

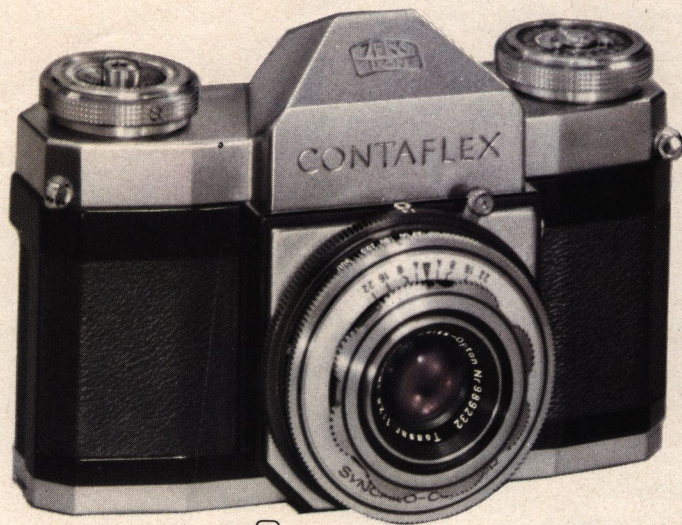


THE PHOTOGRAPHIC CATALOG

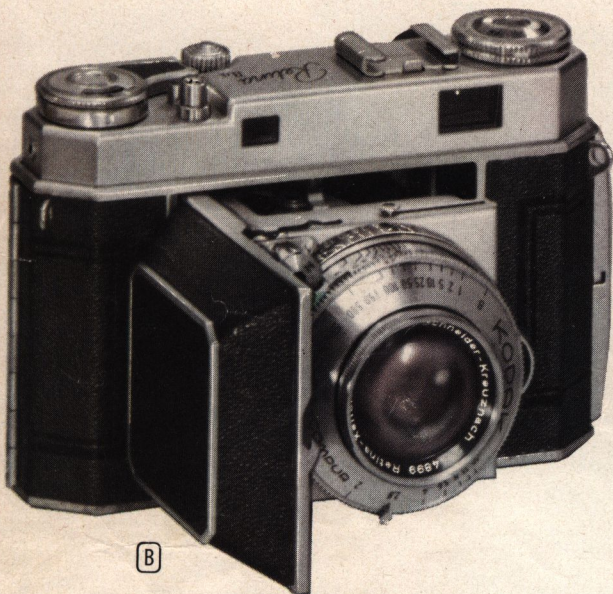
The Contax IIIa camera shown is completely described on Page 5. A representative selection of lenses and accessories for this fine camera is also listed.

The Convenient Index for this Book is on Page 3. For Monthly Payment Terms, turn to Page 100. Ordering Information and Parcel Post Rates are on Page 101.

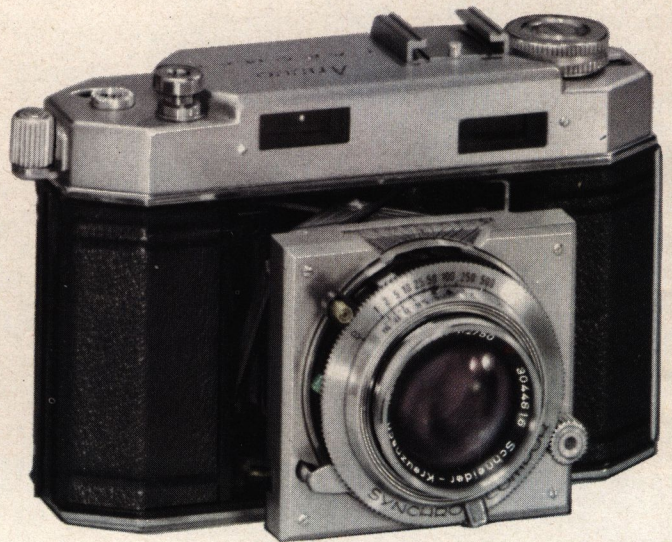
Montgomery Ward 1954



A



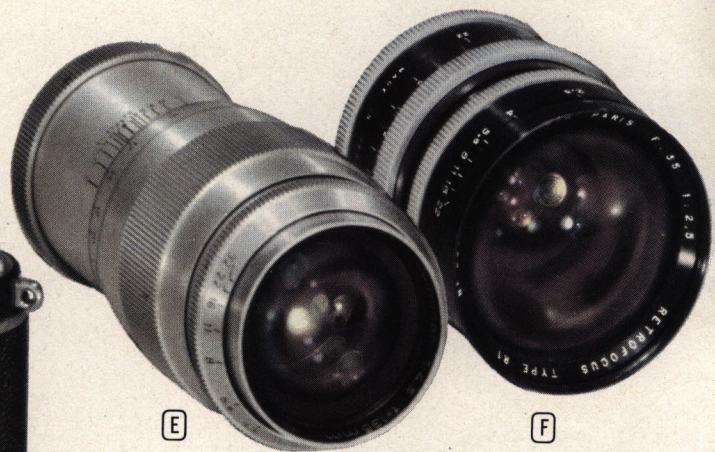
B



C



D



E

F



G

Fine Quality Miniature Cameras

PRECISION MADE BY SKILLED GERMAN CRAFTSMEN

A NEW ZEISS 35MM CONTAFLEX. Latest single lens reflex—with eye-level, through-the-lens viewing and focusing, plus automatic diaphragm, and positive double exposure prevention.

You focus and compose through single, prismatic window, with lens wide open, and see full picture-size image. In center is a bullseye showing split-prism range finder image—you focus hair sharp because it shows a clearer image than most range finders. Lens automatically closes to pre-set f/stop when you press shutter release. Through-the-lens finder eliminates parallax (see Page 98). You see exactly what the lens sees. You can't make a double exposure—a safety shutter blocks finder after each exposure until you turn single knob that advances film and cocks shutter. Made by Zeiss Ikon A.G. in Germany's American Zone.

LENS—Coated, 45mm, f/2.8 Zeiss Tessar focuses from 3 ft. stops down to f/22. SHUTTER—Fully flash synchronized Synchro-Compur (M-X) has 9 speeds from 1 to 1/500 plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs. Use flash units with European fittings—see Page 30. FINDER—Prismatic eye-level, through-the-lens type combined in single window with split-prism rangefinder. FILM—20 or 36 exposures 1x1½ in. on 35mm. CONSTRUCTION—Metal body, black leather covered, satin chromed trim. SIZE—about 5x3½x3 in. With adapter ring for Kodak Series V filters on Page 38.

67 HN 547LT—No Credit Charge. *Postpaid*. Only \$17 Down. 169.00
67 HN 548T—De Luxe Zeiss Eveready Case. *Postpaid*..... 12.50

B KODAK 35MM RETINA II-a. Thumb lever winds film, cocks shutter in one operation—no time wasted winding film between shots. Rangefinder and viewfinder combined in single window for easy focusing, quick shooting. Made in Germany's American zone.

LENS—Coated, 50mm, f/2 Schneider Xenon focuses from 3½ ft. stops down to f/16. SHUTTER—Fully flash synchronized Synchro-Compur (M-X) has 9 speeds from 1 to 1/500, plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs. Use flash unit with ASA or European fitting—see Page 30. FINDER—Optical eye-level type combined with superimposed-image rangefinder. FILM—20 or 36 exposures 1x1½ in. on 35mm. CONSTRUCTION—Metal body, black leather covered, satin chromed trim. SIZE—4⅞x3¼x1½ in. LENS MOUNT DIAM.—1¼ in.

67 HN 342LT—No Credit Charge. *Postpaid*. \$13.00 Down... 127.50
67 HN 343T—Kodak leather eveready case. *Postpaid*..... 10.50

C ANSCO 35MM KAROMAT. Rapid-feed thumb lever advances film, cocks shutter—no wasted time between shots. Viewfinder and rangefinder in single window. Made in Germany's U. S. Zone.

LENS—Coated 50mm f/2.8 Schneider Xenar or f/2 Schneider Xenon. Focus from 3 ft., stop to f/16. SHUTTER—Fully flash synchronized Synchro Compur M-X. 9 speeds from 1 to 1/500, plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs. Use any flash unit with European fitting—see Page 30. FINDER—Optical eye-level type combined with split-image rangefinder. CONSTRUCTION—Metal body, black leather covered, chromed trim. SIZE—5x3x2¼ in. LENS MOUNT DIAMETER—1¼ in. No Credit Charge.

67 HN 349LT—With f/2.8 Schneider Xenar lens. *Postpaid*... 112.50
67 HN 339LT—With f/2 Schneider Xenon lens. *Postpaid*... 125.00
67 HN 517T—Anso Eveready Leather Case. *Postpaid*..... 12.50

D 35MM KINE EXAKTA VX. Pre-set diaphragm lets you focus through lens at full aperture, then see full-size image in finder. Turn diaphragm ring and lens stops at pre-set f/stop. Single lens reflex system permits accurate focusing and composing, eliminates parallax. Cartridge-to-cartridge film feed, no waiting to finish roll—clip off a few exposed pictures with built-in cutting knife, wind into takeup cartridge and they're ready to rush off for processing. Thumb operated lever winds film and cocks shutter.

LENS—Coated 50mm f/2.8 Zeiss Tessar. Focuses from 1½ ft. to infinity, stops down to f/22. SHUTTER—Flash synchronized focal plane. 29 speeds from 12 to 1/1000 second, plus time and bulb. Synchronized at all speeds with No. 6 or 31 bulbs; at speeds to 1/50 with SM or SF bulbs; with (X) zero delay for strobe. Order flash unit below. Coupled film advance and shutter cocking prevent accidental double exposures. Delayed action timer lets you get into your own picture. FINDER—Waist level reflex finder has self-erecting hood, front folds down to form direct eye-level finder (interchanges with Penta Prism finder—order under (G) below). FILM—20 or 36 exposures on 35mm. Film speed Reminder. CONSTRUCTION—Metal body, black leather covering, satin chromed trim. SIZE—6x4x3¾ in. Screw-in adapter ring for Series VI filters, Pg. 38. Imported from Germany's Eastern Zone. Complete with de luxe leather eveready case.

67 HN 581LT—No Credit Charge. *Postpaid*. \$27 Down..... 269.50

NEW AUTOMATIC EXAKTA. Same as above, but with automatic diaphragm—focus at full aperture, lens automatically stops down to pre-set f/stop when you press shutter release. No Credit Charge. *Postpaid*.

67 HN 583LT—With coated 50mm f/2.8 Auto-Westanar lens. Focuses from 1½ ft. to infinity, stops down to f/16. With case 249.50

67 HN 582LT—With Penta Prism finder and rangefinder glass sold under (G) below instead of waist-level finder. Coated 50mm f/1.9 Schneider Xenon lens. Adapter ring takes Series VII filters. Focuses from 1½ ft. to infinity, stops down to f/22. With case 408.00

67 HN 584T—Exakta B-C Flash Unit. Fits Exakta cameras above. Uses bayonet base flash bulbs. With battery. *Postpaid*... 15.50

E EXAKTA 135MM f/4.5 STEINHEIL TELEPHOTO LENS. Brings subject over 2½ times closer than normal 50mm lens. Focuses from 10 ft. to infinity, stops down to f/32. No Credit Charge.

67 HN 2293K—German Import. *Postpaid*. \$6 Down..... 60.00

F EXAKTA 35MM f/2.5 RETROFOCUS WIDE ANGLE LENS. Also fits Exa (F) on Page 20. Covers 1½ times area covered by normal 50mm lens. Focuses from 3 ft., stops to f/22. Only \$10 Down.

67 HN 2292K—German Import. *Postpaid*. No Credit Charge... 99.50

G EXAKTA PENTA PRISM FINDER. For accurate eyelevel reflex viewing and focusing. Does not reverse image. With leather case. German Import. No Charge for Credit.

67 HN 333LT—Only \$5.50 Down on Terms. *Postpaid*..... 53.00

67 HN 330LT—Rangefinder Glass. For Penta Prism above. Has split rangefinder type image in center for sharp focusing. *Ppd*. 35.00

EXAKTA 250MM f/5.5 MEYER TELEPHOTO LENS. Brings subject 5 times closer than normal 50mm lens. Focuses from about 10 ft. to infinity. Stops down to f/22. No Credit Charge.

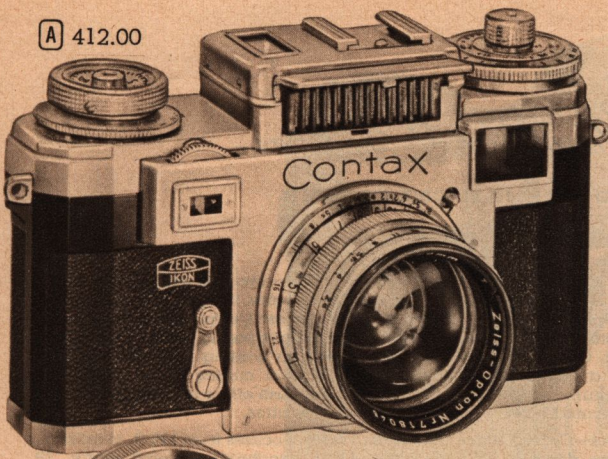
67 HN 2294K—German Import. *Postpaid*. \$13.50 Down..... 132.15

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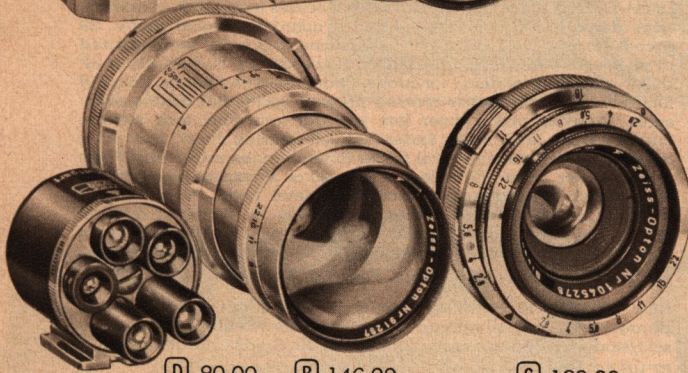
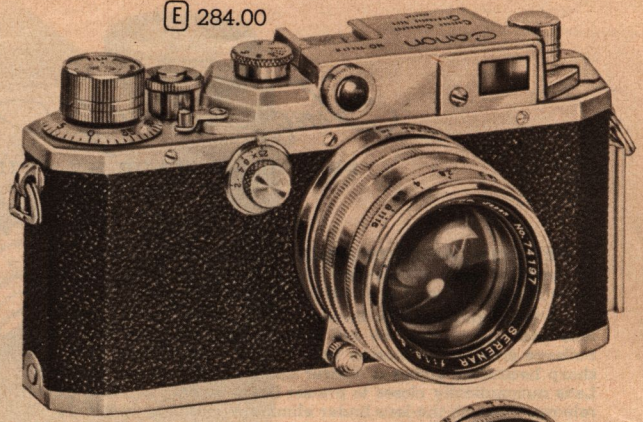
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NOTICE: Above Prices Include April 1, 1954 Excise Tax Reductions.

A 412.00



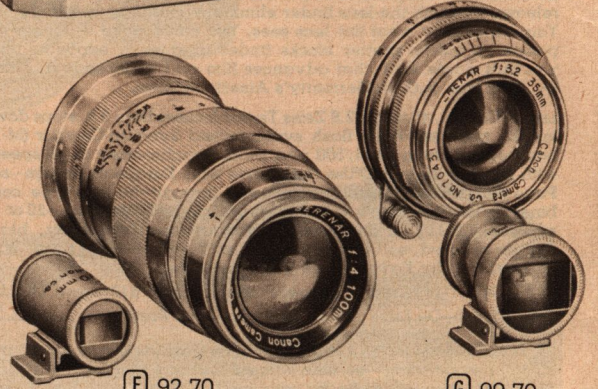
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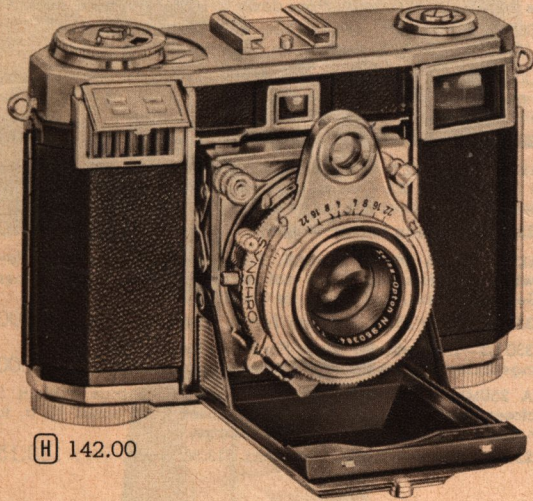
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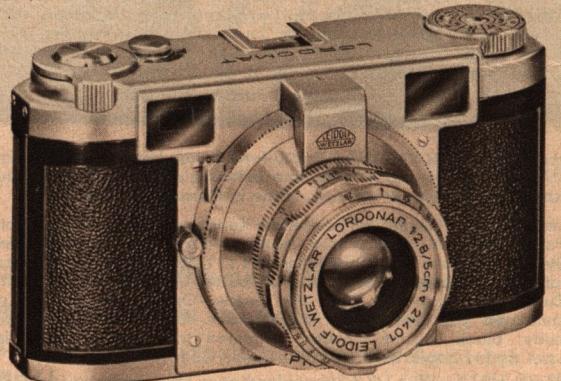


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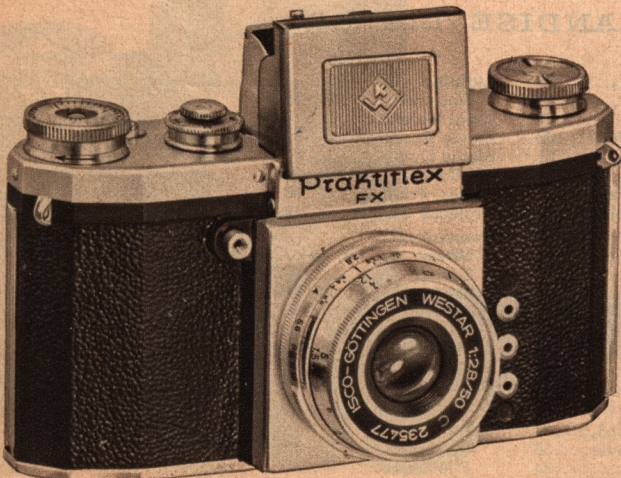
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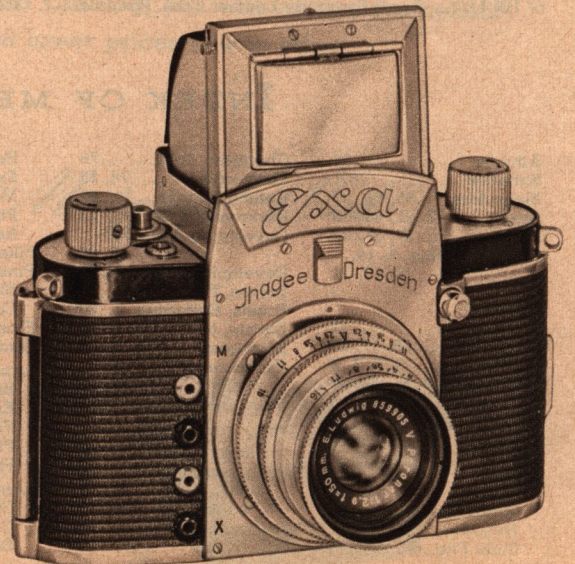
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J 89.50



K 99.50



L 85.00

Highest Quality Miniature Cameras

FOR THE MOST EXACTING NEEDS OF AMATEUR OR PROFESSIONAL

A CONTAX IIIA. (Front Cover.) Brand-new 1954 model—now fully flash synchronized. Superbly-made by Zeiss Ikon A.G. of Stuttgart, Germany (U.S. Zone). Outstanding for versatility and performance. Built-in photo-electric exposure meter. Bayonet lens mount lets you change quickly to accessory lenses (see below or write Bob Adams, Pg. 93 for other lenses and Contax accessories).

LENS—Coated 50mm f/1.5 or f/2 Zeiss Sonnar. F/1.5 stops down to f/16; f/2 stops down to f/22. Both focus from 3 ft. SHUTTER—Focal plane with speeds from 1 to 1/1250 plus time and bulb. Flash synchronized at all speeds with #6 or #31 bulbs, at 1/25 for #5 and #25 bulbs with (x) zero delay for strobe at 1/50 sec. Use flash units with European fitting listed on Page 30. 3-speed delayed action timer. Body release, cable release socket. Coupled shutter and film advance prevents accidental double exposures. FINDER—Optical eye-level type combined with coupled range-finder. FILM—20 or 36 exposures 1x1½ in. on 35mm. CONSTRUCTION—All-metal body, black leather covered, satin chromed trim. SIZE—5¼x3x1½ in. Complete with adapter ring for Series VI filters, page 38. No Credit Charge, 10% Down on Terms.

67 HN 540 LT—With f/1.5 Zeiss Sonnar lens. *Postpaid*.....412.00
67 HN 541LT—With f/2 Zeiss Sonnar lens. *Postpaid*.....381.00

CONTAX IIA. Same as Contax IIIA above, but without exposure meter.
67 HN 542 LT—With f/2 Zeiss Sonnar lens. *Postpaid*.....336.00
67 HN 543 LT—With f/3.5 Zeiss Tessar lens. *Postpaid*.....241.00
67 HN 549 L—Zeiss eveready case for Contax cameras. *Ppd.*...16.00

B ZEISS 135MM f/4 SONNAR TELEPHOTO LENS. For Contax cameras above. Brings subject about 2½ times closer than normal 50mm lens. Focuses from 5 ft., stops down to f/22. No Credit Charge.

67 HN 545 K—*Postpaid*. Only \$15 Down on Terms.....146.00

C ZEISS 35MM f/2.8 BIOGON WIDE ANGLE LENS. For Contax cameras above. Covers 1½ times area covered by normal 50mm lens. Focuses from 3 ft., stops down to f/22. No Credit Charge.

67 HN 544 K—*Postpaid*. Only \$21.00 Down on Terms.....183.00

D CONTAX UNIVERSAL FINDER for 25, 35, 50, 85 and 135mm lenses.
67 HN 546 K—No Credit Charge. *Postpaid*. \$8 Down on Terms...80.00

E CANON IV S-2. High precision camera imported from Japan. Leica-type interchangeable lens mount—9 accessory lenses from 28mm to 135mm are available through Bob Adams, Pg. 93. Rangefinder and viewfinder combined in single window for faster shooting. Viewfinder affords two degrees of magnification for critical focusing in poor light.

LENS—Coated 50mm f/1.8 Canon stops to f/16, focuses from 3½ ft. SHUTTER—Focal plane with 11 speeds from 1 to 1/1000 plus time and bulb. Synchronized at all speeds with No. 6 or 31 bulbs. Zero millisecond delay for strobe. Order flash unit below. Coupled shutter and film advance prevents accidental double exposures. FINDER—Enclosed optical eye-level type combined with super-imposed image range-finder. FILM—20 or 36 exposures 1x1½ in. on 35mm. CONSTRUCTION—All-metal body, leather covered, satin finish trim. Flash bracket. SIZE—5½x2½x3 in. With screw-in adapter for series VI filters (Page 38).

67 HN 520 K—No Credit Charge. *Postpaid*. \$28.50 Down on Terms.284.00
67 HN 521K—Leather eveready carrying case. *Postpaid*.....10.25
67 HN 522 K—Kalart B-C Flash, with battery. *Postpaid*.....15.95

F CANON 100MM f/4 TELEPHOTO LENS. With matched Viewfinder, finder objective. Brings subject about 2 times closer than normal 50mm lens. Focuses from 3½ ft., stops down to f/22. No Credit Charge.

67 HN 506 K—*Postpaid*. Only \$10 Down on Terms.....92.70

G CANON 35MM f/3.2 WIDE ANGLE LENS. With matched Viewfinder, finder objective. Covers 1½ times area covered by normal 50mm lens. Focuses from 3½ ft.; stops down to f/22. No Credit Charge.

67 HN 505 K—*Postpaid*. Only \$10.50 Down on Terms.....99.70

H ZEISS CONTESSA. With a built-in photo-electric meter that makes perfect exposures easy. Coupled shutter release and film advance prevents accidental double exposures. Very compact—folds flat. Precision-made by Zeiss Ikon A.G., of Stuttgart, Germany (U.S. Zone).

LENS—Coated, 45mm, f/2.8 Zeiss Tessar focuses from 3 ft., stops down to f/22. SHUTTER—Fully flash synchronized Synchro-Compur (M-X) has nine speeds from 1 to 1/500 plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs, (X) zero delay for strobe. Use flash units with European fittings—see Page 30. FINDER—Enclosed optical eye-level type combined in single window with coupled super-imposed image range-finder. FILM—20 or 36 exposures 1x1½ in. on 35mm. CONSTRUCTION—All-metal body, black leather covered, satin chromed trim. SIZE—about 4¾x3¼x2 in. With screw-in adapter for series V filters listed on Page 38. No Credit Charge.

67 HN 595 LT—*Postpaid*. Only \$14.50 Down on Terms.....142.00
67 HN 596 T—Zeiss leather eveready case. *Postpaid*.....12.00

J LORDOMAT. A new, feature-packed camera imported from U.S. Zone of Germany. The interchangeable lens mount and coupled range finder provide extreme versatility. Rangefinder automatically focuses camera accurately for whichever lens you use. Thumb-operated film advance for successive shots—cocks shutter, advances film for next exposure immediately. De luxe leather eveready case included.

LENS—Coated 50, f/2.8 Lordonar anastigmat stops down to f/22, focuses from 3 ft. SHUTTER—Prontor SV "M-X" has speeds to 1/300 plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs, (X) zero delay for strobe. Use flash units with European fitting—see Page 30. Body release, cable release socket. FINDER—Enclosed optical type combined with super-imposed image rangefinder. CONSTRUCTION—All metal body, artificial leather covering, satin chromed trim. FILM—20 or 36 exposures 1x1½ in. on 35mm. SIZE 2¾x2½x5¼ in. LENS MOUNT DIAMETER—17/16 in. Ship. wt. 2 lbs.

67 H 570 L—Camera with case. \$9 Down on Terms. or Cash 89.50

67 H 572 L—LORDONAR WIDE ANGLE LENS. 35mm f/3.5 wide angle lens for Lordomat. Couples to rangefinder, focuses from 3 feet, stops down to f/22. Ship. wt. 6 oz. \$5 Down.....or Cash 49.50

67 H 573 L—TELORDON TELEPHOTO LENS. 90mm f/5.5 telephoto lens for Lordomat. Couples to rangefinder, focuses from 3 feet, stops down to f/22. Ship. wt. 8 oz. \$6 Down.....or Cash 57.50

67 H 574—UNIVERSAL VIEWFINDER for Lordomat. Shows the field of view for all Lordomat lenses. Ship. wt. 4 oz.....Cash 9.75

K PRAKTIFLEX FX. An economical single lens reflex camera made in Eastern zone of Germany. Has many features usually found only in higher priced cameras. Single lens viewing for sharp focusing and perfect composition. Interchangeable, screw-in lens mount.

LENS—Coated, 50mm f/2.8 Westar stops down to f/16, focuses from 3½ ft. SHUTTER—Focal plane with seven speeds from ½ to 1/500, plus bulb. Flash synchronized at all speeds with No. 6 or 31 bulbs. Zero millisecond delay for strobe. Order flash unit separately below. Film advance coupled with shutter to prevent accidental double exposures. Body release. Cable release socket. FINDER—Reflex hood with open eye-level finder, and built-in magnifier. FILM—20 or 36 exposures 1x1½ in. on 35mm. CONSTRUCTION—All-metal body, leather covered, satin chromed trim. SIZE—about 5½x3¼x1¾ in. With screw-in adapter for series VI filters (Pg. 38). No Credit Charge.

67 HN 525 LT—*Postpaid*. Only \$10 Down on Terms.....99.50

67 HN 526 LT—Camera above but with 50mm f/2.8 Zeiss Tessar lens in pre-set diaphragm. You focus with lens wide open, close diaphragm to pre-determined stop, and shoot.

Postpaid. Only \$14.00 Down139.50

67 HN 527 T—Leather eveready carrying case. *Postpaid*.....10.95

67 HN 528 T—Praktiflex B-C flash unit with battery. *Postpaid*.15.50

PRAKTIFLEX COMBINATION OUTFIT. Includes Praktiflex camera with 50mm. f/2.8 Westar lens described above with Praktiflex B-C flash unit with batteries, 105mm f/4.5 telephoto lens, and leather eveready case—combined to save you \$30 over individual prices. Telephoto lens brings subject over 2 times closer than normal 50mm lens; stops down to f/22; focuses from 5 ft. No Credit Charge.

67 HN 555 LT—No credit charge. \$14 Down. *Postpaid*.....139.50

L EXA. Single lens reflex viewing and focusing plus interchangeability of lenses and finders, combine to make the Exa more versatile than any other miniature camera in its price class.

LENS—coated 50mm, f/2.8 Westar focuses from 2½ ft. to infinity, stops down to f/16. Interchanges quickly with wide angle lens (F) on Page 3. SHUTTER—Focal plane with four speeds from 1/25 to 1/150, plus bulb. Synchronized at all speeds with No. 6 or 31 bulbs, at 1/25 or 1/50 with strobe or lamps like No. 5 or SM. Use flash sold separately below. Coupled film advance and shutter cocking prevents accidental double exposure. Body release. FINDER—Reflex hood with open eye-level finder. Interchanges with Penta Prism focusing direct finder sold separately (G) on Page 3. FILM—20 or 36 exposures, 1 by 1½ in. on 35mm film. CONSTRUCTION—Metal body, black durable plastic covered, satin chromed trim. SIZE—5¼ by 2¾ by 3¾ in. ACT. WT.—24 oz. With screw-in adapter for series VI filters (Page 38).

67 HN 559 L—No Credit Charge. \$8.50 Down. *Postpaid*.....85.00

67 HN 560 L—Leather eveready carrying case. *Postpaid*.....9.95

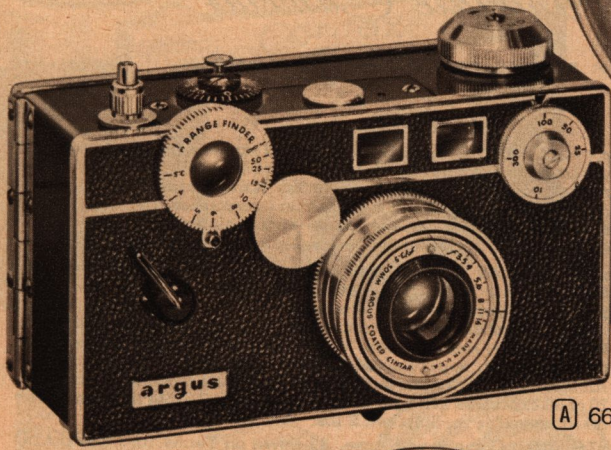
67 HN 561L—Exa B-C Flash Unit with battery. *Postpaid*.....15.50

EXA COMBINATION OUTFIT. Includes Exa camera like above but with Exa B-C flash unit with batteries, 105mm f/4.5 telephoto lens, and leather eveready case—combined to save you \$30 over individual prices. Telephoto lens brings subject 2 times closer than normal 50mm lens; stops down to f/22; focuses from 8 ft.

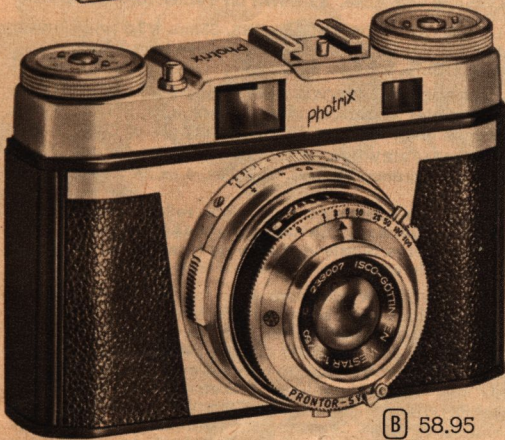
67 HN 557 L—No Credit Charge. \$12.50 Down. *Postpaid*....124.65

FOR FREE COLOR PRINT, MAIL COUPON ON PAGE 102.

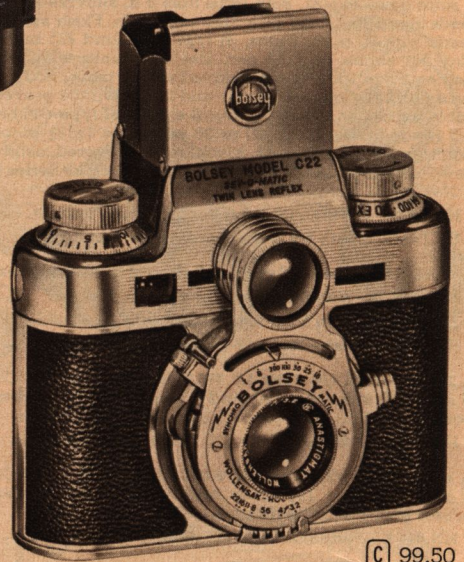
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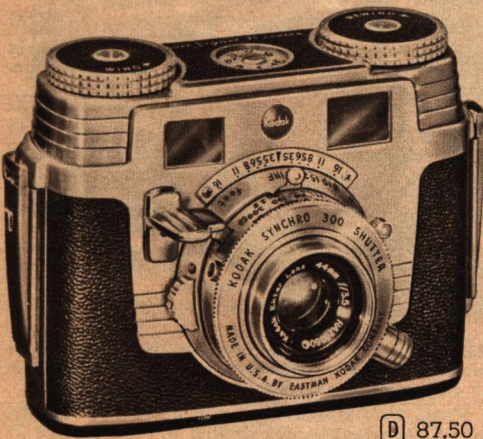
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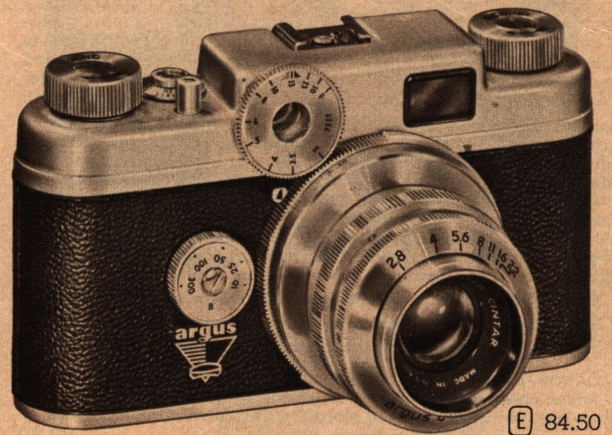
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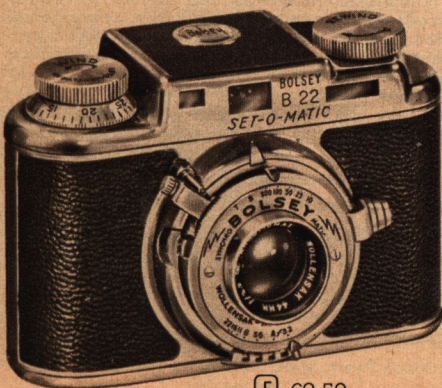
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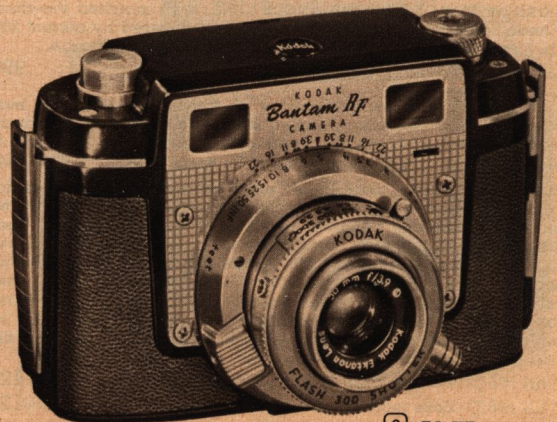
D 87.50



E 84.50



F 69.50



G 59.75

Moderately Priced Miniature Cameras

FOR ECONOMICAL COLOR AND BLACK AND WHITE

A ARGUS C-3 CAMERA. One of America's most popular 35mm cameras. Low-priced with high quality features and performance—takes fine pictures in color or black and white. Interchangeable lenses (sold separately below) provide more camera versatility. Accurate split-image rangefinder couples with all lenses. When you focus the rangefinder, the lens is in focus too. Built-in flash synchronization—plug the flash gun in for night or indoor shots—order No. 5 or 25 flash bulbs from Page 28. With batteries.

LENS—Coated 50mm f/3.5 Cintar, stops down to f/16, focuses from 3 feet. SHUTTER—Five speeds from 1/10 to 1/300, plus bulb. Synchronized at 1/50. Body release, cable release socket. FINDER—enclosed optical type. FILM—35mm. EXPOSURES—20 to 36, about 1 by 1½ inches. CONSTRUCTION—metal and plastic, black leatherette covering, chromed trim. SIZE—about 2 by 2¾ by 5 in. LENS MOUNT—Uses filter kit below or Kodak series IV No. 44 screw-in adapter ring, Page 38. Order 35mm film from Pages 67–69. No Credit Charge on these items. Terms—Page 100. Postpaid.

67 HN 578 L—Camera, Flash Unit, Carrying Case. \$7 Down. .66.50

FILTER KIT FOR ARGUS C-3. Fits 50mm. f/3.5 Cintar lens. Sunshade and filter holder with 6 optical glass filters in pocket case. Contains Type A filter for using indoor color film in daylight; Blue conversion filter for using outdoor color film under artificial light; Haze filter to reduce distant haze in; outdoor color shots; and Medium Yellow, medium Red, and medium Green filters for accentuating clouds and producing other special effects with black and white film (described on Page 38). Complete instructions.

67 H 2274—Ship. wt. 4 oz. Complete outfit \$4.45

67 HN 579 L—ARGUS C-3 TELEPHOTO LENS. 100mm f/4.5 telephoto lens. Couples to rangefinder, focuses from 3 ft., stops down to f/22. Built-in sunshade with finder mask. Postpaid. \$6 Down. .57.50

67 HN 580 L—ARGUS C-3 WIDE ANGLE LENS. 35mm f/4.5 wide angle lens. Couples to rangefinder, focuses from 3 feet, stops down to f/16. With wide angle finder. Postpaid. \$6 Down. .57.50

B PHOTRIX CAMERA. A new precision made camera from the U.S. Zone of Germany. Features built-in coupled rangefinder for sharp pictures every time. Fast f/2.9 lens and fully synchronized shutter let you take pictures under all light conditions. Smooth, helical focusing mount. Double exposure prevention device. Depth of focus scale on lens. All controls visible from above for fast shooting. Advancing film automatically cocks the shutter. Complete with eveready leather carrying case with shoulder strap.

LENS—Coated 50mm f/2.9 Westar, stops down to f/22, focuses from 3 feet to infinity. SHUTTER—Fully synchronized Prontor SV "M-X" with shutter speeds of 1 to 1/300 seconds plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs, (X) zero delay for strobe. European fitting, use any flash unit on Page 30 having European connection. Body shutter release, cable release socket. FINDER—Enclosed optical type viewfinder combined in one window with the super-imposed image type rangefinder. FILM—20 or 36 exposures, about 1 by 1½ inches, on 35mm film. CONSTRUCTION—Die-cast metal body, black leather covering, satin trim. SIZE—About 2¾ by 3¼ by 5 inches. With screw-in adapter ring for Kodak Series V on Page 38. Order 35mm film from Pages 67–69.

67 H 593 L—Camera with case. Ship. wt. 2 lbs. \$6 Down, Cash 58.95

C BOLSEY C-22 TWIN LENS REFLEX. The only 35mm twin lens reflex with both ground glass reflex focusing and eye-level viewfinder with coupled rangefinder. Features the new Set-O-Matic which automatically sets the lens opening when taking flash pictures. Other features include; accidental double exposure prevention device, depth of focus scale, and easy loading film catch.

LENSES—Both are Wollensak coated 44mm f/3.2, stop down to f/22, focus from 2 ft. SHUTTER—Speeds to 1/200, plus bulb and time. Synchronized to 1/100 with Bolsey flash unit (listed below) and SM or SF bulbs. Cable release socket. FINDERS—Actual size reflex and eye-level optical types. FILM—20 or 36 exposures, about 1 by 1½ inches on 35mm. CONSTRUCTION—Die-cast aluminum alloy body with black artificial leather cover, satin trim. SIZE—4½x3¾x2¼ inches. ACTUAL WEIGHT—18 oz. LENS MOUNT DIAMETER—15/16 in. Order film from Pages 67–69. Postpaid.

67 HN 562 LT—No Credit Charge. Only \$10 Down. 99.50

67 HN 563 T—Top grain eveready case. Postpaid. 10.50

67 HN 566—BOLSEY FLASH UNIT for Bolsey C-22 and Bolsey B-22. Uses either screw base or bayonet base bulbs, Page 28. Standard house-plug type outlet for extension flash. Complete with 2 medium size batteries. Postpaid 9.95

D KODAK SIGNET WITH F/3.5 EKTAR LENS. Compactly designed and precision-made for critically sharp work in either black and white or color. With one of the world's finest f/3.5 lenses in an accurate Synchro 300 flash shutter. Viewfinder and coupled rangefinder are combined in a single viewing window for fast, precise focusing and framing. An oversize "Feathertouch" shutter release.

LENS—Coated 44mm, f/3.5 Ektar focuses from 2 feet, stops down to f/22. SHUTTER—Synchro 300 has four speeds from 1/25 to 1/300, plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs and Kodak Flashholder (C) on Page 30. Accidental double exposure prevention device. FINDER—Optical eye-level type, combined with rangefinder in single window. FILM—20 or 36 exposures about 1x1½ in. on 35mm film. CONSTRUCTION—Die-cast aluminum body, black Kodadur covered, brushed metal trim. SIZE—4½x3¼x2½ in. LENS MOUNT DIAMETER—1½ in. Order 35 mm film from Pages 67–69. No Credit Charge.

67 HN 515 L—\$9 Down on Terms. Postpaid. 87.50

67 HN 516—Leather eveready carrying case. Postpaid. 8.50

E ARGUS C-4 CAMERA. A versatile camera that can be used for the most critical color work. Coupled rangefinder is combined with the viewfinder so you can focus and compose your picture simultaneously. Flash shutter is synchronized at speeds to 1/100. Advancing the film cocks shutter—prevents double exposures.

LENS—Coated 50mm f/2.8 Cintar, stops down to f/22, focuses from 3 ft. to infinity. SHUTTER—5 speeds from 1/10 to 1/300, plus bulb. Synchronized to 1/100 with No. 5 or 25 bulbs. Body release, cable release socket. FINDER—enclosed optical; rangefinder focuses through finder. FILM—20 or 36 exposures, about 1x1½ in., on 35mm film. CONSTRUCTION—Metal body, satin trim, leatherette covering. SIZE—About 1¼x2x5 in. LENS MOUNT DIAMETER—15/16 inches.

67 HN 575 L—No Credit Charge. \$8.50 Down. Postpaid. 84.50

67 HN 576—Leather eveready carrying case. Postpaid. 7.50

67 HN 577—ARGUS FLASH UNIT. Uses bayonet lamps. Automatic bulb ejector. With two "C" Type batteries. Order bayonet-base flash bulbs separately from Page 28. Postpaid 7.50

F BOLSEY B-22 WITH COUPLED RANGEFINDER. Moderately priced with many features—Set-O-Matic control, automatically sets lens for flash pictures, built-in flash synchronization, rangefinder, accidental double exposure prevention, and fast lens.

LENS—Wollensak f/3.2 (44mm), coated, stops down to f/22. Color corrected. Focuses from 2 ft. to infinity. SHUTTER—precocking, 5 speeds to 1/200, bulb, and time. Synchronized up to 1/100 with flash unit listed under (C) at left. SM or SF bulbs. Lever body release, cable release socket. FINDER—enclosed eye level optical type. FILM—20 or 36 exposures, about 1 by 1½ in. on 35mm film. CONSTRUCTION—metal body, black imitation leather cover, chrome plated trim. SIZE—4¾ by 2¾ by 2¼ in. LENS MOUNT DIAMETER—15/16 in. Order film from Pages 67–69. See complete outfit below. Postpaid.

67 HN 564 L—No Credit Charge, this item. Only \$7 Down. 69.50

67 HN 565—Leather eveready carrying case. Postpaid. 7.95

BOLSEY B-22 OUTFIT. Consists of Bolsey B-22 camera, carrying case, and special Bolsey flash unit for bayonet bulbs. With batteries.

67 HN 567 L—No Credit Charge. \$8 Down. Postpaid. 79.50

G KODAK BANTAM RF CAMERA. Newly designed Bantam camera with built in coupled rangefinder. Fast lens and synchronized shutter let you take pictures under any light conditions. Uses 8-exposure roll (a weekend's pictures)—can be developed right away.

LENS—Coated 50mm f/3.9 Ektanon focuses from 2½ feet, stops down to f/22. Shutter—Kodak Flash 300 with speeds to 1/300, plus bulb. Synchronized to 1/100 with SM or SF bulbs. Uses Kodak Flashholder (C) on Page 30. FINDER—Combination super-imposed image type rangefinder and optical viewfinder in one window. CONSTRUCTION—Brown plastic body with light brown leather-grained plastic cover, satin trim. SIZE—3x5¼x2½ in. LENS MOUNT DIAMETER—1½ in. Film—Eight 1x1½-in. pictures on 828 film. No Credit Charge.

67 HN 568 L—\$6 Down. Postpaid. 59.75

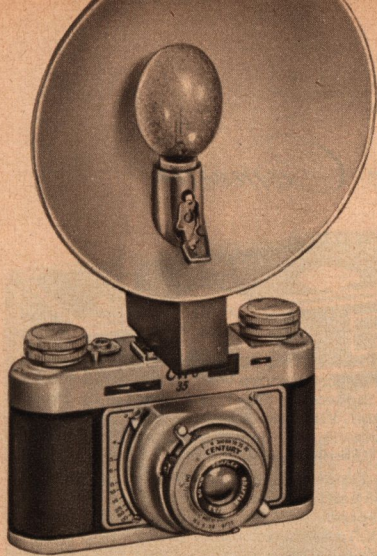
67 HN 569—Leather eveready carrying case. Postpaid. 7.75

COLOR PHOTOGRAPHY MADE EASY. A complete manual published by Ansco, covers all phases of color photography, processing, and printing. Well illustrated. With 88 pages. Paper binding. With Color Film Exposure Guide to help you get good pictures.

67 HN 4833—Postpaid. 75¢



Notice: Above Prices Include April 1, 1954 Excise Tax Reductions.



A 66.50



B 55.50



C 71.75



D 130.00

Popular 35mm Color Cameras

COMPLETE OUTFITS THAT ARE EASY TO USE

CIRO 35 CAMERA WITH RANGEFINDER

A CIRO Model S, 35 mm. camera made by the Graflex Co., with a 64-year reputation for precision equipment. Has built-in split-image range finder for perfect picture sharpness. Takes 20 or 36 pictures, 24 x 36 mm. on 35 mm. size black and white or color film.

LENS: 50 mm. coated f/3.5 Graffar anastigmat lens focuses from 3 ft. to infinity. Stops down to f/16. SHUTTER: Self-cocking Century has 5 speeds from 1/10 to 1/200-second, plus bulb and time. Synchronized at all speeds with SM or SF bulbs; (F) 5 mil. sec. delay for strobe. Cable release socket. Lens mount, diam. 1 5/16 in.

CONSTRUCTION: Enclosed optical eye-level view finder. Split-image range finder. Lens mount 1 5/16 in. Size overall 2x2 3/4x5 in. One-piece die-cast metal case precisely machined to maintain critical accuracy. Black pebbled covering. Exposed metal parts satin-finish aluminum. Special fitting on top for instant attachment or removal of flash gun. FLASH GUN: Uses bayonet-base flash bulbs. Bulb ejector. Complete with batteries. \$7 Down, no Credit Charge.

67 HN 585 L—Camera, flash gun and ever-ready carrying case. *Postpaid*... .66.50

LORDOX I f/2.8 CAMERA OUTFIT

B Imported by Wards from the U. S. Zone of Germany. Exceptional value for the price. Takes 20 or 36 pictures 24x36 mm. on 35mm size black and white or color film.

LENS: Extra-fast, coated 50 mm. f/2.8 Wetzlar anastigmat lens. Focuses from 3 ft. to infinity. Stops down to f/16. SHUTTER: Prontor S-V shutter with 8 speeds from 1 to 1/300-second, plus bulb. Fully flash synchronized at all speeds with No. 5 or No. 25 bulbs. (X) Zero delay for strobe. European flash fitting. Delayed action timer. Double exposure prevention.

CONSTRUCTION: Enclosed optical eye-level view finder. All metal body covered with leather; chromed trim. Size overall about 4 1/2 x 3 1/2 x 2 1/2 in. This outfit also includes an accurate Widor clip-on Range finder, (F) on pg. 27, a top-grain leather ever-ready camera case; a fine Widina Flash Unit with batteries (B) on pg. 30, 3-way flash guard with blue slide for using clear bulbs with daylight film and clear side for ordinary use; 8 G.E. No. 5 flash bulbs; and one 20-exposure roll of Daylight Kodachrome film.

67 H 337 L—Complete outfit. Ship. wt. 8 lbs. 55.50

67 H 335 L—Camera and case. Wt. 2 lbs. 44.95

67 H 2258—Screw-in adapter ring for Lordox I f/2.8 Camera above. Accepts Kodak Series V filters on Page 38. Ship. wt. 2 oz. 1.29

COLOR OUTFITS THAT WILL GIVE YOU PLEASURE FOR YEARS TO COME

C D Enjoy the complete fulfillment of your hobby. Re-capture the interesting and exciting moments you recorded on film, in full color on glass-beaded Da-Lite screens. The two outfits below include everything you will need to make your first 20 pictures in color, with outdoor Kodachrome film. Complete, ready-to-use 35 mm. outfits include excellent all-metal camera, leather case, dependable flash unit, color film, flash bulbs, excellent projector and screen.

C LORDOX CAMERA AND PROJECTOR OUTFIT. Includes Lordox Jr. f/3.8 Camera, (E), described and pictured at top right; complete with all-metal Widina Flash Gun pictured and described on Page 30; a top-grain leather camera case; one roll of 20-exposure Kodachrome Daylight Film; Eight G.E. No. 5 Flash Bulbs; a Da-Lite Handy glass-beaded screen (sold on Page 43), 30x30 in. and a Kodak Merit Projector with 5-in. f/3.5 coated Ektanon lens, 150-watt bulb and unique slide mechanism which feeds slides from the top. Projector pictured and described on Page 41. \$7.50 Dn.

67 HN 588 Y—Complete outfit. *Postpaid*... .71.75

LORDOX JR. CAMERA

E One of the finest values ever presented in a 35 mm. camera. Imported by Wards from the U.S. Zone of Germany, to supply the demand for a well constructed, truly dependable camera in the low-price field. Takes 20 or 36 pictures 24x36 mm. on 35 mm. size black and white or color film. Durable all-metal body.

LENS: Coated 50 mm. f/3.8 Triplet lens. Focuses from 3 ft. to infinity. Stops down to f/12. SHUTTER: Vero shutter, made by Gauthier, famous for Prontor shutters. Four speeds from 1/25 to 1/200-second, plus bulb. Synchronized for SM and SF up to 1/100; for No. 5 and 25 up to 1/50; (X) zero delay for strobe. Fitting for flash gun with European fitting like (3) on Pgs. 30 and 31. Lens mount, diam. 1 in. Double exposure prevention.

CONSTRUCTION: Enclosed, optical, eye-level viewfinder. All-metal body, covered with genuine leather. Exposed metal is satin-finished. All controls designed for easy manipulation and fast operation. Convenient body type shutter release. Accessory clip for range finders on Page 27, or Widina "B-C" Flash on Page 30.

67 H 586 L—Ship. wt. 1 lb. 8 oz. 27.50

67 H 587—Genuine top-grain leather ever-ready carrying case. Ship. wt. 8 oz. 4.75

ARGUS A-FOUR CAMERA

F Newest member of the popular Argus family. Offered at its new low price. Takes 20 or 36 pictures 24 by 36 mm. on 35 mm. black and white or color film.

LENS: Coated 44 mm. f/3.5 Cintar lens. Focuses from 2 1/2 ft. to infinity. Stops down to f/22. SHUTTER: Precision-built with four speeds from 1/25 to 1/200-second, plus bulb. Synchronized for SM and SF up to 1/100; for No. 5 and 25 at 1/25; (X) zero delay for strobe.

CONSTRUCTION: Sturdy case made of bakelite and aluminum. Over-size winding knobs and large push-button shutter release respond to the slightest pressure. Lens mount diameter, 1 3/16 in. Size overall 2 1/2 x 3 3/16 x 5 1/4 in.

FLASH GUN: Argus Flash Unit plugs right into side of camera. No wires to attach, nothing to adjust. Automatic bulb ejector. Complete with batteries and camera neck strap. \$3.50 Down.

67 HN 591 L—Argus A-4 only. *Postpaid*. 32.50

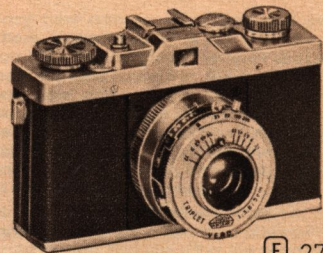
67 HN 592—Argus brown leather ever-ready case. *Postpaid*..... 5.75

67 HN 58 X—Argus flash unit. Takes bayonet base bulbs. With batteries. *Pstpd.* 3.80

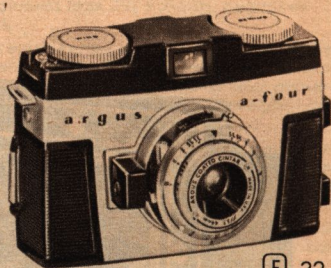
67 HN 58 X—Argus flash unit. Takes bayonet base bulbs. With batteries. *Pstpd.* 3.80

D ARGUS C-3 CAMERA AND PROJECTOR OUTFIT. Includes most popular of all 35 mm. cameras, the famous Argus C-3 with f/3.5 Cintar lens. Camera is pictured and described on Page 7; with Argus Flash Gun; genuine leather camera case; one 20-exposure roll of Kodachrome Daylight Film; Eight G.E. No. 5 Flash Bulbs; a Da-Lite glass-beaded screen 40x40 in. (sold on Page 43); and the Argus 300 Projector with coated 4-in. f/3.5 lens, 300-watt bulb, rotary film carrier and powerful blower. Pictured and described on Page 41. *Postpaid.* \$13 Dn.

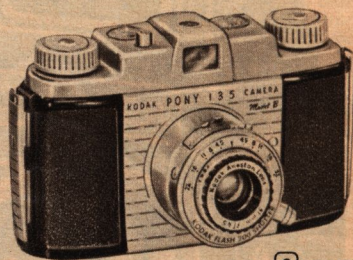
67 HN 589 Y—Complete Outfit. 130.00



E 27.50



F 32.50



G 34.75

KODAK PONY CAMERAS

Smart styling, combined with many built-in features for simplified operation have made Pony cameras increasingly popular. Lightweight, with fingertip controls.

G PONY 135 B—New rapid-loading feature simplifies film loading. Pin on spool automatically catches film and guides it accurately. Takes 20 or 36 pictures 24 by 36 mm. on 35 mm. size black and white or color.

LENS: Coated 51 mm. f/4.5 Kodak Anaston lens. Focuses from 3 ft. to infinity. Stops down to f/22. SHUTTER: Kodak Flash pre-cocking shutter. Four speeds from 1/25 to 1/200-second, plus bulb. Built-in shutter release. Synchronized for SM and SF to 1/100; for No. 5 and 25 at 1/25. (F) Five millisecond delay for strobe. ASA fitting for flash guns with ASA fitting like (2) on Pages 30 and 31. CONSTRUCTION: Optical eye-level view finder. Impact-resistant plastic body with metal front plate and lens tube. Lens mount diam. 1 1/8 in. Size overall about 5 1/8 x 3 1/8 x 2 1/4 in. \$3.50 Down.

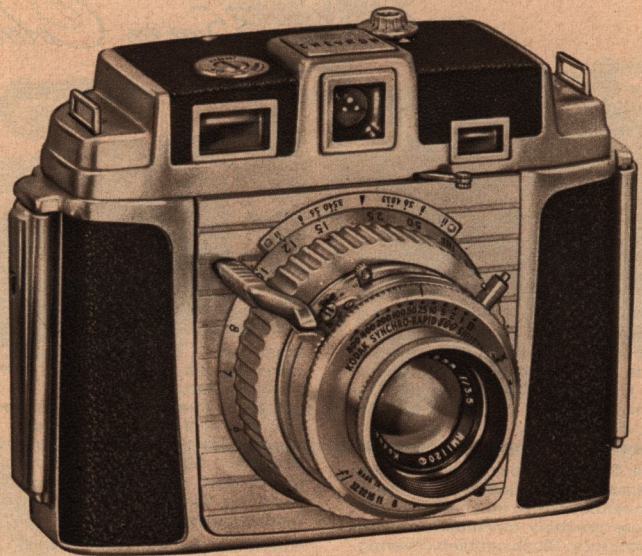
67 HN 304 L—Pony 135 B. *Postpaid*... 34.75

67 H303—Leather Case. Ship. wt. 8 oz. 4.78

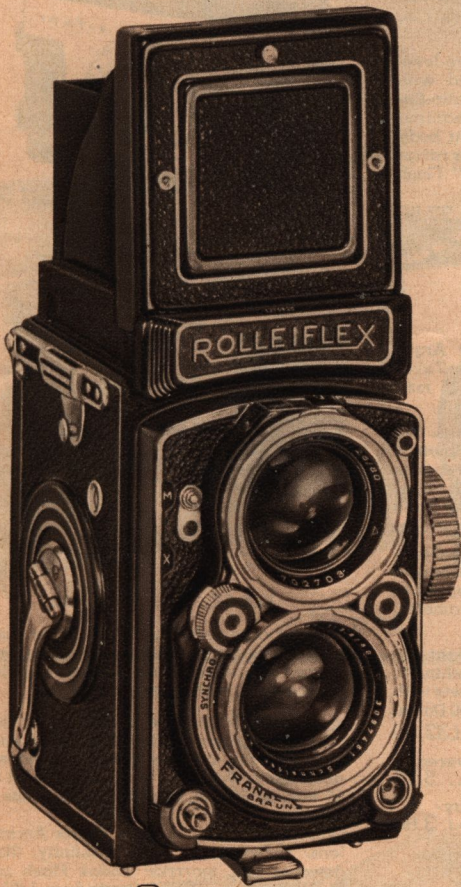
KODAK PONY 828. (Not pictured.) Same construction, lens, shutter and synchronization as Pony 135B above. Takes 8 pictures (just enough for a week-end) 28 by 40 mm. on Bantam 828 film. Slides mounted in standard 2x2-in. mounts (same as 35 mm.).

67 HN 328 L—Pony 828. *Postpaid*... 29.50

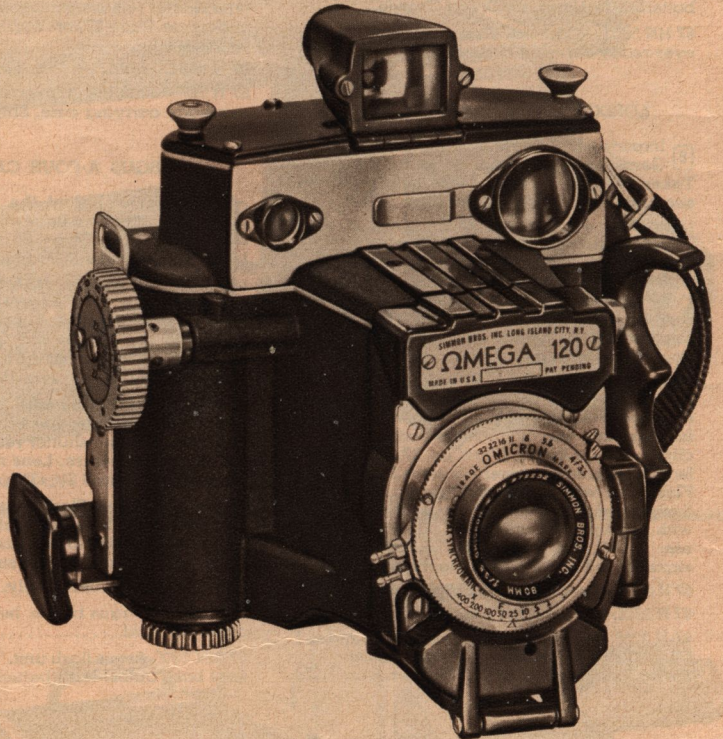
67 H 329—Leather case. Ship. wt. 8 oz. 4.78



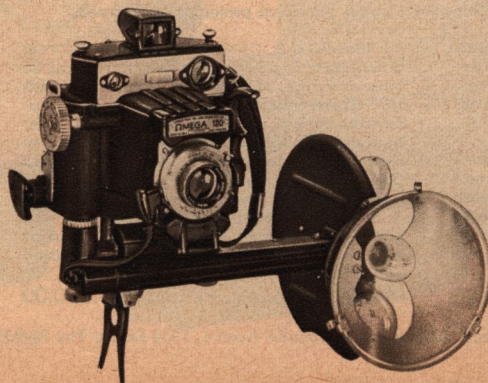
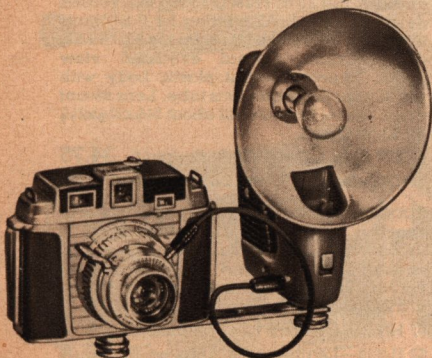
A 198.50



B 299.50



C 247.50



Three Newly Designed Cameras

CLIMAXING YEARS OF DEVELOPMENT BY THEIR MAKERS

A **KODAK CHEVRON.** Kodak's newest and most versatile professional-type camera. Uses 620 roll film for 2 1/4 x 2 1/4-in. shots in black and white, Ektachrome or Kodacolor. Addition of 828 adapter, sold separately below, permits use of Kodak 828 film for 28 x 40-mm. pictures. Ratchet film-advance lever, automatic metering and film counting dial lets you shoot fast, without looking at red window. Extra-rigid construction and a fine f/3.5 Ektar lens combine to assure maximum picture sharpness. View finder directly above range finder eye-piece, with an extra eye-piece for people who wear glasses.

LENS AND SHUTTER. Coated, 78 mm. f/3.5 Kodak Ektar, finest lens produced by Kodak. Focuses 3 1/2 ft. to infinity. Stops down to f/32; click stops. Lens aperture scales on top and front of shutter for convenient setting. Kodak Synchro-Rapid 800, world's fastest between-the-lens shutter, has ten speeds from 1 to 1/800-second, plus bulb. Synchronized at all speeds for No. 5 and No. 25 bulbs, (X) zero delay for strobe; ASA bayonet flash post. Kodak Ektalux Flash Gun pictured on facing page and sold separately below, is recommended for Chevron.

OPERATING CONTROLS. Designed to cradle in the hands, leaving fingers free to manipulate controls. Focusing of camera automatically corrects parallax. Split-image range finder. Built-in 828 finder-mask permits use of film adapter sold separately below.

CONSTRUCTION. Die-cast aluminum body covered with Black Morocco Kodadur; chromed trim. Built-in Series V adapter ring. Neck strap. 67 HN 289 LT—Postpaid. No credit charge. \$20 Down.....198.50

CASE. Genuine leather, saddle-brown. Cover holds 4 Series V filters. 67 HN 290 T—Case only. Postpaid.....17.50

EKTALUX B-C FLASH GUN (Shown with camera, at left). Recommended for Chevron camera. Fits all cameras with ASA (Bayonet) flash post. Accepts either bayonet or screw-base lamps. With 22 1/2-volt battery, 67 HN 3250 T—Postpaid. Complete with battery.....29.75

828 COLOR FILM ADAPTER. Makes it 2 cameras in one. Uses 828 Kodachrome film to achieve excellent portraits and other close-up shots at greater distance from subject. Telephoto effect is created; Ektar lens is about 1 1/2 times focal length of ordinary 828 cameras. 67 HN 291 T—Postpaid.....4.75

B **ROLLEIFLEX 2.8 C.** New model, made in British Zone of Germany by Franke & Heidecke, famous for fine photographic instruments. Retains all of the best features of previous models, with numerous improvements. Extra-fast Schneider f/2.8 Xenotar lens lets you shoot in poor light. Built-in counter for 35 mm. film adapter below. Interior baffled to eliminate internal reflections. Device to prevent double exposures may now be bypassed if multiple image is desired. Four new safety locks: on shutter release, flash outlet, speed and diaphragm controls. Magnifying lenses now adjustable to permit more critical focusing, on either ground glass or through eye-level finder. Takes 12 pictures 2 1/4 x 2 1/4 on 120 film, or 20 to 36 pictures on 35 mm. film, using Model 2-C Rolleikin 35 mm adapter sold below. With adapter ring for Kodak Series VI filters on Page 38.

LENS AND SHUTTER. New, 5-element coated 80 mm. f/2.8 Schneider Xenotar taking lens coupled with matched f/2.8 viewing lens. Focuses 3 1/2 ft. to infinity. Stops down to f/22. Synchro-Compur shutter has 9 speeds from 1 to 1/500-second, plus bulb. Synchronized at all speeds with No. 5 or No. 25 bulbs; (X) zero delay for strobe. European flash post. Use Rollei Flashflex below; attaches on bayonet lens mount.

OPERATING CONTROLS. Footage and shutter speed scales are visible from above. Built-in counter for 35 mm. film goes into operation automatically when 35 mm. film adapter (sold separately below) is used.

CONSTRUCTION. All metal body covered with black leather; chromed trim. Complete with leather carrying case, lens cap and cable release. 67 HN 200 LT—Postpaid. No Credit Charge. \$30 Down.....299.50

MODEL 2-C ROLLEIKIN 35 MM. ADAPTER. Permits use of 35 mm. film. 67 HN 202 T—Includes masks and spools. Postpaid.....25.80

ROLLEI MODEL 2-C FLASHFLEX (Pictured at left). Attaches quickly to viewing lens bayonet mount of Rolleiflex 2.8-C camera. Set screw locks it in place. Lightweight (only 8 oz.) with coil spring bracket which absorbs shock if unit is bumped. Gun can be removed quickly for off-the-camera lighting; coiled cable extends 3 ft., retracts to 8 in. Uses bayonet-base bulbs. Ejector discards spent bulbs. Modern battery capacitor "B-C" circuit operates efficiently for thousands of shots. Batteries often last a year. Extension outlet—three or four bulbs may be flashed simultaneously. Complete with 22 1/2-volt B-battery.

67 H 201 T—Postpaid..... 22.95

OMEGAFLASH B-C UNIT. (Rear view at right, front view on facing page.) Lets you take 6 pictures in 5 seconds. Turret holds 6 bayonet-base bulbs, revolves automatically when you operate autofilm transport to cock shutter and advance film. Extra turret (sold below) may be pre-loaded, ready to replace exhausted turret, in split seconds. Attaches and detaches quickly and easily. Folding support permits flash gun and camera, together, to be placed on flat surface when not in use. New patented capacitor circuit prolongs life of batteries; no need to replace batteries for long periods of time. Complete with 3 Penlite batteries, and one turret which holds 6 bulbs. 67 HN 264 LT—Postpaid.....49.50
67 HN 267 T—Extra turret for above. Ppd....7.50

C **OMEGA 120.** Revolutionary new camera developed and produced by Simmon Brothers, manufacturers of the well-known Omega enlargers. The Omega 120 was designed to provide sharper enlargements than any other hand-held camera on the market. The specially designed 4-element lens and extra-rigid construction, combine with an exclusive momentary pressure plate to assure maximum picture sharpness. The pressure plate moves into positive contact with the film during exposure, to insure a flat film plane, thus creating much better sharpness. After exposure, it retracts, permitting film to advance without scratches or cinch marks.

The Omega 120 takes 9 pictures, 2 1/4 x 2 3/4 in. on standard 120 roll film. This new picture size corresponds to the proportions of standard 8 x 10 and 16 x 20-in. enlarging paper. You use *all of the negative*, not just part as is the case with other sizes: Omega 2 1/4 x 2 3/4-in. negatives require only 7-diameter enlargements for a 16 x 20 print, as against a 9-diameter enlargement from 2 1/4 x 2 1/4-in. negatives... the full negative is included.

Years of research in human engineering and functional design determined the shape and size of Omega 120. The result is a camera that is as easy to hold and convenient to operate as any camera produced today. The Omega 120 is compact, lightweight, and almost completely automatic in operation.

Your left hand fits a grip-shaped handle, positioned so your index finger can trip the oversize shutter release; your right hand grips the big auto-transport knob which moves the film and cocks the shutter so that 9 shots can be taken in less than 10 seconds.

Coupled range finder is extremely accurate; magnifies 1 1/2 times to let you focus quickly. The oversize view finder automatically corrects parallax—it actually tilts as you focus.

LENS AND SHUTTER. Special, coated 4-element, 90 mm. f/3.5 Wollensack Anastigmat lens is made especially for the Simmon Co., and each one is carefully inspected by them. Focuses from 3 ft. to infinity, stops down to f/32. Rapax trigger-action shutter has 9 speeds from 1 to 1/400-second, plus bulb. Shutter release designed with a long trigger-like stroke; operates with smooth, even pressure, minimizing vibration. Oversize focusing knob has depth of field scale. Synchronized for SM or SF bulbs up to 1/100; for No. 5 bulbs up to 1/25; with (X) Zero delay for strobe up to 1/400. Standard twin-post press-type flash connection. Multiflash 6-shot Flash Gun pictured below, is recommended for Omega 120.

OPERATING CONTROLS. All controls are oversize, and so conveniently located they can even be operated while wearing gloves. Autofilm transport advances film and cocks shutter simultaneously. Film counter eliminates need for red window. Coupled range finder magnifies 1 1/2 times. Oversize view finder has true parallax correction. Double exposure prevention.

CONSTRUCTION. Housing is rugged one-piece unit cast of solid magnesium; moisture and corrosion-proof. Black crackle finish. With adjustable nylon hand and shoulder straps. Weighs 2 1/2 lbs.

67 HN 263 LT—Postpaid. No charge for credit. \$25 Down...247.50

LEATHER CASE. Genuine top-grain saddle leather. Natural tan color. Keeps camera and film together—easy to carry.

67 HN 266 T—Postpaid.....29.50

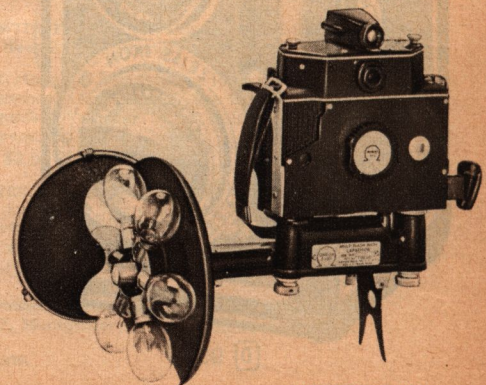
OMEGA SUNSHADE AND FILTER HOLDER. Built-in Kodak Series VI Adapter Ring accepts Series VI Filters (sold on Page 38). Hinged lens cover protects lens from damage and dust.

67 HN 2210 T—Postpaid.....9.15

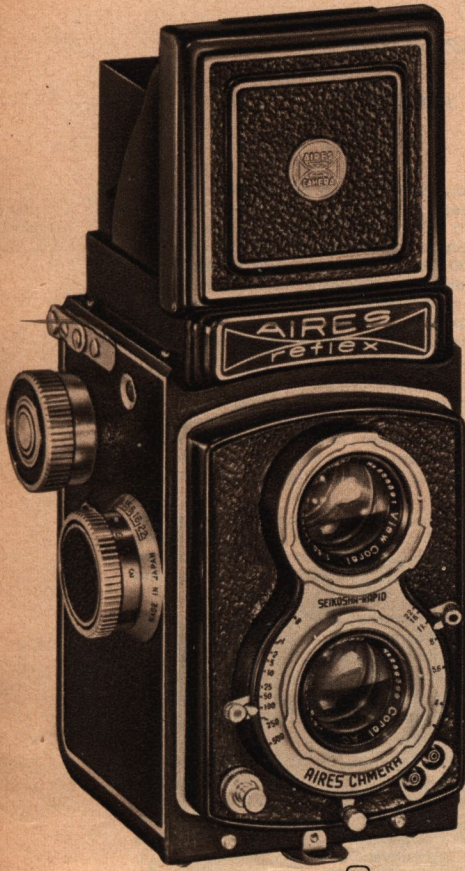
FLASH-GUIDE ATTACHMENT. Fits focusing knob, eliminates need for exposure tables. Set of 3 for popular film and bulb combinations.

67 HN 265 T—Postpaid.....10.50

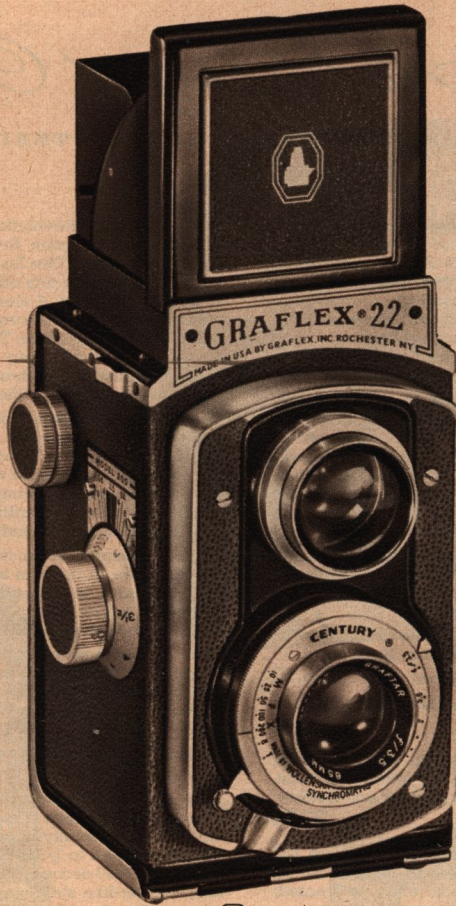
EXTRA ATTACHMENTS FOR OMEGA 120 will be made available soon. For waterproof aluminum case, close-up attachment, and cable release, write Bob Adams—see Page 93.



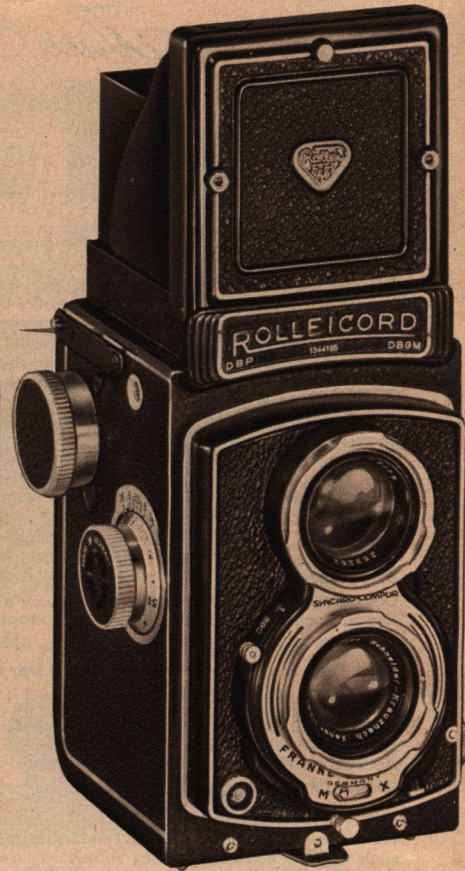
Above prices include April 1, 1954 Excise Tax Reductions



A 99.50



B 93.00



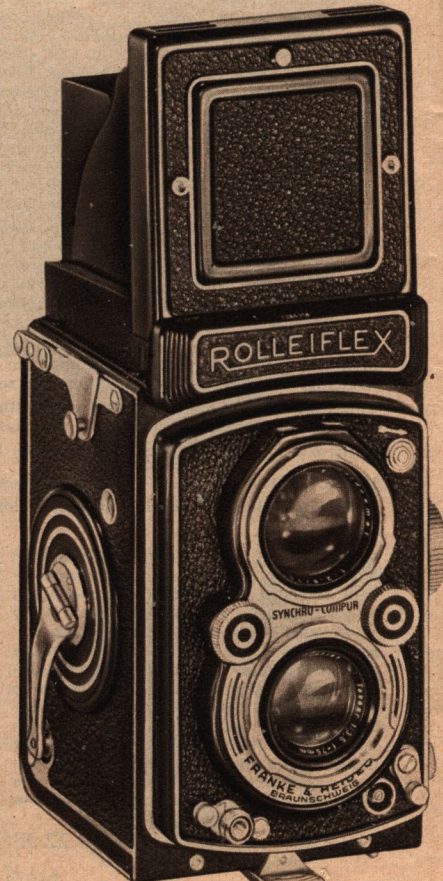
C 149.50



D 95.00



E 159.00



F 239.50

See What You Shoot with a Reflex Camera

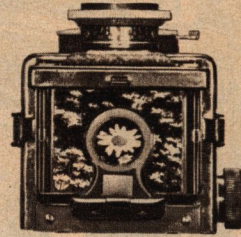
ADVANTAGES OF THE REFLEX TYPE CAMERA

BETTER COMPOSITION. No more off center or "cut off" prints—you see the picture you are going to get right in the ground glass viewer, large size, right side up.

ELIMINATES DISTANCE ERRORS. Makes guessing unnecessary. Focuses by turning knob until image is clear on ground glass. Taking lens is coupled to viewing lens. When ground glass image is in focus, your subject is in focus on taking lens.

FULL SIZE VIEWER. Actual size ground glass is full 2 1/4 by 2 1/4 inches. You can evaluate the picture before shooting it.

ECONOMICAL. Takes twelve 2 1/4x2 1/4-in. pictures—gives you more shots to a roll of film.



(A) AIRES REFLEX. Imported from Japan—a truly exceptional value—packed with quality features. This sturdily made camera will take fine pictures in black and white or color. Matched *f*/3.5 coated lenses and flash synchronized shutter assure good results.

LENS AND SHUTTER—Coated 75mm *f*/3.5 Coral anastigmat taking lens focuses from 3 ft., stops down to *f*/22. Coated *f*/3.5, coupled viewing lens. Seikoshina-Rapid shutter has speeds to 1/500 sec., plus bulb. F-X synchronized at all speeds with SM or SF bulbs, to 1/50 with #5 bulbs, and (X) zero delay for strobe. Uses flash units on page 30 with European fitting. With Adapter Ring for Kodak Series V Filters Sold on Page 38.

OPERATING CONTROLS—Self-erecting hood. Side focusing knob, depth-of-field scale. Exposure counter. Single control cocks and trips shutter. Metered film advance automatically counts exposures.

CONSTRUCTION FEATURES—All-metal body with black leather covering and chrome plated trim. Body size about 5 1/2 by 4 1/4 by 3 1/2 in. Makes twelve 2 1/4x2 1/4-in. pictures on 120 film. Removable back permits use of Rolleikin II 35 mm adapter listed at right below. Complete with de luxe leather eveready carrying case and shoulder strap.

67 H 217 LT—Ship. wt. 3 lbs. \$10 Down on Terms. or Cash 99.50

(B) GRAFLEX "22." An American-made twin-lens reflex with many features usually found only in more expensive cameras. Built-in field lens under ground glass assures brighter image, easier focusing. Flash synchronized shutter lets you take pictures indoors and at night. Convenient reflex and eye-level viewfinders.

LENS AND SHUTTER—Coated, color-corrected 85mm *f*/3.5 Graflax taking lens focuses from 3 ft., stops down to *f*/22. Coupled to *f*/3.2 viewing lens. Century flash shutter has speeds from 1/10 to 1/200, plus bulb and time. Synchronized with SF and SM lamps up to 1/100 sec. (X) zero delay for strobe. Use with flash unit sold below. Color coded to show proper flash lamp for any speed.

OPERATING CONTROLS—Viewing hood has magnifier, hinged front panel that folds down to make direct, eye-level, sports finder. Side focusing knob has scale to show area of sharpest focus.

CONSTRUCTION FEATURES—Welded steel body, silver gray leather covered, chromed trim. Size 5 1/2x3 3/4x4 1/2 in. Makes twelve 2 1/4x2 1/4-in. pictures on each roll of 120 film. Lens mount diameter 1 1/4 in. No Credit Charge these items. See Page 100 for Terms. *Postpaid*.

67 HN 213 LT—Camera only. \$9.50 Down on Terms. 93.00

67 HN 214 T—Graflex leather eveready carrying case. 9.50

GRAFLASH B-C FLASH UNIT for Graflex "22." Fits shoe on camera—no exposed wires. 5-in. reflector, bulb ejector. Extension outlet for additional lights. Gray finish matches camera. Complete with "B" battery that fires up to 4 bulbs at once—lasts up to a year.

67 HN 216 T—Order No. 5 or SM bulbs from Page 28. *Postpaid*. 10.95

(C) ROLLEICORD IV. Precision made in Germany's British Zone—by the same skilled craftsmen who make the Automatic Rollei. Has all basic Rollei features yet is moderately priced. Coated *f*/3.5 Schneider Xenar lens—exceptional for color. Fully synchronized shutter for indoor or night shots. New automatic film advance eliminates red window—automatically meters film for each exposure.

LENS AND SHUTTER—Coated *f*/3.5 Schneider Xenar, focuses from 32 in., stops down to *f*/22. Coupled *f*/3.2 viewing lens. Synchro-Compur "M-X" shutter has speeds 1 to 1/500, plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs, (X) zero delay for strobe. European fitting. Use Flashflex unit under (F) at right or one on Page 30.

OPERATING CONTROLS—Collapsible hood, front panel folds down for direct eye-level viewing. Magnifier for critical focusing. Side focusing knob has depth of field scale. Metered film advance—no red window. Single control both cocks and trips shutter. All settings visible from above—separate windows for *f*/stop and shutter speed. Automatic parallax compensation. Double exposure prevention.

CONSTRUCTION FEATURES—All metal body, black leather covered, chromed trim. Removable back permits use of Rolleikin II adapter at right for 35 mm. film. Size 5 1/4x4x3 1/2 in. Twelve 2 1/4x2 1/4-in. shots, 120 film. With adapter ring for Kodak Series V filters on pg. 38. Furnished with De Luxe Leather eveready carrying case, cable release, and lens cap. *Postpaid*.

67 HN 243 L—No Credit Charge. \$15 Down on Terms. 149.50

(D) ZEISS IKOFLEX CAMERAS. Fine twin-lens reflex cameras imported from the U.S. Zone of Germany. Precision made by expert craftsmen of Zeiss Ikon A.G. Automatic film stop provides safety lock against double exposures and blanks, Extrabrite (fresnel-type) focusing screen gives brighter image for focusing.

OPERATING CONTROLS—Self erecting hood, eye-level finder. Magnifier for critical focusing. Focusing knob has depth of field scale. Film advance locks film, turns counter. All settings visible from above. **CONSTRUCTION FEATURES—**All metal body with black leather cover and chromed trim. Size—3x3 3/4x5 1/2 in. Makes twelve 2 1/4x2 1/4-in. pictures on each roll of 120 film. Order film from Pages 67-69.

(D) IKOFLEX I-A—Lens and Shutter—Coated 75mm *f*/3.5 Novar focuses from 3 1/2 ft., stops down to *f*/16. Prontor SV "M-X" shutter has speeds of 1 to 1/300, plus bulb. Delayed action timer. Synchronized at all speeds with No. 5 or 25 bulbs, (X) zero delay for strobe. European fitting, use flash unit (A), (B), (E), (F) or (H) on Page 30. With adapter ring for Kodak Series VI filters, pg. 38. No Credit Charge.

67 HN 211 LT—Only \$9.50 Down on Terms. *Postpaid*. 95.00

67 HN 212 T—Leather eveready carrying case. *Postpaid*. 12.00

(E) IKOFLEX II-A—Lens and Shutter—Coated 75mm *f*/3.5 Zeiss Tessar focuses from 3 ft., stops down to *f*/22. Synchro-Compur "M-X" shutter has speeds from 1 to 1/500, plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs; (X) zero delay for strobe. European fitting, use flash unit (A), (B), (E), (F) or (H) on Page 30. Film advance automatically cocks shutter. Exposure guide. Window shows lens and shutter settings. With adapter ring for Kodak Series VI filters, pg. 38.

67 HN 209 LT—No Credit Charge. \$16 Down. *Postpaid*. 159.00

67 HN 210 T—Leather eveready carrying case. *Postpaid*. 16.00

(F) AUTOMATIC *f*/3.5 ROLLEIFLEX. Precision made in British Zone of Germany. Preferred by most national magazine illustrators for versatility speed and ease of operation. Coated *f*/3.5 Zeiss Tessar lens. Finder permits reflex viewing and focusing from waist or eye level.

LENS AND SHUTTER—Coated 75mm *f*/3.5 Zeiss Tessar taking lens focuses from 2 ft. 8 in., stops down to *f*/22. Coupled viewing lens is coated *f*/2.8 to assure bright image. Synchro-Compur M-X shutter has speeds from 1 to 1/500, plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs, (X) zero delay for strobe. European fitting, use Flashflex unit below or others on Page 30.

OPERATING CONTROLS—Collapsible hood has built-in magnifier that covers entire focusing area. Special mirror adjusts for eye-level reflex viewing and focusing, while hinged front in hood folds down for direct eye-level viewing. Lever on side winds and positions film automatically, cocks the shutter at the same time. Side focusing knob has depth of field scale. All settings visible from above.

CONSTRUCTION FEATURES—All-metal, black leather covered, chromed trim. Removable back permits use of Rolleikin adapter for 35mm film. Size 5 1/2x3 3/4x3 3/4 in. Twelve 2 1/4x2 1/4-in. shots on 120 film. With adapter ring for Kodak Series V filters on page 38. With leather eveready case, cable release, lens cap. *Postpaid*.

67 HN 226 LT—No Credit Charge. \$24 Down on Terms. 239.50

67 HN 229 LT—AUTOMATIC ROLLEIFLEX with Schneider Xenar *f*/3.5 lens. *Postpaid*. 219.50

AUTOMATIC ROLLEIFLEX WITH *f*/2.8 LENS. This latest addition to the Rollei line is listed and described separately on Page 11.

ROLLEI B-C FLASHFLEX UNIT. Model *f*/3.5 pictured on Page 11. Flexible, shockproof spring mount attaches to Rolleiflex *f*/3.5 or Rolleicord bayonet lens mount. Detaches quickly. Extension outlet, bulb ejector. With B-C battery—lasts up to a year. No Credit Charge.

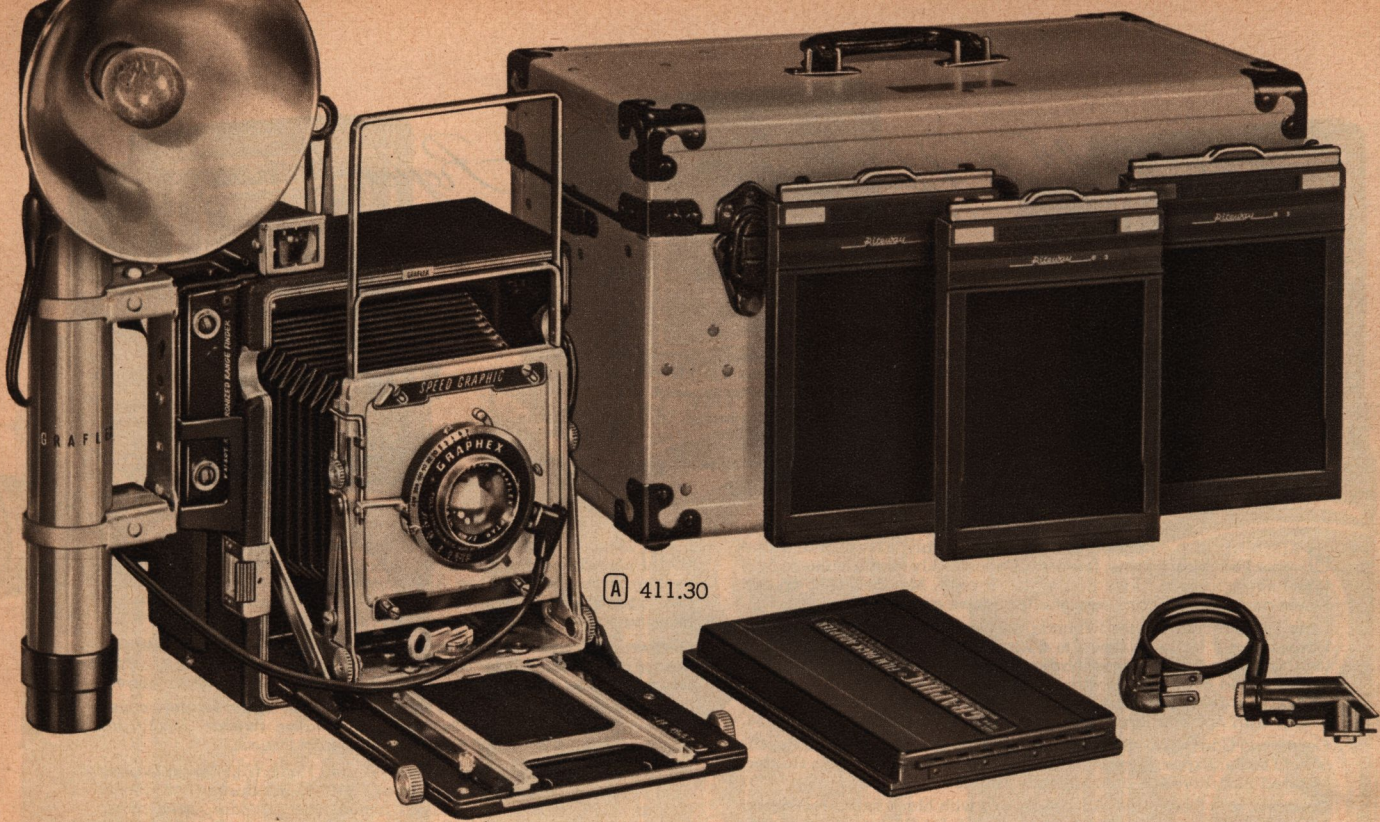
67 HN 215—*Postpaid*. Only \$2.50 Down on Terms. 22.95

ROLLEIKIN II 35MM ADAPTER. Complete kit readily converts your Rolleiflex *f*/3.5 or Rolleicord for taking 35mm pictures in color or black and white. Metered film advance automatically counts exposures. Masks for reflex and direct eye-level viewfinders are included.

67 HN 203 LT—*Postpaid*. No Credit Charge. \$4 Down on Terms. 35.78

NOTICE: For Rollei backs, lenses, filters, and other accessories, write Bob Adams, Department 67, Montgomery Ward, Chicago 7, Illinois.

NOTICE: Above Prices Include April 1, 1954 Excise Tax Reductions.



(A) 411.30

Complete Speed Graphic Outfits Plus

PACEMAKER SPEED AND CROWN GRAPHIC CAMERAS

These standard working press cameras come with a large variety of lens, shutter, and flash combinations, plus a full line of accessories.

All feature the Graflok back which permits the use of Graphic film pack adapters and Graphic film holders. It can be removed to attach accessory Roll Film Holder and, for 4x5 models, the Polaroid Land Back (E) on opposite page). Ektalite field lens for brighter ground glass image is standard equipment on 4 by 5 models. All taking lenses are coated anastigmats.

Choice of front shutters: No. 2 Graphex, speeds from 1 to 1/400; or No. 3 Graphex, speeds from 1 to 1/200; or Synchro-Rapid "800", speeds from 1 to 1/800 (all the above are fully synchronized at all speeds with class M bulbs, "X" setting for strobe); or No. 2 Supermatic X, speeds from 1 to 1/400, for use with strobe. If you wish to use flash bulbs with Supermatic shutter, order model with factory installed Graflite synchronizing unit with solenoid, or order unit (C) separately from opposite page. Cameras with fully synchronized shutters are available with factory installed Graflite flashing unit, or order unit (C) separately from opposite page.

Camera body of Honduras mahogany, reinforced with aluminum and stainless steel. Black, vinyl fabric covering has metal bound edges. No Credit charge on Graphic Cameras. See Pg. 100 for Terms.

SPEED GRAPHICS have (1) a rising and laterally shifting front board to correct distortion; (2) drop bed that gives unobstructed field for wide angle lenses; (3) focal plane shutter synchronized for flash up to 1/1000 second; (4) interchangeable metal lensboard; (5) parallax correcting viewfinder; (6) durable, double extension bellows; (7) body shutter release.

PACEMAKER CROWN GRAPHICS are the medium-priced cameras in the Graphic line. They have all Speed Graphic features except the focal plane shutter.

(A) **OUTFIT NO. 1.** Includes choice of Pacemaker 4 by 5 Speed Graphic or Crown Graphic with fully synchronized Graphex shutter; Graflite 3-cell Flashing Unit with 5-in. reflector ((C) on opposite page), installed, with bracket, cord, and batteries; Kalart No. 6 Focuspot ((D) on opposite page); Kalart E-6 coupled Rangefinder installed; three 4x5 Riteway cut film holders; one 4x5 Graphic Film Pack Adapter; and a 4 by 5 Model Vulcanoid Handi-Case (described on opposite page). No Credit Charge. *Postpaid.*

67 HN 400LT—(shown). Outfit with 4x5 Speed Graphic, 135mm f/4.7 Graflex Optar (lens mount diam. 1½ in.), No. 2 Graphex shutter..... 411.30
 67 HN 402LT—As above, but with 4x5 Crown Graphic..... 367.30
 67 HN 406LT—Complete Outfit with 4x5 Speed Graphic with 162mm f/4.5 Graflex Optar (lens mount diam. 1¾ in.), No. 3 Graphex shutter. 433.80
 67 HN 412LT—As above, but with 4 by 5 Crown Graphic..... 389.80

OUTFIT NO. 2 (not shown). Includes choice of 4 by 5 Pacemaker Speed or Crown Graphic plus other accessories as above, but with No. 2 Supermatic (X) shutter and Graflite 3-cell Synchronizing Unit with 5-inch reflector, solenoid and bracket installed, cord, and batteries. No Credit Charge.

67 HN 404LT—Complete Outfit with Pacemaker Speed Graphic with 127mm f/4.7 Ektar (lens mount diameter 1½ in.). *Postpaid.*..... 408.20
 67 HN 405LT—As above, but with 4 by 5 Crown Graphic. *Postpaid.* 364.20

4 BY 5 PACEMAKER SPEED AND CROWN GRAPHIC CAMERAS. With one 4x5 Riteway cut film holder. Speed Graphic size overall 7½x8x4½ in., weight about 5 lbs. 7 oz. Crown Graphic size overall 8½x7¼x4 in., weight about 4 lbs. 3 oz. No Credit Charge on these cameras. See Page 100 for Terms.

67 HN 413LT—Speed Graphic with 135mm f/4.7 Graflex Optar (lens mount diameter 1½ in.), in fully synchronized No. 2 Graphex shutter, with Kalart E-6 Rangefinder installed. *Postpaid.*..... 331.45

67 HN 419LT—As above, but with Crown Graphic. *Postpaid.*..... 287.45

67 HN 420LT—Same Speed Graphic as described under 67 HN 413, with Kalart E-6 Rangefinder, plus 3-cell Graflite Flashing Unit with 5-inch reflector, installed. Batteries included. *Postpaid.*..... 359.85

67 HN 421LT—As above, but with Crown Graphic. *Postpaid.*..... 315.85

67 HN 410LT—Speed Graphic with 127mm f/4.7 Ektar (lens mount diameter 1½ in.), in No. 2 Supermatic (X) shutter. *Postpaid.*..... 280.50

67 HN 422LT—As above, but with Crown Graphic. *Postpaid.*..... 236.50

67 HN 411LT—Same Speed Graphic as described under 67 HN 410, plus Kalart E-6 Rangefinder installed. *Postpaid.*..... 313.45

67 HN 423LT—As above, but with Crown Graphic. *Postpaid.*..... 269.45

67 HN 430LT—Same Speed Graphic as described under 67 HN 410, with Kalart E-6 Rangefinder, plus 3-cell, 5-inch reflector Graflite Synchronizing Unit with solenoid installed. Batteries included. *Postpaid.* 356.75

67 HN 433LT—As above, but with Crown Graphic. *Postpaid.*..... 312.75

67 HN 424LT—Speed Graphic with 162mm f/4.5 Graflex Optar (lens mount diameter 1¾ in.), in fully synchronized No. 3 Graphex shutter, with Kalart E-6 Rangefinder installed. *Postpaid.*..... 353.95

67 HN 425LT—As above, but with Crown Graphic. *Postpaid.*..... 309.95

67 HN 426LT—Same Speed Graphic as described under 67 HN 424 with Kalart E-6 Rangefinder, plus 3-cell Graflite Flashing Unit with 5-inch reflector, installed. Batteries included. *Postpaid.*..... 382.35

67 HN 427LT—As above, but with Crown Graphic. *Postpaid.*..... 338.35

2¼ BY 3¼ PACEMAKER SPEED AND CROWN GRAPHIC CAMERAS. With one 2¼x3¼ Graphic cut film holder. Speed Graphic size about 7x6¼x4 in., weight about 3 lbs. 11 oz. Crown Graphic size about 7x5½x3 in., weight about 3 lbs. No Credit Charge on these cameras. See Page 100 for Terms.

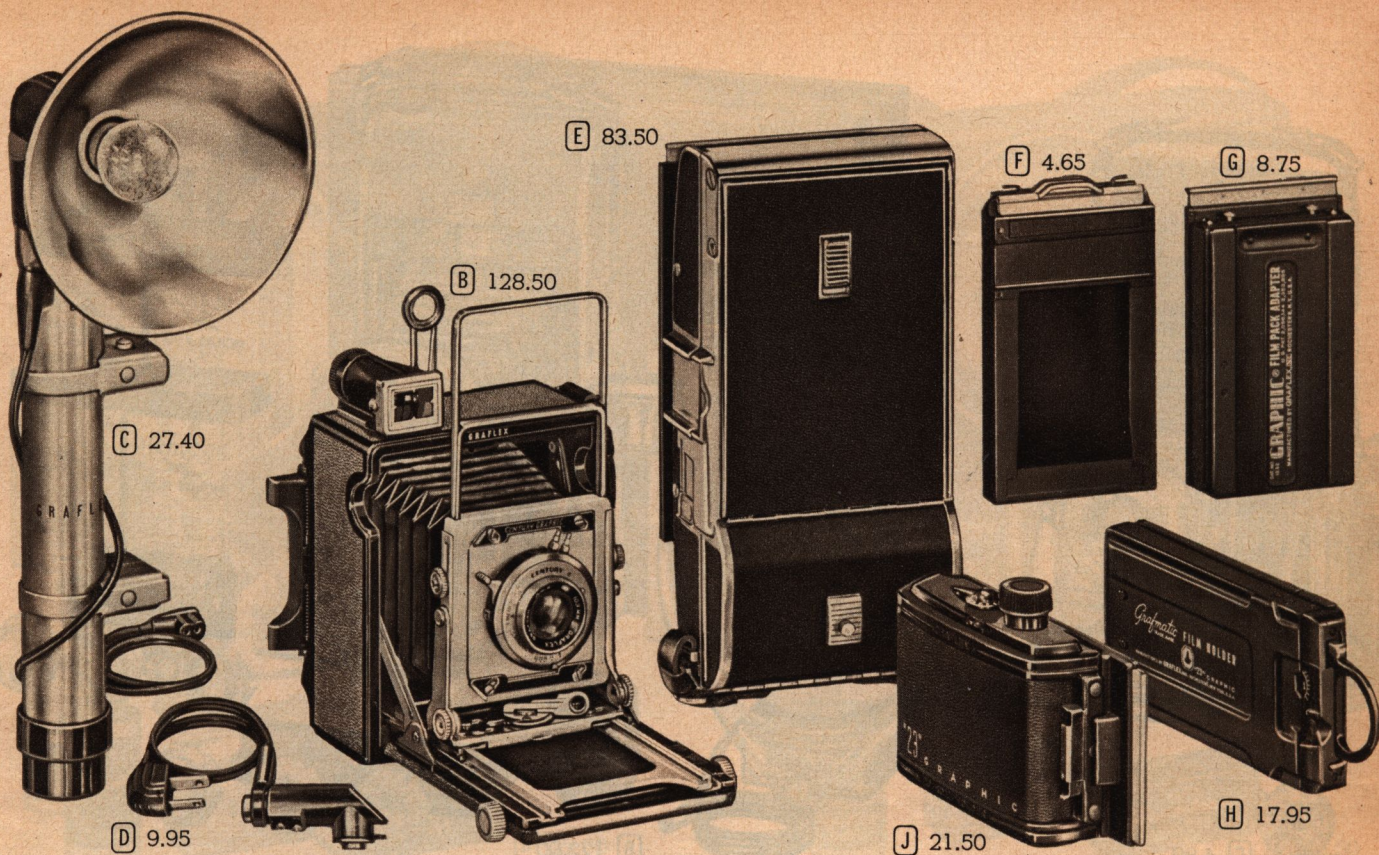
67 HN 403LT—Speed Graphic with 101mm f/4.5 Ektar (with adapter ring for Series V filters, pg. 38), in fully synchronized Synchro-Rapid "800" shutter, with Kalart E-6 Rangefinder installed. *Postpaid.*..... 329.90

67 HN 432LT—As above, but with Crown Graphic. *Postpaid.*..... 292.40

67 HN 435LT—Same Speed Graphic as described under 67 HN 403, with Kalart E-6 Rangefinder, plus 2-cell Graflite Flashing Unit with 5-inch reflector, installed. Batteries included. *Postpaid.*..... 356.15

67 HN 436LT—As above, but with Crown Graphic. *Postpaid.*..... 318.65

NOTE: There are many other lens and shutter combinations which, due to limited space, cannot be listed. For these combinations, other accessories, and factory installation of Graflite Units, write to Bob Adams, see Page 93.



Separate Cameras and Accessories

B NEW 1954 MODEL CENTURY GRAPHIC CAMERAS. Basic $2\frac{1}{4}\times 3\frac{1}{4}$ Graphic with Graflok back. Choice of coated $f/4.5$ Ektar in Synchro-Rapid "800"—speeds from 1 to 1/800, fully synchronized at all speeds for Class M bulbs, "X" setting for strobe; or coated $f/4.5$ Graflex in Century shutter—speeds from 1/10 to 1/200, synchronized to 1/100 with SM or SF bulbs, (X) Zero delay for strobe. Has most Graphic features except focal plane shutter and body release. Durable molded plastic body $7\times 5\times 3$ inches. No Credit Charge. Ppd.

67 HN 444 LT—With 103 mm $f/4.5$ Graflex (lens mount diameter $1\frac{1}{4}$ in.), Century shutter, one $2\frac{1}{4}\times 3\frac{1}{4}$ Graphic cut film holder.....128.50

67 HN 445 LT—Above with 120 roll film holder (no cut film holder)...145.35

67 HN 446 LT—Same as 67 HN 444 but without tubular finder.....121.50

67 HN 447 LT—Same as 67 HN 444, plus Kalart Rangefinder installed.164.75

67 HN 448 LT—With 101mm $f/4.5$ Ektar (with adapter ring for Series V filters, pg. 38), in fully synchronized Kodak Synchro-Rapid "800" shutter, one Graphic $2\frac{1}{4}\times 3\frac{1}{4}$ cut film holder. Postpaid.....202.15

C GRAFLITE FLASH GUNS. For Graphic Cameras. Aluminum 3-cell battery case has outlets for remote control, side lighting units, solenoid, synchronized shutters and Focuspot. Bulb ejector. Testlite. With batteries, mounting bracket, connecting cord, and instructions. 5-inch reflectors make wide or narrow beam, use bayonet base bulbs. State make, model, and size of camera, type of lens and shutter, model of Rangefinder and type of synchronized shutter fitting. For factory installation, write Bob Adams, see Page 93.

GRAFLITE FLASHING UNIT (shown). For ASA, European, or Twin Post (Press Type) synchronized shutter fittings (like (2), (3) and (4), Page 31), and synchronized focal plane shutters on Graflex and Graphic cameras.

67 HN 3283 T—Postpaid. \$3 Down. Specify make, model, etc.....27.40

GRAFLITE SYNCHRONIZING UNIT. With solenoid. For front shutters on Graphic cameras. With cord for synchronized back shutter on speed Graphics.

67 HN 3282 T—Postpaid. \$4.50 Down. Specify make, model, etc.....40.80

67 HN 3214 T—GRAFLITE SIDE LIGHTING UNIT. Plugs into Graflite above. Swivel head, spring clamp. With 5-in. reflector. Postpaid.....19.95

GRAFLITE FLASH REFLECTORS. Fit Graflite battery cases and the side lighting unit listed above. Postpaid.

67 HN 3213 T—7 inch. For medium screw base bulbs.....5.95

67 HN 3212 T—5 inch. For bayonet base bulbs.....5.95

D KALART FOCUSPOT. For focusing in dark or dim light. Projects twin beams of light through Kalart rangefinder—when beams converge on subject, camera is in focus. With cord to fit Graflite or Graflex flashgun.

67 HN 2184 T—State Graflite or Graflex model. Postpaid.....9.95

E POLAROID LAND BACK. Converts 4 by 5 Graphics with Graflok backs for "pictures-in-a-minute," see Page 16. With complete instructions. Order special Land Film, Pg. 16. Black artificial leather cover matches camera.

67 HN 297 LT—No Credit Charge. Postpaid.....83.50

67 HN 298 LT—Focusing Panel for Polaroid Back above. Takes place of ground glass so you focus in same plane as film. Postpaid.....13.95

E 83.50

B 128.50

C 27.40

D 9.95

F 4.65

G 8.75

J 21.50

H 17.95

F GRAPHIC SHEET FILM HOLDERS. Made by Graflex. For cameras with Graphic or Graflok backs. Each holds 2 sheets. Postpaid.

67 HN 251 T—For $2\frac{1}{4}\times 3\frac{1}{4}$4.65; 67 HN 255 T—For $3\frac{1}{4}\times 4\frac{1}{4}$4.75

67 HN 261 T—4x5 Riteway Holder. Lighter, thinner, faster loading...4.80

G GRAPHIC FILM PACK ADAPTERS. Made by Graflex. For Graphic or Graflok back cameras. Hold compact 12-sheet film packs.

67 HN 252 T—For $2\frac{1}{4}\times 3\frac{1}{4}$ cameras. Postpaid.....8.75

67 HN 256 T—For $3\frac{1}{4}\times 4\frac{1}{4}$ cameras. Postpaid.....9.75

67 HN 262 T—For 4x5 cameras. Postpaid.....9.95

H GRAFMATIC FILM HOLDER. Compact 6-sheet cut film magazine for $2\frac{1}{4}\times 3\frac{1}{4}$ and 4x5 Pacemaker Graphics. Precision-made to assure flat film plane. Film loads easily into individual septums. Permits selective loading and processing—shoot and develop one at a time if you wish. Quick "push-pull" changes film. Automatic film counter.

67 HN 275 T—For $2\frac{1}{4}\times 3\frac{1}{4}$ cameras. No Credit Charge. Postpaid.....17.95

67 HN 268 T—For 4x5 Pacemaker Graphics. As above but has built-in film numbering device. No Credit Charge. Postpaid.....24.95

J ROLL FILM HOLDER. Made by Graflex. For shooting economical 120 roll film in Graphic or Graflex cameras. Automatic film metering device. Safety slide lets you remove holder before roll is finished. Graflex cameras have Graflok back; Pacemaker cameras have Graflok back. Models for Graphic back cameras have accessory spring kit to fasten roll holder on camera in place of camera's focusing panel. Postpaid.

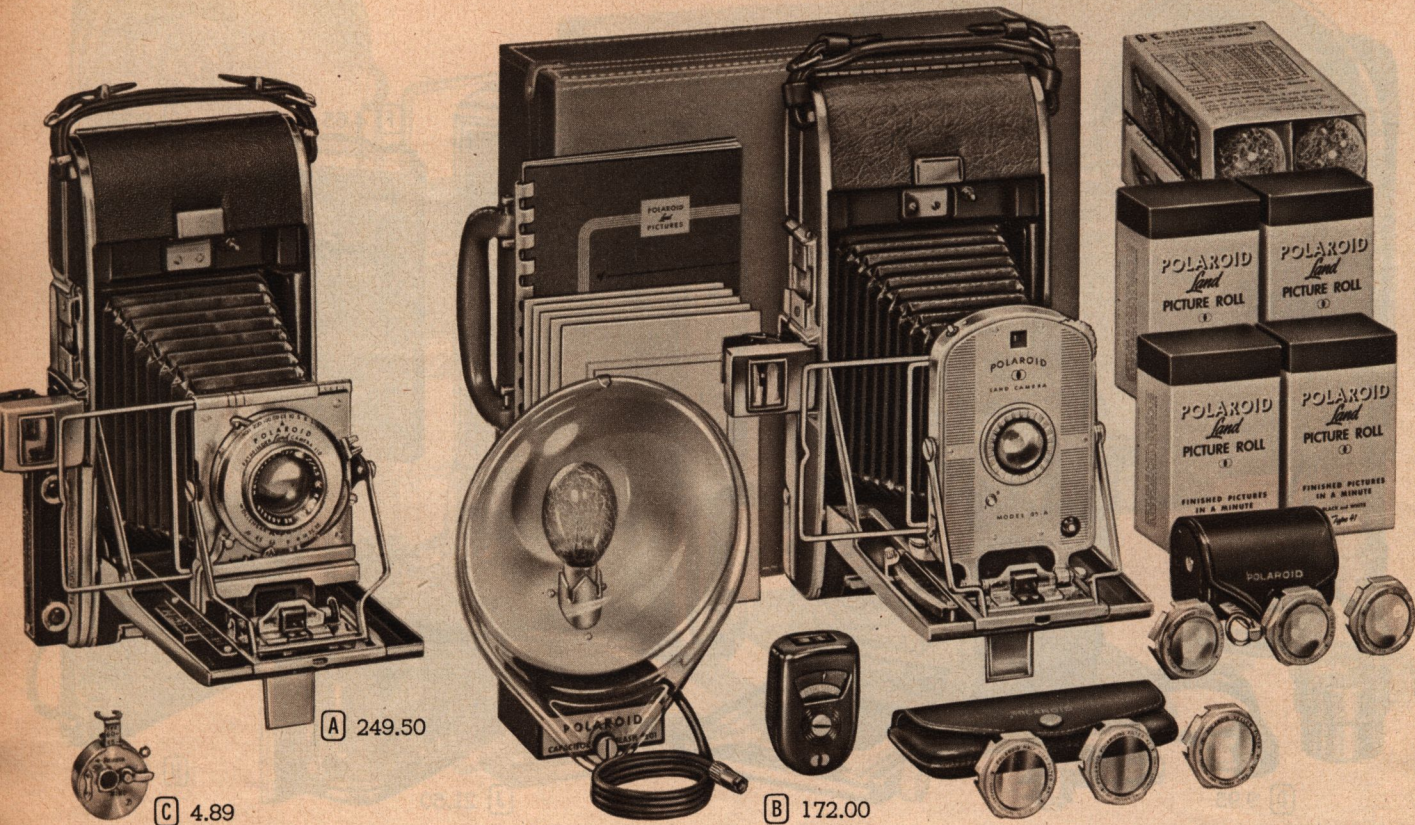
Catalog Number	Picture Size	Camera Size	Type of Back	Price
67 HN 286T	$2\frac{1}{4}\times 3\frac{1}{4}$	$2\frac{1}{4}\times 3\frac{1}{4}$	Graflok	\$21.50
67 HN 287T	$2\frac{1}{4}\times 2\frac{1}{4}$	$2\frac{1}{4}\times 3\frac{1}{4}$	Graflok	21.50
67 HN 272T	$2\frac{1}{4}\times 3\frac{1}{4}$	$2\frac{1}{4}\times 3\frac{1}{4}$	Graflex	21.50
67 HN 273T	$2\frac{1}{4}\times 2\frac{1}{4}$	$2\frac{1}{4}\times 3\frac{1}{4}$	Graflex	21.50
67 HN 441T	$2\frac{1}{4}\times 3\frac{1}{4}$	$2\frac{1}{4}\times 3\frac{1}{4}$	Graphic	23.05
67 HN 440T	$2\frac{1}{4}\times 2\frac{1}{4}$	$2\frac{1}{4}\times 3\frac{1}{4}$	Graphic	23.05
67 HN 276T	$2\frac{1}{4}\times 3\frac{1}{4}$	4x5	Graflok	23.95
67 HN 277T	$2\frac{1}{4}\times 2\frac{1}{4}$	4x5	Graflok	23.95
67 HN 278T	$2\frac{1}{4}\times 3\frac{1}{4}$	4x5	Graflex	23.95
67 HN 279T	$2\frac{1}{4}\times 2\frac{1}{4}$	4x5	Graflex	23.95
67 HN 443T	$2\frac{1}{4}\times 3\frac{1}{4}$	4x5	Graphic	25.50
67 HN 442T	$2\frac{1}{4}\times 2\frac{1}{4}$	4x5	Graphic	25.50

GRAFLITE VULCANOID HANDI-CASE (shown in Outfit (A) on opposite page). Extremely durable hard fiber case that will take rough use. Holds all Graphic cameras with rangefinder attached, extra lenses, flash gun, up to 12 film holders, plus flash bulbs and other accessories.

67 HN 293 T—For $2\frac{1}{4}\times 3\frac{1}{4}$ Graphics. No Credit Charge. Postpaid....19.95

67 HN 294 T—For $3\frac{1}{4}\times 4\frac{1}{4}$ Graphics. No Credit Charge. Postpaid....20.95

67 HN 299 T—For 4x5 Graphics. No Credit Charge. Postpaid.....21.95



Four Complete Camera Outfits That Come

A POLAROID PATHFINDER CAMERA. Model 110. Professional-type picture-in-a-minute camera. Fast lens and shutter lets you take professional quality pictures and stop fast action.

LENS—Coated f/4.5 Wollensak Raptar anastigmat stops down to $1/32$, focuses from 3 feet. **SHUTTER**—Wollensak Rapax with nine speeds from 1 to $1/400$ sec., plus time and bulb. Synchronized at all speeds with No. 5 or No. 25 bulbs; use flash unit below. (X) zero delay for strobe. **VIEWFINDER**—Combined optical and open frame sports type. **RANGEFINDER**—Coupled Kalart for sharp pictures from 3 ft. to inf. **OPERATING CONTROLS**—Large focusing knob. Body clip holds light meter or flash unit. **CONSTRUCTION**—All-metal, leather covered body. Brushed chromed trim. Size closed about $5\frac{1}{2} \times 9\frac{1}{2} \times 3$ in. Act. wt. 4 lbs. 6 oz. Lens mount diameter $1\frac{1}{2}$ in. Order film below. No Credit Charge. \$25 Down.

67 HN 173 LT—Postpaid. 249.50

PATHFINDER B-C FLASH UNIT. Fits Model No. 110 camera clip. Built-in safety shield. Powerful B-C circuit—battery life about one year.

67 HN 175 T—With battery. Postpaid. 19.95

NEW POLAROID 1954 LAND CAMERA. Speedliner Model 95-A. Picture-in-a-minute camera. An improved model with easier "drop-in" loading; has faster lens and new viewfinder as added features. Single dial controls lens and shutter makes picture taking easy. Easy to shoot indoors and at night with plug-in flash units at right.

LENS AND SHUTTER—Easy-to-use because both are controlled by a single dial. Coated anastigmat lens focuses from $3\frac{1}{2}$ ft. Synchronized with No. 5 or 25 bulbs, flash unit at right. **VIEWFINDER**—New optical and open frame sports finder. **CONTROLS**—Large quick-focusing lever. Body clip for light meter or flash unit. **CONSTRUCTION**—All-metal body with brown artificial leather cover, brushed chromed trim. Size closed, $4\frac{1}{2} \times 9\frac{1}{2} \times 2\frac{1}{2}$ in. Act. wt. 4 lbs. 2 oz. Takes filter and close-up lens kits at right. No Credit Charge.

67 HN 177 L—\$9 Down on Terms. Postpaid 89.75

POLAROID FILM. Each roll makes 8 finished black and white prints. Picture size is $3\frac{1}{4}$ by $4\frac{1}{4}$ inches with deckle edges. Ideal for album mounting.

67 HN 1632—Postpaid. Each roll 1.75

16 WARDS 2

B Start shooting and enjoying your pictures right away with this complete outfit. You see the finished print in only one minute—if it isn't just the way you want, shoot again immediately. Contains only genuine Polaroid items—no low-priced substitutes.

The outfit includes new Model 95-A Polaroid picture-in-a-minute camera; Polaroid B-C flash unit (67 HN 3254 below) for indoor or night shots; close-up lens and filter kits for close-ups, cloud effects, and general picture improvement; G.E., light meter to make every shot count; four rolls of

POLAROID FLASH UNITS for Model 95 or 95-A. Choice of battery or long life B-C (battery capacitor) type. Both snap into accessory clip, have shutter cord with ASA connector. Parabolic reflectors have bulb ejector and easy-to-use exposure guide on back. Test lamp and plastic flash shield are built-in. All metal construction, russet crackle finish matches camera. Order No. 5 or No. 25 bulbs, Page 28. No Credit Charge. Postpaid.

67 HN 3253—Standard Type. Has all features listed above. With batteries. 11.00

67 HN 3254—B-C (battery-capacitor) Type. Shown in outfit above. Has all features listed for standard plus: special battery which lasts about one year. Assures perfect flash synchronization if camera has been idle. 17.25

LIGHT METER. Made by GE for both Polaroid cameras. Assures you of good pictures every time. Reads directly to indicate proper exposure simply. Fits camera accessory clip.

67 HN 2196—Postpaid. 14.25

67 HN 2197—METER CASE (not shown). Top-grain cowhide. Fits on camera strap. Pstpd. 1.50

C "PHOTO CLIP" TIMER for timing your Polaroid Land pictures. Adjustable for any length of time from 0 to 60 seconds. Will also fit the cable release for delayed action snapshots—allows you to snap camera shutter and then get in the picture yourself.

67 H 2189—Shipping weight 1 lb. 4.89

67 HN 171L—\$17.50 Down on Terms. . . . 172.00

ORIGINAL POLAROID COMPARTMENT CASES. Partitioned for camera, flash, accessories, film and bulbs. Opens flat. Soft inner lining—reinforced with metal corners and rivets at points of strain. With handle. Brown color.

67 HN 172 L—STANDARD, for Model 95 or 95-A. Durable Neolite—wears longer. Postpaid. 29.75

67 HN 174 LT—DE LUXE, for Model 110 Pathfinder. Top grain cowhide, shoulder strap. Postpaid. 33.50

67 HN 151—CARRYING CASE (not shown). Top grain cowhide. Holds Model 95 or 95-A, 2 rolls of film. Pocket for finished pictures. Postpaid. 14.95

POLAROID FILTER KIT. For model 95 or 95-A Camera. Add to your picture taking potential. Three filters: polarizing filter eliminates reflections from water, glass, and similar items; haze filter cuts out haze and brings out clouds; half-stop neutral filter for precise exposure between shutter numbers.

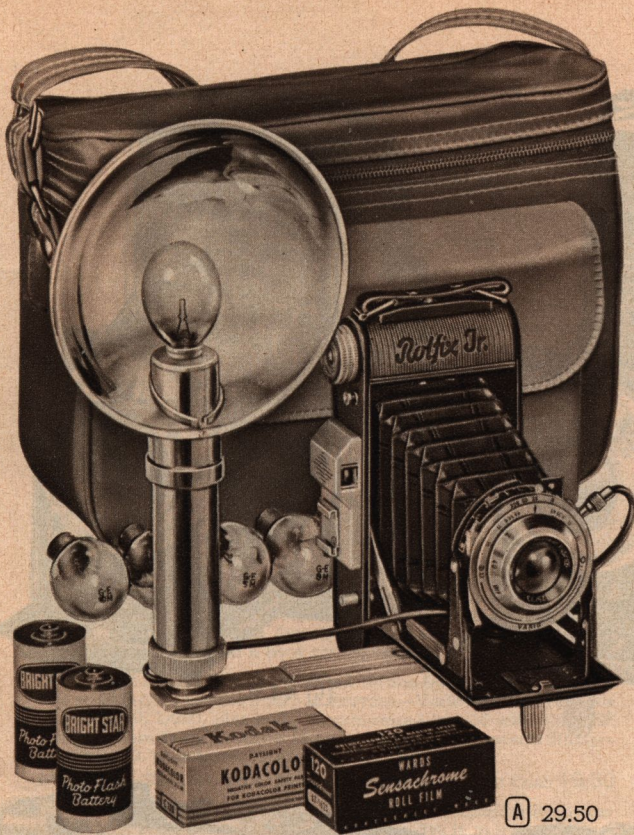
67 HN 2406—In leather case. Postpaid. . . . 5.95

CLOSE-UP LENS KIT. For Model 95 or 95-A Camera. Three lenses, plus 1, 2, and 3, for taking extreme closeups. With steel measuring tape with all settings and distances on it. Snap over lens mount.

67 HN 2407—In leather case. Postpaid. . . . 8.95

POCKET ALBUM FOR POLAROID PRINTS. Has 8 pages with slip-in mounts for 16 prints. Heavy paper cover. Size about $4\frac{1}{2} \times 4\frac{1}{2}$ inches.

67 HN 6049—Postpaid. Two for 98.00



A 29.50



C 46.50

Ready to Take Big, Album-Size Pictures

A DE LUXE ROLFIX JR. OUTFIT. Excellent value in a complete camera outfit that includes everything you need to take black and white or color pictures right away. This Rolfix outfit is exclusive at Wards—combines matched accessories to give fine pictures of high quality.

The Rolfix Jr. camera has fast coated lens and synchronized shutter. Precision made by skilled craftsmen in the U.S. Zone of Germany. LENS— $f/4.5$ coated 105mm Frankar anastigmat, stops down to $f/32$, focuses from 5 ft. to infinity. SHUTTER—Vario flash shutter has speeds of $1/25$, $1/50$, and $1/200$ plus bulb. Flash synchronized to $1/50$ with SM or SF bulbs. CONSTRUCTION—Removable mask lets you choose between eight $2\frac{1}{4} \times 3\frac{1}{4}$ -in. or twelve $2\frac{1}{4} \times 2\frac{1}{4}$ -in. pictures on each roll of 120 film. Cable release socket, tripod socket. Eye-level viewfinder. All-metal body with artificial leather covering, satin chromed trim. Size about 6 by 4 by $1\frac{1}{2}$ inches. Actual weight 1 lb. Lens mount diameter $1\frac{1}{4}$ in. This camera is listed and described separately on Page 19.

Included with camera are: German-made Widina flash unit for indoor or night shots; 8 SM flash bulbs; one roll of black and white Wards Sensachrome film; one roll of Kodacolor film for color pictures; and a sturdy plastic gadget bag to carry the complete outfit and any other accessories you may have. Order extra 120 film from Pages 67-69, SM bulbs from Page 28.

67 H 138 L—Complete outfit. Ship. wt. 3 lbs. \$3 Dn., or Cash 29.50

BROKEN FLASH BULB HINT

Sometimes a flash bulb may break when taken from the flashgun. To remove the broken base without cutting yourself, try forcing a cork over the protruding ends. This will provide a firm grip for your fingers.

B DE LUXE ROLFIX I OUTFIT. An outstanding value. Exclusive at Wards, the Rolfix outfit is matched to give you top quality in black and white or color pictures.

The Rolfix I camera is precision-engineered in the U.S. Zone of Germany with all the skill of fine camera craftsmen. LENS—Fast $f/4.5$ coated 105mm Schneider Radionar anastigmat, stops down to $f/32$, focuses from $3\frac{1}{2}$ feet to infinity. SHUTTER—Prontor SV "M-X" with speeds from 1 to $1/250$ second plus bulb. Flash synchronized at all speeds with No. 5 or No. 25 flash bulbs. (X) zero delay for strobe. CONSTRUCTION—Removable mask lets you shoot eight $2\frac{1}{4} \times 3\frac{1}{4}$ -in. or twelve $2\frac{1}{4} \times 2\frac{1}{4}$ -in. pictures on each roll of 120 film. Delayed action timer lets you snap shutter and get into the picture yourself. Optical type eye-level viewfinder. Tripod socket. Accessory clip. All metal body with artificial leather covering, satin chromed finish. Size about 6 by 4 by $1\frac{1}{2}$ inches. Actual weight 1 lb. Lens mount diameter $1\frac{1}{4}$ in. The Rolfix I camera is listed and described separately on Page 19.

In addition, you receive: an imported, German-made Widina flash unit and Widor rangefinder for sharp prints every time—fits camera accessory clip, matches trim—accurate to 2 ft.; batteries; eight No. 5 flash bulbs for pictures indoors or at night; one roll of 120 Wards Sensachrome black and white film. Order extra 120 film from Pages 67-69, No. 5 bulbs Page 28.

67 H 139 L—Complete outfit. Ship. wt. 3 lbs. \$4 Dn. or Cash 36.50

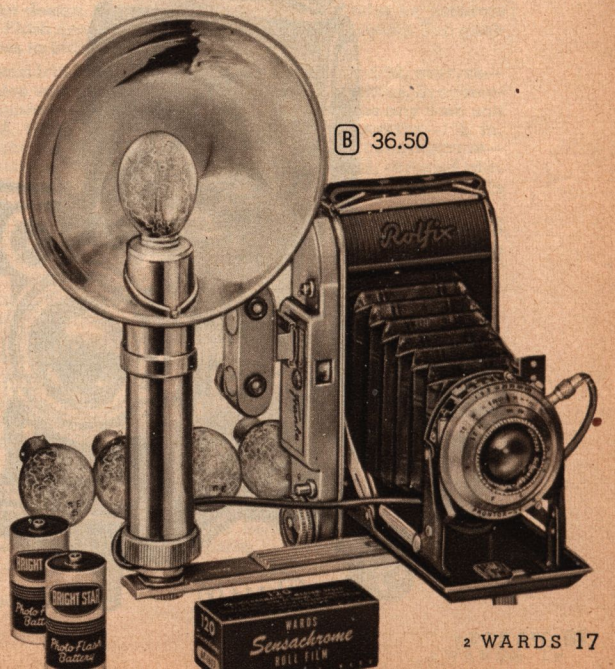
SAVING UNDEREXPOSED SLIDES

Dark color slides can sometimes be saved by soaking in a solution of 1 part household bleach and 32 parts water. Don't let reduction go too far. Stop action by washing in water. Average reduction time is about five minutes.

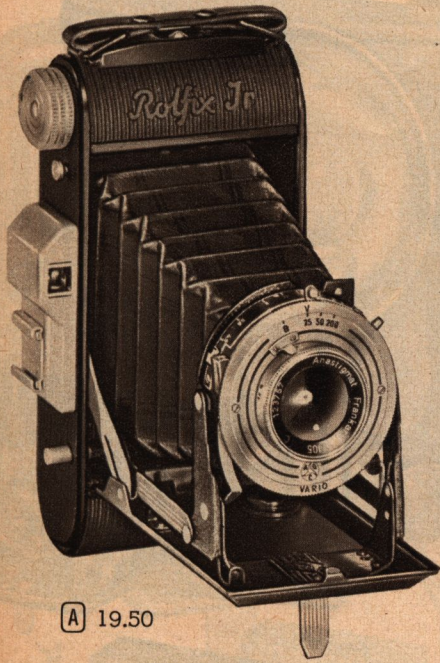
C SOLIDA CAMERA OUTFIT. Complete outfit for top quality pictures. Includes the Solida camera—precision made and imported from the U.S. Zone of Germany. LENS—Fast $f/3.5$ coated 75mm Enagon anastigmat, stops down to $f/22$, focuses from $3\frac{1}{2}$ ft. to infinity. SHUTTER—Prontor SV "M-X" with speeds from 1 to $1/300$ sec., plus bulb. Fully synchronized at all speeds with No. 5 or No. 25 bulbs, (X) zero delay for strobe. Delayed action timer, cable release socket. The Solida is described and sold separately on Page 19.

In addition, you receive: The German-made Widina flash unit and Widor rangefinder—focuses from 2 ft. for sharp pictures—matches camera, fits accessory clip; two batteries and twelve GE No. 5 flash bulbs; one roll of Wards Sensachrome black and white film; one roll of Kodacolor color film; Kodak Master Kodaguide; and Texon plastic gadget bag (67H3315 on 34). Takes twelve $2\frac{1}{4} \times 2\frac{1}{4}$ -in. Pictures on 120 film. Order extra film from Pages 67-69, No. 5 bulbs Page 28.

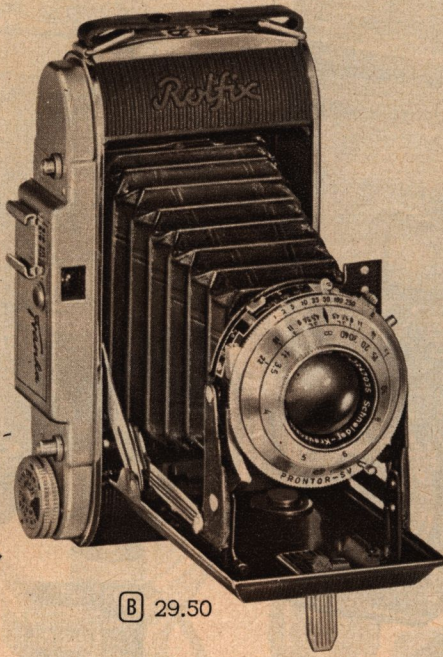
67 H 140 L—Ship. wt. 4 lbs. \$5 Dn on Terms. . . . or Cash 46.50



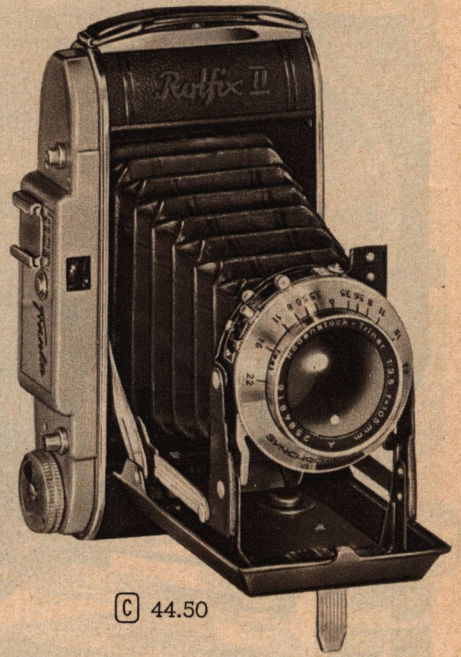
B 36.50



A 19.50



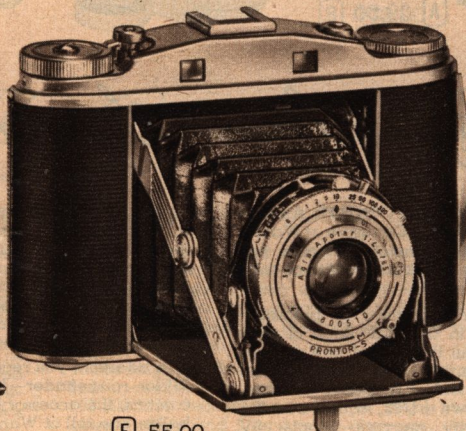
B 29.50



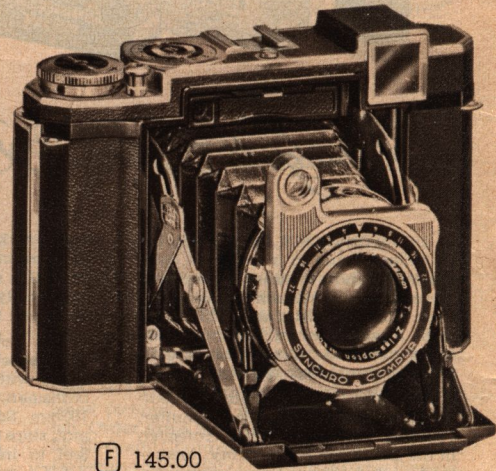
C 44.50



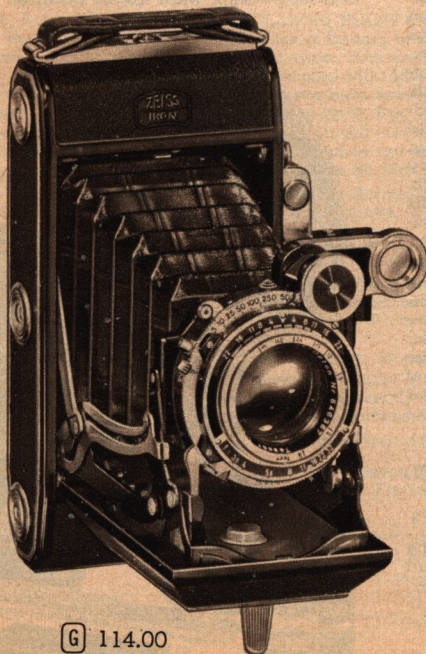
D 29.50



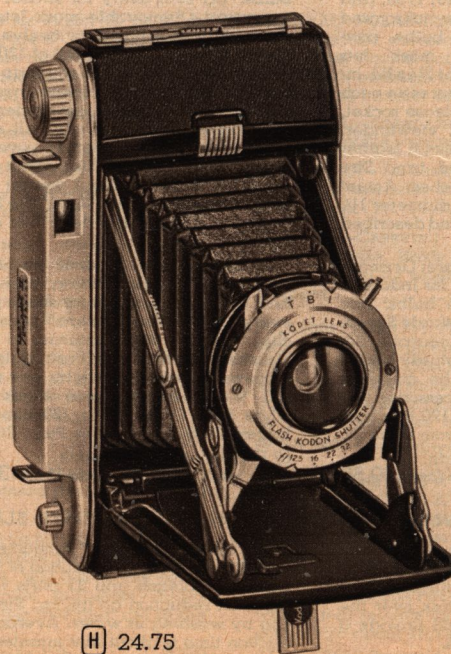
E 55.00



F 145.00



G 114.00



H 24.75

Compact Folding Cameras

IN A WIDE RANGE OF LENS AND SHUTTER COMBINATIONS

A B C NEW DE LUXE ROLFIX CAMERAS. Exclusive at Wards—precision-made in American Zone of Germany. Each of these new models is the "best buy" in its class today. New optical eye-level viewfinder accurately shows both $2\frac{1}{4} \times 2\frac{1}{4}$ and $2\frac{1}{4} \times 3\frac{1}{4}$ -inch picture areas. Satin finish matches the Widor rangefinder (J), sold on Page 27. Fast, coated anastigmat lenses and flash synchronized shutters combine to produce top quality pictures in both color and black and white. Take accessory waistlevel finder below. Rolfix Jr. and Rolfix I sold in complete outfit on Page 17.

FILM—Eight $2\frac{1}{4}$ by $3\frac{1}{4}$ or twelve $2\frac{1}{4}$ by $2\frac{1}{4}$ -in. pictures on standard 120 film (6 or 9 shots on Ansco Color). Removable mask for $2\frac{1}{4}$ by $2\frac{1}{4}$ -in. shots included. **FINDER**—Enclosed optical type shows both picture areas accurately. Accessory clip accepts Widor rangefinder (Pg. 27), or Widina B-C flashgun (Pg. 30). **CONSTRUCTION**—Rigid all-metal body, artificial leather covered. Satin finished viewfinder. Body shutter release to minimize camera movement—cable release socket. Two tripod sockets. Swing-out roll holders for easier, faster film loading. Size about 6 by 4 by $1\frac{1}{2}$ inches. Actual weight 1 lb.

(A) DE LUXE ROLFIX JR. LENS—Coated 105mm $f/4.5$ Frankor anastigmat stops to $f/32$, focuses from 5 ft. **SHUTTER**—Vario flash with speeds of 1/25, 1/50, 1/200, plus bulb. Synchronized at 1/50 with SM or SF bulbs, (X) zero delay for strobe. Uses flash unit with European fitting—see Page 30. LENS MOUNT DIAMETER— $1\frac{1}{4}$ in.

67 H 125 L—Ship. wt. 2 lbs. \$2 Down on Terms. or Cash 19.50

(B) DE LUXE ROLFIX I. LENS—Coated 105mm $f/4.5$ Schneider Radionar anastigmat stops down to $f/32$, focuses from $3\frac{1}{2}$ ft. to infinity. **SHUTTER**—Prontor "S-V" flash shutter fully synchronized at all shutter speeds for No. 5 and 25 lamps, (X) zero delay for strobe. With eight speeds from 1 to 1/250, plus bulb. Delayed-action timer device lets you trip shutter and get into the picture yourself. Flash synchronized at all speeds with all bulbs. Uses flash unit with European fitting—see Page 30. LENS MOUNT DIAMETER— $1\frac{1}{4}$ in.

67 H 126 L—Ship. wt. 2 lbs. \$3.00 Down on Terms. or Cash 29.50

(C) DE LUXE ROLFIX II. Advanced model Rolfix. LENS—Coated 105mm $f/3.5$ Rodenstock-Trinar anastigmat stops down to $f/22$, focuses from 5 ft. to infinity. **SHUTTER**—Synchro-Compur "M-X" with eight speeds from 1 to 1/500, plus bulb. Synchronized at all speeds with No. 5 or 25 bulbs. (X) zero delay for strobe. Delayed action timer lets you take your own picture. Double exposure prevention—no wasted film. Uses flash unit with European fitting—see Page 30. LENS MOUNT DIAMETER— $1\frac{1}{16}$ in.

67 H 127 L—Ship. wt. 2 lbs. \$4.50 Down on Terms. or Cash 44.50

67 H 133—Leather eveready carrying case. Ship. wt. 9 oz. 4.95

67 H 122—Sheath carrying case. Ship. wt. 9 oz. 2.95

D SOLIDA. A compact camera, precision made in the U.S. Zone of Germany. Fast lens and shutter make picture taking easy under any conditions. Double exposure prevention device. Delayed action timer—lets you take your own picture. See outfit (C), Page 17.

LENS—Coated 75mm $f/3.5$ Ennagon anastigmat, focuses from $3\frac{1}{2}$ ft. to infinity, stops down to $f/22$. **SHUTTER**—Prontor "S-V" with speeds from 1 to 1/300, plus bulb. Flash synchronized at all speeds with No. 5 or 25 bulbs. (X) zero delay for strobe. Uses flash unit with European fitting—see Page 30. Body shutter release—cable release socket. Tripod socket. Accessory clip. Swing-out spool for easy loading. **FINDER**—Enclosed optical type. **FILM**—Twelve $2\frac{1}{4}$ by $2\frac{1}{4}$ -in. pictures on 120 film. **CONSTRUCTION**—All-metal body, black leather covered, and chromed trim. Size $5\frac{3}{4}$ by $3\frac{3}{8}$ by $1\frac{5}{8}$ in. Act. wt. 1 lb. LENS MOUNT DIAMETER $1\frac{5}{16}$ in.

67 H 128 L—Ship. wt. 2 lbs. \$3 Down on Terms. or Cash 29.50

67 H 129—Leather eveready carrying case. Ship. wt. 1 lb. 4.75

E NEW ANSCO SPEEDEX SPECIAL with rangefinder. Ansco's finest folding camera from skilled Agfa craftsmen in the U.S. Zone of Germany. Features built-in rangefinder for accurate focusing—simply focus with rangefinder, read answer, then set scale on lens. Fast, coated $f/4.5$ Apotar lens in Prontor "M-F" shutter. Synchronized at all speeds with all bulbs—speeds to 1/300 second.

LENS—Coated 85mm, $f/4.5$ Agfa Apotar anastigmat, focuses from $3\frac{1}{2}$ ft. to infinity, stops down to $f/32$. **SHUTTER**—Prontor "M-F" with eight speeds from 1 to 1/300, plus bulb and time. Flash synchronized at all speeds with No. 5 or 25 bulbs. Five millise. delay for strobe. Uses flash unit with European fitting—see Page 30. Body shutter release, cable release socket. Double exposure prevention with red signal dot. Accessory clip. Depth of field scale. **FINDER**—Optical eye-level type—superimposed image type rangefinder. **FILM**—Twelve $2\frac{1}{4}$ by $2\frac{1}{4}$ -in. shots on 120 film. **CONSTRUCTION**—Rigid all-metal, black scuffproof plastic covered. Size $5\frac{3}{4}$ by $3\frac{3}{8}$ by $1\frac{5}{8}$ in. Act. wt. 1 lb. LENS MOUNT DIAMETER— $1\frac{3}{16}$ in.

67 HN 130 LT—No Credit Charge. \$5.50 Down on Terms. Postpd. 55.00

67 HN 107 T—Ansco Leather eveready case. Postpaid. 6.95

F ZEISS SUPER IKONTA B. Made by Zeiss Ikon A. G. of Stuttgart, Germany (In U.S. Zone). A truly fine folding camera with one of the world's outstanding lenses, a Zeiss Opton $f/2.8$ Tessar. Has coupled rangefinder combined in a single window with viewfinder for quick, accurate framing and focusing. The rangefinder has a longer than average base and contains a solid glass prism—features that combine to assure utmost accuracy and reliability. You wind the film with a big convenient key—winding stops automatically when film is in position for next shot. An easy to read film counter disc shows picture taken—eliminates looking through a red window. Automatic lock prevents double exposures, cuts film waste. Shutter speed and lens opening controls are at your fingertips and settings are visible from above—no need to turn camera when setting. The fully synchronized Synchro-Compur "M-X" shutter—lets you take flash shots at all speeds to 1/500 second with any flash-bulb or strobe. Square picture format eliminates need for turning camera when shooting both vertical and horizontal pictures.

LENS—80mm $f/2.8$ T-coated Zeiss Opton Tessar. **SHUTTER**—Synchro-Compur "M-X" has 9 speeds from 1 to 1/500, plus bulb. Fully synchronized at all speeds with No. 5 or 25 bulbs. (X)—delay for strobe. Uses flash unit with European fitting—see Page 30. Self-timer allows you to get in your own picture. **FINDER**—Optical eye-level type combined with coupled rangefinder. **FILM**—11 pictures $2\frac{1}{4} \times 2\frac{1}{4}$ in. on 120 film roll. **CONSTRUCTION**—Die-cast aluminum body, genuine black leather covered. Size $6\frac{1}{2} \times 3\frac{3}{4} \times 2$ in., folded. Act. wt. 32 oz. LENS MOUNT DIAM. — $1\frac{15}{32}$ in. No Credit Charge. Shipped Postpaid.

67 HN 158 LT—\$14.50 Down on Terms. Cash 145.00

67 HN 159 T—Ikonta brown cowhide eveready case. Ppd. 12.00

G ZEISS SUPER IKONTA C. Made by Zeiss Ikon A. G. of Stuttgart, Germany (U.S. Zone). Combines one of the world's finest $f/3.5$ lenses, the famous Zeiss Tessar, with a superbly accurate Synchro-Compur "M-X" shutter that is fully synchronized. You can use all flash bulbs, plus strobe, at all shutter speeds up to 1/500 second. The coupled range finder gives pinpoint focusing, even close-up, for extremely sharp pictures in either color or black and white. Double exposure preventative eliminates costly mistakes.

LENS— $f/3.5$ coated Zeiss Tessar anastigmat stops down to $f/32$, focuses from 5 ft. to infinity. **SHUTTER**—Synchro-Compur "M-X" has nine speeds from 1 to 1/500, plus bulb. Fully synchronized at all speeds with No. 5 or 25 bulbs. (X)—delay for strobe. Uses flash unit with European fitting—see Page 30. Self timer allows you to get in the picture. Double exposure preventative. Body shutter release. **FINDER**—Optical eye-level type. Coupled rangefinder. **FILM**—Eight $2\frac{1}{4}$ by $3\frac{1}{4}$, or sixteen $1\frac{5}{8}$ by $2\frac{1}{4}$ -in. pictures with removable mask, on 120 film. **CONSTRUCTION**—Rigid die-cast aluminum body, genuine black leather covered. Size $6\frac{1}{2}$ by $3\frac{3}{4}$ by 2 in., folded. Act. weight 32 oz. LENS MOUNT DIAMETER— $1\frac{5}{32}$ in. No Credit Charge. Postpaid.

67 HN 161 LT—Only \$11.50 Down. Cash 114.00

67 HN 162 T—Ikonta eveready brown cowhide case. 10.00

H KODAK TOURIST II. Fine American-made folding camera of modern design. Improved optical eye-level finder for accurate sighting. Flash synchronized for indoor or night shooting. Top quality pictures in black and white or color.

LENS—86mm $f/12.5$ Kodak—fixed focus, stops down to $f/32$. **SHUTTER**—Flash Kodon with instantaneous, time, and bulb settings. Synchronized at instantaneous setting with SM or SF bulbs. Use any flash unit with ASA fitting—see Page 30. LENS MOUNT DIAMETER— $1\frac{1}{8}$ in. **FILM**—Eight $2\frac{1}{4}$ by $3\frac{1}{4}$ -in. pictures on 620 film. **CONSTRUCTION**—Rigid aluminum alloy body, black Kodadur covered, chromed trim. **FINDER**—Enclosed optical type made of Tenite. Size $6\frac{3}{4}$ by 4 by $1\frac{7}{8}$ in. Actual weight about 1 lb. No Credit Charge.

67 HN 147 L—Postpaid. \$2.50 Down on Terms. Cash 24.75

67 H 144—Leather eveready carrying case. Ship. wt. 1 lb. 3.98

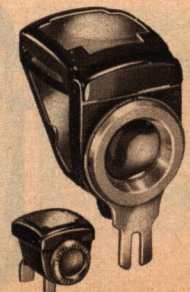
WAISTLEVEL FINDERS for Rolfix cameras. Preferred by people who like to compose pictures from waistlevel and those who wear glasses. Adjusts for vertical, horizontal shots. Slip on camera easily.

LARGE OVERSIZE MODEL. Fits on De luxe Rolfix I and II and those older Rolfix cameras having waistlevel finder brackets behind shutter. Folds flat, fits handy plastic case.

67 H 2500—Ship. wt. 6 oz. 2.49

STANDARD SIZE MODEL. Fits all Rolfix Jr. cameras not supplied with waistlevel finders. Camera will close with finder in place.

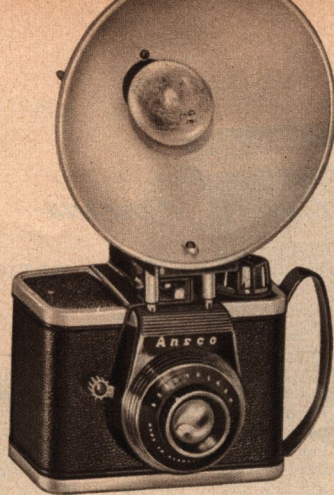
67 H 2501—Ship. wt. 4 oz.98c



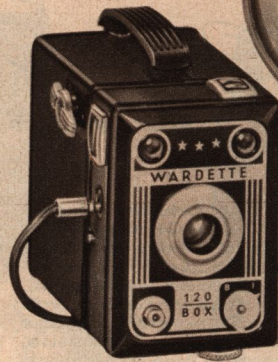
NOTICE: Above Prices Include April 1, 1954 Excise Tax Reductions.



A 3.95



B 8.70



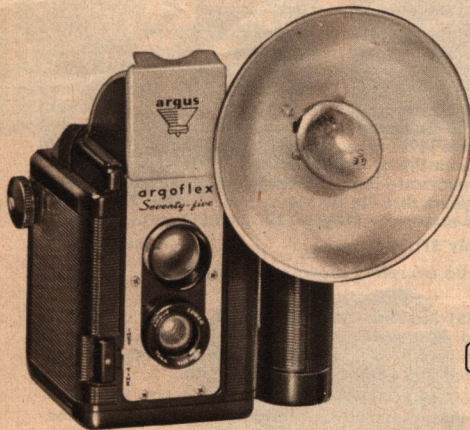
C 7.75 Complete



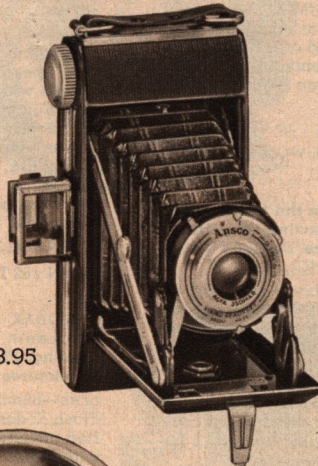
D 10.95



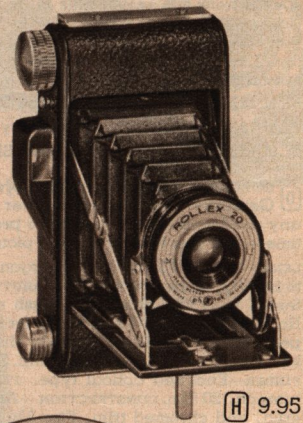
E 9.98



F 18.75



G 18.95



H 9.95



J 18.95



K 26.50

Inexpensive Box Cameras

JUST AIM THE CAMERA AND SNAP THE PICTURE

A KODAK HOLIDAY CAMERA. Kodak's newest modern design camera—compact, easy to use, box camera simplicity. Kodet single meniscus lens is always in focus for quick shooting, sharp pictures. Eye-level viewfinder permits fast sighting for candid type snapshots. Takes 8 black and white or Kodacolor pictures, 2 1/4 x 1 3/8 in. on 127 film. Handsome two-tone brown and tan plastic body is 3 3/4 x 3 x 2 3/4-in. overall. Order 127 film from Pages 67-69.

67 HN 2—Cameras Only. *Postpaid*.....3.95

B ANSCO READYFLASH. Ansco's latest "candid" type camera for fast action—easy shooting. Built-in flash synchronization let's you take pictures anywhere. Factory-focused lens for all distances beyond 7 ft. without adjustment. Eye-level viewfinder makes it easier to follow and take action type shots. Flash unit uses No. 5 or 25 bulbs to make indoor and night pictures as easy as snapshots. Takes 8 pictures 2 1/4 x 3 1/4 in. on 620 black and white or Kodacolor film. All-metal body with plastic lens mount. Size overall 3 1/2 x 4 x 5 1/2 in. Order 620 black and white or color film from Pages 67-69, No. 5 or 25 flashbulbs from Page 28.

67 HN 87—Camera with flash unit, batteries. *Postpaid*.....8.70

67 HN 85—Camera only. *Postpaid*.....5.95

67 HN 86—Flash unit with 2 "C" batteries. *Postpaid*.....2.75

C WARDETT FLASH CAMERA OUTFIT. A truly fine value in a complete flash camera outfit. Includes the Wardette 120 box camera—a German import with an accurately ground meniscus lens for sharper pictures, a feature usually found only on higher-priced cameras. The Wardette camera is ideal for the beginner in photography—it's easy to use, because there are no adjustments to make. Takes snapshots or time exposures. Has two brilliant waist-level finders—one for vertical pictures the other for horizontal. With cable release and tripod sockets.

Included with the camera is an all-metal Victor flash unit for indoor and night pictures; two penlight batteries; enough G.E. Bantam flash bulbs for your first eight pictures; and two rolls of Wards 120 Sensachrome black and white film. Camera takes eight 2 1/4 x 3 1/4-in. album-size pictures in brilliant black and white or in sparkling Kodacolor. Artificial leather covered body is 4 1/2 x 4 3/4 x 3 1/4 in. Order extra No. 8 bulbs from Page 28, 120 film from Pages 67-69. Outfit comes complete in an attractive gift box.

67 H 27—COMPLETE OUTFIT. Ship. wt. 3 lbs.....7.75

67 H 30—WARDETT CAMERA ONLY. Ship. wt. 2 lbs.....3.98

67 H 3201—FLASH UNIT with 2 penlight batteries. Has European flash fitting. Ship. wt. 1 lb.....1.98

D BROWNIE FLASH HAWKEYE. A modern flash camera with an oversized magnifying viewfinder—shows your subject at almost full picture size. Simple to operate because no focusing is necessary—all subjects from 6-ft. to infinity will be sharp, without distortion. Kodalite Lumiclad flashholder will not dent, reflects more light—uses No. 5 flashbulbs to make indoor and night picture-taking easy. Takes 12 sparkling black-and-white or lifelike Kodacolor pictures, 2 1/4 x 2 1/4 in. on each roll of 620 film. Made with black plastic body with gray Tenite trim. Size overall 3 1/4 x 4 1/4 x 3 1/2 in. Order No. 5 flashbulbs from Page 28, 620 film from Pages 67-69.

67 HN 59—Camera with flashholder, batteries. *Postpaid*.....10.95

67 HN 72—Camera only. *Postpaid*.....6.95

67 HN 73—Kodalite Lumiclad Flashholder. Unbreakable plastic reflector is far more durable than metal reflectors. Flashholder complete with two "C" batteries. *Postpaid*.....4.00

67 H 92—Case for Hawkeye Camera. Ship. wt. 8 oz.....2.29

E MIRAFLEX I CAMERA AND FLASH. Makes it easy to take good pictures indoors or out. The camera has a big reflex finder that shows your subject almost full-picture size. Its factory-focused meniscus lens is sharp at any distance past 6 ft.—so there's no need to focus. Settings for both snapshots and time exposures. The flash unit snaps on and off quickly—makes indoor pictures, includes batteries. Camera has long neckstrap for easy carrying. Takes twelve 2 1/4 x 2 1/4-in. black and white or Kodacolor pictures on 620 film. Durable black plastic body is 6 x 3 3/4 x 3 3/4 inches. Order 620 film from Pages 67-69, G.E. No. 5 bulbs from Page 28. Shipping weight 2 lbs.

67 H 65—Miraflex I Camera and Flash Unit.....9.98

COMPLETE MIRAFLEX I FLASH CAMERA OUTFIT. Includes camera described above; flash unit with batteries; eight G.E. No. 5 flash bulbs; one roll of 620 black and white film; and a handy plastic gadget bag for carrying the entire outfit together. Order 620 film from Pages 67-69, No. 5 bulbs from Page 28.

67 H 80—Shipping weight 3 lbs.....13.95

F ARGUS "75". An easy handling reflex-type camera with flash synchronization. Double-exposure preventative—you can't click shutter until you've advanced film. Body-type shutter release minimizes camera movement. Meniscus lens takes snaps, time exposures beyond 7 1/2 feet without focusing. Flash unit uses SM bulbs to make night and indoor pictures easy. 12 black and white or Kodacolor pictures 2 1/4 x 2 1/4 in. on 620 film. Metal trimmed plastic body is 3 x 3 1/4 x 4 3/8 in. Order 620 film from Pages 67-69, SM bulbs from Page 28.

67 HN 70—Camera with flash unit and batteries. *Postpaid*.....18.75

67 HN 57—Camera only. *Postpaid*.....14.95

67 HN 58—Flash unit with 2 "C" batteries. *Postpaid*.....3.80

67 HN 53—Case for Argoflex "75" only. *Postpaid*.....2.50

G ANSCO VIKING READYSET. Compact Ansco folding camera fits in your pocket—operates with box camera simplicity. Made by Agfa's expert craftsman in the U.S. Zone of Germany. F/11 focusing doublet lens is faster than those found on other inexpensive cameras. Simple 2-position focusing assures picture sharpness. Just flip lever to set lens for subjects 5 to 10 ft. away, or 10 ft. to infinity. Lens opening adjusts for correct exposure on average or brightly lighted subjects. Shutter has instantaneous and bulb settings for snapshots, time exposures. Synchronized with all flashbulbs for indoor or night pictures. Use flash units with European fitting (3)—see page 30. Use SM or No. 5 bulbs, order from Page 28. Open frame eye-level viewfinder—makes it easier to follow, take action type pictures. Takes 8 black and white, or Kodacolor pictures, 2 1/4 x 3 1/4 in. on 120 film. All metal body, black leather covered, chrome trimmed. Order 120 film from Pages 67-69.

67 HN 169 L—*Postpaid*. Size 3 1/4 x 6 1/2 x 1 1/2 in. folded.....18.95

67 HN 170—Leather eveready carrying case. *Postpaid*.....4.95

H ROLLEX "20" CAMERA. Operates with the simplicity of a box camera, but folds flat to fit your pocket. Fixed focus meniscus lens needs no focusing—just aim and shoot. Takes 8 snaps or time exposures 2 1/4 x 3 1/4-in. size on either 120 or 620 black and white or Kodacolor film. Metal body, artificial leather covered. Order 120 or 620 film from Pages 67-69. Size 5 x 3 x 1 1/2-in. closed.

67 H 134—Shipping weight 2 lbs.....9.95

67 H 135—Leather sheath case for Rollex "20". Ship. wt. 8 oz.....2.29

J NEW KODAK DUAFLEX III WITH KODET LENS. Latest model of Kodak's all metal reflex-type camera—now with double exposure prevention, to cut film waste. Efficient, easy to use—no focusing necessary—all subjects from 6 ft. to infinity will be sharp without adjustment. Big, bright viewfinder shows the exact picture you are going to get before you take it—full picture size. Detachable flashholder (67 HN 73 listed under (D) at left) has Lumiclad reflector—will not dent, reflects more light. Plugs into side of camera, screwlocks in place. Flashholder uses SM bulbs to make indoor and night picture taking easy. Special device prevents double exposures because you can't click shutter until film is advanced—makes every shot count. Takes 12 pictures 2 1/4 x 2 1/4 in. on 620 film, in lifelike Kodacolor, or sparkling black and white. Settings for snapshots and time exposures. All metal body, black artificial leather covering, satin finish trim. Order 620 film from Pages 67-69, SM or SF bulbs Page 28.

67 HN 7—Camera with flashholder and batteries. *Postpaid*.....18.95

67 HN 6—Camera only. Size 4 1/2 x 2 7/8 x 3 in. *Postpaid*.....14.95

K NEW KODAK DUAFLEX III WITH KODAR LENS. Like above, but has focusing Kodar lens that takes sharper pictures than fixed focus types. Let's you shoot portraits because it focuses down to 3 1/2 ft. 3 settings—for hazy, bright, and brilliant sunlight—assures good exposure, better pictures, regardless of light conditions.

67 HN 9—Camera with flashholder and batteries. *Postpaid*.....26.50

67 HN 8—Camera only. *Postpaid*. No Credit Charge.....22.50

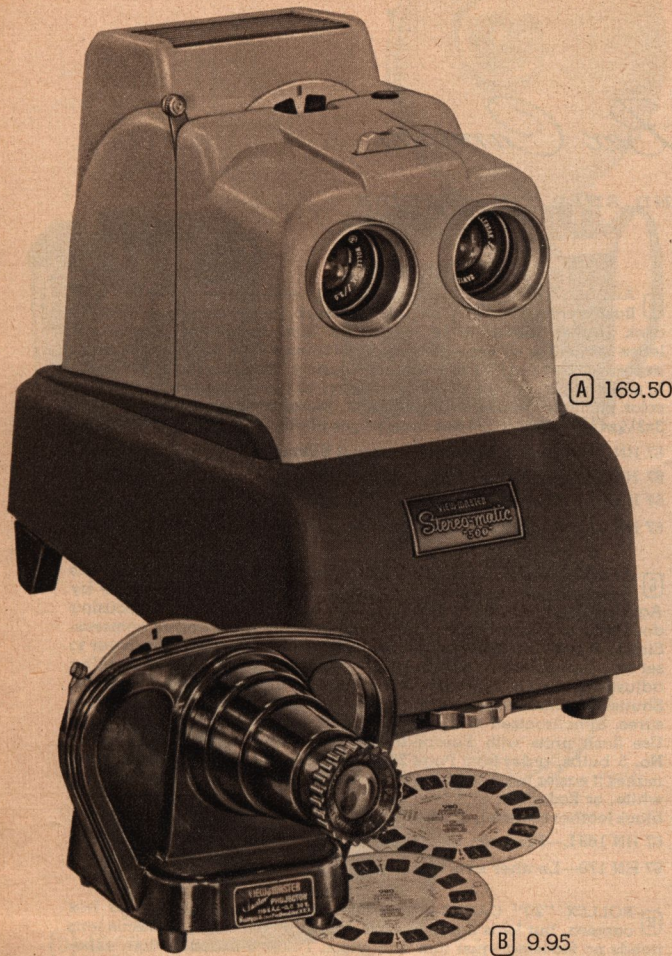
67 H 93—Eveready case for Duaflex cameras. Ship. wt. 8 oz.....2.19

HOW TO MAKE GOOD PICTURES. An excellent book both for beginners and everyday photographers. Published by Eastman and written by their experts in a non-technical, easily understood style. Covers most phases of photography. Lighting, use of filters, shooting with color, composition, indoor and outdoor pictures at night or in daylight, selection of film and developing and printing are only some of the subjects covered. Over 200 pages, fully illustrated. Cloth bound.

67 H 4800—Shipping weight 8 oz.....89c



How 3-D Works



Get the feeling that you're really there! Capture the full, life-like quality of any scene for years to come with a three-dimension stereo picture. Make your vacations come to life by starting a collection of stereo pictures that will let you see things again as you saw them when taking the picture. You'll get the feeling of realism and depth—the massive mountains or the great expanse of the Grand Canyon can be experienced time and again, once you have captured their depth with a stereo picture.

More motion pictures are being made in 3-D stereo now than ever before because of its greatly increased popularity throughout the country. Objects in stereo pictures are not in a single plane as in the usual picture, but they stand out and away from each other in several planes, so you feel that you can touch them or reach around and behind them. Stereo photography is so simple that you can take the pictures as easily as with any other 35mm camera.

After exposed film is developed, it is mounted on a slide in matching pairs at the correct eye spacing. Slide mounting service is available (see below), or you can mount them yourself. They can then be viewed with a stereo hand viewer, table viewer, or projector—all show third dimension.

To understand 3-D better, hold one finger up at arm's length and look at it first with one eye and then the other. See how it seems to jump back and forth from left to right. That is because your eyes see it from two different angles—in effect, they take two different pictures of it. When you look at it with both eyes, the finger stands out in front because your brain combines the two pictures into one. In addition to height and width there is an impression of roundness and depth called "third dimension," or "3-D."

HOW STEREO CAMERAS TAKE THE PICTURE

The Camera has two lenses at normal eye spacing that take separate pictures at the same time. They see the picture just as your own eyes do. The lenses are matched in optical quality and geared to operate together for focusing and f/stop settings, and the shutters are synchronized together to take the two pictures at the same instant. All the stereo cameras that Wards sell use standard 35mm color film.

HOW THE HAND VIEWER SHOWS "3-D"

The Viewer is made with two matched lenses, one for each eye. When the slide is placed in the viewer, each eye sees only its own picture and you have a three-dimension scene—just as you saw it when you took it.

There is a little experiment you can try with your viewer that will show you just how the camera took the picture. Put a slide in your viewer and you will note that there is more of the scene included at the left side of the picture when seen with the left eye, and more of the right side when seen with the right eye. The camera actually takes in more of the scene on these sides. When you look at the slide with both eyes, you see all the picture that was taken by both lenses.

HOW YOU CAN PROJECT "3-D" PICTURES

The projector and table viewer have two lenses—the same as the camera and hand viewer—one for each picture in the stereo pair. However, to project a picture that can be seen in third dimension, the two images are separated by using Pola screens over the lenses. You must wear special glasses with matching Polaroid lenses. Without the glasses, you see two pictures—one slightly "offset" from the other—but with the glasses the images are brought together in a 3-dimension scene. The projector and table viewers are built with adjustable controls so that the lenses may be focused, and the two images properly registered.

Just one other thing is necessary—the screen must have a metallic surface like the Dalite Stereo Screen listed on Page 43. The surface on an ordinary screen destroys the polarization. Stereo screens, however, may be used for any other slide projection also.

HOW PICTURES ARE MOUNTED FOR "3-D"

Slide mounting is not difficult—actually it is fun to do and you will take even more pride in your slides when you have done the whole job yourself with the Viewmaster equipment on the opposite page. However, if you take standard size stereo frames, as with the Realist, Photrix, or Revere, you have several choices: (1) You can have the developed film returned to you in the original roll so you can do the whole mounting job yourself. (2) You can have the pictures set up in cardboard readymounts (these will be ready for viewing in hand viewer or projecting; but your fine slides should be protected from scratches, dirt, and fingerprints by taping them between glass or, better still, putting them in permanent plastic or metal mounts). (3) You can have the complete mounting service where the slides are returned to you in permanent protective mounts. If you prefer to do some part, or all of the job yourself, you will find a complete list of glass, tape, and several different types of mounts on Page 25. The instructions with any stereo camera include complete information on mounting service.

Sawyer Projectors

A NEW VIEW-MASTER "STEREO-MATIC 500" PROJECTOR. New 500-watt projector that shows View-Master reels in three dimensions. Two matched, coated, 3-in. f/3.0 lenses give big 40-in. image at 20 ft. Single light source assures uniform illumination. Blower cooled. Efficient condenser system. Single knob focuses and registers stereo pair—constant focus reel transport eliminates focusing between pictures. Sturdy all-metal construction. Order stereo glasses separately from Page 43. With 500-watt lamp (order extra lamps 67 HN 3124, Pg. 28). For 110–120 volt AC or DC. No Credit charge. 67 HN 680 T—Express Prepaid. \$17 Down on Terms.....169.50
67 HN 681 T—Carrying case. Express Prepaid.....17.50

VIEW-MASTER SENIOR PROJECTOR (not shown). Precision instrument designed for View-Master pictures (no 3-dimension effect). Anastigmat f/3 coated lens projects image up to 40 inches square with full color and detail. Built-in pointer can project shadow to point out any part of picture. Identification is easy—titles reflect in small window at the side of the projector. Flick of lever changes frames. Highly efficient condenser system. For 110–120 volt AC or DC. No Credit Charge.

67 HN 3806—Postpaid. \$4.50 Down on Terms.....44.50
67 HN 3164—Replacement bulb. Postpaid.....1.20

B VIEW-MASTER JR. PROJECTOR. Economical metal, plastic projector for View-Master reels. No 3-dimension effect, but throws bright image up to 18 in. square. Has f/3 lens and lever operated film advance.

67 HN 3805—For 110–120 volt AC or DC. Postpaid.....9.95
67 HN 3163—Replacement bulb. Postpaid.....66¢

STEREO AND STANDARD GLASS-BEADED PROJECTION SCREENS SHOWN ON PG. 44.

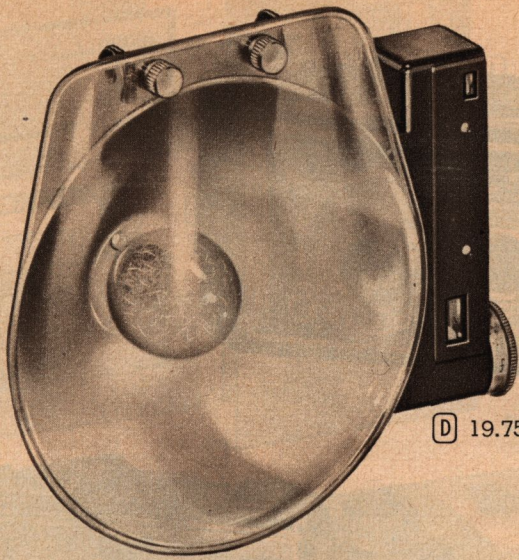
3-DIMENSION TRAVEL PICTURES IN FULL COLOR (WRITE WARDS FOR COMPLETE LIST)

State, Catalog Number, title, and reel number.
67 HN 3811—Postpaid.....Six reels for 2.00

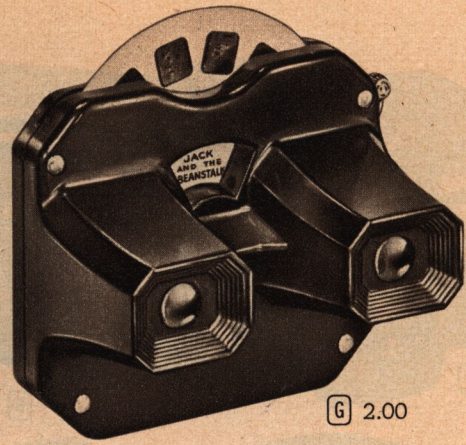
AMERICA. Kodachromes of our beauty spots.
220 California, Hollywood-Homes of Movie Stars
164 Florida, Cypress Gardens
161 Florida, Silver Springs
139 Maryland, U.S. Naval Academy, Annapolis
372 Missouri, The Ozarks

273 Main Sea Coast
350 Pennsylvania, Philadelphia
337 Tennessee, Great Smoky Mts. II
137 Washington, D.C.—Points of Interest
63 Hawaii, Honolulu
206 Idaho, Sun Valley—Winter
333 Illinois, Chicago
334 Mississippi, Natchez "Ol' South"
332 New Orleans, The Mardi Gras

NATIONAL PARKS AND MONUMENTS
203 Black Hills of South Dakota
251 Carlsbad Caverns, New Mexico
124 Dells of Wisconsin
51 Garden of the Gods, Colorado
26 Grand Canyon, South Rim I, Arizona
27 Grand Canyon, South Rim II, Arizona
81 Niagara Falls, New York
177 Painted Desert, Arizona



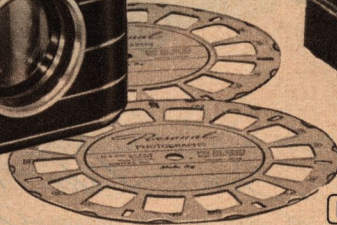
D 19.75



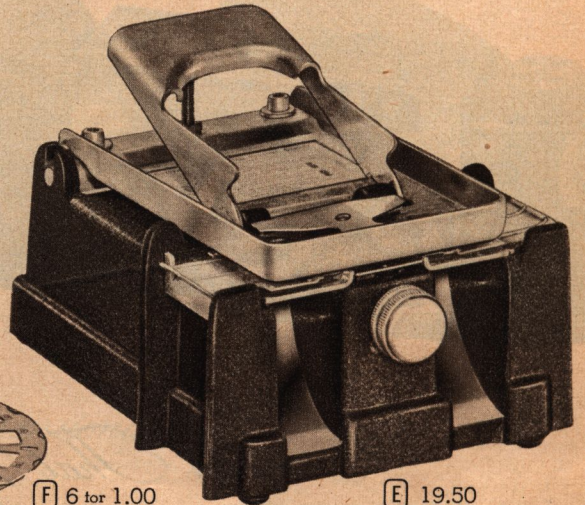
G 2.00



C 139.50



F 6 for 1.00



E 19.50

Take Your Own View-Master Pictures

C VIEW-MASTER PERSONAL STEREO CAMERA. Now you can take your own 3-dimension pictures, with all the depth and color of reality, as easily as taking snapshots—more economically than taking black and white. Built-in exposure meter calculator even makes the settings—just set shutter speed to type of day, marked on dial, and you automatically get correct lens opening; or, choose lens opening, set dial, and you get correct shutter speed. Unusually great depth of field with 25mm focal length lens eliminates focusing. Everything beyond 10 ft. is in critical sharp focus at $f/3.5$; and everything beyond 4 ft. at $f/16$. Built-in level assures perfectly aligned shots. Twin lenses are coated, $f/3.5$ anastigmats, perfectly matched for stereo pairs. There are 5 shutter speeds from 1/10 to 1/100 second, plus bulb, and you won't spoil pictures by double exposure because shutter locks between shots, and will not release until the film is advanced. Size about $6 \times 3\frac{1}{4} \times 2\frac{1}{8}$ in., actual weight about 24 oz. Uses regular 35mm film so economically—you get 37 pairs of pictures to a regular 20-exposure roll. With 2 filter holders for Series V filters (see Page 98). No Credit Charge.

67 HN 365 L—Postpaid. Only \$14 Down. 139.50
67 HN 366—Leather eveready case. Ppd. 12.50

D VIEW-MASTER FLASH UNIT. Makes every flash shot good—no more wasted flash bulbs or film. A built-in rangefinder eliminates exposure guessing and calculating—all you do is focus your subject correctly in the rangefinder window—dial indicates the correct lens opening to use. The flash unit screws securely into the top of the View-Master Stereo camera, removes readily. Protective transparent plastic flash guard snaps down over the front so there's no danger from accidental bulb explosion. Sturdy plastic body, 5-inch reflector. Complete with batteries. Order SM bulbs separately, Pg. 28.

67 HN 367—Postpaid. 19.75

E VIEW-MASTER MOUNTING KIT. Everything you need to make reels of your own 3-D View-Master pictures. Just run developed film, right in the strip, through the editor-cutter where frames are illuminated for easy editing. A fingertip lever cuts them automatically into matching pairs, the exact size to fit into Blank Reels (F) below. No binding necessary—pictures slide right into slots in the reels, and the slots are numbered in pairs so your pictures will line up correctly for the three-dimension effect in the View-Master Viewer or Projector. With standard 15-watt bulb. Plugs into any 110-volt outlet.

67 HN 3631—Complete Kit. Postpaid. 19.50

F BLANK REELS. Each holds 7 pairs.
67 HN 3630—Postpaid. Six for 1.00

G VIEW-MASTER STEREO VIEWER. For View-Master reels. Two lenses match reel frames for three dimension viewing. Fingertip lever turns reel automatically to next frame. No bulbs, no batteries, just point at light. Black plastic. Ppd. 67 HN 3800—(Order reels separately.) 2.00

VIEW-MASTER LIGHTING UNIT (not shown). Even, constant light for your viewer any time, anywhere. Plastic unit attaches to back of viewer. Order batteries separately below.
67 HN 3801—With bulb. Postpaid. 2.00
67 H 3228—Batteries. Ship. wt. 8 oz. Two for 25¢

VIEW-MASTER TRANSFORMER (not shown). Plug into 115 V., 60-cycle, AC outlet and get steady, continuous light in your lighting unit above. With 10-ft. cord. No batteries needed.
67 HN 3802—Postpaid. 3.00

VIEW-MASTER LIBRARY BOX (not shown). Plastic box holds stereoscope and up to 100 reels.
67 HN 3803—Postpaid. 1.85

VIEW MASTER KODACHROME REELS

State Catalog Number, title, and reel number.
67 HN 3811—Postpaid. Six Reels for 2.00

FAIRY TALES. Photographs of miniature molded and carved settings and figures.

FT-1 Little Red Riding Hood
FT-2 Hansel and Gretel
FT-3 Jack and the Beanstalk
FT-4 Snow White and the Seven Dwarfs
FT-5 Cinderella
FT-6 Goldilocks and the Three Bears
FT-7 The Three Little Pigs
FT-8 Little Black Sambo
FT-50A Aladdin and Lamp I
FT-50B Aladdin and Lamp II
FT-51 Magic Carpet

SAM SAWYER. The blonde-haired, apple-cheeked, boy adventurer. With printed story.

SAM-1 Sam Flies to the Moon
SAM-2 Sam Finds a Treasure
SAM-3 Sam in the Land of Giants
SAM-4 Sam in Darkest Africa
SAM-5 Sam in the Land of Ice
SAM-6 Sam and the Flying Saucer Pirates

CARTOON CHARACTERS. Molded figures of animated movie characters.

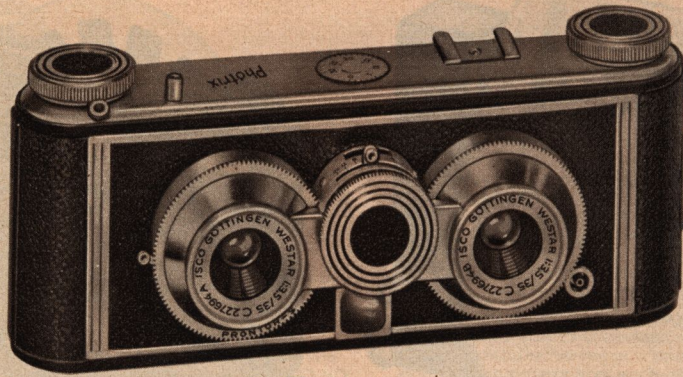
800 Bugs Bunny and Elmer in "The Hunter"
810 Tom and Jerry in "Cat Trap"
820 Woody Woodpecker in "Pony Express Ride"

CIRCUS REELS. Ringling Bros. & Barnum and Bailey Big Top Show.

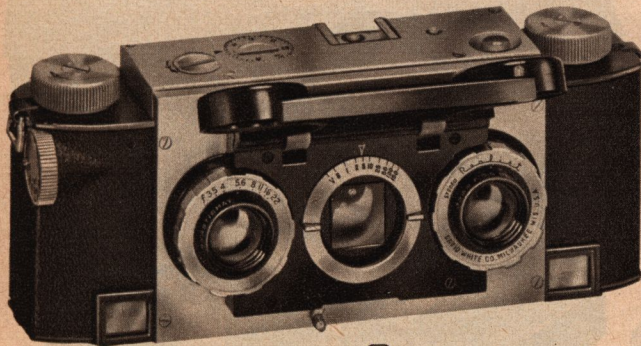
701 A Day at the Circus I
702 A Day at the Circus II
703 A Day at the Circus III

WESTERN ADVENTURE.

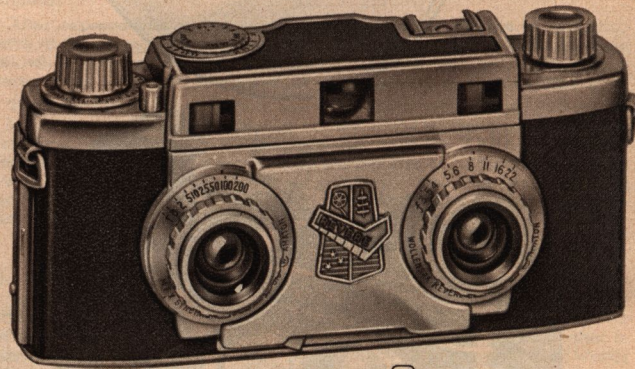
945 Roy Rogers and his horse, Trigger
950 Gene Autry and wonder horse Champion
955 Hopalong Cassidy (Bill Boyd) and Topper
960 The Cisco Kid and Pancho



B 78.50



A 159.00



C 174.50

Cameras That See Like You Do

A STEREO REALIST. The 35mm stereo camera that for years has signified "stereo" to hundreds of photo fans. Two perfectly matched lenses take twin pictures of identical quality. Coupled rangefinder makes sharp pictures easy. Depth of field scale on focusing knob shows, at any particular *f*/stop, just how far away from, or close to the camera your subject can be and still be in sharp focus. Double exposure prevention device cuts film waste caused by accidental double exposures—cocking lever allows you to make double exposures when you wish. Shutter is synchronized for flash. Includes two rings for attaching to lens mounts that automatically give you the correct lens setting for flash shots, using No. 5 and 25, SM and SF, 5B and 25B flash bulbs. Centered viewfinder eliminates parallax. Exposure guide to help you make better pictures is mounted on inside of hinged plastic cover which protects the lenses.

LENSES—coated, anastigmat David White 35mm. SHUTTER—8 speeds plus time and bulb. Synchronized for flash at 1/25 (X) zero delay for strobe. VIEWFINDER—built-in optical eye-level type. FILM—16 stereo pairs on standard 20-exposure 35mm film; 29 pairs on 36-exposure film; 20 pairs on Stereo Kodachrome film. With instructions for having pictures factory-mounted or mounting them yourself with kit (F) on the opposite page. CONSTRUCTION—die-cast aluminum body, Morocco-grained black leather covering, chromed trim. SIZE—about 6¾ by 2¾ by 2⅞ in. ACTUAL WEIGHT—about 1 lb. 13 oz. Accepts filter or sunshade listed at right below. No Credit Charge. *Postpaid*.

67 HN 463 L—With *f*/3.5 lens, focuses from 3 ft. to infinity, stops down to *f*/22. Shutter speeds from 1 to 1/150.....\$159.00

67 HN 357 LT—With *f*/2.8 lens, focuses from 3 ft. to infinity, stops down to *f*/22. Shutter speeds from 1 to 1/200.....\$198.50

67 HN 464—Realist leather eveready case. 12.50

STEREO REALIST FLASH UNIT (not shown). Plugs into clip on top of Stereo Realist camera. Has 5-inch reflector. Complete with three penlight batteries. Order bayonet base bulbs separately from Page 28.

67 HN 465—*Postpaid*.....\$8.75

B PHOTRIX STEREO. A standard 35mm stereo camera, imported from the U.S. Zone of Germany. The two lenses are ground in pairs for perfect matching. The 35mm focal length provides extreme depth of field for sharp pictures when distances are estimated (with lens at *f*/8 and focused on distance of 15 feet. All objects beyond 7 ft. 4 in. will be in sharp focus). Use rangefinder (F), Pg. 27 for maximum accuracy and added convenience. Centered optical viewfinder minimizes parallax. All controls, including center wheel focusing, are placed on center mount. All controls visible from above for quick setting. Delayed action timer lets you get into your own picture—the only stereo camera with this feature. Makes standard stereo pairs. For any viewer and stereo mount on page 25.

LENSES—coated, 35mm, *f*/3.5 Westar anastigmat focus from 3 ft. to infinity, stops down to *f*/16. SHUTTER—Prontor S with eight speeds from 1 to 1/300, plus bulb. Flash synchronized at 1/50 with SM or SF bulbs, (X) zero delay for strobe. Use compact Widina B-C flash (Page 30) or any flashholder on Page 30 with European fitting. VIEWFINDER—optical eye-level type. FILM—16 stereo pairs on 20-exposure standard 35mm film; 29 stereo pairs on 36-exposure standard 35mm film; 20 stereo pairs on Stereo Kodachrome film. CONSTRUCTION—all metal body, with black leather covering and satin chromed trim. Accessory clip for Widina B-C flash or rangefinder (Page 27). SIZE—7¼x3x2½ in. ACT. WT.—1 lb. 12 oz.

67 HN 371 L—No Credit Charge. *Postpaid*..\$78.50

67 HN 372—Photrix leather eveready case.\$6.75

67 H 2259—Set of 2 Screw-in Adapter Rings for above. Take Kodak Series V filters Page 38.

Ship. wt. 4 oz.....\$2.49

NEW KODAK STEREO CAMERA

The newly announced Kodak Stereo Camera is now in production and will be available for delivery early in July. Although the camera was not produced in time for including in Wards Photographic Catalog, it will be available through Bob Adams, see Page 93.

The Kodak Stereo camera has matched *f*/3.5 lenses; Dual-Synchro shutter; simple distance indicator; rapid-loading; quick rewind. Selling price is \$84.50. Write Bob Adams for literature.

C REVERE STEREO CAMERA. A 35mm stereo still camera, engineered and machined to the excellent standards developed in years of experience. Operates with the ease, and has the fine features of other high quality 35mm cameras. Two perfectly matched Wollensak lenses and positively synchronized shutters produce twin pictures of identical quality. Shutter cocks as film advances to prevent accidental double exposures but will make double exposure when you wish. Coupled rangefinder automatically shows correct exposure for flash with SM or SF bulbs. Built-in level assures alignment. Viewfinder has parallax correction.

LENSES—coated, 35mm *f*/3.5 Wollensaks, focus from 3 ft. to infinity, stop down to *f*/22. SHUTTER—Rupax Synchro has 7 speeds from 1/2 to 1/200, plus time and bulb. Synchronized at all speeds up to 1/100 with SM and SF flash bulbs (X) zero delay for strobe. VIEWFINDER—Built-in optical eye-level type, combined with coupled rangefinder. FILM—16 stereo pairs on 20-exposure standard 35mm film; 29 pairs on 36-exposure film; 20 pairs on Stereo Kodachrome film. CONSTRUCTION—all metal body, with brown leather covering, satin chromed trim. SIZE—about 6¾x3¼x9/16 in. ACTUAL WEIGHT—about 2 lbs. Built-in adapter rings accept Series IV filters (Pg. 38). \$17.50 Down. *Ppd.*

67 HN 450 L—No Credit Charge.....\$174.50

67 HN 451—Revere leather eveready case. 12.50

67 HN 488—Revere B-C Flash Unit. Plugs into clip on top of camera. 5-inch reflector. Takes bayonet bulbs. With 22½-volt "B" Battery.\$15.95

REALIST SUNSHADE AND FILTER HOLDER. For both Realist cameras. Use with filter sets below, or any Series V filters (Pg. 38).

67 HN 472—*Postpaid*.....Pair \$5.00

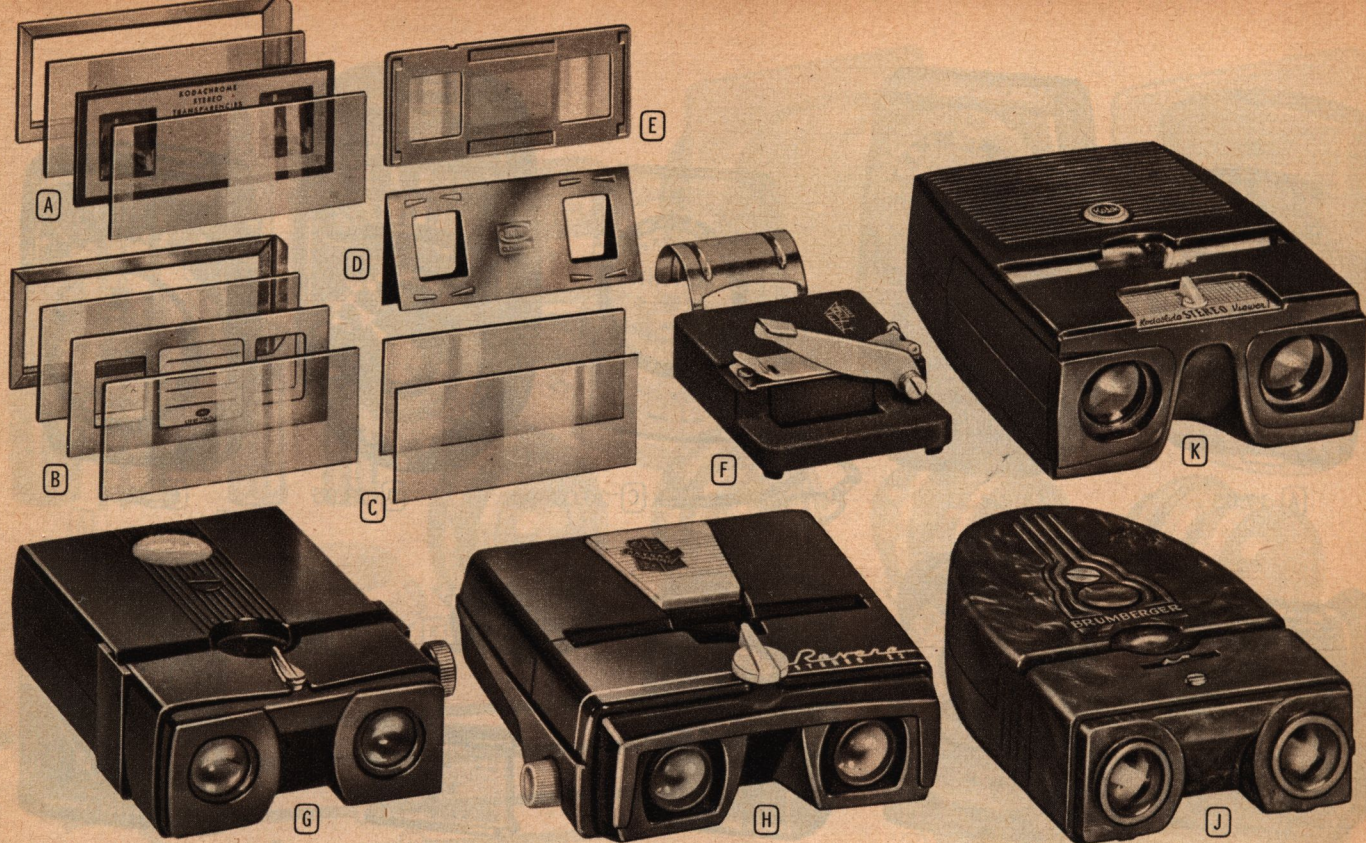
FILTER SET FOR STEREO REALIST (A) above. Three pairs of coated optical glass filters in leather case. Fit directly on lens mounts. Includes two Type A, two Haze, and two Flash (see filter uses on Page 38). *Postpaid*.

67 HN 467—Complete Set.....\$21.50

67 HN 468—Type A Filter set only...Pair 7.00

67 HN 469 T—Haze Filter set only...Pair 7.00

67 HN 470 T—Flash Filter set only...Pair 7.00



Accessories for 3-Dimensional Pictures

EMDE BINDERS FOR KODAK STEREO-MOUNTS

A For Kodak-mounted stereo-slides. Place cardboard ready-mount between pieces of special micro-glass, slip into open end of aluminum frame and close. Recommended for viewers only. Includes aluminum frames and micro-glass.

67 H 3632—Pkg. 20. Ship. wt. 1 lb. \$2.95
67 H 3602—Pkg. 100. Ship. wt. 4 lbs. 2 oz. . \$13.95

B EMDE STEREO BINDERS. For mounting standard size unmounted stereo frames—slide mounting at its quickest and easiest—precision mounted for projection. Transparencys slip into aluminum mask under die-cut, self-aligning and locking corner slots. Place between glass, fit into aluminum frame, fold over end and slide is complete—no adhesive, no tape. Normal Masks have windows placed for shots with subject at 15 ft. or more; Medium Masks have windows placed for shots with subject from 3 to 15 ft.; Closeup Masks have windows placed for shots with subject less than 3 ft. Includes aluminum frames, slide glass, and aluminum masks. Ship. wts. 1 lb. 4 oz. and 6 lbs.

67 H 3603—Normal Mounts. Box of 20 \$3.29
67 H 3604—Normal Mounts. Box of 100 15.95
67 H 3605—Medium Mounts. Box of 20 3.29
67 H 3606—Medium Mounts. Box of 100 15.95
67 H 3607—Close-Up Mounts. Box of 20 3.29
67 H 3608—Close-Up Mounts. Box of 100 15.95

C SLIDE GLASS. Size 1½x4 inches.
67 H 3612—Box of 100. Wt. 2 lbs. 4 oz. . . . \$2.29
67 H 3613 T—Box of 500. Ship. wt. 11 lbs. . . . 9.45

SLIDE LABELS. Adhesive back. Ship. wt. 2 oz.
67 H 3614—Package of 120. 22c

D EMDE STEREO MASKS. Self-aligning, self-locking aluminum masks for mounting stereo transparencys. Quick, simple mounting for checking with hand viewer. Mount between glass (G) below with tape and binder on Page 37 for accurate projection mounting. Ship. wt. 10 oz.
67 H 3609—Normal Masks. Box of 100 \$3.75
67 H 3610—Medium Masks. Box of 100 3.75
67 H 3611—Close-Up Masks. Box of 100 3.75

E REALIST PERMAMOUNTS. For projection or hand viewer. Your pictures will project correctly whether distant or close-up shots, without making any compensating projector adjustments. Just drop each picture into its proper window and pairs are exactly placed for correct projection. Tight seal won't split—protects film from dust and dirt. Gray plastic mounts complete with glass.

Normal Mounts. Windows placed for shots including infinity. *Postpaid.*
67 HN 3615 Box of 20 \$3.00
67 HN 3616 T Box of 100 13.50

Medium Mounts. Windows placed for shots with farthest object at 15 feet or less. *Postpaid.*
67 HN 3617 Box of 20 \$3.00
67 HN 3618 T Box of 100 13.50

Close-Up Mounts. Windows placed for shots with farthest object at 5 feet or less. *Postpaid.*
67 HN 3619 Box of 20 \$3.00
67 HN 3620 T Box of 100 13.50

F MOUNTING KIT FOR STEREO SLIDES. Includes cutter, sorting tray, and tweezers. Everything you need to mount stereo pictures in Permamounts (E) above or mounts (B) or (D) at left.
67 HN 3628—*Postpaid.* \$8.50

G STEREO REALIST VIEWER. Hand viewer for seeing your stereo slides in third dimension. (Polarized glasses not necessary). Has fine achromatic lenses, interocular (eye) spacing and focusing adjustments. Black bakelite body. Uses two standard flashlight batteries (included).
67 HN 3621—With bulb. *Postpaid.* \$19.75

2½-VOLT TRANSFORMER. Eliminates need for batteries in Stereo Realist Viewer above. Gives constant even illumination. Easily attached—plugs into any 110- to 120-volt electric outlet.
67 HN 3622—With 12-ft. cord. *Postpaid.* . . . \$4.95

STEREO PROTECTOR SLEEVES. For cardboard stereo mounts. Plastic sleeve protects transparencys against scratches, fingerprints and abrasion marks. Slips over mount easily.
67 H 3633—Box of 100. Ship. wt. 10 oz. . . \$3.19

H REVERSE STEREO VIEWER. Hand viewer for seeing stereo slides in third dimension. (Polarized glasses are not necessary). Fine achromatic lenses. Adjustments for interocular (eye) spacing and focusing. Built-in illumination system. 3-color plastic body. With 2 flashlight batteries.
67 HN 3623—With bulb. *Postpaid.* \$18.50

2½-VOLT TRANSFORMER for Reverse Stereo Viewer above. Special fitting attaches directly to viewer, plugs into any 110- to 120-volt outlet.
67 HN 3624—With cord. *Postpaid.* \$4.95

J BRUMBERGER STEREO VIEWER. Inexpensive hand viewer for stereo slides (no polarized glasses necessary). Built-in illumination. Knob focusing. No interocular (eye) adjustment, but has compensating extra large diameter ground and polished eyepiece lenses. Marbelized plastic body. With bulb, 2 flashlight batteries.
67 H 3625—Ship. wt. 2 lbs. \$8.95

K NEW KODAK "KODASLIDE" STEREO VIEWER I. For standard stereo mounts. No polaroid glasses necessary. Built-in illumination. Lever adjusts lens spacing to your eyes. Focus adjustment moves slide holder. Single element lenses. Bottom light switch lets you hold viewer in one hand and insert slides with the other. Switch can be locked in "on" position. Complete with bulb and 2 standard "D" size batteries. Accepts 110-120-volt converter below.
67 HN 3634—*Postpaid.* \$12.75

KODAK "KODASLIDE" VIEWER II. Looks like (K) above but is an all-electric model for operation on 110-120 volt AC or DC. Has brightness control to give the best viewing light. Color-corrected achromatic lenses give better picture clarity and realism. Can be operated on batteries (not included) and flashlight bulb if desired. With bulb. For 110-120-Volts AC-DC.
67 HN 3635—*Postpaid.* \$23.75

CONVERTER FOR "KODASLIDE" STEREO VIEWER. Fits inside Viewer I above to convert it to an all-electric viewer for 110-120-volt AC or DC operation. Has rheostat control to adjust brightness for best viewing. Controlled by bottom switch. Special bulb included.
67 HN 3636—*Postpaid.* \$5.95



Exposure Meters Mean Better Pictures

Light meters help you get uniform negatives that result in good pictures every time. You will save money by cutting film waste and avoid disappointment that comes from spoiling a picture. The photo-electric cell meters give correct exposure times for most light conditions. Reflected light meters measure the light reflected by the subject. Incident light meters measure

the light falling upon the subject, especially useful in poor light. Although lower priced meters are an excellent value, higher priced meters have larger photo-electric cells for more sensitivity, and the tests for accuracy are more thorough and exacting. They are better in construction, have jewelled movements, and are comparable in workmanship to a fine watch.

A SKAN QUICK METER. A new meter that's really two meters in one. It's ideal for the new camera fan or amateur.

One side reads "quick as a flash" directly in f /stops from $f/2.8$ to $f/22$ at speeds from $1/25$ to $1/200$ —merely by inserting a metal slide that gives the ASA rating of the film. The other side has a comprehensive computer dial for other combinations of lens openings and speeds: from $f/1$ to $f/64$; $1/1000$ to 16 seconds. Durable gray plastic case fits pocket or purse. In clear plastic box. Complete with neck cord, instructions.

67 HN 2159 L—Postpaid.....17.50
67 HN 2160—Leather case. Postpaid..... 1.95

B G.E. MODEL DW-68 METER. One of our most popular photo-electric cell meters. Highly sensitive—reads three wide ranges of light values. Removable hood lets you measure both reflected and incident light. Can be used for pictures, darkroom and illumination control. Diaphragm stops $f/1$ to $f/45$; shutter speeds $1/1800$ to 120 seconds. ASA film ratings. Jewelled movement. Crackle finished metal body. With instructions and neck cord. No Credit Charge. Postpaid.

67 HN 2162 L—Only \$2.50 Down on Terms.24.50
67 HN 2163—Leather case. Postpaid..... 1.50

C IKOPHOT EXPOSURE METER. Precision made by jewelled craftsmen of the Zeiss Works in the U.S. Zone of Germany. Attractively styled, with jewelled movement—just like a fine watch.

Measures both reflected and incident light. Sensitive photo-electric cell will read under almost any light conditions. Flexible safety chain fastens around wrist. ASA film indexes. Shutter speeds from $1/1000$ to 60 seconds; diaphragm settings from $f/1.5$ to $f/22$. Complete with snap-on incident light attachment, metal reinforced leather case. No Credit Charge.

67 HN 2195 L—Postpaid. Only \$3 Down...28.00

D WESTON MASTER II EXPOSURE METER. Popular photo-electric cell meter—instantly figures correct exposure for you. Has two light scales—one for dim and one for brightly lighted scenes. Flip open baffle and dim scale appears. Diaphragm stops $f/1.5$ to $f/32$. Shutter speeds $1/1200$ to 100 seconds. Molded plastic body. Fine jewelled movement. Instructions. No Credit Charge.

67 HN 2169 L—Postpaid. \$3 Down.....29.95

WESTON CINE MASTER II EXPOSURE METER. As above with scale for movie frames per second. With instructions, film speeds. No Credit Charge.

67 HN 2175 L—Postpaid. \$3 Down.....29.95

67 HN 2177—De Luxe eveready leather case for above Weston meters. Postpaid.... 1.50

E WESTON INVERCONE ADAPTER. Incident light attachment for both Weston meters above.

67 HN 2171—Postpaid.....2.50

F G.E. EXPOSURE METER, MODEL PR-1. For both still and movie photography. "The meter with a memory." Indicator stays at reading until you press button to release it. Louver-coupled dial shifts range automatically from dim to bright scale. Fine jewelled movement. Lens stops from $f/1$ to $f/128$, shutter speeds $1/1200$ to 120 seconds. ASA ratings. Incident light attachment, neck cord, and instructions included. No Credit Charge.

67 HN 2181 L—Postpaid. \$3.50 Down.....32.50

67 HN 2182—Leather case. Postpaid..... 1.50

G PRIZE EXPOSURE METER. Accurate, small-sized meter from Western Germany. Sensitive photo-electric cell. ASA film indexes. Shutter speeds from $1/2000$ to 120 seconds; lens openings from $f/1.4$ to $f/45$. Black plastic case. Accurate dial reads directly in lens and shutter settings. One-hand operation. With leather case.

67 H 2194 L—Ship. wt. 4 oz.....9.95

H DE JUR 5B METER. Compact, lightweight meter by De Jur Amsco. Sensitive photo-electric cell takes accurate light readings.

Uses convenient ASA exposure indexes. Shutter speeds from $1/800$ to 30 seconds; lens settings from $f/1.4$ to $f/45$. Simple one-hand operation. Black plastic body is protected by eveready case and safety neck strap. With instructions.

67 H 2193 L—Ship. wt. 6 oz.....12.95

J G.E. MASCOT EXPOSURE METER. Vest-pocket size meter for quick, easy exposure calculations. No Complicated adjustments to make—interchangeable scale reads directly in f /stops. For stills or movies. Fine jewelled movement. Durable plastic case. ASA film ratings. With instructions and special dial computer. Postpaid.

67 HN 2155 L—No Credit Charge.....15.95

67 HN 2158—Case for above. Postpaid.... 1.50

K LEUDI VISUAL EXTINCTION TYPE METER. Easy to use under good lighting conditions. Exposure is obtained by looking through it at numbers of varying density. The highest number visible is the index from which exposure is calculated by using table on side of meter. Covers all standard film speeds, shutter speeds, lens stops. A.S.A. film ratings. With case, instructions.

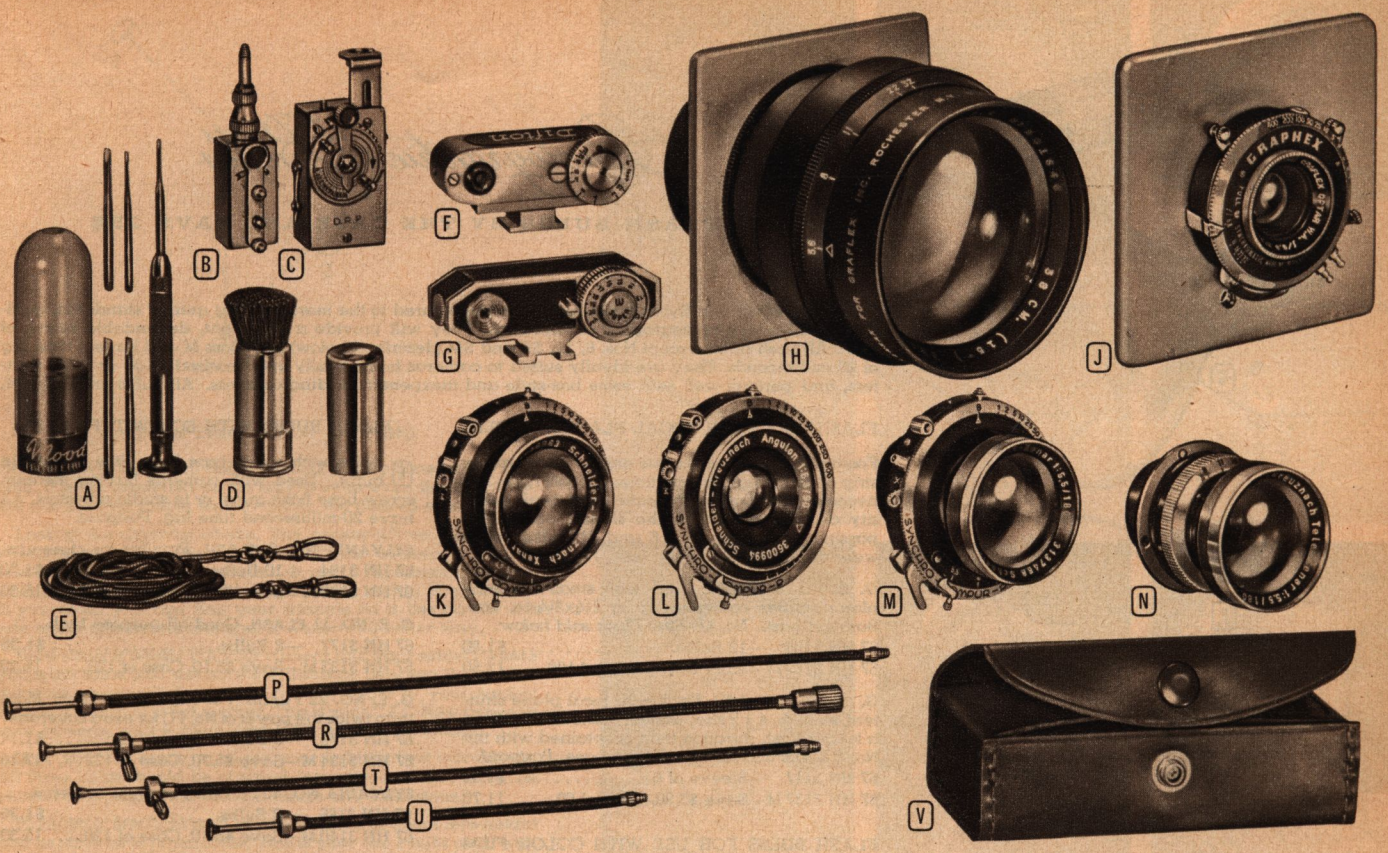
67 H 2154—Shipping weight 4 oz.....1.65

L KODAK MASTER PHOTOGUIDE. Handy spiral bound book. For still pictures with black and white or color films. Convenient dial computers, tables and text give you data on exposure, filters, depth of field and other picture-taking essentials.

67 H 2153—Shipping weight 6 oz.....1.65

KODAK CINE PHOTOGUIDE. Master guide for movies. Tables, dial computers and text in same book as (L) above, answers your movie problems.

67 H 2164—Shipping weight 6 oz.....1.65



Lenses and Accessories for Better Pictures

- A** JEWELERS' SCREWDRIVER SET. With 5 interchangeable blades to fit small camera screws. 67 H 2176—Swivel handle. Ship. wt. 8 oz. 1.49
- B** KOPIL SELF TIMER. Allows you to get into your own picture. Screws directly into cable release socket. Tapered thread fits popular shutters. Delayed action release of shutter is adjustable for up to 12 seconds. Adjustable plunger travel protects shutter. All metal, chromed finish. Made in Japan. 67 H 2348—Ship. wt. 4 oz. 2.79
- C** AUTOKNIPS II SELF TIMER. Affords up to 12 seconds delayed action release of shutter so you can get into your own picture. Also provides controlled time exposures of 1/2 to 10 sec.—with camera on bulb setting. Attaches to cable release (order separately at right). All metal, chromed finish. Made in U.S. Zone of Germany. With metal case. 67 H 2349—Ship. wt. 5 oz. 3.79
- D** "LIPSTICK" LENS BRUSH. Camel hair bristles. Brush screws in and out from metal case. 67 H 5073—Abt. 2 in. long. Ship. wt. 5 oz. 98¢
- E** CHROME PLATED NECK CHAIN. Fastens into lugs of your camera with two snap clips. 67 H 2343—36 in. long. Ship. wt. 4 oz. 1.79
- F** WIDOR RANGEFINDER. Made in U.S. Zone of Germany. Look at subject through window—turn dial until two images come together . . . scale indicates exact focusing distance from 2 ft. to inf. Bright super-imposed image type. Two screw adjustments—for readjusting focus and re-aligning images vertically. Fits camera accessory clips. All metal, satin chromed finish. About 2 in. long. 67 H 2188—Ship. wt. 8 oz. 3.79
- G** SUPER WATAMETER RANGEFINDER. Precision made in U.S. Zone of Germany. Focuses from 12 inches to infinity. 22 in. or over is shown on convenient scale inside meter—reads while focusing, 12 to 24 in. on separate dial. Two wheels for readjusting—one sets infinity distance, second aligns images vertically. Bright super-imposed image. All metal with leather covering and satin trim. Fits camera accessory clip. About 2 inches long. 67 H 2342—Shipping weight 9 oz. 7.79

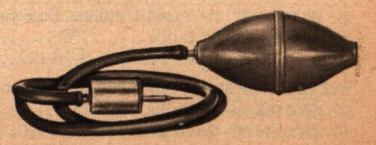
- H** GRAFLEX TELE-OPTRAR F/5.6 TELEPHOTOS. Coated lenses complete with lens boards for 4x5 Pace-maker Graphic cameras. No Credit Charge.
(H) 67 HN 2238LT—15-in. barrel mount (no shutter). *Postpaid*. \$20 Down 196.35
67 HN 2341LT—10 inch in No. 3 Graphex X synchronized shutter with speeds from 1 to 1/200, plus T and B. State size. *Postpaid*. \$17.50 Down . . 170.35
- J** GRAFLEX OPTAR WIDE ANGLE. Coated 90mm f/6.8 lens in fully synchronized No. 1 Graphex MX shutter, speeds from 1 to 1/400, plus T and B. On lensboard for 4x5 Pacemaker Graphic. 67 HN 2236LT—*Postpaid*. Only \$11.00 Down 108.00
- K** TO **N** SCHNEIDER LENSES. Precision-made in the U.S. Zone of Germany. All are top quality, coated lenses, suitable for press or view cameras up to 4x5-in. size. Compur MX shutters are fully flash synchronized with 20 millise. delay for Class M lamps and (X) zero delay for strobe. 9 speeds from 1 to 1/500 second plus bulb, and blade-arrestor for ground glass focusing. Compur X shutters have (X) zero delay for strobe and Class F flashbulbs to 1/100 second. Have 9 speeds from 1 to 1/400 second plus bulb and delayed-action shutter release. Both have cable release brackets. With locking nut for lens-board mounting and lens cap. *All Mailed Postpaid*. Boards and viewfinder masks can be ordered from Bob Adams (Page 93). No Credit Charge.
(K) 135mm, f/4.7 Schneider Xenar. *Postpaid*.
67HN2300LT—In Compur. MX shutter. \$6 Down. 58.15
67HN2301LT—In Compur X shutter. \$5 Down. . 47.95
(L) 90mm, f/6.8 Schneider Angulon. Wide angle lens, convertible for 3 focal lengths in ratio of 1:1 1/2:2.
67HN2239LT—In Compur. MX shutter. \$6.50 Dn. 64.88
67HN2240LT—In Compur X shutter. \$5.50 Dn. . 54.58
(M) 180mm, f/5.5 Schneider Tele-Xenar telephoto lens mounted in fully synchronized Compur MX.
67 HN 2302LT—*Postpaid*. Only \$7.50 Down. . 71.65
(N) 180mm, f/5.5 Schneider Tele-Xenar telephoto lens in barrel mount (no shutter).
67 HN 2304LT—*Postpaid*. Only \$5.50 Down. . 52.20

- P** TO **U** CABLE RELEASES. Tapered threads fit Kodak, German cable release sockets. Ship. wt. 4 oz.
(P) 67 H 2310—12-in. Tapered thread. 98¢
(R) 67 H 2313—10 in. with Leica-type cap, fits Lordox cameras. With lock-on screw for time exposures. . . 1.19
(T) 67 H 2312—10 in. with lock for time exposures. Tapered thread . . . 1.19
(U) 67 H 2311—6-in. Tapered thread. . 98¢

- V** KODAK COMBINATION FILTER CASE. Leather, felt lined. Holds lens hood, ring, 3 filters. Size 5x2 1/2 x 3/8 in. *Postpaid*.
67 HN 2325T—Series V case 4.25
67 HN 2331T—Series VI case. 4.95

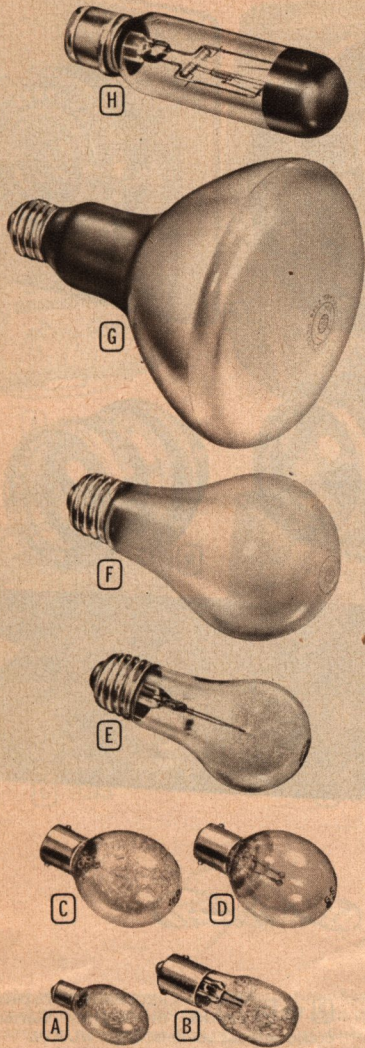
DE GROFF AIRWAY SHUTTER RELEASE (shown below). Convenient method of releasing your shutter from a distance. Airway release fastens directly to cable release socket of shutter—squeeze bulb and shutter is released. With 20 ft. of tubing and bulb. Ship. wt. each 12 oz.
67 H 2336T—For Kodak shutters. . . 11.95
67 H 2337T—For Compur, Prontor, and other European shutters. . . . 11.95
67 H 2338T—For Wollensak shut. . 11.95
67 H 2339T—50-foot extra rubber tubing for above. Ship. wt. 8 oz. . . . 6.95

POLAROID LAND PICTURES IN WINTER
"Pictures in a minute" take a little longer to develop in cold weather. When temperatures drop to 45° wait two minutes before removing the finished picture. Three minutes at 32°, five minutes at 15°.



Photographic Bulbs

BUY FLASH BULBS BY THE CASE AND SAVE 25%



NEW MIDGET FLASH BULB

A G. E. M-2 MIDGET. New—only 1 3/4 in. long. Small size makes it possible to carry dozens of bulbs in your pockets. Produces adequate light for black and white snapshots. With special adapter to fit bayonet-base flash guns. *Postpaid.* 67 HN 3110—12 Bulbs.....\$1.20
67 HN 3111M—Save \$3.00. Case of 120 bulbs. 9.00

POPULAR BAYONET-BASE FLASH BULBS

B NO. 8 BULBS. Primarily for box cameras. Permits close-ups without overexposing.
G. E. NO. 8 BULBS. Bayonet base.
67 HN 3152—12 Bulbs.....\$1.50
67 HN 3141M—Save \$3.75. Case of 120.....11.25
SYLVANIA NO. 8 BULBS. Bayonet base.
67 HN 3165—12 Bulbs.....\$1.50
67 HN 3168M—Save \$4.50. Case of 144.....13.50

C Most popular of all flash bulbs. Compact, easy to carry. 20-millisecond time lag. *Postpaid.*

G. E. NO. 5 FLASH. Bayonet base.
67 HN 3172—12 Bulbs.....\$1.56
67 HN 3131M—Save \$3.90. Case of 120.....11.70

SYLVANIA NO. 25 SUPER FLASH. Bayonet base.
67 HN 3183—10 Bulbs.....\$1.30
67 HN 3139M—Save \$3.90. Case of 120.....11.70

D For cameras with F or X synchronization; most box-type and inexpensive folding cameras. Time lag 5 milliseconds. Flash so fast it stops action like 1/200 sec. shutter speed. *Postpaid.*

G. E. MIDGET SM FLASH BULBS. Bayonet base.
67 HN 3115 —12 Bulbs.....\$1.68
67 HN 3135M—Save \$4.20. Case of 120..... 12.60

SYLVANIA SF SPEED FLASH BULBS. Bayonet base.
67 HN 3188 —10 Bulbs.....\$1.40
67 HN 3149M—Save \$4.20. Case of 120..... 12.60

General Electric and Sylvania bulbs are manufactured to the most exacting quality standards, qualified to fill every photographic requirement. They will provide a consistent, dependable source of light. All flash bulbs except Nos. 6, 31, SF and SM (described below) are Class M and have a time lag of 20 milliseconds. They are ideally suited to cameras having fully synchronized (M-X) or (M-F) shutters, and perform well with some box-style and inexpensive folding cameras. All bulbs are *Postpaid.*

FLASH BULBS FOR FOCAL PLANE SHUTTERS

Focal plane shutters expose only a very narrow strip of film to light at one time. For this type, it is necessary to have flash continue at peak intensity during entire time the shutter opening is passing across film. No. 6 and 31 bulbs below were designed for this purpose. *Postpaid.*

G. E. NO. 6 FLASH. Used with small-size focal plane shutter cameras, up to 2 1/4 x 3 1/4-in. size. Bayonet base. No. 6B Blue Flash sold below.
67 HN 3166 —12 Bulbs.....\$1.80
67 HN 3167M—Save \$4.50. Case of 120..... 13.50

G. E. NO. 31 FLASH. For larger focal plane shutters, such as 4 x 5 size, and for subjects requiring a longer flash duration than is obtained with the No. 6 bulbs above. Screw-type base. *Postpaid.*
67 HN 3117 —Sleeve of 6.....\$1.56
67 HN 3137M—Save \$3.90. Case of 60.....11.70

FLASH BULBS FOR USE WITH COLOR FILM

Essentially the same bulbs as the corresponding clear bulbs Nos. 5, 6, 11, 22 and 25; same size and same base, but with a filter coating. The five blue bulbs are used to supplement daylight, for outdoor color pictures; or, as the sole source of light for taking pictures indoors with daylight-type color film. The amber bulb 25C, is used for indoor-type color film, without filters. All except 6B have a 20 millisecond time lag. *Postpaid.*

G. E. 5B BLUE FLASH. Bayonet base.
67 HN 3171 —12 Bulbs.....\$2.04
67 HN 3132M—Save \$5.10. Case of 120..... 15.30

G. E. NO. 6B BLUE FLASH. Time lag 30 milliseconds. For synchronized focal plane shutters.
67 HN 3169—12 Bulbs.....\$2.28
67 HN 3170M—Save \$5.70. Case of 120..... 17.10

G. E. NO. 11B BLUE FLASH. Screw-type base.
67 HN 3178 —8 Bulbs.....\$1.68
67 HN 3156M—Save \$6.30. Case of 120..... 18.90

G. E. NO. 22B BLUE FLASH. Screw-type base.
67 HN 3116 —6 Bulbs.....\$1.44
67 HN 3136M—Save \$7.20. Case of 120..... 21.60

SYLVANIA NO. 25B BLUE FLASH. Bayonet base.
67 HN 3119 —10 Bulbs.....\$1.70
67 HN 3180M—Save \$5.10. Case of 120..... 15.30

SYLVANIA NO. 25C AMBER FLASH. Bayonet base.
67 HN 3159—10 Bulbs.....\$1.70
67 HN 3158M—Save \$5.10. Case of 120..... 15.30

LAMPS FOR ENLARGERS

Standard screw base; opal glass. 110-120 volts.
67HN3128—No. 211, 75-Watt. *Postpaid.* Each 45c
67HN3129—No. 212, 150-Watt. *Postpaid.* Each 47c
67HN3130—No. 302, 500-Watt. *Postpaid.* Each \$1.35

BELL & HOWELL LAMPS

For Bell and Howell Projectors, with special B & H installed base that centers filament, to assure uniform light and maximum screen brilliance. Keep an extra bulb on hand. *Postpaid.*

FOR REGENT PROJECTORS.
67 HN 3151—500-Watt Each \$4.46

FOR NO. 173 and 273 PROJECTORS.
67HN3153 T-750-Watt. Each \$5.04

FOR FILMOSOUND PROJECTORS.
67HN3155 T-1000-Watt. Each \$6.56

FLASH BULBS WITH SCREW-TYPE BASE

E Bulbs with screw-type base (like household bulb). Used with cameras having medium screw-base flash guns, or in studio reflectors. All have 20-millisecond time lag. *Postpaid.*

SYLVANIA NO. 0 FLASH. Popular for close-ups.
67 HN 3184 —10 Bulbs.....\$1.70
67 HN 3138M—Save \$5.10. Case of 120..... 15.30

G. E. NO. 11 FLASH. Good all-purpose bulb.
67 HN 3177 —8 Bulbs.....\$1.36
67 HN 3133M—Save \$5.10. Case of 120..... 15.30

G. E. NO. 22 FLASH. For high-speed shots. More than twice the power of No. 11, for extra coverage.
67 HN 3179 —6 Bulbs.....\$1.14
67 HN 3134M—Save \$5.70. Case of 120..... 17.10

SYLVANIA NO. 40 FLASH. For press cameras.
67 HN 3186 —8 Bulbs.....\$1.36
67 HN 3140M—Save \$5.10. Case of 120..... 15.30

G. E. PHOTOFLOOD BULBS

F For either Black and White or color photography, indoors. The B2 Blue photoflood lamp is used to supplement daylight in color photos, but is not recommended as the only source of light for daylight-type color film. All photoflood bulbs have screw-type base. *Postpaid.*

NO. 1 PHOTOFLOOD. Light equals 750 Watts.
67 HN 3101—Life about 3 hours.....Two for 40c
NO. 2 PHOTOFLOOD. Light about 1700 Watts.
67 HN 3113—Life about 6 hours.....Two for 70c
NO. B2 BLUE PHOTOFLOOD. About 1700 watts.
67 HN 3114—Life about 6 hours.....Each 60c

G. E. REFLECTOR-TYPE PHOTOFLOOD BULBS

G Reflectors are sealed in as an integral part of the lamp. Produce a controlled beam of light. May be screwed into any standard light socket. If you have no photographic lamp stands, use a table lamp or bridge lamp.

NO. RFL2 PHOTOFLOOD. Gives broad 90° beam about equal to a No. 1 Photoflood in a good reflector. Light equals 1700 Watts. Life about 6 hours.
67 HN 3103—*Postpaid.*.....Each \$1.30

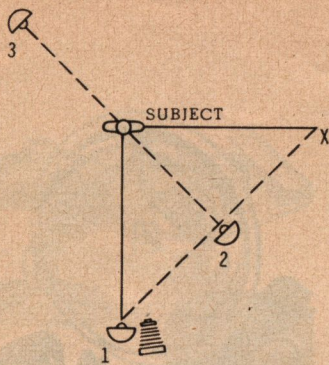
NO. RSP2 PHOTOSPOT. Ideal for movies. Gives light about 8 times intensity of RFL2 above. Focuses light in 20° beam. Light equals 10,500 Watts. Life about 6 hours.

67 HN 3100—*Postpaid.*.....Each \$1.45

NO. 375 PHOTOFLOOD. For movie armlights and barlights. Tailored to approximately match the lens coverage of most amateur movie cameras. Light equals 1000 Watts. Life about 4 hours.
67 HN 3185—*Postpaid.*.....Each \$1.35

H G. E. PROJECTION LAMPS. To determine type, look at present lamp; or, see catalog description of your slide or movie projector on Pages 41, 42, 53, 55, 56 and 57 of this Catalog.

Article No.	Type	Base	Watts	Price
67 HN 3125	T-12	Medium Pre-focus	750	\$4.30
67 HN 3142T	T-12	Medium Pre-focus	1000	5.77
67 HN 3122	T-10	Medium Pre-focus	200	3.30
67 HN 3123	T-10	Medium Pre-focus	300	3.30
67 HN 3124	T-10	Medium Pre-focus	500	3.93
67 HN 3120	T-8	Single Contact Bayonet	100	84c
67 HN 3121	T-8	Single Contact Bayonet	150	1.36
67 HN 3187	T-8	Single Contact Bayonet	200	1.47
67 HN 3112	T-8 1/2	Single Contact Bayonet	300	2.46
67 HN 3126	T-8 1/2	Double Contact Bayonet	300	2.57



A PLAN FOR INDOOR LIGHTING

Here is a plan by which home lighting can be done simply and well. It is not presented as the only way or even the best way. But it is the best simple way to obtain the desired effect.

Look at the diagram above. The person whose picture you intend to take is marked "Subject," the camera is plainly recognizable, and the numbers 1, 2, and 3 represent three possible positions for lights. "X" marks the far corner of a triangle. If you wish, you can flop your triangle so it lies on the left side of the camera-subject line. It works well either way.

Here's how it works: Put your camera and your subject where you want them and measure the distance between them. Now measure an equal distance at a right angle to your subject and drop a coin or other marker. This is your "X." Now between your camera, your subject, and "X" you see a triangle.

Now you are ready to place your lights to best advantage. All three lights should be of equal intensity, but they may be photofloods, photospots, or flash lamps and extensions.

Place your first light next to your camera at about lens height and as close as is practicable. This is your No. 1 light and, with few exceptions, it's always used. It is your basic light and the light on which exposure is calculated. It lights every part of the picture that your lens can see, and it's the kind of picture you get with an attached flash gun. The picture keyed (A) at the right is an example. The result is satisfactory, but the effect is somewhat flat and leaves something to be desired.

Your No. 2 light is placed at a point just midway between your No. 1 light and "X." It is usually placed higher than the No. 1 light. A good height would be one high enough so that if your subject faces the camera, the shadow of his nose extends toward the corner of his mouth. Picture and diagram (B) at the right show the set-up and the resulting picture. The No. 2 light is rarely used alone because without other lights it tends to leave long, deep shadows and "burned out" areas. However, if used in conjunction with No. 1—see (D)—or Nos. 1 and 2—see (F)—it adds life and sparkle because it brings out the outline of features and creates shadows so necessary in showing texture and giving the picture a professional quality.

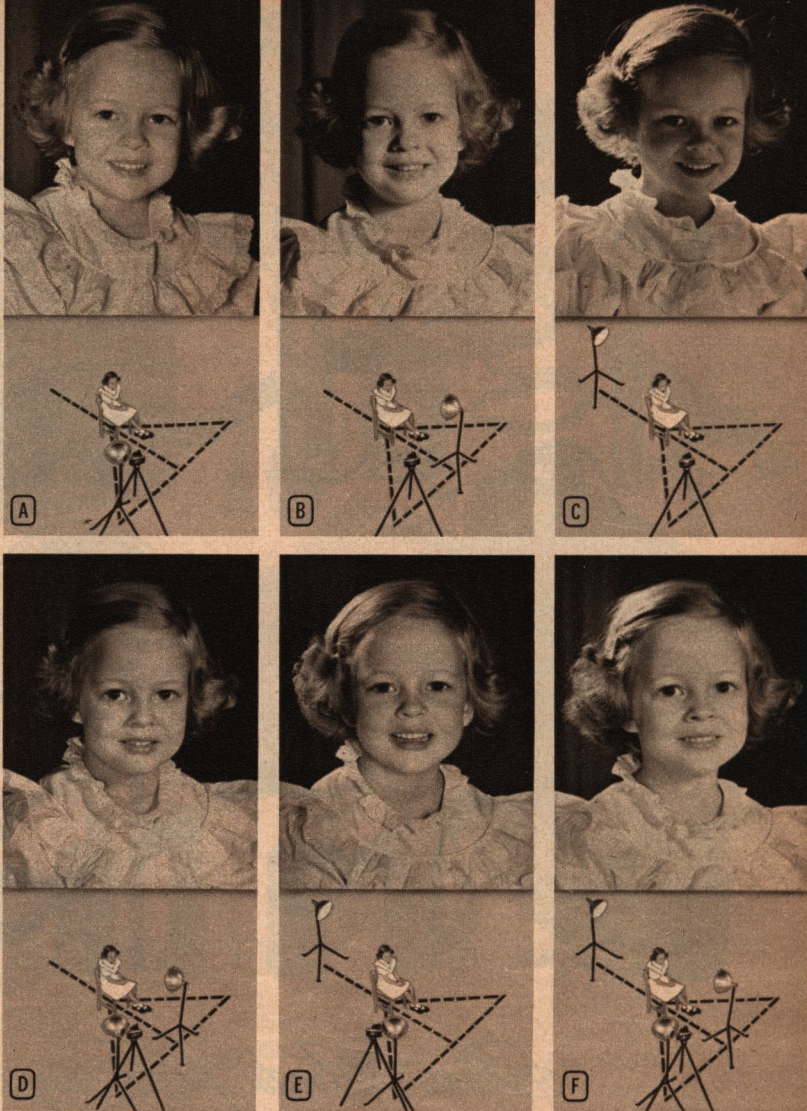
To place your No. 3 light, extend the line between your No. 2 light and your subject. Your No. 3 is on a projection of this line and is the same distance beyond the subject. In relation to the other lights, it should be placed higher in order to bring out highlights on the hair. The No. 3 is the light which adds roundness and depth to your picture. It separates your subject from his background and makes him stand out to show that a third dimension exists. The No. 3 is rarely used alone because, except for reflected light, there is practically no light on the front of your subject. Picture and diagram (C) show the function of this light. Note how dark the face is.

Picture and diagram (D) show the set-up and results of using lights No. 1 and No. 2 in combination. You have the full illumination of the entire picture area as in picture (A), and you'll notice that the shadows which were so deep and dark in picture (B) have become lighter and more transparent.

Picture (E) shows the result of using lights Nos. 1 and 3 together. You have the full illumination of the face and dress found in (A). But the addition of No. 3 has brought out the characteristic highlights on the hair; there is the distinct definition between the little girl and her background; and the desirable look of roundness to her neck and shoulders. There is less texture to the face and dress, and a softening of the features. These lights are particularly flattering for subjects with dominant features or coarse complexions.

Picture (F) shows the results of using all three lights at once. The characteristic advantages of each light are easily discernible—the full lighting of subject and background by No. 1, the sparkle and texture of No. 2, and the depth and roundness of No. 3 combine to produce a picture full of life and reality, of proper contrast, and some third dimension.

PHOTOGRAPHING LARGER GROUPS. When you need to light larger areas just place your lights in a bigger triangle. Your camera does not have to be right next to the No. 1 light. It can be closer to the subject if you wish. Just keep it as near as possible in line with the No. 1 light and the subject and be sure it doesn't cast a shadow on the subject.



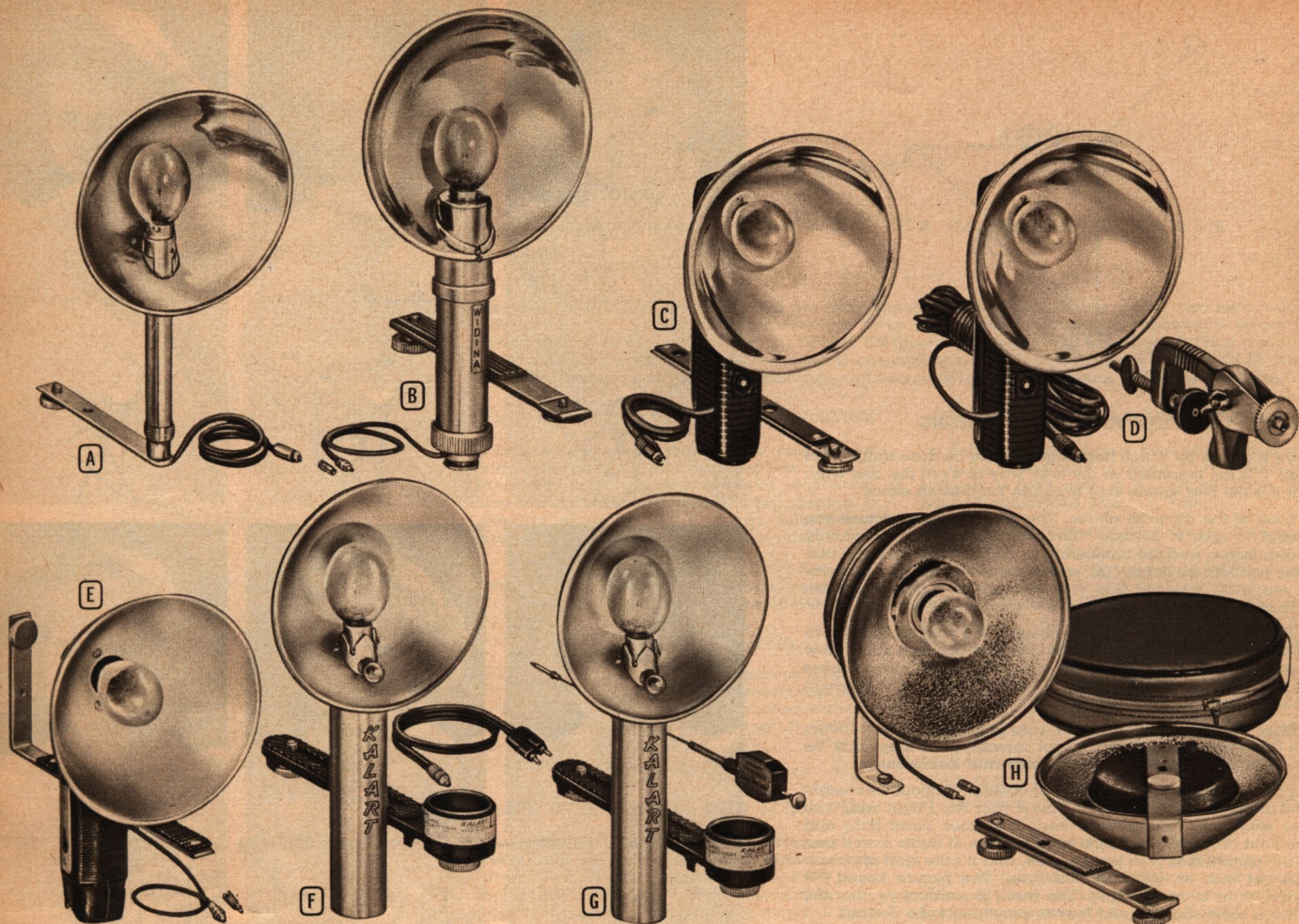
Good Lighting is Easy

HOW TO DETERMINE EXPOSURE. An exposure meter (Pg. 26) is recommended, especially for color film. However, you can get excellent results by using the charts below. In either case, exposure should be based on the No. 1 light only. This assures that shadow areas are properly exposed, and film latitude will take care of the highlights.

To use the chart, first find the column that is headed with the A.S.A. Tungsten Speed of the film you are using (see film listings in this catalog). Follow this column down to the line opposite the shutter speed you want and the lamp you are using. The number at this point is your Guide Number. Now measure the distance from your No. 1 light to your subject in feet and divide this distance into the guide number. The result is the correct f/stop to use. If this proves impossible with your camera, simply change your setup to a different shutter speed or a different lamp distance or both and refigure until you get a combination you can use. *Example:* Using Super XX film (A.S.A. 80) and a No. 2 bulb at 1/25 second, the guide number is 52. If the light distance is 5 ft., divide 5 into 52 and get 10.4. Use the closest camera setting—F/11.

The charts below show most of the flood lamps Wards sell, and the most popular flash lamps. For complete charts on other flash lamps see the flashlamp carton.

PHOTOFLOOD GUIDE NUMBERS					PHOTOFLOOD GUIDE NUMBERS					
Flood Lamp	Shutter Speed	A.S.A. Tungsten Speed			Flash Lamp	Shutter Speed	A.S.A. Tungsten Speed			
		10-16	20-32	80-125			10-16	20-32	80	
No. 1	1 sec	64	90	180	SM	Up to 1/100	44	60	96	
	1/5	29	40	80			1/200	40	55	88
	1/25	13	18	36		5B	Up to 1/25	55	75	
	1/50	9	13	26				1/50	48	70
No. 375	1 sec	70	99	199	5	1/100	44	60		
	1/5	32	44	88			1/200	34	48	
	1/25	14	20	39		Up to 1/25	80	110	180	
	1/50	10	14	28			1/50	70	100	160
No. 2 or RFL 2	1 sec	90	130	260	25 or 0	1/100	65	90	140	
	1/5	40	58	116			1/200	50	70	110
	1/25	18	26	52		Up to 1/50	90	125	250	
	1/50	13	18	36			1/100	70	95	190
	1/100	9	13	26		1/200	50	75	145	



Flash Units for Easy Indoor Shooting

A VICTOR FLASHGUN. For synchronized shutters with European fitting like (3) on opposite page. 5-in. reflector for bayonet base bulbs, bracket and 2 penlight batteries.

67 H 3201—Ship. wt. 1 lb. 1.98

B WIDINA FLASH UNIT. For synchronized shutters. Has interchangeable connectors for either ASA or European fittings like (2) and (3) on opposite page. Imported by Wards from Germany (U.S. Zone). Heavy-gauge polished aluminum, 5-in. reflector adjusts to center bayonet base lamps. Sturdy aluminum battery case. Mounts rigidly on camera's tripod socket with padded self-aligning bracket. Has fitting on base for mounting directly on camera accessory clips. With two "C" batteries.

67 H 3275—Ship. wt. 1 lb. 4.79

C KODAK STANDARD FLASHHOLDER. For synchronized shutters with ASA fitting like (2) on opposite page. 5-in. reflector, with ASA outlet on case for extension cord—use with (D) for improved flash lighting. Takes bayonet base lamps; with bulb ejector and 12-in. cable. Black plastic battery case, sturdy camera bracket, two "C" batteries and plastic flash guard included.

67 HN 3238—Postpaid. 7.95

NEW KODAK B-C FLASHHOLDER. Like above but with built-in B-C Flashpak like (B) on opposite page. For extra long battery life and more positive synchronization (see "B-C" explanation on opposite page). 22½-volt "B" battery included.

67 HN 3267—Postpaid. 10.95

D KODAK EXTENSION FLASHHOLDER. Extra light source for improved flash pictures with either Kodak flash unit above. With 20-ft. cord and versatile C-clamp with swivel bracket for mounting anywhere. Takes bayonet base bulbs. With two "C" batteries for use with Standard Flashholder, and shorting bar for use with B-C Flashholder.

67 HN 3209—Postpaid. 11.00

E ANSCO UNIVERSAL FLASH UNIT. For all synchronized shutters with ASA or European fittings like (2) or (3) on opposite page. Handle snaps to bracket and is quickly and easily detachable to hold at different lighting angles. 14-in. cable. 5-in. reflector takes bayonet base bulbs. Black plastic case with standard 2-prong (household type) outlet for extension flash use. With bulb ejector, two "C" batteries.

67 HN 3262—Postpaid. 8.95

F NEW KALART SUPER SPEED FLASH. For synchronized shutters. With built-in Kal-Q-Lator bracket that quickly gives correct lens setting for any flash exposure with color or black and white film. 5-in. reflector takes bayonet base lamps. With test light, bulb ejector, flash guide bracket, and two "C" batteries. Ship. wt. 1 lb.

67 H 3221—For ASA fitting (2, Page 31) . . . 9.45

67 H 3222—For European fittings (3, Page 31) 9.45

G KALART AUTOMATIC SYNCHRONIZER. With master automatic synchronizer for all non-synchronized cameras with cable release socket like (1) on opposite page. Synchronizes at any speed for which shutter can be set (only at full shutter aperture with focal plane shutters). Same Kal-Q-Lator guide bracket and reflector as for (F) above. For bayonet base bulbs. With two "C" batteries and instructions. State make, model of your shutter and camera when ordering. Allow 5 days extra for shipment.

67 H 3256 K—Ship. wt. 2 lbs. 18.95

KALART PASSIVE SYNCHRONIZER. Like (G) but with passive synchronizer for non-synchronized cameras with cable release socket like (1), Pg. 31, and self-setting shutters—(shutters that do not have to be cocked before tripping). Synchronizes at shutter speeds up to 1/50 second. State make, model of your shutter and camera when ordering. Allow 5 days extra for shipment.

67 H 3224 K—Ship. wt. 2 lbs. 10.45

H NEW WIDINA B-C COLOR-FLASH. For synchronized shutters. Imported by Wards from U.S. Zone of Germany. It is our best flash unit value, combining efficient B-C operation (see editorial on next page) with compact, pocket-size and exclusive blue-colored reflector. Permits use of outdoor-type color film for indoor flash pictures with regular (clear) flash bulbs. (Patented, blue surfaced 5½-inch diam. reflector corrects light.) Eliminates both of two types of color film, conversion filters, or special blue flash bulbs. Works as well as standard silvered reflectors for black and white film. Takes all bayonet base lamps (Nos. 5, 25, 8, SM and SF). Built-in bulb tester and ejector. Round battery case on back of reflector is detachable to store inside reflector—compact enough to carry in your coat pocket. Convertible connector fits cameras with either ASA or European fittings (2) and (3) on opposite page. "L" type mounting bracket with set screw fits on camera accessory clip—with bar bracket furnished for attaching to camera's tripod socket. Complete with 22½-volt "B" battery and 6-in. diam., zippered plastic carrying case—with loops to fit camera shoulder strap with exposure data.

67 H 3226—Shipping weight 12 oz. 7.95

67 H 3217—Like (H) but with conventional silver-colored reflector. Ship. wt. 12 oz. . . . 7.95

FLASH GUN ACCESSORIES

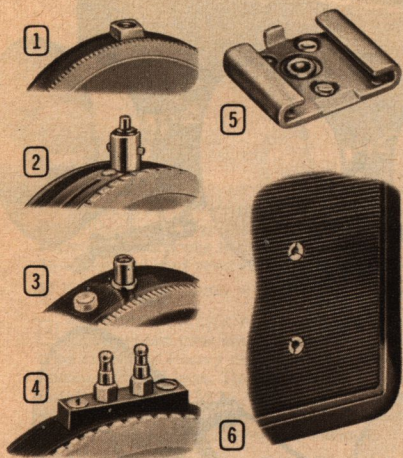
3-WAY PLASTIC FLASH GUARD. One side blue for emergency use with outdoor film and indoor bulbs; one side diffused to soften highlights, and one side clear for normal use.

67 H 3249—Ship. wt. 2 oz. 39¢

EXTENSION CORDS. Permit wider lighting range for flash pictures. One end fits on to shutter of camera, other end on flash gun. Wt. 6 oz.

67 H 3204—For cameras and flash units with ASA fittings only. 3 ft. long 2.59

67 H 3263—For cameras and flash units with European fittings only. 5 ft. long 1.98



WHAT ABOUT FLASH GUNS?

A flash gun lets you take pictures any time—any place, in color or black and white. Good flash pictures can be taken with any camera—here's how to choose one for yours.

FLASH UNITS FOR SYNCHRONIZED SHUTTERS. If your camera has ANY of the fittings (2) through (6) above, its shutter is synchronized for flash. ASA fittings like (2) or European fittings like (3), on shutters such as Compur, Prontor and Vario, work with all flash units on Page 30 except (G). For press camera flash fittings like (4), use (C) on Page 15. If your camera has a special flash fitting like (5) or (6), order flash unit from Page on which that camera is listed, or write Bob Adams for information on specific gun for your camera.

FLASH UNITS FOR NON-SYNCHRONIZED CAMERAS. If your camera has a cable release socket like (1) it can be fitted with either mechanical synchronizing units (G) on opposite page, or built-in synchronization can be added to your present camera. Write Bob Adams Page 93.

B-C (BATTERY CAPACITOR) FLASH UNITS. Designed for long life, convenience, more positive synchronization. Takes thousands of flashes or fires, 3 bulbs at one time. One special 22½-volt "B" battery will last about 1 year, assures you of positive performance even after your flashgun has lain idle for weeks. Because the B-C unit operates at higher voltage, it affords more positive synchronization and is less likely to misfire. Order Kodak or Widina B-C Flashholders (D) and (H) on opposite page, or convert your present flashgun to B-C operation with Flashpak (B) at right.

ABOUT STROBE FLASH. Many photographers prefer electronic Strobe units especially for shooting fast action scenes and children and because they eliminate the expense and inconvenience of flash bulbs. While generally less powerful than conventional flash, such units as Thrift-Lite Strobe Flash (K) at right provide adequate light even for color film. Strobe units vary considerably in size, weight, light output and price. If you are interested in information about any of the other popular Strobe units, write Bob Adams (Page 93) for descriptive literature and prices. Be sure to state complete name and model of your shutter and camera.

(A) SERVO FLASHER. Wireless extension unit for multiple flash lighting of a large group or area where supplementary extension wiring would be inconvenient or impossible to install. Light from your flash gun activates the photoelectric cell in window of Flasher unit which sets off the auxiliary bulb. Synchronizes with camera's flash at distances up to 500 ft. and speeds to 1/200 second. Black plastic case. Adjustable 5-in. reflector takes medium screw base bulbs. Order two 67½-volt batteries separately below.
67 H 3218 T—Ship. wt. 3 lbs.21.50

62 H 43—BATTERIES FOR SERVO FLASHER. 67½-volt "B" type.
Shipping weight 2 lbs.Two for 4.39



(B) KODAK B-C FLASHPAK. Battery capacitor unit described at left. Fits any flash unit using two "C" batteries. Includes 22½-volt "B" battery.
67 HN 3207—Postpaid3.95

(C) DX FLASH CARTRIDGE. Long life battery. Lasts 2 years or 5000 flashes from No. 5 or No. 25 bulbs. For use with synchronized shutters and any flash unit using two "C" batteries.
67 H 3281—Ship. wt. 1 lb.....2.79

(D) BRIGHT STAR DUAL FLASHTESTER. Checks all sizes of photoflash batteries and bulbs without draining or firing. Easy to use, vest pocket size. Cuts film and bulb waste to a minimum.
67 H 3280—Ship. wt. 4 oz.2.79

(E) BAYONET AND M-2 FLASH ADAPTER. One unit adapts screw base sockets for bayonet base bulbs, other adapts bayonet base socket for new M-2 bulbs. Test lamp with bulb fits bayonet base sockets only. M-2 adapter has bulb ejector.
67 H 3237—Ship. wt. 6 oz.98¢

(F) TO (J) BRIGHT STAR FLASH BATTERIES. Designed specifically for flash photography. Give extra life, power.

(F) 67 H 3228—Reg. size, abt. diam. of 50c piece. Ship. wt. for two, 8 oz.Two for 25¢
(G) 67 H 3229—"C" size, abt. diam. of 25c piece. Ship. wt. for two, 6 oz.Two for 25¢
(H) 67 H 3230—Penlight size, abt. diam. of dime. Ship. wt. for two, 6 oz.Two for 20¢
(J) 67 H 3247—22½-volt "B" battery for B-C units. Ship. wt. 4 oz.1.05

KODAK FLASHPOST ADAPTER. Adapts flash units with ASA connectors for use with Compur, Prontor, and Prontor flash synchronized shutters with European fitting like (3) above.
67 HN 3241—Postpaid90¢

(K) THRIFT-LITE STROBE FLASH. Fast 1/1000 second flash freezes action. Repeating tube will take about 10,000 shots. Ready to shoot every 7 seconds. Provides adequate light to shoot Kodachrome color film, 8 ft. at f/3.5 (or guide number 28). 60-watt second input. Will shoot Plus-X black and white film at 15 ft., f/8. Color is balanced for Daylight color film—6500° Kelvin. Dial calculator on back of case shows proper exposure for color or black and white. 5-in. reflector, artificial leather covered with plastic handle. Bracket for camera mounting. 15-ft. power cord. For 110 to 120 volts, AC, or Battery pack below. Instructions. With shutter connection for any popular synchronized camera. State make and model of camera and shutter. No charge for Credit. Postpaid.
67 HN 3286 T—Synchronizes with shutters having "X" (zero millisecond delay) setting, including "M-X" shutters.59.50
67 HN 3287 T—Synchronizes with shutters having "F" (5 millisecond delay); "X" (zero millisecond delay) settings, including "M-F" and "M-X" shutters Polaroid, 95 and 95-A camera.69.50

(L) THRIFT-LITE BATTERY PACK AND BOOSTER PACK. Battery Pack enables you to shoot with Strobe outdoors or any place where electrical current is not available. Booster Pack increases Strobe light output about 50% whether used with Battery Pack or on AC. Can shoot color film to 12 ft. at f/3.5. Both Packs make one portable Strobe outfit. Leather carrying cases. Instructions.

(M) BOOSTER PACK. Plug into Battery Pack below or A.C. wall outlet. Actual weight 12 oz.
67 H 3289 T—Ship. wt. 2 lbs.19.50

(N) BATTERY PACK. Good for more than 1500 flashes. With two "C" batteries and two 90-volt "B" batteries. Actual weight 3½ lbs.
67 H 3285 T—Ship. wt. 5 lbs.24.50
62 H 46—REPLACEMENT BATTERIES for Battery Pack. 90-volt "B" type. Wt. 2 lbs. 2 for 5.25

Thrift-Lite Strobe

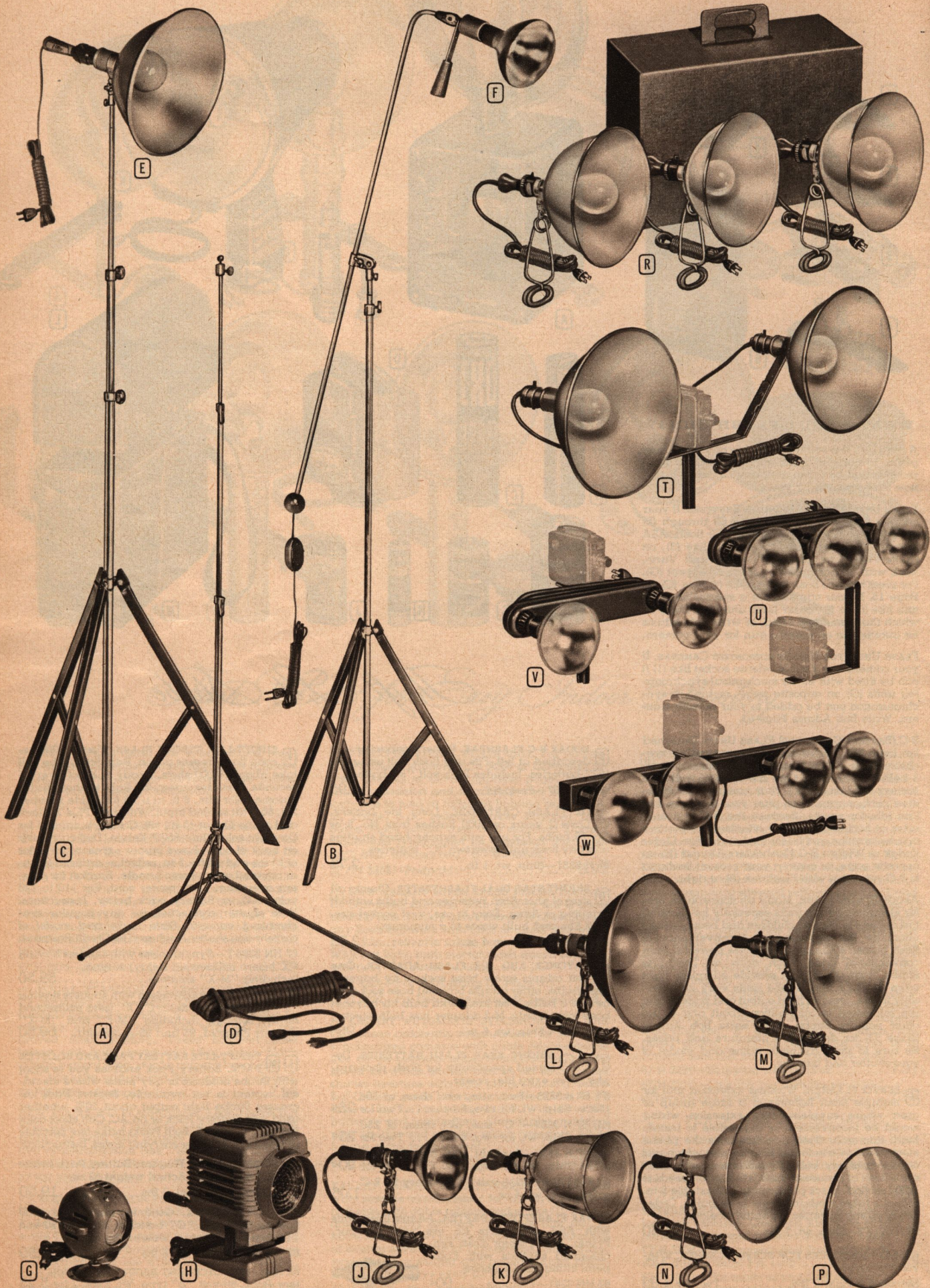


Photo Lighting Equipment

FOR PROFESSIONAL QUALITY PICTURES AT HOME

A NEW COMPACT 3-SECTION STAND. Ideal portable lighting outfit. Closes to 24 in., elevates to 6 ft.; weighs only 2½ lbs. Nickel plated steel tubing and legs. Rubber tipped feet spread to 32 in. to give firm support. Lever locks hold tube securely at desired height. Standard ¾-in. top rod and removable ball stud take any reflector.
67 H 3266 M—Shipping weight 3 lbs. 2.98

B **C** VICTOR TELESCOPIC LIGHT STANDS. Our finest and strongest. Designed now with removable ball stud that permits use of all type reflectors. Heavy tight-joint steel tubing, cadmium plated, green enameled steel legs. Thumb screws lock sections securely at all elevations. Standard ¾-in. top rod section is geared at bottom to prevent accidental withdrawal. Legs lock automatically at any point. Feet slightly rounded to grip on any surface.
(B) MODEL S2 STAND. 2 sections. 6½-ft. elevation. Closes to 42 inches. Foot spread 26 inches.
67 H 3233 M—Shipping weight 3 lbs. 12 oz. 3.39
(C) MODEL S3 STAND. 3 sections. Elevation 8 ft. Closes to 35 inches. Foot spread 33 inches. Heavier-gauge tubing than (B).
67 H 3234 M—Shipping weight 6 lbs. 8 oz. 5.59
MODEL S4 STAND. Not pictured. Same construction as (C) above but in 4 sections. Elevation 10½ ft. Closes to 36 in. Foot spread 33½ in.
67 H 3235 M—Shipping weight 7 lbs. 8 oz. 7.95

D NEW HEAVY-DUTY EXTENSION CORD. Especially designed for use with photoflood and reflector-flood lamps. Heavy 16-gauge copper wire, rubber insulated, delivers full current to lamps. Ordinary lamp extension cords cut current causing inadequate lighting and under-exposure. Rubber plug on one end, single outlet on other end.
83 H 1271 L—25 ft. long. UL Approved. Ship. wt. 2 lbs. 1.79

E VICTOR STAND REFLECTOR. Heavy aluminum with etched interiors, efficient reflector design for even diffusion of light. Heat insulated bakelite socket, wood handle. Ball and socket attachment fits Victor stands above and others with ¾-in. stud. Order No. 2 photofloods, Page 28. With 10-ft. rubber cord and switch.
67 H 3261—10½-in. diam. 7¼ in. deep. Wt. 2 lbs. 4 oz. 2.98
67 H 3236—11-in. diam. 8 in. deep. Wt. 2 lbs. 10 oz. 3.98

F VICTOR MINI-BOOM. Sturdy tubular aluminum with swivel to fit Victor stands and others with ¾-in. stud. Boom is 44 in. long and swivels on ball attachment, can be extended or retracted, provides 30-in. play. Ball handle weighted for balance—swivel socket on one end for reflector lamps. Order lamps separately, Page 28. Wood handle. Off-On switch in 15-ft. rubber cord.
67 H 3245 M—Shipping weight 3 lbs. 4 oz. 6.29

VICTOR MINI-BOOM WITH STAND. Lighting range from floor to 10 ft. high. Adjusts from handle or head. Complete with 2-section stand (B) and Boom (E). Order lamp from Page 28.
67 H 3244 M—Shipping weight 6 lbs. 8 oz. 8.95

G GOLD-E HI-LITER. Small yet highly efficient spotlight. Has 3-in. diam. Fresnel type lens that throws a powerful, clear beam. Spherical chrome plated reflector. Rear focusing device. Tilts up or down or swings in complete circle. Removable panning handle. Bracket adjustable for tripod mounting. Double walled housing keeps light cooler. All metal brown wrinkle finish case; cord and plug.
67 H 3251 T—With 100-watt, 200 hr. G16½ lamp. Wt. 3 lbs. 9.95

H NEW TDC VIVID SPOTLIGHT. Precision designed for amateur or professional work. 4½-in. heat-resistant Fresnel lens. Medium pre-focus heatproof porcelain socket aligns lamp filaments perfectly with lens to give brilliant white light. Push-pull control adjusts readily for sharp spot or broad flood lighting. Die-cast aluminum housing, chrome plated unbreakable reflector; removable table base has bracket for use with tripod, any Victor stand or others with ¾-in. stud. Adjusts for horizontal or vertical positions. Removable top for quick lamp change. Complete with projection lamp, off-on switch in 9-ft. cord; for 110 to 120 volts, 60 cycle AC. Shipped from warehouse. Order and pay postage from nearest Mail Order House.
MODEL 175. With 500-watt T20 medium pre-focus lamp. Size overall 11 by 6½ by 11 in. long. Ship. wt. 7 lbs.
67 H 3243 K—\$3.50 Down on Terms. Cash 31.50
MODEL 176. Twin-fan blower cooled. With 1000-watt T20 medium pre-focus lamp. Size overall 11 by 6½ by 12½ in. long. Ship. wt. 9 lbs.
67 H 3246 K—\$4.50 Down on Terms. Cash 41.75

I VICTOR REFLECTOR-FLOOD UNIT. Includes RFL2 reflector, photoflood lamp, 6-ft. cord, push switch in heat-resistant bakelite socket, wood handle, rubber-jawed spring clamp.
67 H 3220—Shipping weight 2 lbs. 4 oz. 2.79

K BROAD-FLOOD TYPE REFLECTOR. Fine for background lighting, gives wide span, even dispersal of light. Spun aluminum reflector 6½-in. diam., 7 in. deep. Ball swivel spring clamp with rubber covered jaws. Push switch socket, wood handle, 8-ft. rubber cord. Order No. 1 or No. 2 photofloods separately from Page 28.
67 H 3265—Shipping weight 2 lbs. 2.69

L VICTOR BEST QUALITY REFLECTOR. Heavy-gauge aluminum with etched reflecting surface, brown enameled metal exterior; 11-in. diam., 8 in. deep. Heat-resistant bakelite socket, wood handle. Rubber covered clamps with ball and socket are removable—reflector can be used conveniently on stands at left. Off-On switch, 10-ft. cord. Order No. 2 photofloods from Page 28.
67 H 3206—Shipping weight 3 lbs. 4.49

M VICTOR BETTER QUALITY REFLECTOR. Spun aluminum with etched reflecting surface and exterior. Heat-proof push switch in metal socket. Wood handle. 6-ft. cord. Clamp same as with Best Quality Reflector (K). Fits stands above. Order photofloods, Page 28.
67 H 3208—11-in. diam. 8 in. deep. For No. 2 photofloods. Ship. wt. 2 lbs. 10 oz. Each 3.59
67 H 3225—Pair of above. Ship. wt. 4 lbs. Pair 6.79
67 H 3255—10-in. diam. 7¼ in. deep. For No. 1 or No. 2 photofloods. Ship. wts. 2 lbs. 4 oz. Each 2.98
67 H 3268—Pair of above. Ship. wt. 3 lbs. 4 oz. Pair 5.49

N VICTOR GOOD QUALITY REFLECTOR. Spun aluminum reflector 10-in. diam. 6¾ in. deep. Ball swivel spring clamps, rubber covered jaws. Push switch metal socket. 6-ft. cord. Order No. 1 or No. 2 photofloods separately from Page 28.
67 H 3223—Ship. wt. 1 lb. 12 oz. Each 2.29
67 H 3298—Pair of above. Ship. wt. 3 lbs. Pair 4.19

P VICTOR DIFFUSING SCREEN. Durable material gives excellent diffusion of light. Resists tearing, heat and scorch resistant. Securely set into metal hoop, clips easily to reflector. Ship. wt. 7 oz.
67 H 3290—For 10-in. reflectors. 1.29
67 H 3292—For 11-in. reflectors. 1.59

R TRIANGLE LIGHTING KIT. Contains everything you need to take pictures like those shown on Page 29. Includes 3 reflectors—two 10 in. and one 9½-in. diam., all with rubber-jawed spring clamps and 8-ft. cords; 2 No. 2 GE photoflood lamps, 1 No. 1 GE photoflood lamp; and exposure guide folder. Corrugated carrying case.
67 H 3258 M—Ship. wt. 5 lbs. 8 oz. UL Approved. 7.98

T VICTOR EVER-READY ARMLITE. Designed for above-the-lens lighting and maximum compactness. Two No. 2 photofloods in 11-in. aluminum reflectors light subject brilliantly for movies or stills in color or black and white. As powerful as four 500-watt reflector flood lamps but use only half as much current, costs about \$4 less to replace lamps. Sure-grip mount fits all cameras, with socket for tripod mounting. Phenolic sockets have individual switches. 15-ft. rubber cord. With 2 No. 2 lamps. Corrugated carton has compartments for camera, film and spare lamps. Reflectors fold inward for compact storage.
67 H 3278 M—Ship. wt. 4 lbs. 8 oz. UL Approved. 10.95

U VICTOR FLOODMASTER 3-LAMP BAR-LIGHT. Puts light above camera for natural shadow effects, better lighting. Gives ample illumination for movies and stills in color or black and white yet will not overload home circuit. Versatile mounting feature permits wide variety of lighting possibilities, ball and swivel socket on handle enables bar light to be held vertically or horizontally, or at any position within 90°; bar-light can be mounted on either side of camera. Bracket folds flat against bar for easy storage. Switch on back of bar. Enameled metal finish; corrugated carrying case. With 15-ft. cord and 3 GE reflector-photoflood lamps. UL Approved.
67 H 3205—14½ in. long. Ship. wt. 5 lbs. 10 oz. 9.95

V NEW VICTOR 2-LAMP BAR-LITE. Compact, easy to attach. For movies or stills, color or black and white. Padded camera platform at center; bakelite handle with socket for tripod mounting. Switch on back of bar. Enameled metal finish case. With 10-ft. cord and two GE reflector-photoflood lamps included. UL Approved.
67 H 3295—14½ in. long. Ship. wt. 2 lbs. 6 oz. 6.95

W FOUR-LAMP BAR-LIGHT. Use either two or four lights for desired illumination—one switch operates two outside lamps, one switch for two inside lamps. For movies, stills in color or black and white. Baked enamel metal case with bakelite sockets, wood handle. Adaptable for hand or tripod use. 8-ft. cord. With four 375-watt GE reflector-flood lamps. UL Approved.
67 H 3248 M—24¾ in. long. Ship. wt. 5 lbs. 10.95



A 29.95



D 7.95



F 2.98



B 1.75



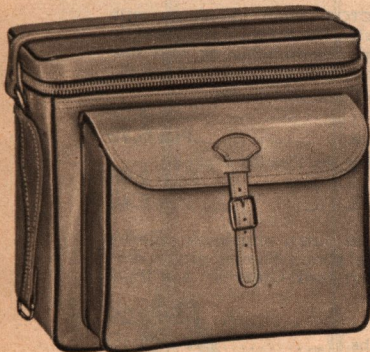
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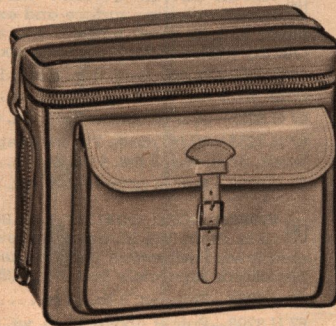
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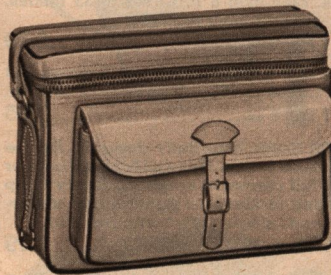
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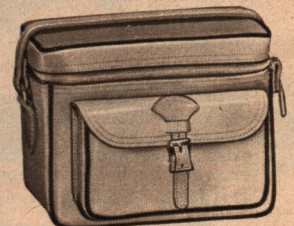
H 29.95



J 24.95



K 18.95



L 14.95

Carry Everything in a Gadget Bag



A PERRIN PRO BAG. Protect your camera and equipment from damage. Designed to hold reflex outfits, 16mm movie outfits, press cameras up to 4x5, or a combination of a smaller movie and still or 2 still cameras and equipment. Made from the finest top, full grain, double shoulder, cowhide saddle leather. Same California Saddle Leather described under (H) and (L) in Light Maple (natural) color. Has removable shoulder strap and meter-filter pocket. Comfort-grip handle, triple thick bottom for longer wear. Flashgun attaching straps, tripod strap "D" rings. Solid brass Swiss Homa Lock. Size overall 14x5x8½ inches. \$3 Down on Terms. 67 H 3386—Wt. 3 lbs. 8 oz. Cash 29.95

B PERRIN TRIPOD STRAP ATTACHMENT KIT. Take your tripod everywhere—solid brass swivel snaps fasten securely to "D" rings of all Perrin Bags except (L). Matching top grain natural cowhide leather straps, solid brass buckles hold all tripods. 67 H 3388—Ship. wt. 6 oz. 1.75

C NEW MINIATURE CAMERA BAG. Top grain cowhide leather bag ideal for carrying small 35mm still or 8mm movie cameras plus accessories. Compartment in top holds filters, small items. Moveable divider. Brass snap lock and feet. Adjustable shoulder strap. Choice of mahogany brown or natural saddle tan. State color choice. 67 H 3350—Ship. wt. 1 lb. 7.95

D NEOLITE PRO BAG. Scuff-resistant, long wearing Neolite covering for strength and rugged dependability. Protects camera, equipment from loss and damage. Reinforced seams, ends, top and bottom. Inner divider, shoulder straps. Russet color. 67 H 3347—11x8x4½ in. Ship. wt. 2 lbs. 7.95

E F G PLASTIC GADGET BAGS. Flexible dividers hold camera, accessories firmly. Medium brown plastic—remarkably leatherlike in appearance, is waterproof, will not stain or crack. Reinforced ends, top and bottom. Zipper closure, extra outside pouch. Adjustable shoulder strap.

(E) TOLEX GADGET BAG. Extra strong and durable fabric reinforced plastic. Big enough for reflex, Polaroid, and 16mm movie cameras. Bound edges. Size excluding pouch 10½x8½x3½ inches. 67 H 3315—Shipping weight 2 lbs. 4.98

(F) VINYL PLASTIC BAG. For 35mm and folding still cameras, 8mm movie cameras. No flexible divider. Size excluding pouch 11x7½x3½ inches. 67 H 3301—Ship. wt. 1 lb. 2 oz. 2.98

(G) Like above, made of heavier plastic. With divider. Ship. wt. 1 lb. 8 oz. 3.98

(G) LARGE TOLEX GADGET BAGS. Made of extra strong fabric reinforced plastic (Tolex). Holds all cameras up to 2¼x3¼ press. Snap pockets in lid. 67 H 3344—12x10x3½ in. Ship. wt. 2 lbs. 6 oz. 7.50

(G) Like above, but larger size, 14x11x4¼ in. Larger pouch. Ship. wt. 3 lbs. 9.95

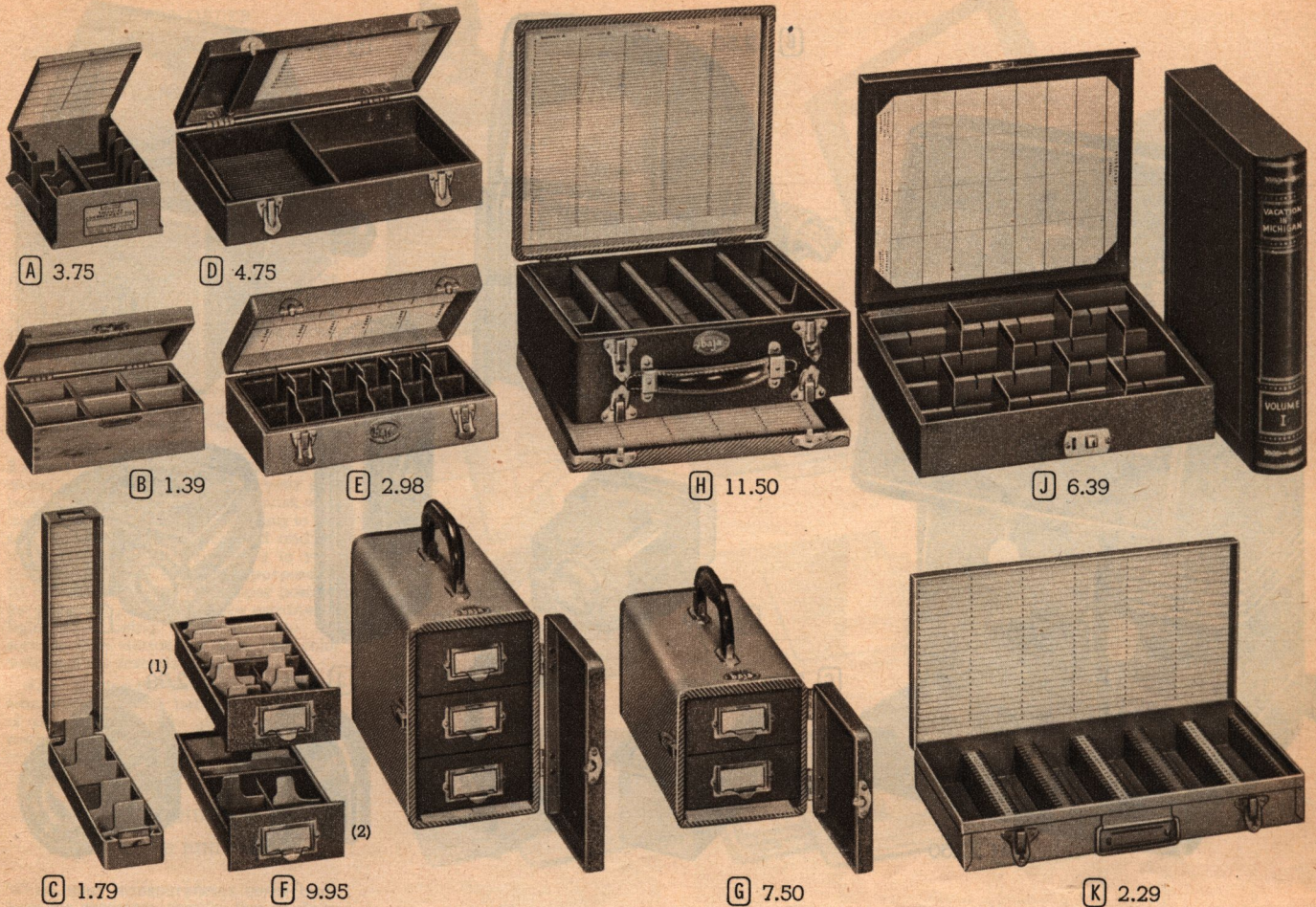
(H) TO (L) PERRIN CAMERA BAGS. Select the bag you need from a complete line of California Saddle Leather camera bags. A unique tanning process gives California Saddle Leather a natural russet color that mellows with use. Like a fine Meerschaum pipe, it grows even more beautiful with age—turning to a rich golden hue. Unlike ordinary leather, California Saddle is not sanded down during the tanning process. Natural markings remain to strengthen the leather. These markings lend character and distinction—make each bag as individual as a fingerprint. Each bag is compartmented to hold your camera snugly in place, with room to spare for accessories. A zipper compartment in the top holds your filters and other small items, while the outside pouch holds "extras" like film and flash bulbs. Brown vinyl piping protects all edges of bag from wear. Extra-strong stitching exceeds govt. standards. All have reinforced tops and bottoms, brass hardware, adjustable shoulder straps, and come with a rubber-padded shoulder pad.

(H) Camera Bag for 4x5 press or smaller cameras, plus accessories. Has durable, extra-heavy-duty zipper. Size 12¼x6¼x10½ in. with D-rings for tripod straps. 67 H 3375—Ship. wt. 3 lbs. 29.95

(J) Camera Bag for 2¼x3¼ press cameras, Land camera, or reflex cameras, plus all necessary accessories. Extra-heavy-duty zipper. Size 10¾x5¾x9½ in. with D-rings for tripod straps. 67 H 3376—Ship. wt. 2 lbs. 12 oz. 24.95

(K) Camera Bag for all 8 or 16mm movie cameras and 35mm still cameras, plus all necessary accessories. Heavy-duty zipper. Size 11x5¼x7¾ in. with D-rings for tripod straps. 67 H 3382—Ship. wt. 2 lbs. 10 oz. 18.95

(L) Camera Bag for 8mm movie cameras and miniature still cameras, plus all necessary accessories. Size 8½x5x6½ in. 67 H 3384—Ship. wt. 2 lbs. 14.95



Protect Your Slides in Indexed Files

A KODASLIDE COMPARTMENT FILE. For 35mm or Bantam. Compact—fits into a small space, yet carries 240 cardboard or 96 glass slides. Each of 12 compartments keeps slides in place whether you carry a few or a full box—each folds out for use, or locks into fixed position when cover is closed. Gray metal box has red plastic compartments. Size 7x5x2¼ inches. Index in lid.
67 H 3404—Ship. wt. 1 lb. 8 oz. 3.75

B NEGA-FILE "MIDGET" 2x2 SLIDE FILE. Holds 90 glass mounted slides or 180 cardboard mounts. Built of solid, well-seasoned hardwood; brass plated hardware, including lid-stay, hinges and hasp. Natural finish. 7¼x3⅞x2⅜ in.
67 H 3446—Ship. wt. 12 oz. 1.39

C NEW KODASLIDE 2x2 READY FILE. Made of non-shatterable polystyrene—light and long wearing plastic. Takes two hundred 2x2 cardboard mounts, 66 glass mounts, or 100 stereo mounts. 4 index cards provided to permit filing into 6 groups. 9½x2¼x2½ in.
67 H 3447—Ship. wt. 6 oz. 1.79

D BAJA STEREO FILE. A stereo slide and viewer carrying case that may be tucked under your arm. Bottom slots hold 31 glass-mounted or metal-mounted slides individually. Space for viewer built into carrying case. Sturdy plywood frame, maroon fabric covering. Accommodates Revere or Realist stereo viewers. Snap lock.
67 H 3444—Ship. wt. 2 lbs. 4 oz. 4.75
67 H 3445—Same as above but holds 62 mounted slides. Ship. wt. 3 lbs. 4 oz. 6.50

E BAJA BOOK-SIZE SLIDE FILE. Easy to carry under your arm. Made of sturdy plywood covered with durable, brown tweed fabric. Group-file holds about 150 glass mounted slides or 300 cardboard mounts, in groups. 9¼x5¼x2⅜ in.
67 H 3437—Ship. wt. 2 lbs. 2.98

F **G** NEW BAJA SLIDE CASES. Newly designed slide files feature plastic drawers with removable metal dividers to accommodate either stereo or 2x2 slides. Lightweight drawers have metal index frames and drawer pulls. Group filing drawers like (1) shown above separate slides in subject-groups with fiber dividers. Individual filing drawers like (2) shown above have slotted bottoms to hold each slide separately—permit you to fan the tops of the slides for quick identification without lifting. Plywood case covered with two-tone brown and tweed luggage-type plasticized fabric—long wearing, scuff-proof. Four metal feet protect case from damage. Polished brass hardware. Plastic handle.

(F) THREE DRAWER GROUP FILE. With drawers like (1) shown above for group filing. Holds 450 2x2 glass or 1350 cardboard 2x2 mounts, or 225 stereo glass or 675 cardboard stereo mounts.
67 H 3440—Ship. wt. 5 lbs. 9.95

67 H 3441—THREE DRAWER INDIVIDUAL FILE. With drawers like (2) shown above. Holds 276 2x2 glass or metal mounts, or 138 stereo glass or metal mounts. Ship. wt. 5 lbs. 9.95

67 H 3442—6-DRAWER GROUP FILE. As (F) above but with drawers like (1) shown. Holds 900 glass or 2700 cardboard 2x2 mounts, or 450 glass or 1350 cardboard stereo mounts. Wt. 8 lbs. 17.95

67 H 3443—6-DRAWER INDIVIDUAL FILE. With 6 drawers like (2) shown. Holds 552 2x2 glass or metal mounts, or 276 stereo glass or metal mounts. Ship. wt. 8 lbs. 17.95

(G) 2-DRAWER GROUP FILE. With drawers like (1). Holds 300 glass or 900 cardboard 2x2 mounts, or 150 glass or 450 cardboard stereo mounts.
67 H 3438—Ship. wt. 4 lbs. 8 oz. 7.50

67 H 3439—2-DRAWER INDIVIDUAL FILE. With drawers like (2) shown above. Holds 184 2x2 glass or metal mounts, or 92 stereo glass or metal mounts. Ship. wt. 4 lbs. 8 oz. 7.50

H BAJA TWO-COMPARTMENT SLIDE FILE. Files 35mm or Bantam slides individually. Opens from either side; holds 500 glass slides or cardboard readymounts. Index card on each cover. Two-tone brown artificial leather covering.
67 H 3403—12x10¾x5 in. Ship. wt. 8 lbs. 11.50
Unifile One-Compartment Slide Case. Same as case above but has single opening; holds 250 glass slides or cardboard readymounts. No handle. Cover all tweed color. Ship. wt. 4 lbs.
67 H 3402—Size about 12x10¾x2⅝ in. 5.95

J HOB-B-BOOK SLIDE FILE. "Album" with gold-tooled design, personalized titles, is actually a group file. Fabricoid waterproof, scuffproof cover, sturdy plywood frame; matches Hob-B-Book albums (Pg. 64). Index in lid, index dividers. Key blank. With each file is a self-explanatory order blank for personalized 3-line title and a 2-line volume number which manufacturer stamps in 24K Gold at no extra charge. 12½x11x2½ in.
67 H 3364—For 2x2 in. slides. Holds 350 glass slides or 700 readymounts. Ship. wt. 2 lbs. ... 6.39
67 H 3341—For Stereo. Holds 175 glass or 350 readymounts—or remove dividers to hold Realist, Brumberger viewers. Wt. 2 lbs. 6.39

K BRUMBERGER SLIDE FILE. Large, attractive case with numbered individual slots to protect your slides. All-steel construction, gray crackle enamel finish. Steel handle, snap locks.
67 H 3318—For 35mm and Bantam. Holds 300 readymounts or 150 glass slides. Size abt. 7½x14½x2½ in. Ship. wt. 2 lbs. 4 oz. 2.29
67 H 3448—Same as above but has 6 compartments with removable dividers, for group filing. 14½x7½x2½ in. Ship. wt. 2 lbs. 4 oz. 2.98
67 H 3328—Holds 100 2¾x2¾ slides. Size abt. 7½x14½x2⅜ in. Ship. wt. 3 lbs. 8 oz. ... 3.69
67 H 3329—Holds 75 3¼x4 in. slides. Size abt. 7½x13½x3½ in. Ship. wt. 3 lbs. 4 oz. ... 3.69



Selected Viewers for your Color Transparencies

A KODASLIDE TABLE VIEWER, 4X. See your 35mm or Bantam transparencies magnified four times—in a fully lighted room. 7½x7½-in. screen, big enough for six people to enjoy at once. Square screen enables you to project either horizontal or vertical slides without cutting off edges. To change slide insert the next one, which pushes first slide out other side. Mahogany plastic, gold color trim. With bulb and 8-ft. cord. 67 HN 660 M—Postpaid. No Credit Charge 37.50

CARRYING CASE. Plywood, with leatherette cover. Room for one Kodaslide File (See Pg. 35). 67 HN 661 M—Postpaid. 9.75

B TDC DUO VIVID VIEWER. A modestly priced table viewer. Metal flip-up plates accommodate 35mm. or Bantam or 2¾x2¾-in. slides. Plug in, turn the switch, and view your slide in a fully lighted room on a brilliant 3x3-in. built-in screen. The TDC Duo Vivid is light and compact enough to carry with you everywhere you go—weighs only 14 oz. About 5x7x6 in. Brown bakelite, virtually unbreakable. For 110 to 120-volt AC or DC. Complete with cord and 7-watt bulb. 67 HN 3323—Postpaid. No Credit Charge. 12.50

C BRUMBERGER SLIDE VIEWER. Hinged adapter centers all 35mm, Bantam, and 2¾ by 2¾-in. slides. You see the brilliantly lighted and enlarged image with both eyes—no squinting. Optically ground and polished lens. Electrically operated—plugs into 110-V outlet. Sturdy construction. With switch, bulb, and 6-foot cord. 67 H 3420—Ship. wt. 2 lbs. 8 oz. 5.79

D MICO-ETTE DELUXE VIEWER. For 35 mm. and Bantam slides. Lightweight, compact, illuminated viewer. Battery unit may be quickly detached for viewing with artificial light or daylight. Brilliant red plastic case beautifully styled. With battery attachment, 2 batteries, bulb. Size 4¼x2¼x2 in. No Credit Charge. 67 H 3399—Ship. wt. 6 oz. 2.79

E ADMIRAL POCKET VIEWER. For 35mm and Bantam slides. Self-lighting—just slip slide in groove, and light turns on. No buttons to push, no wasted batteries. Three persons can view slides at one time. Rugged Fiberglass case. 5½x1½x3 in. Ship. wt. 11 oz. 67 H 3309—With batteries. 4.49

F TWINLENZ VIEWER. Fine viewer for 35mm and Bantam slides. Look with both eyes at once—without eye strain. The two-lens optical system magnifies without distortion. Shows the clearest image of any hand viewer that Wards sell. Ejection lever for easy slide change. 67 H 3320—Ship. wt. 1 lb. 2 oz. 8.95

G BRUMBERGER SLIDE PRE-VIEWER. For 35-mm and Bantam slides. Use any 110-volt electric outlet. Use alongside a projector when pre-viewing slides. Ground glass diffusion, steel body. Viewing surface 2¼x3 in. Can be carried in compartment in File cases (G), and (J) on Page 35. Complete with 6-foot cord and bulb. 67 H 3316—Ship. wt. 12 oz. 2.29

H KODAK FOLDING POCKET VIEWER. For 35 mm. and Bantam slides. Cleverly designed for maximum efficiency. Snaps open at the touch of a finger, with automatic spring. Collapses to only 2¼x2⅞ in., fits in palm of the hand. Remains closed with friction-type catch. Excellent 1-inch lens gives bright, sharp image with no cut corners. All plastic body is grey and black. 67 H 3322—Ship. wt. 4 oz. 1.79

J GUILD MINI-VIEWER. For 35 mm. and Bantam slides. Hold viewer up to any light source. Fixed focus eye-piece. Newly designed 1-inch Lucite lens gives sparkling clear picture. Sturdy, compact marbled plastic case 2¼x2¼x3 in. Keep several on hand for group showings. 67 H 3303—Ship. wt. 6 oz. 98¢

K GUILD DE LUXE VIEWER. New, improved viewer for 35 mm. and Bantam slides. Needs only artificial light or daylight. Rounded top for easier slide removal. Double lens system and focusing eye-piece provide maximum magnification and a sharp, clear image. Two cardboard film tracks included for 16 mm. and 35 mm. viewing. Sturdy, marbled plastic case 2¼x2¼x3 in. 67 H 3300—Ship. wt. 8 oz. 2.98



TDC PROJECT-OR-VIEW

L Converts instantly from table viewer to wall projector. For 35 mm., or Bantam slides. See your slides in daylight, or in a lighted room, magnified and in full color. Viewing glass 6¾x6¾ in.—large enough for several persons to see picture at one time. For projection on wall, insert transparencies in feed-through slide carrier. Coated f/2.9 lens, 200-watt bulb. Motor cooled by built-in blower. Front raised by turning elevation knob. Lightweight, die-cast metal, crackle finish. 110-120 volts, AC only. Postpaid. No Credit Charge. 67 HN 606 M—Only \$8 Down. 77.50
67 HN 607 M—Case for above projector 9.95

FACTS ABOUT SLIDES

All standard 35 mm. cameras take pictures 24x36 mm. in size; Bantam cameras produce 28x40 mm. pictures. After processing, both 35 mm. and Bantam slides are mounted in 2x2-in. cardboard Ready-mounts. To protect film from dust and fingerprints, it is advisable to enclose them in glass. Some prefer glass-bound mounts, with taped edges (B, C); others enjoy the convenience of metal mounts (K, L, M).

HOW TO ORDER

SLIDE EQUIPMENT TO PROTECT YOUR TRANSPARENCIES

Give your valuable color transparencies maximum protection against damage due to scratching, dust, and fingerprints by mounting them in either glass or metal slides.

The selection of mounting equipment is determined by the size film your camera uses and also by the slide size of your projector. There are two types of slides available for most film transparencies: Metal slides and Glass slides.

Metal slides are complete within themselves. You simply insert your film and snap the overlapping covers of the slide into place. Most metal mounts can be re-used time and again if you desire.

However for glass slides you will need 3 items: glass, tape, and masks. For the glass, select a size that will fit your projector. You will then require a mask with an outer dimension corresponding to the size glass you have purchased and an inner dimension corresponding to your film size. The mask serves two purposes—(1) it holds the film in the proper position for projecting, and (2) it stops extraneous light from being projected onto the screen, thus detracting from the color values of the transparency.

After placing the film in the mask, you sandwich the mask between two pieces of glass and bind the glass together by running a strip of the special binding tape completely around the glass.

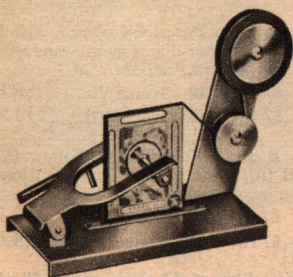
A FEW HINTS ON SLIDE BINDING

When your transparencies come back from the processor, they're just as clean as modern laboratory methods can keep them—so try to mount them in glass just as soon as you can, before they become marked, scratched or dusty; they'll be easier to bind.

Be sure your slide glass is clean before you use it. After washing in a soap or detergent solution, drain and rinse in water with Kodak Photo-Flo Solution, Page 78, or other wetting agent. Then let glass drain dry.

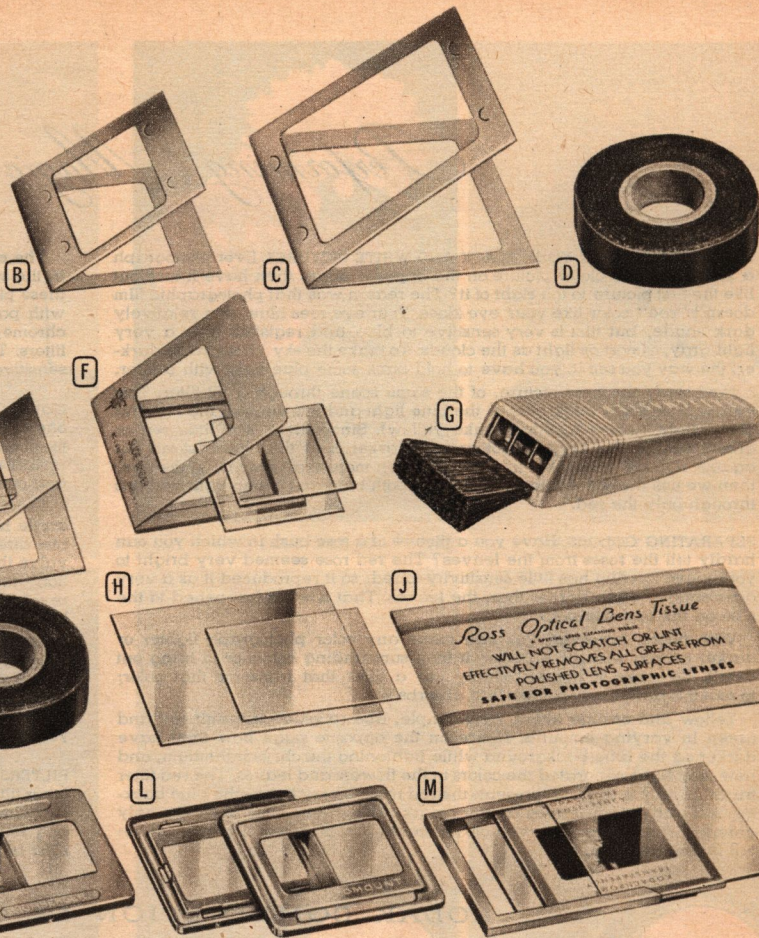
You can make a simple drying rack by stretching an ordinary screen door spring and nailing the ends to a board. You'll find that the glass will fit nicely between the spring's coils and will dry quickly and evenly.

When the glass is dry, wipe clean with a lintless cloth or lens tissue and it will be ready for use.



COMPCO SLIDE BINDER

Simplify the binding of your slides in sizes up to 3¼ by 4 inches with a CompcO Slide Binder. Its sturdy all metal construction assures years of lasting service. Simply squeeze lever and vise grips slide leaving both of your hands free to place tape on edges. Slide revolves smoothly in vise so that tape rolls on evenly, with neatly tailored corners for a professional-type binding job. Order Kodak mounting tape 67HN3314 at right. 67 H 3326—Ship. wt. 1 lb. 8 oz. 4.89



- A** KODAK FILM CLEANER. For black and white or color negatives, transparencies, movie film. Moisten cloth, which is provided, to clean film. 67 H 4338—4-oz. bottle. *Postpaid*..... 81¢
- B** **C** SLIDE MASKS. All sizes have convenient cutting film guides. Heavy-weight heat-deflecting silver paper. Order glass (F) below.
(B) 67 H 3307—Package of fifty 35mm size masks to fit 2 by 2-inch glass. Ship. wt. 2 oz. 49¢
67 H 3368—Package of 50 Bantam size masks to fit 2 by 2-inch glass. Ship. wt. 2 oz. 49¢
- C** 67 H 3304—Package of 50 masks; 2¼ by 2¼-inch size, to fit 2¾ by 2¾-inch glass. Ship. wt. 4 oz. 65¢
- D** KODAK SLIDE MOUNTING TAPE. Black cloth tape, smooth as silk. Excellent for binding any size slides. Enjoyable to work with—makes smooth, trouble-free corners. Not affected by temperature or climate. Each roll 30 ft. x ¾ in. *Postpaid*. 67 HN 3314..... 2 Rolls for 1.19
- E** KODAK SLIDE BINDER KIT. Contains material for mounting fifty 2x2-in. glass slides. Complete with masks, slide glasses and roll of Kodak mounting tape. 67 H 3354—For 35mm. Ship. wt. 1 lb. 9 oz. 3.29
- F** S.V.E. SLIDE BINDER KIT. Everything you need for mounting 2x2-in. glass slides. One-piece shockproof fiber cushion—automatically centers film to eliminate shifting. Tight gummed dustproof seal between fiber board cover and glass. Three spaces provided on outside for writing data. 67 H 3422—For 20 slides. Ship. wt. 1 lb. 4 oz. 1.29
67 H 3366—For 100 slides. Ship. wt. 3 lb. 8 oz. 5.49
- G** STATICMASTER BRUSH. Neutralizes static and removes dust and lint in one sweep. Polonium strip in durable plastic handle removes static electricity as 1-in. brush sweeps away dust and lint. Fine for cleaning slides, negatives, lenses, and equipment. 67 H 3373—Ship. wt. 6 oz. 4.69

Slide Binding Materials

- H** GLASSES FOR SLIDES. In standard projection sizes. Package of 100 glasses enough for 50 slides. Ship. wts. 1 lb. 6 oz., 3 lbs. 12 oz.
67 H 3306—Size 2 by 2 inches..... 1.09
67 H 3355—Size 2¾x2¾ inches..... 2.29
- I** LENS AND SLIDE TISSUE. Removes grease or dust particles from slides, lenses. Leaves no lint. 67 H 3317—When ordering state size wanted.
3 x 5-inch size. 100 sheets. Ship. wt. 3 oz. 32¢
4¼x5-inch size. 300 sheets. Ship. wt. 5 oz. 89¢
- J** BRUMBERGER SLIDE MOUNTS. Instantly mounts 35mm, Bantam, or 2¼ by 2¼-inch transparencies. Simply place your film between the two pieces of glass and snap the interlocking steel frame together. Forms a shockproof carrier to protect slides. 67 H 3330—2 by 2-inch mounts for 35mm film. Ship. wt. 12 oz. 20 mounts 1.49
67 H 3324—2 by 2-inch mounts for Bantam film. Ship. wt. 12 oz. 20 mounts 1.49
67 H 3331—2¾ by 2¾-inch mounts for 2¼ by 2¼-inch film. Ship. wt. 14 oz. 12 mounts 1.59
- K** TDC PRESTMOUNTS. For 35 mm. and 2x2-in. slides. Lightweight, durable aluminum. Optically clear glass. Snap-shut locking for quick, easy assembly. Self-masking. Simply insert transparency between two pieces of glass, and press metal plates together. Indented title strip for writing data. 67 H 3327—For 20 slides. Ship. wt. 10 oz. 1.75
67 H 3339—For 100 slides. Ship. wt. 3 lbs. 7.95
- L** EMDE READYMOUNT BINDERS. For 35 mm. or Bantam slides in cardboard mounts. Preserve the freshness of your slides. Insert transparency, cardboard mount and all, between glass; slide into aluminum frame and close the open end. Finished mount is as thin as other metal mounts. Data may be written on outside, in pencil; will not rub off. 67 H 3394—For 20 slides. Ship. wt. 12 oz. 1.75
67 H 3325—For 100 slides. Ship. wt. 3 lbs. 7.95

Performing Magic with Filters

GETTING CLOUDS IN YOUR BLACK AND WHITE PICTURES. Ever photograph a scene like the cloud picture on the opposite page, then have it turn out like the first picture to the right of it? The reason was that photographic film doesn't "see" color like your eye (does. Your eye sees blue as a relatively dark shade, but film is very sensitive to blue and registers it as a very light gray, almost as light as the clouds. To make the sky photograph darker, then we use the red A filter, which stops both blue and green light and lets through only the red.

Now study the next picture, of the same scene through a K2 filter. This yellow filter holds back most of the blue light and lets through the red and green light (which together make yellow). Since there was little red or green light in the sky, it photographs darker, and the clouds stand out against it. If we wish them to stand out even more than they do to the eye, then we use the red A filter, which stops both blue and green light and lets through only the red.

SEPARATING COLORS. Have you a picture of a rose bush in which you can hardly tell the roses from the leaves? The red rose seemed very bright to your eyes, but film has little sensitivity to red; so it reproduced it as a very dark shade—even darker than the leaves. That is what happened to the rose on the opposite page.

With filters, however, you can make any color photograph lighter or darker as you wish, to separate it from surrounding colors or to bring out detail. To make it lighter, simply use a filter that transmits that color; to make it darker use a filter that absorbs it.

Yellow and orange filters, for example, absorb blue—transmit red and green in varying amounts. Notice on the opposite page how they have darkened the blue background while lightening the chrysanthemum, and how they have separated the colors in the flowers and leaves. The red filter transmits only red; so it represents the red rose as very light—the blue background and green leaves as very dark. The green filter transmits only green; so it reverses these values. Notice particularly how it brings out detail in the green leaves.

The exact effect of these tone changes will depend on the purity of color in the subject, the kind of film used, and the quality of the light. Studying these pictures, however, will give a good idea of the effects to be expected with panchromatic film. Orthochromatic film, such as Verichrome, Plenachrome, or Sensachrome will give similar results with the K2, G, and X1 filters. This film cannot be used with the A filter, however, since it is not sensitive to red. For color sensitivity of various films see Pages 68 and 69.

CONTROLLING REFLECTIONS. The two pictures of the china figures show one of the results that can be obtained with a Pola-Screen. It can be used to eliminate reflections from glass, water, or any non-metallic surface; or to darken blue skies in a manner similar to a color filter. It is the only filter that can be used for this purpose with color film.

Ordinary light vibrates in all directions, but when it is reflected at an angle from a non-metallic surface, most of its vibrations are then in only one direction, and it is said to be "polarized." The Pola-Screen acts like a valve that will admit this light only if its vibrations are in one certain direction—the direction of the handle on the Pola-Screen. As the Pola-Screen is revolved through 90° from this position, more and more of the polarized light is kept out.

As most of the glare from water, sand, roadways, store windows, etc. is polarized light, you can eliminate this glare from your pictures with the Pola-Screen. And as the light from the sky at right angles to the sun is also strongly polarized, you can darken it with the Pola-Screen. All you have to do is look through the screen while you rotate it until you see the effect you want—then put it on the camera lens in that position.

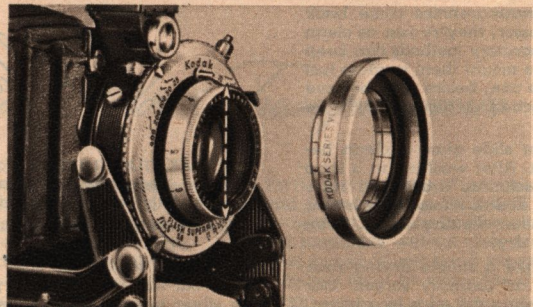
FILTERS FOR COLOR FILM. Besides the Pola-Screen described above, two other filters are useful with color film. The Kodachrome Skylight (Haze) filter, by holding back ultra-violet light, reduces the too-blue effect of aerial haze and improves definition in distance shots. And the Kodachrome Type A filter balances sunlight so you can use indoor type film outdoors.

KODAK COMBINATION LENS ATTACHMENTS

Pictured at bottom of opposite page. These attachments provide matched accessories to fit almost any camera—enable you to use filters, pola-screen, and supplementary lenses either singly or in any appropriate combination. Each accessory fits into the others, and all are held on the camera lens by the slip-on Adapter Ring.

HOW TO ORDER: The basic attachment is the Kodak Adapter Ring listed below. Order it to fit the lens mount diameter of your camera as shown by the arrows on the picture at right. Measure accurately with the ruler at bottom of this page. (The lens mount diameter is given for all cameras in this book which do not require special adapter rings).

When you have found your Adapter Ring size below you will note it is listed as Series IV, V, VI, or VII. Order any of the other attachments in this same series.



A ADAPTER RING. Slips on lens mount of camera. Includes adapter ring insert which screws into ring to hold any filter or lens of same series. Will also accept all other attachments (step-up ring, retaining ring, pola-screen, or lens hood). See "How to Order" above. If exact size is not listed, order closest size (within 1/32 inch) and adjust prongs to fit. *Mailed Postpaid.*

67 HN 2381—SERIES IV. Slip-on Type: 16.5mm (5/8 in.); 18mm (11/16 in.). Screw-in Type: No. 41 for Reliant; No. 42 for Wollensak 1/2-in. Cine Raptor f/2.5 and f/1.9; No. 43 for Brownie; No. 44 for Argus C3. *State lens mount diameter of your camera.*.....Each 1.35

67 HN 2200—SERIES V. Lens mount diam. 3/4, 7/8, 15/16, 1, 1 1/16, 1 1/8 and 1 1/4 inches. *State lens mount diameter of your camera.*.....Each 1.40

67 HN 2201—SERIES VI. Lens mount diam. 1 1/4, 1 5/16, 1 3/8, 1 13/32, 1 15/32, 1 1/2, 1 9/16, 1 5/8, and 1 21/32 in. *State lens mount diameter.*.....Each 1.65

67 HN 2214—SERIES VII. 1 3/4 in. only. *State lens mount diameter.*Each 2.75

B STEP-UP RING. For those having two cameras whose lens mount diameters differ enough to require adapter rings of two different series. The step-up ring enables you to use the larger series attachments on the smaller camera. It screws into any series IV or V adapter ring, but accepts series V or VI filters, lens hood, pola-screen, etc., *Mailed Postpaid.*

67 HN 2400—Series IV to V Step-Up Ring.....1.75

67 HN 2202—Series V to VI Step-Up Ring.....1.75

C PORTRA LENSES. Allow camera closer to subject for larger pictures. For portraits, flowers, etc. 1+ lens allows focusing as close as about 21 in.; 2+ lens 13 1/2 in.; 3+ lens 10 in. Focusing tables included. Can be used for wide-angle effects on cameras having ground glass focusing. *Postpaid.*

67 HN 2241—Series V 1+.....2.95 67 HN 2244—Series VI 1+.....3.50

67 HN 2242—Series V 2+.....2.95 67 HN 2245—Series VI 2+.....3.50

67 HN 2243—Series V 3+.....2.95 67 HN 2246—Series VI 3+.....3.50

D RETAINING RING. Needed when it is desired to use any two disks (filters, lenses, or pola-screen) at the same time. Fits into any other ring, or accepts any other, of same series. *Mailed Postpaid.*

67 HN 2384—SERIES IV.....1.15 67 HN 2252—SERIES VI.....1.45

67 HN 2251—SERIES V.....1.20 67 HN 2253—SERIES VII.....2.00

E POLA-SCREEN. For controlling reflections as described above. Also for darkening skies with black and white or color film. Fits into any other ring, or accepts any other, of same series. *Mailed Postpaid.*

67 HN 2385—SERIES IV.....6.75 67 HN 2248—SERIES VI.....8.80

67 HN 2247—SERIES V.....7.80 67 HN 2249—SERIES VII.....11.40

F FILTERS. Wratten gelatin filters in B glass. Colors: Med. Yellow (K2); Orange (G); Light Green (X1); Red (A); Kodachrome Skylight (Haze); Kodachrome Type A. *State color of filter when ordering. Postpaid.*

67 HN 2382—SERIES IV.....1.75 67 HN 2206—SERIES VI.....2.25

67 HN 2205—SERIES V.....1.95 67 HN 2224—SERIES VII.....4.00

G LENS HOOD. Screws into any Adapter Ring of the same series. Shades your lens from brilliant sunshine and from direct light. Particularly helpful when pictures are strongly side lighted. *Postpaid.*

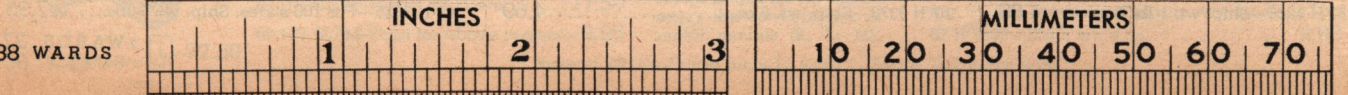
67 HN 2383—Series IV.....1.75 67 HN 2204—Series VI.....2.15

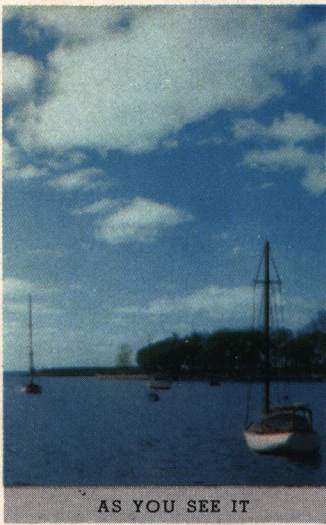
67 HN 2203—Series V.....1.80 67 HN 2213—Series VII.....4.00

POLA-SCREEN VIEWER (not shown). Fits on handle of pola-screen. Small viewing screen shows effect that pola-screen will have on picture.

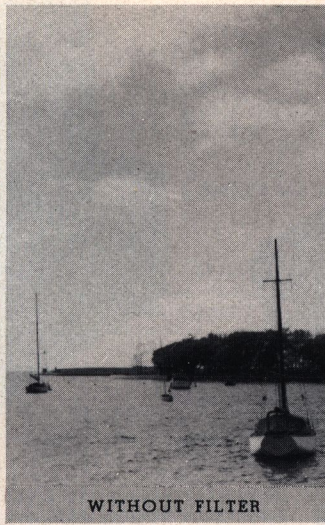
67 HN 2250—*Mailed Postpaid.*.....Each 7.50

TYPE A KODACHROME lets you shoot any subject without changing film. Use it with a Type A filter outdoors. When shooting indoors, use Photo-flood lamps or clear flash bulbs and no filter is required.





AS YOU SEE IT



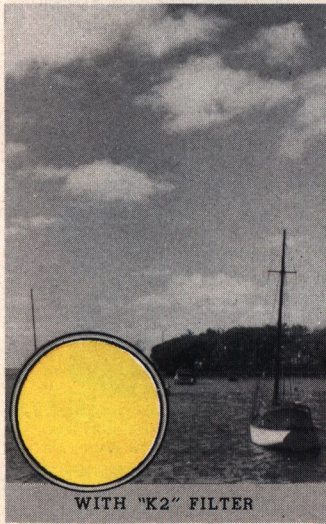
WITHOUT FILTER



AS YOU SEE IT



WITHOUT FILTER



WITH "K2" FILTER



WITH "A" FILTER



WITH "K2" FILTER



WITH "G" FILTER



WITHOUT POLA-SCREEN



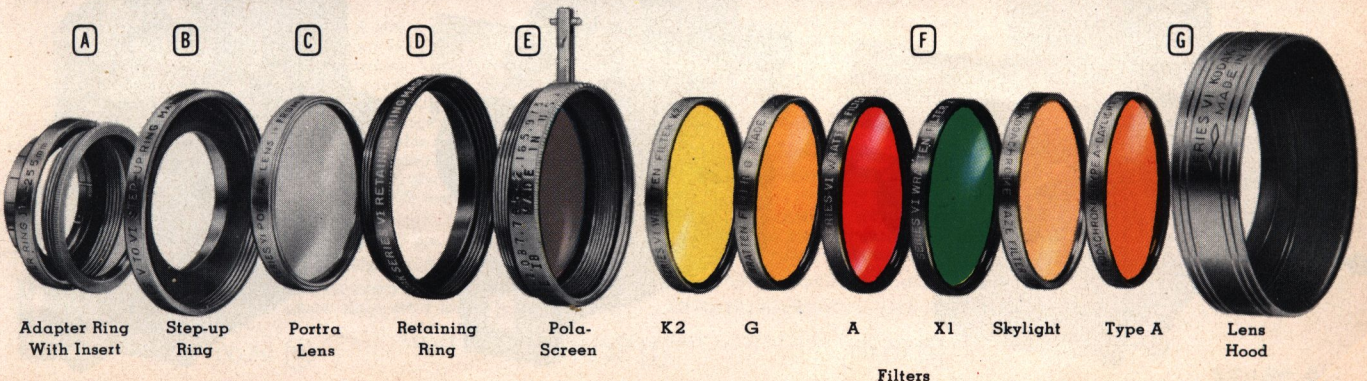
WITH POLA-SCREEN



WITH "A" FILTER



WITH "X1" FILTER



A Adapter Ring With Insert

B Step-up Ring

C Portra Lens

D Retaining Ring

E Pola-Screen

K2

G

A

X1

Skylight

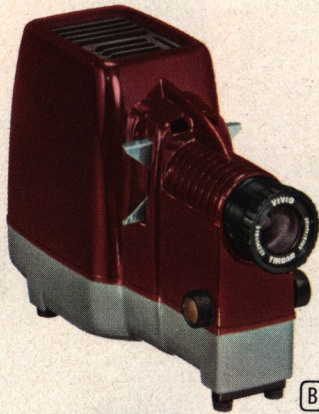
Type A

Lens Hood

Filters



A 24.65



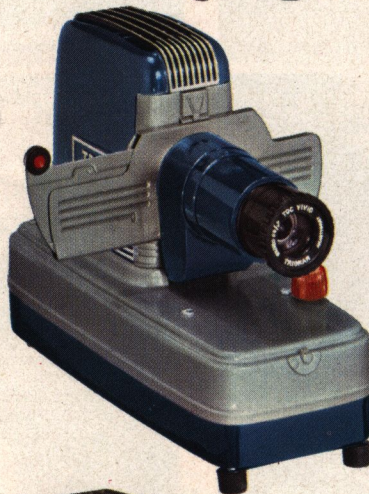
B 37.50



C 49.95



D 55.95



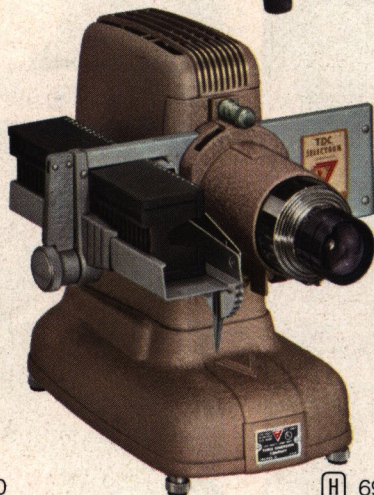
E 54.50



F 57.50



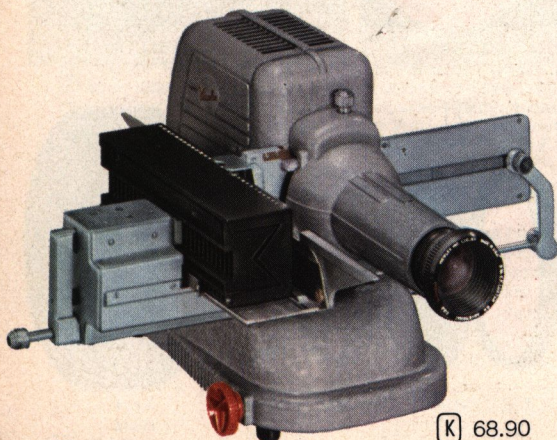
G 69.50



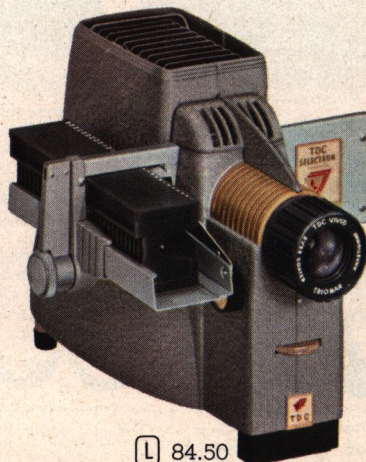
H 69.50



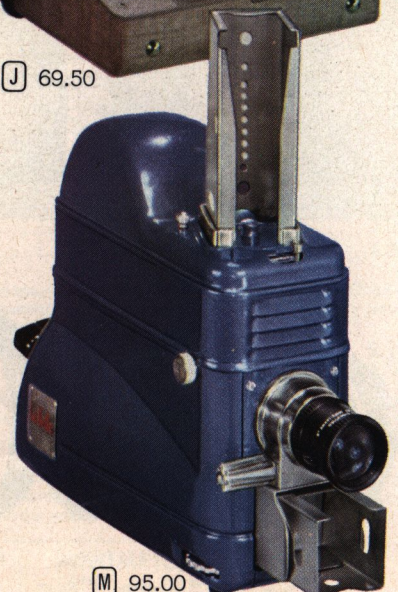
J 69.50



K 68.90



L 84.50



M 95.00

Easy-to-Use Slide Projectors

FOR YOUR 35MM, BANTAM, AND LARGER COLOR SLIDES

A KODAK MERIT PROJECTOR. A 150-watt projector for 35mm and Bantam slides. Slides feed from the top—minimizes possibility of moving or jarring the projector. Convection cooled. Coated, 5-in. f/3.5 Ektanon lens with spiral-grooved barrel for positive focusing. Tilt adjustment. Mahogany colored plastic body. For 110-120 volt AC only. With 150-watt lamp (order extra lamps 67HN3121 from Page 28). No Credit Charge.

67 HN 657 L—Postpaid. Only \$2.50 Down on Terms... 24.65
67 H 658—Luggage fabric covered plywood carrying case.
Shipping weight 4 lbs. 6.95

KODAK HIGHLUX III PROJECTOR. 300-watt projector for brighter image. Motor-driven blower in case. With 300-watt lamp (order extra lamps 67HN3112 from Page 28). No Credit Charge.

67 HN 659 L—With case. For 110-120 volt AC only. Postpaid. 56.50

B TDC HEADLINER PROJECTOR. A 200-watt projector for 35mm and Bantam slides. Motor-driven blower cooling protects your slides from heat. Push-through slide carrier. Fine coated, 5-in. f/4 lens gives bright screen image—ideal for average home projection. Friction focusing. Tilting adjustment. Durable red and gray molded plastic body. For 110-120 volt AC only. With 200-watt lamp (order extra lamps 67HN3187 from Page 28). No Credit Charge.

67 HN 601 L—Postpaid. Only \$3.50 Down on Terms... 33.50
67 HN 602—Luggage-type tweed covered case. Postpaid... 6.00

C ARGUS 300 SLIDE PROJECTOR. A new 300-watt projector for 35mm and Bantam slides. Gives extra-bright screen image. Rotary slide carrier takes transparencies right side up for more convenient operation. Will also accept Airequipt slide changer shown on Page 42, for completely automatic changing. Powerful blower protects your slides from overheating. Coated 4-in., f/3.5 lens in helical focusing mount. Tilt adjustment. Die-cast metal body, green crackle finish. For 110-120 volt AC only. With fabric covered case and 300-watt lamp, (order extra lamps 67HN3123 from Page 28). No Credit Charge. See Page 100 for Terms.

67 HN 622 L—Postpaid. Only \$5 Down on Terms... 48.50

ARGUS STRIP FILM CARRIER. Lets you project single or double frame 35mm film in up to 6-ft. lengths. Fits Argus projector only.

67 H 623—With 2 spools. Ship. wt. 2 lbs. 4.35

D GOLDE MANUMATIC SLIDE PROJECTOR. 300-watt illumination gives bright projection of 35mm and Bantam slides. Heatproof socket mounted on springs protects lamp from shock. Blower cooling protects your slides from heat. 2-way slide carrier—will also accept Airequipt slide changer (sold on Page 42) for completely automatic changing. Coated 5-in. f/3.5 lens in spiral grooved focusing mount. Tilting control locks in place. Die-cast metal body, baked-on brown crackle enamel finish. Carrying case (sold separately below), accepts projector with either 2-way carrier or Airequipt automatic changer in place. For 110-120 volt AC only. With 300-watt lamp (order extra lamps 67HN3112 from Page 28).

67 H 612 L—Ship. wt. 12 lbs. Only \$5.50 Down on Terms... 54.50

67 H 613—Luggage type carrying case. Ship. wt. 6 lbs. 8.95

E TDC SHOW-PAK 300. A 300-watt projector for 35mm and Bantam slides—built right into its own all-metal case. Takes slides in deluxe manual changer—will also accept automatic Airequipt changer, Page 42. Blower cooling protects your slides. Coated 4-in. f/3.5 lens focuses sharply in helical mount. Tilt adjustment. Die-cast metal body with lift-off metal top. Finished in silver-gray and blue. For 110-120 volt AC only. With 300-watt lamp (order extra lamps 67HN3112 from Page 28). No Credit Charge. Postpaid.

67 HN 600 L—With case. Only \$5.50 Down on Terms... 52.50

F SVE SKYLINE 300 B PROJECTOR. A 300-watt projector for 35mm and Bantam slides, with powerful blower that protects your slides. Comes complete with 2 slide carriers. Airequipt auto-changer (described on page 42) changes and stores slides in magazine with single lever-control. Magazine accepts 36 slides (cardboard ready-mounts only). Order extra magazines on page 42. Comes with extra 2-way manual carrier for glass-bound slides and previewing new slides. Coated, 5-in. f/4 lens. Friction focusing. Easy-to-use micro-lift tilting adjustment. Aluminum construction, gray and blue enameled finish. For 110-120 volt AC only. With 300-watt lamp (order extra lamps 67HN3112 from Page 28).

67 H 616 L—With two carriers. Ship. wt. 12 lbs. 54.95

67 H 617 L—With 2-way changer (not shown). Ship. wt. 10 lbs. 42.00

67 H 618—Deluxe luggage type carrying case. Accepts projector with either carrier in place. Ship. wt. 7 lbs. 9.95

G BRUMBERGER FLEETWOOD. 300-watt projector for 35mm and Bantam 2x2-in. slides. Also for 2 3/4x2 3/4 in. or single frame of stereo-mounted slides (order carriers below). 2-way carrier tilts to align picture with screen. Accepts Airequipt automatic changer Pg. 42. Efficient blower cooling. Coated 5-in. f/3.5 Wollensak lens in spiral grooved metal mount. Lamp adjusts for maximum illumination. Lights up only when blower is on. Tilt adjustments. Die-cast aluminum body, gray hammerloid finish. With carrier for 2x2 slides, 300-watt lamp. Order extra lamps 67 HN 3126, Pg. 28. For 110-120 volts AC only.

67 H 640 M—With covered plywood case. Ship. wt. 15 lbs. 67.95

67 HN 642—Slide carrier for 2 3/4x2 3/4-in. slides. Ship. wt. 1 lb. 3.69

67 HN 643—Carrier for Stereo slides. Ship. wt. 1 lb. 3.69

H TDC DELUXE MODEL D PROJECTOR. 300-watt projector for 35mm and Bantam slides. With Selectron Semi-Matic carrier—changes slides by simple push-pull of lever. Magazine holds 30 slides in any type mount. Blower cooled. Coated, 5-in., f/3.5 lens. Dial focusing control. Locking tilt. Adjustments. Die-cast metal body, tan crackle finish. With 300-watt lamp (extra lamps 67HN3112, Pg. 28). Order carrying case and extra magazines under (L) below. Postpaid.

67 HN 603 L—For 110-120 volt AC only. No Credit Charge... 67.50

J REVERE 444 PROJECTOR. A 300-watt projector completely new in design, for 35mm and Bantam slides in any type mount. Revolving carrier holds 4 slides—operates forward or backward. Projected image automatically fades out as next slide fades in. Slides drop in, right side up, over illuminated panel for easy previewing. Blower directs air out through side of projector, away from operator's face. Coated 5-in. f/3.5 lens. Friction focusing. Tilt adjustment. All-metal body, gray crackle finish. Built into luggage fabric covered plywood case. With 300-watt lamp (order extra lamps 67 HN 3112, Pg. 28). Postpaid.

67 HN 611 L—For 110-120 volt AC only. No Credit Charge... 69.50

K VIEWLEX V33L PROJECTOR. 300-watt projector for 35mm and Bantam slides or single frame of stereo-mounted slides (order stereo carrier below). Changeomatic carrier accepts all 35mm. and bantam slides—automatically changes and replaces them in magazine. Magazine stores 30 slides. "Light-Multiplier" optical system for maximum illumination. Blower cooling. Coated, 5-in. f/3.5 Luxtar lens in helical focusing mount. Tilt control. Die-cast aluminum body, gray hammer-tone finish. For 110-120 volt AC only. With 300-watt lamp (order extra lamps 67 HN 3126, Pg. 28). No charge for credit. Postpaid.

67 HN 650 M—With Changeomatic. Postpaid. \$7 Down... 67.00

67 HN 651 L—With 2-way carrier. Postpaid. \$6.50 Down... 61.50

67 HN 653—Stereo carrier only. Postpaid... 9.50

67 HN 654—Extra magazine for Changeomatic. Postpaid... 1.45

67 H 652 M—Luggage type carrying case. Takes projector with either carrier in place. Ship. wt. 7 lbs. 12.95

L TDC STREAMLINER PROJECTOR. Powerful 500-watt illumination— for school, church or home. For 35mm and Bantam slides. Semi-Matic Selectron carrier—easy push-pull slide changing. Slide tray acts as storage file for 30 slides. Blower cooling. Coated, 5-in. f/3.5 lens in helical focusing mount. Tilt adjustment. Die-cast aluminum body, tan crackle finish. For 110-120 volt AC only. With 500-watt lamp (order extra lamps 67HN3124, Pg. 28).

67 HN 604 L—No Credit Charge. Postpaid. \$7.50 Down on Terms. 75.00

67 H 605—Carrying case for TDC Streamliner and TDC Deluxe

(H) above. Holds projector with carrier in place. Ship. wt. 7 lbs. 12.95

67 HN 610—Extra magazine for Selectron. Postpaid... 1.00

M LA BELLE MODEL 55 PROJECTOR. 500-watt projector for 35mm and Bantam slides. Interchangeable magazine holds up to 75 cardboard, or 35 glass slides—press lever to change slides. Blower cooled. Coated, 5-in. f/3.5 lens in helical focusing mount. All-metal construction, blue crackle finish. With 500-watt lamp, 2 slide magazines. (Order extra lamps 67 HN 3124; Page 28). For 110-120 volt AC only.

67 HN 632 MT—No Credit Charge. Postpaid. \$9.50 Down... 95.00

67 HN 633 MT—Carrying Case. Postpaid... 13.85

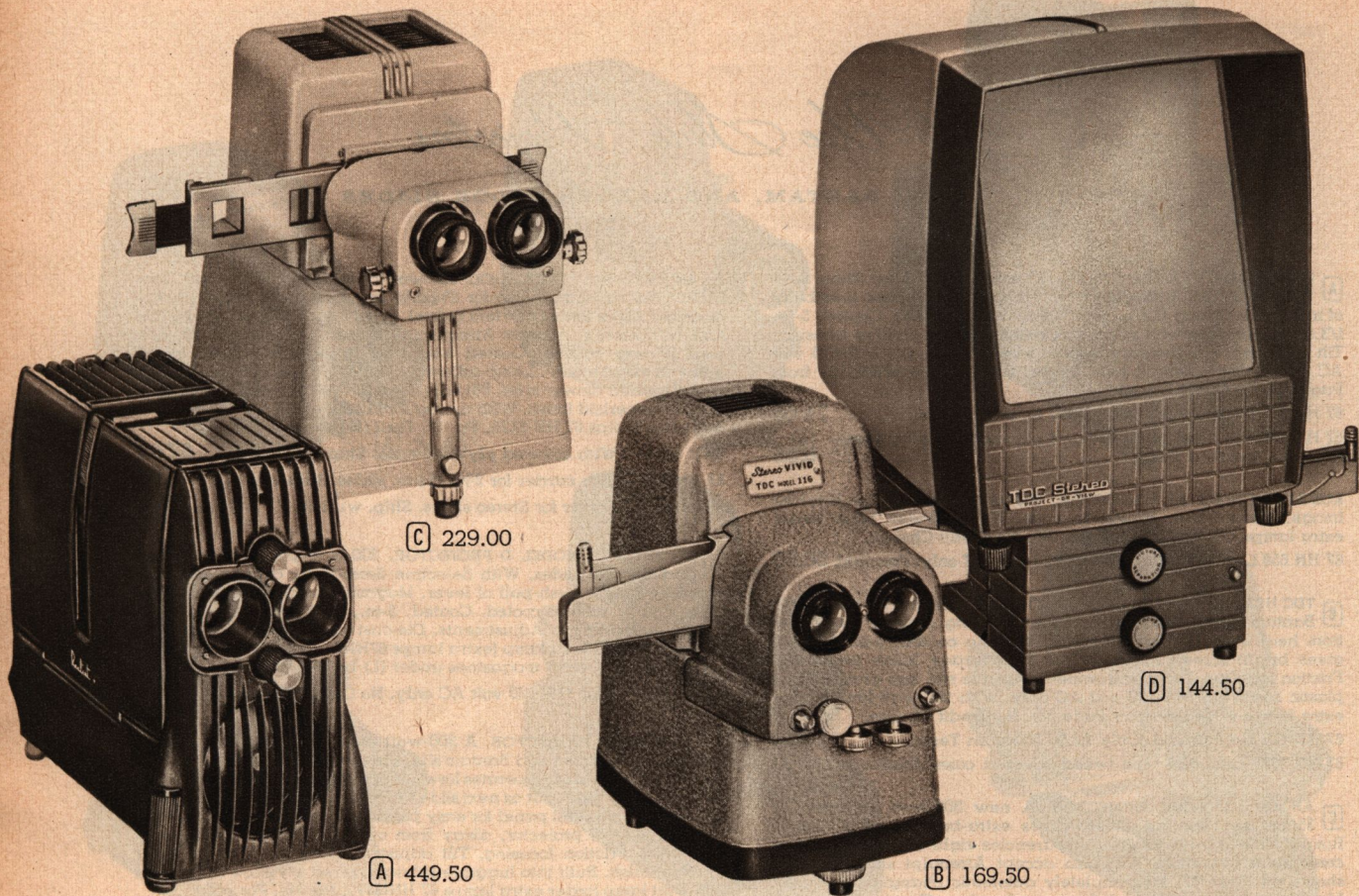
67 HN 634 T—Magazines for Models 55 and 75. Ppd. 2 for... 1.85

LA BELLE MODEL 75 WITH REMOTE CONTROL. Same as 55, but with 10-ft. electric cord for push-button slide changing. Shipped Postpaid from Factory near Milwaukee, Wisconsin. With case.

67 HN 630 K—No Credit Charge. \$15.50 Down... 154.95

67 HN 631 K—With 7-in. f/4.9 lens. No Credit Charge... 174.95

NOTICE: Above Prices Include April 1, 1954 Excise Tax Reductions.

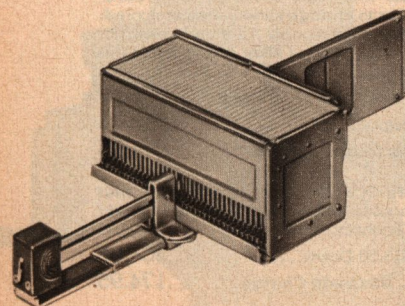


Finest Quality Projectors for Stereo Slides

A REALIST MODEL 81 STEREO PROJECTOR. The finest projector for three dimensional viewing—featuring semi-automatic fingertip changer. Two 500-watt lamps and fast, coated 3½-in. f/2.8 lenses provide ample illumination for 6x6 ft. screen. Built-in magazine holds abt. 25 slides, "pops" them up one at a time—ready for insertion in slide carrier. Convenient rotary carrier accepts all standard stereo slides.

Powerful blower forces air through projector for cool operation—can be operated without lamps to cool projector before storage. Smooth operating controls have separate adjustment for focusing, tilting, and image convergence. Streamlined die-cast metal body, rich black finish. With two 500-watt lamps. Order extra lamps (67 HN 3124), Page 28. Size 13½x12½x7 in. Act. wt. 32 lbs. For 110-120 volt AC only. With carrying case. No Credit Charge. \$45 Dn. 67 HN 688 RT—Express Prepaid. \$449.50

STEREO POLAROID GLASSES (not shown). For viewing projected stereo pictures. *Postpaid*. 67 HN 3601T—De Luxe Glass Lens Spectacles, with comfortable plastic frames. \$4.00 67 HN 3600T—Plastic Lens Spectacles with comfortable plastic frames. \$1.75



B TDC STEREO VIVID. 500-watt blower cooled projector for all standard stereo slides. Also accepts standard 2x2-in. slides. Matched 5-in. f/3.5 anastigmat lenses are coated and color corrected for clear image. Twin condenser systems give brilliant image. 500-watt lamps on separate switches for 2x2 projection.

Motor-driven blower keeps slides cool. Fast changing push-pull slide carrier. Smooth operating controls for horizontal and vertical alignment—positions pictures for 3-dimension viewing. Tilt adjustment centers picture. Die-cast metal body, tan crackle finish. With two 500-watt lamps. Order extra lamps (67 HN 3124), Pg. 28. Size 12½x13x7½ in. For 110-120 volt AC only. Order Polaroid glasses below, stereo screen from opposite page. No Credit Charge. Only \$17 Down on Terms.

67 HN 690 F—Express Prepaid. \$169.50
67 HN 691 F—Carrying Case. *Postpaid*. 20.00

AIRQUIPT AUTOMATIC 2x2 SLIDE CHANGER (shown below at left). Gives you completely automatic slide changing without your having to touch a single slide, plus a permanent, protective storage case as well. Just a simple push-pull movement of a lever projects the new slide and puts the old one back in its proper place in the file—all automatically. Or the magazine may be advanced manually to select individual slides from anywhere in the magazine—the cardboard index on top shows title and number of each slide and just where it is. Once you have your slides set up in proper sequence, you need not touch them again. Each magazine holds 36 slides—accepts cardboard readymounts only, no need to mount in glass because each slide has its own protective metal frame. Magazines snap in and out of adapter in a moment. Built-in shutter blocks out light during slide changing. Fits all 2x2 slide projectors on Page 41 except Kodak, TDC Headliner, Revere and LaBelle. *State make and model of projector.*

67 HN 644—With 1 magazine. *Postpaid*. . . . \$14.95
67 HN 647—Extra storage magazine. *Postpaid*. 1.95

C TRIAD STEREO PROJECTOR. For all standard stereo slides—with extra slide carrier for standard 2x2 slides. With simplified two knob operation—one knob controls stereo slide alignment; the other focuses both lenses simultaneously. Motor-driven blower cooling—Removable polaroid filter for brighter 2 by 2 slide protection. Triad Ejector Button at either end of carrier raises slide for easy removal.

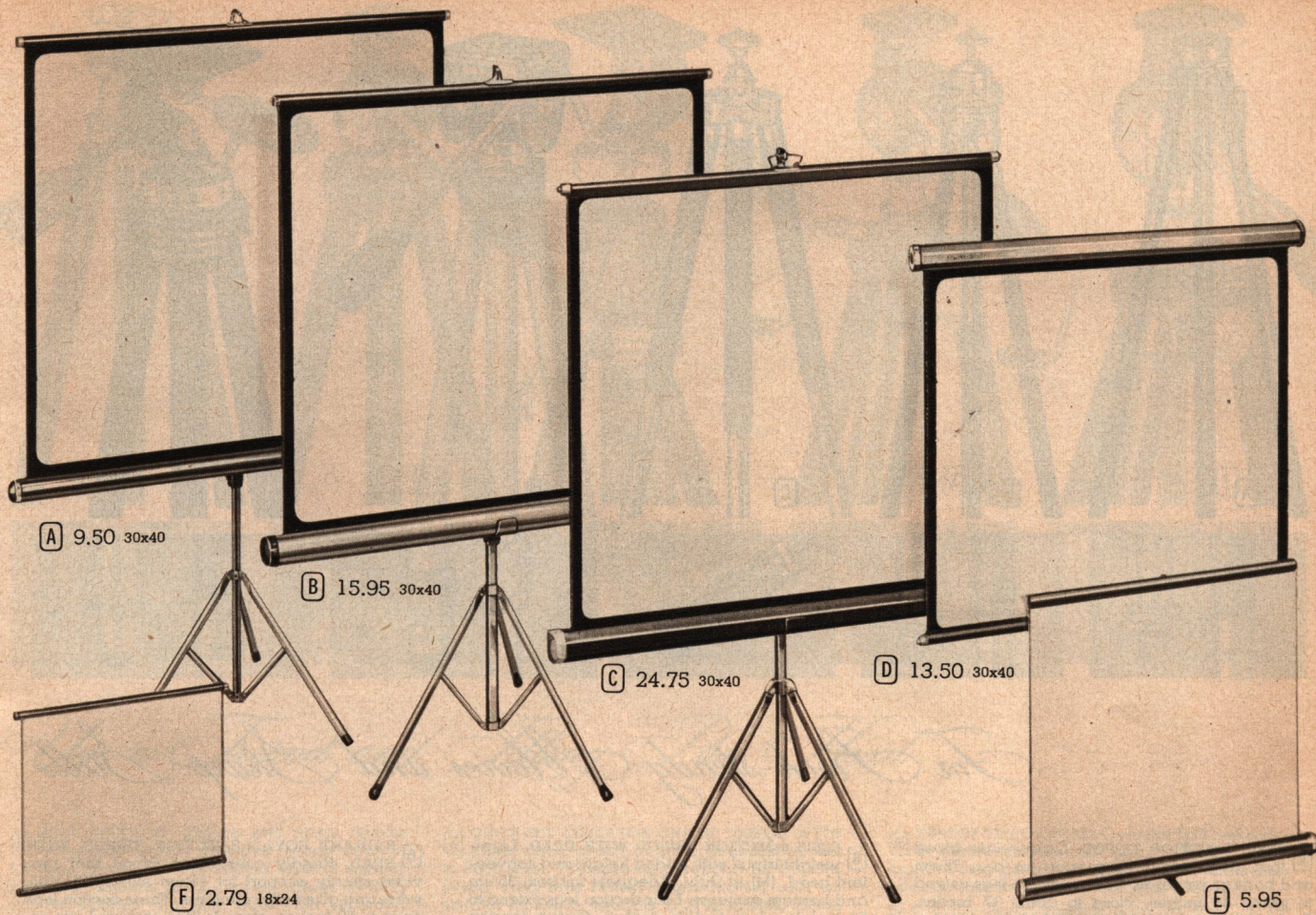
Two 5-inch f/3.5 coated, anastigmat Triad lenses. With two 500-watt lamps. Order extra lamps (67 HN 3124), Pg. 28. Individual lamp switches. Twin reflector-condenser systems. "Preview Panel" permits you to check slide before showing it. Feed-through, stereo slide carrier. All-metal construction, baked-on metallic wrinkle enamel finish, satin chrome trim.

Size 12x9x13 in. For 110-120 volt AC only. With 2 pairs Triad polaroid glasses, slide carrier for standard 2x2 slides. Order Stereo screen opposite page, extra glasses at left. *Express Prepaid*. 67 HN 685 RT—No Credit Charge. \$229.00
67 HN 686 RT—Carrying case. *Postpaid*. . . . 25.00

D TDC STEREO PROJECTOR-OR-VIEW. New projector-viewer for stereo slides—gives the convenience of a table viewer, plus the advantage of projection for large groups—all in one unit. 8x10-in. window shows slides magnified as a table viewer, or open back and you can project a picture that fills a 40x40 in. screen at 11 ft.

Two matched 3-in., f/2.8 coated, color-corrected anastigmat lenses. With two 300-watt lamps. Order extra lamps (67 HN 3127), Pg. 28. Twin reflector-condenser systems. Blower cooled. Focusing and stereo alignment knobs are placed at front where they're easy to reach. Feed-through slide carrier. Die-cast aluminum and Royalite construction. Size 18¼x11¼x16 in. For 110-125 volt AC only. Order Polaroid glasses at left, stereo screen opposite page.

67 HN 692F—No Credit Charge. \$144.50
67 HN 693F—Carrying Case. *Postpaid*. . . . 20.00



Da-Lite Screens for Brilliant Projection

All of the screens on this page are made by the Da-Lite Screen Company—world's oldest and largest manufacturer of projection screens. All but Silver King are glass-beaded for maximum picture brightness and durability. Da-Lite's exclusive "White Magic" Process makes your slides and movies "come alive" in all their natural contrast and natural color—without the yellow tinge of average screens. Da-Lite screens are lightweight and easy to carry. They're precision-engineered to set up quickly and easily, and adjust automatically to the correct proportions for slides or movies.

Square screen sizes are fast becoming most popular—because they are the most convenient for both still and movie projection. Even if you're strictly a movie fan at the moment, chances are that you'll be shooting color slides soon. A square screen lets you show both your slides and movies—just as big as you want them—on the same screen. The square sizes of Wards (A), Challenger (C), and Wall type (D) screens on this page are used full size when you project slides, but they adjust quickly and automatically to the nearest rectangular size when you're ready to show movies.

A WARDS SCREENS. Good quality screens made for Wards by Da-Lite. Easy to set up—adjustable height. Non-sagging top slat and tension spring roller hold screen flat. Green hammerloid metal case, rubber tipped legs, and folding handle. Lightweight tubular construction. Standard Da-Lite glass-beaded screen surface. Square sizes adjust to rectangular movie sizes.

67 H 1014 M—30 by 40 in. Ship. wt. 8 lbs. \$9.50
 67 H 1016 M—40 by 40 in. Ship. wt. 9 lbs. 10.95
 67 H 1017 M—37 by 50 in. Ship. wt. 10 lbs. 12.95
 67 H 1022 M—50 by 50 in. Ship. wt. 11 lbs. 13.95

B DA-LITE VERSATOL SCREENS. A better quality screen with heavy square metal tubing—won't twist. Standard Da-Lite glass-beaded surface. Adjusts easily to four height positions. Non-sag tubular slat at top and strong spring roller maintain even screen tension. Sturdy construction. Sturdy round metal roller case. Folding handle. Square sizes do not adjust to movie size.

67 H 1000 M—30 by 40 in. Ship. wt. 10 lbs. \$15.95
 67 H 1001 M—40 by 40 in. Ship. wt. 11 lbs. 17.95
 67 H 1002 M—37 by 50 in. Ship. wt. 12 lbs. 20.95
 67 H 1008 M—50 by 50 in. Ship. wt. 13 lbs. 23.95

CASES FOR VERSATOL AND CHALLENGER SCREENS (not shown). Heavy canvas material firmly stitched for heavy duty. Provides dustproof protection for your screen. Shipping wt. 1 lb. 9 oz.

67 H 1036—For 30x40 and 40x40 in. \$4.98
 67 H 1037—For 37x50 and 50x50 in. 5.98

C DA-LITE "5-STAR" CHALLENGER SCREENS. Best quality screen with new push-button operation. Press button and extension tube pops up while legs open automatically. Rigid extra heavy weight construction. Four adjustable height positions. Octagon shaped metal case. Balanced carrying handle. Special fire-resistant and mildewproof glass-beaded screen material. Square sizes adjust to rectangular movie sizes. Postpaid. No Credit Charge. See Page 100.

67 HN 1009 M—Size 30 by 40 inches. . . . \$24.75
 67 HN 1010 M—Size 40 by 40 inches . . . 26.50
 67 HN 1011 M—Size 37 by 50 inches. . . . 31.25
 67 HN 1012 M—Size 50 by 50 inches. . . . 33.90
 67 HN 1013 MT—Size 45 by 60 inches. . . . 38.50
 67 HN 1004 MT—Size 60 by 60 inches. . . . 44.50
 67 HN 1005 MT—Size 52 by 70 inches. . . . 47.25
 67 HN 1006 MT—Size 70 by 70 inches. . . . 54.75

D DA-LITE WALL TYPE SCREENS for permanent installation. Convenient for den, basement, or game room. Has special bracket for attaching to wall or ceiling—ready for instant use. Fire-resistant and mildewproof Da-Lite glass-beaded screen material—rolls into protective octagon metal case. No Credit Charge. Postpaid.

67 HN 1015 MT—Size 30 by 40 inches. . . . \$13.50
 67 HN 1030 MT—Size 40 by 40 inches. . . . 14.50
 67 HN 1031 MT—Size 50 by 50 inches. . . . 20.75
 67 HN 1019 MT—Size 52 by 70 inches. . . . 36.50

E DA-LITE HANDY SCREEN. Low-priced glass-beaded screen that sets on table, hangs on wall, or fits any standard tripod. Widely spaced rubber feet provide steady support without scratching table surface. Non-sag top slat and spring roller keeps screen surface flat. Screen rolls into protective metal case. Size 30 by 30 in. 67 H 1007 M—Shipping weight 5 lbs. . . . \$5.95

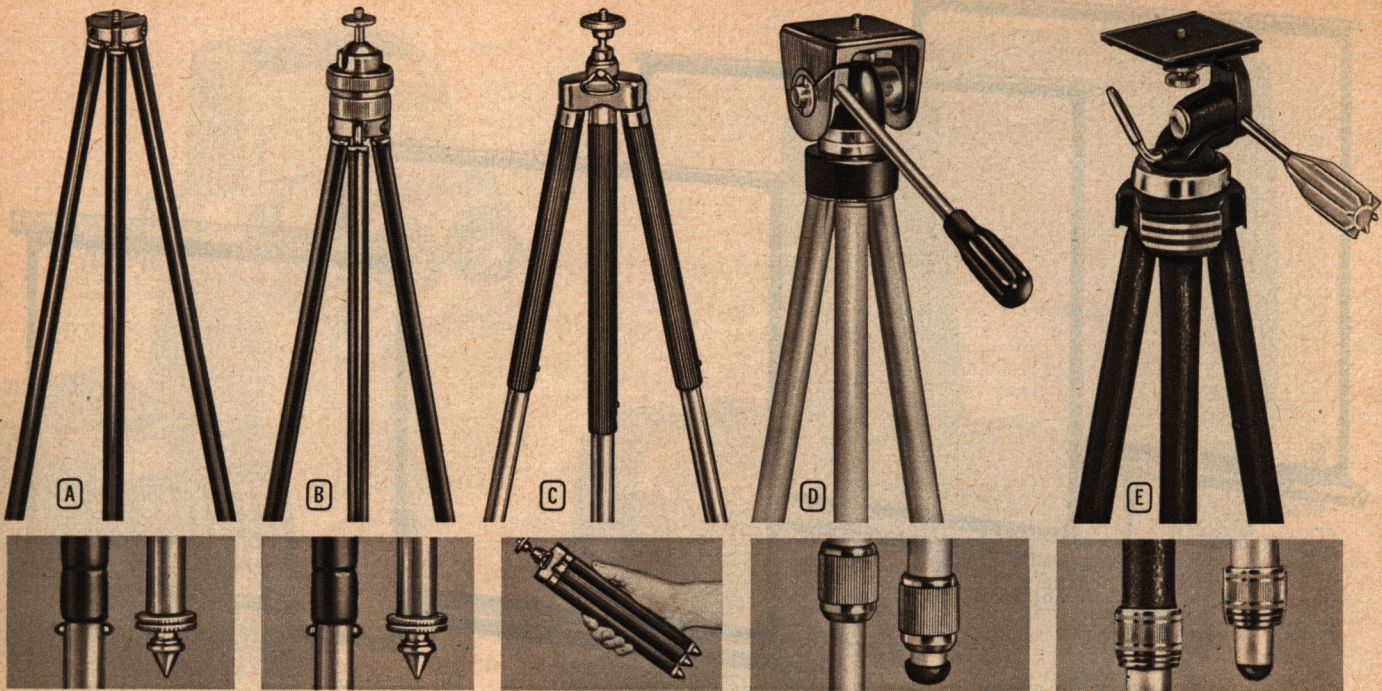
F DA-LITE JUNIOR SCREENS. Same fine Da-Lite glass-beaded screen material used in regular models. Rolls up compactly; sets up quickly. Heavy wire easel back holds screen flat. Stands on table or hangs on wall.

67 H 1032—18 x 24-in. size. Ship. wt. 1 lb. . . \$2.79
 67 H 1033 M—30 x 40-in. size. Ship. wt. 3 lbs. 4.85

DA-LITE SCREEN MATERIAL. Make your own screen. Regular Da-Lite glass-beaded surface. 67 H 1034—42x36-in. piece. Ship. wt. 2 lbs. \$4.85
 67 H 1035 K—42-in. width, length 2 yards or more. Pay postage from Chicago Factory. Shipping weight per yard, 2 lbs. . . . Per Yard \$4.79

DA-LITE SILVER KING STEREO SCREEN. Has metallic surface for projecting stereo slides—can be used for other projection. With exclusive "Roller-Lock"—a twist of screen roller stretches fabric taut for wrinkle-free surface. Same fine construction and push-button opening as "5-star" challenger (C) above at left. Postpaid.

67 HN 1020 MT—40x40-in. size. . . . \$31.95
 67 HN 1021 MT—50x50-in. size. . . . 39.95



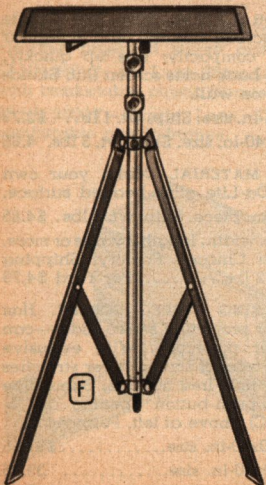
For Rock-steady Movies and Sharp Stills

A **SUSIS 3-SECTION TRIPOD.** Lightweight tripod that gives adequate support for box, 35mm and bantam cameras. Three-section legs extend to about 43 inches, close to about 17 inches. Spring tension locking snaps hold legs when extended. Just push snaps to close. Non-slip metal tips hold tripod steady on most surfaces. Tripod screw reverses to fit both American and European camera sockets, fits all tilt tops and pan heads sold on opposite page. Tripod is tubular brass, outer tubes are black enameled. Act. wt. only 14 oz. Imported from U.S. Zone of Germany. 67 H 2100—Ship. wt. 1 lb. 4.19

SUSIS 3-SECTION TRIPOD WITH HEAD (not shown). Same tripod as above with the addition of the Tilt Top Aluminum Head (M) on opposite page. Adequate for box, 35mm, or bantam cameras. Large ball and socket joint provides firm support. Knurled ring tightens with slight turn. 360° pan, 180° tilt. 45 in. open, 18½ in. closed. 67 H 2101—Ship. wt. 1 lb. 6 oz. 5.79

CHECK YOUR METER

If you've dropped your exposure meter—or have reason to think it isn't working—here's a quick way to check. Be sure your meter is the photo-electric type for measuring reflected light. If it is, simply hold the uncovered photo-cell against a lighted 60-watt lamp. If the needle approaches the highest reading, it is probably all right.



F **VICTOR PROJECT-R-TABLE.** An economical and sturdily constructed projector stand made of durable lightweight metal. The detachable presdwood platform measures 10½ by 13 inches and will easily accommodate all transparency, slide and 8mm. movie projectors. It offers a steady, vibration-free support for projector. Quickly and easily set up in any home, school or conference room. Uses only a minimum amount of space when legs are fully extended and platform is up. Center column may be adjusted from two to over three feet to give you desired height for your projector. Platform and legs fold and collapse easily for compact storage. When folded down, a convenient carrying handle is revealed. Stand has nickel plated center support and brown enameled legs with flat leg tips for level, even support. Actual weight 4 lbs. 12 oz. 67 H 2130 M—Mailable. Shipping weight 6 lbs. 6.95

AVOIDING TRAFFIC BLURS IN NIGHT SHOTS

If you want to photograph a night scene but are troubled with pedestrians and moving cars, try making a series of short exposures. With the camera mounted on a steady tripod, and the lens set for bulb, you can expose during lulls in the traffic. Exposures made at intervals are generally more successful if computed a little differently than single exposures. A 50% increase in time is a safe guide.

B **SUSIS 4-SECTION TRIPOD WITH HEAD.** Lightweight tripod with added height and convenient head, (M) at right. Adequate for box, 35mm and bantam cameras. Four-section legs extend to 51 inches, close to 17½ inches. Spring tension locking snaps hold legs when extended. Non-slip metal tips on feet. Tripod screw fits American threads. Complete with Tilt Top Aluminum Head (M), has 360° pan, 180° tilt. Tubular brass construction, black enameled outer tubes. Act. wt. 1 lb. 8 oz. Imported from U.S. Zone of Germany. 67 H 2122—Ship. wt. 1 lb. 10 oz. 6.59

SUSIS 4-SECTION TRIPOD ONLY. As above, without head. Adequate for box, 35mm and bantam cameras. Reversible tripod screw fits American and European camera threads. Act. wt. 17 oz. 67 H 2121—Ship. wt. 1 lb. 4 oz. 4.98

C **SUSIS 7-SECTION TRIPOD WITH HEAD.** Compact tripod that is small enough to fit your pocket. Adequate for box, 35mm, or bantam cameras. Extends to 46 inches, closes to only 10 inches. Seven-section legs held firmly by spring tension leg locks. Removable rubber tips prevent slipping. Reversible tripod screw fits both American and European camera sockets. Built-in pan head has 360° pan, 180° tilt. Brass tubular construction. Black ribbed covering on outer tubes. Convenient to carry and handle—act. wt. 19 oz. Imported from U.S. Zone of Germany. 67 H 2119—Ship. wt. 1 lb. 8 oz. 9.45

D **RADIANT ROYAL 3-SECTION TRIPOD WITH HEAD.** Rigidly constructed tripod that provides steady support for 16mm movie, 2¼x3¼ press and all smaller cameras. Three-section legs open to 60 inches, close to 25½ inches. Legs extend and lock with simple quarter turn of collar. Rubber feet hold steady on all surfaces.

Large star shaped camera wheel is easy to grasp and tighten securely. Fits all American tripod sockets. Adjustable for deep or shallow socket. Radiant pan head gives top efficiency: 2½-in. square platform gives camera full support. One handle controls 360° pan, 180° tilt. Turn handle to lock tilt, turn tighter to lock pan.

Lightweight aluminum construction. Attractive gray hammertone finish on outside tubes of legs. Easy to handle and carry—act. wt. 3 lbs. 10 oz. 67 H 2132 M—Ship. wt. 4 lbs. 2 oz. 11.95

E **STAR D 3-SECTION TRIPOD WITH HEAD.** Sturdy tripod that's rigid enough for 16 mm movie, 4 by 5 press, and all smaller cameras. Three-section legs extend to 59 inches, and close to 25½ inches. Quarter turn of knurled ring locks legs in position at any height. Rubber tips on legs give firmer support on all types of surfaces. Tripod screw fits all standard American sockets. Control handle tensions 180° vertical tilt; lever controls 360° pan.

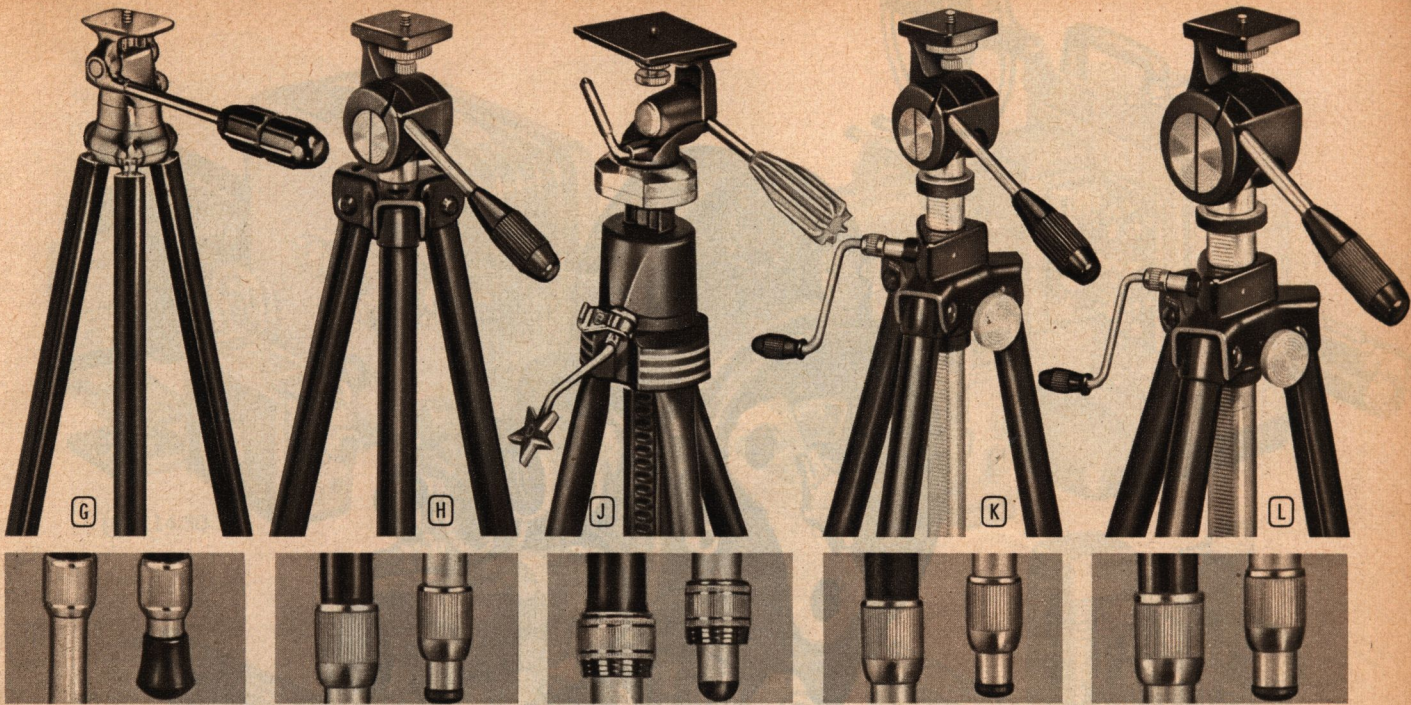
Removable platform provides solid support for all sizes and types of cameras. With platform in position you have a firm 2¾-inch square base for larger cameras such as press or reflex. Lever lock releases platform from standard head to accommodate smaller still and movie cameras.

Precision machined of aluminum alloy and chrome plated steel with bronze bushings on all moving parts. Outer leg sections have black enamel finish. Actual weight about 3 lbs. 8 oz. 67 H 2138 M—Ship. wt. 4 lbs. 8 oz. 13.95

STAR D 2-SECTION TRIPOD WITH HEAD. Same fine construction as 3-section above. Two-section legs open to 60 inches, close to 33 inches. Same pan head and controls as listed above; 360° pan, 180° tilt. Black enamel finish. Act. wt. 3½ lbs. 67 H 2137 M—Ship. wt. 4 lbs. 2 oz. 12.45

EUROPEAN TRIPOD SOCKETS

Most imported cameras have different tripod sockets than American made cameras. All the imported cameras in this book are equipped so that you may use any tripod on these pages with any camera listed. If you need a tripod adapter for your camera, write Bob Adams, Page 93.



Use a Tripod and Tilting Pan Head

G HOLLYWOOD JR. TRIPOD AND HEAD. Sturdy two-section tripod, provides steady support for 8mm movie, 120-620 folding and all smaller cameras. Extends to 61 inches, closes to 34½ inches. Knurled ring leg locks hold securely. Non-skid rubber feet. American tripod screw. Smooth operating Klutch Kontrol head allows 360° pan, 180° tilt. Separate control on each. Tubular aluminum legs, satin chrome finish head and fittings. Baked enamel top section. Act. wt. 3 lbs. 67 H 2126 MT—Ship. wt. 4 lbs. 8 oz. 18.95

H QUICK-SET CHAMP TRIPOD WITH HEAD. Precision-made and preferred by "pros" because of the speed and ease in handling. Provides rigid support for 2¼x3¼ press, twin lens reflex, 16mm movie, and all smaller cameras. Three-section legs open to 55½ inches, close to 24½ inches. Knurled ring leg lock holds legs at any height. Non-skid rubber feet. Tripod screw fits American sockets. Head pans 360°, tilts 150°, described under (T) at right. Polished aluminum, black enamel finish. Act. wt. 3 lbs. 8 oz. 67 HN 2103 M—Postpaid. 19.95

QUICK-SET DUPLEX TRIPOD WITH HEAD (not shown). Sturdy Quick-Set construction at a new low price. Two-section legs extend to 54 inches, close to 33 inches. Pan head like (H) above. 67 HN 2106 M—Act. wt. 3 lbs. Postpaid. . . 14.95

J STAR D ELEVATOR 3-SECTION TRIPOD WITH HEAD. Synchro-lock elevator positions camera rigidly. Removable platform (described opposite page (E)) accepts all cameras up to 4x5 press. Extends from 28 inches to 72 inches. 3-section legs lock at any height. Elevator column gives 16-in. height adjustment. Nylon gear and guides assure long wear. Rubber tipped feet. Handle locks head tilt, lever on pan. American thread tripod screw. Full 360° pan, 150° tilt. Black enamel finish. Actual weight 4 lbs. 12 oz. 67 H 2140—Shipping weight 5 lbs. 18.75

K QUICK-SET ELEVATOR CHAMP TRIPOD WITH HEAD. Shoot at any angle from almost six feet to floor level. Provides rigid support for 2¼x3¼ press, twin lens reflex, 16mm movie, and all smaller cameras. Extends to 71½ inches, closes to only 26 inches. Elevator column gives 15 inches of fingertip control for adjusting camera height. Reverses for floor level shooting.

Three-section legs lock securely with knurled ring. Rubber tipped non-skid feet. Standard American thread on tripod screw. Head is (T) described at right—full 360° pan, 150° tilt. Handle locks head adjustments. Fold-away handle on elevator column. Polished aluminum construction with black enamel finish. Act. wt. 4 lbs. 12 oz. 67 HN 2104 M—Postpaid. 34.00

L QUICK-SET ELEVATOR HUSKY TRIPOD AND HEAD. Extra heavy construction and greater height provide super-rigid support for all cameras up to 4x5 press size. Fully extended tripod is 76 inches high, folds compactly to only 28½ inches. Center column gives 16½ inches of height adjustment—reverses for shooting at floor level.

Sturdy three section legs lock at any height from 28½ to 59 inches with knurled ring leg lock. Non-skid rubber feet. Standard American tripod screw. Senior Head, (U) at right, has large bearing surfaces for smooth operation. Full 360° pan, 150° tilt. Polished aluminum construction with black enamel finish. Act. wt. 6 lbs. 12 oz. 67 HN 2107 MT—Postpaid. 47.00

M TIP-TOP TRIPOD HEAD. Oversize ball and socket assure smooth 360° pan, 180° tilt. Large knurled ring controls tension to hold miniature, folding, and 8mm movie cameras firmly. 67 H 2110—Amer. threads. Ship. wt. 6 oz. . . 1.79

N MIDGET TRIPOD HEAD. For small still cameras. 5-inch handle. Thumbscrew control adjusts tension on 360° pan, 180° tilt action. 67 H 2131—Amer. threads. Ship. wt. 6 oz. . . 1.49

P KODAK FLEXICLAMP. Use this pocket-size camera or flash unit support instead of a tripod. Padded C-type clamp has strong grasp on both flat and round surfaces. Opens 2 inches. Swivel construction permits tilting to all angles. About 8-in., clamp fits in gadget bag or pocket. 67 H 2123—Amer. threads. Ship. wt. 1 lb. . . 3.98

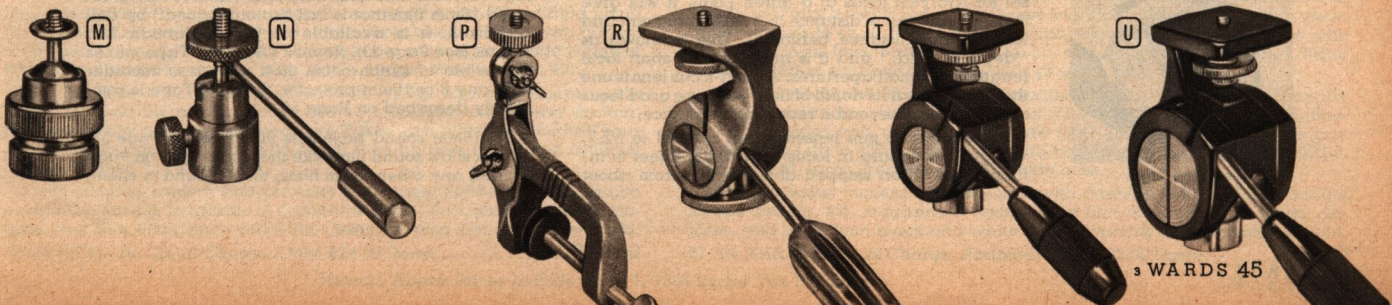
R ARCHER PAN HEAD. Moderately priced, medium sized pan head. Smooth action. 360° panning, 140° vertical tilting. 1½x2¼-in. plate gives solid bearing surface for camera. 6-in. handle locks pan head. Standard American threads. Instant lock. Act. wt. about 10½ oz. 67 H 2113—Shipping weight 14 oz. 2.98

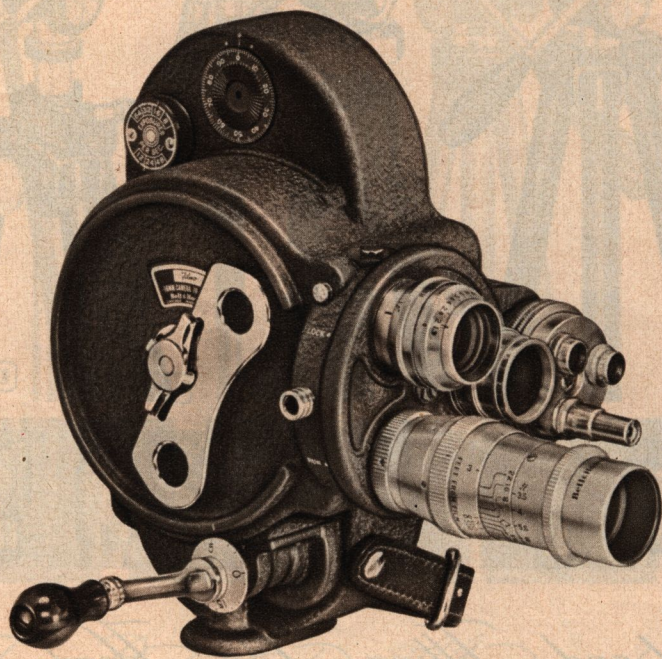
T QUICKSET CHAMP PAN HEAD. Smooth action. instant locking—135° tilt, 360° pan. 1½x1½-in. plate—holds up to 4x5 press cameras. Polished aluminum, black enamel finish. 6-in. handle. Same head as in (J) at left. Adj. tripod screw. Standard American threads. 67 H 2115—Actual weight 1 lb. Postpaid. . . 6.00

U QUICK-SET SENIOR PAN HEAD. Large oversize bearing surfaces provide smooth action for panning and tilting. Holds cameras up to 4x5 press or view. 6-in. handle locks—135° tilt, 360° pan. Adjustable tripod screw. Standard American threads. 67 H 2108—Act. wt. 1 lb. 12 oz. Postpaid. . . 9.00

HOW TO FLATTEN DRY PRINTS

Place the curled print face down on an open blotter book. Then with a moist cloth or sponge, dampen the back of the print. Don't get it too wet, just enough to moisten it. Close the blotter book and weight it down with a few books or some other weight. Remove the picture when it is dry. Repeat the process if the curl is not all gone—this may be done 3 or 4 times.





Which Movie Camera and Projector?

THE CAMERA

8 OR 16 MM SIZE?—The two films are shown at left in actual size. Before exposure, they are the same width, but the 8 mm has more sprocket holes. It is put through the camera twice; so it has two series of pictures side by side. After developing it, the manufacturer splits it down the middle and splices the two pieces together. The big advantage of 8 mm cameras is in the lower cost of the film they use. This saving amounts to about 60% compared to the same projection time with 16 mm. For this reason they are an excellent choice for the average home movie maker. They are capable of excellent movies of average subjects in black and white or color, and these can be projected to a size of about 3 by 4 feet.

16 mm cameras cost more to run, but their larger film permits finer recording of detail and can be "blown up" to as much as 6 by 8 feet. Single frames can be enlarged as "still" pictures. And more film emulsions are available in 16 mm. For these reasons, the 16 is the choice of the serious amateur who wishes to achieve professional effects.

Another consideration in favor of 16 mm is that you might want to add sound equipment later. Sound projectors will handle either sound or silent film, but they are made in 16 mm size only.

MAGAZINE OR REEL LOAD?—The magazine-loading camera is most convenient to use because no threading of film is required. Just open the camera, insert the magazine, and close the camera again. With this type, also, you can change from one kind of film to another whenever you wish, without waiting to "finish the reel."

More film emulsions are available on reels than in magazines, and reel film costs about 15% to 20% less.

FOCUSING OR FIXED-FOCUS LENS?—When a lens is set for sharpest focus at a given point, it will give good focus for some distance in front of that point and for a longer distance behind it. This is known as "depth of field," and it is greatest with short focal lengths and small apertures. A fixed-focus lens is one that is set so that its depth of field will give good focus on all subjects beyond a reasonable distance.

Fixed-focus 16 mm lenses, when opened to $f/2.7$, will get everything in focus from about 8 feet to infinity, and when stopped down to $f/11$ from about

3 feet to infinity. Fixed-focus 8 mm lenses at $f/2.7$ will give good focus from about 7 feet to infinity, and at $f/11$ from about 2 feet to infinity. For shorter distances a supplementary lens is needed.

Since fixed-focus lenses cannot be changed in focus, they are easier to use and are preferred by many who do not require critical focus at short distances. A worker who wants to make closeups, or to duplicate soft-and-sharp focus effects of professional films, will want the focusing lens.

TURRET OR NON-TURRET?—Movie makers who wish to photograph fast action at varying distances—where they may be using a normal lens one minute and a telephoto the next—will find a turret camera the answer. Where time is not important, the non-turret may be preferred. It is lighter because its extra lenses are kept in the case until needed.

THE PROJECTOR

HOW MUCH LIGHT?—The more light you have the more brilliant your screen image will be and the bigger you can make it. With 8 mm at least 300 watts is recommended, especially for color projection. With 16 mm projectors at least 500 watts, or even 750, is desirable. If you expect to show occasionally to large groups in clubs, etc., or if you want big screen size, then 750 or 1000 watts will be more satisfactory.

SOUND OR SILENT?—Amateur sound movies are now a reality. Bell & Howell's 16mm Model 202 projector and Revere's Synchro-Tape (See Page 56) make it easy for anyone to add sound to silent movies. They let you record commentary, sound effects, and background music—then play them back—synchronized with your own or professionally-made films.

The 16mm B&H Model 202 projector has a built-in tape recorder that adds magnetic sound to any processed 16mm film that is first "sound striped" by Bell & Howell. It is available at Wards through Bob Adams (see Page 93). Revere's Synchro-Tape makes it possible to synchronize most any tape recorder with any 8 or 16mm projector. Synchro-Tape is completely described on Page 56.

All 16mm sound projectors (like those on Page 57) let you show sound films like the Castle films on Page 63, and any other 16mm films, either sound or silent.



8 mm Film
After
Splitting



16 mm Film



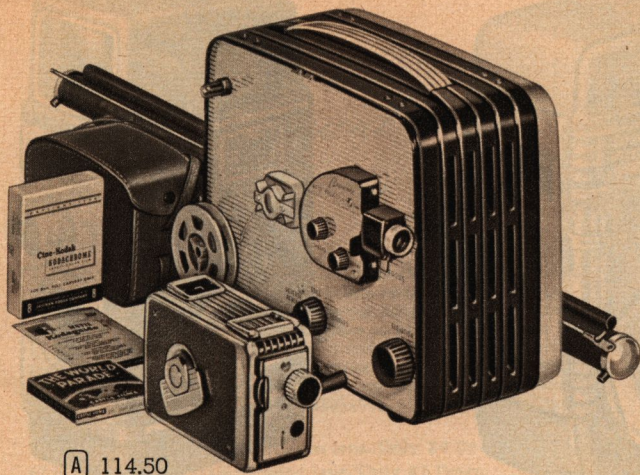
8 mm Film
Before
Splitting



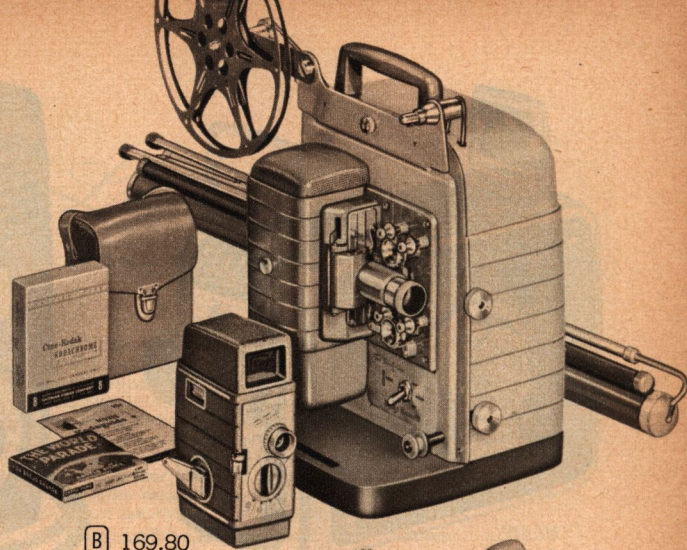
Reel Load



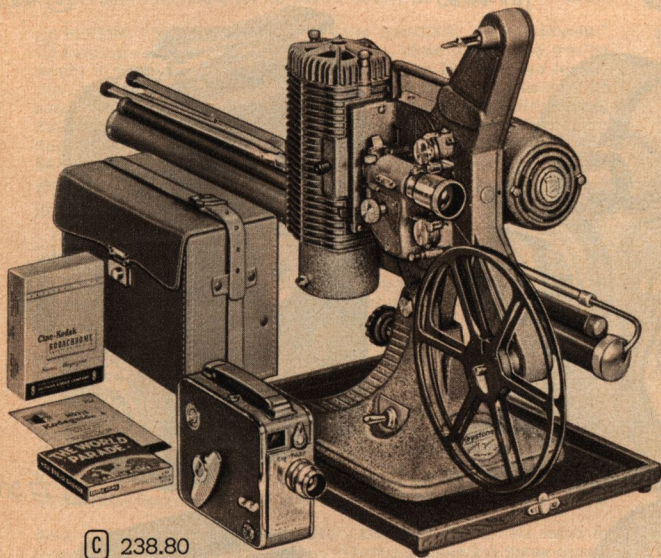
Magazine Load



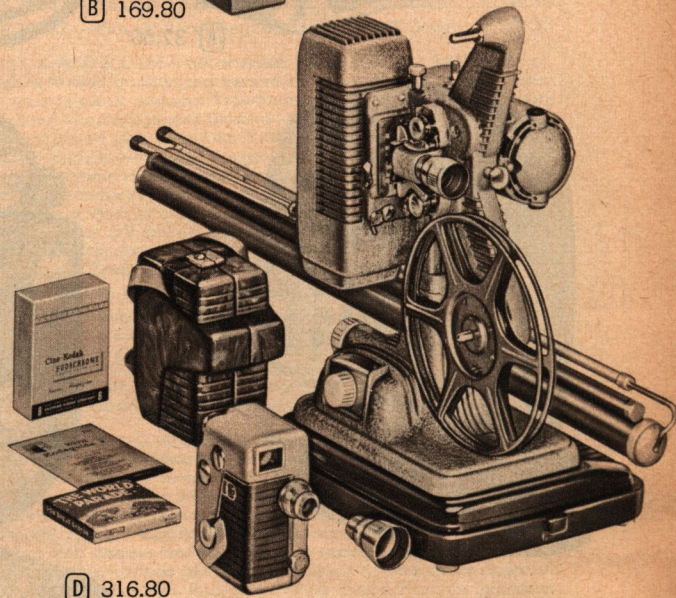
A 114.50



B 169.80



C 238.80



D 316.80

Complete, Ready-to-use 8mm. Movie Outfits

A **KODAK BROWNIE 8MM REEL-LOADING MOVIE OUTFIT.** Brownie simplicity and reliability in a complete movie outfit. Both camera and projector are outstanding Eastman products, built with exceptional features at an exceptionally low price.

The Kodak Brownie camera (described on Pg. 49), has lumenized Ektanon $f/2.7$ lens. It's easy to operate because it's always in focus, and it has a built-in exposure guide frame. Motor locks on so you can get into your own picture. Takes 16 frames per second for normal shooting. With case.

The Brownie projector (described on Pg. 53), gives bright 300-watt illumination. And it has the extra features of reverse, extra-bright still projection and automatic rewind. With coated $f/2.0$ lumenized lens and blower cooling. Built into its own case—compact as a portable radio. Takes up to 200-ft. reel. With 50-ft. Tenite take-up reel and lamp.

Outfit includes camera and projector with cases, 30x30-in. Da-Lite Handy screen (see Pg. 43), roll of Kodachrome color film, Kodaguide for better pictures, and 50-ft. 8mm black and white Castle travelog film. Express prepaid. 67 HN 920R—No Credit Charge. Only \$11.50 Down.....114.50

C **KEYSTONE 8MM MAGAZINE LOADING MOVIE OUTFIT.** The ease of magazine loading and exceptionally bright 750-watt projection, combined in one exceptionally low priced outfit. Built for years of entertainment.

The Keystone K-41 camera (described on Pg. 51) has a standard screw-in lens mount that will accept accessory lenses (see Pg. 58). The sliding viewfinder gives field for both normal and telephoto lenses. Comes with normal $f/2.5$ lens. Takes 12, 16, 24, and 48 frames per second for a wide range of fast, normal and slow motion. With movie gadget case (see Pg. 49).

The Keystone K-95 projector (described on Pg. 53), has exceptionally bright 750-watt illumination. With coated $f/1.6$ lens and blower cooling. Snap-down film gate speeds threading. Takes up to 400-ft. reel for half hour of continuous entertainment. With 400-ft. take-up reel, lamp, and artificial leather grained plywood case.

Outfit includes camera and projector with cases, 30x40-in. Wards Da-Lite screen (see Pg. 43), magazine of Kodachrome film, Kodaguide for better pictures, and 50-ft. 8mm black and white Castle travelog film. Express prepaid. 67 HN 931R—No Credit Charge. Only \$24.00 Down.....238.80

B **BELL & HOWELL 8MM REEL-LOADING MOVIE OUTFIT.** With Bell & Howell's matched camera and projector. Designed for simple operation and dependable performance—backed by the Bell & Howell tradition of quality.

The Bell & Howell 220 (see Pg. 49) is the camera with the automatic Sun Dial. Just dial the type of day or the light conditions and lens is automatically set for the correct exposure. No focusing is necessary—just aim and shoot. The extra-big "picture window" viewfinder shows field for normal and accessory telephoto lenses. Comes with normal $f/2.5$ lens. Takes 16 frames per second. With genuine leather sheath case.

The Bell & Howell 221 projector (see Pg. 53) gives brilliant 500-watt illumination. With coated $f/1.6$ lens and blower cooling. Takes up to 400-ft. reel for half hour of entertainment. With 400-ft. take-up reel, lamp, and two-tone gray and maroon built-in case of durable Tenite.

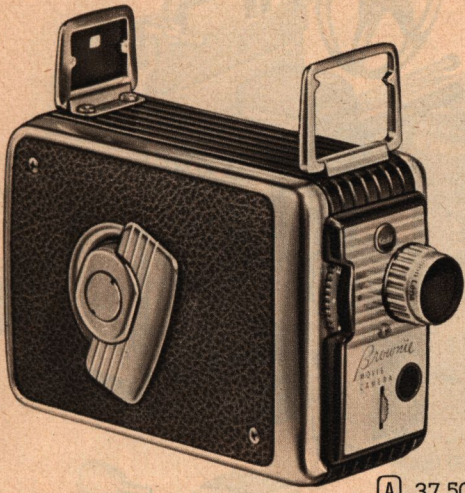
Outfit includes camera and projector with cases, 30x40-in. Wards Da-Lite screen (see Pg. 43), roll of Kodachrome film, Kodaguide for better pictures, and 50-ft. 8mm black and white Castle travelog film. Express prepaid. 67 HN 926R—No Credit Charge. Only \$17.00 Down.....169.80

D **REVERE 8MM MAGAZINE LOADING MOVIE OUTFIT.** A deluxe outfit with amazingly compact camera, 750-watt projector, and extra 17mm wide angle projection lens that more than doubles your picture area.

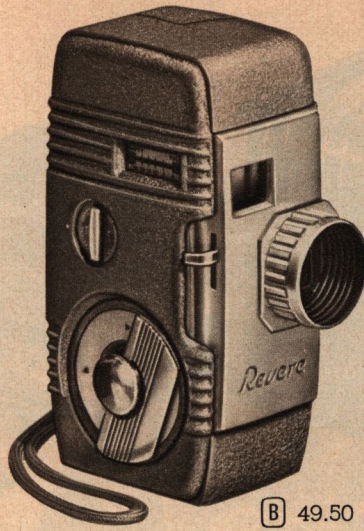
The Revere "B-61" camera (described on Pg. 51) has standard screw-in lens mount that accepts accessory lenses (see Pg. 58). "Micro-Match" viewfinder adjusts to show field for normal and wide angle lenses. Comes with $f/1.9$ fixed focus lens. Takes 12, 16, 24, 32, and 48 frames per second. Motor locks on—takes single frames too. With plastic case.

The Revere Model 90 projector (described on Pg. 53), has exceptionally bright 750-watt illumination. With coated $f/1.6$ lens and blower cooling. Special film guides and retainers eliminate most film wear and handle any splice. Takes up to 400-ft. reel for full half hour of entertainment. With 400-ft. take-up reel, lamp, and slip-over Royalite case.

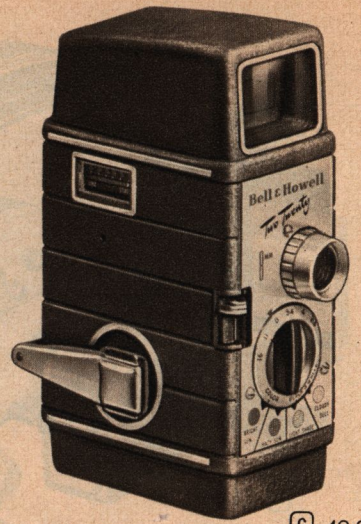
Outfit includes camera and projector with cases, 30x40-in. Wards Da-Lite screen (see Pg. 43), magazine of Kodachrome film, Kodaguide for better pictures, and 50-ft. 8mm black and white Castle travelog film. Express prepaid. 67 HN 924R—No Credit Charge. Postpaid. Only \$32.00 Down.....316.80



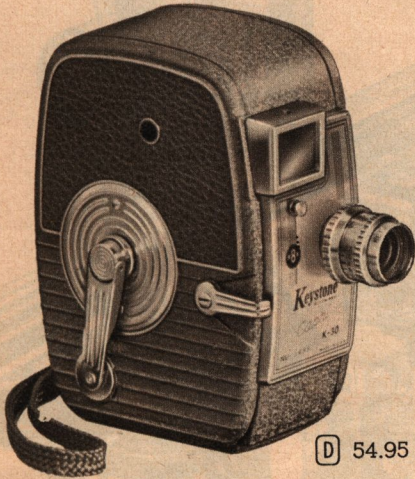
A 37.50



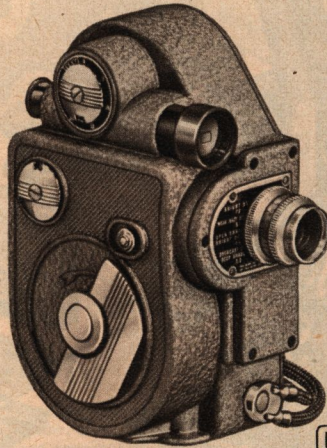
B 49.50



C 49.95



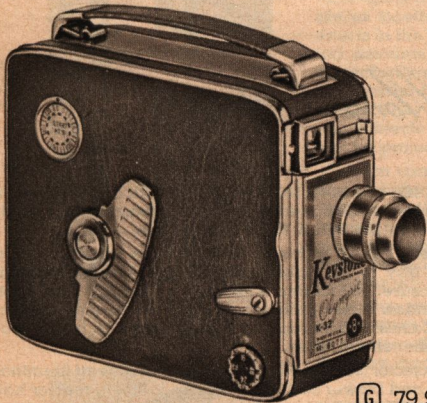
D 54.95



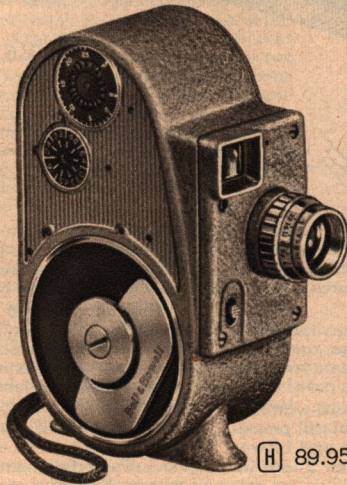
E 72.50



F 77.50



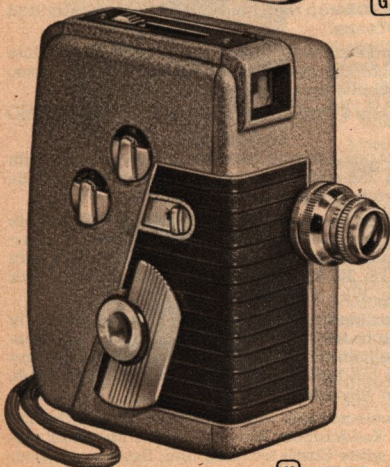
G 79.95



H 89.95



J 89.95



K 97.50



L 5.95



M 8.95

Economical 8mm. Reel-Loading Cameras

FOR FINE HOME MOVIES IN EITHER BLACK AND WHITE OR COLOR

A KODAK BROWNIE REEL-LOADING 8MM CAMERA. Brownie simplicity and reliability in a movie camera. Only one adjustment to make—set lens opening, frame your subject in the sports-type metal viewfinder and shoot. Motor locks on for continuous run. Built-in exposure guide frame—holds guide included with each roll movie film. Footage indicator. All-metal body, Kodadur covering. LENS—luminized Ektanon. FRAMES PER SECOND—16 for normal shooting. BODY SIZE—about 3 $\frac{3}{4}$ x2 $\frac{1}{2}$ x5 $\frac{3}{4}$ in. No Credit Charge. Postpaid.

67 HN 703L—With f/2.7 fixed focus lens. Only \$4 Down.... 37.50
67 HN 702L—With f/1.9 focusing lens. Only \$5 Down..... 46.75
67 HN 704—Carrying case for above cameras. Postpaid.... 3.40

B REVERE "50" REEL-LOADING 8MM CAMERA. Real "drop-in" loading—just place reels on spindles, close back, and you're ready to shoot. No adjustments are necessary because the lens is always in focus. Extra long 10-ft. run. Lens is recessed in its own sunshade. Motor locks on for continuous run, takes single frames too. Built-in exposure guide. Footage indicator. Die-cast metal body, tan finish. LENS—coated f/2.8 anastigmat. FRAMES PER SECOND—16 and 64 for extreme slow motion. BODY SIZE—about 5 $\frac{5}{8}$ x8x2 $\frac{1}{4}$ in. Postpaid.

67 HN 718L—No Credit Charge. Only \$5 Down on Terms... 49.50
67 HN 744—Leather-like plastic sheath case..... 3.49

C BELL & HOWELL "220" REEL-LOADING 8MM CAMERA. With "Sun Dial"—tops in simple operation. Just set dial to match the light conditions and lens is automatically set for correct exposure. No focusing is necessary—just aim and shoot. Extra big "picture window" viewfinder shows field for normal and telephoto lenses. 10mm lens covers a wider picture area than most normal lenses—ideal for taking indoor movies in small rooms. Telephoto lens (sold separately below) brings subject 2 $\frac{1}{2}$ times closer. Long 10-ft. film run. Automatic run-down stop assures uniform exposure throughout every winding. Die-cast aluminum body, silver-gray, mar-proof finish. LENS—coated, anastigmat, 10mm f/2.5. FRAMES PER SECOND—16 for normal shooting. BODY SIZE—about 5 $\frac{7}{8}$ x2 $\frac{1}{2}$ x3 $\frac{3}{8}$ in.

67 HN 721L—No Credit Charge. Postpaid. Only \$5 Down.... 49.95
67 HN 726—Bell and Howell leather sheath case. Postpaid... 5.95

BELL & HOWELL 2 $\frac{1}{2}$ X TELEPHOTO LENS FOR "220." No need to focus—just screw into camera lens to bring subject 2 $\frac{1}{2}$ times closer. Coated to prevent reflection and glare.

67 HN 1400L—No Credit Charge. Postpaid. Only \$2.50 Down 22.95

D KEYSTONE K-30 "CAPRI" REEL-LOADING 8MM CAMERA. Interchangeable lens mount adds versatility. Extra-large optical viewfinder shows field for normal and telephoto lenses (see Page 58 for accessory lenses). No focusing necessary—just aim and shoot. Built-in exposure guide. Footage indicator. Locks on continuous run—takes single frames. All-metal body, 2-tone gray-brown crackle finish. Scuffproof vinyl trim. LENS—coated, $\frac{1}{2}$ -in. f/2.8 anastigmat. FRAMES PER SECOND—16 for normal shooting. BODY SIZE—about 5x4 $\frac{3}{4}$ x2 $\frac{1}{2}$ in. Cases sold under (L) and (M).

67 HN 700L—No Credit Charge. Postpaid. Only \$5.50 Down. 54.95

E REVERE "88" REEL-LOADING 8MM CAMERA. The reliable companion of thousands of movie makers. Viewfinder shows field for normal and telephoto lenses. Standard screw-in lens mount accepts accessory lenses (see Page 58). Built-in exposure guide. Footage indicator. Aluminum body, brown textured finish. Order cases (L) or (M) below at right. LENS—coated, $\frac{1}{2}$ -in. anastigmat. FRAMES PER SECOND—8, 12, 16, 24, 32. BODY SIZE—about 5x2 $\frac{1}{4}$ x3 $\frac{1}{4}$ in. Postpaid.

67 HN 707L—With f/2.5 fixed focus lens. No Credit Charge. 72.50
67 HN 708L—With f/1.9 focusing lens. No Credit Charge.... 97.50

F DEJUR CITATION REEL-LOADING 8MM CAMERA. With foolproof, anti-jam film lock that prevents improper loading. Viewfinder shows field for normal and telephoto lenses. Standard screw-in lens mount accepts accessory lenses (see Page 58). Extra long 10-ft. film run. Automatic run-down stop assures uniform exposure throughout each winding. Motor locks on for continuous run. Built-in exposure guide. Footage indicator. Die-cast aluminum body, brown crackle finish. Order carrying cases (L) or (M) separately at right. LENS—coated, $\frac{1}{2}$ -in. anastigmat. FRAMES PER SECOND—12, 16, 32, 48. BODY SIZE—about 4 $\frac{1}{2}$ x3 $\frac{1}{2}$ x1 $\frac{3}{4}$ in. No Credit Charge. Postpaid.

67 HN 745LT—With f/2.5 fixed focus lens. Only \$8 Down.. 77.50
67 HN 795LT—With f/1.9 focusing lens. Only \$10.50 Down. 102.50

SHOOT AT THE RIGHT SPEED FOR BETTER MOVIES

Use 8 to 12 frames per second for filming clouds; 16 for general scenes; 24 to 32 for shooting from moving car or train; 48 for catching the action of rapidly moving objects like kittens at play; and 64 to study form in diving, swimming, golf, and other sports.

G KEYSTONE K-32 OLYMPIC REEL-LOADING 8MM CAMERA. With "Magna-Finder" viewfinder that not only gives field for normal lens, but, with a snap of the sliding lens, for telephoto and wide angle shots as well. Standard screw-in lens mount accepts accessory lenses (see Pg. 58). Motor locks on for continuous run. Takes single frames too. Automatic run-down stop assures uniform exposure. Built-in exposure guide. Footage indicator. Die-cast metal body, brown Vinyl plastic covering. Order carrying cases (L) or (M) separately below. LENS—coated $\frac{1}{2}$ -in. anastigmat. FRAMES PER SECOND—12, 16, 24, 48. BODY SIZE—about 2x4x4 $\frac{1}{2}$ in. No Credit Charge. Postpaid.

67 HN 794LT—With f/2.5 fixed focus lens. Only \$8 Down..... 79.95
67 HN 798LT—With f/1.9 focusing lens. Only \$10.00 Down.... 99.95

H BELL & HOWELL 134-V SPORTSTER REEL-LOADING 8MM CAMERA. Bell & Howell quality and versatility at a moderate price. A compact, easy-to-carry camera. Viewfinder shows field of view for both normal and telephoto lenses. Special lens mount accepts Bell & Howell accessory lenses (see Page 58). Takes single frames too. Automatic run-down stop assures uniform exposure. Has wide range of 5 speeds, including extreme slow motion—valuable for sports shots. Built-in exposure guide helps you to take better pictures. Footage indicator. Die-cast aluminum body, Fawn metallic finish, maroon trim. Order carrying cases (L) or (M) below. LENS—coated, $\frac{1}{2}$ -inch Comat has click stops. FRAMES PER SECOND—8, 16, 24, 32, and 64. BODY SIZE—about 5x2 $\frac{1}{4}$ x3 $\frac{1}{4}$ in. No Credit Charge. Postpaid.

67 HN 711L—With f/2.5 fixed focus lens. \$9 Down..... 89.95
67 HN 710LT—With f/1.9 Super Comat focusing anastigmat lens. Only \$12 Down on Terms..... 119.95

BELL & HOWELL COMPANION—Same as above except has no single frame, 8, 16, 24, 32 frames per second. F/2.5 fixed focus lens.

67 HN 725LT—Gray finish. Only \$8 Down..... 79.95

J BOLEX L-8 REEL-LOADING 8MM CAMERA. Imported from Switzerland—beautifully designed and precision made by skilled Swiss craftsmen. Adjustable mask viewfinder gives field for normal and 1 and 1 $\frac{1}{2}$ -in. telephoto lenses. Accessory lens adapter ring (sold separately below) accepts all standard screw-in accessory lenses (see Pg. 58). Has 7-ft. run. Motor locks on for continuous run. Automatic run-down stop assures uniform exposure throughout every winding. Ratchet winding—winds like a watch. Black pointer drops down in viewfinder at end of reel. Built-in exposure guide. Footage indicator. Sturdy wrist strap. All-metal body, genuine black morocco leather covering. Order cowhide carrying cases (L) or (M) separately below. LENS— $\frac{1}{2}$ -in. coated, anastigmat. FRAMES PER SECOND—12, 16, 24, 32. BODY SIZE—about 5x3 $\frac{1}{4}$ x2 in. No Credit Charge. Postpaid.

67 HN 786LT—With f/2.8 Yvar fixed focus lens. Only \$9 Down. 89.95

67 HN 787LT—With f/2.8 Yvar focusing lens, and zippered white pigskin carrying case. Postpaid. Only \$11 Down on Terms 109.95

67 HN 1410T—Adapter lens ring for all standard accessory screw-in lenses. See Page 58. Postpaid..... 1.50

67 HN 1411T—Viewfinder for wide angle lens. Postpaid..... 7.50

K REVERE "80" REEL-LOADING 8MM CAMERA. New design combined with versatility. Gives almost magazine-loading ease with reel-loading economy. "Zoom-type" viewfinder slides at the touch of a finger, to show field for normal, telephoto, and wide angle lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 58). Has 8-ft. film run. Motor locks on for continuous run. Takes single frames too. Film footage indicator. Aluminum body, crackle finish, with brown leather and chrome trim. Order carrying case (L) or (M) below. LENS— $\frac{1}{2}$ -in. coated, anastigmat. FRAMES PER SECOND—12, 16, 24, 32, 48. BODY SIZE—about 2x3 $\frac{1}{2}$ x5 $\frac{1}{4}$ in. No Credit Charge. Postpaid.

67 HN 763L—With f/2.5 fixed focus lens. Only \$10 Down.... 97.50

67 HN 764LT—With f/1.9 focusing lens. Only \$12.50 Down... 122.50

L MOVIE GADGET CASE. Made of top grain cowhide. Holds all the 8mm cameras that Wards sell, with room for extra film, lenses, etc. Removable compartment divider. Adjustable shoulder strap. Size about 5x3x6 $\frac{1}{4}$ in.

67 H 732—Medium Tan color. Ship. wt. 2 lbs..... 5.95

67 H 733—Dark Mahogany Brown color. Ship. wt. 2 lbs..... 5.95

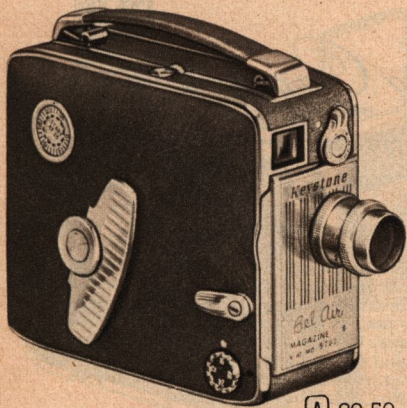
M MOVIE COMPARTMENT CASE. Top grain saddle leather case for all the 8mm cameras that Wards sell. Hard sides give maximum protection for your equipment. Inner divider adjusts to hold camera firmly. Ample room for extra film and accessories. Lined with velveteen. Adjustable shoulder strap. Size about 5 $\frac{1}{2}$ by 3 $\frac{1}{2}$ by 7 $\frac{1}{2}$ in.

67 H 728—Light Tan color. Ship. wt. 2 lbs. 8 oz..... 8.95

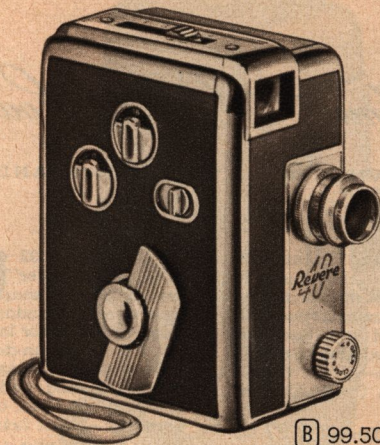
HOW TO MAKE GOOD MOVIES (not shown). A complete handbook for both experienced and beginning amateur movie makers. Published by Eastman, written by experts. Over 200 pages well illustrated.

67 H 4801—Heavy board covers. Ship. wt. 8 oz..... 1.89

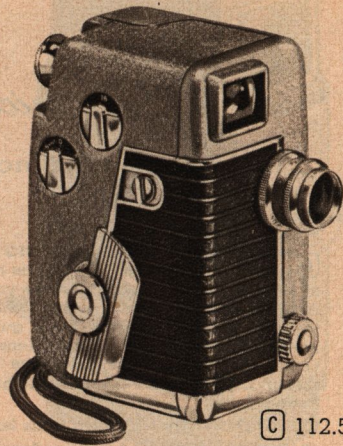
NOTICE: Above Prices include April 1st Excise Tax Reductions.



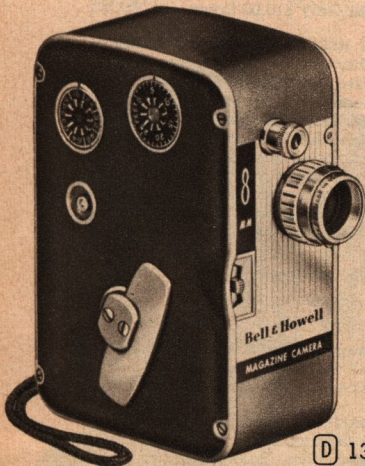
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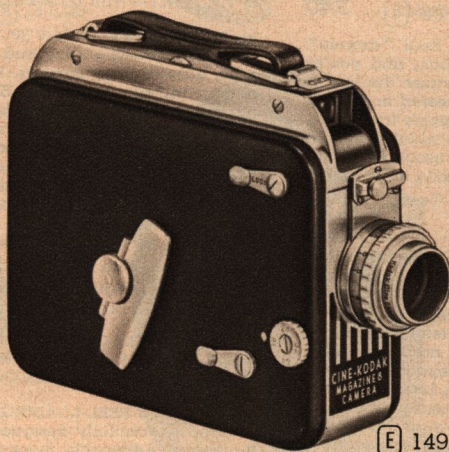
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C 112.50



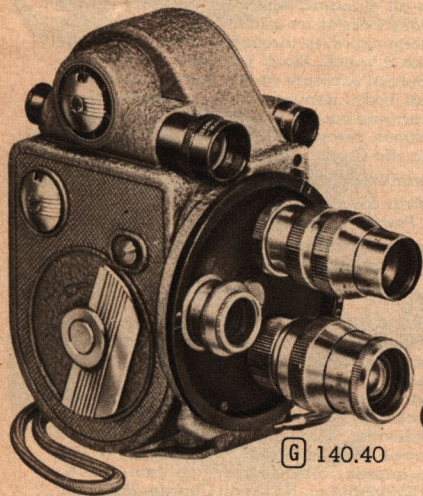
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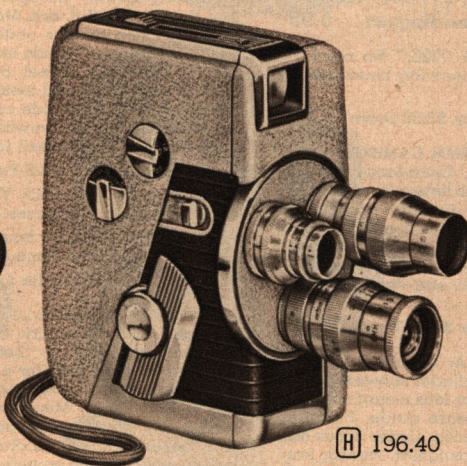
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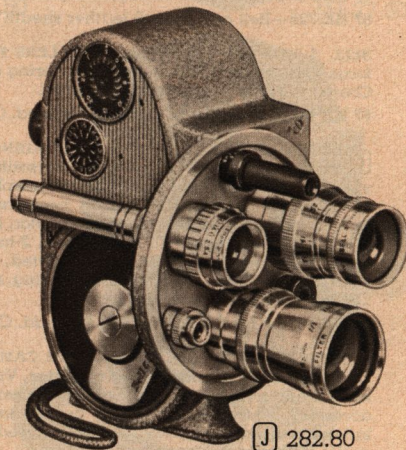
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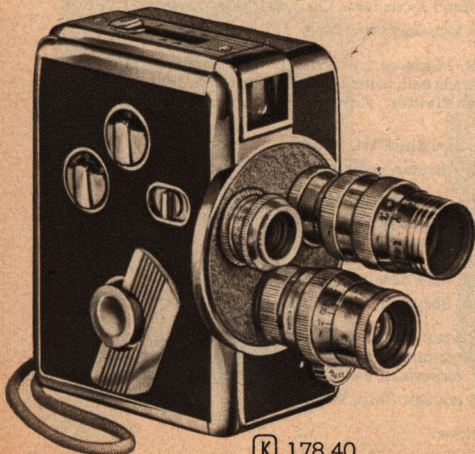
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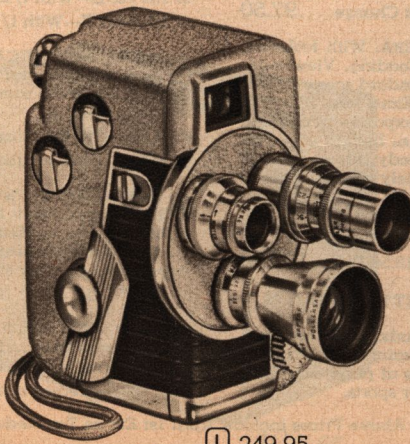
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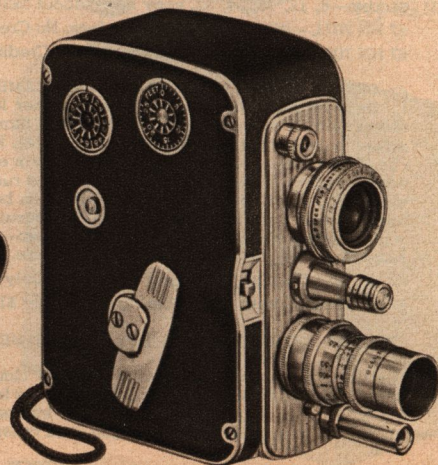
J 282.80



K 178.40



L 249.95



M 260.90

Finest American-Made 8mm. Cameras

TOP-QUALITY REEL AND MAGAZINE-LOADING CAMERAS

A KEYSTONE K-41 MAGAZINE LOADING 8MM CAMERA. The lowest priced magazine camera that Wards sell. Adjustable viewfinder shows field of view for normal and telephoto lenses (see Pg. 58). Standard screw-in lens mount. Built-in exposure guide. Footage indicator. Motor locks on continuous run. Aluminum body, brown vinyl covering, chromed trim. LENS—coated, 1/2-in. anastigmat. FRAMES PER SECOND—12, 16, 24, 48. BODY SIZE—about 2x4x4 1/2 in. Fits cases (L) and (M), Pg. 49. No Credit Charge. *Postpaid*.

67 HN 734 L—With f/2.5 fixed focus lens. Only \$9 Down . . . \$89.50

67 HN 735 LT—With f/1.9 focusing lens. Only \$11.50 Down . . . 114.50

B REVERE "40" MAGAZINE LOADING 8MM CAMERA. "Zoom-type" viewfinder slides, with a finger touch, to give field of view for normal, telephoto, and wide-angle accessory lenses (see Pg. 58). Standard screw-in lens mount. Motor locks on for continuous run—takes single frames too. Built-in exposure guide. Footage indicator. All metal body, brown crackle finish, chromed trim. LENS—coated 1/2-in. anastigmat. FRAMES PER SECOND—12, 16, 24, 32, 48. BODY SIZE—about 4 3/4x2 1/4x3 1/2 in. Fits cases (L) and (M), Pg. 49. No Credit Charge.

67 HN 729 L—With f/2.5 fixed focus lens. *Postpaid*. \$10 Down. \$99.50

67 HN 731 L—With f/1.9 focusing lens. *Postpaid*. \$12.50 Down. 124.50

C REVERE "B-61" MAGAZINE LOADING 8MM CAMERA. Revere's best 8mm single lens camera. Very compact—only about the size of 2 film magazines. "Micro-Match" viewfinder adjusts to show field for normal, telephoto, and wide angle accessory lenses. Standard screw-in lens mount accepts accessory wide angle lenses (see Pg. 58). Long 10 ft. film run—locks on for continuous run. Takes single frames too. Cast aluminum body, brown textured finish, leather and chromed trim. LENS—coated, 1/2-in. anastigmat. FRAMES PER SECOND—12, 16, 24, 32, 48. BODY SIZE—about 4 1/2x2 1/8x3 in. No Credit Charge. Only 10% Down. *Postpaid*.

67 HN 789 L—With f/2.5 fixed focus lens. \$112.50

67 HN 788 L—Above camera with hard plastic carrying case 116.50

67 HN 791 L—With f/1.9 focusing lens and carrying case 141.50

D BELL & HOWELL "172-B" MAGAZINE LOADING 8MM CAMERA. Built to the Bell & Howell tradition of quality. Matched finder objective shows subject exactly as exposed on film. Lens mount accepts B&H lenses listed under camera (M). Locks on for continuous run—takes single frames. Footage indicator. Aluminum body, gray finish. LENS—coated 1/2-in. anastigmat. FRAMES PER SECOND—12, 24, 32, 48, 64. BODY SIZE—about 5x1 7/8x3 7/16 in. Fits cases (L) and (M), Pg. 49. No Credit Charge. *Postpaid*. \$13.50 Down.

67 HN 716 LT—With f/2.5 B&H Comat fixed focus lens. \$134.95

67 HN 727 LT—With f/1.9 B&H Super Comat focusing lens. 164.95

E KODAK MAGAZINE EIGHT. Snap-in bayonet type lens mount permits quick change to Kodak accessory lenses on Pg. 58. Viewfinder adjusts to show field for normal, wide angle, and telephoto lenses. Motor locks on for continuous run. Scene length indicator. Aluminum body, black grained cowhide covering. LENS—coated, 1/2-in. f/1.9 focusing Ektanon. FRAMES PER SECOND—12, 24, 32, 64. BODY SIZE—about 4 1/2x1 3/4x6 1/8 in. Fits cases (L) and (M), Pg. 49.

67 HN 717 L—No Credit Charge *Postpaid*. \$15 Down. \$149.50

F DEJURE FADE-MATIC D-100 MAGAZINE LOADING 8MM CAMERA. With special built-in Fadematic control for fade-ins, fade-outs, and lap dissolves with ease. Sliding viewfinder gives field for normal and telephoto lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 56). Built-in exposure guide. Long run—about 10-ft. of film at each winding. Locks on for continuous run—takes single frames. Footage indicator. All-metal body, black cowhide covering, chromed trim. LENS—coated, anastigmat, 1/2-in. Wollensak. FRAMES PER SECOND—12, 16, 24, 32, 48, 64. BODY SIZE—about 4 3/4x3 1/2x1 1/8 in. Fits cases (L) and (M), Pg. 49. No Credit Charge.

67 HN 796 LT—With f/2.5 fixed focus lens. *Postpaid*. \$127.50

67 HN 797 LT—With f/1.9 focusing lens. *Postpaid*. \$15 Down. 149.50

G REVERE "99" REEL-LOADING 8MM TURRET CAMERA. Wards lowest priced three-lens turret camera. Viewfinders show field for normal and 1 and 1 1/2-in. telephoto lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 58). Coated lenses. Built-in exposure guide. Footage indicator. Aluminum body, textured finish. FRAMES PER SECOND—8, 12, 16, 24, 32. SIZE—about 5x3 3/4x 2 in. Fits cases (L) and (M), Pg. 49. No Credit Charge. Terms on Pg. 100. *Postpaid*.

67 HN 767 LT—With 1/2-in. f/2.5 fixed focus normal, 1 1/2-in. (3X) f/3.5 focusing Elitar telephoto, and 7mm f/2.5 fixed focus Elitar wide angle lenses as shown. Also accessory finder objective to show field for wide angle lens. \$14.50 Down. \$140.40

67 HN 709 LT—With 1/2-inch f/2.5 fixed focus normal lens only. Only \$10 Down. \$99.50

67 HN 2317 T—Elgeet wide angle finder objective only 2.49

H REVERE "84" REEL-LOADING 8MM TURRET CAMERA (shown in color on back Cover). Deluxe camera with reel-loading economy. "Zoom-type" viewfinder shows field for normal, telephoto, and wide angle lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 56). Long run—about 8 ft. Locks on for continuous run—takes single frames too. Coated lenses. Film footage indicator. Exposure guide. Aluminum body, brown crackle finish, leather and chromed trim. FRAMES PER SECOND—12, 16, 24, 32, 48. BODY SIZE—about 2x3 1/2x 5 1/4 in. Fits (L) and (M), Pg. 49. No Credit Charge.

67 HN 780 LT—With 1/2-in. f/1.9 focusing normal, 1 1/2-in. (3X) f/2.5 focusing Elitar telephoto, and 7mm f/2.5 fixed focus Elitar wide angle lenses as shown. *Postpaid*. Only \$20 Down. \$196.40

67 HN 766 LT—With 1/2-inch f/1.9 focusing normal lens only. No Credit Charge. *Postpaid*. Only \$15 Down. \$147.50

67 HN 765 LT—With 1/2-inch f/2.5 fixed focus normal lens only. No Credit Charge. *Postpaid*. Only \$12.50 Down. \$122.50

J BELL & HOWELL 134-TA REEL-LOADING 8MM TURRET CAMERA. Permits through-the-lens focusing. Viewfinder accepts matching objectives for each lens. Coated lenses below fit this camera only. Has 5-ft. film run. Takes single frames too. Built-in exposure guide. Film footage indicator. Aluminum body with fawn metallic finish, maroon trim. FRAMES PER SECOND—12, 24, 32, 48, 64. BODY SIZE—about 5x3x1 3/4 in. Fits cases (L) and (M), Pg. 49. No Credit Charge. *Postpaid*.

67 HN 779 LT—With 1/2-in. f/2.5 fixed focus Comat normal, 1 1/2-in. (3X) f/3.5 focusing Telate telephoto, 6.5mm f/1.9 fixed focus B & H wide angle lenses and matching objectives as shown. \$28.50 Down. \$282.80

67 HN 712 LT—With 1/2-in. f/2.5 fixed focus Comat normal lens and matching finder objective only. Only \$13 Down. \$129.95

67 HN 1433 LT—Coated 6.5 mm f/1.9 fixed focus B & H wide angle lens only and matching finder objective. Only \$9.50 Down. \$91.90

67 HN 1430 LT—Coated 1 1/2-in. (3X) focusing f/3.5 Telate telephoto lens only and matching finder objective. Only \$6.50 Down. \$60.95

K REVERE "44" MAGAZINE-LOADING 8MM TURRET CAMERA. "Zoom-type" viewfinder slides at finger touch to give field for normal, telephoto, and wide angle lenses (see Pg. 58). Motor locks on for continuous run—takes single frames too. Built-in exposure guide. Film footage indicator. Aluminum body, brown leather finish, chromed trim. FRAMES PER SECOND—12, 16, 24, 32, 48. BODY SIZE—about 4 3/4x2 1/4x 3 1/2 in. Fits cases (L) and (M), Pg. 49. *Postpaid*. No Credit Charge.

67 HN 771 LT—With 1/2-in. f/2.5 fixed focus normal, 1 1/2-in. (3X) f/2.5 focusing Elitar telephoto, and 7mm f/2.5 fixed focus wide angle lenses as shown. \$18 Down. \$178.40

67 HN 759 LT—With 1 1/2-in. f/2.5 fixed focus normal lens only. No Credit Charge. Only \$13 Down. \$129.50

L REVERE "B-63" MAGAZINE-LOADING 8MM TURRET CAMERA. "Micromatic" viewfinder has click-stop adjustment to show field of view for normal, 1 and 1 1/2-in. telephoto, and wide angle lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 58). Coated lenses. Runs 10 ft. of film per winding. Aluminum body, textured finish. FRAMES PER SECOND—12, 16, 24, 32, 48. BODY SIZE—about 4 1/2x3 1/4x2 1/2 in. Fits cases (L) and (M), Pg. 49. No Credit Charge. *Postpaid*.

67 HN 777 LT—With 1/2-in. f/1.9 focusing normal, 1 1/2-in. (3X) f/3.5 focusing Wollensak telephoto, and 6.5mm f/2.5 fixed focus Wollensak wide angle lenses as shown. Only \$25.50 Down. \$249.95

67 HN 770 LT—With 1/2-inch f/1.9 focusing normal lens only. Only \$17 Down on Terms \$167.50

67 HN 790 LT—With 1/2-inch f/2.5 fixed focus normal lens only. Only \$14.50 Down on Terms. \$142.50

M BELL & HOWELL 172-A MAGAZINE-LOADING 8MM TURRET CAMERA. Extremely compact, top quality twin turret camera. Visible-Audible footage indicator—scene length indicator in viewfinder, signal clicks 2 ft. before motor runs down. Coated lenses below fit this camera and camera (D). Viewfinder accepts matching objectives for each lens. Long 9 ft. run. Locks for continuous run—takes single frames. Aluminum body, brown scuffproof covering. FRAMES PER SECOND—12, 24, 32, 48, 64. BODY SIZE—about 5x4 5/8x2 in. Fits cases (L) and (M), Pg. 49. No Credit Charge. *Postpaid*.

67 HN 736 LT—With 1/2-in. f/1.9 focusing Super Comat normal and 1 1/2-in. f/3.5 focusing Telate telephoto lenses as shown. \$260.90

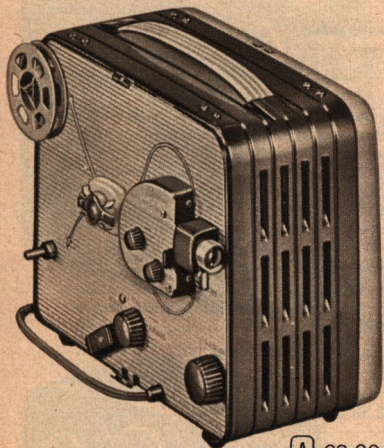
67 HN 774 LT—With 1/2-in. f/1.9 focusing Super Comat normal lens only. Only \$20 Down. \$199.95

67 HN 773 LT—With 1/2-in. f/2.5 fixed focus Comat normal lens only. Only \$17 Down on Terms. \$169.95

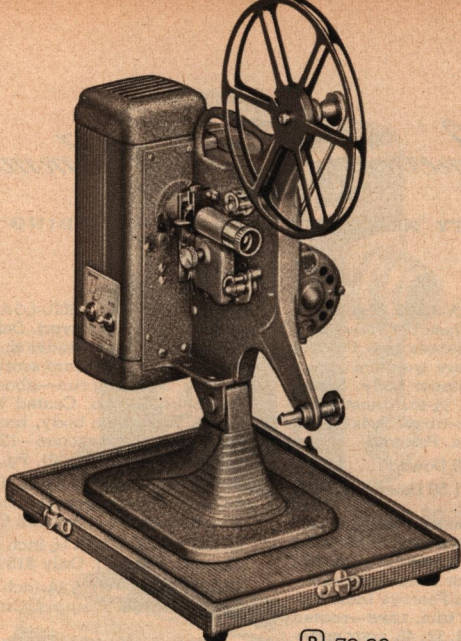
67 HN 1431 LT—1 1/2-in. (3X) focusing f/3.5 B & H Telate telephoto lens only and matching finder objective. Only \$6.50 Down. \$60.95

67 HN 1434 LT—6.5mm f/1.9 fixed focus Bell & Howell wide angle lens only and finder objective. Only \$9.50 Down. \$91.90

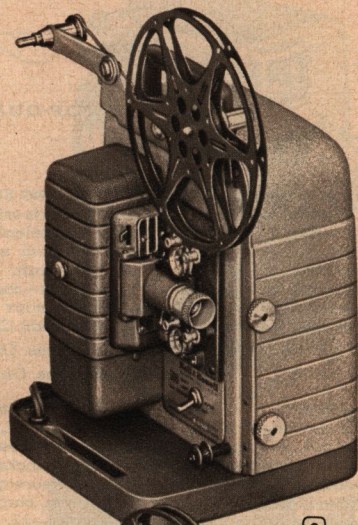
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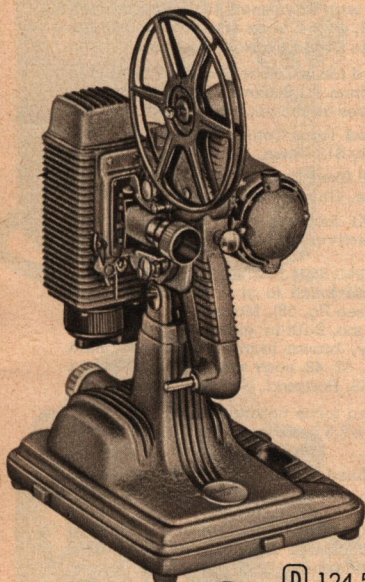
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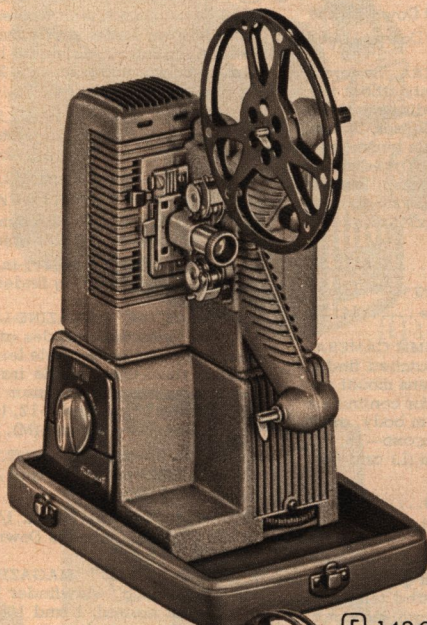
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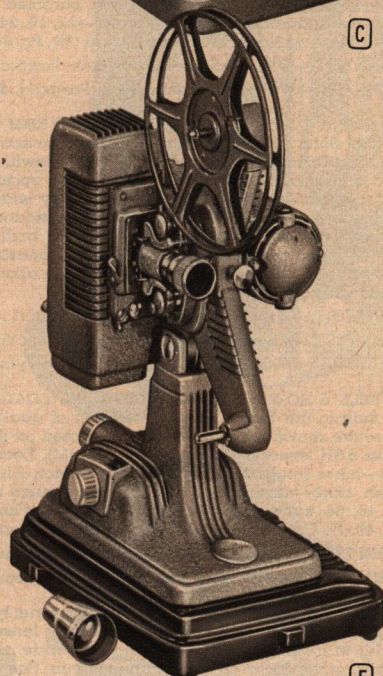
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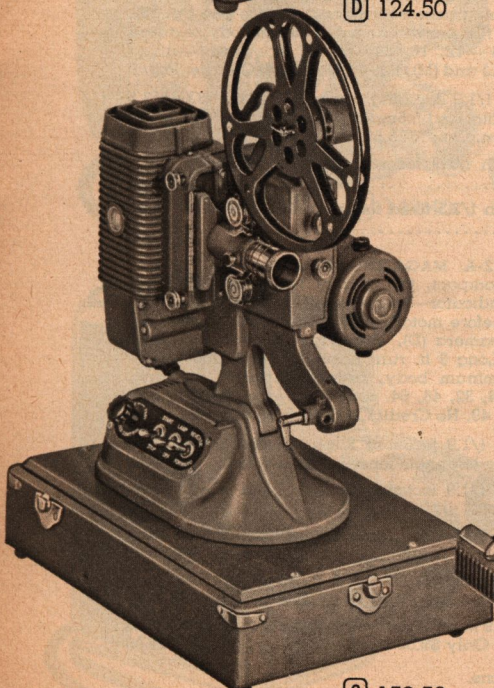
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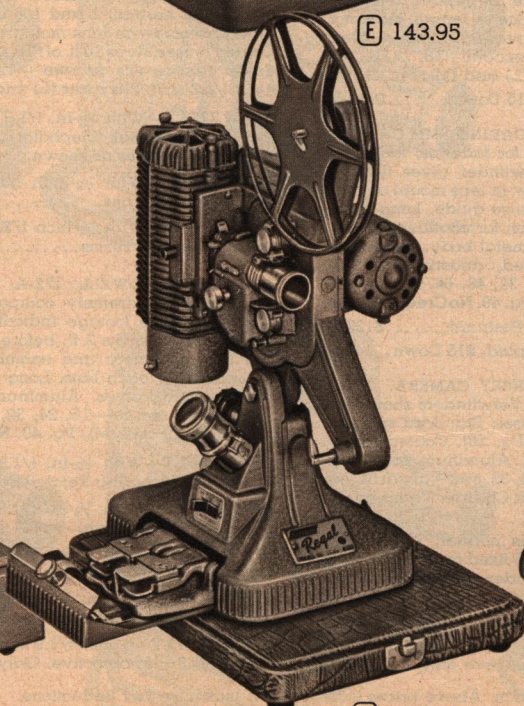
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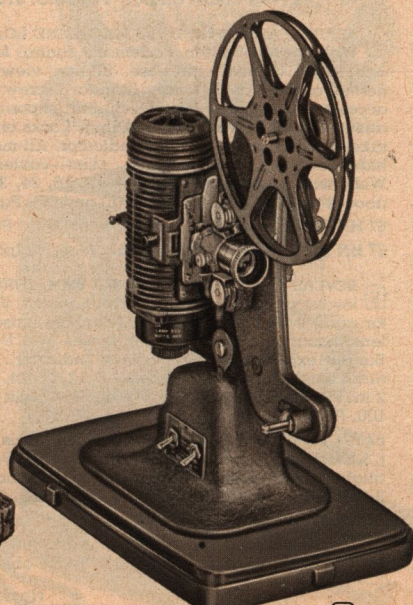
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G 159.50



H 169.50



J 179.95

Popular 8mm. Movie Projectors

DESIGNED FOR BEST PERFORMANCE AT MODERATE PRICE

A KODAK BROWNIE 8MM PROJECTOR. Modern design plus exceptional price. Kodak's latest 8mm projector—extremely attractive in appearance, very easy to use. Has many "plus" features like reverse, extra-bright still picture projection, and automatic rewind. Built into its own case—as compact as a portable radio. And it's so simple to use that anyone can set up the Brownie in seconds.

Focusing, coated, color-corrected, 1-inch, f/2.0 Eastman lens. Bright 300-watt illumination. Reflector-condenser optical system. Motor driven blower cooling. Single switch controls lamp and blower. Reverse and single frame projection. Safety screen protects film during single frame projection. Hand knob checks threading. Built-in threading light. Direct, motor driven rewind. Constant speed motor. Tilting; framing adjust. Takes up to 200-ft. reel. With 50-ft. Tenite take-up reel, 300-watt lamp, power cord, instr. Order extra lamp listed below. All-metal body and case, 2-tone brown crackle finish. About 9 $\frac{5}{8}$ in. high. For 110-120 volt, AC only. \$6.50 Down.

67 HN 903 R—Act. wt. 11 $\frac{3}{4}$ lbs. No Credit Charge. Exp. Prpd.. 62.00
67 HN 3127—Extra lamp for (A) above. Postpaid..... 3.51

B BRIGHTBEAM K-70 8MM PROJECTOR. Keystone's 500-watt projector. Built to give you good, bright pictures—easily and quickly set up for an evening's entertainment.

Focusing, coated, color-corrected, 1-inch, f/1.6 lens. Brilliant 500-watt illumination. Coated condenser optical system. Motor driven blower cooling. Single switch for lamp and blower. Hand knob checks threading. Fast rewind by changing spring belt. Friction speed control. Tilting and framing adjustments. Takes up to 400-ft. reel. With 400-ft. take-up reel, 500-watt lamp, power cord, off-on line switch, instructions. Order extra lamps 67 HN 3124, Pg. 28. All-metal body, brown crackle finish. Artificial leather covered plywood case. Abt. 14 in. high. Act. wt. 15 lbs. 110-120 volt, AC or DC.

67 HN 905 R—With case. No Credit Charge. Express Prepaid.. 79.90

C BELL & HOWELL MODEL 253 8MM PROJECTOR. Built to give simple operation, a bright steady picture, and quiet action. Unusually light and compact, with a sturdy aluminum base. Projector and all aluminum die cast case of Fawn metallic finish built as a unit.

Focusing, coated, color-corrected, 1-inch, f/1.6 lens. Brilliant 500-watt illumination. Reflector-condenser optical system. Motor driven blower cooling. Single switch controls lamp and blower. Motor driven rewind. Constant speed motor assures steady 16-frame projection. Tilting, framing adjustments center image. Takes up to 400-ft. reel. With 400-ft. take-up reel, 500-watt lamp, power cord, instr. Order extra lamps 67 HN 3124, Pg. 28. All-metal body about 11 in. high. Act. wt. 13 $\frac{1}{2}$ lbs. For 90-130 volt, AC only. Exp. Prepaid.

67 HN 908 R—No Credit Charge. Only \$11.50 Down..... 114.95

67 HN 902 R—Bell & Howell 221 8MM Projector (not shown). Same as above, but with built-in Tenite case in 2-tone gray and maroon. Act. wt. 12 lbs. No Credit Charge. Exp. Prpd. Only \$10 Down.. 99.95

D REVERE MODEL 85 8MM PROJECTOR. The reliable projector that has given many hours of home entertainment to thousands of families for years. Designed to give you a bright picture, steady projection, and long film life.

Focusing, coated, color-corrected, 1-inch, f/1.6 lens. Brilliant 500-watt illumination. Reflector-condenser optical system. Motor driven blower cooling. Interlocking switches for lamp and blower. Single frame projection. Safety screen protects film during single frame projection. Manual threading knob checks threading. Built-in light and lever-operated film gate make threading easier. Direct, motor driven rewind. Rheostat speed control. Tilting, framing adjust. Takes up to 300-ft. reel. With 300-ft. take-up reel, 500-watt lamp, power cord, instr. Order extra lamps 67 HN 3124, Pg. 28. Die-cast metal body, bronzed textured finish. Russet color fiber lift-off top case. About 14 $\frac{1}{2}$ in. high. Act. wt. 14 $\frac{1}{4}$ lbs. For 105-120 volt, AC or DC.

67 HN 901 R—With case. Exp. Prepaid. No Credit charge... 124.50

E AMPRO "FUTURIST" 8MM PROJECTOR. An all-gear drive, 750-watt projector that's easy to operate. Single "Duomatic" control lets you shift from forward to still to reverse with only one lever. "Planetary Drive" makes changes instantly. Choice of 1-inch lens for normal distances, or 3/4-inch lens for larger images in close quarters.

Focusing, coated, color-corrected lens. Extra-bright 750-watt illumination. Reflector-condenser optical system. Motor driven blower cooling. Single lamp and blower switch. Reverse and single frame projection. Swing-out film gate makes threading easy. Direct motor driven rewind. Rheostat speed control. Framing, and 1-finger dial tilt adjustments. Takes up to 400-ft. reel. With 400-ft. take-up reel, 750-watt lamp, power cord, instr. Order extra lamps 67 HN 3125, Pg. 28. Die-cast metal body, brown crackle finish. Royalite plastic lift-off top case. About 15 $\frac{1}{2}$ in. high. Act. wt. 17 $\frac{1}{2}$ lbs. For 110-120 volt, AC or DC. No Credit Charge. \$14.50 Down.

67 HN 946 RT—With 1-in. lens and case. Express Prepaid.. 143.95

67 HN 948 RT—With 3/4-in. lens and case. Express Prepaid.. 143.95

F REVERE EIGHT MODEL 90 8MM PROJECTOR. A deluxe 750-watt projector, capable of theater quality projection. A 17-mm wide angle lens is included for use in small rooms—more than doubles your picture area at any given distance.

Focusing, coated, color-corrected, 1-inch, f/1.6 lens. Exceptionally bright 750-watt illumination. Reflector-condenser optical system. Motor driven blower cooling. Interlocking switches for lamp and blower. Single frame projection. Safety screen protects film during single frame projection. Manually operated knob checks threading, selects single frames. Self-adjusting film guides and stainless steel film retainers eliminate most film wear—handles any splice. Direct, clutch controlled, motor driven rewind. Rheostat speed control. Tilting and framing adjustments center image. Takes up to 400-ft. reel for half hour of entertainment. With 400-ft. take-up reel, 750-watt lamp, power cord, instr. Order extra lamps 67 HN 3125, Pg. 28. Die-cast metal body. Slipover molded fiber, Rust colored Royalite case. About 16 $\frac{1}{2}$ in. high. Act. wt. 15 $\frac{1}{2}$ lbs. For 110-120 volts, AC or DC.

67 HN 940 R—With case. Express Prepaid. No Credit Charge.. 159.50

G DEJUR AMSCO 8MM PROJECTOR. Well-designed, quality 750-watt projector. With swing-out film gate for easy threading, and double toothed film movement to prolong life of your film.

Focusing, coated, color-corrected, 1-inch, f/1.6 lens. Exceptionally bright 750-watt illumination. Reflector-condenser optical system. Motor driven blower cooling. Reverse and single frame projection. Safety screen protects film during single frame projection. Manually operated knob checks correct threading, selects single frames. Direct, motor driven rewind. Rheostat speed control. Tilting and framing adjustments. Takes up to 400-ft. reel. With 400-ft. take-up reel, 750-watt lamp, power cord, instr. Order extra lamps 67 HN 3125, Pg. 28. Die-cast metal body, gray enamel finish. Artificial leather covered case. About 17 inches high. Act. wt. 21 lbs. For 110-120 volt, AC or DC.

67 HN 925 R—With case. No Credit Charge. Express Prepaid.. 159.50

67 HN 912 RT—Same projector and case as above, but with extra features: Cordomatic reel for power cord—cord retracts automatically into base for storage; larger blower so that projector may be used with 1000-watt lamp. About 18 inches high. Act. wt. 23 lbs. With case. No Credit Charge. Express Prepaid. Only \$18 Down. 177.50

H KEYSTONE MODEL K-109V 8MM PROJECTOR-EDITOR. A 750-watt projector with special features of Light-O-Matic, and a built-in editor and splicer. The Light-O-Matic will automatically turn off a table lamp when you start the projector, and turn it on when you stop the projector. You can edit your film right on the projector reels by running it through the action viewer, and splice too in the built-in splicer. All gear driven take-up, reverse, and rewind.

Focusing, coated, color-corrected, 1-inch, f/1.6 lens. Exceptionally bright 750-watt illumination. Coated condenser optical system. Motor driven blower cooling. Single switch control of lamp and blower. Reverse and single frame projection, with safety screen. Snap-down film gate speeds threading. Rapid, motor driven rewind. Rheostat speed control. Tilting and framing adjustments center image. Takes up to 400-ft. reel. With 400-ft. take-up reel, 750-watt lamp, power cord, instr. Order extra lamps 67 HN 3125, Pg. 28. Die-cast metal body, brown textured finish. Artificial leather covered plywood case. About 16 $\frac{1}{2}$ in. high. Act. wt. 26 lbs. For 110-120 volt, AC or DC.

67 HN 900 R—With case. Express Prepaid. No Credit Charge.. 169.50

KEYSTONE K-95. Same as projector (H) above but without reverse projection, built-in splicer and editor, and Light-O-Matic.

67 HN 911 R—With case. No Credit Charge. Express Prepaid.. 127.50

67 HN 1287 T—Editing Viewer only for above. Postpaid..... 10.00

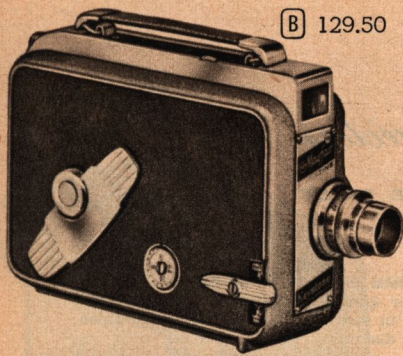
J BELL & HOWELL REGENT 8MM PROJECTOR. A 500-watt, all gear drive projector, with Bell & Howell's precision engineering. Special shutter eliminates flicker at slow speeds. Film floats on recessed handling parts for minimum film wear. Built-in threading light.

Focusing, coated, color-corrected, 1-inch, f/1.6 lens. Brilliant 500-watt illumination. Reflector-condenser optical system. Motor driven blower cooling. Interlocking switches control lamp and blower. Hand knob controls single frame projection, checks threading too. Safety screen protects film during single frame projection. Direct, motor driven rewind. Rheostat speed control. Tilting and framing adjustments. Takes up to 400-ft. reel. With 400-ft. take-up reel, 500-watt lamp, power cord, instructions. Order extra lamp 67 HN 3151, Pg. 28. Die-cast aluminum alloy body, brown crackle finish, chrome plated trim. Artificial leather covered case. About 15 inches high. Act. wt. 13 lbs. For 110-125 volt, AC or DC. \$18 Down.

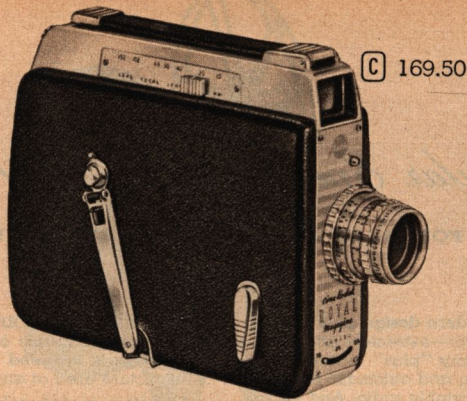
67 HN 937 R—With case. No Credit Charge. Express Prepaid.. 179.95

ADD SOUND TO ANY OF YOUR HOME MOVIES

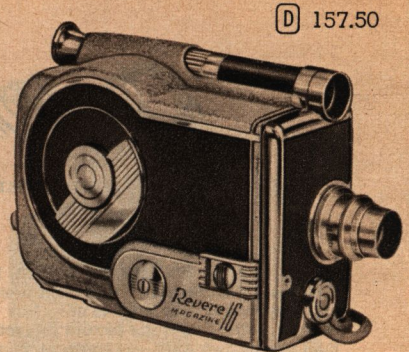
All you need to add your own commentary or sound effects to any of your home movies is a projector like any of those above, a tape recorder, and Synchro tape. See Pg. 56 for complete information.



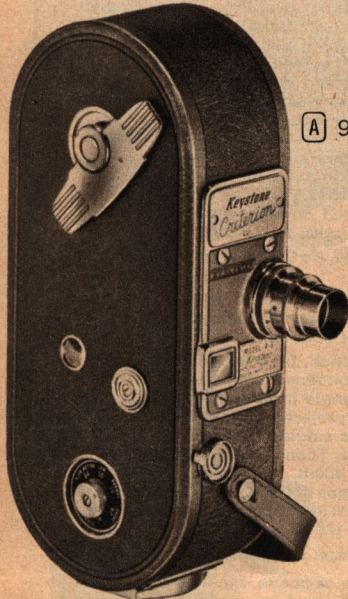
B 129.50



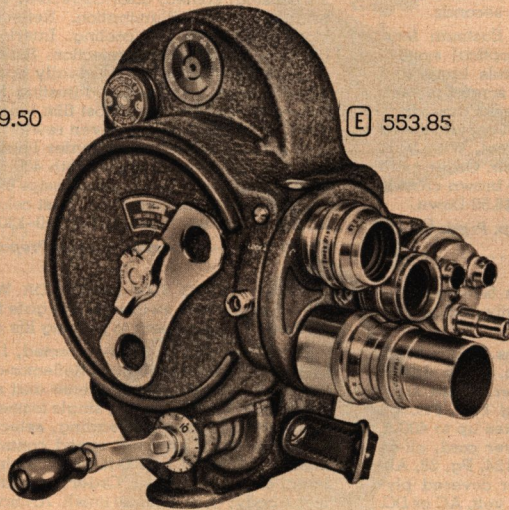
C 169.50



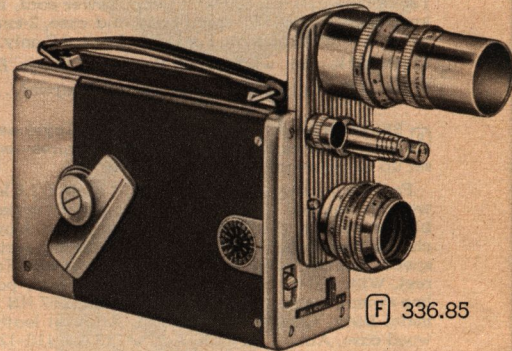
D 157.50



A 99.50



E 553.85



F 336.85

16mm. Cameras and Projectors for the

A KEYSTONE A-9 REEL-LOAD 16MM CAMERA. Easily and quickly loaded. Viewfinder shows field for normal and telephoto lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 58). Long 20-ft. film run. Motor locks on for continuous run, takes single frames too. Built-in exposure guide, audible footage indicator. All metal body, scuffproof vinyl covering, chromed trim. LENS—coated, 1-in. Wollensak Raptor. FRAMES PER SECOND—10, 16, 24, 32, 48, 64. BODY SIZE—about 9x4x3 in. No Credit Charge. Only \$10 Down on Terms. *Postpaid.*

67 HN 803 LT—With $f/2.5$ fixed focus lens. \$99.50
67 HN 804 LT—With $f/1.9$ focusing lens. . . 129.50

Keystone A-12 Reel-Loading Turret Camera. Like above with two lens turret. (1 lens included).

67 HN 842 LT—With $f/2.5$ fixed focus lens. \$129.50
67 HN 843 LT—With $f/1.9$ focusing lens. . . 159.50
67 HN 844 T—Holster case for above. 10.95

B KEYSTONE K-50 16MM MAGAZINE CAMERA. Wards lowest priced magazine-loading 16mm camera. "Marksman" viewfinder shows field for normal, wide angle, and telephoto lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 58). Locks on for continuous run, takes single frames too. Automatic run-down stop. Instantaneous release from normal to continuous run to single frame. Built-in exposure guide. Footage indicator. Metal body, brown vinyl covering. LENS—coated 1-inch anastigmat. FRAMES PER SECOND—8, 16, 24, 64. SIZE—about $4\frac{3}{8} \times 5\frac{3}{4} \times 2$ in. No Credit Charge on these items. Only 10% Down on Terms—see Page 100. *Postpaid.*

67 HN 816 LT—With $f/2.5$ fixed focus lens. \$129.50
67 HN 815 LT—With $f/1.9$ focusing lens. . . 159.50
67 HN 807 T—Compartmented leather case. 8.95

KEYSTONE K-55. Like K-50 above, but with twin lens turret. With one, coated, 1-inch lens only. No Credit Charge. 10% Down on Terms. *Postpaid.*
67 HN 819 LT— $f/1.9$ focusing lens. \$175.00
67 HN 806 T—Compartmented leather case 17.95

C KODAK ROYAL 16MM MAGAZINE CAMERA. The "Royal" is one of a long line of Eastman top quality products. Modern, streamlined design. An automatic run-down stop assures uniform exposure on every winding, and it takes extreme slow motion for sports shooting. Adjustable viewfinder shows field for normal, wide angle, and up to 6-in. telephoto lenses. Parallax correction for close-up shots. Bayonet type snap-in lens mount permits quick change to Kodak accessory lenses (see Pg. 58). Motor locks on for continuous run—takes single frames too. Exposure guide. Footage indicator. All metal body, black leather covering, chromed trim. LENS—coated, 25mm. FRAMES PER SECOND—16, 24, 64. BODY SIZE— $3\frac{1}{2} \times 6 \times 2$ inches. No Credit Charge. Only 10% Down on Terms—see Page 100. *Postpaid.*

67 HN 802 LT—With $f/1.9$ focusing lens. . . \$169.50
67 HN 801 LT—With $f/2.8$ fixed focus lens. 139.50
67 HN 807 T—Compartmented leather case 8.95

D REVERE "16" MAGAZINE 16MM CAMERA. For years, the choice of serious amateurs for fine quality movies. "Micromatic" viewfinder adjusts to show field for normal and telephoto lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 58). Locks on for continuous run—takes single frames too. Built-in exposure guide helps you to make better pictures. Footage indicator. All metal body, brown leather covering. Order carrying case below. LENS—coated, 1-inch anastigmat. FRAMES PER SECOND—12, 16, 24, 32, 48. BODY SIZE—about $4\frac{1}{2} \times 7\frac{3}{8} \times 2\frac{3}{8}$ inches. No Credit Charge. *Postpaid.*

67 HN 826 LT—With $f/2.5$ fixed focus lens. \$157.50
67 HN 827 LT—With $f/1.9$ focusing lens. . . 182.50

REVERE "26". Like "16" above, but with three-lens turret. Includes one, 1-inch anastigmat lens only. Order other lenses from Page 58. No Credit Charge. Only 10% Down on Terms. *Postpaid.*

67 HN 829 LT—With $f/2.7$ fixed focus lens. \$187.50
67 HN 830 LT—With $f/1.9$ focusing lens. . . 212.50

Leather Compartmented Case for "16", "26".
67 HN 828 T—No Credit Charge. *Postpaid.* \$17.50

E B & H 70DL REEL-LOAD 16MM CAMERA. An excellent 3-lens turret camera. Critical through-the-lens focusing assures sharp pictures. Viewfinder adjusts for parallax up to 3 ft., takes matching B & H objectives to show field for normal, wide angle, and telephoto lenses. Standard screw-in lens mount. Long 22-ft. run. Hand crank for extended run. Locks on for continuous run. Built-in exposure guide. Footage indicator. Coated lenses. Aluminum body, brown crackle finish. FRAMES PER SECOND—8, 12, 16, 24, 32, 48, 64. BODY SIZE—about $8 \times 4 \times 5\frac{1}{2}$ in. No Credit Charge.

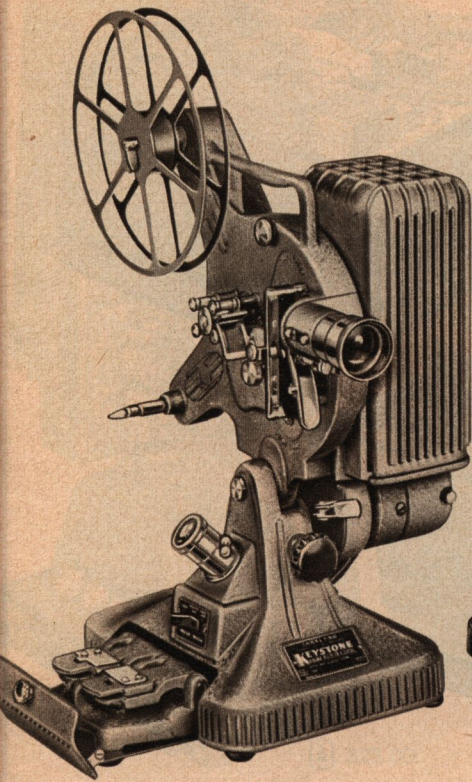
67 HN 813 LT—With 1-inch $f/1.9$ focusing Super Comat normal, 3-inch (3X) $f/3.5$ focusing Bell & Howell telephoto, 0.7mm $f/2.5$ focusing Bell & Howell Super Comat wide angle lenses, and matching objectives as shown. *Postpd.* \$553.85
67 HN 812 LT—With $f/1.9$ focusing lens only and matching objective. *Postpd.* \$365.50
67 HN 846 LT—Bell & Howell top grain leather compartmented carrying case. *Postpaid.* \$37.95

F BELL & HOWELL 200T MAGAZINE LOAD 16MM CAMERA with twin-lens turret. Five speeds including extreme slow motion. Positive finder accepts matching Bell & Howell objectives for each lens. Standard screw-in lens mount. Motor locks on—takes single frames too. Built-in exposure guide. Footage indicator. Coated lenses. All metal body, gray vinyl covering, chrome trim. FRAMES PER SECOND—16, 24, 32, 48, 64. BODY SIZE—about $2 \times 3\frac{3}{4} \times 5\frac{3}{4}$ in. No Credit Charge.

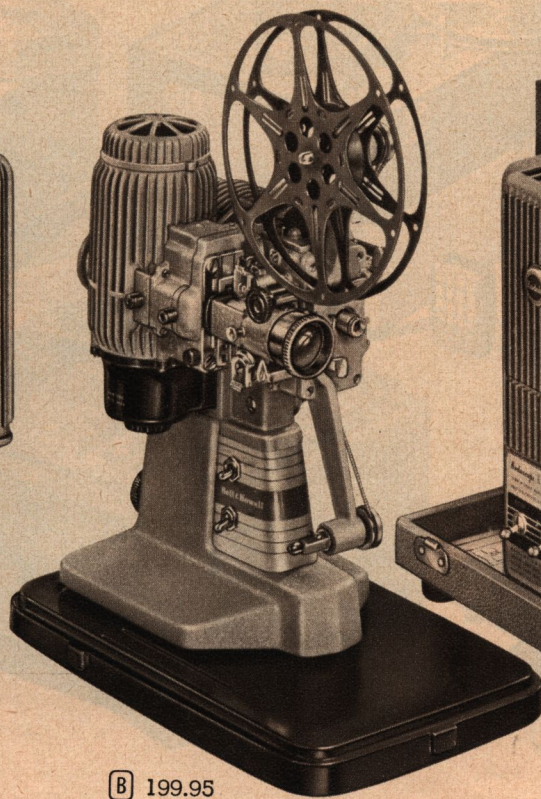
67 HN 824 LT—With 1-inch $f/1.9$ focusing Super Comat normal, 3-inch (3X) $f/3.5$ focusing B & H telephoto lenses and matching objectives as shown. *Postpaid* \$34 Down on Terms. . . \$336.85

67 HN 822 LT—With $f/1.9$ lens only and matching objective. *Postpaid.* \$24.50 Down on Terms. \$244.95

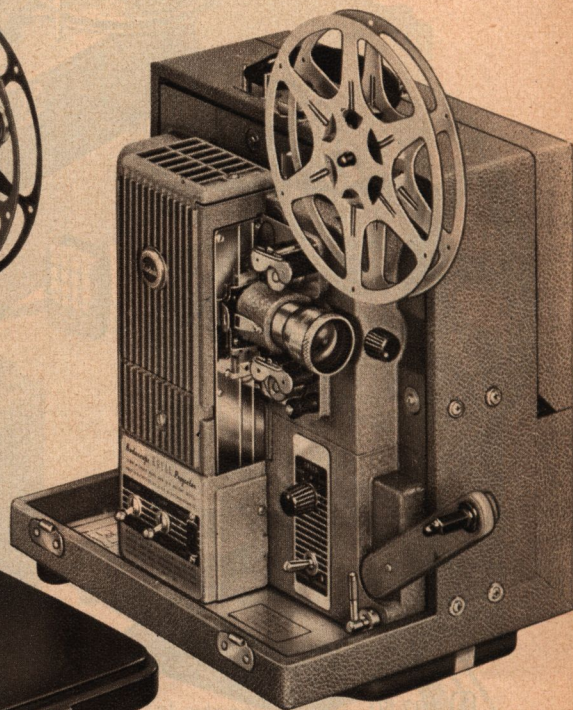
B & H "200". 16mm magazine loading camera like above, but without turret. With $f/1.9$ focusing Super Comat lens only and matching objective.
67 HN 821 LT—No Credit Charge. *Postpd.* \$199.95
B & H Compartmented case for above cameras.
67 HN 823 T—*Postpaid.* \$22.95



A 169.50



B 199.95



C 240.00

Finest in Personal Moving Pictures

A KEYSTONE K-161V 16MM PROJECTOR-EDITOR. A 750-watt projector with Light-O-Matic and built-in action editor and splicer—no extras to buy. Light-O-Matic automatically turns off table lamp when you start projector, turns it on automatically when you stop projector.

Coated, achromatic, 2-in., f/1.6 lens. Reflector-condenser optical system. Blower cooling. Reverse and single frame projection. Direct, motor-driven rewind. Rheostat speed control. Tilting, framing adjustments. Metal body, tan crackle finish. 15 in. high. Act. wt. 26 lbs. With 400-ft. take-up reel, 750-watt lamp, and case. Order extra lamp (67 HN 3125) Page 28. For 110-120-V., AC or DC. No Credit Charge. *Express Prepaid.*

67 HN 952 RT—Model K-161-V. \$17 Down. \$169.50

67 HN 953 RT—Model A-82. As above without editor, splicer, Light-O-Matic or reverse. \$139.50

B BELL & HOWELL 273 16MM PROJECTOR. Bell & Howell's newest 16mm projector—a good-looking, modern, streamlined design with brilliant 750-watt illumination. Has reversing switch on motor for automatic rewind and instantaneous reverse projection.

Coated, achromatic 2-inch, f/1.6 Excessalite lens. Reflector-condenser optical system. Motor driven blower cooling. Reverse and single frame projection. Direct, motor-driven rewind. Friction speed control. Tilting and framing adjustments center image on screen. Die-cast metal body, light gray crackle enamel finish. About 15½ inches high. Actual weight 18 lbs. With 400-ft. take-up reel, 750-watt lamp, and scuffproof, lift-off top Royalite carrying case in two-tone gray. Order extra lamp (67 HN 3153 T) Page 28.

67 HN 963 RT—Complete with Case. No Credit Charge. \$20 Down. *Express Prepaid.* . . . \$199.95

C KODASCOPE ROYAL PROJECTOR. A new 750-watt projector that provides easy, professional quality projection. Sets up in a jiffy because it's built right into the case. Convenient controls located on operators side.

Coated 2-in. f/1.6 Ektanon lens. Reflector condenser optical system. Motor-driven blower cooling. Separate switch for lamp and blower. Floor lamp receptacle—lamp goes off when projector starts. Reverse projection. Direct motor-driven rewind. Rheostat speed control. Tilting and framing adjustments center image on screen. Die-cast metal body, brown crackle finish. Sturdy plywood case has brown imitation leather cover. Size overall 12¼x9½x13 in. high. Act. wt. abt. 22 lbs. With 400-ft. take-up reel, 750-watt lamp. Order extra lamp (67 HN 3125) Page 28. 110-120-V., AC or DC. No Credit Charge.

67 HN 959 RT—*Exp. Prepaid.* \$24.50 Dn. \$240.00

MOVIES AND SPORTS

Whether you are shooting the biggest game of the season or your latest fishing trip, it will appeal to a lot of people. All the elements of a full-length feature are there: action, drama, and suspense. Remember to change the pace occasionally and use some of these tricks.

Slow motion is a favorite for sports because it allows you to see details of the fast action. Use it, but don't overdo it.

If you're shooting a game where score is important, show the scoreboard occasionally—audience will appreciate it.

A shot of the crowd or surrounding area sets the scene, shows the weather and adds interest—close-ups give emphasis to interesting figures.

D BOLEX H-16 LEADER 16MM CAMERA. A fine 3-lens, reel load turret camera, imported from Switzerland. Beautifully styled with every part precision fitted—automatic threading, and capacity for many professional effects. Trifocal viewfinder gives field for normal, wide angle, and telephoto lenses. Standard screw-in lens mount accepts accessory lenses (see Pg. 58). Direct focusing through magnifying "eye-cup". Long 18-ft. run. Governor controlled hand crank for longer runs to 100 ft., or winding film backwards for lap dissolves, double exposure and other effects. Takes single frames. Automatic frame counter, audible footage indicator. Coated lenses. Metal body, black leather covering. FRAMES PER SECOND—8, 16, 24, 32, 64. size: 8⅞x5¾x2⅞ in. No Credit Charge. \$44 Down. *Postpaid.*

67 HN 834 K—With 1-in. f/1.9 focusing Lytar normal, 75mm (3X) f/2.8 focusing Yvar telephoto, and 16mm f/2.8 fixed focus Yvar wide angle lenses as shown. . . . \$433.50

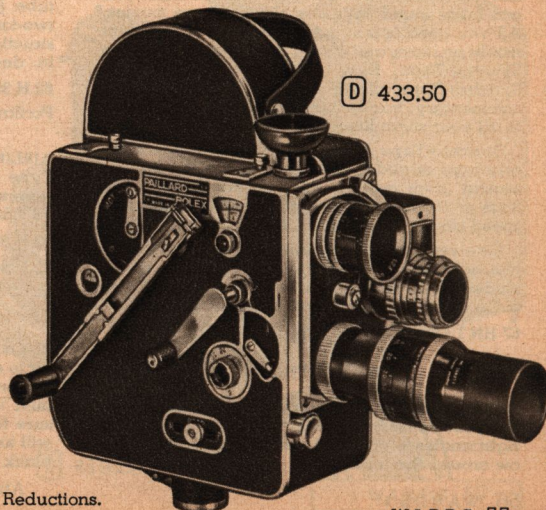
67 HN 832 K—With 1-inch f/1.9 focusing Lytar normal lens only. Only \$27 Down on Terms. . . . \$269.50

67 HN 833 K—With 1-inch f/1.5 focusing Switar normal lens only. Only \$34 Down on Terms. . . . \$332.50

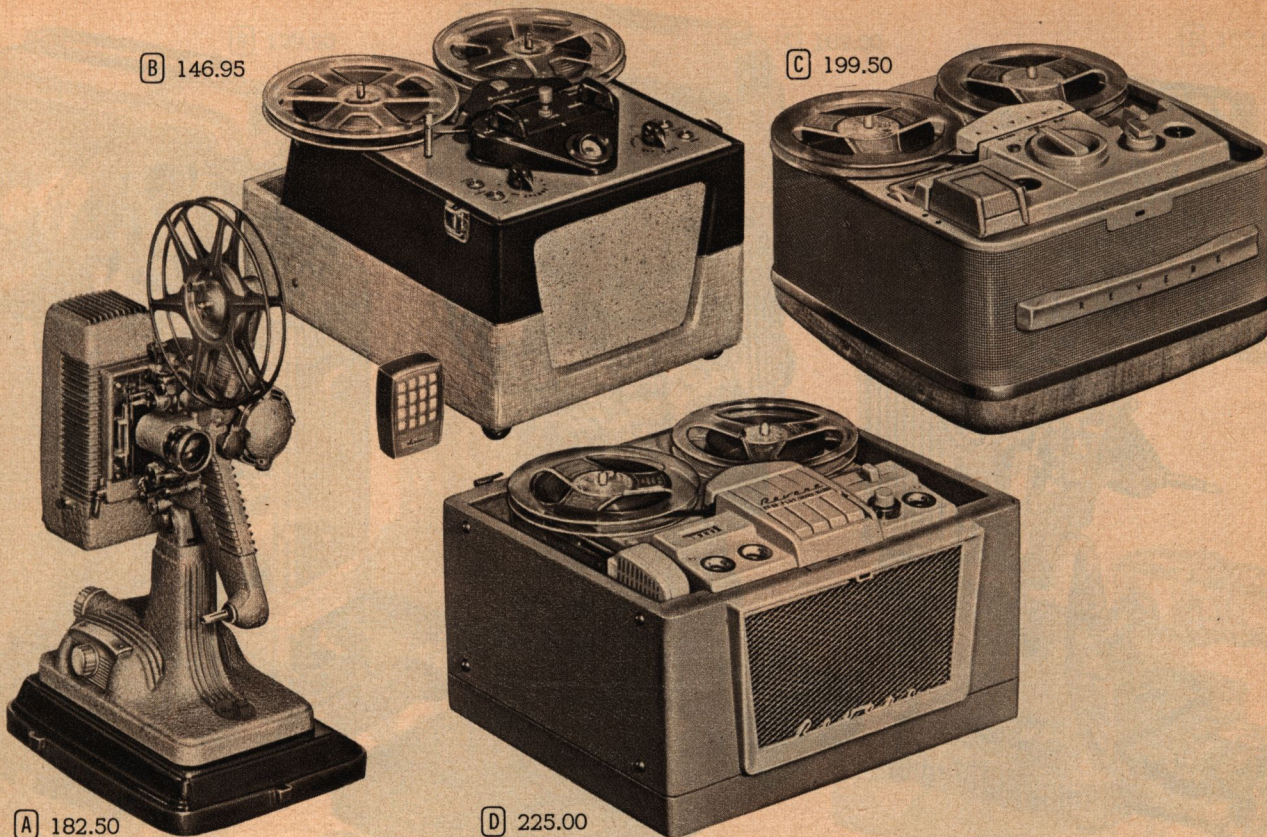
67 HN 1412 K—Yvar 16mm f/2.8 wide angle lens only. 69.50

67 HN 1413 K—Yvar 75mm f/2.8 telephoto lens only. . . 94.50

D 433.50



Notice: Above Prices Include April 1, 1954 Tax Reductions.



B 146.95

C 199.50

A 182.50

D 225.00

For Sound With Your Silent Films

A REVERE MODEL 48 16MM PROJECTOR. A 750-watt silent projector that has proven its reliability through years of use by hundreds of 16mm movie fans. Use it with Synchro-Tape listed below and tape recorder for realistic sound movies. Simplified three-point threading makes it easy to use and operate.

Coated, achromatic 2-in., $f/1.6$ lens. Reflector-condenser optical system. Motor-driven blower cooling. Single switch controls lamp and blower. Single frame projection. Direct motor-driven rewind. Rheostat speed control. Tilting and framing adjustments center image on screen. Base has built-in compartment that holds two reels. Die-cast metal body, brown crackle enamel finish. About 18 in. high. Actual weight 18 lbs. With 400-ft. take-up reel, 750-watt lamp, power cord and scuffproof, rust colored Royalite plastic slip-over carrying case. For 110-120 volts, AC or DC. No Credit Charge on this item. *Express Prepaid.*

67 HN 993 R—Complete with case.
Only \$18.50 Down on Terms..... 182.50

REVERE SYNCHRO-TAPE (not shown). Now you can have sound with any of your home movies. All you need is a standard 8mm or 16mm silent movie projector and a tape recorder, plus Revere Synchro-Tape. Easy to use and economical, Synchro-Tape allows you to add talking titles, commentary, background music, or sound effects to all your silent films.

Synchro-Tape makes it possible to synchronize any tape recorder operating at $3\frac{3}{4}$ inches per second (such as those on this page) with any 8mm or 16mm silent projector having adjustable speed and a conventional shutter.

One reel supplies sound for 800 feet of 8mm film or 1600 feet of 16mm film. Complete kit includes 600-ft. reel of Synchro-Tape, special lens deflector, marking tape, and instructions.

67 HN 1309—Synchro-Tape kit. *Postpaid*... 7.85

YOUR OWN BODY

Makes an excellent substitute sunshade. If you've left your sunshade home, turn your camera at right angles to your body so that your own shadow crosses the lens.

Use an Airline or Revere recorder to add sound to your home movies. It's easy and economical with Revere Synchro-Tape listed at left. Excellent for professional use in music, teaching, lecturing, or other applications where a high quality, dependable recorder is needed. Each has connector cord for attaching to FM tuner, radio, or phonograph to record speeches, music, radio programs—anything you want to hear again. All have dual track recording mechanism—

B SEMI-PROFESSIONAL AIRLINE TAPE RECORDER. Compare this superbly engineered recorder with any similar recorder for performance, features, and especially price.

Records up to two hours on 1200-ft. reel. Tape speed is 3.75 inches per second and 7.5 inches per second. Electric eye recording indicator. Footage-time indicator for indexing. You can instantly switch from "play" to "record" in order to erase or insert announcements or make changes at any point.

3 tube amplifier plus rectifier and electric eye tube (serves as pilot light). Brown and gray two-tone case with handle. Sturdy plywood construction. 6-inch speaker. Size $10\frac{1}{2}$ by 14 by $11\frac{1}{2}$ in. deep. Ship. wt. 32 lbs. Shipped by Express.

62 H 3682 R—\$5 Down on Terms or Cash 146.95
Portland, Oakland..... 152.95

AIRLINE RECORDING TAPE (not shown). Plastic. Type "A." Coated side toward center. Easily reversed for Type "B" machines requiring coated side out. Ship. wt. 14 oz.

62 H 3676—600-ft. reel... 2.75 Five for 12.75
62 H 3679—1200-ft. reel... 4.35 Five for 19.95

LEVEL YOUR TRIPOD

You can make your tripod level if you know how far to extend the legs. A simple way to determine the proper height is by marking the legs every inch with a smaller mark every half inch. Be sure to write numbers next to the marks so you will know just how far each leg is extended. Use black paint, lacquer, or nail polish.

Above Prices Include April 1, 1954 Excise Tax Reductions

doubles the normal recording capacity of one reel of tape. Slow tape speeds offer tape economy, but faster speeds result in better tone. Rapid forward and rewind speeds. Tone control. Tape erases easily—can be used over and over. Microphone, one 7-inch reel with 1200-ft. of tape, empty reel, and instructions included. Compartment for microphone, tape. UL Approved. AC only. Other Revere models available. Write giving name and model No. of equipment you want.

C REVERE'S LATEST TAPE RECORDER T-900. Has high fidelity amplifier and two $5\frac{1}{4}$ -inch speakers for life-like three-dimensional sound which actually fills an entire room. Accurate tape indexing.

Records up to two hours on one 1200-ft. reel. Tape speed is 3.75 in. per second. Two-level neon recording indicator. Index counter locates exact spot on tape for ready reference of recorded material. Master function control for recording and playback. "Stop" button for stopping tape instantly when recording or playing.

3 tubes plus rectifier. Powerful 5-watt amplifier with frequency response up to 16,000 cycles. Pilot light. Strong metal and molded fiber-glass case covered with imported linen; convenient handle. Size $9\frac{1}{2}$ by 14 by $13\frac{1}{2}$ in. *Prepaid.*

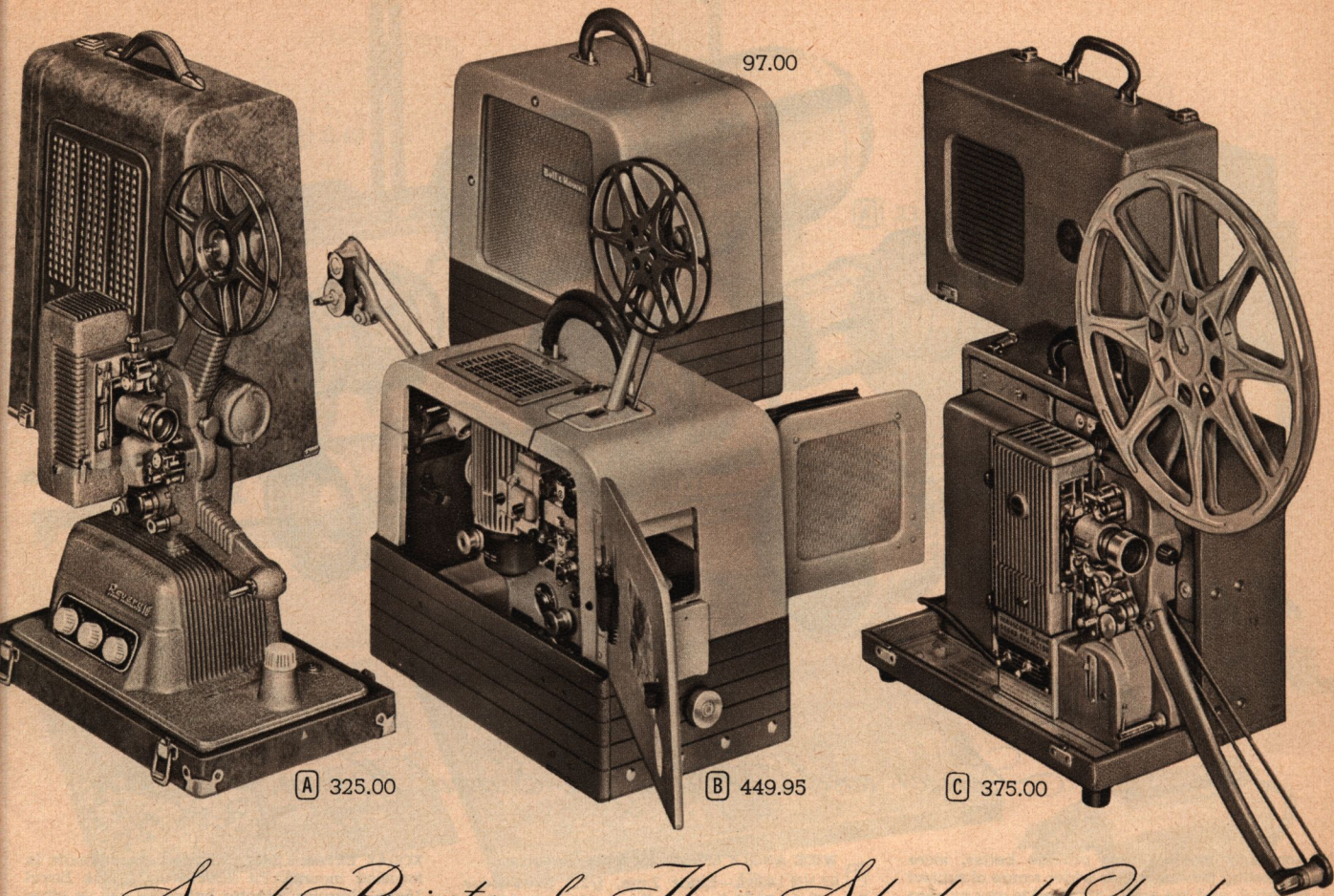
62HN3684 R—\$5 Down. No Credit Charge 199.50

D REVERE'S FINEST TAPE RECORDER T-700. Built for greatest ease in operation, better tone, increased volume, and accurate indexing of tape. Two recording indicators, loudness control.

Records up to 2 hours on 1200-ft. reel. Tape speed 3.75 in. per second. Two recording indicators: one for normal volume; other indicates volume is excessive. Special loudness control compensates tone at low volume so that bass tones are not lost.

4 tube amplifier plus rectifier. $5\frac{1}{2}$ -watts output. Pilot light. Wood case with tan artificial leather covering; handle. 6 by 9-inch oval speaker. Size 16 by 10 by 14 in. deep. *Shipped Prepaid.*

62HN3688 R—\$10 Down. No Credit Charge. 225.00



97.00

A 325.00

B 449.95

C 375.00

Sound Projectors for Home, School, and Church

A REVERE 16MM SOUND PROJECTOR. A fine quality reliable projector for both sound and silent pictures. Compactly built—the ingeniously designed "concert tone" speaker chamber serves as carrying case. Remove case, attach reels, and thread film, and you're ready to go—no arms to attach for 400-foot projection. Has take-up arm extension for 1600-ft. reels—shows up to 44 minute program without interruption. Sturdy Fabrikoid-over-plywood case protects machine.

LENS—2-inch f/1.6 coated anastigmat. PROJECTION LAMP—750-watt. REWIND—Motor driven. REEL CAPACITY—1600 feet. AMPLIFIER—5-watt output. Has special microphone and phonograph jacks. Frequency response from 80 to 7000 cycles. Underwriters' Laboratory listed. SPEAKER—6-inch permanent magnet type. CURRENT—110-120 volts, 50 or 60 cycle AC or DC. WEIGHT—Projector and speaker complete, about 33 pounds. SIZE OVERALL—about 10¼ by 15½ by 22¼ inches. ACCESSORIES—Projector oil, 400-foot take-up reel, 30-foot speaker cable, and instructions. No Credit Charge. *Express Prepaid*. 67HN970R—\$32.50 Down or Cash 325.00

REPLACEMENT EXCITER LAMPS

Replacements for the sound projectors listed after each. Ship. wt. each, 4 oz.
 67 H 3143 T—For Natco M-3030.....85¢
 67 H 3144 T—For Revere, Ampro Compac, and Ampro Stylist.....95¢
 67 H 3146 T—For Bell & Howell, models 185, 285, and 202.....85¢
 67 H 3150 T—For Kodak Pageant....85¢

SAVE YOUR EXPOSURE DATA

Rub a sheet of white plastic or celluloid with fine sandpaper, then attach it to the side of your camera or case. Notes and exposures penciled on the sheet will resist rubbing off, but they can be removed easily with a damp cloth or sponge.

B BELL & HOWELL FILMOSOUND. Model 285. Professional quality reproduction. Has 55-minute sound capacity. Reverse and still picture projection. Shows 16mm. silent or sound films. Rapid rewind.

LENS—2-in. f/1.6 coated anastigmat. LAMP—1000 watt. REWIND—Motor driven. REEL CAP.—2000 ft. AMPLIFIER—10-watt output. Single microphone and phonograph jack. Frequency response, 50 to 7000 cycles. UL Approved. SPEAKER—Permanent magnet type. CURRENT—110-120 volts, 50 to 60 cycle, AC only. WEIGHT 34 lbs. SIZE OVERALL—about 17½x10x14¾ in. ACCESSORIES—Exciter lamp, oil, fuses, cleaning brush, 40-ft. speaker cord, 400-ft. take-up reel, spring belt, threading chart, inst. No Credit Charge. *Express Prepaid*.

67 HN 956 F—Projector only; 6-in. speaker on detachable baffle 449.95
 67 HN 957 F—Two case unit. Projector and 12-inch speaker...529.95
 67 HN 958 F—12-in. speaker only. Use with above for larger areas. .97.00

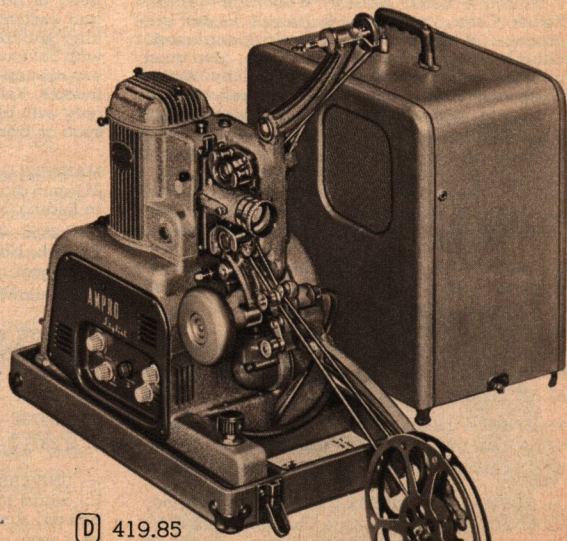
C KODAK PAGEANT SOUND PROJECTOR for 16mm. sound and silent movies. Shows full 55-minute sound program without interruption. Portable, with speaker in top of case. Lightweight construction, tan metallic wrinkle surface; case brown Kodakur covering.

LENS—2-in. f/1.6 luminized Kodak Projection Ektanon. PROJECTION LAMP—750-watts. 1000-watt lamp optional on AC. REWIND—motor driven. REEL CAPACITY—2000-ft. AMPLIFIER AC—7-watt output. Frequency response from 50 to 7000 cycles U.L. Approved. SPEAKER—full range, high efficiency 8-in. permanent magnet CURRENT—105-125 volts on AC or DC. FULL VENTILATION—on both sound and silent speeds. WEIGHT—32½ pounds. SIZE OVERALL—about 15¾x13x10¼ in. ACCESSORIES—35-ft. speaker cord, 1600-ft. takeup reel. No Credit Charge. *Express Prepaid*. 67 HN 950 RT—Only \$37.50 Down 375.00

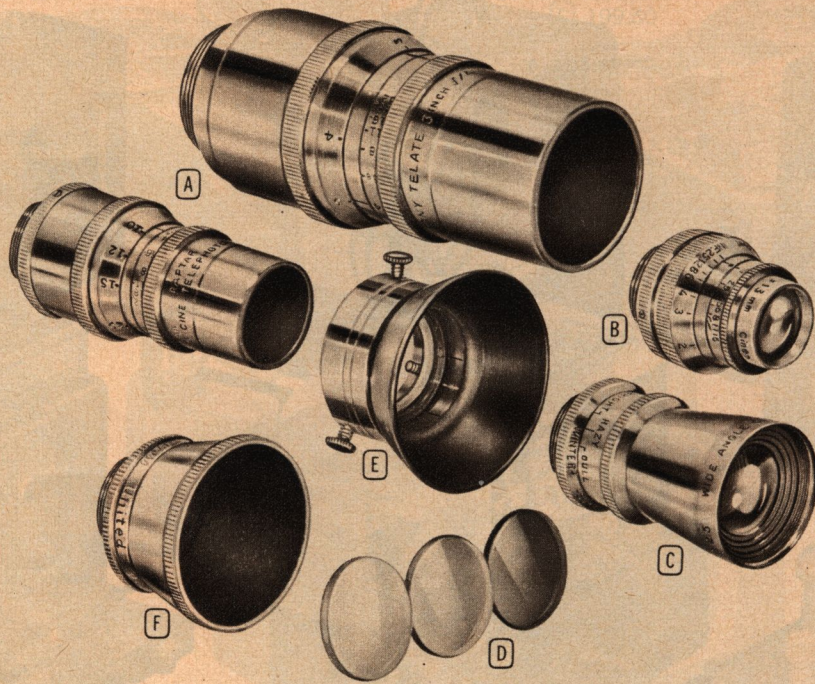
D AMPRO "STYLIST" PROJECTOR. A truly portable 16mm projector because it is so compact and lightweight—only 29 lbs. This lightness comes from the wide use of reinforced magnesium, aluminum, and plastic materials. The machine itself sets up quickly and easily, and its sound fidelity is excellent. It shows up to 55 minutes of uninterrupted sound pictures and more than 80 minutes of silent projection.

LENS—2-in. f/1.6 coated anastigmat. PROJECTION LAMP—750-watt—will take 1000-watt lamp for even greater brilliance. REWIND—motor-driven. REEL CAPACITY—2000 ft. AMPLIFIER—4-watt output. Microphone and phonograph jack. Frequency response from 50 to 7000 cycles. U.L. Approved. SPEAKER—8-in. permanent magnet type. CURRENT—105-125 volts, 25-60 cycles AC or DC. WEIGHT—only 29 lbs. SIZE—17½x16x9⅞ in. ACCESSORIES—Ampro oil, cleaning brush, fuses, 10-ft. line cord, 40-ft. speaker cable, 400-ft. takeup reel, instructions. Bronze finish.

67 HN 994 RT—No Credit Charge. \$42 Down. *Express Prepaid*.....419.85



D 419.85



Lenses and Filters for 8 and 16mm.

Accessory movie lenses provide better, more interesting movies with a wider range of subject material, and are easily attached to any camera with an interchangeable lens mount.

WIDE ANGLE LENSES have a focal length shorter than the normal lens to provide about twice the picture area. Wide angle lenses are usually of the fixed focus type because their short focal length gives an extremely wide depth of field.

NORMAL LENSES have the same focal length as the lens that comes on your camera. If yours is a fixed focus lens, however, you may want a focusing type which permits you to take sharp pictures as close as 2 or 3 feet from the camera.

TELEPHOTO LENSES have a longer focal length than normal lenses and show a smaller picture area, but give larger sized images without moving close to the subject. A 3-power telephoto shows an image 3 times as large as a normal lens.

LENS SPEED. For explanation see Page 98.

LENS QUALITY. All lenses listed are coated, anastigmat lenses of high optical quality, and will take sharp, clear movies. Generally, the more expensive lenses are designed to give more detailed images for large screen projection.

Bausch & Lomb Animar, Wollensak Raptor, Kodak Ektar, and Bell & Howell lenses are products of fine American optical engineers. Elitar lenses are imported from Japan, give good pictures at lowest expense. Backed by Wards Guarantee of Satisfaction or money refunded.

The following lenses fit all 8 and 16mm cameras with standard threaded lens mounts. This includes all cameras Wards sell except Bell & Howell, 16mm Kodak, and 8mm Magazine Kodak. For lenses with mount to fit these cameras, see special listings at right and on camera pages. All lenses are shipped *Postpaid*. No Credit Charge.

TELEPHOTO LENSES (3x) for 8mm Cameras.

A 67 HN 1403 L—Elitar *f*/3.2 fixed focus...\$10.95
 67 HN 1402 L—Elitar *f*/3.2 focusing..... 15.95
 67 HN 1404 L—Elitar *f*/2.5 focusing..... 23.95
 67 HN 1405 L—Elitar *f*/1.9 focusing..... 34.95
 67 HN 1415 LT—Wollensak *f*/3.5 focusing. 39.95
 67 HN 1425 LT—B & L *f*/3.5 focusing..... 55.00

TELEPHOTO LENSES (3x) for 16mm Cameras.

67 HN 1407 LT—Elitar *f*/2.5 focusing.....\$34.95
 67 HN 1426 LT—B & L *f*/3.5 focusing..... 80.00

NORMAL WOLLENSAK LENSES *f*/1.9 Focusing.

B 67 HN 1416 LT—For 8mm Cameras.....\$42.50
 67 HN 1417 LT—For 16mm Cameras..... 56.50

WIDE ANGLE LENSES for 8mm Cameras.

C 67 HN 1406 L—Elitar 7mm, *f*/2.5 fixed focus lens. Only \$2.50 Down on Terms..... \$24.95
 67 HN 1401 L—Elitar 6.5mm *f*/1.9 fixed focus 35.50
 67 HN 1418 LT—Wollensak 6.5mm *f*/2.5 fixed 42.50
 67 HN 1427 LT—B & L 7.5mm *f*/2.5 fixed focus 56.00

WIDE ANGLE LENSES for 16mm Cameras.

67HN1408 LT—Elitar 17mm *f*/2.7 focusing \$29.95
 67HN1419LT—Wollensak 17mm *f*/2.7 focusing 52.50

BELL & HOWELL LENSES in special mounts for 8mm reel-loading cameras. 10% Down on Terms.

67 HN 1429 LT—Wide angle 6.5mm *f*/1.9 fixed focus for B & H Model 134-V and 134-W.....\$79.95
 67 HN 1432 LT—Telephoto (3X) *f*/3.5 focusing Telate 3-power for B & H Mod. 134-V and 134-W\$53.00
 Movie Cameras are listed on Pages 49, 51, 54, 55.

SUNSHADES AND FILTERS FOR YOUR MOVIE CAMERA

D Filters will improve the quality of your movies, (see "Performing Magic with Filters", Pg. 64). The Kodachrome Type A permits using indoor type Kodachrome outdoors which eliminates the need of having two types of Kodachrome film and switching from one to the other. The haze filter subdues overcast or haze in distant shots with outdoor color film. The No. 80 blue filter is for emergency use, permits using outdoor color film indoors. Yellow, green, and red filters are used only with black and white film for special effects such as bringing out clouds in the sky.

MANSFIELD FILTER KITS. Polished glass filters, 2 1/2mm diameter, to fit lens shades on this page. In folding case. Ship. wt. 4 oz.

67 H 2369—Color film kit. One each: Kodachrome Type A, Haze, No. 80 (blue).\$1.98
 67 H 2370—Black and white film kit. One each: K 2 (yellow), XI (green), 25A (red).....\$1.98

EDNALITE SERIES I FILTERS. 2 1/2mm diameter, best quality solid optical glass filters—both surfaces hard coated. Fit lens shades on this page.

67 H 2372 T—Type A. Ship. wt. 4 oz.....\$1.49
 67 H 2373 T—Haze. Ship. wt. 4 oz..... 1.49
 67 H 2371 T—No. 80 (blue). Ship. wt. 4 oz... 1.49

E UNIVERSAL LENS SHADE. Knurled set screws adjust to fit any lens mount up to 1-inch diameter. Accepts 2 1/2mm or Series IV filters.

67 H 2328—Shipping weight 5 oz.....\$1.58

KODAK EKTAR LENSES. Coated anastigmats in focusing mounts. Fit directly on Kodak Royal 16mm. Require adapter below for use on other cameras. No Credit Charge these items. *Postpaid*.

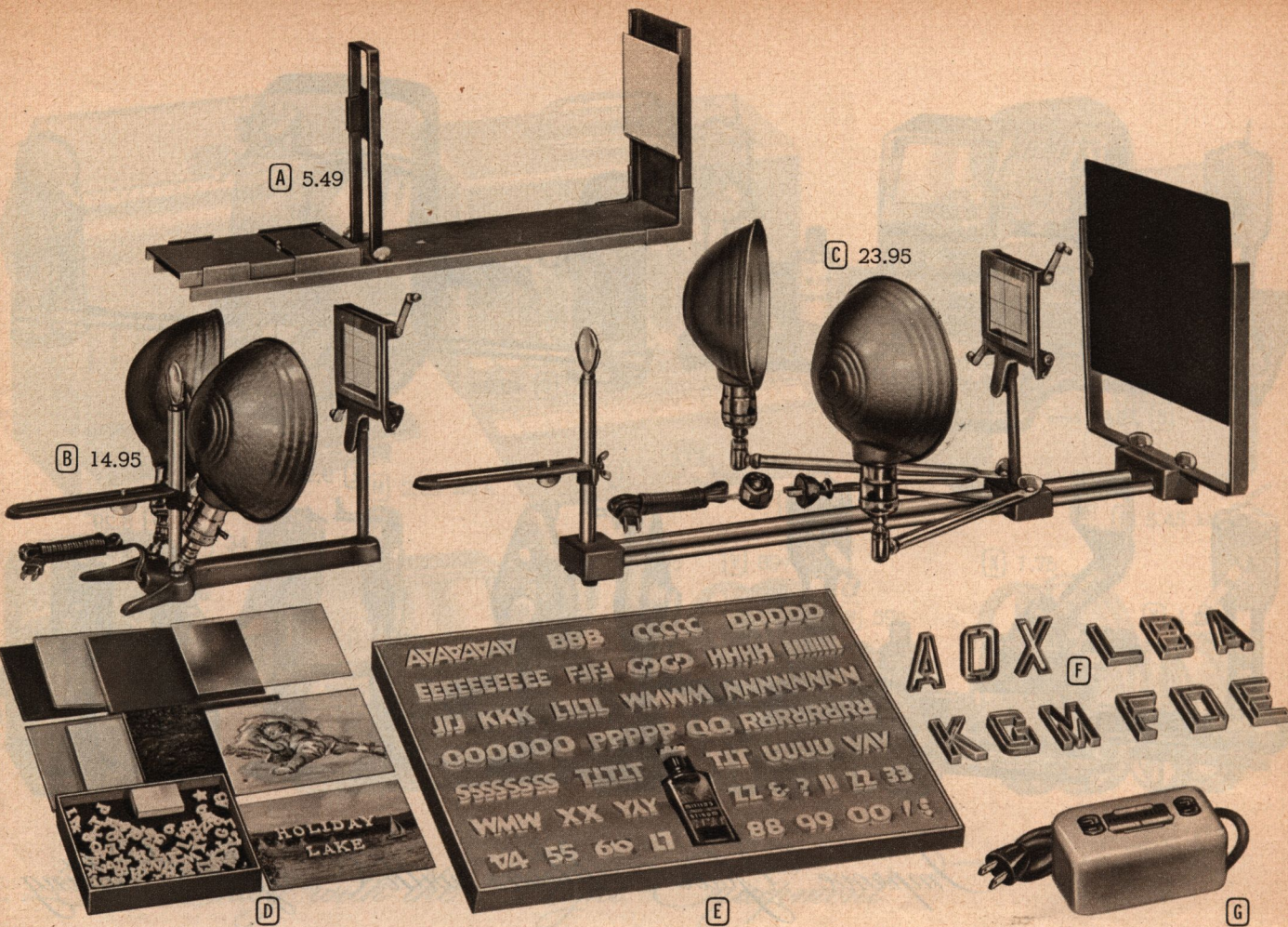
67 HN 1420 LT—Wide angle 15mm *f*/2.5 for 16mm cameras. Only \$8.50 Down on Terms....\$82.50
 67 HN 1421 LT—Telephoto 63mm *f*/2.0 5x for 8mm cameras, 2 1/2x for 16mm cameras..\$115.40
 67 HN 1422 LT—Telephoto 152mm *f*/4.0 12x for 8mm cameras, 6x for 16mm cameras....\$146.60

ADAPTERS FOR KODAK LENSES. Postpaid.

67 HN 1444 LT—For all magazine Kodaks..\$9.75
 67 HN 1445 LT—For 16mm cameras with standard threaded lens mounts..... \$9.75
 67 HN 1446 LT—For 8mm cameras with standard threaded lens mounts..... \$9.75

F EDNALITE SUNSHADES. Three-piece precision sunshade filter holders. Machined from aluminum, anodized matte black to eliminate reflections. Hold filters listed at left. Shipping weight each, 4 oz.

67 H 2282 T—Fits Wollensak-Velostigmat 1/2-in. *f*/1.9, *f*/2.5, *f*/2.7, *f*/3.5; Nikkor-Revere 1/2-inch *f*/1.9; and Bell & Howell Ansix 1-inch *f*/2.5 lenses.....\$2.29
 67 H 2395 T—Fits Wollensak Cine Raptor 1/2-in. *f*/1.9 fixed focus, 1/2-in. *f*/2.5; Elgeet *f*/1.9; and Somco-Revere 1/2-in. *f*/2.5 lenses.....\$2.29
 67 H 2396 T—Fits Wollensak Cine Raptor 1/2-in. *f*/2.5 fixed focus, *f*/1.9 focusing; and Bell & Howell 1/2-in. Comat *f*/2.5 lenses.....\$2.29
 67 H 2404 T—Fits Bausch & Lomb Animar 1/2-inch *f*/2.8 lenses.....\$2.29
 67 H 2398 T—Fits Bell & Howell 10mm *f*/2.5 lens on 220 camera.....\$2.29
 67 H 2391 T—Fits Bell & Howell Super Comat 1/2-inch *f*/1.9, and Kodak Brownie Ektanon *f*/2.7 lenses.....\$2.29
 67 H 2390 T—Fits Bell & Howell 1-inch Super Comat *f*/1.9, Comat *f*/2.5, and Lumax *f*/1.9 lenses.....\$2.29
 67 H 2392 T—Fits Bausch & Lomb 1-inch Animar *f*/1.5, *f*/1.9 lenses and 1-inch *f*/1.9 Ektar lens on Kodak Royal 16.....\$2.29
 67 H 2393 T—Fits 1 1/2-in. *f*/1.9 focusing Ektanon lens on Kodak Magazine 8.....\$2.29



Titlers that Add the "Hollywood" Touch

A MANSFIELD MOVIE TITLER. Wards lowest priced titler, adjusts for all 8 and 16mm cameras. Easel takes 4x5-in. cards on which you can write or type; or paste on miniature letters like (D) at right. With supplementary titling lens for close-up focusing, and complete instructions.
67 H 1348—Ship. wt. 4 lbs. 8 oz. \$5.49

B STANDARD TITLER WITH REFLECTORS. Adjustable reflectors provide brilliant, even illumination of titling easel. For both 8 and 16mm cameras. Easier to adjust than (A) above, because supplementary titling lens is factory-set to align with easel. Takes 3 1/4 x 4 1/4-inch cards for printing or typing, or you can paste on miniature letters like (D) at right. Crank attachment for scroll or rolling titles. Plastic guide assures correct centering of title. Complete with two 5/4-inch swivel type reflectors, cord, socket push switches, and instructions. (Order No. 1 Photoflood lamps separately from Page 28.)
67 H 1276—Shipping weight 5 lbs. \$14.95
67 H 1277—Above titler without reflectors. Shipping weight 4 lbs. \$8.95

C PREMIER DUAL TITLER WITH LIGHTS. Large size titler for producing professional quality titles of all types. Use with both 8 and 16mm cameras. Two easels provide various effects—one is 3 1/4 x 4 1/4 inches for both scroll type moving titles, and printed or typewritten cards; the other is 8 1/4 x 10 inches for large cut-out letters like (E) and (F) at right—pivots for making flip-flops. There are two supplementary lenses for closeup focusing—one for each titling easel. Two matching reflectors may be adjusted for both large and small screens, or may be used for back lighting the small frame. Order No. 1 Photoflood bulbs separately from Page 28. Crinkle enamel finish.
67 H 1345—Ship. wt. 6 lbs. 4 oz. \$23.95
67 H 1346—Above titler without reflectors. Shipping weight 5 lbs. \$19.75

D HOLLYWOOD ADHESIVE LETTER SET. Miniature 7/16-in., white, all-metal block letters for use with titlers at left. Adhesive sticks them to any horizontal or vertical surface—removable for repeated use. Set contains 150 characters, all capitals, with assorted, colored novelty backgrounds. With cake of adhesive.
67 H 1241—Shipping weight 1 lb. \$4.59

E MITTEN'S TITLER SETS. Three-dimensional. With side lighting they cast a shadow for special effects. Special adhesive included, permits sticking letters to any surface, allows easy removal—use them over and over. Semi-porcelain 3/4-in. letters—large enough to be photographed with normal lens without using titler. White surfaces can be tinted.
67 H 1223—246 characters—Capitals and lower case. Shipping weight 5 lbs. \$8.95
67 H 1222—150 characters — All Capitals. Shipping weight 3 lbs. \$6.95

TRICK TIPS FOR YOUR HOME MOVIES

ANIMATION. To make inanimate objects perform for you, just set your camera on a tripod, and photograph them a frame or two at a time, moving them slightly between exposures. If your camera has a single frame release, it's easy—if not, let the camera nearly run down and tap release button quickly for each exposure.

GHOSTS. This is a very popular trick, and very startling. First, make a normal exposure of the scene in which the ghost is to appear. Then, rewind the film and photograph the "ghost" against a dark background.

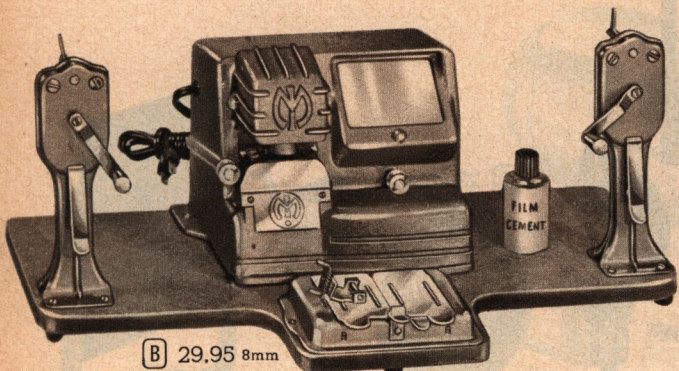
FADES. Fadeouts without a fader are easy indoors—just block off your light slowly with cardboard dimmers. To fade in, reverse the procedure. A similar effect can be achieved outdoors by turning the camera lens in or out of focus. (For professional quality, see (G) above.)

F PLASTIC LETTERS AND NUMERALS. You can lay them down or stand them up. Sturdy characters molded of bright, photogenic red plastic are 1 1/8 in. high — large enough to use without titler—thick enough to cast a three-dimension effect shadow. There are four complete sets of alphabets, four sets of numbers from 0 through 9, and an extra set of four each of A, E, I, and S—160 characters in all.
67 H 1347—Ship. wt. 1 lb. 5 oz. \$2.75

G PROJECTOMATIC. Turn projector lamp switch on and Projectomatic automatically turns room light off—turn projector lamp switch off and room light automatically goes on. No more groping in the dark for light switches. Steel case, rubber power cord, plug. Instr. Ship. wt. 1 1/2 lbs.
67 H 1290 T—For projectors with 300, 400, 500, or 750 watt lamp. 110-120-volt, 60-cycle AC. . \$7.95

MAGIC-PLASTIC TITLE SET (shown below). A new and easy method of titling—just press washable plastic letters on 13x18-in. plastic tiling frame or any shiny, smooth surface, and they stick without glue, paste or pins. Pull off and use again and again. 410 one-inch letters and designs in 3 colors—red, yellow, and white. Titling frame takes 5 interchangeable backgrounds—white, black, green, blue, or clear transparent for shooting live background scenes. With compartmented box.
67 H 1279—Ship. wt. 3 lbs. \$5.49

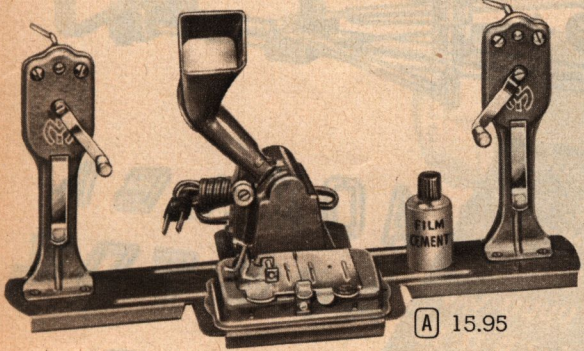




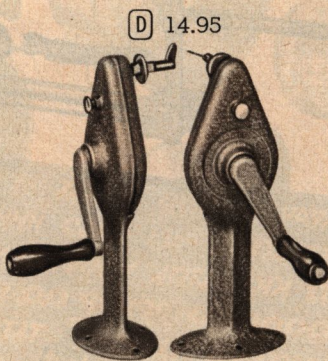
B 29.95 8mm



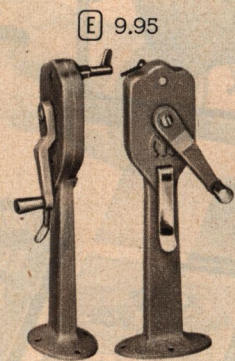
C 49.95



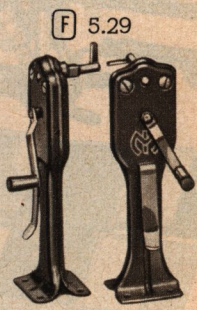
A 15.95



D 14.95



E 9.95



F 5.29

Improve Your Movies with Careful Editing

A MANSFIELD 8MM NON-ACTION EDITING OUTFIT. Low priced model that shows movies frame by frame—lets you edit and splice quickly, conveniently. Consists of Viewer (U), Rewinds (F), automatic splicer (H), and film cement on 18x8 1/4-in. steel base. Extra lamp sold below.

67 H 1341—Instructions. Ship. wt. 8 lbs. . . 15.95

MANSFIELD SPLICER AND REWIND OUTFIT. Same as above but without viewer. Pre-drilled base lets you add Viewer (U) later. With film cement.

67 H 1343—For 8 or 16mm. Ship. wt. 6 lbs. . 9.95

B MANSFIELD ACTION EDITING OUTFIT. A popular model action editor that's complete and convenient. Shows movies in full action. For fastest editing, splicing. Outfit consists of Viewer like (T) on opposite page, but without framing and focusing controls. Rewinds (F), automatic pressure bonding splicer (H) below, and film cement. On 19x10 1/2-inch base. Order extra lamp below at right. Ship. wt. 9 lbs.

67 H 1206 M—Complete 8mm Outfit. 29.95

67 H 1245 M—Complete 16mm Outfit. 32.95

C BAIA ACTION EDITING OUTFITS. Better quality action editor takes down and stores in case sold below. Shows movies in motion for quick, convenient editing and splicing. Brown crinkle outfit consists of Action Viewer (R) (on opposite page), one rewind geared for fast takeup; other is direct drive for smooth editing. (holds up to 800 ft. of film), automatic pressure bonding splicer, film cement. Instructions. Order extra lamp below at right. Ship. wt. 11 lbs. \$5 Down on Terms.

67 H 1312 T—For 8mm film. Cash 49.95

67 H 1313 T—For 16mm film. Cash 49.95

PLYWOOD CASE FOR BAIA EDITOR. For Baia action editors above. Size about 7 1/2 x 8 1/2 x 10 1/2 in.

67 H 1314 T—Ship. wt. 4 lbs. 6.45

D CRAIG MASTER REWINDS. Exceptional capacity—up to 2000-ft. 8 or 16mm reels. Adjustable brakes control your film at a constant speed—it won't race. Four to one ratio gear drive—cranks and reels turn in the same direction. Die-cast metal housing, brown crackle finish. Holes are drilled in bottom for mounting on a base. Height about 8 1/2 inches. Ship. wt. 3 lbs. 8 oz.

67 H 1229 T. Set of Two 14.95

E MANSFIELD MASTER REWINDS. Take up to 2000-foot reels of 8 or 16mm film. Adjustable tension brake maintains even speed. Three to one ratio gear drive—quiet, long wearing neoprene gears. Aluminum die-cast housing with gray crackle finish. Holes for mounting. 8 5/8 in. high.

67 H 1224—Ship. wt. 3 lbs. 8 oz. Set of Two. 9.95

F MANSFIELD SENIOR REWINDS. An excellent value. Take up to 800-foot reels of 8 and 16mm film. Four to one ratio gear drive—cranks turn in opposite direction from reels. Tension brakes maintain winding speed of the film, prevents overrunning. Stamped metal housing, holes drilled for easy mounting. About 7 in. high.

67 H 1205—Ship. wt. 2 lbs. Set of Two 5.29

G MANSFIELD JR. SPLICER. An economical splicer for 8 and 16mm film. Stud pins hold film in place. Scraper bar clips to splicer. Hinged cutter cuts film—pressure plates hold it while cement dries. With film cement. Mounted on 5 1/2 x 5 1/2-in. base. Instructions.

67 H 1244—Ship. wt. 1 lb. 10 oz. 2.49

H MANSFIELD AUTOMATIC GEM SPLICER. For 8 and 16mm film. Double-bladed scraper attached to splicer. When cement is applied, pressure bonding is done automatically. Release arm and splice is complete. Stainless steel film handling parts. Base about 3 1/2 x 5 in. Instructions.

67 H 1296—With cement. Ship. wt. 2 lbs. . . 4.95

J CRAIG MASTER SPLICER. For 8 and 16mm film. Strong, smooth splices in only four steps—no wetting is required. Once inserted, film is not touched until splice is completed. Accurate, built-in dry scraper. Pressure plates automatically trim film. Convenient bottle holder. Gray crackle finish metal base. Instructions.

67 H 1288—With cement. Ship. wt. 3 lbs. . . 9.95

K CINE-KODAK DUO SPLICER. A precision-built splicer for both 8 and 16mm film—at a budget price. Designed to make your splicing jobs quick and easy. Firm-holding double platens lock film for scraping and cementing. Comes in handy carton, complete with film cement, and water bottle.

67 HN 1275—Instructions. Postpaid. 9.25

L REVERE SPLICER. Splices both 8 and 16mm film in just five simple steps. Smooth, strong splices assured with almost completely automatic operation. One stroke of arm trims both ends of film, ready for scraping with attached scraper. Apply cement—overlapping of film and bonding are done automatically—release arm and splice is complete. Water container and bottle of cement are clamped to well in cast metal base.

67 HN 1243—Instructions. Postpaid. 16.50

FILM CEMENT (not shown). For firm movie film splices. 1-oz. bottle with brush.

67 H 1211—Shipping weight 6 oz. 19c

KODAK FILM CLEANER (not shown). For color or black and white film. 4-oz. bottle. Instructions.

67 H 4338—Shipping weight 8 oz. 79c

REPLACEMENT LAMPS for Baia and Mansfield 8 or 16mm editor viewers. Ship. wt. each 4 oz.

67 H 3160—30-watt. For Baia Editor (C) (R). . 55c

67 H 3161—30-watt. Mansfield Editor (B) (T). 50c

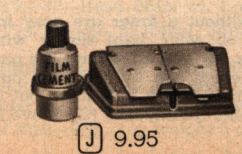
67 H 3162—6-watt. Mans. non-action (A) (U). 32c



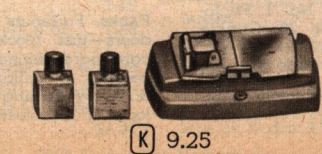
G 2.49



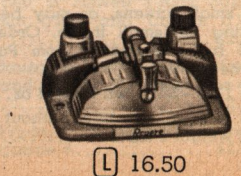
H 4.95



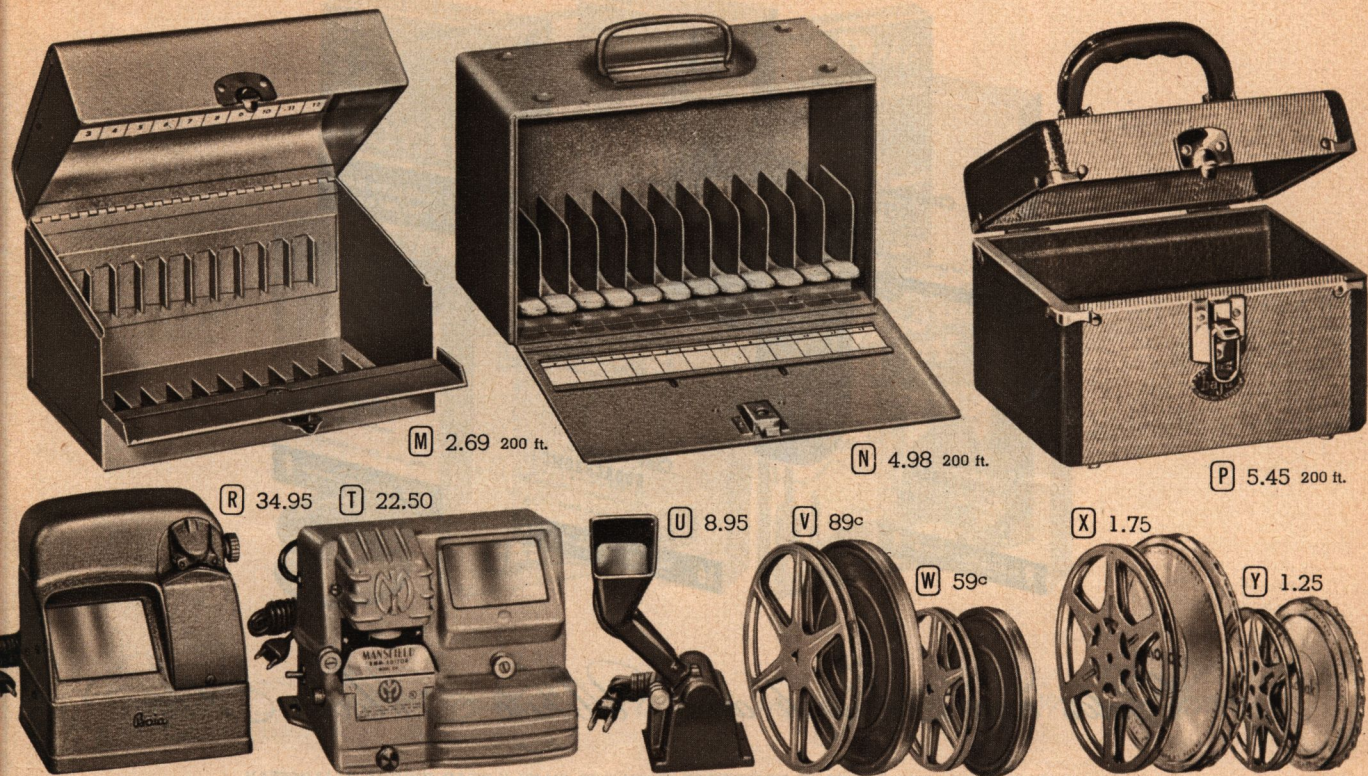
J 9.95



K 9.25



L 16.50



M 2.69 200 ft.

N 4.98 200 ft.

P 5.45 200 ft.

R 34.95 **T** 22.50

U 8.95

V 89c

X 1.75

W 59c

Y 1.25

... It's Easy with the Right Equipment

M MOVIE FILM STORAGE CASE. For protecting, storing, and carrying 8mm. or 16mm. film. Hinged top swings back, front hinges down for easy access. Replaceable index card permits easy location of reels. All steel construction yet light in weight. Welded individual partitions. Gray Hammerloid (enamel) finish. Metal carrying handle and sturdy snap lock.

67 H 1215—For twelve 8mm. 200-ft. reels, cans. Ship. wt. 3 lbs. 2.69
 67 H 1213—For twelve 8mm. 400-ft. reels, cans. Ship. wt. 3 lbs. 8 oz. ... 3.39
 67 H 1216—For twelve 16mm. 400-ft. reels, cans. Ship. wt. 5 lbs. 4 oz. ... 3.79

N BRUMBERGER EJECTOR REEL CASE. For carrying and storing your movie reels—just press the index lever and selected reel rolls forward. Exterior and interior index cards. Case design permits compact stacking—drop front makes all reels readily accessible. Heavy steel construction. Rust-resistant. Gray crackle enamel finish. Metal handle, snap action lock.

67 H 1202—For twelve 8mm. 200-ft. reels. Ship. wt. 5 lbs. 4.98
 67 H 1203—For twelve 8mm. 300-ft. reels. Ship. wt. 6 lbs. 5.95
 67 H 1214—For twelve 8mm. 400-ft. reels. Ship. wt. 7 lbs. 5.95
 67 H 1204—For nine 16mm. 400-ft. reels. Ship. wt. 7 lbs. 5.95

P BAJA REEL CASES. Handsome, two-tone tweed covered, plywood cases for carrying and storing 8mm or 16mm film. Sponge rubber lining on back and front holds reels firmly so they won't rattle. Top swings back for easy access to reels. Plywood case has snap lock, sturdy plastic handle. Long-wearing plastic impregnated fabric covering. Rubber feet to protect table tops.

67 H 1281 T—For twelve 200-ft. 8mm. reels. Ship. wt. 3 lbs. 8 oz. 5.45
 67 H 1282 T—For twenty-four 300-ft. 8mm. reels. Ship. wt. 5 lbs. 6.75
 67 H 1283 T—For eleven 8mm or seven 16mm 400-ft. reels. Wt. 4 lbs. ... 5.45

R BAIA ACTION EDITING VIEWER. Four sided prism gives you smoother picture—you see flickerless movie action much like your projector shows. Large 2½x3-inch viewing area. Easy to thread. With metal stylus to mark frame for splicing. With complete instructions. Complete with 110-volt bulb and cord. Order extra lamp opposite page. Shipped from Warehouse in Chicago, Dallas or New York. Pay postage from point nearest you.

67 H 1311K—For 8mm film. Ship. wt. 8 lbs. \$3.50 Down. Cash 34.95
 67 H 1310K—For 16mm film. Ship. wt. 8 lbs. \$3.50 Down. Cash 34.95

T MANSFIELD DE LUXE ACTION EDITING VIEWER. Shows full action, much like projector, on 2x2¼-inch screen. Focusing and framing knobs provide projection quality picture. Film runs from left to right. Easily threaded for fast editing. Gray crackle finish. With bulb, cord. (Order extra lamp from opp. pg.)

67 H 1297 M—For 8mm film. Shipping weight 3 lbs. 22.50
 67 H 1298 MT—For 16mm film. Shipping weight 3 lbs. 27.50

U MANSFIELD 8MM NON-ACTION EDITING VIEWER. Shows a bright 1½x1-inch image. Does not show action but is as efficient as other viewers. Merely run film through until you see area to splice, stop film, then cut. Smooth track assures minimum film wear. (Extra lamp opposite page.)

67 H 1207—With instructions, 110-volt bulb and cord. Ship. wt. 3 lbs. ... 8.95

V **W** WARDS STEEL REEL AND CAN SETS. Reels have special easy-threading slot in hub. Sturdy rib design retains alignment, resists bending. Accurately balanced to run evenly. Edges are smoothly finished. Blue enameled reels are rust-resistant. Dustproof cans have circular ridges for easy stacking. Cans are metallic blue finished. You save 10% extra on sets of 3; 15% extra on sets of 6.

Catalog No.	Size	Ship. wt. each	Each	3 for	6 for
(W) 67 H 1300	8mm 200 ft.	5 oz.	59c	\$1.59	\$2.98
67 H 1301	8mm 300 ft.	7 oz.	75c	1.98	3.79
(V) 67 H 1302	8mm 400 ft.	10 oz.	89c	2.39	4.49
67 H 1303	16mm 400 ft.	12 oz.	89c	2.39	4.49

STEEL 1600 FT. 16MM REEL AND CAN SET (not shown). Sturdily constructed with rust-resistant enameled finish.

67 H 1260—Ship. wt. each set, 5 lbs. 4 oz. 3 sets, \$13.79. Each set 4.95

X **Y** KODAK REEL AND CAN SETS. Positive protection for your films. Reels have springs on sides—not necessary to thread film in slot. Metal construction, gray enamel finish. Transparent plastic "cans" let you see how much film is on reel and allow you to see titles on film leader while films are stacked. Finger-grip, scalloped edge prevents can from rolling. Indentations make stacking easy. *Postpaid.*

(Y) 67 HN 1319—For 8mm film, 200 feet. Reel and can 1.25

(X) 67 HN 1320—For 8mm film, 400 feet. Reel and can 1.75

67 HN 1321—For 16mm film, 400 feet. Reel and can 1.75

GOOD EQUIPMENT MAKES EDITING EASY

Too many movie makers look on editing of their movies as a chore and bore all their friends with disconnected 100-foot reels of Junior, with apologies for bad shots. Actually, editing is as much fun as taking movies.

But to make it so you need good equipment:

1. A VIEWER. The best ones project each frame on a small, brilliant viewing screen as the film is drawn through, just the way your projector shows them except that you can stop instantly at any frame. Less expensive ones have no shutter, you see the pictures when you stop the film or run it slowly.
2. A SPLICER. The one you may have received with your projector is okay for repairing occasional breaks but is too slow for real editing. A good one cuts the film square, zips off the emulsion from one end easily, then flips the two ends together for cementing with the throw of a lever.
3. A PAIR OF REWINDS. Used to run the film back and forth from one reel to another to locate the part you want.

All three of the above, mounted on a single base, become a complete editor ready to transform your footage into well-edited movies.

Here is a suggestion as to how you can make a scenario out of your films. If you have a lot of vacation footage, look it over and list every scene, noting the subject, whether closeup, medium, or long shot, etc. Number each scene and add any comments that occur to you. Take an old egg carton and number each section. As the film is cut, drop it into the square numbered correspondingly. Now you can splice film in desired order.



Color and Black and White Movie Film

8 MM MOVIE FILM

REELS. Each holds 25 feet of double-eight film—makes 50 feet of film for projection. For standard reel loading eight mm cameras. For explanation and illustration of double-eight movie film, see Page 46. *Postpaid.*

- 67 HN 1801—Cine-Kodak Super X Pan Black and White... \$3.15
- 67 HN 1803—Kodachrome Outdoor Color. 3.75
- 67 HN 1804—Kodachrome Type A Indoor Color film... \$3.75

MAGAZINES. Each holds 25 feet of double-eight film—makes 50 feet for projection. For standard magazine loading eight mm cameras. For explanation and illustration of double-eight movie film see Page 46. *Postpd.*

- 67 HN 1805—Cine-Kodak Super X Pan Black and White... \$4.15
- 67 HN 1806—Kodachrome. Outdoor Color. 4.65
- 67 HN 1807—Kodachrome. Type A Indoor film. 4.65

PRICES OF MOVIE FILM on this page include processing and return postage from the developing laboratory. Do not send exposed movie film to Wards for processing.

16 MM MOVIE FILM

REELS. Each holds 100 feet of film. For reel loading 16 mm cameras only. For explanation and actual size illustration of 16 mm movie film see Page 46. *Postpaid.*

- 67 HN 1809—Cine-Kodak Super XX Pan Black and White film \$8.10
- 67 HN 1810—Cine-Kodak Super X Pan Black and white film \$8.10
- 67 HN 1811—Kodachrome Outdoor Type color film \$10.40
- 67 HN 1812—Kodachrome Type A. Indoor Color Film. 10.40
- 67 HN 1816—Anasco Color Daylight... 10.20

MAGAZINES. Each holds 50 feet of film. For magazine loading 16 mm cameras only. For explanation and actual size illustration of 16 mm movie film, see Page 46. *Postpaid.*

- 67 HN 1813—Cine-Kodak Super X Pan Black and White film \$6.10
- 67 HN 1814—Kodachrome Outdoor Type Color Film \$6.95
- 67 HN 1815—Kodachrome Type A Indoor Color film. 6.95
- 67 HN 1822—Anasco Color Daylight... 6.95

A.S.A. MOVIE FILM SPEEDS

The proper camera settings for correct exposure depend on two conditions—the amount of light reflected from the subject and the speed of the film that is being used.

A photoelectric exposure meter will most accurately measure the reflected light. The chart below shows the A.S.A. film Speed Index in which most meters are calibrated. Meters that use Weston or other systems include instructions for conversion to A.S.A.

The higher, or faster, the film speed, the more sensitive it is to light. Daylight value shows sensitivity to sunlight or natural light; Tungsten, to artificial light.

Film Type	Daylight	Tungsten
Super XX Pan	100	80
Super X Pan	40	32
Panchromatic	10	8
Kodachrome (Daylight)	10	4*
Kodachrome Type A	10#	16
Anasco Color (Daylight)	10	

#With Type A filter for daylight.
*With Kodachrome filter for photoflood.

SOME SIMPLE, EFFECTIVE TIPS FOR IMPROVING YOUR HOME MOVIES

Here are a few tricks for getting professional effects:

REVERSE ACTION. With this trick you can make all your action appear backwards, such as making a diver come feet first out of the water and land on the springboard. To do this, turn the camera upside down. Then, when you get your film back from processing, cut out that section, turn it end for end, and splice it back in.

Note: This works best with 16 mm cameras. With 8 mm, when you turn the film end for end, you'll have to turn it over also to make the sprocket holes line up. That will make it backwards from left to right, and you will have to re-focus the projector whenever you come to this part of your reel.

Dual Roles. By using a mask on your movie camera, you can allow one person to appear on the screen in two roles in the same scene. Sounds like a tough job but it isn't. Just remember that your camera must be mounted on a rock-steady base and must not be moved. When your camera is set up, slip a mask into a mask box on the lens so it covers half of the lens; you take only half of the set.

All the action that takes place in front of the unmasked half of the lens is recorded on the film. Next you rewind the film to the point where the first exposure begins. Put the mask on the opposite side of the lens and record the action that takes place on the other side of the set. This little camera trick can be very humorous as well as unusual—adds a bit of interesting action to any home movies.

MAGIC. A lot of magic can be performed just by stopping the camera in the right places. For instance, your actor comes in fully dressed. When you call "cut!" he holds his position, and you stop the camera. Take note of his position, mark the location of his feet, and have him change to a bathing suit. Then have him resume the same position and start shooting again. A trick like this can really liven up your home movies—and make them more fun to watch.

SIZES OF PROJECTED IMAGES FOR 8 AND 16 MM

Focal Length of Lens		Distance From Projector to Screen in Feet						
		8	10	12	16	20	25	35
8 mm	16 mm	Width of Projected Image in Feet						
.....	5/8 in.	4.8	6.0	7.2	9.6	12.0	....	....
.....	3/4 in.	4.0	5.0	6.0	8.0	10.0	12.5	....
.....	1 in.	3.0	3.8	4.5	6.0	7.5	9.3	13.1
.....	1 1/4 in.	2.0	2.5	3.0	4.0	5.0	6.3	8.8
.....	1 1/2 in.	1.5	1.8	2.3	3.0	3.8	4.7	6.5
.....	2 1/2 in.	1.2	1.5	1.8	2.3	3.0	3.8	5.3
.....	3 in.	... 1.3	1.5	2.0	2.5	3.1	4.3	...
.....	4 in.	... ..	1.1	1.5	1.8	2.3	3.3	...

Notice: Above Prices Include April 1, 1954 Excise Tax Reductions.



Enjoy Professional Movies in Your Own Home

NATIONALLY KNOWN CASTLE FILMS FOR HOME PROJECTION IN SILENT AND SOUND EDITIONS

Treat your family and friends to these professionally produced and edited films in the luxury of your own home. They're made in a variety of subjects to suit every taste. The "Headline" Editions are streamlined, tabloid versions of the "Complete" Editions, hence cost less, have shorter running times. Write Wards for the complete Castle Film catalog. Sound editions are mailed directly from New York; allow 5 extra days; all others mailed from Chicago, Baltimore or Denver—order from your nearest Wards Mail Order House.

All films mailed Postpaid. State Catalog Number and Film Title.
 67 HN 1058 T— 8mm, 50-ft. Headline Edition (About 3 minutes)..\$1.79
 67 HN 1059 T— 8mm, 160-ft. Complete Edition (About 10 minutes) 5.65
 67 HN 1060 T—16mm, 100-ft. Headline Edition (About 3 minutes) 2.79
 67 HN 1061 K—16mm, 320-ft. Complete Edition (About 10 minutes) 9.49
 67 HN 1062 K—16mm, 320-ft. Complete Sound Edition (About 10 minutes)19.95

WESTERNS

Famous stars bring the exciting action of the Old West right into your home.

TOM MIX

Terror Trail Guns of Vengeance

HOPALONG CASSIDY

Stagecoach War Hoppy Sets A Trap
 Battle of the Buttes Border Justice
 Rustlers' Valley Heart of the West
 Prairie Vengeance Bar 20 Rides Again
 Danger Trail Three on a Trail
 Trail Dust Law of the Trigger
 Riders of the Timberline

ANIMAL ANTICS

Real animal actors trained to act in amusing films. Adds variety and fun to your home movies which the whole family will enjoy.

Bruins Go Camping Chimp the Sailor
 Bruins on a Spree Chimp on the Farm
 Bruins in a Canoe Chimp the Cowboy
 Bruins Make Mischief Chimp the Fireman
 Chimp Steps Out Chimp the Aviator
 Carnival at the Zoo Circus at the Zoo
 Here Comes the Bruins Great Adven-
 Circus ture

ADVENTURE PARADE

Action films for both children and adults—adventure on the sea—untamed animals.

S.O.S. Iceberg Simba—Killer Lion
 Ten Fathoms Deep Killer Gorilla
 Flying Action Caged Fury
 Deep Sea Adventure Africa Untamed
 Man Against Mt. Everest

SPORT PARADE

Exciting sports action films that thrill boys and girls and grownups too.

Jr. Bronc Busters Spills and Thrills
 Snow Speed Jabs and Jolts
 Fishing Fun Living Dangerously
 Thrills on Wheels Throw that Bull
 Cowboy Stampede Fishing Thrills

WORLD PARADE

Beautiful views of well-known places and scenic wonders you've always wanted to see.

Yellowstone Glacier National Park
 Florida Holiday Banff and Lake Louise
 Grand Canyon California Picture Book
 America's Wonderland Yosemite

COMEDIES

ABBOTT AND COSTELLO—Your favorites.

Midget Car Maniacs Kitchen Mechanics
 High Flyers Oysters and Muscles
 Riot on Ice No Indians Please
 Knights of the Bath Fun on the Run
 Gob in a Mess Champs of the Chase

ANIMATED CARTOONS—Fun for everybody.

WOODY WOODPECKER

Solid Ivory Reckless Driver
 Well Oiled Who's Cooking Who
 Smoked Hams Bathing Buddies
 Coccoo Bird Woody Dines Out
 Giant Killer Dizzy Acrobat

ANDY PANDA

Wacky Weed Apple Andy
 Mousie Come Home

FAIRY TALE CARTOONS—Age old favorites. Taken from the childrens' story books.

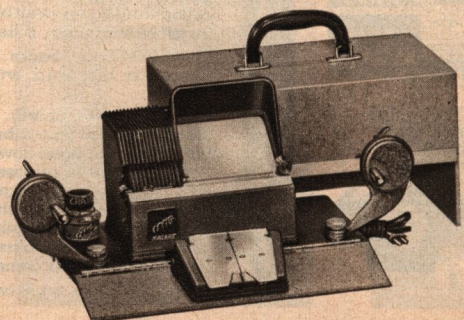
Jack and Aladdin's Lamp
 Beanstalk Little Black Sambo
 Simple Simon Mary's Little Lamb
 Puss in Boots Old Mother Hubbard
 Big Bad Wolf Sinbad the Sailor

NEW CRAIG PORTABLE MOVIE VIEWER AND EDITOR (shown at right). Compact design makes it easy to carry and set up anywhere. Handy enough to show your films to a few friends or to review films just returned from processing.

Large 3½ by 4½-inch viewing screen. 75-watt bulb provides brilliant image. Convection cooled. Straight line threading on smooth stainless steel tracks. Automatic mercury switch turns light on when film is locked in viewer. Prism type shutter gives smooth picture action. Special perforator marks edge of film at the exact place you wish to make splice.

Automatic splicer attaches to front for use and locks into cover for carrying. Forward rewind is geared 1 to 1, rear rewind 4 to 1. All metal die-cast construction, two-tone brown finish. 7½x7¾x13½-in. plywood case with brown textured finish, plastic handle. Act. wt. 10 lbs. For 110–120 volts AC or DC. With film cement, bulb, cord, instructions. Shipped from Warehouse in Chicago, St. Louis, Dallas, Pittsburgh, or Minneapolis. Pay postage from nearest. Allow 5 days. Ship. wt. 12 lbs. No Credit Charge.

67 H 1331 K—For 16mm film. \$8 Dn. \$79.50
 67 H 1330 K—For 8mm film. \$8 Dn. 79.50



Fine Pictures Deserve Fine Albums

A to E HOB-B-BOOK ALBUMS. Luxury, personalized, cloth bound albums to match the finest books in your library. Each volume includes a special order blank for your personal title printed in your own words—to go on the spine in 24-karat gold. Order this title after you receive your album, there's no extra charge.

The durable cloth binding is styled to accent your finest pictures and add beauty to any library. Compensators at the spine keep the book flat—even when filled with pictures. A protective sheath case of matching or contrasting color is included with each album. A matching "album" for stereo or 2x2-in. slides is listed separately on Page 35.

A BOOKBOUND HOB-B-BOOK. A big 10 by 12-inch, 80-page album with gold-tooled design on the spine and around an inset portion of the cover—where you mount your favorite 8x10-inch picture.

You get two titles; your personal 3-line caption and a standard title which you choose from; My Book, Our Book, Our Home, Army, Navy, Marine, Our Trip, Our Wedding, and Our Family. Each volume has 80 pages (40 leaves) with stubs to mount an additional ten double-weight or twenty single weight full page enlargements. Bound in two-tone Tan, Green, or Blue-gray. With maroon sheath case.

67 H 6043—Ship. wt. 4 lbs. *State color of binding wanted.* 5.39
67 H 6021—Ship. wt. 12 lbs. *State color wanted.* Three for 13.50

B POST BOUND HOB-B-BOOK. Large 10 by 12-inch photograph album with book style cloth covers. Gold tooling on spine and around inset portion of cover—designed to accept your favorite 8x10-in. picture. Post bound for loose leaf convenience.

Your personal 3-line title, plus 2-line volume number. 70 pages (35 leaves) are double thick at spine for added strength. Choice of Blue, Green or Maroon binding. *State color.*

67 H 6044—With matching color sheath case. Ship. wt. 3 lbs. 4.49

C BOOK BOUND HOB-B-BOOK. Standard 8 by 10-inch album with cloth binding to match your library books. Gold tooling on spine and cover. Inset portion of cover accepts your favorite 8x10-in. picture. Book bound leaves for neat appearance.

Your personal 3-line title, plus 1-line volume number. 80 pages (40 leaves) with stubs for mounting full page enlargements. Choice of Blue, Tan or Maroon binding with Maroon sheath case.

67 H 6041—Ship. wt. 3 lbs. *State binding color wanted.* 4.49

D BRIDES' BOOK. Luxury 10 by 12-inch edition with antique white washable Fabrikoid cover, gold-tooled design. Post-bound loose leaf style so pages can be added or removed.

Your personal 3-line title, plus 2-line date title 30 pages (15 leaves) plus 12 frame mounts for 8 by 10-inch enlargements. Special 10-page smooth paper section for recording names and happenings of the event. With matching white washable sheath case.

67 H 6013—Shipping weight 3 lbs. 12 oz. 8.39

E BABY'S BOOK. 9 by 11-inch album to keep the picture story of your baby. Washable white Fabrikoid covers and spine with attractive 3-color design. Slip-in frames inside front and back covers to hold your favorite 8x10-in. pictures of baby. Postbound loose leaf style pages allow for expansion or extra pages.

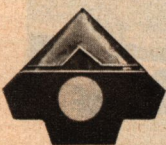
Your personal 3-line title, plus special 2-line birthday date title. 70 pages (35 leaves) are double thick at spine for added strength—allow expansion. 4-page smooth paper section at front for vital statistics. With matching white washable sheath case.

67 H 6023—Ship. wt. 3 lbs. 5.39



ENGLE DUO ART CORNERS (shown at left). For fast mounting—no additional adhesive is needed. Corner mount has cellophane cover over black corner for invisible mounting, if desired.

67 H 6406—Four packs (800 Art Corners in all). Ship. wt. 3 oz. 98¢



GLUE-PEN (shown at left). A neat way to glue pictures in your album. Built like a ball point pen, press down on point and "dot" of glue is released—more than 5000 "dots" in a cartridge. Permits temporary or permanent adhesion depending on pressure applied. Attractive 7-inch gray plastic barrel. With extra cartridge of rubber cement.

67 H 6402—Ship. wt. 8 oz. 2.69

F HOLSAN SNAPSHOT ALBUM. Large, easy-to-use album for mounting and showing your prints. Padded washable Fabrikoid cover comes in your choice of two colors, with silver trim. About 50 pages (25 leaves) of sturdy black album paper—large 10 by 13-inch size. Double thickness at binding for added strength—keeps book flat, even when filled with pictures. Hidden post binding is expandable—lets you add extra pages. Choice of Maroon or Green binding. *State color of binding wanted.*

67 H 6039—Shipping weight 2 lbs. 6 oz. 2.49

G HOLSAN TRANSPARENT ENVELOPE ALBUMS. These transparent acetate-page multi-ring binders are the ideal albums for your finest prints and enlargements—because transparent pages protect them. The padded cover is of washable Fabrikoid with embossed gold leaf design.

Heavy paper inserts in each page for mounting smaller prints. White albums have white paper inserts, all others have black. Each heavy-gauge acetate sheath holds two full page prints, or mounted smaller prints. Multi-rings reduce strain; hold pages securely. Six pages included with album; extra pages listed below. Capacity is 30 pages. *State color:* Maroon, White, or Green.

67 H 6045—8x10-inch album. Ship. wt. 2 lbs. 4 oz. 3.98
67 H 6046—5x7-inch album. Ship. wt. 1 lb. 2 oz. 2.98

EXTRA TRANSPARENT ACETATE PAGES. With white or black heavy paper inserts. *State color of inserts desired.*

67 H 6047—For 8x10-in. album. Ship. wt. 12 oz. 12 for 2.29
67 H 6048—For 5x7-in. album. Ship. wt. 7 oz. 12 for 1.49

H NEW KODAK DUPLEX PROTECTO ALBUM. A convenient new acetate envelope album. Divided into four separate sections—keeps your prints neat and orderly. Kodak acetate envelope pages provide maximum protection for your prints. The double plastic spiral binding prevents strain on pages and allows book to open flat. 48 pages hold 96 prints up to 3½ by 5-inch size, back to back. White inserts are adhesive coated for permanent mounting. Padded covers have attractive plastic imitation leather finish with gold stripe trim. Choice of brown or green binding. Size about 6 by 8 inches. *State color of binding wanted.*

67 H 6002—Shipping weight 1 lb. 8 oz. 7.49

J SPRINGFIELD ALBUM KIT. Display your prints in this fine large album. Everything you need for mounting your pictures is included. The large album has about 80 pages (40 leaves), 11 by 14 inches. Padded covers are washable Pyroxylin coated—look like leather. Spacers at string binding keep book flat. 300 black Engle Art Corners are included. Ship. wt. 3 lbs.

67 H 6000—*State color;* Dark Red or Dark Blue. 1.49

K SPRINGFIELD BABY BOOK. Economy-priced baby book for a complete picture record of your child's development. Padded covers have heavy, washable white Pyroxylin coated finish—looks like leather. String tied with tasseled white silk cord. About 60 7x10-in. pages (30 leaves) plus additional sheet of white paper for vital statistics. Double thick spacers at binding.

67 H 6024—Shipping weight 2 lbs. 97¢

L KODAK FOTOCRAFT FOLDERS. Give your pictures that finished look—ideal for presenting to friends or relatives. Professional type folders of heavy board. White patterned cover, inside face has heavy beveled opening. Inslip style provides easy mounting—no gluing. *State Catalog No. and size.*

Picture Size	Opening Size	Ship. Wt.	Vertical 67 H 6426	Horizontal 67 H 6427
4x 5 in.	3½x4½ in.	15 oz.	12 for \$1.69	12 for \$1.89
5x 7 in.	4½x6½ in.	1 lb. 8 oz.	12 for 2.19	12 for 2.49
8x10 in.	6½x9¼ in.	2 lbs. 12 oz.	12 for 3.49	.....
8x10 in.	9¾x7¾ in.	2 lbs. 14 oz.	.....	12 for 3.79

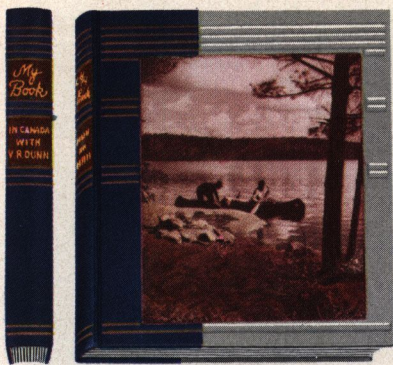
M N PICTURE FRAMES. Fine frames in wood and metal to display your best photographs. Each frame comes complete with glass, velvet covered easel back for standing on table, desk, or dresser, plus metal ring for hanging on wall.

(M) WIDE WOOD FRAME. Beautifully grained solid oak frame in choice of two sizes and two finishes. The broad 1½-inch frame is attractively designed to harmonize with both modern and traditional rooms. *State finish wanted:* natural oak or rich walnut.

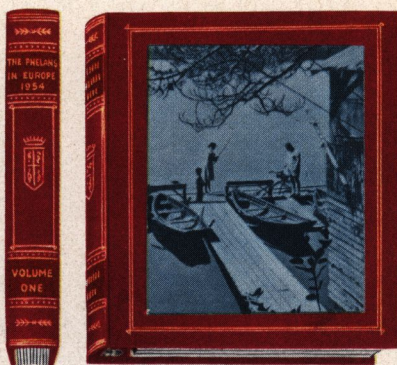
67 H 6101—For 8x10-inch picture. Ship. wt. 3 lbs. 3.19
67 H 6102—For 11x14-inch picture. Ship. wt. 4 lbs. 8 oz. 4.49

(N) GOLD PLATED METAL FRAME. For 5x7 or 8x10-inch pictures. ½-in. width metal frame is finished in 24-karat gold. Beaded edges with applied crest at corners. *State picture size wanted.*

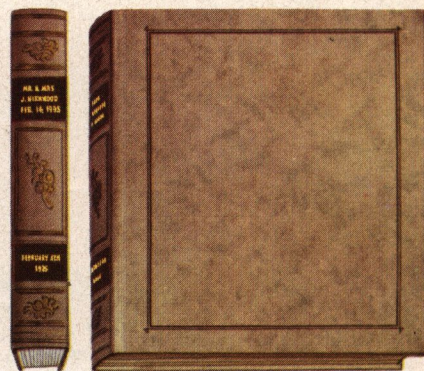
67 H 6103—Ship. wts. 1 lb. 2 oz. and 2 lbs. 8 oz. 2.49



A 5.39



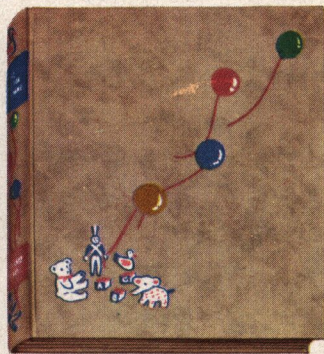
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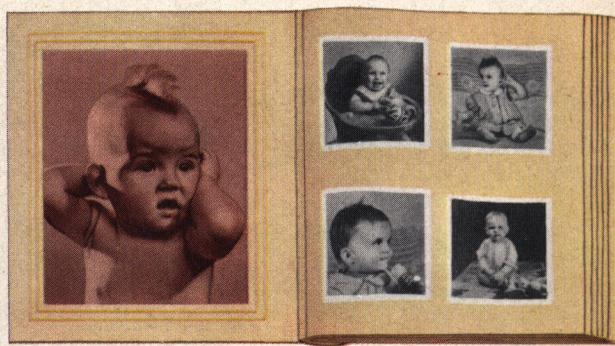
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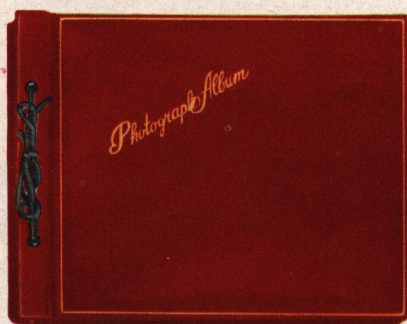
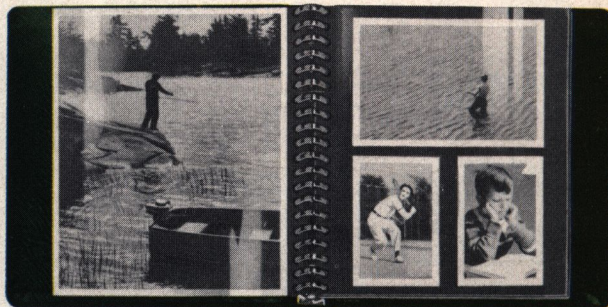
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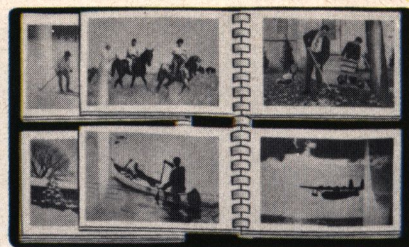
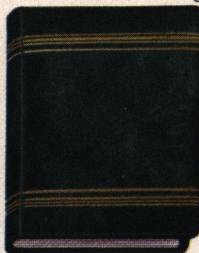
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G 3.98



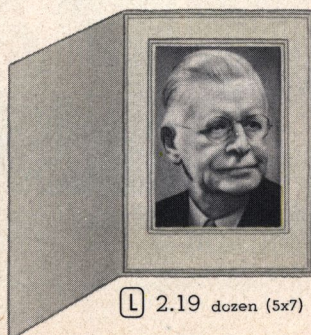
H 7.49



J 1.49



K 97c



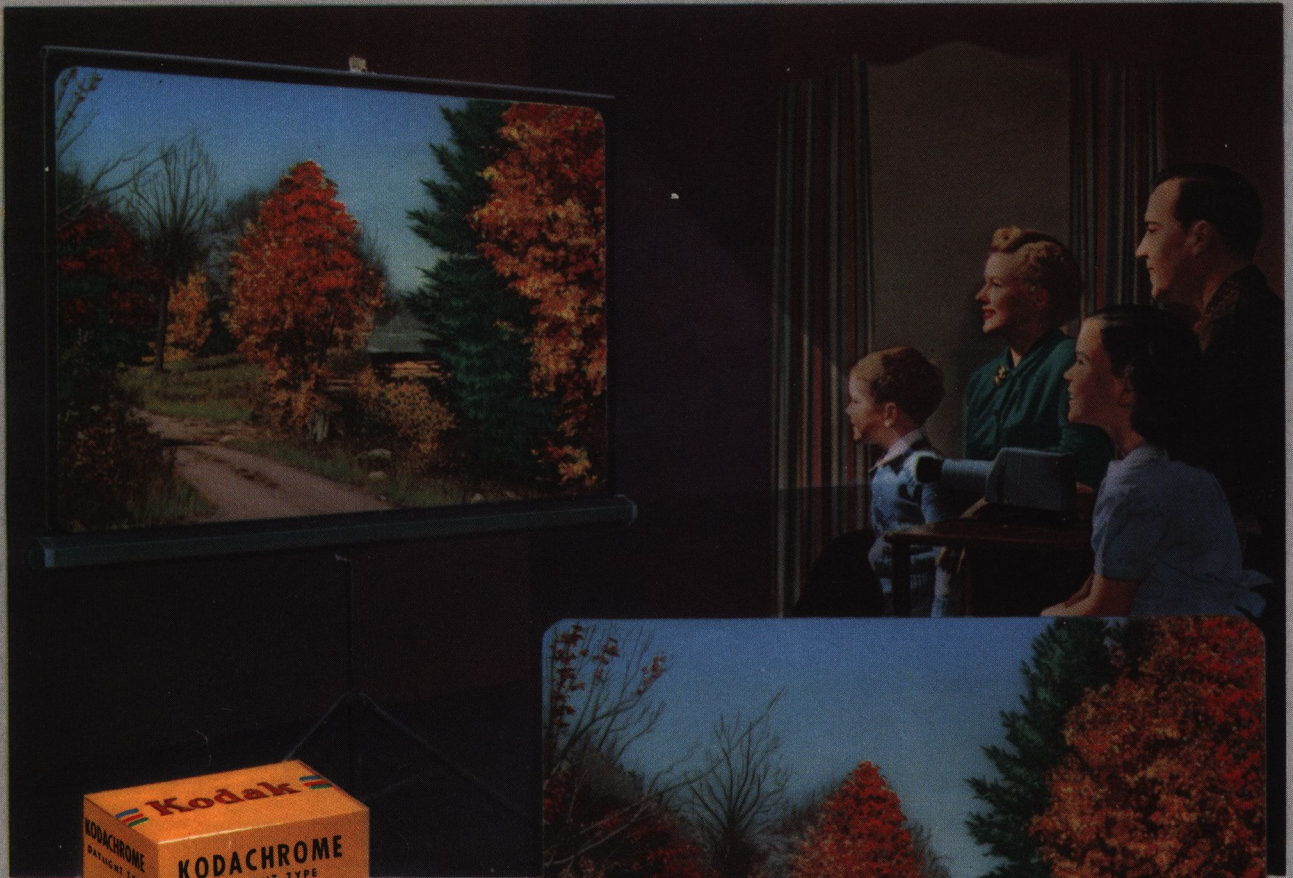
L 2.19 dozen (5x7)



M 3.19



N 2.49



Record it in Color!

WITH EASTMAN KODACHROME OR EKTACHROME

Kodachrome film can be used in any camera that will take 35mm or Bantam (828) film. For roll film, and cameras using sheet film, use Ektachrome. Ektachrome gives the same results. Both make positive transparencies which can be projected or printed.

In exposing this film however, remember that any color film has far less exposure "latitude" than black and white. That means that camera settings must be more accurate and there should be less contrast between the brightest highlight and the darkest shadow.

Soft lighting is best for color work, in order to record detail in highlight and shadow areas. Since actual color contrast is recorded, little brightness contrast is needed; so lighting should be fairly flat. A slightly hazy sky is an advantage for outdoor shots. If lighting is too contrasty use a white matte reflector or daylight blue flash bulbs (Page 28) to lighten shadows for daylight film.

Daylight Kodachrome and Ektachrome are for use with natural light—Type A Kodachrome and Type B Ektachrome with photoflood or photoflash. Type A film can also be used in daylight, but only if a Type A filter (Pg. 38) is used on the camera. A.S.A. Speed Index is: Daylight Type roll film—10; Type A film—16; Type A with Type A filter for daylight—10; Ektachrome Daylight—8; Type B—16.

KODACHROME MINIATURE CAMERA ROLL FILM. Prices include processing, return postage and mounting in Kodaslide mounts. *Postpaid.*
 67 HN 1547—K828 Bantam Daylight Kodachrome. 8 exposures. \$1.85
 67 HN 1548—K828 Bantam Type A Kodachrome. 8 exposures. 1.85
 67 HN 1552—K135 35 mm. Daylight Kodachrome. 20 exposures. 3.25
 67 HN 1553—K135 35 mm. Type A Kodachrome. 20 exposures. 3.25
 67 HN 1508—K135 35 mm. Daylight Kodachrome. 36 exposures. 4.95
 67 HN 1509—K135 35 mm. Type A Kodachrome. 36 exposures. 4.95
 67 HN 1519—Stereo Daylight Kodachrome. 20 stereo pairs. . . . 4.65
 67 HN 1602—Stereo Type A Kodachrome. 20 stereo pairs. . . . 4.65

EKTACHROME ROLL FILM. Prices do not include processing. See Page 102 for Pavele processing service. Makes eight 2 1/4 x 3 1/4-in. or twelve 2 1/4 x 2 1/4-inch transparencies.
 67 HN 1603—Size 120. Ektachrome 120 Daylight. *Postpaid.* . . . \$1.35
 67 HN 1617—Size 120. Ektachrome 120B Type B. *Postpaid.* . . . 1.35
 67 HN 1604—Size 620. Ektachrome 620 Daylight. *Postpaid.* . . . 1.35
 67 HN 1618—Size 620. Ektachrome 620B Type B. *Postpaid.* . . . 1.35

...OR EASTMAN KODACOLOR

COLOR PICTURES WITH ROLL FILM CAMERAS

Now, owners of ordinary roll film cameras—even box cameras—can obtain good color photographs, with brilliance and color fidelity, that cost less than Kodachrome prints. You get a color negative from which any number of prints can be made. Kodacolor negatives can't be projected—order Kodacolor prints at right. Kodacolor is used the same as black and white. No filters or attachments are required, although Type A can be used outdoors with a type A filter. A.S.A. Index for Daylight Kodacolor—25, for Type A—20.

KODACOLOR FILM FOR ROLL FILM CAMERAS. Gives negatives from which Kodacolor prints are made—see above. Standard 8-exposure rolls. Prices include processing to Kodacolor negatives and return postage. Send film to Wardway Photo Service, Park Ridge, Illinois—do not send to Wards Mail Order Houses. *Postpaid.*

Daylight Kodacolor—for outdoor use			Type A (Indoor) Kodacolor		
Cat. No.	Size	Price	Cat. No.	Size	Price
67 HN 1633	828	\$1.55	67 HN 1634	828	\$1.55
67 HN 1525	127	1.80	67 HN 1619	127	1.80
67 HN 1526	120	1.98	67 HN 1620	120	1.98
67 HN 1527	620	1.98	67 HN 1621	620	1.98
67 HN 1528	116	2.40	.....	.....	.....
67 HN 1529	616	2.40	.....	.....	.....

KODACOLOR NEGATIVES FROM COLOR SLIDES. Have negatives made from 35mm or Bantam Kodachrome or Ansco Color. Then order Kodacolor prints or enlargements at right. Send slide to Wardway Photo Service, Park Ridge, Ill.—an authorized Kodak dealer. Negative and original will be returned in about 3 weeks, *Postpaid.* Give your name and address and state "make Kodacolor negative."
KODACOLOR NEGATIVE. Size 2 1/4 x 3 1/4. Each 30c

KODACHROME DUPLICATES FROM STEREO TRANSPARENCIES. Unmounted full color copies of your stereo pairs. Send to Wardway Photo Service, Park Ridge, Ill. Returned in about 10 days, *Postpaid.*

STEREO DUPLICATES. Minimum order \$1.00. Per pair 60c

EKTACHROME CUT FILM: Prices do not include processing. See Page 102 for Pavele processing service. *Postpaid.*

67 HN 1570 T—Daylight Type Ektachrome. 2 1/4 x 3 1/4. 10 sheets for \$3.95
 67 HN 1571 T—Type B Ektachrome. 2 1/4 x 3 1/4. 10 sheets for 3.95
 67 HN 1572 T—Daylight Type Ektachrome. 3 1/4 x 4 1/4. 10 sheets for 5.63
 67 HN 1573 T—Type B Ektachrome. 3 1/4 x 4 1/4. 10 sheets for 5.63
 67 HN 1574 T—Daylight Type Ektachrome. 4x5. 10 sheets for 8.09
 67 HN 1599 T—Type B Ektachrome. 4x5. 10 sheets for 8.09

SELECTING TRANSPARENCIES FOR KODACHROME PRINTS. The best way to tell whether a transparency will make a good Kodachrome print is to view it by light reflected from a white paper. Lay the paper on a table and light it well by tungsten light in a reflector placed about a foot above the paper. Now hold the transparency at an angle near the paper so it can be viewed by reflected light. If attractive when viewed in this manner, it can be expected to produce attractive prints. The transparency must be sharp. Check projected image closely.

KODACHROME PRINTS. Full color, glossy enlargements on acetate base. Made from split 35mm, 35mm, Bantam, Stereo, Kodachrome or Ansco color transparencies in ready mounts or 2x2-in. glass slides. Also 3x 4 3/8, 5x7, and 8x10-in. prints from Kodachrome, Ektachrome, or Ansco color roll film or sheet film up to 4x5. Unmounted—for mounts see Pg. 37. Send to Wardway Photo Service, Park Ridge, Ill.—authorized Kodak dealer. Do not send to Wards Mail Order Houses. Returned *Postpaid* in about 3 weeks. State size and number wanted. Minimum charge per order \$1.00.

Print Size	From std. 35mm and Bantam Slides	From std. roll or sheet film up to 4x5, and half-frame 35mm slides	From std. frame Stereo slides (Realist, Revere, Photrix)
2 1/4 x 3 1/4	50c	...	....
3 x 4 3/8	75c	85c	....
3 x 3 3/8	...	.....	75c
5 x 7	\$1.75	\$2.25	\$2.25
8 x 10	4.00	5.00	5.00

FOR BLACK AND WHITE PRINTS FROM COLOR SLIDES by the Diaversal process, see Page 88—shows you how to make your own.

KODACOLOR PRINTS FROM KODACOLOR NEGATIVES. Rich color prints on paper—made to a standard width of 2 7/8 inches; length depends on proportion of negative size—see table below. Send exposed roll for "Process and Print" service, or negatives for "Prints Only" service, to Wardway Photo Service, Park Ridge, Illinois—an authorized Kodak dealer. Do not send to Ward Mail Order Houses. Prints will be made from each negative of suitable quality when sending rolls marked "Process and Print." Protect negatives for mailing. Be sure to include your name and address, and state number of prints wanted from each negative. Kodacolor prints and negatives returned to you *Postpaid* in about 3 weeks. Minimum charge per order \$1.00.

KODACOLOR PRINTS. From any size Kodacolor negative. Each 32c
Kodacolor Negative and Print Sizes in Inches.

Roll Size	Neg. Size	Print Size	Roll Size	Neg. Size	Print Size
127	1 5/8 x 2 1/2	2 7/8 x 4 1/2	620	2 1/4 x 3 1/4	2 7/8 x 4 3/8
127	1 5/8 x 1 5/8	2 7/8 x 2 7/8	120 or 620	2 1/4 x 2 1/4	2 7/8 x 2 7/8
127	1 9/16 x 1 3/16	2 7/8 x 3 3/16	120 or 620	2 1/4 x 1 5/8	2 7/8 x 4
120	2 1/4 x 2 1/2	2 7/8 x 3 3/16	116 or 616	2 1/2 x 4 1/4	2 7/8 x 5
120	2 1/4 x 3 1/4	2 7/8 x 4 3/8	616	2 1/2 x 2 1/2	2 7/8 x 3 3/8

NEW KODACOLOR ENLARGEMENTS. Now you can have enlargements made from Kodacolor negatives too. This service gives the same rich-color paper prints as above, but in enlarged sizes with 1/4-inch white margins. Enlargement will be made from the biggest area of your negative that can be printed in the proportions of the size you order. If it is impossible to include all of the principal subject in this proportion enlargement will be made in next nearest size. Enlargements will be limited in size to not more than 5 times the size of negative.

Send your Kodacolor negatives to Wardway Photo Service, Park Ridge, Illinois—authorized Kodak dealer. Do not send to Wards Mail Order Houses. Enlargements and your original Kodacolor negatives will be returned in about three weeks by *Postpaid* mail. Be sure to include your name and address, and state size and number of the enlargements wanted from each negative.

4x7, 5x5, or 5x7-in. size Kodacolor enlargements. Each \$1.50
 6x10, 7x10, 8x8, or 8x10-in. size Kodacolor enlargements. Each 3.50

NOTICE: Above Prices Include April 1, 1954 Excise Tax Reductions.



Eastman, Ansco, and Wards Film... in

MEDIUM SPEED ORTHOCHROMATIC FILMS

Most widely used for outdoor snapshots. Suitable for night and indoor photography with photoflash lamps. Medium grain permits some enlargement. Process under red safelight (Page 82). Can be used with yellow filter (Page 38) to bring out clouds. Sizes are for popular box, reflex, and folding cameras. A.S.A. Speed Index 50 Daylight, 25 Tungsten. *Postpaid.*

Kodak Verichrome	Ansco All-Weather	Wards Sensachrome	Film Size	Price
67 HN 1605			127	2-roll pack, 75c
	67 HN 1515		127	3-roll pack, \$1.05
		67 HN 1664	127	1 roll, 32c
		67 HN 1624	127	3-roll pack, 86c
67 HN 1606			120	2-roll pack, 85c
	67 HN 1516		120	3-roll pack, \$1.20
		67 HN 1665	120	1-roll, 37c
		67 HN 1625	120	3-roll pack, 99c
67 HN 1607			620	2-roll pack, 85c
	67 HN 1517		620	3-roll pack, \$1.20
		67 HN 1666	620	1 roll, 37c
		67 HN 1626	620	3-roll pack, 99c
67 HN 1608			116	1 roll, 55c
67 HN 1609			616	1 roll, 55c
67 HN 1610			118	1 roll, 70c
67 HN 1611			130	1 roll, 70c
67 HN 1616			122	1 roll, 80c

MEDIUM SPEED PANCHROMATIC FILMS

For outdoor use, indoor flash; photoflood with lenses of f/6.3 or faster. Fine grain, for enlargements up to 10 diam. Sensitive to all visible colors, they give excellent rendition of all color values. Process in total darkness. Use with any filter (Pg. 38). A.S.A. Speed Index 50 Daylight, 40 Tungsten. *Ppd.*

Kodak Plus-X	Ansco Supreme	Film Size	Price
67 HN 1642		127	1 roll, 45c
	67 HN 1655	127	1 roll, 45c
67 HN 1643		120	2-roll pack, 95c
	67 HN 1656	120	1 roll, 50c
67 HN 1644		620	2-roll pack, 95c
	67 HN 1657	620	1 roll, 50c
67 HN 1645		828	1 roll, 45c
67 HN 1646		35mm, 20	1 roll, 85c
67 HN 1647		35mm, 36	1 roll, \$1.10

KODAK PLUS X AND ANSCO SUPREME FILM PACKS. *Postpaid.*

Kodak Plus X	Ansco Supreme	Negative Size		Pack of 12 Films	
		Inches	Centimeters	Each	6 for
67 HN 1612	67 HN 1560	2 1/4 x 3 1/4	6 x 9	\$1.70	\$ 9.50
67 HN 1613	67 HN 1561	3 1/4 x 4 1/4	8 x 10.5	2.25	12.80
67 HN 1614		3 1/2 x 4 3/4	9 x 12	2.35	13.10
67 HN 1615	67 HN 1563	4 x 5	10 x 12.5	2.55	14.50

HIGH SPEED PANCHROMATIC FILMS

Faster speed than films at left. Preferred for use under photoflood light. Also used outdoors when light conditions are poor or fast shutter speeds are needed to stop action. Medium grain permits some enlargement. Sensitive to all visible colors. Must be processed in total darkness. Can be used with any filter (Page 38). A.S.A. Speed Index 100 Daylight, 80 Tungsten. *Postpaid.*

Kodak Super-XX	Ansco Super-Pan Press	Film Size	Price
67 HN 1648		127	1 roll, 45c
67 HN 1649		120	2-roll pack, 95c
	67 HN 1659	120	1 roll, 50c
67 HN 1650		620	2-roll pack, 95c
	67 HN 1660	620	1 roll, 50c
67 HN 1651		616	1 roll, 60c
67 HN 1652		828	1 roll, 45c
67 HN 1653		35mm, 20	1 roll, 85c
67 HN 1654		35mm, 36	1 roll, \$1.10

KODAK SUPER XX FILM PACKS. 12 films per pack. *Postpaid.*

Catalog No.	Neg. Size, In.	Neg. Size, Cm.	Each Pack	6 Packs
67 HN 1575	2 1/4 x 3 1/4	6 x 9	\$1.70	\$9.50
67 HN 1576	3 1/4 x 4 1/4	8 x 10.5	2.25	12.80
67 HN 1577	3 1/2 x 4 3/4	9 x 12	2.35	13.10
67 HN 1578	4 x 5	10 x 12.5	2.55	14.50

KODAK SUPER XX SHEET FILM. *Postpaid.*

Catalog No.	Neg. Size, In.	Neg. Size, Cm.	25 Sheets
67 HN 1585 T	2 1/4 x 3 1/4	.....	\$1.70
67 HN 1586 T	3 1/4 x 4 1/4	.....	2.40
67 HN 1589 T	4 x 5	.....	3.20
67 HN 1587 T	.....	6.5 x 9	1.85
67 HN 1588 T	.....	9 x 12	2.75

FILTER FACTORS

Since a filter absorbs part of the light ordinarily affecting the emulsion, an increased exposure is needed. The filter factor represents degree of increase needed. This factor varies for filters, with emulsion, and with Day or Tungsten light. ("D" or "T" below). Examples: Suppose the correct exposure without filter for daylight on Plus-X film is 1/100th second and a K2 filter is to be used. The table shows the factor is 2; the picture should be taken at 1/50th.

Name of Film	K2		G		X1		A		Polarscreen	
	D	T	D	T	D	T	D	T	D	T
Sensachrome	2.5	2	5	3	4	3	2.5	2.5
Verichrome										
Plenachrome										
Plus X	2	1.5	3	2	4	3	8	4	2	2
Supreme										
Superpan Press										
Panatomic X										
Portrait Panchromatic										
Super XX										
428 Hi-Speed Pan	2	1.5	2	1.5	4	3	4.5	3	2	2
Arrow Pan										



Sizes and Emulsions for Every Amateur

SPECIAL PURPOSE FILMS

DUPONT TYPE 428 HI-SPEED PANCHROMATIC SHEET FILM. A super-speed film especially designed for press work, sport pictures, or other uses requiring high shutter speeds or small apertures under difficult lighting conditions. Especially valuable for electronic flash. Fully panchromatic. Must be processed in total darkness. Can be used with any filter (Page 38). A.S.A. Speed Index 160 Daylight, 125 Tungsten. *Postpaid.*

Catalog Number	Neg. Size, Inches	24 Sheets	100 Sheets
67 HN 1635 T	2 1/4 x 3 1/4	\$1.65	.....
67 HN 1636 T	3 1/4 x 4 1/4	2.30	.....
67 HN 1637 T	4 x 5	3.05	\$11.50

DUPONT ARROW PAN SHEET FILM. A high-speed film widely used for portraiture as well as press and sports work. High red sensitivity permits use with incandescent light at relatively brief exposures and small apertures. Fully panchromatic, balanced for near-perfect color correction by daylight or daylight fluorescent lighting. Medium grain permits some enlargement. Must be processed in dark. Can be used with any filter (Page 38). A.S.A. Speed Index 160 Daylight, 125 Tungsten. *Postpaid.*

Catalog Number	Neg. Size, Inches	24 Sheets	100 Sheets
67 HN 1638 T	2 1/4 x 3 1/4	\$1.65	.....
67 HN 1639 T	3 1/4 x 4 1/4	2.30	.....
67 HN 1640 T	4 x 5	3.05	\$11.50

KODAK PORTRAIT PANCHROMATIC SHEET FILM. The standard panchromatic film for portrait use. Gives very good color rendition even with high red content tungsten lamps. Medium to low graininess allows considerable enlargement without objectionable grain. Medium speed. A.S.A. Speed Index 50 Daylight, 32 Tungsten. *Postpaid.*

Catalog Number	Negative Size, in.	25 Sheets
67 HN 1580 T	2 1/4 x 3 1/4	\$1.70
67 HN 1581 T	3 1/4 x 4 1/4	2.40
67 HN 1584 T	4 x 5	3.20

HOW TO SELECT YOUR FILM

Black and white film is made in different emulsions for various types of picture taking jobs. In making a choice of what film to use, the most important considerations are color sensitivity, speed, and grain.

COLOR SENSITIVITY is the ability of a film to record colors. Orthochromatic film is sensitive to blue, violet, and green, and is fine for outdoor snapshots. Panchromatic reacts also to yellow and red, approximating the range of the eye. It is the best film for artificial light.

SPEED means amount of exposure required to produce a satisfactory image on the emulsion. The A.S.A. speed index shows relative speed of films. The higher this number, the faster the film. High-speed film (A.S.A. 100 Daylight) requires short exposure, and is best for minimum illumination. Medium speed (A.S.A. 50 Daylight) is best for most outdoor shots. Slow speed (A.S.A. 32 Daylight) for maximum light.

GRAIN shows in big enlargements, and is due to grouping of silver particles during development. Special developing solutions control this somewhat. Supreme, Plus-X, and Portrait Panchromatic are all fine grain, and are recommended for taking pictures that are to be enlarged.

FULL COLOR FILM YOU CAN PROCESS AT HOME

Anso Color lets you take full color transparencies with almost any folding or miniature camera—provided your lens is f/6.3 or faster. Anso Color transparencies faithfully reproduce delicate colors, and are easy and economical to take. They can be viewed, projected, and printed in full color. Daylight type Anso Color is for taking pictures outdoors, but can be used indoors with blue flash bulbs. Tungsten type is for taking indoor pictures with photofloods or clear flash bulbs, or even outdoor shots, using filters below. You can develop Anso Color yourself using the materials sold below. Or, see Page 102 for Pavele Color Processing.

ANSCO COLOR FILM. Daylight film has an A.S.A. Speed Index of 10 (Weston 8). Tungsten type is rated at A.S.A. 12 (Weston 10). *Postpaid.*

Cat. No.	Film Size	Film Type	Transparency Size	Exp.	Price
67 HN 1557	35 mm.	Daylight	24 x 36 mm.	20	\$2.10
67 HN 1558	35 mm.	Tungsten	24 x 36 mm.	20	2.10
67 HN 1630	828	Daylight	28 x 40 mm.	8	90c
67 HN 1641	828	Tungsten	28 x 40 mm.	8	90c
67 HN 1595	120	Daylight	Makes 6 ea. 2 1/4 x 3 1/4 in.		\$1.00
67 HN 1596	120	Tungsten	or 9 ea. 2 1/4 x 2 1/4 in.		1.00
67 HN 1597	620	Daylight	transparencies depending on camera used		1.00
67 HN 1598	620	Tungsten			1.00

ANSCO COLOR FILTERS. Use with sunshade while shooting color film. Gelatin filters mounted in glass. Filter UV 15 for slight haze correction or for using Tungsten film with photoflood lights. Filter UV 16 for medium haze or for using Tungsten film with clear flash bulbs. Filter UV 17 for greatest haze correction. Filter 10 for using Daylight film with Tungsten light. Filter 11 for using Tungsten film outdoors. *State filter wanted. Postpaid.*

67 HN 2217 T—Series V.....\$2.10 67 HN 2218 T—Series VI.....\$2.50

ANSCO OUTFITS FOR HOME COLOR PROCESSING

For those who have been processing black and white film, color processing offers more interest but requires more operations, added skill, and more carefully controlled temperatures for obtaining best results.

ANSCO COLOR FILM PROCESSING OUTFIT. Contains set of chemicals needed to develop Anso color film to make positive transparencies. Quart develops 432 sq. in. (or 8 rolls 120 or 620). With instructions.

67 HN 4705 T—Chemicals for quart-size solutions. *Postpaid.*.....\$3.05

ANSCO COLOR PRINTON PROCESSING OUTFIT. For making color prints from positive transparencies when used with Printon listed below. Quart develops about 400 square inches of prints. Order Printon below.

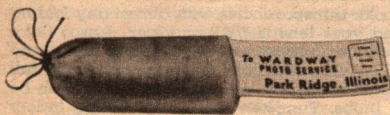
67 HN 4702 T—Chemicals for quart-size solutions. *Postpaid.*.....\$3.00

ANSCO COLOR PRINTON. A hard, high gloss material for making full color prints. Cut to size needed. Order color filters listed below. *Postpaid.*

67 HN 4127 T—12 sheets 4x5...\$2.75 67 HN 4128 T—12 sheets 5x7...\$4.95

ANSCO COLOR PRINTING FILTER SET. Contains ten color compensating filters, one ultra-violet filter required to balance the light in your enlarger or contact printer for exposing Anso Color Printon. 4 by 5-inch Printing Quality Filters. Complete instructions included.

67 HN 2262 T—Set of 11 in individual envelopes, each numbered.....\$4.40



Wardway Standard Photo Finishing

The Wardway Standard photo finishing service is recommended for the average photographer who simply wants good clear prints for his album or scrapbook, or good quality enlargements of his favorite snap-shot. This service may be compared to the service offered by local stores and photographic shops. Wardway gives you satisfactory work at the lowest possible cost.

STANDARD PROCESSING. Wardway does a thorough job on all orders. Negatives and prints are processed mechanically, using automatic equipment and standard formulas.

STANDARD NEGATIVES. All developing is work of good quality done by experienced personnel. Wardway uses only fine grain developers. Negatives are hardened to prevent scratching.

STANDARD PRINTS are oversize prints especially mounted in a handy miniature album that has a pressed paper cover and a plastic spiral binding (see relationship between negatives and prints pictured above). You'll receive one glossy, single-weight, deckle edged print for each good exposure. Also for any exposure not printed you receive a coupon good for one standard reprint.

HOW TO ORDER STANDARD FINISHING

Included with every order of film from Wards is a film mailer. Work returned Ppd. by 3rd class mail. If you include 10c extra it will be returned as 1st class mail. If you do not have a mailing bag, address film or negatives, with money, to Wardway Photo Service, Park Ridge, Ill.

West Coast customers send film and negatives to Wardway Photo Service; Box 25; Los Angeles.

Do not send film to Wards. State what service you want, your name, and your return address. Allow approximately 12 days for mailing and service. Enlargements take somewhat longer. A mailer for your next order is included when work is returned to you.

STANDARD ROLL FILM AND 35MM MINIATURE CAMERA ROLL FILM

Prices below are for developing and printing standard roll film, 35mm miniature camera roll film, and "split-exposure" roll film. "Split-exposure" film means the film used in the cameras that make either 12 or 16 exposures—or the film used in cameras that have a removable mask allowing you to take two different size negatives on the same size film.

120 or 620 roll films printed in big 3 1/2 x 5-inch size.....	40c
116 or 616 roll films printed in big 3 1/2 x 5 3/4-inch size.....	40c
127 or 828 roll films printed in bi 3 1/4 x 4 1/2-inch size.....	40c
All larger 6 or 8 exposure roll film negatives printed in 3 1/2 x 5 3/4-inch size.....	40c
Any "split-exposure" roll with 12 exposures—printed in 3/4 x 3 1/2-inch size.....	60c
Any "split-exposure" roll with 16 exposures—printed in 3/4 x 4 1/2-inch size. 116 and 616 negatives printed 3 x 3 1/2-in. size.....	75c
Any 18 or 20-exposure standard 35 mm. film—printed in 3/4 x 4 1/2-inch size.....	1.00
Any 36-exposure 35 mm. film—printed in 3/4 x 4 1/2-inch size.....	1.80

STANDARD REPRINTS

Order reprints in any of the sizes mentioned above, either roll film or candid specials. Minimum order is 5 prints..... Each print 5c

COPY NEGATIVES

Price for making one negative from any size print. Negative will be about 2 1/4 x 3 1/4-inch size..... Each 75c

STANDARD ENLARGEMENTS

Good quality enlargements at extremely low prices. Printed on single weight paper stock with semi-matte (semi-dull) finish. Narrow margin, smooth edged prints. For hand colored enlargements, double the prices below and state color of eyes, hair, clothes, etc. State size and quantity wanted when ordering.

5x 7-in. Size..... Each 30c.....	Six for 1.50
8x10-in. Size..... Each 50c.....	Six for 2.50
11x14-in. Size..... Each 75c.....	Six for 3.50

WARDWAY PHOTO COPY SERVICE

Get all the copies you want of that favorite print. You don't need the negative;—just send us the print itself, any size, and one dollar. Here's what you get back:

- (1) Five copy prints, size about 3 by 5 inches, printed on single weight glossy paper and mounted in attractive, light gray folder style slip-in mounts—suitable for gifts.
- (2) One copy negative, size 2 1/4 x 3 1/4 inches, from which additional prints can be made when you like. (This is the same quality negative that sells separately at left for 75c.)
- (3) Your original print returned to you in the same condition you sent it to us.

Send your print, with money, to Wardway Photo Service, Copy Department, Park Ridge, Ill. West coast fans send to Wardway Photo Service, Copy Department, Box 25, Los Angeles, Calif. Do not send to Wards. Be sure to include your name and return address.

Copy negative and five 3x5 prints, mounted in folder type mounts..... 1.00

LARGER SIZE MOUNTED PRINTS. Same as above except larger prints, mounted in larger folders.

Copy negative and five 5x7 prints.....	2.50
Copy negative and three 8x10 prints.....	2.75



Pavelle Custom Photo Finishing

The Pavelle Custom photo finishing service equals the finest photo finishing anywhere. Pavelle is a nationally known laboratory whose work has won prizes year after year in important photo salons. Their work meets the most particular demands—at only a small extra cost.

CUSTOM PROCESSING. Throughout the entire processing, the utmost personal attention is paid to every detail. All work is done by a select group of trained and highly skilled workers. Their job is to utilize all their skill in bringing out the best your camera produces.

CUSTOM NEGATIVES are given individual attention throughout every step of processing. Ultra fine grain developers capture maximum gradation, keep emulsion graininess at a minimum; extra hard fixing baths protect film from scratches; longer washing gives greater permanence of image and completely removes surface deposits.

CUSTOM PRINTS—on semi-matte double-weight paper, smooth edged—are made on modern printers, automatically regulated to split second accuracy by photo electric cell control. Electric drying, spotting under ultra violet rays, etc., give your work a quality appearance.

HOW TO ORDER CUSTOM FINISHING

Send films or negatives, with money to Pavelle Laboratories, Box 1156, Grand Central Station, New York 17, N.Y. Do not send to Wards. State service wanted, your name and address. Allow 4 days for processing or up to 14 days for special work, plus about 10 days for 1st Class Mail or 15 days for 3rd Class. Prices include 3rd Class return Postage from Pavelle. Mailing envelopes come with all black and white film Wards sell. All completed Pavelle work includes stamped mailer for next roll. Include extra postage for 1st Class, Air Mail, or Special Delivery.

For prices on special services, like slide mounting, write Bob Adams—for information, Pg. 93.

DEVELOPMENT AND CONTACT PRINTS

For developing and printing any 6 or 8-exposure standard roll film except 828 and 127.
Prints will be same size as negatives.....75¢

DEVELOPMENT AND OVERSIZE PRINTS

For developing and printing any small negative roll such as 35mm., Bantam, 127, and "split-exposures" of 120 and 620 film. Prints will be about 3x3 or 3x4 inches, depending on negative size.
Any 828 or 127 roll with 8 exposures.....1.00
Any roll with 10 or 12 exposures.....1.50
Any roll with 16 exposures.....1.75
Any 35mm. roll with 18 or 20 exposures...2.00
Any 35mm. roll with 36 exposures.....3.25

DEVELOPING ONLY

Roll film, all sizes.....Per roll 50¢
35mm. film, 18 to 36 exposures.....Per roll 75¢
Packs and cut films, all sizes....Per dozen 1.25
Packs and cut films, all sizes.....Each 15¢

PRINTING ONLY

Bantam and 35mm negatives must be in strips of 3 or more with frames to be printed carefully listed—individual frames are double price.
Oversize prints from miniature and "split-exposure" negatives.....Each 10¢
Contact prints up to 3¼x4¼ in.....Each 10¢
Contact prints up to 4x6 in.....Each 15¢
Contact prints 5x7 in. or larger.....Each 20¢

35MM BLACK AND WHITE SLIDES

Unmounted transparencies for projection, made from strips of 6 or more 35mm negatives.
One each of good negatives on strip...Each 5¢
Selected negatives on strip of six or more frames.....Each 10¢
From strips of less than six frames....Each 20¢

COPY NEGATIVES

Made from any size print. Negative will be about 2¼x3¼ inches.....Each 75¢

CUSTOM ENLARGING

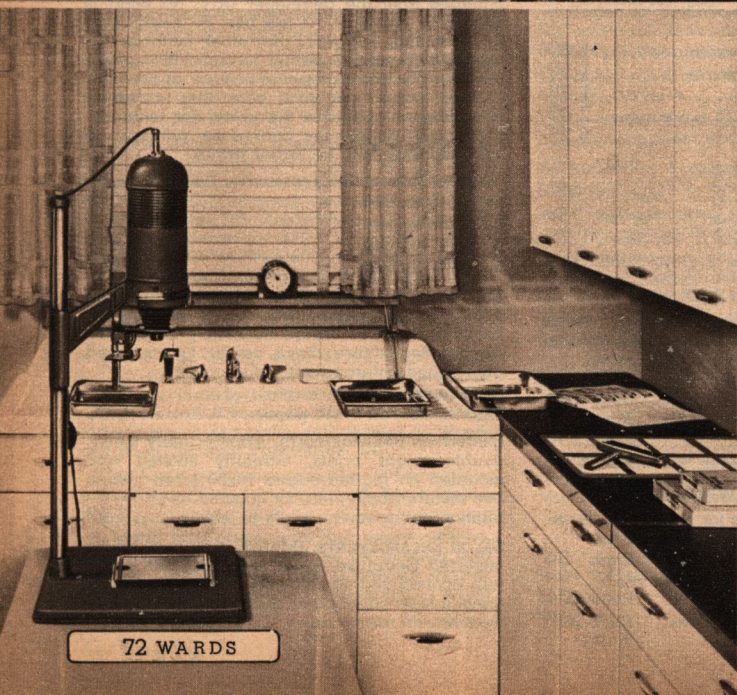
Custom enlarging is a science in itself at Pavelle. Test prints are made and accepted if satisfactory, or discarded and done over until a suitable print emerges from the developer tray. No effort is spared in bringing out the best in a negative. Spot-printing, dodging, and other methods are used whenever the printer feels it will improve the print. General cropping is done at no extra charge. Specific cropping according to customer's diagram is double the price. For toning or vignetting, double the charge for prints up to 5x7; add only 50% for larger prints.

NARROW MARGIN ENLARGEMENTS. Double weight. 3½x 5¼-in. size.....Each 25¢
4 x 6 -in. size.....Each 30¢
5 x 7 -in. size.....Each 40¢
8 x 10 -in. size.....Each 65¢

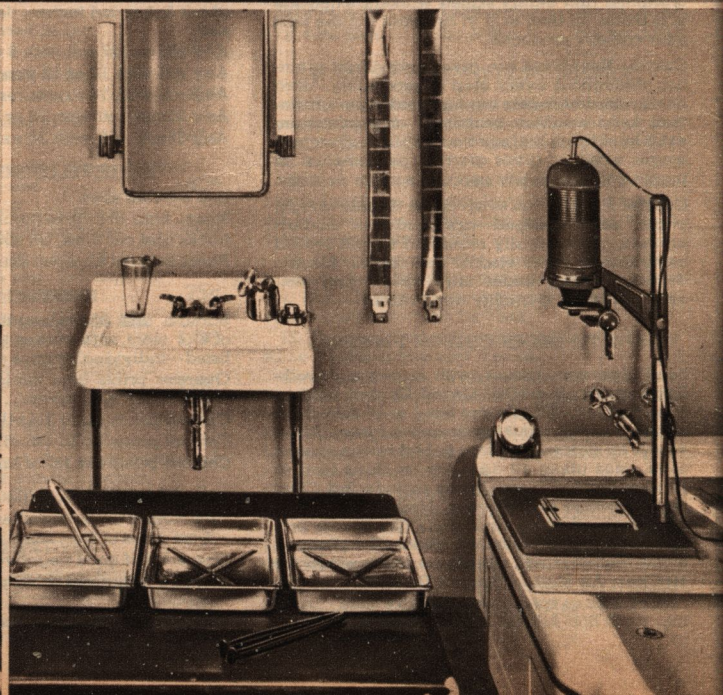
EMBOSSED UNMOUNTED ENLARGEMENTS. Printed on double-weight paper. Wide edge suitable for framing. Cropped where necessary to improve picture. See picture above, center, for embossed unmounted enlargement.
5x 7-in. size, on 8x10 paper.....1.25
8x10-in. size, on 11x14 paper.....2.00

EXHIBITION ENLARGEMENTS. Appropriately toned, double-weight prints, carefully spotted and mounted on feather-edged 16x20 salon mount. See picture above, left, for finished exhibition enlargement. 11x14-in. size.....3.95

SALON ENLARGEMENTS. Printed on highest grade imported Gevaluxe paper (see Page 81). Carefully spotted and mounted on 16x20 salon mount. Special front cut-out mat. Salon enlargement shown above right, 11x14-in. size....5.75



72 WARDS



Planning the Home Darkroom

The greatest enjoyment of photography comes from doing your own developing, printing, and enlarging. A home darkroom changes mere "picture taking" into a fascinating hobby, and also offers the only way to get your pictures exactly the way you want them. And it need not be expensive. The "dream darkroom" on the opposite page was built for a material cost of about \$150. However, by adding or

subtracting features, you can make it as elaborate or as simple as you wish. Complete plans for building it are offered at the bottom of this page. They can be modified to fit your needs, but whether it be a built-in darkroom in the basement or a portable set-up in the kitchen or bathroom, the enjoyable hours and finer prints resulting will more than compensate for the time and small expense involved.

WHERE AND HOW BIG?

A darkroom doesn't need to be large—in fact a small one, efficiently arranged, is an advantage. The one shown on the opposite page is seven by eight feet. For a one-man setup five by six feet is sufficient, which makes it possible to find space in almost any home. All you need is any small room or closet which can be made light-tight, and which can be wired for electricity. Running water is a convenience but not a necessity, since the small amount needed for developing can be carried in, and the prints can be washed outside.

If you can use a room on the first or second floor, that will be ideal, but in most homes the basement is the best bet because it is usually cool in summer, it is easy to build what you want there, and water and electricity are readily available.

THE PORTABLE DARKROOM

Where space is not available for a permanent darkroom, you can adapt the kitchen, bathroom, or laundry to that purpose simply by providing some means of blacking out the windows. This is easily done at night by hanging blankets over them, but if you wish to work in the daytime you will find it better to build some light wooden frames to fit in the windows. Cover the frames with cardboard, plywood, or very heavy black paper and slip them in place in the windows whenever you wish to do darkroom work. Weather-stripping on the edges of the frames will make them fit absolutely light-tight.

TESTING FOR LIGHT LEAKS. When the room is blacked out, test to see if it is light-safe. Place a coin on a piece of unexposed photographic paper for ten minutes—then develop the paper fully. If the spot where the coin was shows up whiter than the rest of the paper, then light is leaking in somewhere and must be excluded. Before looking for the leak, accustom your eyes to the darkness for five minutes or more to make them more sensitive.

After making sure your room is light-tight, turn on your safelight and test it in the same way. If any gray develops in the paper, your light is too strong and you should put in a smaller bulb. A 10-watt bulb is usually safe for direct light if it is in a good safelight and not too near the paper. For indirect lighting a 25-watt bulb may often be used.

THE PERMANENT DARKROOM

By all means build a permanent darkroom if you can. You will get many more prints made if your equipment is always laid out ready to use, and doesn't have to be set up first or taken down afterwards. The cost of the materials needed is small. And the skill required is only what it takes to handle a hammer and saw. If you build it in the corner of the basement you will have to build only two walls.

MAKE A PLAN FIRST. After deciding on your space, the first step is to make a plan of how the room will be arranged, so that you can change the shape or size if necessary to fit your equipment. The easiest way is to draw the plan right on the floor in chalk, with your enlarger base, trays, sink, etc. drawn full size. Or simply set them in place to be sure they will fit the way you want them. In general, you should provide for a straight flow of work from the enlarger and printer, through the developing and fixing trays, to the washing sink. If you are starting without an enlarger, you should provide space for adding it later, as well as space for using the larger trays.

BUILDING THE DARKROOM. Having decided where your walls will be, cut 2 by 4's and lay them on the floor at those points to nail your vertical studding to. The top of the studding can be nailed directly to the ceiling beams or to other 2 by 4's nailed across them. They should be spaced 24 inches between centers so as to make it possible to nail on the standard 48-inch wallboard.

The ceiling beams should probably be covered with the same wallboard. Otherwise they should be filled in at the wall for lightproofing, and they should be thoroughly cleaned and painted to eliminate dust. The door can also be made of wallboard on a light framework, but it should be fitted well and made to butt against a wood strip all around. Felt weather stripping on this will make the door light-proof, and an inexpensive screen door latch will close it.

Gummed wallboard tape will lightproof the joints, or you can cover them with wood panel strips. Light leaks at the basement wall or floor can be filled with cement or plaster. When finished, you should test the room for light leaks in the manner suggested for the portable darkrooms at left.

VENTILATION. Ventilation is easily provided by a ventilator fan such as shown on Page 76, using a plywood light baffle. Or you can build your own by using the space between two of the upright studs. Nail a piece of your 2 by 4 between them about three feet from the floor and cut a 10 by 3-inch slot in the wallboard just below it. Nail the wallboard securely all around, cover all joints with the gummed tape, and paint the whole area below the 2 by 4 a dull black. Cut another piece of wallboard to reach from the 2 by 4 to within two or three inches of the floor, paint it black on the inside, nail it in place, and lightproof the joints. One of these arrangements opening at the floor and another at the ceiling will provide ample ventilation. Forced ventilation can be achieved by placing a fan in front of one of them, and this will also serve to warm the room in winter by bringing it to the temperature of the outer basement.

BENCHES AND CABINETS. These should be planned around your equipment and can be as elaborate or as simple as you want to make them. They are usually built about 36 inches from the floor and should be at least two feet deep. It is well to cover them with linoleum or Masonite so that spilled chemicals can be easily wiped up. Use the space underneath for shelves, cabinets, and racks to hold your trays and other large equipment. The printing box can be recessed in the top of the table. Graduates and funnels are kept safe and in position to drain if kept on a peg board which is nailed in place on the wall. A shelf above the table is handy for chemicals.

The enlarger table should, probably be built low in the average basement in order to provide head room when the lamp house is raised. Or the enlarger can be bolted to the table as shown and the easel made adjustable downward for big enlargements. Build this table plenty heavy, because the least vibration during exposure will make your enlargements fuzzy.

Put drawers in this table for storing paper, dodgers, vignettes, etc. If one of them is painted black inside and provided with a light-tight, hinged, drop cover, it becomes a handy paper safe. For a good ready-made paper safe see Page 90.

PLUMBING. Water connections are usually easy in the basement, but a drain is more of a problem. One way of avoiding it is to connect your sink drain to a garden hose which is kept hanging on the outside of the darkroom. When you wish to use the darkroom, just lead this hose over to the floor drain.

The sink itself can be bought either new or second hand, or you can solder one together from galvanized iron. If you use the latter method you can make it long as shown with removable slat sections on top to hold the developing trays. With a smaller sink, you will want a developing bench to the left of it.

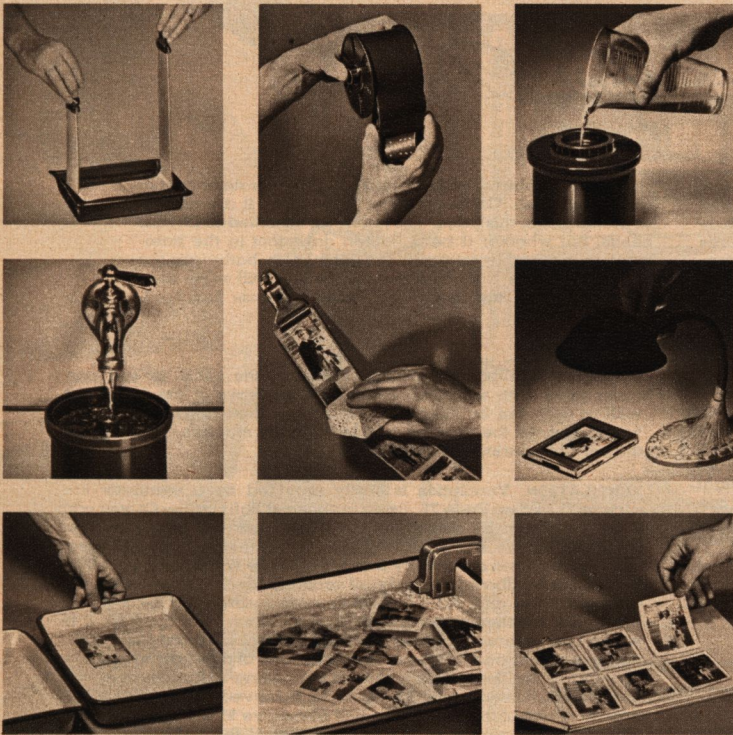
LIGHTING. Strange as it sounds, darkrooms should be well lighted. The only thing to avoid is the wrong kind of light. So provide plenty of safelights where they will do the most good. You need one over the developing trays and one to illuminate the clock with the big second hand that should be near the enlarger. These should have 10-watt bulbs. A bigger one with a 25-watt bulb can be directed against the ceiling for general, indirect lighting. There should also be a 60 or 75-watt white light with a pull chain over the sink or washing tray for examining finished prints. The darkroom walls should be painted a light color to reflect these lights to all corners.

Electric outlets should be installed also, one for the enlarger, one for the printing box, and some extras for tank agitators, etc.

COMPLETE DARKROOM PLANS

If you wish to build the darkroom shown on the opposite page, or some modification of it, complete plans are available in booklet form. They show every detail of its construction in easy-to-follow scale drawings, with measurements and list of materials needed. Priced to cover cost of postage and handling.

67 HN 4250—Complete Darkroom Plans. *Postpaid*25¢



A 41.50

It's Fun to Develop and Print Your Own

DEVELOPING FILM

TRAY METHOD. Fill one tray about half full of developer, one with water, and one with hypo. Check temperature, follow developer instructions, and set your timer for recommended time.

The rest of the process is carried out in darkness. Separate paper backing from the film and take one end of film in each hand. Start timer and place end of film in the developer. With a see-saw motion of the hands, agitate film in the developer.

At the end of developing time, film is transferred to the water rinse, then to the hypo for about ten minutes.

TANK METHOD. Modern film tanks make developing a simple matter of time and temperature. All operations except loading are done in full light.

Follow the instructions for loading film on the reel. Orthochromatic (Verichrome, Plenachrome, Sensachrome etc.) film can be handled under a red safelight but Panchromatic (Kodak Super XX, Ansco Superpan Press, etc.) film should be handled in complete darkness. Handle film by edges to avoid fingerprints.

After the film is in the tank, the light may be turned on. Pour enough developer into a graduate to fill the tank, then pour it in the tank in a steady stream—if you stop part way it will leave a mark on the film. Follow time and temperature directions that come with developer. Agitate film every two minutes. After recommended time, pour off developer, flush with water, and fill tank with hypo solution for about fifteen minutes.

WASHING is done by allowing water to run over film for about 30 minutes.

DRYING. Attach film clips to ends of film and hang up. Soak a chamois or viscous sponge in water, squeeze out, then wipe both sides of the film gently.

MAKING PRINTS

Photographic prints can be made in any room from which white light can be excluded (see Page 73). Photographic paper is sensitive to blue and white light, but you can work with a relatively bright safelight. You also need a white light with a switch, a clock with a second hand, a printing frame, and three trays.

The developer is dissolved in water in the first tray, following directions on the package. Plain water or stop bath in the second tray, and hypo in the third.

EXPOSURE. With the printing frame opened, glass side on the table, place the negative, dull side up, on the glass. Cover with a sheet of printing paper, emulsion side down, and clamp on the back. Turn the frame over and place it on the table under your unlit white light. Adjust the light to 8 or 10 inches above the frame.

Look at your clock and turn on the light for five seconds. Turn it off, open the printing frame, and take out the paper.

DEVELOPING. Slip the paper into the developing tray. After a few seconds the picture will begin to "come up," and in about 60 seconds it will be fully developed. Rinse it for a few seconds in water and transfer to the hypo.

After a minute or so turn up the room light and get a good look at the picture. If it is too dark, try again with less exposure to the white light; if too light give it more exposure next time. Leave print in the hypo for 10 minutes.

WASHING. Prints should be washed for an hour in running water. Any washer listed on Page 90 will do a fine job. Be sure to wash prints at least one hour to avoid fading or stains.

DRYING. When thoroughly washed, lay prints on a clean cloth and sponge off excess water. Then lay them between the leaves of either a photo blotter book or blotter roll (listed on Page 90) to dry.

A **FEDERAL 269 ENLARGING OUTFIT.** Priced to save you money. Contains everything you need to make big ones out of little ones. Your favorite print will look even better when "blown-up" to show all the fine detail. Unwanted back-grounds can be "cropped" to add interest and emphasize the main subject.

The Federal model 269 Diffusion Enlarger is sturdily constructed of welded steel. Accepts negatives from 35mm to 2 1/4 by 3 1/4-in. size. 3 1/2-in. f/6.3 Decar anastigmat lens makes sharp prints. Enlarges up to seven times on the 14 by 16-inch baseboard—head swivels to make bigger blow-ups on the floor. 30-inch upright post comes apart for easy storage. Long extension bellows and interchangeable lensboard permit use of other lenses. Built-in focusing target lets you focus quickly and easily—even when printing dense negatives. Extra negative carriers can be ordered from Page 85. Complete outfit includes:

- 1 5 by 7 Speed Easel (Page 89).
 - 1 Eclipse film developing Tank (Page 76).
 - 3 Eclipse 5 by 7 Trays (Page 77).
 - 1 Plastic Darkroom Safelight (Page 82).
 - 1 Glass 8-oz. graduate (Page 77).
 - 6 8-oz. pks. Kodak Universal Developer (Page 78).
 - 1/2 gal. Kodak Acid Fix (Page 78).
 - 2 Stainless Steel film clips (Page 76).
 - 1 Glass stirring rod Thermometer (Page 76).
 - 1 Photo Blotter Book (Page 90).
 - 1 Pair Eclipse Print Tongs (Page 77).
 - 25 sheets Semi-matte enlarging paper, 5 by 7 in.
 - 1 Photographic handbook of instructions.
- 67 H 4732 Y—Ship. wt. 30 lbs. Only \$4.50 Down or Cash 41.50

FEDERAL 240 ENLARGING OUTFIT (not shown). An economically priced enlarging outfit featuring the Federal 240 Enlarger (Page 84). Diffusion type enlarger of sturdy all steel construction for stability. F/7.9 anastigmat lens focuses sharply on 12 by 14-inch steel baseboard. Helical focusing lens mount has five click stops. Accepts negatives from 35mm to 2 1/4 by 3 1/4 in. Upright is 30 inches high. Outfit includes all the accessories listed with the outfit above. See Page 100 for convenient terms.

67 H 4733 Y—Ship. wt. 25 lbs. Only \$3 Down...or Cash 29.95

ETCHINGS MADE EASY

Place a piece of drawing paper in your enlarging easel; then focus a negative on the paper. With a pencil, fill in all light areas with fine cross-hatch lines until the whole sheet looks the same color. Then turn on the lights—you've made a fine etching. Try it—it's easy and it works!



B 7.98

C 13.95

D 16.95

...and these Outfits Supply Everything You Need

B WARDS GOOD DEVELOPING OUTFIT. Contains basic darkroom equipment for the beginning darkroom enthusiast to develop and print pictures. An adjustable film developing tank permits you to do all the roll film developing operations, except loading, in full light. Handy contact printing box has an enclosed light. Glass stirring rod thermometer helps you keep the temperatures of the solutions just right. With this economical outfit, it's easy to develop your film and make contact prints.

- 1 Economy printing box (Page 82).
- 3 Eclipse 4 x 6-in. trays (Page 77).
- 1 Glass 8-oz. Graduate (Page 77).
- 1/2 gal. Kodak Acid Fix (Page 78).
- 2 plastic film clips.
- 1 Photographic handbook of instructions on film and print developing.
- 67 H 4722 M—Shipping weight 6 lbs. 8 oz. 7.98

C WARDS BETTER DEVELOPING OUTFIT. A more complete developing and printing outfit than that listed above, with additional conveniences. It contains equipment for the advanced beginner or the amateur. Ideal if you like to have all your basic darkroom equipment in one set. As in the Good Quality developing outfit, it has an adjustable film tank which permits roll film developing with the light on, except for loading. An added convenience in this outfit is—print tongs, which facilitate easy handling, and eliminate the presence of fingerprints on your finished pictures. An automatic light in the Compcoprinting box goes on when the platen is lowered. The film clips in this set are better than the plastic clips in outfit (B) because they're metal, and the trays are larger, enabling you to make larger prints. The set includes the following:

- 1 Compcoprinter (Page 82).
- 3 Eclipse 5 x 7 trays (Page 77).
- 1 Glass 8-oz. graduate.
- 1/2 gal. Kodak Acid Fix (Page 78).
- 1 Glass stirring rod Thermometer.
- 1 Pair Eclipse print tongs.
- 1 Photographic handbook of instructions on film and print developing.
- 67 H 4726 M—Shipping weight 14 lbs. 13.95

67 H 4723 M—Same as above but has Economy printer as pictured in outfit (B) instead of Compcoprinter. Shipping weight 12 lbs. 9.95

D WARDS BEST DEVELOPING OUTFIT. Has all the darkroom equipment necessary for you to do a really fine job with your film and prints. Complete with the Compcoprinter, with light that automatically turns on when the lid is closed. This printer takes all negative sizes from 35mm to 4 x 5 inches. The Chaney "Acurite" thermometer lets you make sure that your developer is just the right temperature for top quality negatives. Other improvements over the Better Quality set are the large 16-oz. graduate, the quart of fine grain film developer, the chromed ferrotyp tin for glossy prints, and the stainless steel print roller. Set includes:

- 1 Compcoprinter (Page 82).
- 3 Eclipse 5 x 7 trays (Page 77).
- 1 Glass 16-oz. graduate.
- 1/2 gal. Kodak Dektol Developer.
- 2 Stainless steel film clips.
- 1 10 x 14-in. Chromed Ferrotyp tin.
- 1 Pair Eclipse Print Tongs.
- 100 sheets Paper, No. 2 (normal) contrast. Size 2 3/4 x 4 1/2 inches.
- 67 H 4725 Y—Shipping weight 17 lbs. 16.95

E WARDS BEGINNERS' DEVELOPING OUTFIT. (Shown below.) Contains the basic equipment for the novice. Includes an adjustable developing tank for easy roll film development. Makes contact prints from your negatives. Glass thermometer helps you control developer temperature. Instruction book gives all information you need for making good prints.

- 1 Eclipse Developing Tank (Page 76).
- 3 Eclipse 4 x 6-in. trays (Page 77).
- 1 Glass 4-oz. graduate.
- 1/2 gal. Kodak Acid Fix.
- 2 plastic film clips.
- 1 Photographic handbook of instructions on film and print developing.
- 67 H 4721—Shipping weight 5 lbs. 4.69

67 H 4720—Same as above but without Eclipse Tank or Thermometer. Films can be tray developed. Ship. wt. 4 lbs. 8 oz. 2.98



E 4.69

REMOVING SPOTS FROM YOUR PRINTS

To Remove White Spots—Those annoying white spots on your prints usually caused by dust or other particles on your negative, can be removed easily. Take a carbon pencil, which you can obtain inexpensively from any art store, and make light, short stipple marks on the white area until the proper tone is achieved. An ordinary pencil will do the job, but it leaves the stippled surface shiny—which is most undesirable in a matte print.

To Remove Black Spots—Black spots on prints caused by damaged emulsion or air bubbles on your negative can be removed without difficulty by careful scraping. Take the sharp point of a razor blade or the point of a retouching knife and scrape the spot in straight parallel lines, in one direction only. Do it very lightly so you don't remove all coloration. If you scratch too deeply, add color by spotting (see To Remove White Spots at left).



Developing Tanks for All Sizes of Roll and

A ECLIPSE DEVELOPING TANK. Low-priced tank made of sturdy Styrene plastic, practically unbreakable. For roll film from 35mm to 116. Small diameter reel and tank, requires minimum solution. Agitator rod and instructions.

67 H 5056—Shipping weight 1 lb. 1.49

B FEDCO DEVELOPING TANK. For all 35mm and standard roll film up to 116. Also for 2 1/4 x 3 1/4 film or packs if used with 67 H 4903 below. All Bakelite construction. With instructions.

67 H 4902—Shipping weight 1 lb. 2.49

67 H 4906—Extra reel for above. Wt. 8 oz. 1.19

67 H 4903—Cut film Reel. For 2 1/4 by 3 1/4-inch cut film or packs. Ship. wt. 4 oz. 1.69

C FR SPECIAL TANK. Develops all films from 35mm to 116. Especially easy to load wet or dry—just hook film on core of reel and roll from inside out. A second or third roll can be developed without having to dry reel between rolls. With agitator and instructions.

67 H 4938—Shipping weight 1 lb. 3.25

D KODACRAFT ROLL FILM TANK. Easy-load principle—just roll your film up in pliable plastic apron. Beaded edges let chemicals reach all film surfaces. Does not leave marks on picture area. Sturdy plastic construction. With 2 aprons to handle 127, 120 and 620, film.

67 H 4905—Shipping weight 1 lb. 2.39

E NIKOR TANKS. Stainless steel, unbreakable, chemical-resistant. Film winds on easily from inside of reel out. Compact size saves on developer—uses only 16 oz. for 120 or 620 roll film. Reel dries rapidly so you can develop more rolls in less time. Ship. wt. 1 lb.

67 H 4936 T—For 120 and 620 roll film. 7.29

67 H 4935 T—For 35mm and Bantam roll film 6.39

F DAYLIGHT-LOADING ROLL FILM TANK. For 120 and 620 film. Load and develop both color and black and white film without a darkroom in full light. Film unwinds for re-exposure without detaching from reel. Made of molded plastic, holds 12 oz. of solution. With instructions.

67 H 5077—Ship. wt. 1 lb. 8 oz. 9.95

G ANSCO RATCHET LOAD TANK. A fast, easy, and really fool-proof method of tank-loading. Slip end of film in reel, then twist reel top back and forth—ratchet action rolls film in smoothly. Film won't buckle, jam, or overlap in the same groove, and you touch it only twice—one to slip end in reel, once to take it off. Adjustable for roll film from 35mm to 116.

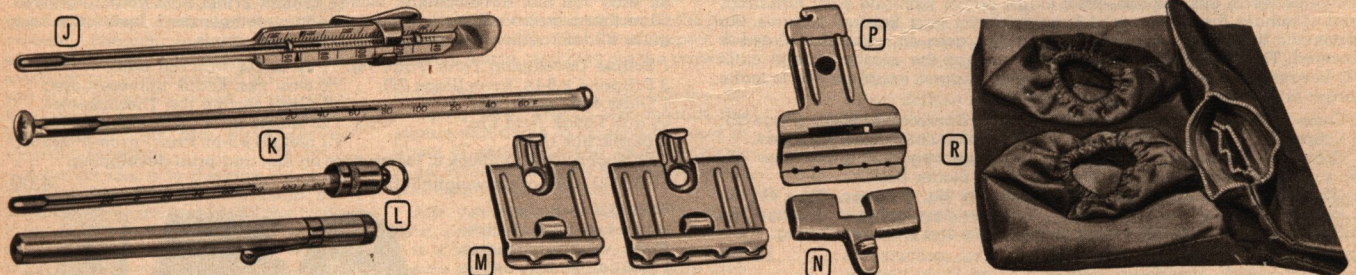
67 H 5030—Ship. wt. 1 lb. 4.79

67 H 5029—Extra Ratchet Reel. Wt. 8 oz. 2.79

H FASCO DARKROOM BLOWER. Maintains circulation. Used as exhaust or intake. Removes chemical fumes and cigarette smoke. 2 1/8-inch outlet, with mounting flange. Long-life bronze sleeve bearings. Moves 50 cubic feet of air per minute—a complete change of air for average darkroom every 5 or 6 minutes. For 110-120-volts, 60-cycle AC only. Requires simple light baffle in some installations.

67 H 4939 T—Ship. wt. 4 lbs. 8 oz. 9.95

67 H 4945 T—Double Blower. As above but with 2 fans and outlets. Twice the capacity—100 cubic ft. of air per minute. Ship. wt. 6 lbs. 14.95



J CHANEY ACURITE THERMOMETER. Individually indexed and scaled to assure complete accuracy. Easy-to-read magnifying tube protected by Pyrex jacket. For tank or tray use.

67 H 4996—Removable clip. Ship. wt. 4 oz. 79c

K STIRRING ROD THERMOMETER. Low-priced and accurate. For measuring temperature and for mixing solutions.

67 H 4937—Shipping weight 4 oz. 1.29

L TANK THERMOMETER. Metal case protects magnifying tube.

67 H 4904—With case and pocket clip. Ship. wt. 4 oz. 1.49

M **N** FILM CLIPS AND WEIGHTS. Set of 6 stainless steel spring action clips. With 3 clip weights to keep film from curling as it dries. Ship. wts. 9 oz., 11 oz.

(M) 67 H 5050—1 3/8-in. width. Set 1.29

(N) 67 H 5051—2-in. width. Set 1.59

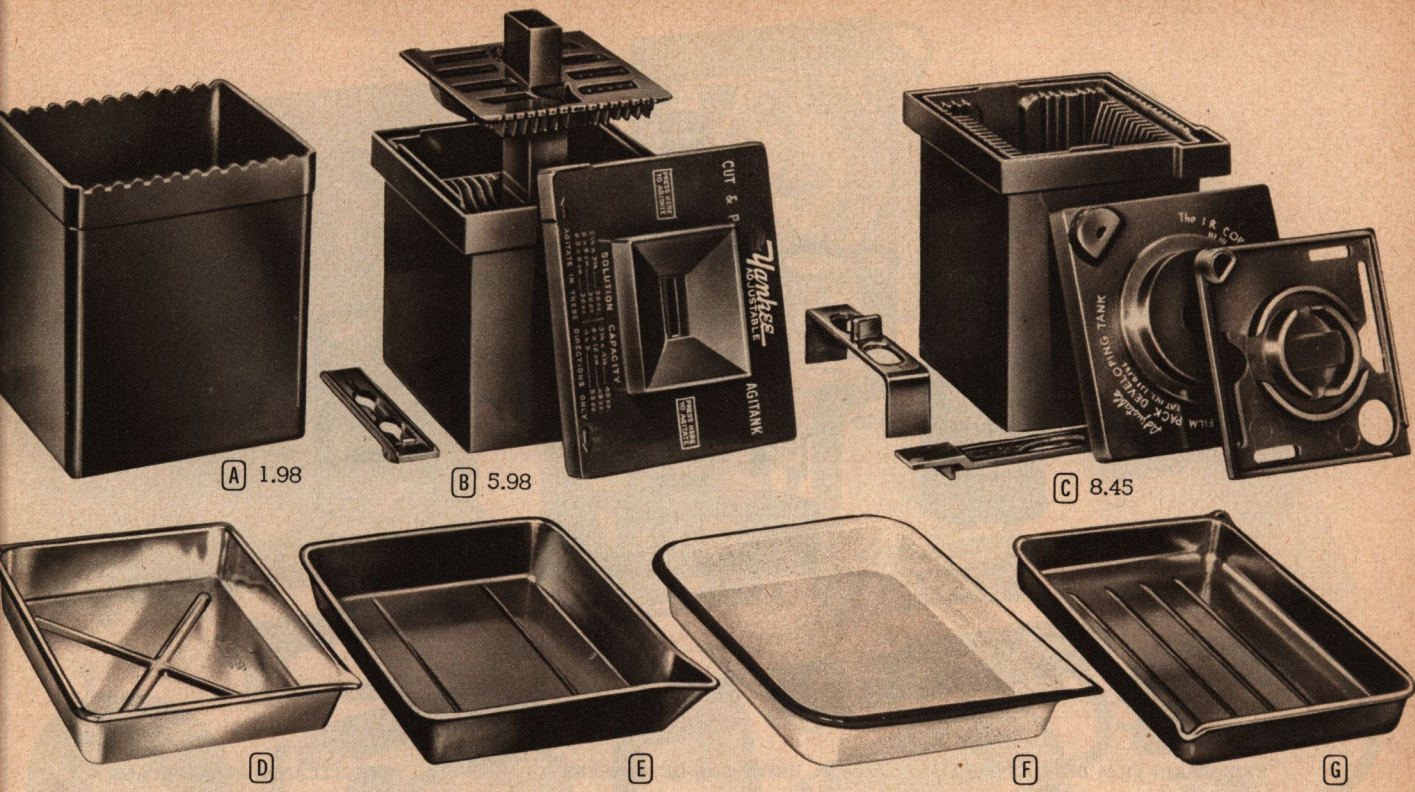
P FAULTLESS FILM CLIP. Holds film firmly. Chrome plated. Heavy spring construction. 3x1 3/4 in.

67 H 4989—Ship. wt. 12 oz. Six for 1.59

R LIGHTPROOF CHANGING BAG. Lets you work in full light when loading, reloading and developing film. No need of dark closets, or "blacked-out" rooms. Double bags of durable black sateen. 2 full-length zippers let you put in film, holders, developing tank, etc. easily. Zip the bags closed and slip arms into elastic, light-tight arm holes.

67 H 5080 T—18x18 in. Ship. wt. 11 oz. 5.95

67 H 5081 T—30x32 in. Ship. wt. 3 lbs. 9.95



Sheet Film up to 4x5... Darkroom Accessories

A YANKEE CUT FILM TANK. Accommodates all film hangers to 4x5 in. Notched rim holds up to 12 hangers like (L) below. Size 6x6x5½ inches deep. Sturdily constructed of black Bakelite. Order hangers (L) separately below.
67 H 4907—Ship. wt. 2 lbs. 6 oz. 1.98

B LIGHT-TIGHT CUT FILM TANKS. Work in fully lighted room after film is loaded in dark. Takes up to 12 pieces of cut film or film pack. Adjust from 2¼x3¼ to 4x5-in. size. Both have special tops that permit developing, fixing, and washing in same tank. Sturdily made of black chemical resistant Bakelite.

(B) 67 H 5076—Yankee Agitank. Removable film rack adjusts with friction locking washer. Stainless steel pins hold film securely. Shipping weight 2 lbs. 8 oz. 5.98

(C) 67 H 4956—FR Cut Film Tank. Special guide assures quick, easy film loading. Film stands in vertical position for even development. Easily removed and replaced for inspection before washing or for reversal exposure of color film. Shipping weight 3 lbs. 8.45

D STAINLESS STEEL TRAYS. Made of durable stainless steel—won't chip, crack, break or corrode, will never need replacement. Impervious to photographic chemicals—completely unaffected by color processing chemicals. Ribbed bottom, rolled edges for strength. Shipping weights 1 lb. 8 oz. and 1 lb.

67 H 5096—For 8 by 10-inch prints. . . Each 3.19
67 H 5070—For 5 by 7-inch prints. . Two for 1.29

E ACE TRAYS. Heavy-weight trays made of molded hard rubber—are highly resistant to all photographic chemicals and are practically unbreakable. Bottoms are reinforced for added strength—ribbed for over-all development. With pouring spout.

67 H 4930—For 8 by 10-inch prints. Shipping weight 5 lbs. Three for 3.98
67 H 4931—For 11 by 14-inch prints. Shipping weight 5 lbs. 4 oz. Each 2.89
67 H 4932—For 14 by 17-inch prints. Shipping weight 6 lbs. 4 oz. Each 5.49

F "CESCO" ENAMELED STEEL TRAYS. Triple-coated baked-on white enamel, acidproof.

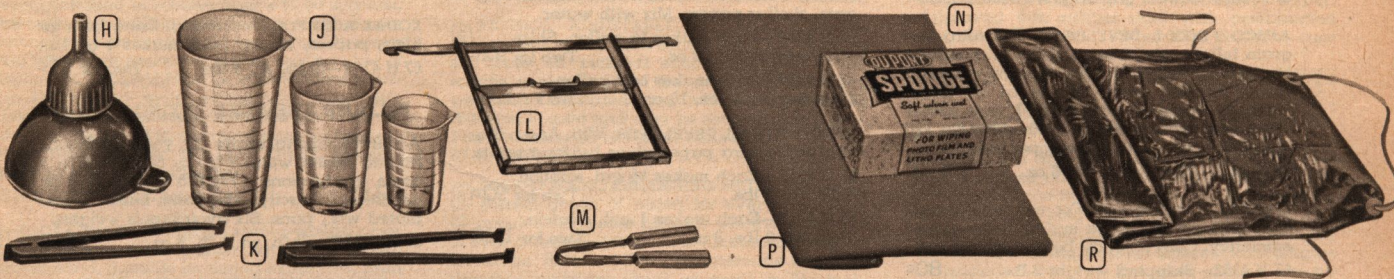
67 H 4974—For prints up to 8x10 inches in size. Ship. wt. 7 lbs. 4 oz. Three for 4.49
67 H 4975—For prints up to 11x14 inches in size. Ship. wt. 4 lbs. 12 oz. Each 2.69

"CESCO" HYPO-WASHING TRAY (not shown). Like above but extra deep—for fixing or washing. Takes prints up to 11x14 in., is 5 in. deep.

67 H 4977 M—Ship. wt. 6 lbs. Each 3.69

G ECLIPSE DARKROOM TRAYS. Sturdily constructed of durable plastic. Reinforced ribs. Pouring spout on all but 4x6-in. size.

Catalog Number	For Prints up to	Shipping Weight	Three For
67 H 5064	4x 6 in.	1 lb.	98c
67 H 5065	5x 7 in.	1 lb. 4 oz.	\$1.19
67 H 5066	8x10 in.	3 lbs. 12 oz.	2.49
67 H 5067	11x14 in.	4 lbs. 8 oz.	4.29



H PLASTIC COMBINATION FUNNEL. Three funnels in one for large and small mouth bottles.
67 H 5034—Shipping weight 6 oz. 49c

J GRADUATE SET. Three beaker-style molded glass graduates. One each 4-oz., 8-oz., and 16-oz. size. For measurement of chemicals.
67 H 4913—Shipping weight 2 lbs. Set 69c

K PRINT TONGS. Plastic. Two-color set.
67 H 4942—Shipping weight 6 oz. Pair 39c

L STAINLESS STEEL FILM HANGERS. For cut film. Will not corrode. Hinged top section prevents film from floating off when agitated. Heavy-gauge stainless steel.

67 H 4985—Size 2¼x3¼ in. 67 H 4987—Size 4x5 in.
67 H 4986—Size 3¼x4¼ in.
Three of any size above. Ship. wt. 12 oz. . . . 2.29

M FILM SQUEEGEE. Wipes both sides of all roll film for fast even drying. Soft sponges.
67 H 5021—Shipping weight 6 oz. 1.19

N DUPONT FINE PORE SPONGE. Long-wearing sponge for drying film. Size 1½x3¾x5½ in.
67 H 4908—Shipping weight 6 oz. . . . Two for 98c

P PHOTO CHAMOIS. Fine texture 11x13-in. skins—especially selected for photographic use.
67 H 4909—Ship. wt. 14 oz. Two for 1.19

R DARKROOM APRON. Protects your clothes. Opaque black Vinyl. Resists acids and oils.
67 H 5006—Shipping weight 1 lb. 98c



Save 10% on Fresh Photo Chemicals

FINE GRAIN FILM DEVELOPERS

KODAK D-76 FILM DEVELOPER. For low contrast and maximum shadow detail development of films, slides, and plates. Highest speed obtainable with normal contrast. Medium fine grain. Powder—dissolve in water.

67 H 4324—Each makes ½ gal. working solution. Ship. wt. 1 lb. 7 oz. . . . Two for 92¢

67 H 4325—Each makes 1 gal. working solution. Ship. wt. 2 lbs. 10 oz. . . . Two for 1.40

KODAK REPLENISHER D-76R. For Kodak D-76 developer. Extends its capacity over 400%. Package makes 1 gallon working solution.

67 H 4323—Ship. wt. 1 lb. 8 oz. . . . Each 70¢

ANSCO NORMADOL FINE GRAIN DEVELOPER. A soft-working borax film developer. For fine grain and medium contrast. Powder—1 pkg. makes 1 gal. working solution. Keeps well.

67 H 4345—Ship. wt. 2 lbs. 8 oz. Two for 1.53

KODAK MICRODOL FILM DEVELOPER. Produces extremely fine grain suitable for large blow-ups. Powder—dissolve in water.

67 H 4398—8 Packets, each packet makes 8 oz. working solution. Eliminates waste, measuring bother. Ship. wt. 12 oz. . . . 90¢

67 H 4341—One-gallon size. Makes 1 gal. working solution. Ship. wt. 1 lb. 11 oz. . . . 95¢

KODAK MICRODOL REPLENISHER. Increases life of Microdol developer about 300%.

67 H 4373—Makes 1 gal. Ship. wt. 2 lbs. Ea. 95¢

ANSCO FINEX-L DEVELOPER. For ultra-fine grain full development. Quality is consistent because developing time remains constant. Single solution ready to use at all times. When replenished with Finex-L replenisher sold below will process up to 60 rolls of No. 120 film. Quart-size bottle developer only.

67 H 4351—Ship. wt. 3 lbs. 6 oz. . . . 1.10

FINEX-L REPLENISHER. For use with developer sold above. Helps maintain developer efficiency. Conveniently bottled in pint size.

67 H 4352—Shipping weight 2 lbs. . . . 80¢

EFFICIENT PRINT WASHER

Convert your sink or laundry tub into a good print washer. Take a short length of pipe and file one end down so it fits into drain hole like a stopper. Invert a graduate or mason jar over the pipe with about an inch clearance on the top, and raise one side of the jar with an object like a stirring rod. Now turn on the faucet and watch. Water will raise in the sink and jar until it overflows. A syphon will be formed that will empty the sink. Then the cycle will start over again automatically.

UNIVERSAL DEVELOPERS

KODAK MQ DEVELOPER. For paper and film. Each makes 8 oz. Dissolve in water.

67 H 4343—Ship. wt. 8 oz. . . . 12 for 54¢

KODAK TRI-CHEM PAK. For paper and film. Each contains: 8 oz. Kodak Universal M-Q Developer, 8 oz. Universal Stop Bath, 8 oz. Universal Fixer. Mix with water.

67 H 4344—Ship. wt. 1 lb. 2 oz. . . . Six for 1.08

PAPER DEVELOPERS

KODAK DEKTOL PRINT DEVELOPER (improved D-72). Similar to D-72, but increased capacity and life. Use with Velox, Kodabromide.

67 H 4397—9 convenient packets each makes 16 oz. working solution. Wt. 12 oz. . . . 95¢

67 H 4318—Each makes ½ gallon. Shipping weight 2 lbs. . . . Two for 92¢

67 H 4319—Each makes 1 gallon. Shipping weight 3 lbs. 6 oz. . . . Two for 1.40

KODAK SELECTOL PRINT DEVELOPER (improved D-52). For papers. Especially suitable for Vitava Opal. Powder—dissolve in water.

67 H 4321—Each makes ½ gallon. Shipping weight 1 lb. . . . Two for 76¢

67 H 4322—Each makes 1 gallon. Shipping weight 1 lb. 8 oz. . . . Two for 1.03

DU PONT 53-D DEVELOPER. All purpose: for normal results on Apex, Velour Black, Vari-gam, similar papers. Mix with water.

67 H 4358—Each makes ½ gallon. Shipping weight 1 lb. 8 oz. . . . Two for 92¢

67 H 4359—Each makes one gallon. Shipping wt. 2 lbs. 10 oz. . . . Two for 1.40

ANSCO VIVIDOL DEVELOPER. With Anso Brovira or Convira paper gives brilliant prints.

67 H 4316—Each makes ½ gal. solution. Ship. wt. 2 lbs. . . . Two for 92¢

67 H 4315—Each makes 1 gal. solution. Ship. wt. 3 lbs. 8 oz. . . . Two for 1.40

REDUCERS AND INTENSIFIERS

VICTOR INTENSIFIER. Intensifies thin negatives. Pack makes 8-oz. solution.

67 H 4333—Ship. wt. 6 oz. . . . Two for 99¢

KODAK FARMER'S REDUCER. Reduces intensity of heavy negatives. Six packets, each makes 32 oz. working solution.

67 H 4376—Ship. wt. 9 oz. . . . Six for 86¢

If you prefer to mix your own formulas, you obtain chemicals from Bob Adams—see Pg. 93.

MISCELLANEOUS CHEMICALS

KODAK INDICATOR STOP BATH. Changes color the moment bath should be discarded. Stops development instantly. Prolongs life of hypo. Keeps indefinitely.

67 H 4396—12 packets powder make 8 oz. of solution each. Ship. wt. 10 oz. . . . 55¢

KODAK TESTING OUTFIT. Contains two bottles of solution, one test tube, and eye dropper. Shows whether shortstop and fixing solution are exhausted. With instructions.

67 H 4387—Ship. wt. 12 oz. . . . Each 1.41

KODAK PHOTO-FLO SOLUTION. A concentrated wetting agent. Prevents water marks or streaks during drying. Facilitates retouching. 16-oz. bottle makes 20 gallons of solution.

67 H 4395—Ship. wt. 2 lbs. . . . Each 81¢

ANSCO FLEXOGLOSS. Keeps glossy prints from curling. Makes them dry soft and flat.

67 H 4334—Quart bottle. Ship. wt. 3 lbs. 1.62

FILM AND PAPER FIXING SOLUTIONS

KODAK KODAFIX WITH HARDENER. A rapid, long-lasting fixer with hardener in a single solution. Does the job in as little as five minutes. For films, plates, or papers. Just mix with water according to instructions to obtain a working solution. Makes a full gallon of working solution. Keeps almost indefinitely.

67 H 4310—Ship. wt. 3 lbs. 6 oz. . . . 90¢

KODAK ACID FIX. Hardening, fixing bath for films, papers, plates. Each makes 1 gallon.

67 H 4314—Ship. wt. 4 lbs. . . . Two for 92¢

PELOUZE CHEMICAL MIXING SCALES

Accurate mixing scales for your darkroom. Sliding beam weighs up to 50 grains in 1 grain graduations; 1790.625 grs. or 4.09 oz. maximum capacity. Aluminum finish. Nickel plated wts., pans. Six avoirdupois weights.

67 H 4952 T—Ship. wt. 1 lb. 8 oz. . . . 7.95

REMOVE DUST FROM NEGATIVES

Many "dustless" all-metal negative carriers do not prevent the adherence of dust particles to a negative. In fact, brushing the negative often tends to build up a static electricity charge which holds the dust tighter. The charge will be dissipated if the holder is rested against a ground like a faucet or pipe while you brush. Grounding your enlarger may also help to get rid of much of the dust that accumulates around the carrier.

For free color print of your favorite transparency, mail coupon on Page 102.



Photo Timers Make Printing Easier

A GRA-LAB UNIVERSAL TIMER. Accurate electric timer for darkroom use and other timing jobs. Easy-to-read 7-inch luminous dial. Provides both visual and audible interval timing in minutes and seconds up to 60 minutes. To operate, set minute and second hands for desired time. At expiration of interval, timer hands return to zero, turning either on or off any appliance plugged into it. Bell rings at end of operation. To repeat, reset pointer to desired interval and close switch. Case about 8½x8½x2½ in. For 110-volt, 60-cycle AC only. 750-watt capacity.
67 H 5055 LT—Ship. wt. 5 lbs. 19.95

67 H 5004 LT—Like above, but with non-luminous dial. Ship. wt. 5 lbs. 18.95

B TIME-O-LITE MODEL P49. Our most versatile automatic electric timer. Plug in enlarger or contact printer—set pointer on 3-inch dial for exact controlled exposures from 1 to 60 seconds. Operates from built-in push switch or by remote control from your foot switch. Automatically resets itself after each exposure. Makes any number of duplicates. Toggle switch for independent focusing. Heavy-duty synchronous-type motor with silver electrical contacts. Operates efficiently in any position. Has 6-ft. cord and plug for connection to power supply. For 110-120-volt, 60-cycle AC only. 1500-watt capacity.
67 H 5013 LT—Ship. wt. 4 lbs. 22.95

C KODAK TIMER. Accurate, spring-wound timer with easy-to-read minute hand and sweep second hand. Suitable for timing exposures, print or negative development. 3½-inch dial calibrated from 1 second to 60 minutes. Metal base with swivel support—tilts to any position for easy reading. Start or stop with control lever.
67 H 4929—Ship. wt. 3 lbs. 7.59

D FR INTERVAL TIMER. Spring movement times intervals from 0 to 55 minutes. Pre-set stop permits resetting in darkness. Loud ring announces end of interval. Ideally suited for negative tank or tray development. With easy-to-read 3-in. dial in attractive plastic case.
67 H 5020—Ship. wt. 1 lb. 8 oz. 6.95

E MINUTE TIMER ALARM. Spring-wound timer for intervals from 1 to 55 minutes. Has adjustable repeat stop. Set stop for interval desired. Timing cycle can then be started at any time in total darkness—can be reset in total darkness. Bell sounds at end of time interval. Bakelite case and knob. Bold figures on 2½-inch dial are easily read in darkroom light.
67 H 4963—Ship. wt. 2 lbs. 4.95

F KODAK PRINT SCALE. This projection print scale simply and quickly determines correct exposure for enlarging any negative. Save paper and time. Scale consists of a wheel with transparent sectors of various density. Scale is placed over sensitized paper and the enlarger is turned on for 60 seconds. After developing the paper, correct exposure time in seconds appears on sector showing desired density.
67 H 5001—Ship. wt. 4 oz. 1.09

G PICTROL ADJUSTABLE DIFFUSER. Converts any enlarging anastigmat lens to a variable soft focus for pictorial effects. Reduces grain, softens contrast—ideal for professional quality portraits. Calibrated ring tells just how much diffusion is used and may be set for future prints. Fits all lenses up to 1¼-in. diameter.
67 H 5037—Ship. wt. 8 oz. 4.79

H SPOT-O-MATIC ENLARGING METER. Shows (1) correct grade of paper for every negative; (2) accurate exposure time; (3) whether negative is over or under developed. Eliminates need for test strips. Balances light to determine negative density—measures areas as small as ¾ inch. About 6 in. long. With 48-page instruction book.
67 H 4981—Ship. wt. 1 lb. 9.95

J FOCUS RITE. Plastic focusing device for sharper enlargements—eliminates squinting and stooping. Place on enlarger easel, look down onto screen to view brilliant enlarged image.
67 H 5016—Ship. wt. 4 oz. 1.69

K KRISER FOOT SWITCH. Heavy-duty foot control for enlargers or printers. Operated by pressure of foot on pedal—permits use of both hands. Rustproof, polished aluminum construction. Heavy-duty contacts will handle up to 1000 watts at 110-volt, A.C. or D.C. With 5-ft. cord for connection to power supply. Double plug on cord outlet for plugging in the enlarger.
67 H 4982 T—Ship. wt. 2 lbs. 7.95

L LEE FOOT SWITCH. Keeps both hands free to handle paper, dodgers, etc. Has luminous button in center of black footplate—easy to find in dark room, yet cannot affect paper. Approved 6-ft. rubber cord with combination plug and receptacle. Silver alloy contacts; case for footplate is die-cast. Wetproofed.
67 H 4983—3-in. diameter. Ship. wt. 12 oz. 5.79

HOW TO DETERMINE PICTURE SIZES

In projecting any size slides, the size of the projected picture on the screen is determined both by the distance from the projector to the screen, and the focal length of the projector lens. The table below shows the size of the picture on the screen when using lenses of different focal lengths at varied distances. The sizes shown are for 35mm slides—Bantam slides are slightly larger.

Projector to screen distance	Length of picture in feet				
	3-in. lens	4-in. lens	5-in. lens	6-in. lens	7-in. lens
10 ft.	4.6	3.4	2.6	2.2	1.9
15 ft.	6.8	5.0	4.0	3.4	2.9
20 ft.	9.0	6.8	5.4	4.6	3.9
25 ft.	11.4	8.8	7.0	5.8	4.9
30 ft.	13.6	10.2	8.0	6.8	5.9
40 ft.	18.2	13.6	11.0	9.2	7.8
50 ft.	22.4	16.8	13.6	11.5	9.6

A QUICK RANGEFINDER CHECK

Set camera on a tripod and use ground glass to focus on a flashlight set up at average shooting distance—perhaps 10 to 15 feet. Shine the light just to one side of your lens and focus on the bulb. Use a magnifying glass to assure sharpness. Look at light through the rangefinder—you'll know at once whether it's in or out of focus.



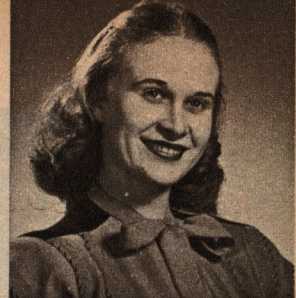
Flat Negative. Too soft.



On Soft Paper. Much too soft.



On Medium Paper. Too soft.



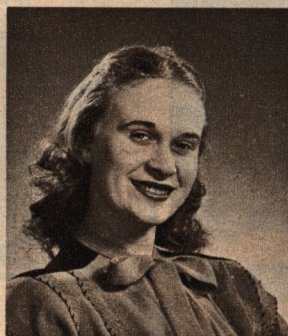
On Hard Paper. Just right.



Normal Negative. Just right.



On Soft Paper. Too soft.



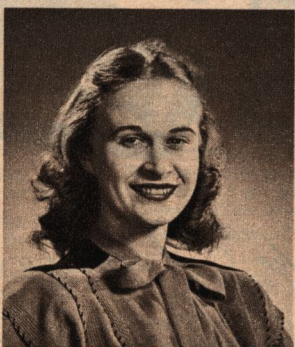
On Medium Paper. Just right.



On Hard Paper. Too hard.



Contrasty Negative. Too hard.



On Soft Paper. Just right.



On Medium Paper. Too hard.



On Hard Paper. Much too hard.

How to Choose the Right Paper

CONTRAST OF PRINTING PAPERS. Printing papers, both enlarging and contact, are supplied in various degrees of contrast which have the ability to add to or subtract from the contrast of a given negative. Choosing the right paper for each negative is one of the big secrets of making good prints.

Normal negatives (negatives having good contrast, but not extreme contrast, between their lightest and darkest parts) print best on Medium paper—because it reproduces the same contrast that exists in the negative.

Flat negatives (negatives with very little contrast between their lightest and darkest parts) should be printed on Hard paper, because it adds the contrast that is lacking in the negative.

Contrasty negatives (negatives with extreme contrast between their lightest and darkest parts) should be printed on Soft paper, because it subtracts from the contrast of the negative.

Notice in the pictures above that each negative prints well on only one grade of paper, and that these good prints are very nearly alike although they were made from very unlike negatives.

Contrast grades of papers are designated by numbers as follows:

- No. 1—a Soft paper for printing contrasty negatives.
- No. 2—a Medium paper for printing normal negatives.
- No. 3—a Hard paper for printing flat negatives.
- No. 4—an Extra Hard paper for printing extra flat negatives.

Defender Varigam paper (Pg. 81) will print all negatives on a single grade of paper, just by changing filters in front of the enlarger lens.

CLASSIFYING NEGATIVES. In determining proper paper contrast do not confuse contrast with density. Density means only the overall "blackness" of the negative, while contrast means the *difference* in blackness between the lightest and darkest parts. Very dense negatives, for instance, while often contrasty, are just as often flat, in which case they should be printed on hard paper. Very thin negatives also may be flat or contrasty.

The right grade of paper depends only on the *contrast* of the negative. The density of a negative affects only the time of exposure in printing.

DEVELOPING TIME. All paper manufacturers enclose instruction sheets with their papers in which they give the recommended developing time in various developers. Yet far too many amateurs ignore these recommendations and either "pull" the print from the developer to keep it from getting too black or "force" it for longer than the recommended time in an attempt to build up further contrast. In both cases they merely get bad prints.

Unlike negative material, paper contrast can be changed very little by changing the time of development. On chloride papers such as Velox the effect of longer development is merely to give the appearance of longer exposure, without any change in contrast. On chloro-bromide papers, which includes most enlarging papers, a very little increased contrast can be gained but usually at the expense of inferior tones. Warm toned papers grow progressively colder with increased development.

While some papers have considerable exposure "latitude," that merely means they will make acceptable prints when exposure and developing times are varied. Even they will make best prints only when you choose the right contrast, expose it correctly, and develop it for the recommended time.

CHOOSING SURFACE AND COLOR. This is largely a matter of personal taste, but the purpose and subject of the picture will also be factors.

Glossy papers show the widest brightness range from the most sparkling highlight to the blackest shadow. They are used wherever it is important to record extremely fine detail or delicate differences in shade.

Smooth papers are used when fine detail is wanted without the sheen of glossy stock. They have no noticeable surface texture.

Fine-Grained papers add richness to the print because of their slightly pebbled surface, yet they preserve good definition. They make excellent all around papers and are especially suited to portraits of young people.

Rough papers subdue detail and emphasize masses. Landscapes, portraits of old people, and character studies are often best on these papers.

Silk papers have a cloth-like surface that shines like silk and adds sparkle to snow and water scenes. They are also useful for many still-life subjects.

Ivory paper has a warm ivory tone that adds character to studies of elderly people, fireside scenes, sunsets, desert landscapes, etc.



Photographic Printing Papers

KODAK KODABROMIDE ENLARGING PAPER. Fast, chloro-bromide paper suited to exhibition prints which require rich blacks, sparkling highlights. Wide exposure and development latitude. Contrasts: 1, 2, 3, 4 (see opposite page). *State Catalog Number, Contrast, Size, and Quantity.*

67 H 4110—White, Glossy, (F), Single Weight.

Size	Quantity	Ship. Wt.	Price
4x5 in.	25 sheets	7 oz.	62c
	100 sheets	1 lb.	\$1.94
5x7 in.	25 sheets	10 oz.	90c
	100 sheets	2 lbs.	\$3.13
8x10 in.	25 sheets	1 lb.	1.99
	100 sheets	5 lbs.	6.84
11x14 in.	10 sheets	1 lb.	1.47

Double Weight Papers:

67 H 4109 T—White, Glossy, Smooth (F)

67 H 4111—White Luster, Fine Grain (E)

67 H 4113 T—Cream White Luster, Fine Grain (G)

Size	Quantity	Ship. Wt.	Price
4x5 in.	25 sheets	7 oz.	81c
	100 sheets	1 lb.	\$2.47
5x7 in.	25 sheets	10 oz.	1.19
	100 sheets	2 lbs.	4.04
8x10 in.	25 sheets	1 lb.	2.61
	100 sheets	5 lbs.	8.93
11x14 in.	10 sheets	1 lb.	1.94

67 H 4108 T—16x20 in., double weight, No. 2 contrast only. *State surface: F, E, or G. Ship. wt. 1 lb.*.....10 sheets for \$3.95

KODAK OPAL ENLARGING PAPER. Slow speed, chloro-bromide paper especially suited for portraiture. Produces prints of warmth, fine gradation. Normal contrast only, double weight. (G) Cream White Luster, fine grained; (R) Cream White Luster, tweed; (Y) Cream White Luster, Silk; (V) Cream White Matte, Suede. *State surface, size, and quantity. Ship. wt. 1 lb.*

67 H 4114 T—8x10 in.25 sheets for \$2.99
11x14 in.10 sheets for 2.18

HALOBROME ENLARGING PAPER. Professional paper available in amateur quantities only through Wards. Priced 10 to 15% below comparable papers. Brilliant, neutral black, chloro-bromide paper. Rich gradations, maximum latitude. Single weight. Contrasts: 2 and 3 (see opposite page). *State Catalog Number, Contrast, Size, and Quantity.*

67 H 4153—Glossy White

67 H 4154—Semi-matte. Lightly grained.

Size	Quantity	Ship. Wt.	Price
5x7 in.	25 sheets	10 oz.	81c
	100 sheets	2 lbs.	\$2.87
8x10 in.	25 sheets	1 lb.	1.84
	100 sheets	5 lbs.	6.29

KODAK MEDALIST ENLARGING PAPER. Extra-wide latitude makes exposure less critical. Permits contrast control through change in development time. Produces warmer tones than Kodabromide at left. High Luster, Smooth (J) surface gives glossy-type prints, but requires no ferrotyping—combines sparkle of glossies with ease of matte print drying methods. Contrasts: 2 and 3 (see opposite page). Single weight. *State Catalog Number, Size, Contrast, and Quantity.*

67 H 4105—Glossy White (F)

67 H 4106—High Luster Smooth (J)

Size	Quantity	Ship. Wt.	Price
5x7 in.	25 sheets	10 oz.	90c
	100 sheets	2 lbs.	\$3.13
8x10 in.	25 sheets	1 lb.	1.99
	100 sheets	5 lbs.	6.84

ANSCO CYKORA ENLARGING PAPER. Moderately high-speed with rich, warm-black tones, and high sheen. Contrasts: 2 and 3 (see opposite page). *State Cat. No., Contrast, Size, Quantity. Ship. wts.: 5x7, 10 oz.; 8x10, 1 lb.; 11x14, 1 lb.*

67 H 4150 T—Glossy White, Single weight.

67 H 4151 T—Kashmir White, slightly pebbled. Double weight.

67 H 4152 T—Silk White, silk-like texture. Double weight.

Catalog Number	5x7 in. 25 sheets	8x10 in. 25 sheets	11x14 in. 10 sheets
67 H 4150 T	90c	\$1.99	\$1.47
67 H 4151 T	\$1.19	2.61	1.94
67 H 4152 T	1.19	2.61	1.94

HALOID HALO CONTACT PAPER. Professional quality paper with rich, blue-black tones. Has long scale of tonal gradations, Glossy White, single weight. In two contrasts (see opposite page). *State Catalog Number, Size.*

67 H 4144—Contrast No. 2

67 H 4145—Contrast No. 3

Size	Quantity	Ship. Wt.	Price
2½x2½ in.	100 sheets	6 oz.	59c
2½x3½ in.	100 sheets	8 oz.	74c
2¾x4¼ in.	100 sheets	10 oz.	94c

KODAK VELITE CONTACT PAPER. Slow contact paper than can be processed in lighted room, 4 feet or more from 60-watt tungsten light. With No. 1 Photoflood (see Pg. 28), 2 or 3 seconds is sufficient time for exposure for all but extremely dense negatives. White, Glossy, Smooth. Single weight. Normal contrast.

67 H 4140—2½x3½-inch size.

Ship. wt. 3 oz.100 sheets for 81c

67 H 4141—2¾x4¼-inch size.

Ship. wt. 6 oz.100 sheets for 1.04

KODAK VELOX CONTACT PAPER. Quality chloro-bromide contact paper. Blue-black tone. Fast, wide latitude paper, single weight, White, Glossy. *State Catalog Number, Size, and Quantity.*

67 H 4117—Contrast No. 1

67 H 4118—Contrast No. 2

67 H 4119—Contrast No. 3

67 H 4120—Contrast No. 4

Size	Quantity	Ship. Wt.	Price
2½x2½ in.	100 sheets	6 oz.	65c
2½x3½ in.	100 sheets	8 oz.	81c
2¾x4¼ in.	25 sheets	6 oz.	35c
	100 sheets	10 oz.	\$1.04
4x5	100 sheets	14 oz.	1.56

DUPONT VARIGAM ENLARGING PAPER. Comes in a single grade only—yet on it you can print any negative to any degree of contrast you wish. Thus, Varigam eliminates the necessity of keeping several different grades of paper on hand. All you do is change filters in front of your enlarging lens (see filters sold separately below). Exposing Varigam through these filters will give all the contrasts from soft to hard, depending on filter used. The paper is medium speed, and is developed the same as any other. It can be processed in dim red light, but safelight filter 67 H 5012, Pg. 82, is recommended. *State Catalog Number, Size and Quantity.*

67 H 4121—Glossy, White (R), single weight.

67 H 4124—White Semi-Matte (A), single weight.

Size	Quantity	Ship. Wt.	Price
5x7 in.	25 sheets	10 oz.	90c
	100 sheets	2 lbs.	\$3.13
8x10 in.	25 sheets	1 lb.	1.99
	100 sheets	5 lbs.	6.84

67 H 4122—Cream White Silk (Y), double wt.

67 H 4123—Velvet Grain, White Luster (DL), double weight.

Size	Quantity	Ship. Wt.	Price
5x7 in.	25 sheets	10 oz.	\$1.19
	100 sheets	2 lbs.	4.04
8x10 in.	25 sheets	1 lb.	2.61
	100 sheets	5 lbs.	8.93

VARIGAM CONTRAST FILTERS. Use with paper above. Optical quality plastic filters in plastic frames, marked for degree of contrast. First 2 sets listed include holder that fastens on enlarger lens. No. 5 is normal contrast, smaller numbers are progressively softer; higher numbers harder. Ship. wt. set of 5, 8 oz.; set of 10, 12 oz.

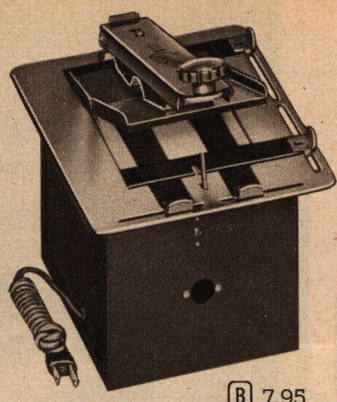
67 H 4130—Complete set of 10 filters.....\$7.49

67 H 4131—Set of 5—Nos. 1, 3, 5, 7, 10.... 4.29

67 H 4132—Set of 5—Nos. 2, 4, 6, 8, 9..... 4.29



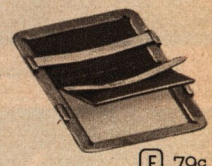
A 3.95



B 7.95



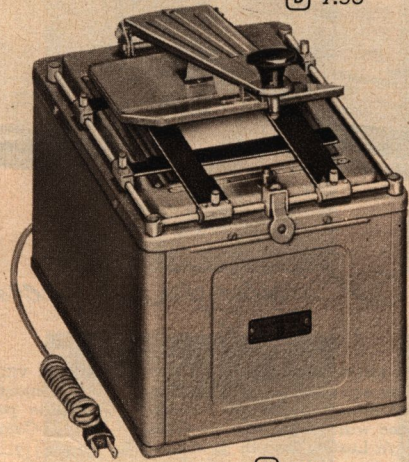
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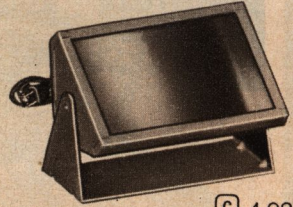
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D 12.75



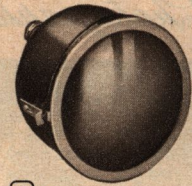
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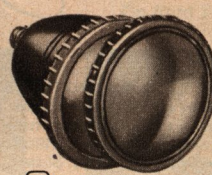
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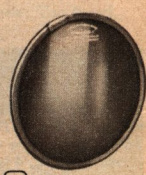
H 5.59



J 4.39



K 1.29



L 1.49

Printers are a Must for Every Darkroom

A CONTACT PRINT BOX Takes negatives from 35mm to 4x5 in. Matte white interior furnishes even diffused illumination. Convenient push switch controls print light. Hinged platen, padded facing. Clear printing glass. Sturdy all-metal construction. Size about 6 by 7½ by 8 in. with red bulb. Uses standard 25 watt white light (not included).
67 H 5085—Ship. wt. 4 lbs.....3.95

B COMPCO CONTACT PRINTER. Prints all negatives from 35mm to 4 by 5 inches. Four spring steel masking bands easily adjustable; fold back to admit negative, assure even margins, accurate corners. Double-hinged pressure back has sponge rubber facing and heavy pressure bar to assure all-over contact and even pressure. Platen does not lock in place, can be quickly lifted at any time. Single white light spreads even illumination through diffusion glass for good print quality—no hot spots. Red masking light permits accurate placement of paper, equal margins. All-metal construction with gray crackle finish and chromed trim. Size about 6½ by 7¾ by 9½ inches. Comes complete with red and white bulbs and diffusion glass.
67 H 5047—Ship. wt. 6 lbs.....7.95

C AIREQUIPT JUNIOR PRINTER. Prints negatives from 35mm to 4 by 5 in. and post card size. Top and left-hand margins set simultaneously. Two stainless steel bands complete the job. One-piece felt faced platen has spring actuated panel to hold paper in place until platen is lowered. Locks down for long exposures. Light goes on when platen is lowered, snaps off as platen opens. Diffusion glass spreads light of single white bulb evenly. Red masking light. Sturdy all-metal construction with gray hammerloid finish. Size about 6¼ by 7½ by 8½ inches. Complete with white and red bulbs.
67 H 4948—Ship. wt. 6 lbs.....9.45

D AIREQUIPT PHOTOCRAT PRINTER. Sturdily built all-metal printer takes all negatives from 35mm to 4 by 5 in. Improved masking—four metal curtains operated by knobs at sides slide up to frame negative—calibrated slots permit accurate margins. One-piece platen has small spring plate to hold paper firmly until platen is lowered. Felt facing assures even pressure. Single white light snaps on as platen is lowered; snaps off on release. Light can be set in "on" position to use printer as retouching frame. Red masking bulb. Sturdy all-metal construction. Attractive blue hammerloid finish. Size about 6½ by 7 by 8½ in. Complete with bulbs.
67 H 5052—Shipping weight 8 lbs.....12.75

E BRUMBURGER 5X7 PRINTER. All-metal contact printer designed to speed and facilitate your work. Takes negatives from 35mm to 5 by 7 in. Five spring steel masking bands, hinged for easy insertion and framing of negatives. Calibrated scale permits accurate margin control. Double hinged platen has heavy metal bar at top and a sponge rubber facing to give firm, even pressure; locks in place during exposure; spring release. Two-bulb white light source passes through two layers of glass—one opal, one clear—that you will be assured of an even spread of illumination. Red masking light. Door at rear opens for access to interior and dodging. All-metal construction with gray crackle finish. Size about 7½ by 8½ by 12½ in. With bulbs.
67 H 4933 M—Ship. wt. 18 lbs.....18.95

F METAL PRINT FRAME. Prints from negatives up to 4x5 in. Hinged back, spring pressure clamps. Mask not included. Comes with glass.
67 H 5005—Shipping weight 8 oz.....79c

G TO **L** DARKROOM SAFELIGHTS AND FILTERS. It's not necessary to grope in the dark in your darkroom. With one of the safelights below and the proper filter, you can have all the light you need for efficient work without danger of spoiling film or paper. Brumberger (G) has 6-ft. cord and plug so you can place it conveniently; (H), (J), (K) screw into standard light socket.

(G) Brumberger-Bracket-Type Safelight. For maximum utility. Stands on table or shelf, has screw slots for attaching to wall or ceiling. Hinged to swing up and down. All-metal, hinged door. On-off switch. 6-ft. cord. With 5x7-in. amber filter for paper. Order other filters below.
67 H 5038—With 7-watt bulb. Ship. wt. 2 lbs. 8 oz. 4.98

Filters for Brumberger Safelight. Rectangular 5x7-in. filters for safelight (G) above. Red for Ortho film like Verichrome and Plenachrome; Green for Panchromatic film; Amber for all paper but Varigam.
67 H 5039—State color. Ship. wt. 8 oz.....89c

(H) Kodak Darkroom Lamp. Metal body, screw-on plastic filter retaining ring. Takes filters (L) below. With Wratten 5½-in. OA (greenish-yellow) filter for all printing papers but Varigam. With 10-watt bulb.
67 H 4998—Ship. wt. 1 lb. 10 oz.....5.59

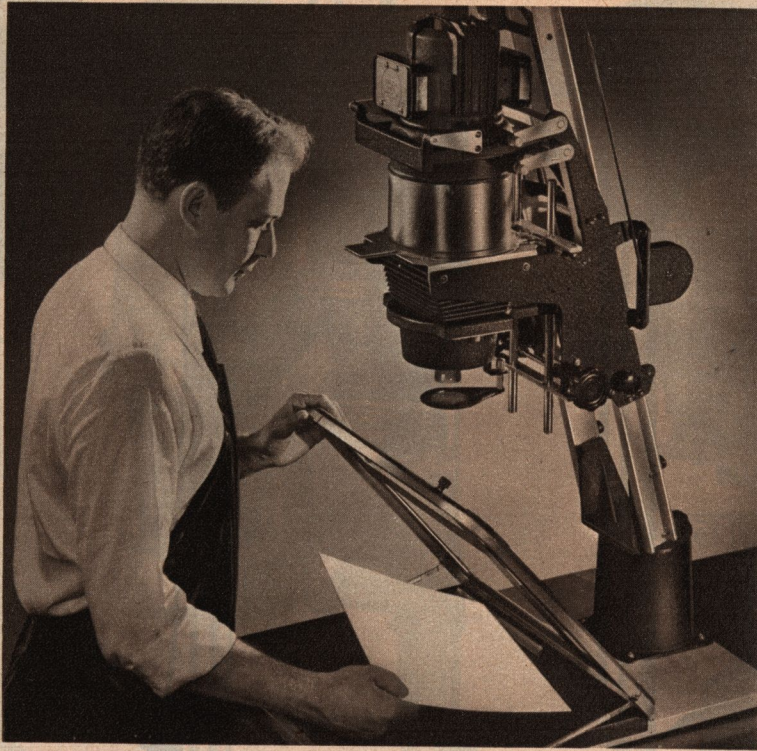
(J) Compeco Safelight. All-metal body, spring-lock filter holder. Takes filters (L) below. With 5½-in. Dupont S55-X filter and 10-watt bulb.
67 H 4968—Shipping weight 2 lbs.....4.39

(K) Eclipse Safelight. All plastic construction. With 2 plastic filters; orange for contact paper; red for enlarging paper. With 15-watt bulb.
67 H 4972—Shipping weight 1 lb. 8 oz.....1.29

(L) Safelight Filters. 5½-in. filters mounted between glass. For (H) and (J) safelights above. Series OA, 3 and 2 are Kodak Wratten filters, the S-55X is a Du Pont filter. Ship. wt. each, 4 oz.
67 H 5003—Series 3 (green). For inspection of panchromatic film during late stages of development...1.49
67 H 5002—Series OA (greenish-yellow). A bright filter for use with all papers but Varigam.....1.49
67 H 5011—Series 2 (dark red). For orthochromatic film like Sensachrome, Verichrome, Plenachrome...1.49
67 H 5012—S-55X (orange-brown). Darker filter for Varigam and other printing papers.....1.49

USES FOR WAX IN A DARKROOM

Here are some uses for hard, paste-type waxes. Wax grooves of developing reels for easy loading and quick drying. Wax rails of your enlarger for easy adjustment and rustproofing. Wax floor and furniture for easy cleaning. Wax drawer guides to prevent sticking. Finally wax prints for high luster and a protective finish.



Enlarging is Fun...and It's Easy Too

ENLARGING IS FUN

Enlarging is fun, but it's more than that, too. The praise of friends for the portrait on your bookcase, or the larger mural on the wall, is an added reward of this fascinating hobby.

Making "blow-ups" of your favorite pictures gives you a feeling of accomplishment, and you will look forward to the evening set aside for enlarging. A batch of new negatives, or some old favorites, will provide sufficient material for a pleasant time.

Any small snapshot can be improved just by enlarging it. The size alone makes it more effective by giving it more life and added depth. Whether framed or in the album, enlargements look much better than contact prints. You'll find that the old prints look dull and uninteresting next to a full-size picture you've made yourself.

The camera can record only the scene before it, and the best pictures are made in the darkroom. By enlarging you add size, composition, tone, and quality—all the elements of a real work of art. Start now to improve your pictures with an enlarger.

Enlarging lets you compose and improve your pictures to such an extent that many of them may be of prize-winning quality. But, since contact prints are seldom entered in a picture contest or salon, an enlarger may bring you the thrill that comes to many amateurs—the thrill of making a prize-winning picture or an acceptable salon print.

ENLARGING IS EASY

Enlarging is as easy as projecting 35mm slides. Basically, an enlarger is a projector with a few additional refinements. Enlargers project images downward for convenience in operating and to conserve space.

The enlarger and enlarging paper are the only basic things needed besides your regular darkroom supplies. Setting up is simple, and after the negative is placed in the carrier, you are ready to start.

Enlarging improves almost any picture, but with a few simple techniques, you can progress from "oversize" snapshots to prize-winning photographs. The few simple techniques are "cropping," "dodging," and "vignetting," which are not possible in normal contact printing. (See pictures below).

"Cropping" means printing and enlarging only that part of the negative which is most interesting. This gives emphasis to the subject and improves composition.

"Dodging" means holding back the light from certain areas of the print for added contrast or more detail. A piece of cardboard held between the lens and the paper casts a shadow—reduces exposure in that area.

"Vignetting" means printing the main subject and letting the background fade into the white of the paper. A piece of cardboard with a hole in it is held between the lens and the paper to produce this effect. See pictures of these techniques below.

ENLARGING TEACHES

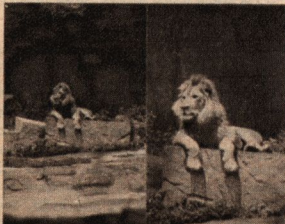
Enlarging teaches you to make better pictures. Imperfections are more apparent when enlarged. While they can be corrected during printing, you also learn to eliminate these by better camera technique as well.

Suppose you shoot a scene with too many elements in it. With a negative of this scene in the enlarger, you realize that you could have taken the picture at closer range, utilizing most of the film area for the main subject. Larger images on your negative will provide prints of better detail and tone quality.

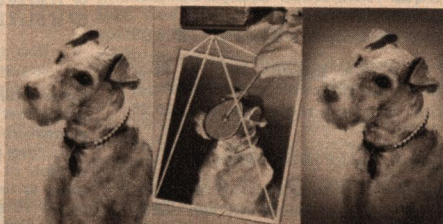
Expression, position of subject, and composition are carefully watched in the enlarging process, but often neglected when taking the picture. You soon learn to give more attention to details and thus to improve your shooting technique as well as your pictures.

Although unnoticed in contact prints, distracting backgrounds show up readily in enlargements. Many times, these backgrounds can be avoided when shooting, and enlarging alerts one to be aware of the background as well as the subject in future camera work.

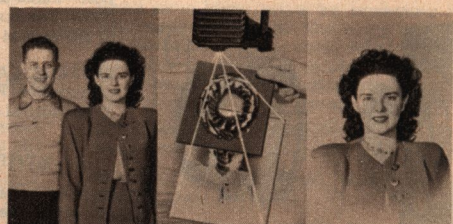
Be sure to choose an enlarger that will accept the size of your negatives. If you have a temporary darkroom such as the kitchen or bathroom, you will want a model that folds conveniently into a small case for storing. When you use your enlarger, you will find out that it is not only fun, not only easy, but it teaches you photography as well.



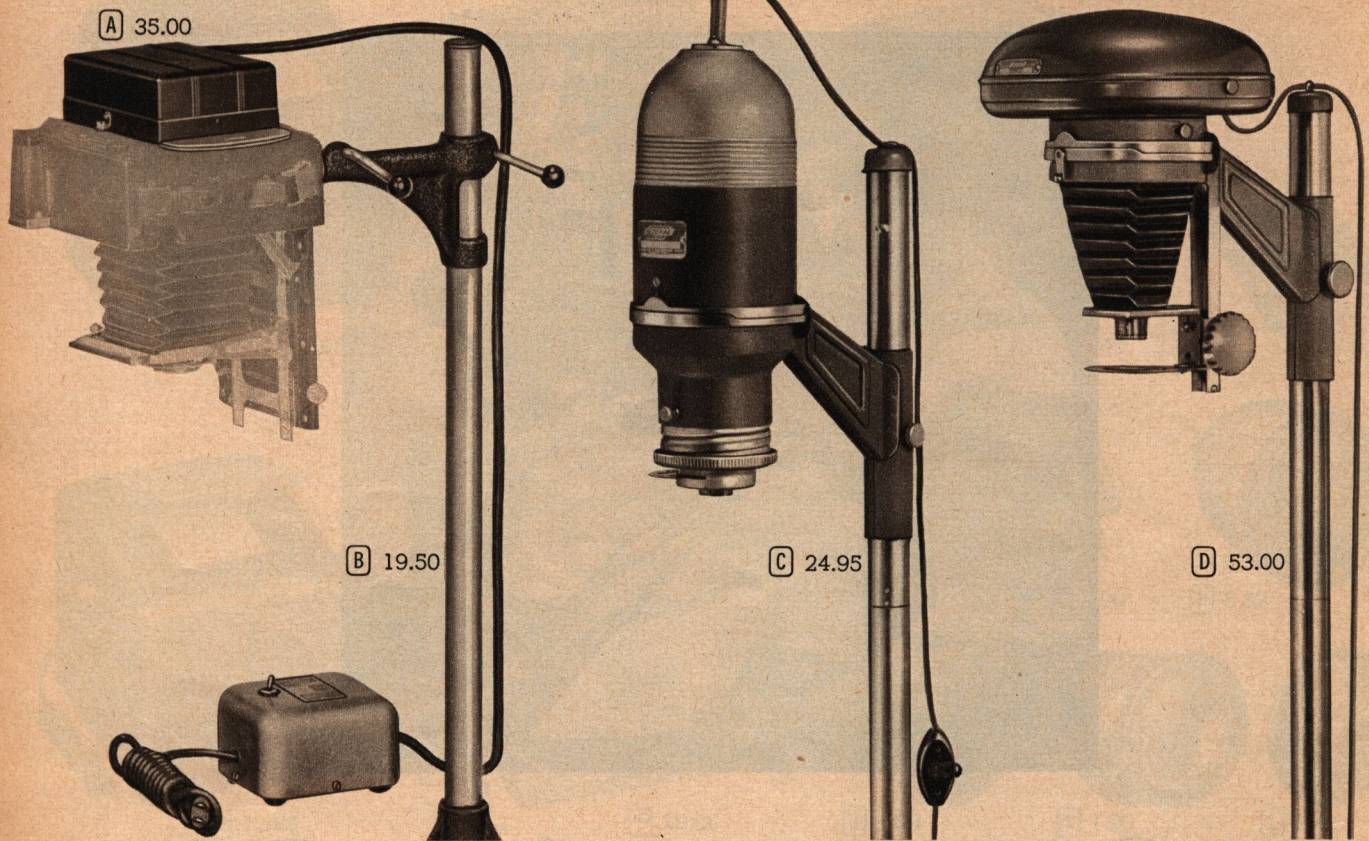
CROPPING



DODGING



VIGNETTING

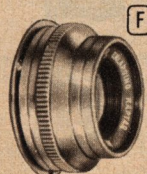


Low-priced Enlargers by Graflex and Federal

A GRAFLARGER ENLARGING BACK. Let your Graphic camera double as a compact cool-light enlarger and make your blow-ups through the same fine lens you have on your camera. The cool-light back attaches instantly to Graflok backs. Complete with spring kits for use on Graphic and Graflex back cameras. The cold light source provides a soft, fast light which will not buckle or harm your negatives—gives sharp, crisp prints.

Portable, easy to set up anywhere. Excellent for travelers who must carry their darkroom with them. Can be used with Graflarger Stand (below) or on a tripod; set on table for horizontal wall projections. Also a fine transparency viewer or retouching stand. Separate switch box for added convenience. Complete with glassless negative carrier for full camera size negative. No Credit Charge. *Postpaid.*
 67 HN 4070LT—For 4x5 cameras . . \$35.00
 67 HN 4071LT—For 3½x4¼ cameras 35.00
 67 HN 4072LT—For 2¼x3¼ cameras 35.00

B GRAFLARGER STAND. Holds Graphic cameras when used as enlargers. Can also be used as copying stand. Complete with mounting bolts to attach to table or your own baseboard. Flexibility makes adjustments easy. Levers lock stand securely in any position. 30 inches high.
 67 HN 4073MT—*Postpaid* \$19.50



C FEDERAL MODEL 240 ENLARGER. Latest model Federal is easy-to-use—combines quality with economical price. Diffusion light system provides even illumination. Accepts negatives up to 2¼x3¼ inch size. Enlarges from 1½ to 7 times on 12x14 inch metal baseboard. Revolving head lets you make extra-big prints by projecting on floor. 3½-inch f/7.9 lens focuses smoothly, has click stops, red focusing filter. Built-in focusing target makes focusing easy. Welded steel construction. Two-piece, 30-inch upright post takes down for storage. Supplied with 75-watt lamp. No Credit Charge on this item. See Page 74 for complete outfit. *Mailable.*
 67 HN 4018M—*Postpaid*. Only \$2.50 Down . . \$24.95

D FEDERAL COLD-LITE ENLARGER MODEL 269. Federal's most popular enlarger, in a cold-light model. Cold-light will not buckle or damage your negatives. Accepts all negative sizes from 35mm to 2¼ by 3¼ in. Breaks down for compact storage in convenient case, listed separately below. Has all Federal features listed on opposite page, including: interchangeable lens board, sturdy welded steel construction, long bellows extension for use with long lenses or for reductions with short lenses, metal baseboard, safety focusing filter, built-in focusing target to make focusing easy, and convertible rapid-shift carrier. Order glassless negative carriers for other film sizes from opposite page. Head can be revolved to project on floor for bigger blow-ups.
 3½-in. f/6.3 Decar anastigmat lens provides needle sharp prints. Enlarges 1½ to 7 times on 14 by 16-inch baseboard. Two-section, 30-in. upright post—takes down easily. No Credit Charge on these items. See Page 100 for Terms. *Mailable.*
 67 HN 4006M—*Postpaid*. Only \$5.50 Down . . \$53.00

STORAGE CASE for above. Sturdily built of fiber composition. Protects enlarger from dust and damage.
 67 HN 4015M—With carrying handle. *Postpaid*. \$10.25

STOP THAT SLIPPING TRIPOD

Rubber erasers made to slip over the end of a pencil make excellent tips for small tripods. They keep metal tripod tips from slipping on smooth surfaces, and protect wood surfaces from scratches.

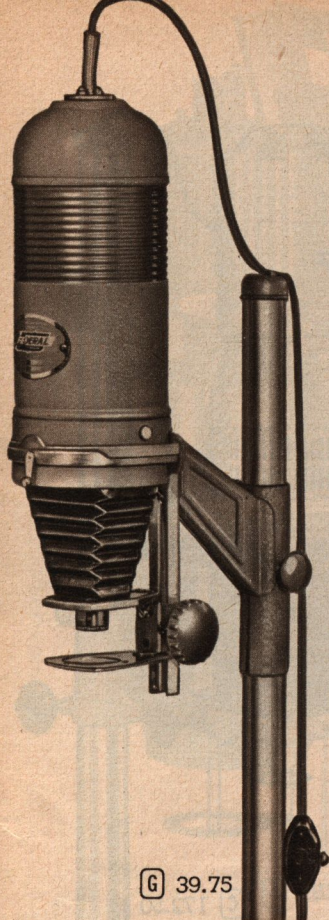
E KODAK ENLARGING LENSES. Fine color corrected Ektanon f/4.5 coated lenses. Two-inch lens has one-piece molded plastic barrel and 2⅝x2⅝-in. lens board; all others have lens caps, metal barrels, mounting rings, and 2⅝x2⅝-in. metal lensboards. No Credit Charge. *Postpaid.*
 67 HN 5100LT—2-inch focal length (50 mm.) . . \$15.00
 67 HN 5101LT—3-inch focal length (75 mm.) . . 26.00
 67 HN 5102LT—4-inch focal length (105 mm.) . . 32.50
 67 HN 5103LT—5⅝-in. focal length (135 mm.) . . 44.50
 67 HN 5104LT—6⅝-in. focal length (161 mm.) . . 55.00

F WOLLENSAK ENLARGING LENSES. Coated enlarging Raptor f/4.5 lenses, iris diaphragm. With flanges for mounting on any lensboard. Optically corrected for spherical and chromatic aberrations. Lens caps. Ship. wt. each 6 oz.
 67 H 5105LT—2-inch focal length (50 mm.) . . \$25.50
 67 H 5106LT—3-inch focal length (75 mm.) . . . 27.95
 67 H 5107LT—3½-inch focal length (90 mm.) . . 28.95
 67 H 5108LT—5-inch focal length (125 mm.) . . 38.95
 67 H 5109LT—5⅝-inch focal length (135 mm.) . . 41.95
 67 H 5110LT—6⅝-inch focal length (162 mm.) . . 53.95
 67 H 5111LT—7½-inch focal length (190 mm.) . . 74.50

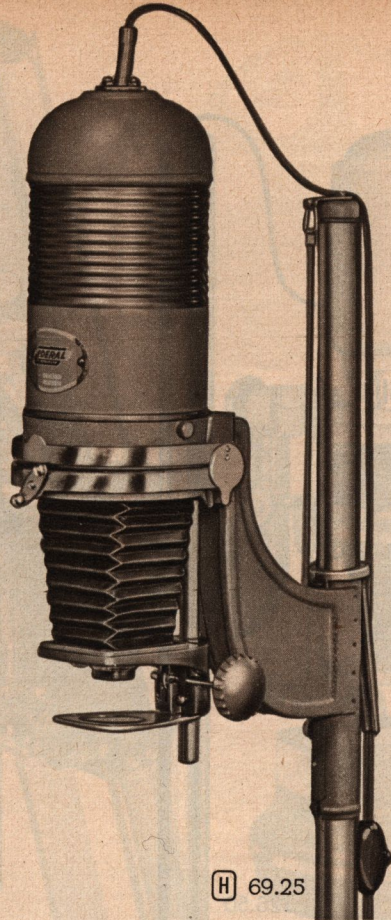
Wollensak lenses above but with mounting disc for use on Omega D-2, and B-6. Ship. wt. 8 oz.
 67 H 5112LT—2-inch focal length (50 mm.) . . . \$26.50
 67 H 5113LT—3-inch focal length (75 mm.) . . . 28.95
 67 H 5114LT—3½-inch focal length (90 mm.) . . 29.95
 67 H 5115LT—5-inch focal length (125 mm.) . . 39.95
 67 H 5116LT—5⅝-inch focal length (135 mm.) . . 42.95
 67 H 5117LT—6⅝-inch focal length (162 mm.) . . 54.95

TEST STRIPS SAVE PAPER

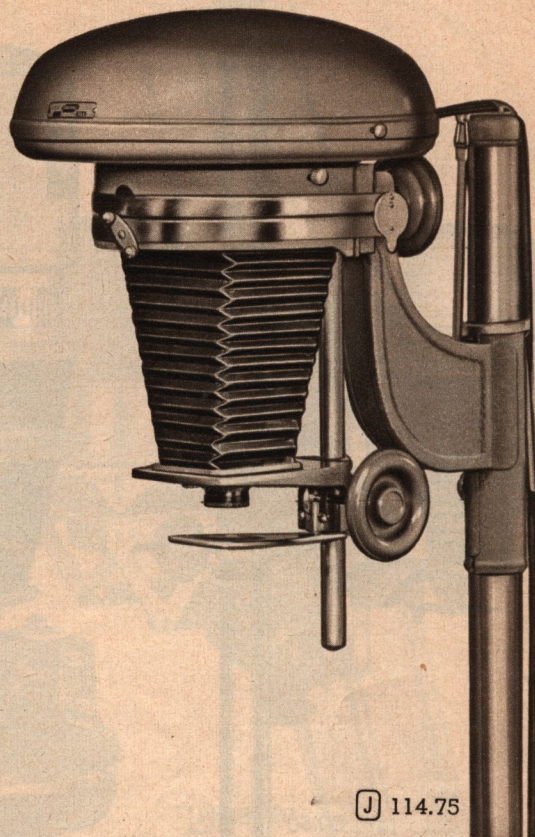
Determine proper exposure time for enlargements by using test strips. Place a small piece of enlarging paper in the easel and cover with cardboard. Turn the enlarger on and uncover the paper one section at a time at equal intervals. If the interval used is ten seconds, then the last section will receive 10 seconds, next to last 20 seconds, etc. Develop the strip and the section with the best tone values indicates proper exposure time.



G 39.75



H 69.25



J 114.75

Federal Enlargers are America's Most Popular

Federal enlargers are well engineered and sturdily built. They can be depended upon for detailed blow-ups from 35mm to the largest size negative it handles. The welded steel construction is rigid and strong to eliminate vibration and give needle-sharp prints.

Enlargers (C) and (D) on opposite page and (G) and (H) on this page combine precision construction with compactness, as they can be quickly disassembled for storage in the carrying cases listed below. This is especially convenient for photographers without permanent darkrooms, to keep the enlarger protected and out of the way when it is not in use. All Federal enlargers have the following features:

- (1) Tested, anastigmat lenses.
- (2) Interchangeable lensboards so you can switch lenses easily.
- (3) Long extension bellows, permitting the use of long focus lenses, and the making of reductions with short focus lenses.
- (4) Focusing target, so it's easy to get needle-sharp focus, even when printing from dense negatives.
- (5) Safety filter in swivel holder.
- (6) Convertible rapid shift carrier that permits printing from separate negatives, or from strips of film without cutting. Each carrier comes with two glasses which are removable, so you can use accessory glassless carriers (order separately below).
- (7) Enlarger heads

can be revolved around the posts so you can project on the floor to make oversize enlargements of almost any size.

Three basic light systems are represented in this group of enlargers. Any of them will make excellent enlargements, but each has its own special advantages—choose the one that fits your needs.

DIFFUSION LIGHT SYSTEM spreads the light over the negative evenly. The slight softness of the resulting print minimizes many negative defects. Can be operated on alternating or direct current.

CONDENSER LIGHT SYSTEM focuses the light rays evenly and sharply through negative to lens, producing prints of great detail and definition, and crisp contrast. Can be operated on alternating or direct current.

COLD LIGHT SYSTEM uses a fluorescent type, instant starting light that gives cool illumination. It maintains constant printing speed and color temperature for thousands of hours of operation. High print speed is uniform even with variations in line voltage, and the low temperature means it cannot buckle negatives, whether wet or dry, during long exposures. Can be operated on 105- to 125-volt, 60-cycle A.C. only.

G FEDERAL ENLARGER MODEL 269. Takes negatives from 35mm to 2 1/4 by 3 1/4-inch size. Has all features listed above plus: A sharp 3 1/2-inch f/6.3 Decar lens. Enlarges from 1 1/2 to 7 times the original negative size on the 14 by 16-inch baseboard. Upright post is 30 inches high, and is built in two sections so it will take down for packing in storage case (order separately below). See listing at right for glassless negative carriers. No Credit Charge on these items.

67 HN 4043 M—With Diffusion Light System. Postpaid. Only \$4 Down on Terms. \$39.75

STORAGE CASES. Sturdily built cases that will protect your enlarger from dust and damage. Fiber composition. Carrying handle. Postpaid.

67 HN 4047 M—For Model 269, Diffusion Light System and Model 135. \$7.25
67 HN 4061 M—For Model 311. 10.25

EASY MONTHLY TERMS. You can equip your entire darkroom with a small Down Payment and small Monthly Payments. See Page 100 for complete details of Wards Terms and payments.

H FEDERAL ENLARGER MODEL 311. Takes negatives from 35mm to 2 1/4 by 3 1/4-in. size. Has all features above plus: A 3 1/2-inch, coated f/4.5 Octar lens. Enlarges from 1 to 8 times original negative size on the 16 by 18-inch baseboard. Built-in focusing target enables you to obtain needle-sharp prints. Spring-actuated metal tape counterbalance gives fingertip up and down movement of the enlarger head. Non-slip enlarger arm clutch operates with one hand. Upright post is 36 inches high—takes down for packing in storage case (order separately at left). See listing below for glassless negative carriers. No Credit Charge on these items.

67 HN 4051 M—With Single Condenser Light System. Postpaid. Only \$7 Down on Terms. \$69.25

GLASSLESS NEGATIVE CARRIERS. Convert standard carrier to glassless carrier. Each takes one negative size only, either 35mm, Bantam, 2 1/4 x 2 1/4, or 2 1/4 x 3 1/4 in. State negative size wanted.

67 HN 4010—For Model 311. Postpaid. \$1.50
67 HN 4009—For Model 269. Postpaid. 1.00
67 HN 4024 T—For Model 450. Postpaid. 2.00

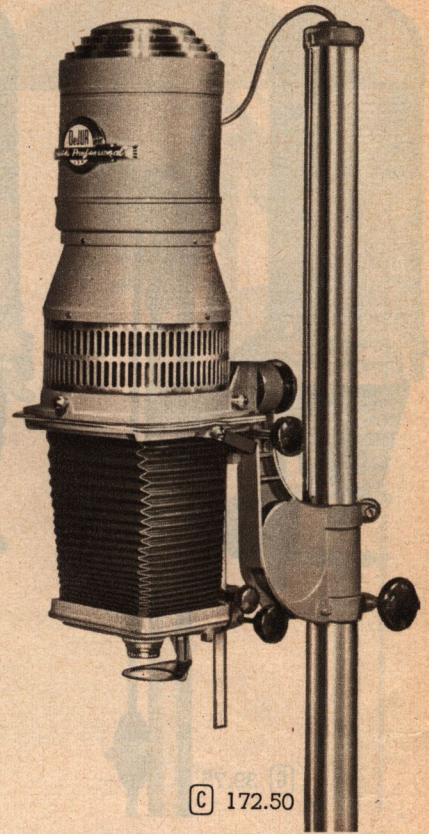
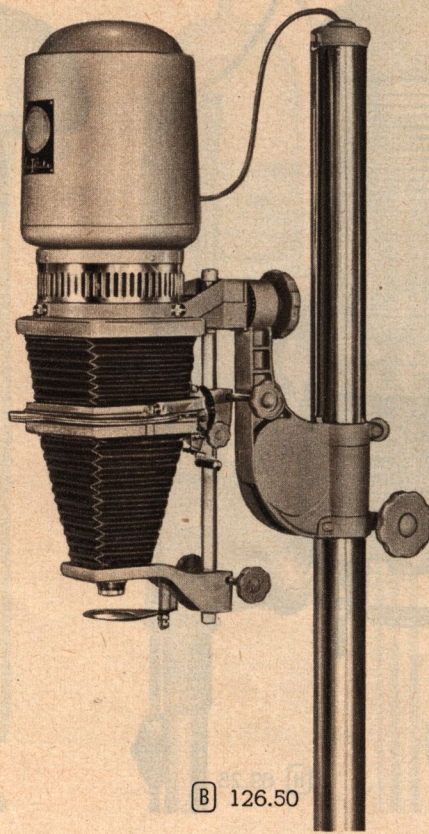
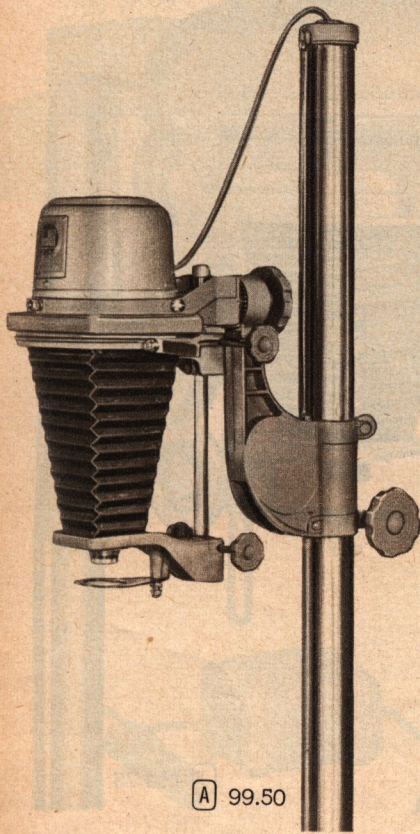
J FEDERAL 4x5-IN. ENLARGER. A fine precision instrument, designed not only for advanced amateurs, but for professional and commercial photographers as well.

Takes negatives from 35mm to 4 by 5-inch size. Has all features above plus: A 5 1/2-in., coated f/4.5 Octar lens. Enlarges 1 to 4 times the original negative size on the 18 by 25-inch baseboard. The negative carrier has a built-in focusing target that gives you needle-sharp prints. Calibrated swivel head allows you to make extra-large prints by projecting horizontally against the wall. The non-slip clutch and counterbalance assure easy, accurate, one-hand control of the head. One piece upright post is 36 inches high. Order glassless negative carriers at left. No Credit Charge. Postpaid.

67 HN 4026 MT—Model 450CL. With Cold-Lite System (illustrated). Only \$11.50 Down. . . \$114.75

67 HN 4027 MT—Model 450. With Diffusion Light System. Only \$11 Down. \$109.50

67 HN 4025 MT—Model 470. With Double Condenser Light System for maximum definition and illumination. Only \$13 Down. \$129.50



DeJur Enlargers are Fast and Versatile

DeJur enlargers are made to the highest precision standards to meet the most exacting requirements for black and white or color work. All of them have the following features:

(1) Rotating type glassless negative carriers (except on the Professional) allow you to revolve your negative to any position you want after it has been put in the enlarger. Being glassless, they minimize trouble from dust. The Professional Model will accept the rotating carriers by using the adapter below; non-rotating carriers are also listed. (2) Long bellows extension to permit use of long focus lenses, or the making of reductions with short lenses. (3) Revolving and tilting heads to allow projection on floor or wall for extra-big enlargements. Tilting scale calibrated in degrees for exact repositioning. (4) Heads mounted on ball bearings and counter-balanced for one-hand movement. (5) Dual knobs on all controls, with micrometer adjustment, to allow right or left-hand operation. (6) Die-cast, vibrationless construction for sharp prints—even when head is raised to the top for big "blow-ups."

STANDARD MODELS have condenser type illumination with two plano-convex condensing lenses. Heat absorbing filter between light source and condensers protects your negatives. Condenser units easily re-

moved for cleaning. Scientifically ventilated lamphouse is light-tight, yet remains cool. For AC or DC.

KOOLITE MODELS have new fluorescent "Koolite" illumination instead of the standard lamphouse and condensing lenses. Instant-starting—never gets warmer than body temperature—maintains constant printing speed and color temperature for 10,000 hours of operation. High-printing speed is uniform even with variations in line voltage, and low temperature means it cannot buckle negatives, either wet or dry. Covers entire negative evenly with any focal length lens. The smaller size lamphouse also permits higher elevation (bigger enlargement on the easel) under low ceilings. Must be operated on AC only.

MANY ACCESSORIES AVAILABLE. DeJur enlargers can be equipped with Camera Backs for copying; Copying Lights; Color Heads, Tripod Adapters so enlarger can be used with camera back on a tripod as a view camera; and Camera Support Bracket to hold any still or movie camera on the post for copying or tilting. Write Bob Adams (Page 93) for full information and prices of accessories, or for Koolite heads to fit your present DeJur enlarger.

A DEJUR VERSATILE II. For negatives of all sizes from 35mm to 2 1/4 by 3 1/4 in., singly or in strips. Moderately priced enlarger with top DeJur quality and all features described above. Enlarges 1 to 9 times on baseboard with lens furnished. Baseboard 17 3/4 by 23 3/4 in. Post 38 in. high.

With 3 1/2-in. f/4.5 coated anastigmat lens, lamp, and instructions. Choice of one glassless negative carrier listed below. *State size wanted.* No Credit Charge. Only \$10 Down. *Prepaid.*

67 HN 4012 RT—Koolite model (shown) . . . \$99.50
67 HN 4029 RT—Standard model. 99.50

ROTATING NEGATIVE CARRIERS. For Versatile model enlargers. Fit Professional enlarger at right if used with the carrier adapter below. Glassless type. Size: 35mm, Bantam, 2" x 2" mounted transparency, 1 1/2 x 2 1/2, 2 1/4 x 2 1/4, 2 1/4 x 3 1/4 (roll, cut film, or film pack). *Postpaid.*

67 HN 4032 T—*State size wanted.* Each 5.95

CARRIER ADAPTER for DeJur Professional enlarger. Uses negative carriers above.

67 HN 4069 T—*Postpaid.* \$12.35

86 WARDS 2

B DEJUR VERSATILE I. For negatives of all sizes from 35 mm to 2 1/4 by 3 1/4 in., singly or in strips. With all the quality and features of the Versatile II at left plus "distortion control." The negative carrier is in the center of the bellows, where it can be tilted to create or correct distortion (particularly useful for architectural photography). When the easel is tilted in the opposite direction all parts of the image remain in sharp focus even with the lens wide open. Focusing can be done with either the lens or the negative carrier, thus permitting the use of a wide range of lenses with the same condensers. Enlarges 1 to 8 times on the baseboard with lens furnished.

Hardwood baseboard size 17 3/4 by 23 3/4 inches. Post 38 inches high. With 3 1/2-in. f/4.5 coated anastigmat lens on 2 5/8 by 2 5/8-in. lensboard, lamp, and booklet of instructions. Choice of one glassless negative carrier any size from 35mm to 2 1/4 x 3 1/4 in. listed at left. *State size wanted.* No Credit Charge. \$13 Down on Terms—see Page 100 for details. *Prepaid.*

67 HN 4031 RT—Standard model (shown) . . \$126.50

67 HN 4011 RT—Koolite model. 126.50

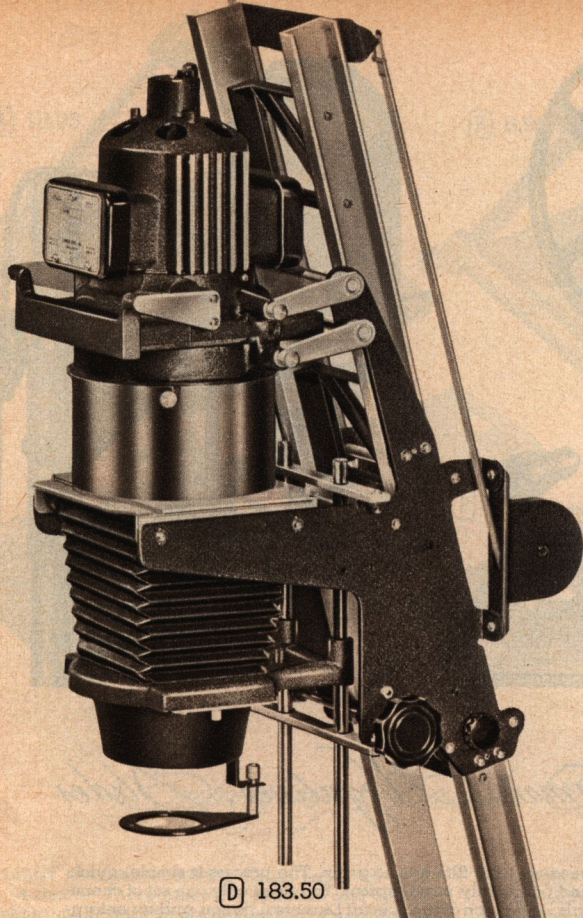
C DEJUR PROFESSIONAL ENLARGER. For top quality enlarging of negatives of all size from 35mm to 4 by 5 inches. Designed to meet the exacting requirements of professionals and advanced amateurs. This fine enlarger has all the regular DeJur features described above—plus advanced "distortion control." Similar in effect to that on the Versatile I at left, but distortion is introduced or corrected by tilting calibrated lensboard instead of negative carrier. Enlarges 1 to 5 times on baseboard with lens furnished. Hardwood baseboard 18 by 27 in. Post 38 in. high. For either 4 by 4 or 2 5/8 in. by 2 5/8-in. lensboard.

With 5 1/2-in. f/4.5 coated anastigmat lens on 4 by 4-in. lensboard, lamp, and booklet of instructions. Choice of one glassless negative carrier listed below. *State size wanted.* No Credit Charge. Only \$17.50 Down. *Express Prepaid.*

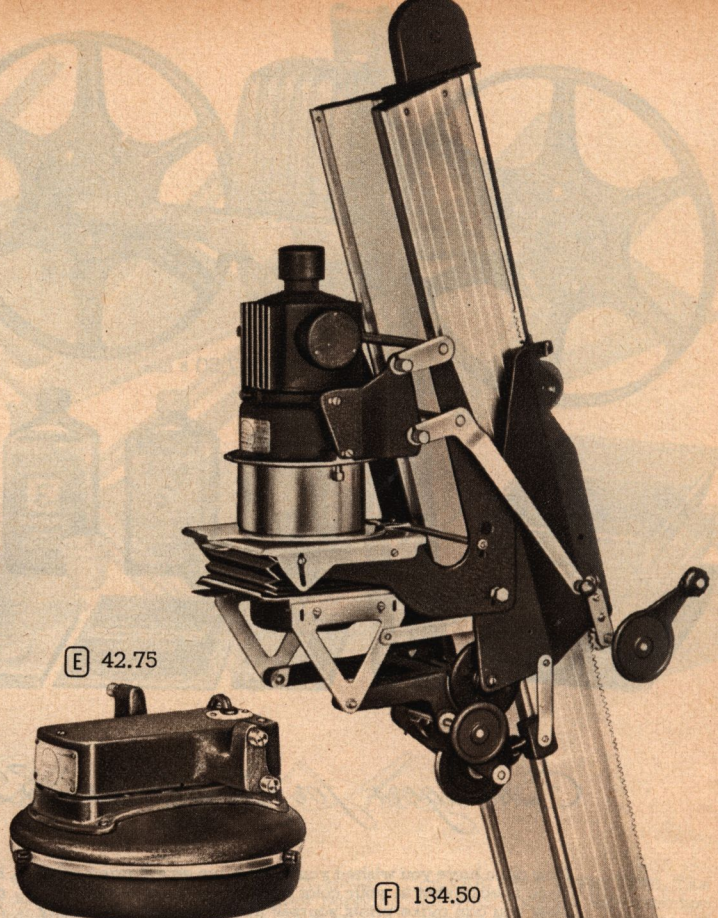
67 HN 4021 RT—Standard model (shown). \$172.50

67 HN 4013 RT—Koolite model. 172.50

67 HN 4030 T—Professional Glassless Carriers for above. Non-rotating. Sizes 35mm, 2 1/4 x 2 1/4, 2 1/4 x 3 1/4, 3 1/4 x 4 1/4, 4 x 5 in. *State size when ordering.* *Postpaid.* \$7.70



D 183.50



E 42.75

F 134.50

Omega Enlargers for Professional Quality

These are professional quality Omega Enlargers. They produce sharp, sparkling prints in black and white and color. Equipped with many precision-built features to lessen darkroom work and insure better prints. Condenser type lighting gives your enlargements greater sharpness and detail; efficient condensers focus all light accurately in any lens you are using. Color head permits quick insertion of filters required for color printing. Enlarger head is delicately balanced and

rides on rigid girder supports that incline forward to allow room on the baseboard for huge enlargements. Heads can easily be moved up or down with one hand. Perfectly balanced construction avoids fuzzy enlargements. Post revolves on base for floor projection when making the occasional extra-large blow-up. Scientifically ventilated lamphouse remains cool though light-tight. With 75-watt enlarging bulb for 110-120 volts, AC or DC. For Wards Monthly Payment Terms see Page 100.

D OMEGA D-2 ENLARGER. Makes brilliant enlargements from any size negative up to 4x5 in. Accurate, twin-guide, micrometer focusing. Interchangeable lensboard. Produces prints of exceptional sharpness.

Complete with 6½-inch condensers and 2¾-inch cone type lens mount for lenses from 4⅝ to 6⅝-in. focal length. Hardwood base measures 26x17 in. Vertical height to top of post rails 43 inches—height with head raised is 55 inches. Universal glass filmholder for negatives up to 4x5 inches. Lens not included—order Wollensak lens with mounting disk, Page 84. For prices and special order of this model equipped with Omegalite, write Bob Adams (see Page 93). No Credit Charge on this enlarger. *Express Prepaid.*

67 HN 4033 RT—With color head as shown above. \$18.50 Down.....\$183.50
67 HN 4014 RT—Without color head. \$17 Down..... 168.50

E OMEGALITE HEAD. For Omega D-2. Diffuses cold light evenly over negatives from 35mm to 4x5 inches. Softer prints won't show dust, grain, minor film faults. Instant starting 8¼-in. circular fluorescent lamp—smaller head permits higher elevation of enlarger under low ceilings for bigger prints.
67 HN 4035 T—No Credit Charge. *Postpaid.* \$4.50 Down.....\$42.75

CONDENSERS. Fit Omega D-2. With matching Omega lens mounts. *Postpaid.*
67 HN 4086 T—Matched 3½ in. Use with 2-in. or shorter lenses.\$19.30
67 HN 4087 T—Matched 4½ in. Use with 3-in. lenses..... 23.30
67 HN 4088 T—Matched 5 in. Use with 3½ to 4-in. lenses..... 23.30

67 HN 4016 T — GLASSLESS CARRIERS. 35mm, Bantam, 2¼x2¼, 2¼x3¼ (specify for roll, cut or film pack), 3¼x4¼ or 4x5 in. *State size. Postpaid.* \$6.85

UNIVERSAL GLASS NEGATIVE CARRIER. For negatives up to 4 by 5 inches.
67 HN 4017 T—*Postpaid.*.....\$11.70

RAPID SHIFT CARRIER. For 35mm, 2¼x2¼ or 2¼x3¼-in. roll film negatives in uncut rolls. Upper plate is lifted by spring when pressure is released, allowing film to be advanced easily without removing from carrier.
67 HN 4037 T—*State size wanted. Postpaid.*.....\$13.80

For Color Head, Filter Holder, Copy Attachment, Lens Mounts, Lenses, or other Omega accessories write Bob Adams—See Page 93 for details.

F NEW AUTOMEGA B-5 ENLARGER. With true automatic focus. Just slip any negative up to 2¼x3¼ inches into the carrier and run the enlarger up or down until you see the size picture you want. The easel image is always in sharp focus—ready to print. You can readily change lenses, and every print will still be in exact focus. "Micro" Auto-focusing is achieved by the large pulley-like wheel below the head which rides on an accurately machined track designed for exact focal length of lens being used. Two of these tracks can be mounted at same time so any two lenses from 2 to 3½-in. focal length can be interchanged. Complete with double condensers for 3½-in. lens. Lens, lens mount, focusing track and supplementary 2 and 3 inch condensers not included—order below. Size of baseboard, 18x26 in. Height to top of column, 47 in.; with head raised, 48 in. Rapid-shift 2¼x3¼-in. glass-type carrier included. *Express Prepaid.*

67 HN 4004 RT—No Charge for Credit. \$13.50 Down on Terms.....\$134.50

OMEGA B-6 ENLARGER. Like above but not automatic—has manual wheel controlled focusing. With lens mount for 3½-inch lens. Order Wollensak Raptor Lenses with Omega mounting disc on Page 84. For 2 or 3-in. lenses also order supplementary condensers with lens mount below.

67 HN 4003 RT—No Charge for Credit. \$11 Down. *Express Prepaid.* \$109.50

LENS OUTFITS FOR AUTOMEGA B-5. Wollensak Enlarging Raptor f/4.5, with matching lens mount, mounting disk, focusing track and supplementary condensers for 2 and 3-inch lenses. No Charge for Credit. *Postpaid.*

67 HN 4089 LT—2-inch focus. Covers 1¼x1⅝-in. negative.....\$36.40
67 HN 4090 LT—3-inch focus. Covers 2¼x2¼-in. negative..... 41.00
67 HN 4091 LT—3½-inch focus. Covers 2¼x3¼-in. negative..... 37.20

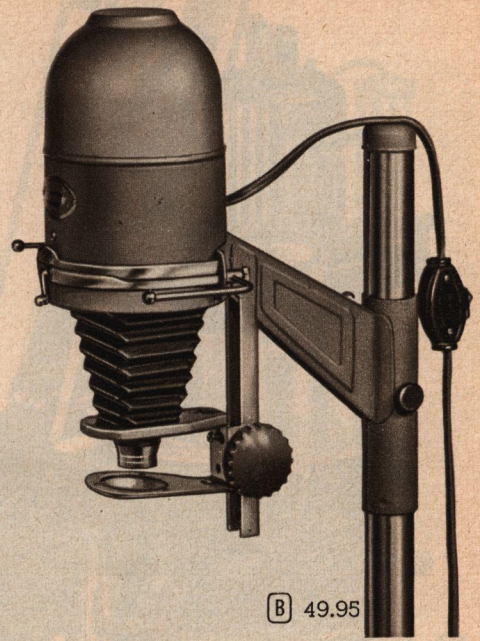
LENS MOUNT-CONDENSER UNITS FOR OMEGA B-6. Supplementary condenser and lens mount for use with 3½-in. condenser supplied with enlarger.
67 HN 4084 T—For 2-inch focus lenses. *Postpaid.*.....\$6.60
67 HN 4085 T—For 3-inch focus lenses. *Postpaid.*..... 8.70

RAPID SHIFT CARRIERS FOR AUTOMEGA B-5 AND B-6. Handles individual frames or strips. *State size wanted:* 35mm, Bantam, 2¼x2¼ or 2¼x3¼ in. (specify for roll, cut film, or film pack). *Postpaid.*

67 HN 4081 T—Glass-type....\$7.25 67 HN 4083 T—Glassless type...\$4.95



A 37.50 8 mm



B 49.95

Enlargers for Movies, 35mm. Negatives, Slides

How often have you wished you could have an enlargement of some special shot in your color slide file or your movie reel? Now you can make prints yourself from Kodachromes, or any positive color transparency, or from any black and white or color movie film. No negative is necessary—you expose directly from your transparency on black and white Diaversal paper which develops into a positive print. You get sharp, detailed enlargements, up to 11 by 14 inches from 2 by 2-inch transparencies. Prints from color film are especially sharp

because color film has no grain. The process is simple, quick, and practically mistakeproof. You need only one set of chemicals, one batch of the special Diaversal paper, and an enlarger. You can leave your transparencies right in their cardboard readymounts, and leave your movie film right on the reel. And your chemicals are ready-mixed liquids—just add water, expose paper, drop into solutions, wash, dry, and you have a big rich, sepia-toned print ready for album or frame. It's easy, it's fun, and adds to your picture taking pleasure.

DIIVERSAL CHEMICALS AND PAPER. For sepia-toned prints from black and white or color slides, using your present darkroom equipment. Any enlarger and set of trays with the chemicals and paper listed below will provide sharp, detailed enlargements up to 11x14 in. from color or black and white transparencies.

Exposure procedure is the same as with other printing papers. Processing consists of three solutions—developing, reversal, and toning. Prints are then washed and dried. Finished prints have a rich brown tone.

67 HN 4312—Complete chemical outfit only. Processes about 100 prints. *Postpaid*.....\$2.50

DIIVERSAL PAPER. Use OA (yellow-green) safelight. Recommended for 8 or 16mm films. *Postpaid*.

67 HN 4161—25 sheets, 2½ by 3½ in.\$0c

67 HN 4162—50 sheets, 2½ by 3½ in.\$1.50

67 HN 4163—25 sheets, 4 by 5 in. 1.50

67 HN 4164—50 sheets, 4 by 5 in. 2.50

DIIVERSAL PAPER IN LARGER SIZES. Recommended for use with 35mm transparencies or larger. Use OA (yellow-green) safelight (see Page 82).

67 HN 4165 T—State size and quantity. *Postpaid*.

Size	25 sheets for
5 by 7 in.	\$3.00
8 by 10 in.	6.75
	10 sheets for
11 by 14 in.	\$4.75

WARDS ECONOMY DIIVERSAL CHEMICAL KIT. Powdered form—dissolves easily in water. Makes 1 gal. stock solution—3 gals. of working solution. 67 H 4326 T—Ship. wt. 4 lbs. 8 oz.\$5.95

STOP THAT BLUR

An all-over blurred picture indicates camera movement. This can usually be avoided by using a cable release at shutter speeds slower than 1/100—plus a tripod when slower than 1/50.

88 WARDS

A REVERE ENLARGER-VIEWER KIT. A complete easy-to-use outfit for making enlargements from your black and white or color movie films. Contains Enlarger-Viewer, easel, complete chemicals, with trays, measuring cups, and enough paper to make 75 prints.

The Enlarger-Viewer is used as an enlarger or a viewer for editing your home movies. Sturdily constructed and fastened permanently to baseboard. Convection cooled lamphouse—uses standard enlarging bulb, included. No extra lens necessary—use regular lens from any 8 or 16mm movie camera having standard threaded mount. Reel cranks draw film smoothly through enlarger. Reels not included. With filter adapter. (See Page 69 for information on making color prints.)

Chemicals are ready-mixed in bottles colored red, white, and blue numbered 1, 2, 3, to mark each step in the process. Supply is sufficient for about 100 prints. Plastic trays and measuring cups are colored to match bottles so you can keep solutions straight and sequence of development in the proper order—no chance for error.

The single weight, matte finish, Diaversal paper is exposed directly from your movie film to give a rich, sepia-toned print. You can control the color depth by removing it from the last solution when it reaches the tone you prefer. Additional chemicals and paper can be ordered from the listing at the left. No Credit Charge on These Items. See Page 100 for Terms. *Postpaid*.

8MM REVERE ENLARGER-VIEWER KIT. For 8mm movie film. With 50 sheets 2½ by 3½-in., and 25 sheets 4 by 5-in. Diaversal paper.

67 HN 1267 L—Only \$4 Down on Terms.. \$37.50

16MM REVERE ENLARGER-VIEWER KIT. For 16mm movie film. With 50 sheets 4 by 5-in., and 25 sheets 2½ by 3½-in. Diaversal paper.

67 HN 1268 L—Only \$4 Down on Terms.. \$39.50

QUICK PROJECTION PREVIEW

Try projecting on your big TV screen—when you want a quick preview of a reel of movies or batch of slides just back from processing.

B FEDERAL ENLARGER MODEL 135. A reliable, well-built enlarger, made especially for handling 35mm and Bantam film with maximum speed and a minimum of effort. This is an ideal enlarger for making sepia-toned prints on Diaversal paper from your color film as described above. Welded, all-steel construction to eliminate vibration and give needle-sharp prints. Comes complete with two dustless (glassless) negative carriers—one each for 35mm and Bantam film, allows you to run film through in strip form. Order carrier below for mounted slides.

Built with a double condenser system that gives you prints of great detail and sharpness, and speeds exposure time. (See Page 85 for full explanation of condenser systems.)

Equipped with a 2-inch (55mm) Decar, f/4.5 anastigmat lens, coated to eliminate internal reflections. Efficient iris diaphragm. Enlarges up to 14 diameters on the steel baseboard; bigger blow-ups can be obtained by revolving the enlarger head so you can project to the floor. Can be taken down quickly and easily for safe, compact storage in the carrying case below (not included—order separately). No Credit Charge on these items. See Page 100 for Monthly Terms.

67 HN 4022 M—Federal Enlarger Model 135 only. *Postpaid*. \$5 Down on Terms.\$49.95

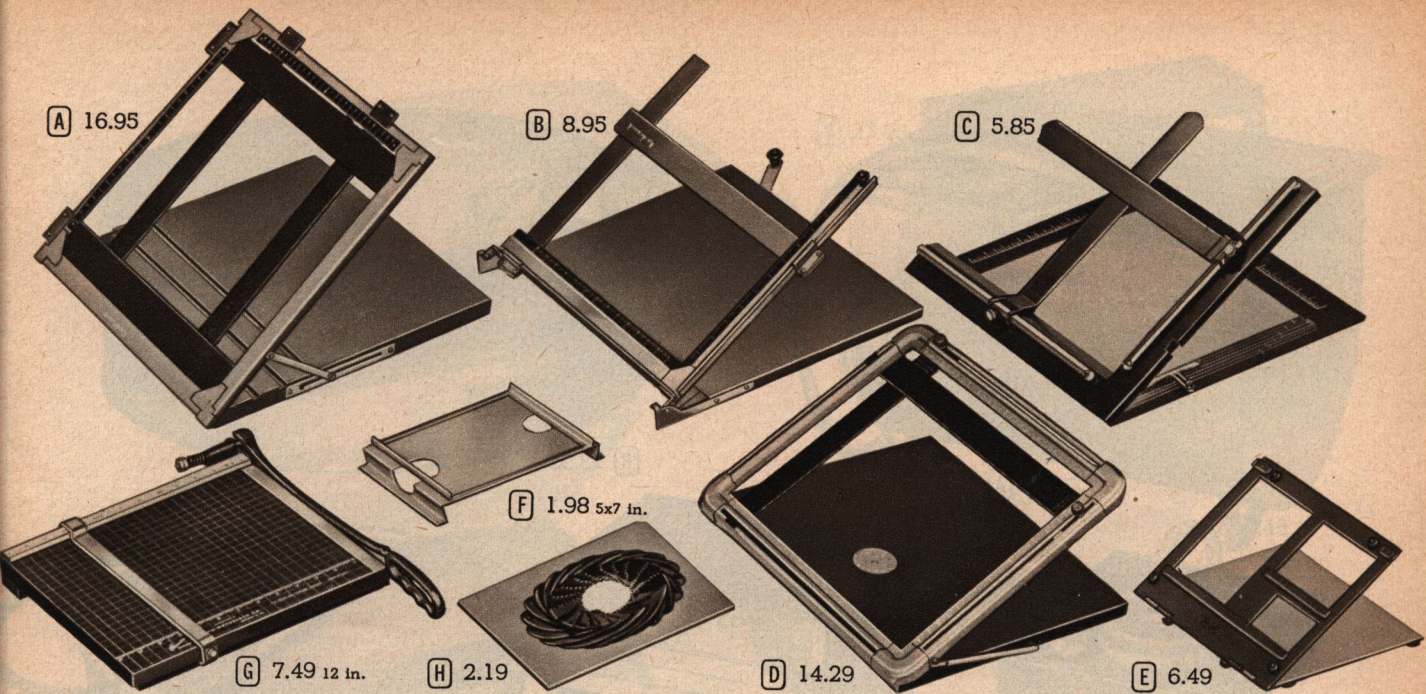
67 HN 4023—Recessed dustless (Glassless) carrier for mounted 35mm and Bantam slides. *Postpaid*.....\$2.25

STORAGE CASE. Sturdily built case that protects your enlarger from dust and damage. Fiber composition body; carrying handle.

67 HN 4047 M—*Postpaid*.....\$7.25

VIGNETTING YOUR ENLARGEMENTS

Vignetting is a form of dodging, used to eliminate the background. A cardboard having a hole with rough edges, or a regular vignetter (Page 89) is held to allow only the light from the desired part of the image to reach the paper. Keeping it in motion blends the tones evenly into a white background. This is often used to make a portrait of one person when two were on the negative.



Enlarging Easels, Other Useful Accessories

A **RADIANT AUTOMATIC EASEL.** Takes paper up to 11 by 14 inches. Three automatic features and sturdy construction make this one of the most convenient easels to use. Automatic paper alignment keeps image in center of easel. Calibrations on easel frame give you automatic adjustment of 1/8-in. to 1 7/8-in. margins for 5 by 7, 8 by 10, and 11 by 14-inch paper—manually adjusts for accurate margins on all other paper sizes up to 11 by 14 inch. Heavy four-sided steel frame retains masking bands at both ends to keep paper flat—automatically locks in two upright positions during insertion of paper and releases with one hand. Heavy reinforced non-warping baseboard. Non-slip bottom prevents movement when easel is lined-up under enlarger. Durable, two-tone gray hammertone enamel finish resists rust and corrosion from chemicals. Easy to keep clean.
67 H 4978 T—Shipping weight 9 lbs.....\$16.95

B **RADIANT 11 BY 14 EASEL.** Takes paper sizes up to 11 by 14 in. Single lever adjusts two-sided paper stop for border widths from 1/8 to 1 1/2 in. Two-sided steel top frame holds paper securely. Steel masking bands adjust to paper size—are spring positioned to assure correct alignment, even borders, and accurate corners. Non-warping baseboard. Easy to read scale in 1/8-in. graduations. Gray hammertone enamel finish resists rust, darkroom chemicals. Easy to keep clean.
67 H 4959—Shipping weight 7 lbs.....\$8.95

C **PRECISE ECONOMY EASEL.** Not as convenient, or as accurate as more expensive easels on this page, but a good value, economically priced. Adjusts for all paper sizes up to 11x14 in. Position paper on ruled markings on baseboard for 1/4 to 1 1/2-in. borders—spring clip holds it in place. Two spring masking bands slide on two-sided stamped steel frame, adjust to paper size. Size scale on enameled steel baseboard calibrated in 1/16-in. graduations. White enameled focusing surface.
67 H 4965—Shipping weight 6 lbs. 8 oz.....\$5.85

D **AIRQUIPT DIAL MASTER EASEL.** Compact all-steel easel takes all size paper up to 14 by 17 inches. Comparable in size overall to most 11 by 14-inch easels. Has automatic margin control. New dial actuated paper stop—a turn of the dial automatically positions paper for any width margin from 3/16 to 3/4 inch. Four-sided frame retains self-aligning masking bands, in parallel alignment, assure square corners and even, accurate margins. Two spring counter balances hold easel open while you insert printing paper—leave your hands free to position paper. Silver hammertone finish resists rust and corrosion from darkroom chemicals—is easy to wipe clean. Black enameled finish, reinforced metal baseboard—rubber under baseboard to prevent slipping.
67 H 4967—Shipping weight 8 lbs.....\$14.29

If you need special photographic equipment that is not listed in this catalog, write to Bob Adams, Page 93.

E **AIRQUIPT 4-WAY EASEL.** Small and compact. Made especially for use with the four most popular paper sizes without adjustment. On one side 2 1/4 by 3 1/4, 4 by 5, 5 by 7 in. and on the other side 8 by 10 in. Just slip paper under proper opening. Each size has permanent straight 1/4-in. border and square corners. Heavy stamped steel construction holds permanent alignment. Rubber prevents slipping. Top stays up while you insert paper. Matte white finish for focusing and composing.
67 H 5031—Shipping weight 5 lbs.....\$6.49

F **SPEED EASELS.** Small, fixed dimension easels for speedy enlarging in quantity. You just slip paper in and get uniform 1/4-in. margins without adjustment. Individual easels come in the four paper sizes most commonly used—3 1/2 by 5, 4 by 5, 5 by 7, and 8 by 10 inches. Sturdy all metal construction—welded joints. Matte white finish for critical focusing.
67 H 4958—3 1/2 by 5 in. Ship. wt. 10 oz.....\$1.39
67 H 4961—4 by 5 in. Ship. wt. 1 lb..... 1.49
67 H 4962—5 by 7 in. Ship. wt. 1 lb. 4 oz..... 1.98
67 H 4960—8 by 10 in. Ship. wt. 2 lbs..... 2.79

G **PREMIER TRIMMERS.** Reduce your paper inventory—buy large sizes and cut accurately to desired size. Hard-rock maple top reinforced to resist warping; half-inch square rules assure accuracy. Knife detachable for resharpening. Adjustable trimming guide. 18 and 24-inch sizes shipped from Warehouse in Atlanta, Chicago, Kansas City, and Dallas, Texas. Pay charges from nearest point. 10-in., 12-in., and 15-in. sizes Mailed from Stock.
67 H 5088—10 inch. Ship. wt. 6 lbs. 4 oz.....\$5.59
67 H 5089—12 inch. Ship. wt. 7 lbs. 12 oz..... 7.49
67 H 5090 M—15 inch. Ship. wt. 19 lbs..... 13.95
67 H 5091 K—18 inch. Ship. wt. 25 lbs..... 19.95
67 H 5092 K—24 inch. Ship. wt. 35 lbs..... 29.95

MOVIE TITLES AND "PRO" TRICKS

Titles raise the quality of your home movies. If you have to explain each scene to your audience as you run your movie, it is much less effective than it could be if it were adequately titled. Use the title letters sold on Page 59, with a natural, appropriate background such as cloth, wood, brick, sand, etc. Make live backgrounds by pasting the letters to a clean pane of glass and photographing the subject through it—be sure subject and title are sharp.

To "frost" a window for some special movie effect, swab the glass with a mixture of stale beer and epsom salts. Or use hypo or spirits of camphor.

Icicles for the same special scene can be made by dripping a solution of silicate of soda, or by soaking strips of cellophane in alcohol and paraffin.

Make "cobwebs," for your ghost picture, by pouring rubber cement between two blocks of wood—pull the blocks in and out until it forms fine strands—provides realistic background for your ghosts and ghouls.

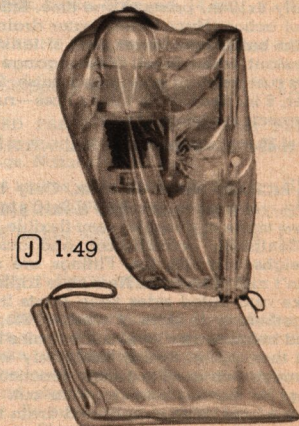
H **VARIABLE VIGNETTER.** The Willo Variable Vignetter furnishes an infinite variety of shapes and sizes, ovals, squares, circles, etc. Consists of 8 by 10-inch cardboard with series of overlapping pivoted leaves in center. Can be quickly and easily adjusted to any of the above mentioned shapes in various sizes.

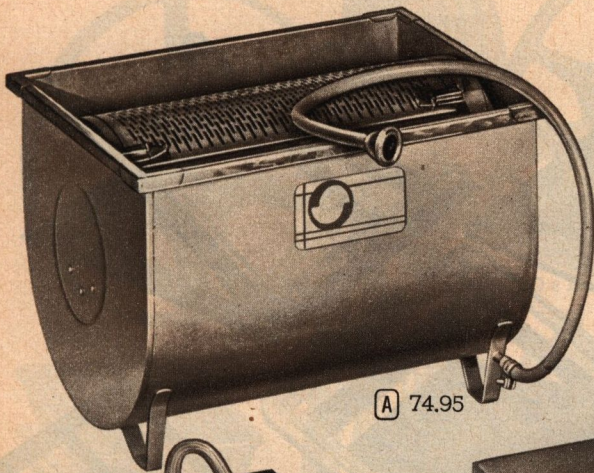
One side of the leaves has a sawtooth edge for diffused vignetting, the other edge is smooth for sharp edged vignetting. Leaves are of transparent red material to assist in centering the print during enlargement.
67 H 4993—Ship. wt. 8 oz....\$2.19

J **ENLARGER COVER.** Protects enlarger, lens and negative carrier from dust. Durable heavy Vinyl plastic material. Drawstring bottom closing. Fits all enlargers sold in this Catalog.
67 H 5000—Ship. wt. 10 oz....\$1.49

CLEANING APERTURE GATES

Use a pipe cleaner moistened with alcohol. It's easy to handle and does a good job. But remember, touch gate only with the well-cushioned part to avoid damage or scratches on the gate.

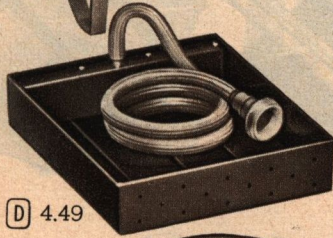




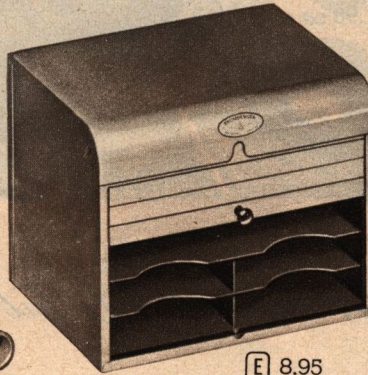
A 74.95



B 13.95



D 4.49



E 8.95



C 21.95

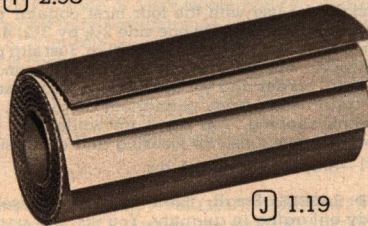


F 2.98

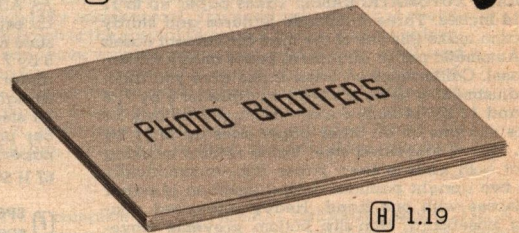
G 1.79



K 1.39 for two



J 1.19



H 1.19

Darkroom Work Is Most Enjoyable

A ARKAY ROTARY PRINT WASHER. Highly efficient water powered drum-type washer for prints 11x14 and smaller—washes up to 100 8x10's at once. Drum has full length door for easy loading, unloading. Heavy-duty construction of stainless steel, other rust-resistant materials. Supply hose connects to any faucet. With drain hose. Size 19x15x13 in. Pay Postage from Factory in Chicago, New York or Dallas, whichever is nearest. Allow 5 extra days. Only \$7.50 Down.
67 H 5023 K—Ship. wt. 25 lbs. Cash 74.95

B PRINT WASHER. An economical washer that will handle quantity work. Washes up to thirty 8x10-in. prints at one time. Efficient whirlpool action. Hypo-laden water drains off below print baffle from lower part of tank. Maintains constant water level. Heavy-gauge steel body has rust-resistant galvanized finish. 24-in. diameter, 6 in. deep. With intake hose—rubber fitting connects to almost any faucet.
67 H 4947 M—Ship. wt. 11 lbs. 13.95

C RICHARD PRINT WASHER. Only 18½x6½ in.—yet washes up to 60 DW 8x10's in 25 minutes. Now made of durable, semi-flexible Dow Styron—dentproof, scratchproof, and acid resistant. Weighs only 3½ lbs. Fittings are solid brass, can't rust or corrode. New style triple spray intake and fluted sides keep prints from sticking together, or to sides of washer. Sloping bottom and below-water-level sump drains hypo quickly, thoroughly. Drains completely when you're through—no need to dump—practically self drying. No moving parts to wear out. Attaches to any faucet. With supply and drain hoses.
67 H 5049 M—Ship. wt. 5 lbs. 21.95

D ARKAY PRINT WASHER. Fast jet water action for quick, efficient washing. With 3-ft. hose plus connections for any faucet.

FOR PRINTS UP TO 8x10 IN. Washes up to eighteen 8x10's at once. Black Bakelite. 12x9½x2¼ in.
67 H 5009—Shipping weight 4 lbs. 4.49

FOR PRINTS UP TO 11x14 IN. Washes up to twenty-four 8x10's, or twelve 11x14's at once. Made of steel—zinc alloy. Rust-resistant. 17½x13½x2½ in.
67 H 5010 MT—Shipping weight 6 lbs. 7.49

E BRUMBERGER LIGHTPROOF PAPER SAFES. Eliminates fumbling with envelopes and boxes while printing. Roll top door raises with finger pressure—closes when released. Shelves, partitions hold various sizes, grades of paper. All steel, rust-resistant grey finish. Ship. wts. 12, 24 lbs.
67 H 4916 M—Holds up to 8x10-in. paper. 8.95
67 H 4910 MT—Holds up to 11x14-in. paper. 16.95

F HYDROJET WASHER. Attaches with suction cup to any smooth tray or tub for efficient whirlpool action. Maintains consistent water level. Powerful jet-type syphon elevates discharge above water level. With 3-ft. drain and supply hoses. Fits any faucet.
67 H 4927—Shipping weight 1 lb. 2.98

G DE HYPO PRINT WASHER. Converts sink, wash bowl or tub into print washer. Maintains constant 2¾-in. water level. Fits any faucet.
67 H 5007—Shipping weight 12 oz. 1.79

H PHOTO BLOTTER PACK. Clean, lintless, 12x15 in. Photo stock. Use to make drying stack for matte prints up to 11x14-in. size. Package of 25.
67 H 4926—Shipping weight 2 lbs. 1.19

J PHOTO BLOTTER ROLL. For drying semi-matte and matte prints. Prints dry with back-ward curl—lie flat when removed. About 11½ in. wide, 6 ft. long. Holds 9 8x10-in. prints.
67 H 4953—Shipping weight 2 lbs. 1.19

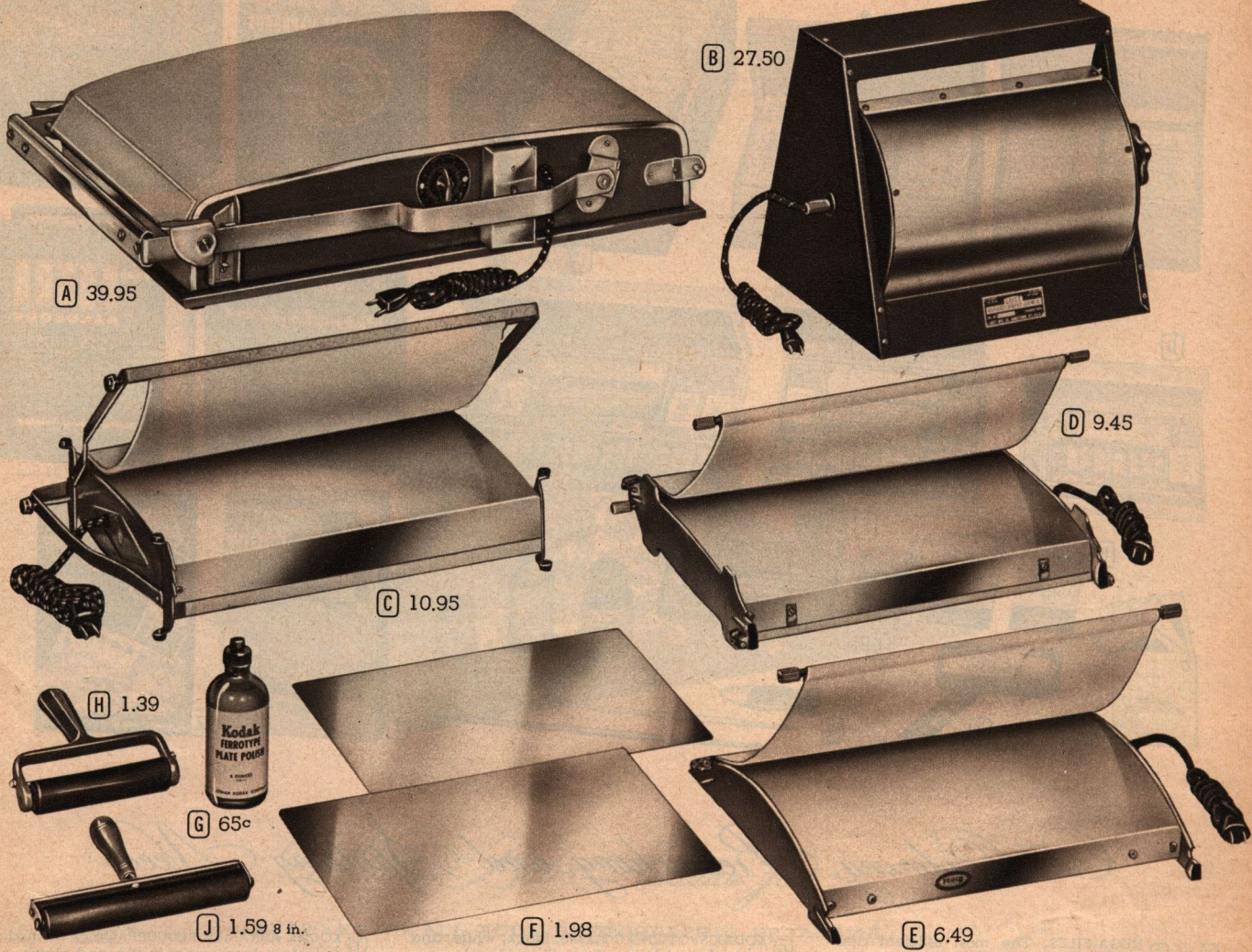
K BOUND BLOTTER BOOK. For drying semi-matte and matte surface prints. Lintless blotting paper assures clean prints. Wax separation sheets. 18 blotter sheets, 9 by 12 inches. Directions on cover. Holds 9 8x10-in. prints.
67 H 4925—Ship. wt. 2 lbs. 10 oz. Two for 1.39

FADING OF PRINTS

The fading of prints is almost always caused by faulty fixing and/or washing, and wise darkroom workers always make sure their solutions are fresh and their washing adequate. A weak or improperly compounded fixing solution is one cause—another is lack of agitation or circulation.

The two-bath system of fixing is to be preferred. Place your prints in a fresh solution for from 5 to 10 minutes; then transfer them to another fresh solution for a short time before washing. Never use an exhausted bath for the first one because insoluble compounds may be present which may cause the print to fade.

The fixing bath may be tested by chemicals available in the Kodak Testing Kit on Page 78. A few drops of one of the solutions can be dropped into your fix (10% solution of potassium iodide works the same way). If it remains clear, the solution is safe to use. If it clouds but the cloudiness vanishes when the solution is shaken, the bath is aging and should be replaced. If the solution remains milky after shaking, pour it happily down the sink; it's no good.



When You Have Efficient Equipment

A ARKAY PRINT DRYERS. Made to professional standards. Permits continuous production of high glossy and matte prints. Curved heating surface of heavy steel, chrome plated over copper. Make glossies direct on chrome surface or use chrome ferrotype tins sold separately at right. Adjustable thermostat lets you control heat—adjust drying time. Heating element insulated with mica and ceramic. Canvas apron maintains even pressure—assures even drying, flat prints. On-Off switch. Approved by Underwriters' Laboratories. 110-120V. AC only. Pay Postage from New York, Chicago or Dallas. Allow 7 days.

67 H 5040 K—Model A-20. Size 15 $\frac{3}{4}$ x21 in. Will dry two 8x10 or fifteen 4x5 prints in 5 to 8 min. 770-watts. Ship. wt. 25 lbs. 39.95
 67 H 5041 K—Model A-24. Size 18 $\frac{1}{2}$ x24 $\frac{3}{4}$ in. Will dry four 8x10; or eighteen 4x5 prints in 5 to 8 min. 880-watts. Ship. wt. 32 lbs. 44.50

B ROTO PRINT DRYERS. Dries matte or glossy prints in about 8 minutes directly on polished, stainless steel drum. Has 28-in. circumference. Turn handle and canvas overlay keeps prints flat for even drying. Even distribution of heat prevents buckling. Maintains constant drying temperature. Pay Postage from Warehouse in Chicago, St. Louis, Pittsburgh, St. Paul, or Dallas, whichever is nearest you. Allow 5 extra days.

STANDARD. 12x28-in. surface. Dries three 8x10's or twelve 4x5's. Uses 180-watts, 115V, AC or DC.
 67 H 4994 K—Ship. wt. 15 lbs. 27.50

PROFESSIONAL. 23x28-in. surface. Will dry six 8x10's or 24 4x5's. 300-watts, 115V, AC, DC.
 67 H 4995 K—Ship. wt. 23 lbs. 37.50

C LEE DUPLEX PRINT DRYERS. Exceptional value in an easy to use, durably built dryer. Two satin aluminum drying surfaces turn out dry matte prints about every 8 minutes. For glossy prints use chromed plates (F) at right. Durable, well protected heating elements maintain even temperature about 195°F. Uses only 225 watts. For 110-120-volts, AC-DC. Ceramic insulators. Dryer has heavy-gauge stamped steel frame, rubber feet. Canvas aprons under tension to assure even drying. UL Approved.

67 H 5078 M—Size 13x15 $\frac{1}{2}$ in. Dries two 8x10's or eighteen 4x5's. Wt. 5 lbs. 12 oz. 10.95
 67 H 5079 M—Above with adj. thermostat to regulate drying time. AC only. Wt. 6 lbs. 13.95
 67 H 5068 M—Size 13x17 $\frac{1}{2}$ in. Dries four 8x10's or eighteen 4x5's. 300 watts. Wt. 7 lbs. 13.50
 67 H 5069 M—Above with adjustable thermostat to regulate drying time. AC only. Shipping weight 7 lbs. 16.50

D FEDCO PRINT DRYER, MODEL 200. Has 2 satin aluminum surfaces, 11 $\frac{1}{2}$ x15 in. each. Dries two 8x10's or twelve 4x5's about every 8 minutes. Canvas apron keeps prints flat. Use chromed plates (F) for glossy prints. 205-watts, 110-120-v, AC or DC.
 67 H 4992 M—Ship. wt. 6 lbs. 8 oz. 9.45

67 H 4991 M—FEDCO MODEL 300. Twin dryer like above but 16 $\frac{1}{2}$ x20 $\frac{1}{2}$ in. Dries eight 8x10's or thirty-two 4x5's. Uses 325 watts. Wt. 13 lbs. 17.95

E FEDCO PRINT DRYER, MODEL 100. 11 $\frac{1}{2}$ x15-in. satin aluminum surface. Dries one 8x10 or six 4x5's every 8 minutes. Use chromed plates (F) for glossies. 105 watts, 110-120-v, AC-DC.
 67 H 4997 M—Ship. wt. 4 lbs. 8 oz. 6.49

F CHROMED GLOSSY PLATES. For glossy prints. High gloss without using polish. Triple plated: chrome, nickel and copper on steel. May be used with electric dryers or for air drying.

67 H 5036—10x14 in. Ship. wt. 2 lbs. 2 for 1.98
 67 H 5035—12x17 in. Ship. wt. 3 lbs. 2 for 2.98
 67 H 5037—14x20 in. Ship. wt. 4 lbs. 2 for 3.97
 67 H 5094—BLACKENAMELED PLATES (not shown). 10x14 in. For glossy prints. Use with polish below. Ship. wt. 2 lbs. Two for 1.49

G KODAK FERROTYPIC POLISH. For polishing enameled ferrotype plates.
 67 H 4346—8-oz. bottle. Ship. wt. 14 oz. 65c

H PREMIER PRINT ROLLER. 6-inch rubber roller on ball bearings. Cast-iron frame.
 67 H 5024—Shipping weight 12 oz. 1.39

J STANDARD PRINT ROLLERS. Rubber roller mounted in sturdy stainless steel frame. Sleeve type bearings. Natural wood grip.
 67 H 4901—4 inches wide. Ship. wt. 6 oz. 55c
 67 H 4900—5 $\frac{3}{4}$ inches wide. Ship. wt. 9 oz. 89c
 67 H 4955—8 inches wide. Ship. wt. 12 oz. 1.59

PROTECT YOUR THERMOMETER

Stirring rod thermometers are likely to break if you hit them too hard or stir too energetically. You can make an effective bumper for your tip by cutting the lower portion off a medicine dropper bulb and slipping it on the end of your thermometer. Be sure it's a bumper and not a complete cover. Simple, but effective.



Oil Coloring, Retouching, and Spotting Needs

(A) TO (C) NEGA-FILES. The most efficient and convenient method of filing your negatives, besides keeping them clean and dust-free, protected from finger prints and scratches. Glassine envelopes allow you to see your negatives without removing them. Envelopes are printed for filling in identification and exposure data. Index cards and numbered guides allow you to locate desired negative instantly. Hardwood chests with brass plated hardware. Ship. wt.: 2 lbs., 4 oz.; 2 lbs. 12 oz.; 5 lbs. 8 oz.

(A) 67 H 5025 T—With 600 2 1/4 x 3 1/4 envelopes. 6.85
 (B) 67 H 5026 T—With 900 2 1/4 x 2 1/4 envelopes. 8.75
 (C) 67 H 5027 T—With 500 4x5 envelopes. 11.45

(D) TO (F) MARSHALL OIL COLORING SETS. For coloring black and white prints. Adding color to your pictures is easy to do, and it adds interest and more life-like appearance to any print. Colors will not fade.

(D) MARSHALL STUDENT COLORING SET. 8-color basic set. Includes 2-in. tubes of Cadmium Yellow, Chinese Blue, Flesh, Verona Brown, Raw Sienna, Cheek, Viridian, and Oxide Green. Also bottle of Prepared Medium Solution, roll of cotton, five skewers and instructions.
 67 H 4331—Ship. wt. 1 lb. 6 oz. 2.69

(E) MARSHALL ACADEMY COLORING SET. An adequate set for most coloring needs. With everything in set (F) below except Ultramarine Blue, Burnt Sienna, Payne's Gray, Ivory Black, Flake White, and the Duolac Varnish and Drier.
 67 H 4332—Ship. wt. 2 lbs. 4 oz. 4.79

(F) MARSHALL NO. 2 COMPLETE COLORING SET. Complete assortment of photo oil colors—20 in all—Cobalt Violet, Carmine, Lip, Cheek, Flesh, Chinese Blue, Ultramarine Blue, Tree Green, Viridian, Oxide Green, Cadmium Yellow, Cadmium Orange, Burnt Sienna, Raw Sienna, Verona, Brown, Sepia, Payne's Gray, Ivory Black, Flake White and Neutral Tint—plus bottles of Marlene, Prepared Medium Solution, and Duolac Varnish, tubes of Drier, Extender, package of cotton, 6 skewers, and palette. Instructions.
 67 H 4364—Ship. wt. 2 lbs. 8 oz. 6.29

(G) KODAK SPOTTING COLORS. Black, white, and sepia. Just pick up color with wet brush.
 67 H 4329—Ship. wt. 2 oz. Set 1.05

(H) KODAK SEPIA TONER. For contact and enlarging papers. 6 packets, each makes 32 oz. solution—enough for average requirements.
 67 H 4386—Ship. wt. 6 oz. 6 Pkgs. for 89¢

(J) KODAK BLUE TONER. For contact and enlarging papers. Packet makes 32 oz. solution—enough for average requirements.
 67 H 4377—Ship. wt. 3 oz. 75¢

(K) BAUSCH & LOMB READING GLASS. Magnifies about two times. Wide field of view. One-piece handle and rim of black plastic. Lens is 3 3/8 inches. Focal length 9 inches.
 67 H 7827—Shipping weight 8 oz. 3.69

(L) TRIPOD MAGNIFIER. Ten-power, 1-inch lens in bakelite mount, threaded for focusing. Steel tripod is 1 3/8 by 1 3/4 inches.
 67 H 7800—Shipping weight 7 oz. 1.19

(M) TEC RETOUCHING SET. Includes: 1 tenite pencil with full-length lead, 1 tenite eraser pencil, tube of 12 long leads from B to 9H in hardness, 10 lead marking rings.
 67 H 4984—Ship. wt. 6 oz. Set 1.79

(N) PHOTO BRUSH SET. Three fine camel-hair brushes—one small and one medium for spotting and retouching prints and negatives; one wide 1-inch brush for negative dusting.
 67 H 4940—Ship. wt. 5 oz. 1.89

(P) CROCIEEN SCARLET. (Neo cocaine.) To increase density and reduce light penetration in shadow areas of negatives. Powder dissolves to a transparent red liquid, brushes on easily.
 67 H 4335—1 oz. Ship. wt. 4 oz. 95¢

(R) KODAK RETOUCHING FLUID. Gives a fine-toothed surface for pencil or pen in negative retouching. 2-ounce bottle.
 67 H 4336—Ship. wt. 5 oz. 75¢

(T) KODAK ABRASIVE REDUCER. Quick method of reducing dense areas in film and plates.
 67 H 4339—1/2 oz. paste. Ship. wt. 5 oz. 79¢

(U) KODAK REFERENCE HANDBOOKS. Loose-leaf manuals on all phases of black and white photography. Each contains four Data Books. Cover differs from illustration. Ship. wt. 1 lb.
 67 H 4837—Vol. I, Picture Taking 3.79
 67 H 4838—Vol. II, Processing and Printing 3.79

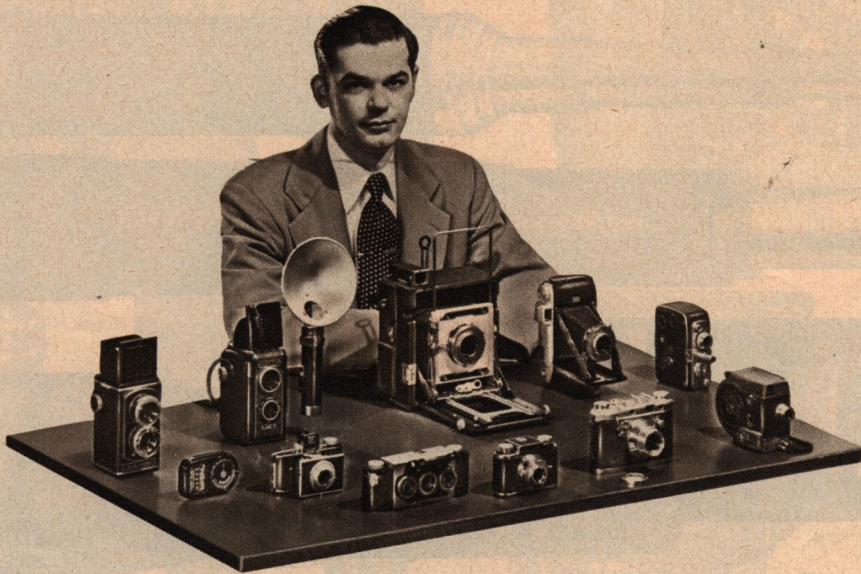
(V) PHOTO LAB INDEX. The latest, 14th Lifetime Edition—packed with useful information. De Luxe edition with 4-inch capacity, boxed storage. Loose-leaf style for adding new information. Quarterly supplements available by subscription. Covers every phase of photography—photo papers, film, color work, formulae, dark-room data, processing—a complete guide. Excellent index. Heavy cloth bindings; metal backed. Mailed from Chicago, St. Paul, Pittsburgh, St. Louis, or Dallas—allow 5 extra days.
 67 HN 4834 K—Postpaid 17.95

(W) KODAK PHOTO NOTEBOOK. Red, multi-ring binder for supplementary Kodak literature. Plastic covers, 25 sheets unruled paper, 5 separator pages, registration card for new material.
 67 H 4818—Ship. wt. 8 oz. 1.39

(X) KODAK COLOR HANDBOOK. Complete manual of Kodak Data Books on Color. Hardbound loose-leaf binder with registration card for obtaining new and revised Kodak literature.
 67 H 4803—Ship. wt. 1 lb. 12 oz. 3.79

(Y) COMMERCIAL PHOTOGRAPHY. By Kenneth M. McCombs. A useful manual for the amateur and commercial photographer. Soundly factual and clearly written. Profusely illustrated.
 67 H 4836—Ship. wt. 1 lb. 4.50

(Z) PHOTO OIL COLORING FOR FUN OR PROFIT. By Lucille R. Marshall. Covers phases of photo oil coloring from proper paints to how to make money coloring photos. Cloth bound.
 67 H 4821—Ship. wt. 1 lb. 5 oz. 2.10



Write Bob Adams for...

ANSWERS TO ALL YOUR PHOTOGRAPHIC PROBLEMS

PHOTO ANSWERS

Next time you run into a photographic problem that has you stumped, "Write to Bob Adams." He's Wards expert on photography. Whether it's still or moving pictures, color or black and white, or if you just want advice in selecting a gift for some member of your family, Bob Adams will give you the help you want.

He will give you the answers to most of your questions out of his own full experience. And if he doesn't know the whole answer himself, he will look it up for you in his extensive photographic library.

He will help you improve your negatives and prints, your movie editing and splicing; he will help you get the results you've been missing. He'll tell you why and how you may have gone wrong and will suggest methods and equipment for producing the kind of pictures you want.

So when you want a quick, complete, competent answer to any photographic problem that's been puzzling you, "Write Bob Adams"—he has all the answers.

SHOPPING SERVICE

It's Bob Adams' job to make Wards Photographic Catalog the most complete source of photographic equipment in the world. No matter what you want in the photographic line, if you don't see it in this catalog, "Write Bob Adams." He'll get it for you.

For example, because of the vast combinations of lenses, shutters, flash guns, and range-finding apparatus, it's next to impossible to list the complete Speed Graphic camera line. Wards Photographic Catalog lists just the most popular combinations. So, if you don't see the Graphic

with just the right combination of equipment you want, "Write Bob Adams." He'll get it for you promptly.

Whether it's a fine camera or an odd filter, a special purpose lens or a high-speed time study moving picture camera—if it's to be had, Bob Adams will shop for you until he finds it. So if you don't see the equipment you want in Wards 1954 Photo Catalog, "Write Bob Adams."

CAMERA TRADE-IN

When the time comes for you to get yourself a better camera with more versatility and greater range, what are you going to do with your old camera? Now, you can trade it in on a new one at Wards.

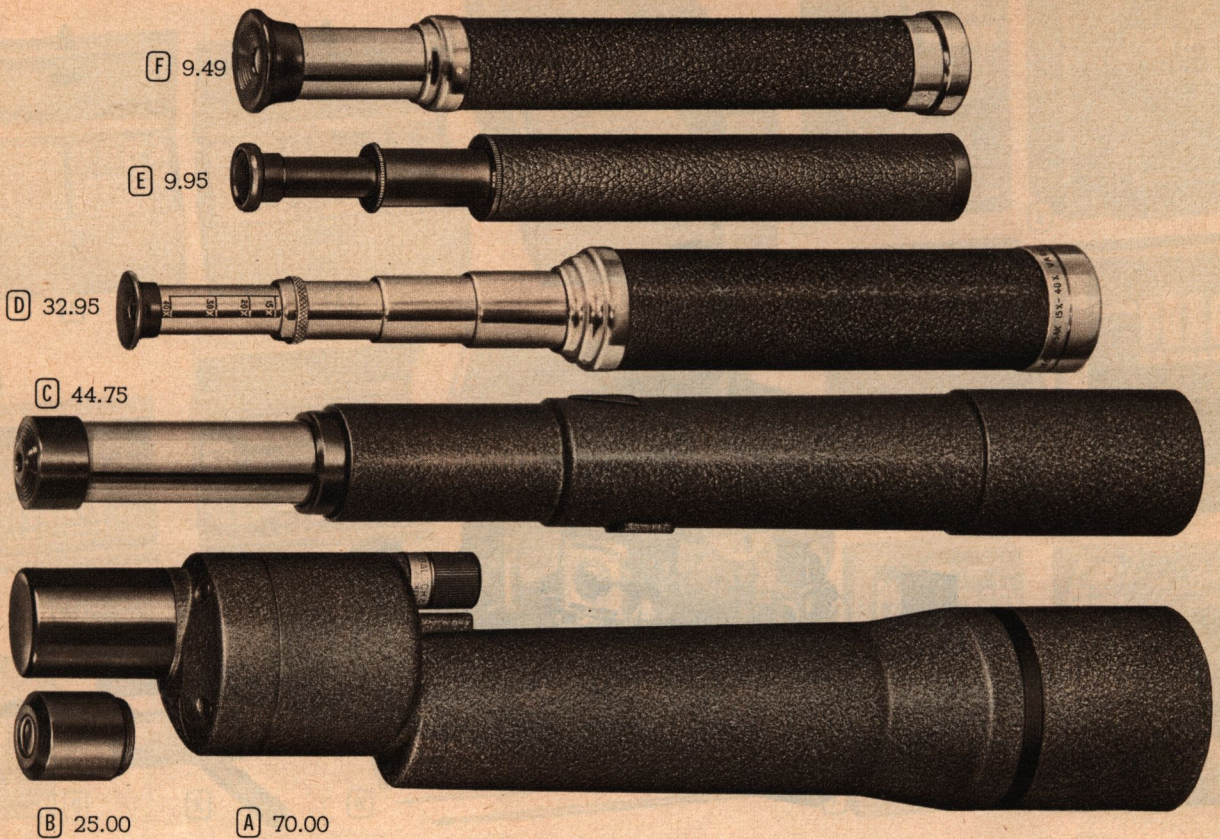
Write to Bob Adams. He'll help you arrange your exchange. But don't send him your old camera yet. First write him a letter; tell him

- (1) the make and model of your present camera;
- (2) its condition: excellent, good, fair, or broken—if broken, what's wrong?
- (3) the new camera you intend to buy.

Bob Adams will then send you an estimate of how much he can allow you and where to send your old camera. It's as simple as that to make a trade-in at Wards. Just "Write to Bob Adams."

Like everything else Wards sell, you may use Wards Monthly Payment plan when you make trade-in or special purchases. On trade-ins, figure the down payment on the catalog price minus the trade-in allowance. 10% is the minimum down payment. For example, on a \$100 camera with a \$35 trade-in-allowance, your minimum down payment is 10% of the \$65 balance, or \$6.50.

WRITE TO BOB ADAMS AT MONTGOMERY WARD, DEPARTMENT 67, 618 W. CHICAGO AVE., CHICAGO 7, ILLINOIS



Telescopes From 8 to 60-Power Magnification

A BAUSCH & LOMB BALSCOPE SR. TELESCOPE. Magnifies 15 to 60 times, depending on eye-piece used. Order 15, 20, 30 or 60-power separately—not included in the price of the telescope.

Designed for easier, quicker adjustment—focuses clear and sharp with one or two turns of the knob. New method of focusing, with knob conveniently located on prism housing away from sighting eye. Eliminates turning eye-piece with hand held up to sighting eye. A new sealing method makes Balscope the nearest to a completely air-tight and moisture-proof telescope yet developed. Dust or moisture will not collect inside to blur your vision.

Achromatic Balcote anti-reflection lenses eliminate reflections. Sunshade extends 2 in. to shade lens and eliminate glare. Internal spring expander permits precision-smooth movement. Length with caps is $16\frac{7}{16}$ in.; weight 48 oz. Green crackle finish. Bausch & Lomb tripod adapter (at top right) recommended for use on your camera tripod. Eye-pieces not included; order below. *Postpaid*.

67 HN 7217 LT—No credit charge. \$7.00 Down. 70.00

B EYE-PIECES FOR BALSCOPE SR. Your choice of four powers (Magnifications): 15, 20, 30 or 60. Sixty-power is designed especially for celestial use; other powers for sports, nature study, etc.

Power of Eye-Piece....	15X	20X	30X	60X
Relative Brightness....	16.0	9.0	4.0	1.0
Field of View, in feet, at 1000 yards.....	140.0	111.8	78.4	28.6

No credit charge. Only \$2.50 Down, on Terms.
67 HN 7218 LT—*Postpaid*. State Power.. Each 25.00

C BAUSCH & LOMB 20 POWER BALSCOPE JR. Magnifies 20 times. Achromatic Balcote lenses produce amazingly brilliant, sharp image. Relative brightness 4.0 Field of view 75 ft. at 1,000 yards. Precision-cast aluminum body seals out dust and moisture. $12\frac{1}{2}$ in. long overall, with dust caps. Tripod lug cast in body for easy attachment to any camera tripod. Green crackle finish.

67 HN 7207—*Postpaid*.....44.75

D WOLLENSAK VARI-POWER TELESCOPE. Four different magnifications 15, 20, 30, or 40—all in one scope, complete for one price. A simple adjustment of the tube, graduated in click stops, permits instant automatic fixing of selected power—and intermediate powers can be obtained between click stops. Images equally sharp at all magnifications. Lens units coated. The 36mm achromatic objective lens shows a 31 to 79 ft. field of view at 1000 yds. depending on the magnification. Chrome plated draw tube and artificial leather-covered outer tube. Length closed $8\frac{1}{4}$ inches. With leather case.

67 H 7218—Ship. wt. 1 lb. 8 oz.....32.95

E IMPORTED GERMAN 10 POWER TELESCOPE from U.S. Zone. Color-corrected objective lens. Metal tubes in leather-covered housing. Sturdy construction. 10-Power: Magnifies 10 times. 23mm objective lens. Field of view about 90 ft. at 1000 yds. Closes compactly to 7 inches.

67 H 7214—Ship. wt. 1 lb.....9.95

15-Power. 33mm objective lens. Field of view abt. 105 ft. at 1000 yds. Closes to $8\frac{7}{8}$ in.

67 H 7215—Ship. wt. 1 lb.....13.95

IMPORTED 30-POWER 40MM SCOPE. (Shown at left). Precision-made by skilled craftsmen in Japan. Magnifies 30 times—fine for use where extreme high power is required. Coated, color-corrected lens reduces color fringing and increases brightness. Field of view 59 feet at 1000 yds. All metal with black crackle finish. Closes to 24 in. Telescope tilts up and down and pans 360° on tripod stand, about $8\frac{1}{2}$ in. high.

67 H 7205—Ship. wt. 5 lbs.....14.95

B & L TRIPOD ADAPTER. (Shown at right) Enables you to use telescope (A) on camera tripod. Weighted base gives firm mount. Wing nut tightens rubber-covered circular steel band around circumference, holds telescope rigidly. Black crackle finish.

67 HN 7216 T—*Postpaid*.....6.85



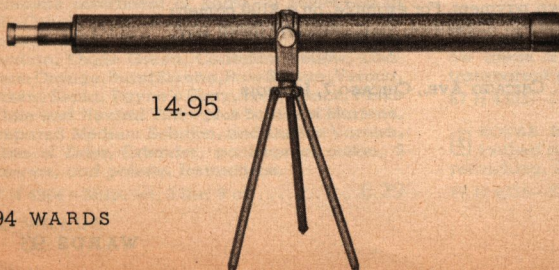
F WOLLENSAK 8-POWER "EXPLORER" TELESCOPE. A quality instrument with fine coated lenses at a reasonable price. The 21mm objective lens is fully achromatic to eliminate color fringe. Magnifies 8 times. Field of view 150 ft. at 1000 yds. Length extended is about $9\frac{1}{2}$ in., closes to pocket size— $6\frac{3}{4}$ in. Smoothly polished chrome plated draw tube. Vulcanized fiber body. Grained leather-finished outer tube. Leather carrying case included. Weighs only 6 oz.

67 H 7202—Ship. wt. 1 lb.....9.49

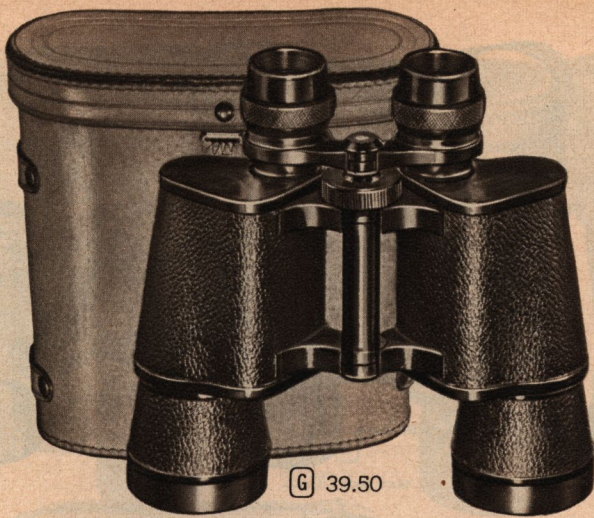
FACTS ABOUT TELESCOPES

Telescopes are used for general observation where higher power is desired than is possible with a binocular. They have long been enjoyed by target shooters, both rifle and pistol, for positive spotting of hits on the target. With the adapter above, they can be used with ordinary camera tripods for sports, bird watching, and amateur astronomy.

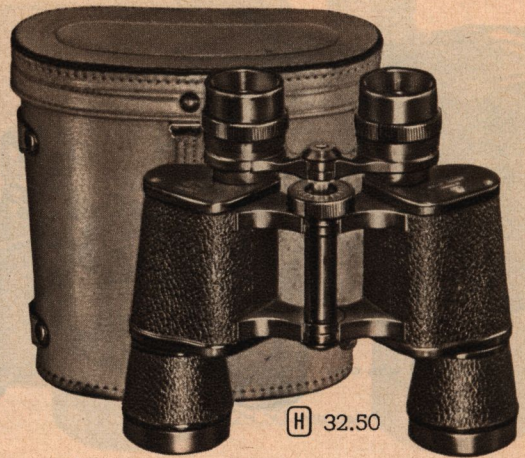
The important parts of a telescope are the object glass or mirror which collects the beam of light to form the image, inner prisms or lenses, and the eye-piece which magnifies this image. All of Wards telescopes except (E) have coated lenses which reduce reflections and increase transmission of light. Choose your telescope with confidence from the five excellent models above which range from 8 to 60-power, in a price range to fit every budget.



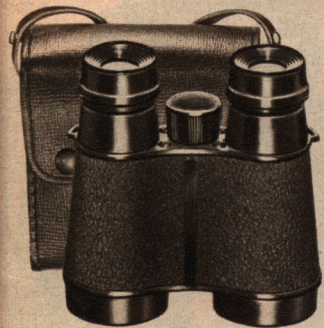
14.95



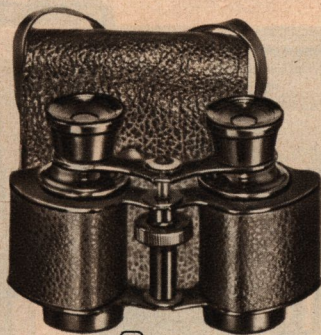
G 39.50



H 32.50



J 13.50



K 4.95



L 12.95



M 14.95

Low-priced Binoculars and Field Glasses

G JUPITER 7X 50MM BINOCULAR. Magnifies 7 times. Powerful glass with convenient center focus. Excellent for navigation and night use. Big 50mm objective lenses, coated optics for maximum image brightness. Leather covered barrels. Hinged bridge, plus separate right eye focus. Field of view 369 ft. at 1000 yds. Relative brightness 50.4. Closes to about 6¾ in. Velvet-lined pigskin case. Imported from Japan. 10% Fed. Tax included.

67 H 7017L—Ship. wt. 3 lbs. 8 oz. 39.50

H JUPITER 7X, 35MM BINOCULAR. Magnifies seven times. Excellent all-purpose glass imported from Japan. Ideal for travel, hunting, and sporting events. Objective lenses are coated to eliminate reflections and improve image. Hinged bridge with central focusing and separate right-eye adjustment for added sharpness. Field of view—340 ft. at 1000 yds. Relative brightness 25.0. Barrels covered with genuine leather. Lenses and prisms rigidly mounted to resist shock. Closes to 5¾ in. Velvet-lined pig-skin case. 10% Fed. Tax incl.

67 H 7018L—Ship. wt. 2 lbs. 8 oz. 32.50

J WARDS 4X 35MM FIELD GLASSES. 4-power magnification. Wards finest field glass. Ideal for sports, travel and nature study. Lightweight and compact—easy to carry. Achromatic lenses give a sharp, crisp view without distortion or color fringe. Makes objects 40 ft. distant appear 10 ft. away through glasses. Ruggedly constructed frame of aluminum and zinc. Durable all-weather plastic barrel covering. Fixed bridge has central focusing. Objective lens 35mm diam. Field of view 275 ft. at 1000 yd. Size closes 4½ in. With black artificial leather carrying case. 10% Fed. Tax included.

67 H 7109—Ship. wt. 1 lb. 8 oz. 13.50

K WARDS 3X, 27MM SPORT GLASSES. Magnifies 3 times—objects 100 ft. away appear to be 33 ft. away through the glasses. The right glass for sports events, at a remarkably low price. Accurate central focus control. Hinged bridge adjusts eye-pieces to your individual eye width. Black artificial leather-covered barrels.

Field of view (width of area seen through glass) is 307 ft. wide at 1000 yards. Glass closes to about 3½ in. Complete with artificial leather carrying case and neck strap. 10% Federal Tax included.

67 H 7111—Ship. wt. 1 lb. 4.95

L CLEMENT 8X, 25MM MONOCULAR. French import. Magnifies 8 times—objects 80 ft. distant seem only 10 ft. distant. Coated optics for maximum light transmission. Price of this high quality glass is lower because it has only a single focusing eyepiece. High powered glass is easily carried by the sportsman or observer since it closes to only 3¾ inches. Field 330 feet at 1000 yards. Objective lens, 25mm. Relative brightness 9.76. With case.

67 H 7219—Ship. wt. 1 lb. 12.95

M PLUM 6X, 15MM PRISM BINOCULAR. Shirt pocket size, yet magnifies 6 times—objects 60 ft. distant seem only 10 ft. away. Size only 1½x4½ in.; weight only 6 oz. Recommended for spectator sports, theater and hunting in wooded areas.

Precision made in Japan. Coated optics, color-corrected lenses, ground prisms. Individual eye focusing, hinged bridge, diopter scales for instant resetting. Covers field 438 ft. at 1000 yds. Made of machined bronze, chromed and black enamel finished. With neck cord, leather case. Ship. wt. 1 lb.

67 H 7032L—10% Fed. Tax included 14.95



FACTS ABOUT BINOCULARS

Pictured above are the two types of binoculars. The Galilean type at left is simply two straight tubes, and the greater the power the longer the tubes must be. At right are prismatic binoculars, in which prisms refract light back and forth, permitting greater magnification without materially increasing the length of the tubes.

Binoculars (sold on Pages 95, 96 and 97) are rated by three factors: their power of magnification, the diameter of their objective lenses, and by "relative brightness," which is a comparison, of the brilliance of images seen through binoculars of different powers and objective lens diameters.

For example, in a 6X, 30 glass, the "6X" means the binoculars magnify objects six times. The second figure "30," means the objective lenses have a diameter of 30 millimeters. From this description, 6X, 30, the relative brightness can be figured—divide the number of millimeters by the magnifying power and square the quotient—example, 30 ÷ 6 = 5, and 5 squared equals 25, which is the relative brightness rating. The higher this number is, the brighter the image seen.

Some lenses are coated for the same reason camera lenses are, and the benefits are the same (see Page 98). For comparison the field of view is usually given in terms of feet at a distance of 1000 yards. Glasses of low power, because of their construction, generally allow a larger field of view than binoculars of higher magnification, and give a steadier image for sports events, etc.

TAKING PICTURES IS SO EASY, EVEN A CHILD CAN DO IT

Help your child develop self-confidence and give him an outlet for surplus energy by encouraging him to develop a hobby. Photography opens up an entire new world for children. They become aware of color, form and beauty in even the most common-place objects, and are intrigued by the chemistry and mechanics which combine to produce the finished picture. Frequently they de-

velop a skill and technique which becomes highly profitable. Excellent cameras are available, for less than \$5, which take eight pictures 2¼x3¼ in. size (See Pages 20 and 21). Black and white film for this camera is less than 35¢ per roll (Pages 68 and 69). For the older child who enjoys developing and printing his own pictures, choose from a wide selection of photo supplies on Pages 74 to 92.

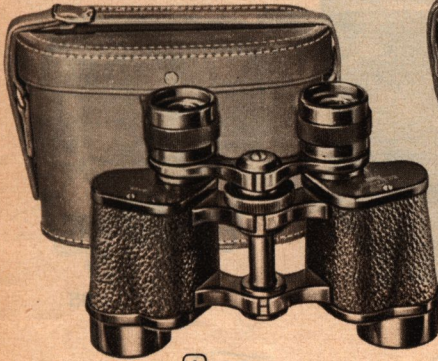
Prices on All Binoculars Include New Reduced 10% Federal Excise Tax



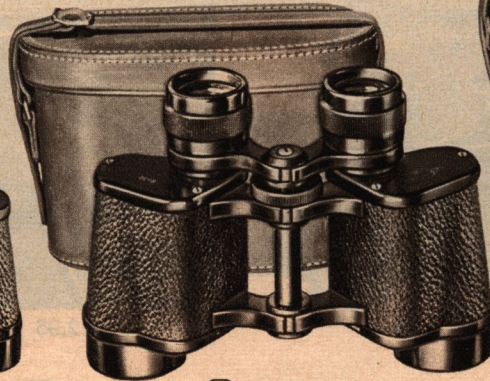
D 49.95 with case



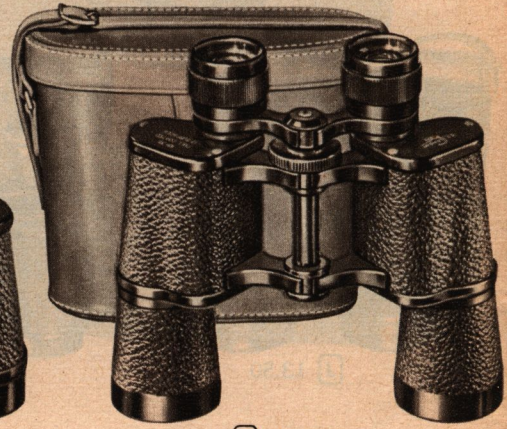
E 65.00 with case



A 22.50 less case



B 44.50 less case



C 44.50 less case

Bausch & Lomb Binoculars... Quality

A B CLEMENT BINOCULARS. Internationally known prism binoculars imported from France. High power for long distance viewing. Precision 3-lens optical system magnifies 8 times—objects 80 feet distant appear to be only 10 feet away. Hinged bridge adjusts to individual eye width. Central focusing plus separate right eye focusing for added sharpness. Leather-grained plastic covered barrels. Glasses close to about 4 inches.

(A) 8X, 25's. 25mm objective lenses. Relative brightness 9.76. Field of view 330 feet at 1000 yards. Actual weight 13 oz. Ship. wt. 2 lbs.

67 H 7010L—Only \$2.50 Down on Terms.....or Cash 22.50
67 H 7066—Tan Saddle Leather carrying case. Ship. wt. 1 lb.....5.75

8X, 30's. With larger 30mm objective lenses. Relative brightness 14. Field of view is 360 feet at 1000 yards. Actual weight 17 oz.

67 H 7028L—Ship. wt. 2 lbs. \$3.50 Down on Terms.....or Cash 32.50
67 H 7067—Tan Saddle Leather carrying case. Ship. wt. 1 lb.....6.50

(B) CLEMENT DE LUXE 8X, 32's. Fine 5-lens optical system with even larger 32mm objectives for big game, nature study. Produces the widest field of view known in an 8-power glass—481 feet at 1000 yards. Relative brightness is 16. Oversize prisms and specially engineered optical system produce finer images without measurably increasing the size of the glass.

67 H 7011L—Act. wt. 21 oz. Ship. wt. 2 lbs. \$4.50 Down.....or Cash 44.50
67 H 7067—Tan Saddle Leather carrying case. Ship. wt. 1 lb.....6.50

(C) CLEMENT 10X, 35MM BINOCULARS. Top quality glasses—precision-made in France. Recommended for mountain climbing and hunting. Coated, color-corrected lenses are mounted to resist shock—give a clear, sharp image of high magnification. 3-lens optical system magnifies ten times—objects 100 feet distant appear 10 feet away. Central focusing plus separate right eye focus. Adjustable hinged bridge for individual eye spacing.

Field of view is 285 feet at 1000 yards. 35mm objective lenses—relative brightness 12.25. Size 5½ in. closed. Actual weight 20 oz.

67 H 7051L—Shipping weight 2 lbs. \$4.50 Down on Terms....or Cash 44.50
67 H 7068—Tan Saddle Leather carrying case. Ship. wt. 1 lb.....6.95

WHAT ARE NIGHT GLASSES?

There is no binocular manufactured with properties or characteristics which will allow you to see in total darkness. You only see subjects at night in relation to the amount of light at hand. The larger the objective lenses on your glasses, the more available light is gathered. The best night glasses give you the highest relative brightness, see "Facts About Binoculars" on Page 95.

(D) WRAYLUX 8X, 30MM PRISM BINOCULARS. A lifetime glass—same style as used by Royal Air Force. Made by the well known Wray works, English producers of fine binoculars for 100 years. These glasses are especially good for big game hunting, mountain climbing and travel. Precision ground prisms. Color-corrected lenses for a brilliant, crisp image. All optics are recessed, cemented, and clamped securely in place—highly resistant to shock. Wide field of vision. Center wheel for instantaneous focusing, with adjustable right eyepiece for individual focusing. Hinged bridge adjusts to individual eye width. Leather grained plastic cover. Cast aluminum alloy barrels for true alignment and light weight.

Eight-power magnification—objects 80 feet distant appear to be only 10 feet away. Wide field of view is 390 feet at 1000 yards. Objective lenses are 30mm in diameter—relative brightness 14. Glass closes to about 4¾ inches. Act. wt. 21 oz. Finest leather saddler-made carrying case included.

67 H 7030L—Ship. wt. 3 lbs. Only \$5 Down on Terms.....or Cash 49.95

(E) WRAYLUX 12X, 35MM BINOCULARS. Imported from England—same fine construction and features as Wraylux glass above. Higher magnification without appreciably increasing the size of the glass. Ideally suited to climbing or big game hunting in mountainous areas, and long distance game spotting on prairies. Prisms are ground and polished to precision accuracy. Coated, color-corrected lenses provide a brilliant image, sharp in detail and free from color fringes. Recessed, cemented, and clamped optical system resists shock. Central focusing with separate right eye adjustment. Hinged bridge adjusts for correct eye width.

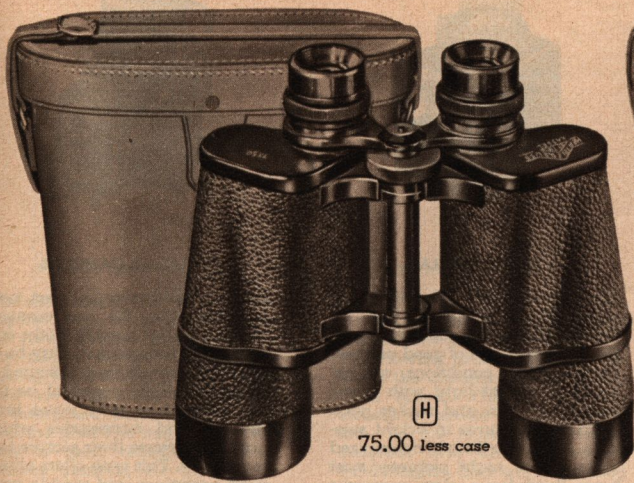
Magnifies 12 times—objects 120 feet away appear only 10 feet distant. Field of view is 237 feet at 1000 yards. 35mm objective lenses provide a relative brightness of 8.52. Aluminum alloy body, leather grained plastic covered. Size closed, about 5¾ inches. Actual weight is only 21 oz. Complete with fine saddle-stitched leather carrying case.

67 H 7033L—Ship. wt. 3 lbs. Only \$6.50 Down on Terms....or Cash 65.00

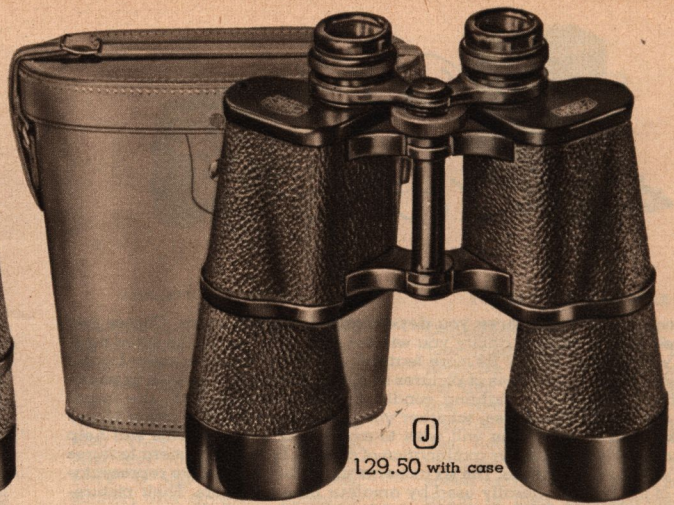
WARDS TOP QUALITY BINOCULAR CASES

The cases listed for the Clement, and Hertel & Reuss imported binoculars on these pages are made by J. B. Perrin & Co. of California Saddle Leather—the best leather available for binocular cases. Hard finished, designed for rugged use—each case is saddle-stitched and sturdily constructed to give years of dependable service and protection. Tan color increases in beauty with age and use. Fine velvet lining prevents scratches. Solid brass hardware. Leather straps for binocular and case included.

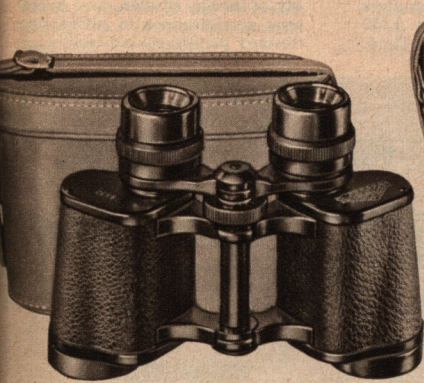
Prices on All Binoculars Include New Reduced 10% Federal Excise Tax.



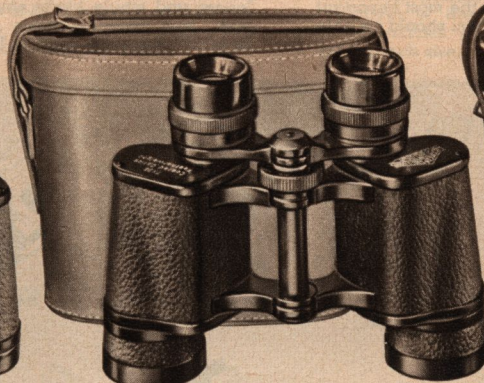
H 75.00 less case



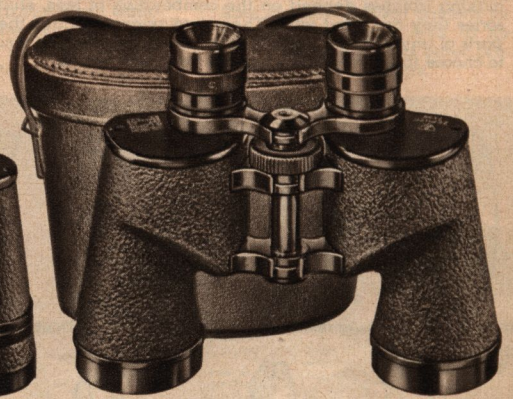
J 129.50 with case



F 39.95 less case



G 49.95 less case



K 170.50 with case

Imports from Germany, England, and France

F HERTEL & REUSS 6X, 30MM PRISM BINOCULARS. Fine quality precision-made prism binoculars imported from the American Zone of Germany. Excellent for viewing fast action—spectator sports, hunting in the woods, or racing. Accurately ground and polished lenses of world famous Jena glass—known for its high light transmission. Entire optical system is coated to provide a brighter image and more shadow detail. Central focusing and separate right eye adjustment with diopter scale for instant resetting. Hinged bridge with scale for individual eye width adjustment. Lightweight cast magnesium alloy body. Leather covered.

Magnifies six times—objects sixty feet distant appear to be only ten feet away. Wide field of view is 450 feet at 1000 yards. 30mm objective lens—relative brightness of 25. Size $4\frac{1}{2}$ inches closed. Act. wt. 15 oz.

67 H 7057 L—Shipping weight 2 lbs. Only \$4 Down.....or Cash 39.95

67 H 7067—Tan saddle-stitched leather case. Ship. wt. 1 lb.....6.50

G HERTEL & REUSS 7X, 35MM BINOCULAR. Made in the U.S. Zone of Germany. Ground and polished lenses of Jena glass for clear, sharp image. Chosen by experts as the size best suited for all 'round use such as travel, hunting game or wild fowl, yachting, nature study, and sporting events. Entire optical system is coated. Lenses, prisms rigidly mounted to resist shock. Central focusing and separate right eye adjustment with diopter scale for instant resetting. Hinged bridge adjusts to eye width—relieves eye strain. Extremely lightweight leather-covered magnesium body.

Magnifies seven times—objects seventy feet away seem only ten feet distant. Extra-wide field of view, 405 feet at 1000 yards. 35mm objective lenses—relative brightness of 25. Size $5\frac{1}{8}$ inches closed. Act. wt. $16\frac{1}{2}$ oz.

67 H 7058 L—Ship. wt. 2 lbs. Only \$5.00 Down.....or Cash 49.95

67 H 7068—Tan saddle-stitched leather case. Ship. wt. 1 lb.....6.95

H HERTEL & REUSS 7X, 50MM PRISM BINOCULAR. Preferred for navigation and night use. Large light-gathering 50mm objective lenses. Precision-made in the U.S. Occupied Zone of Germany. Lenses of Jena glass—carefully mounted to withstand shock and hard use. Entire optical system coated for brilliant image with sharp detail. Central and individual right eye focusing with diopter scale for quick adjustment. Hinged bridge. Sturdily constructed lightweight magnesium body, leather covering.

Magnifies seven times—objects seventy feet distant seem to be only ten feet away. Wide field of view, 381 feet at 1000 yards. 50mm objective lenses—relative brightness is 50.4. Size $6\frac{3}{4}$ inches closed. Act. wt. 30 oz.

67 H 7059 L—Ship. wt. 3 lbs. Only \$7.50 Down.....or Cash 75.00

67 H 7069—Tan saddle leather case for above. Ship. wt. 1 lb.....7.75

J IMPORTED 12X, 60MM BINOCULAR. Designed for specialists, such as explorers, who want sharp definition at great distances. Precision-made in the U.S. Occupation Zone of Germany. Color-corrected lenses are recessed, cemented, and clamped in place to resist shock and maintain register. Hinged bridge. Central focusing plus individual right eye focusing with diopter scale for quick resetting. Black leather-covered metal barrels.

Twelve-power magnification—objects 120 feet away appear to be only 10 feet away. Large 60mm objective lenses show 330 ft. field of view at 1000 yds. Relative brightness 25. Size closed about $7\frac{7}{8}$ in. Act. wt. 40 oz. With sturdy black leather carrying case and neck strap.

67 H 7047 LT—Ship. wt. 4 lbs. \$13.00 Down.....or Cash 129.50

K BAUSCH & LOMB 7X, 35MM PRISM BINOCULARS. Popular American-made binocular of highest quality. For all 'round use—nature study, hunting, sailing, control tower viewing. All glass-air surfaces have "Balcote" coating for image brightness and contrast. Color corrected optical system—recessed, cemented, and clamped for precise alignment and rugged use. Central focusing, plus separate right eye adjustment—indexed for quick resetting. Hinged bridge with scale for instant adjustment to individual eye width—relieves eye strain. Sturdy, lightweight magnesium-alloy body. Designed to fit the hand comfortably for long periods of use. Morocco grained plastic cover—will not peel off, provides firm grip even if hands are wet.

Magnifies seven times—objects seventy feet distant appear to be only ten feet away. Field of view is 381 feet at 1000 yards. 35mm objective lenses—relative brightness of 25. Size, $5\frac{5}{8}$ inches closed. Actual weight, 20 oz. Supplied complete with genuine leather case and neck strap.

67 HN 7013 LT—Postpaid. No Credit Charge. \$17.50 Down on Terms 170.50

BAUSCH & LOMB 9X, 35MM BINOCULAR (not shown). Precision-made binocular of American manufacture. Designed for hunting in mountain country. Magnifies nine times for a large image. "Balcote" anti-reflection coating provides better shadow detail and added contrast. Color-corrected lenses give clear, sharp image without color fringes. Central focusing with separate right eye adjustment, indexed for resetting. Hinged bridge adjusts for eye width. Lightweight magnesium body with rugged, morocco grained plastic cover.

Magnifies nine times—objects ninety feet away seem only ten feet distant. Field of view is 381 feet at 1000 yards. 35mm objective lenses—relative brightness of 14.4. Size $5\frac{7}{16}$ inches closed. Actual weight, 20 oz. Complete with genuine leather case and handy neck strap.

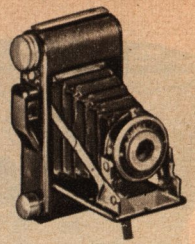
67 HN 7015 LT—Postpaid. No Charge for Credit. \$19.00 Down.....187.00

Prices on All Binoculars Include New Reduced 10% Federal Excise Tax.

Which Camera Shall I Buy?



BOX CAMERAS



FOLDING CAMERAS

A good camera will serve you dependably for many years. Choose one whose picture-making ability you will not soon outgrow. At the same time, you will not wish to pay for more features on it than you ever intend to put to use. Consider the types of pictures and subject matter you wish to photograph, the variety of lighting conditions you will work with, the negative size you desire to use, whether you want to use roll film or cut film or packs, and whether you will wish to make color pictures. This will help you determine the proper combination of camera type and camera features best suited to your needs. The six cameras shown at the right are representative of the types generally used by amateur photographers. Their picture-making abilities depend on the combination of lens, shutter, and accessories they are fitted with. These two pages describe the most important parts of any camera. After reading these descriptions you should be able to choose the camera that best fits your own needs.

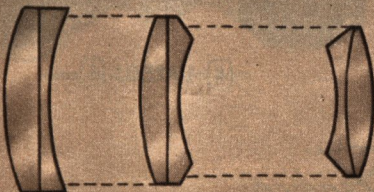
Box cameras are very inexpensive and are easiest to use. Although limited in some respects, they are capable of good pictures under proper conditions, are reliable in bright light with black and white film and makes good Kodacolor pictures in bright sunlight. Many are flash synchronized for indoor or night pictures; most have fixed focus, slow meniscus lenses, and single blade shutters with one speed—about 1/50 second—plus either Bulb or Time.

Folding bellows make them more compact than the box camera; many may be conveniently carried in the coat pocket. May be as simple to operate and as limited in picture making potential as the box camera or may have lens, shutter, and accessories which greatly increase their picture taking ability. This type offers album sized negatives and a wide variety of lenses, shutter, and accessory combinations to afford any desired picture-taking ability.

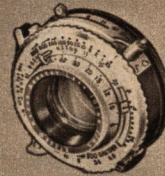


Single Meniscus Achromatic Meniscus

Doublet



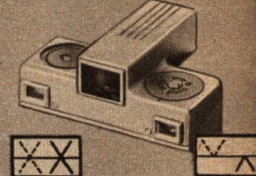
Anastigmat



Lens Mount Focusing



Bed Focusing



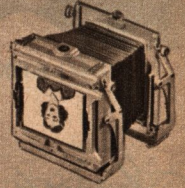
Range Finder



Single Lens Reflex



Double Lens Reflex



Ground Glass Back

WHAT YOU SHOULD KNOW ABOUT YOUR LENS

The lens is the most vital part of your camera. It determines the quality of the pictures, the minimum light with which they may be taken, and the minimum exposure for a given light.

The picture-taking ability of the lens depends on its construction—how big it is, and how many elements (single optical forms) and cells (groups of elements) it has. It may be composed of one element (single meniscus), one cell (achromatic meniscus), or two or more cells (doublet or anastigmat). In general, the more complex the lens, the greater its ability to bring into focus divergent lines, objects of different colors, light which enters the lens near its margin, all the objects in a plane, and to record the straight lines of the subject as straight lines on the film.

LENS SPEED. The speed of the lens (the amount of light it will gather and focus upon the film) is expressed as the "F" value. This is a number obtained by dividing the distance from the lens to the film (called the focal length of the lens) by the diameter of the lens aperture at its largest opening. Thus a lens having an 8-inch focal length and a 1-inch aperture is called an f/8 lens; one with an 8-inch focal length and a 2-inch aperture is called an f/4 lens, etc.

The smaller the "f" number the faster the lens. If the required exposure for a scene is 1 second at f/22, it will be 1/2 second at f/16, 1/4 second at f/11, 1/8 second at f/8. As the "f" number is halved, four times the volume of light enters the lens; so the exposure time may be reduced to one-fourth. As the "f" number is reduced by one-fourth, twice the volume of light enters, so the time may be reduced to one half.

COATED LENSES have an extremely thin, hard chemical coating which reduces reflections at

their surfaces. Since these reflections normally produce haze, coated lenses make clearer, sharper pictures.

SINGLE MENISCUS LENS. A single cell composed of a single element. Only the center portion of this kind of lens is accurate enough for photographic use; therefore it has a maximum aperture of about f/11. It will make good black and white pictures in good sunlight. Single meniscus lenses are used on almost all box cameras and some low-priced folding cameras.

ACHROMATIC MENISCUS LENS. A single cell of two or more elements cemented together. Called achromatic because it has the ability to bring all colors of light from the subject into focus on the film. It is the lowest priced lens satisfactory for use with color film, and it is used on low-priced folding cameras and some box cameras. It usually has a maximum aperture of about f/8.

DOUBLET LENS. Composed of two cells, each having one or more elements. The use of two cells eliminates the distortion of lines and permits using a maximum aperture of about f/6.3—fast enough for indoor pictures with artificial light and fast film. As the cells are usually composed of two or more elements the lens is also achromatic and is suitable for color film. Doublet lenses are used on a few box cameras and on many medium-priced folding cameras.

ANASTIGMAT LENS. The most fully corrected lens type—capable of fast lens speeds because its design and construction permit use of a wide portion of the lens diameter. It is used on the finest cameras. The anastigmat has more cells than other lens types, and its cells have more elements—usually three or four to the cell.

...YOUR FOCUSING

Focus is the means by which you calculate the proper distance setting for your lens. It is particularly important when shooting close-ups, using fast lenses at wide apertures, and when the negative is to be enlarged to any extent.

FIXED FOCUS. A lens of slow speed is fixed at a set distance so that all objects beyond 6 or 8 feet are in sharp enough focus for making contact prints. Though limited in ability, fixed focus lenses simplify shooting for the snapshot fan.

SCALE FOCUSING. Camera-to-subject distance is measured or estimated by eye. This distance is set on the lens mount or bed focusing scale, which is calibrated in feet. Accuracy depends on measurement of camera-to-subject distance.

RANGEFINDER FOCUSING. Distance is computed by adjusting rangefinder until the two images of the subject, seen through rangefinder, come together. These are either superimposed or split-image as shown above. Rangefinder's footage scale indicates distance at which camera should be focused. Coupled rangefinders focus the camera as rangefinder is adjusted.

REFLEX FOCUSING. Subjects brought into focus on the ground glass will be in focus on the film. With single lens reflex, as lens is stopped down, depth of field is shown (area of focus before and behind subject focused upon). With twin lens reflex depth of field is not shown, but image remains bright when lens is stopped down.

GROUND GLASS BACK FOCUSING. As camera is focused, a ground glass occupies film position. Objects in focus on glass will be in focus on film. As lens is stopped down, depth of field is shown. Focusing will be accurate with any lens.



SINGLE LENS REFLEX

The same lens is used when focusing the image on the ground glass for viewing, and when focusing the image on the film for exposing the picture. For focusing and viewing, a hinged mirror is interposed between the lens and the film. The image from the lens is then reflected on the ground glass in the top of the camera. The mirror springs out of the way just before the exposure. Wards offer several 35mm cameras with this feature.



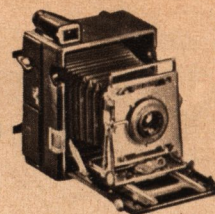
TWIN LENS REFLEX

This type of camera uses two matching lenses of the same focal length. One focuses the image on the viewing ground glass in the top of the camera by means of a fixed mirror. The second lens focuses a similar image on the film. As the lenses are directly coupled, and are of identical focal lengths, they will be focused together at all times. The viewing lens always remains at full aperture for focusing; the taking lens remains stopped down.



MINIATURE CAMERAS

The most popular type of cameras we sell. Used primarily for making color slides for projection, or viewing. See Page 67. These compact, easy-to-carry cameras use economical 35mm and Bantam size film. They usually feature fast lens and rapid shooting. They have a wide variety of lens, shutter, and accessory combinations. Make sharp black and white negatives or the popular color transparencies approximately 1 by 1½-inch size.



PRESS TYPE CAMERAS

Dependable and versatile. Feature ground glass focusing, large negative sizes, and the use of cut film and film packs. Lenses are readily interchangeable. Adjustable lensboards correct distortion. Readily adaptable to synchronized flash. Some have high-speed focal plane shutters in addition to their between-the-lens front shutters. A good camera for serious amateurs as well as for news cameramen and other professional photographers.



Single Blade Shutter



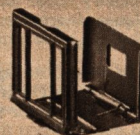
Between-the-lens Shutter



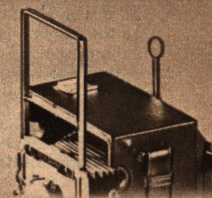
Focal Plane Shutter



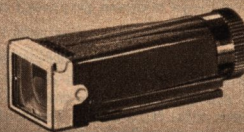
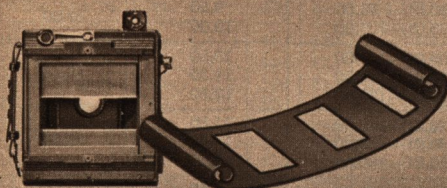
Waist Level Finder



Metal Frame Finder



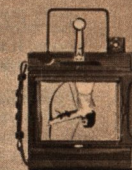
Sport Frame Finder



Tubular Finder



Reflex Finder



Ground Glass Back

...YOUR SHUTTER

High-speed, wide-aperture lenses should be coupled with versatile shutters having wide ranges of speed. A slow-speed, single meniscus lens requires only the ability of the single blade shutter.

SINGLE BLADE SHUTTER. Usually found on box cameras and lower-priced folding cameras. It has but one exposure time, about 1/30 or 1/50 second, but it may also have Time or Bulb. On Time, the shutter remains open from the time it is released until it is closed by pressing the release a second time. Set for Bulb, the shutter remains open as long as the release is depressed. While a single blade shutter is limited in operation, it simplifies picture making by eliminating the necessity of making choices of exposure times. Its single speed is suitable for most outdoor pictures with good light. When equipped with Time or Bulb, indoor pictures can be made with a flasher kit or with photoflood lights. Many cameras with this type of shutter are synchronized for simple flash guns.

BETWEEN-THE-LENS SHUTTER. So called because the shutter is placed between the cells of the lens. Such shutters usually have a wide range of speeds—often from a full second to 1/400 second or faster, plus Time and Bulb. Some between-the-lens shutters are also equipped with a delayed action release. This enables the photographer to set off the delayed action control and get into the picture himself before the actual shutter release. Most of these shutters are flash synchronized (see below).

FOCAL PLANE SHUTTER. This type is usually a curtain having openings of various widths; it is located just in front of the film at approximately the plane of the focal length of the lens. Exposure is controlled by regulating the width of the opening and speed at which it passes the film. They are usually more efficient than between-the-lens shutters. They usually operate at speeds from 1 to 1/1000 second plus Time. Some are flash synchronized.

BUILT-IN FLASH SYNCHRONIZATION. Virtually all of the cameras made today have built-in flash synchronization. This eliminates the necessity for external synchronizers and makes flash pictures just as easy to take as outdoor shots. All you do is connect a suitable flash unit to your camera and fire away. Most camera shutters have built-in flash contacts, that are wired to an external connector. These contacts act as a switch, closing the circuit when the shutter is wide open, thus firing the flash bulb in perfect synchronization. Every flash camera description in this Catalog tells which flash unit to buy for use with the camera.

...YOUR VIEW-FINDER

The means of finding the field of view (the exact area focused upon the film) is particularly important in action shots, close-ups, and scenes where it is desired to give close attention to details of composition.

WAIST LEVEL FINDERS. Viewed from a foot or two below the eye. The field of view is shown in a small ground glass in the top of the finder. Because of parallax (see below) the field is not exact for close-ups.

DIRECT FRAME FINDER. The field of view is shown when the finder is held at eye level and openings in the metal or sport frames are lined up. Direct vision makes it good for following action. Because of parallax (see below), the field is not exact in close-ups unless corrections are made.

TUBULAR FINDER. An optical viewfinder which is viewed at eye level. It works like a telescope in reverse; shows a small image with brilliance and detail—often adjustable to compensate for parallax in close-ups.

REFLEX FINDER. The image, shown right side up on the ground glass, is large—usually full negative size—a definite advantage where composition detail is important. In single lens reflex cameras the image is a reflection of the exact image shown from the camera lens—there can be no parallax—and when accessory or supplementary lenses are used, the correct field of view is still shown. The image darkens as the lens is stopped down and disappears when the shutter is released. In twin lens reflex cameras there may be parallax in close-ups unless corrections have been made, and lenses cannot be interchanged. However, the image remains bright when the lens is stopped down.

GROUND GLASS BACK. With no film in place ground glass panel occupies the normal position of the film. The image—upside down and reversed from left to right—is full negative size, and pinpoint focusing can be obtained. The camera is usually used on a tripod. There can be no parallax.

PARALLAX. Because of the distance between viewfinder and lens, they look at the subject from a slightly different angle. This angle increases as the camera approaches the subject. Beyond 6 or 8 feet the difference is small, but if not allowed for in close-ups, the top of the picture will be cut off. Some viewfinders are corrected for parallax.



Wards Monthly Payment Plan

APPLIES TO EVERYTHING WE SELL

Our Monthly Payment Plan enables you to enjoy the advantages of new, better, and extra equipment while you pay for it. Don't let lack of cash keep you from buying a better camera, a telephoto or wide angle lens, a needed spotlight, or an exposure meter. Of course paying cash is the most economical way to shop if it is possible to do so. When cash is not readily available, it is sound economy to use your credit, provided the amount to pay monthly can comfortably be spared each month out of income. The convenience and satisfaction of having the use of quality merchandise as you pay for it, justifies the small extra charge for credit.

HOW TO OPEN A MONTHLY PAYMENT ACCOUNT

Write your order in the usual way on one of our order blanks, being sure the order totals \$20 or more. You may include anything that Wards sell in any of Wards Catalogs. Then sign and fill in the application for credit on the back. Minors will have parent or guardian sign and fill in application. Enclose check or money order for the down payment and mail to the Ward Mail Order House nearest you. There will be a short delay for credit investigation, which is confidential.

If you live near a Ward Store or Catalog Office see the Credit Manager there. He will be glad to give you full information about our Monthly Payment Plan and handle all the details for you.

REQUIRED DOWN PAYMENT

The minimum down payment is 10% on all photographic and optical goods. It is to your advantage to make as large a down payment as you can comfortably spare.

If you send more than the minimum down payment with your order, you reduce your unpaid balance. This is a distinct advantage to you because (1) it may reduce the amount of your carrying charge, and in many cases (2) it reduces your monthly payment rate. Note in the chart at right how much lower the monthly payments are when the unpaid balance is small. If your account is paid in full before the first monthly payment is due, there will be no carrying charge.

HOW MUCH TO PAY EACH MONTH

To find how much to pay each month, add up your purchases (including any tax or shipping charges to be advanced by Wards) and subtract from this total the amount you paid as down payment. The remainder is the "Unpaid Balance," to which a small carrying charge may be added. The table of Monthly Payment Terms at right shows both the carrying charge and the amount to pay monthly. Minimum monthly payment is \$5.

WARDS "ADD-ON" PLAN

After your credit has been established at Wards, or if you already have a Monthly Payment Account with us now, you may make additional purchases of \$10 or more to be added to your account. Just fill in and sign the "Add-on" form on the back of the order blank. The amount of your new purchase, plus our usual carrying charge of 10%, is then added to the amount you owe.

Monthly payments will not be increased unless the new balance requires a larger monthly payment as shown in the Table of Terms at the right.

NO CHARGE FOR CREDIT ON MOST PHOTOGRAPHIC GOODS

More than two thirds of the items in this catalog are sold without any carrying charge being made when purchased on Monthly Payments. This means that the cost to you is the same whether you pay cash or buy on credit. These items can be identified by the letter "N" added to the letter "H" in the catalog number. For example, catalog number 67 HN 463L requires no charge for credit. But catalog number 67 H 3375 does. The descriptions of all such credit-free items costing more than \$20 also carry the phrase "No Credit Charge" or "No charge for credit on this item." Watch for this phrase in the descriptions of many popular items. Whenever it appears; you will save the entire carrying charge.

TABLE OF TERMS

If Unpaid Balance is	We will add for carrying charge	Monthly Payment
20.00— 22.00	2.00	5.00
22.01— 24.00	2.25	
24.01— 26.00	2.50	
26.01— 28.00	2.75	
28.01— 30.00	3.00	
30.01— 33.00	3.25	5.00
33.01— 36.00	3.50	
36.01— 40.00	4.00	
40.01— 45.00	4.50	6.00
45.01— 50.00	5.00	
50.01— 55.00	5.50	
55.01— 60.00	6.00	6.00
60.01— 65.00	6.50	
65.01— 70.00	7.00	7.00
70.01— 75.00	7.50	
75.01— 80.00	8.00	8.00
80.01— 85.00	8.50	
85.01— 90.00	9.00	
90.01— 95.00	9.50	9.00
95.01—100.00	10.00	
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130.01—140.00	13.50	11.00
140.01—150.00	14.50	
150.01—160.00	15.50	
160.01—170.00	16.50	12.00
170.01—180.00	17.50	
180.01—190.00	18.50	13.00
190.01—200.00	19.50	
200.01—210.00	20.00	14.00
210.01—220.00	20.50	
220.01—230.00	21.00	15.00
230.01—240.00	21.50	
240.01—250.00	22.00	16.00
250.01—260.00	22.50	
260.01—270.00	23.50	17.00
270.01—280.00	24.50	
280.01—290.00	25.50	18.00
290.01—300.00	26.50	
300.01—310.00	27.00	19.00
310.01—320.00	28.00	
320.01—330.00	29.00	20.00
330.01—340.00	30.00	
340.01—350.00	31.00	21.50
350.01—360.00	31.50	
360.01—370.00	32.50	22.50
370.01—380.00	33.50	
380.01—390.00	34.50	24.00
390.01—400.00	35.50	
400.01—410.00	36.00	25.00
410.01—420.00	37.00	
420.01—430.00	38.00	26.00
430.01—440.00	39.00	
440.01—450.00	40.00	27.50

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PARCEL POST RATES					
Shipping Weight of your Order	ZONES				
	Local	1-2	3	4	5
	With-in This City	Not Over 150 Miles	151 to 300 Miles	301 to 600 Miles	601 to 1000 Miles
Up to 8 ounces.....	2c for the first 2 oz. and 1c for each additional oz.				
9 oz. to 1 lb.....	18c	23c	23c	24c	26c
1 lb. 1 oz. to 2 lbs.....	20c	27c	29c	31c	36c
2 lbs. 1 oz. to 3 lbs.....	21c	31c	34c	38c	45c
3 lbs. 1 oz. to 4 lbs.....	23c	35c	39c	45c	54c
4 lbs. 1 oz. to 5 lbs.....	24c	39c	44c	52c	63c
5 lbs. 1 oz. to 6 lbs.....	26c	43c	49c	59c	73c
6 lbs. 1 oz. to 7 lbs.....	27c	47c	54c	66c	82c
7 lbs. 1 oz. to 8 lbs.....	29c	51c	60c	73c	91c
8 lbs. 1 oz. to 9 lbs.....	30c	55c	65c	80c	\$1.00
9 lbs. 1 oz. to 10 lbs.....	32c	59c	70c	87c	1.10
10 lbs. 1 oz. to 11 lbs.....	33c	63c	75c	93c	1.19
11 lbs. 1 oz. to 12 lbs.....	34c	67c	80c	\$1.00	1.28
12 lbs. 1 oz. to 13 lbs.....	36c	71c	85c	1.07	1.37
13 lbs. 1 oz. to 14 lbs.....	37c	75c	90c	1.14	1.47
14 lbs. 1 oz. to 15 lbs.....	39c	79c	96c	1.21	1.56
15 lbs. 1 oz. to 16 lbs.....	40c	83c	\$1.01	1.28	1.65
16 lbs. 1 oz. to 17 lbs.....	42c	87c	1.06	1.35	1.74
17 lbs. 1 oz. to 18 lbs.....	43c	91c	1.11	1.42	1.84
18 lbs. 1 oz. to 19 lbs.....	45c	95c	1.16	1.49	1.93
19 lbs. 1 oz. to 20 lbs.....	46c	99c	1.21	1.56	2.02
25 lbs.....	53c	1.18	1.47	1.90	2.48
30 lbs.....	61c	1.38	1.73	2.25	2.95
35 lbs.....	68c	1.58	1.99	2.59	3.41
40 lbs.....	75c	1.78	2.24	2.94	3.87
50 lbs.....	90c	2.17	2.76	3.63	4.80
60 lbs.....	\$1.04	2.57	3.27	4.32	5.72
70 lbs.....	1.19	2.96	3.79	5.01	6.65

EXPRESS RATES							
If you wish us to ship by Express, do not include express charges with order if there is an agent at your station. You can pay him when the goods arrive. Rates are as follows. Add 3% Federal Tax.							
Ship. Wt. of Order	100 Miles	200 Miles	300 Miles	400 Miles	500 Miles	750 Miles	1000 Miles
5 Lbs.....	\$1.80	\$1.80	\$1.80	\$1.80	\$1.80	\$1.80	\$1.87
10 Lbs.....	1.80	1.80	1.87	1.96	2.01	2.13	2.25
15 Lbs.....	1.80	1.93	2.07	2.20	2.27	2.45	2.63
20 Lbs.....	1.91	2.09	2.26	2.43	2.53	2.77	3.01
25 Lbs.....	2.02	2.24	2.45	2.67	2.79	3.10	3.40
35 Lbs.....	2.23	2.54	2.84	3.15	3.32	3.74	4.16
55 Lbs.....	2.66	3.14	3.62	4.10	4.37	5.03	5.70
75 Lbs.....	3.09	3.74	4.40	5.05	5.41	6.32	7.23
100 Lbs.....	3.63	4.50	5.37	6.24	6.72	7.93	9.14

NOTICE—Prices and shipping rates in this catalog are subject to change without notice. Prices in this catalog are also subject to an additional charge to cover any applicable sales tax or other tax affecting our purchase or sale of merchandise.

When you buy photographic equipment by mail, you enjoy several advantages not readily available through most photographic shops. First, you choose from a much larger assortment than most stores can carry. Second, you may take all the time you want to make your selections. Third, you get factory-packed merchandise, unhandled until you receive it delivered to your own door. Really, it's the easiest way to shop for your camera needs. When you've arrived at a decision as to which items you intend to buy, just follow these easy steps:

1. GIVE COMPLETE INFORMATION. Make a list of photographic and optical goods you want, using the enclosed order blank—or use any piece of plain paper if no order blank is available. State the full Catalog Number (for example, 67 HN 3203K) and name, price, and shipping weight (if given) of each item. Be sure to state Size and Color if there is a choice, and give any other information requested in the description. Add the prices and include amount for tax, if any.

2. INCLUDE ENOUGH FOR POSTAGE. Many cameras and accessories in this catalog are Postpaid, as indicated in the descriptions. For items not Postpaid, include enough for postage (see Table at left). Packages not over 70 lbs. and not more than 100 inches length plus girth are mailable with certain restrictions on packages going to First Class Post Offices. See Express rates at left. For Freight charges see our General Catalog.

3. MAIL YOUR ORDER. Send your order direct to Wards nearest Mail Order House (a handy addressed envelope is supplied) and enclose your remittance. If you wish to use our convenient Monthly Payment Plan, see the explanation and terms on the opposite page.

NOTE: Items with catalog numbers ending in "T" (for example, 67 HN 387T) may be shipped to you from one of Wards other Mail Order Houses. Postage on all "T" items is charged only on the distance from your nearest Ward Mail Order house.

NOTE: Items with catalog numbers ending in "K" or "F" are shipped directly to you from the factory. Allow a little extra time for such items.

HOW TO SEND MONEY

The safest and best ways to send money are by Postal Money Orders, Personal Checks, or Bank Drafts. We advise against sending cash through the mails. If you live on a rural route, your carrier will buy a Postal Money Order for you and enclose with your order to Wards.

AVOID C.O.D. ORDERS

C.O.D. fees are very expensive and we advise you to avoid this service except when necessary. Wards do not accept orders for less than \$5 to be shipped C.O.D. (except repair parts). We must also refuse to accept C.O.D. orders for any articles cut, made-to-order, monogrammed or engraved or for merchandise described as shipped from a factory.

IF THERE IS A WARD CATALOG OFFICE OR WARD RETAIL STORE NEAR YOU

Trained clerks will give you personal attention, write and mail orders for you, save you letter postage, and money order fees. Goods will be shipped from our Mail Order House directly to your home; or if you wish you can call for them when they're ready, and save part of shipping cost.

WARDS GUARANTEE

We guarantee the quality of every article as described and guarantee that it will give you the service you have a right to expect. If any purchase you make from us is not entirely satisfactory, return it and we will exchange it for what you want. Or we will promptly refund your money and pay transportation charges both ways.

MONTGOMERY WARD & CO.

Full Color Prints by Pavelle

...FOR EVERY CAMERA OWNER

COLOR PRINTS FROM COLOR TRANSPARENCIES

Have your favorite Ansco Color, Ektachrome, and Kodachrome transparencies made into brilliant Pavelle color prints. If your camera uses Ansco color, Ektachrome, or Kodachrome, Pavelle prints can be made from your color transparencies whether from half size 35mm. or oversize 8 by 10-inch cut film. No Pavelle color prints are made from Kodacolor negatives or Dufay color positives.

PAVELLE'S TECHNICIANS USE ELECTRONIC EQUIPMENT. Skilled Pavelle technicians, aided by the most advanced electronic methods, assure you of the best possible color prints. They supervise the prints through a solid half mile of modern equipment. Each transparency is individually inspected, then keyed according to exposure and color balance so the electronically controlled printing equipment gives each print an individually compensated exposure.

TRANSPARENCIES FAITHFULLY REPRODUCED ON ANSCO PRINTEON. Pavelle color prints are reproduced from color transparencies on Ansco Color Printon which is as exact as any color process which does not depend on complicated procedures or expensive masking to overcome minor losses in color saturation. Printon has a glossy acetate base which affords your prints a high color reflection, a stiff backing, and far more durability than photographic paper.

WHICH TRANSPARENCY MAKES A GOOD PRINT?

The best color prints are made from properly exposed transparencies taken in soft light. High lighting contrast is not necessary because of the contrast between colors.

To tell whether a transparency will make a good color print you should view it by the light reflected from a sheet of white paper. Place the paper on a table under the light of a table lamp or other tungsten light. Now hold the transparency at an angle so it can be viewed by light reflected from the paper. When viewed in this manner, the overall appearance and contrast of the transparency will be quite similar to the resulting print.

HOW TO ORDER PAVELLE COLOR PRINTS

Wrap transparencies with cardboard or stiff paper so they won't bend. Indicate on each the number of Pavelle prints you want from it—and in what sizes. Be sure to enclose your name, complete address, and amount of your order (either cash, money order, or check). In cases like Process and Print service described at right below, where exact cost is indefinite, send maximum amount for six or nine prints—money will be refunded for any transparencies not deemed printable. Mail to Pavelle Color Incorporated, G.P.O. Box 575, New York 1, N.Y. Do not Send To Wards. Finished work returned by Postpaid 1st class mail if you live East of the Mississippi River, by Postpaid Airmail if you live west of the Mississippi River.

DUPLICATE 35MM TRANSPARENCIES

Made in 35mm size, from any transparency from 35mm to 8 x 10. Mounted in 2x2-in. cardboard readymounts. Minimum order \$1.00. Price Each..... 35c

WRITE BOB ADAMS (Page 93) for quantity prices on Pavelle prints, duplicates, and on professional quality dye transfer prints.

MAIL COUPON BELOW FOR FREE PAVELLE COLOR PRINT

This coupon entitles you to 1 color print from your favorite transparency—FREE! Includes 35 mm., Bantam roll film, sheet film, standard stereo transparency only. See "How to Order" above.

From 35mm or Bantam you get a (2X) 2 1/4 x 3 1/4 in. print.

From standard stereo you get a (2S) 2 3/4 x 2 3/8 in. print.

From roll or sheet film you get a (2R) 2 3/4 x 3 3/4 in. print.

Name _____
(Print Name and Address Plainly)

Address _____

City _____ State _____

Prints are returned Postpaid. Offer expires April 1, 1955.

ECONOMICAL PAVELLE TWIN COLOR PRINTS

Made from full 35mm, Bantam, and all 120 and 620 roll film transparencies—made only in units of 2 each, from the same transparency at the same time. Twin prints are ideal size for pocket or wallet—1 7/8 x 2 3/4 in., unmounted, with rounded corners. Set of two prints for only..... 49c

COLOR PRINTS FROM LARGER TRANSPARENCIES

Made from roll and sheet film transparencies from 1 5/8 x 2 1/4-inch to 8 x 10 in. May be cropped to match shape of prints.

PAVELLE 2R (2 3/4 x 3 3/4-INCH) PRINTS. Made from transparencies up to 2 1/2 x 3 1/2 in. Unmounted with rounded corners. Each print 60c

PAVELLE 3X (3 1/2 x 4 3/4-INCH) PRINTS. Made from transparencies up to 2 1/4 x 3 1/4 in., and sections of larger transparencies up to 4 x 5 inches. Unmounted with rounded corners.... Each print 75c

PAVELLE 5x7-INCH PRINTS. Made from transparencies up to 5 by 7 inches. Mounted in De Luxe folders. Each print 1.50

PAVELLE 8x10-INCH PRINTS. Made from transparencies up to 8 by 10 inches. Mounted in De Luxe folders. Each print 3.00

COLOR PRINTS FROM STEREO TRANSPARENCIES

Made from single frame of standard Realist or Kodak cardboard double mounts (if mounted in glass add 10c extra for removal and remounting in cardboard). State size prints you want.

PAVELLE 2S 2 3/4 x 2 3/8 Prints Unmounted..... 55c

PAVELLE 3 1/2 x 4 3/4 or 3 1/2 x 3 1/2-IN. PRINTS. Unmounted. Each print 75c

PAVELLE 5x5 or 5x7-IN. PRINTS. In folder. Each print 1.50

PAVELLE 8x8 or 8x10-IN. PRINTS. In folder. Each print 3.00

COLOR PRINTS FROM MINIATURE TRANSPARENCIES

Made from 35 mm, Bantam, Mercury, and Robot, transparencies. May be cropped to match shape of prints.

PAVELLE 2X (2 1/4 x 3 1/4-INCH) PRINTS. Unmounted.... Each print 50c

PAVELLE 3X (3 1/2 x 4 3/4-INCH) PRINTS. Unmounted.... Each print 75c

PAVELLE 5x7-INCH PRINTS. In De Luxe folders.... Each print 1.50

PAVELLE 8x10-INCH PRINTS. In De Luxe folders.... Each print 3.00

MOUNTS FOR PAVELLE 3X PRINTS (not shown)..... Each 10c

COLOR PRINTS FROM SAWYER OR 16MM MOVIE FRAMES

Made from any 16mm color movie film or Sawyer Viewmaster frame. For prints from movie frames send only a one or two inch strip of subject. For Sawyer Prints mark frame wanted.

PAVELLE 2V (2 1/4 x 3 1/4-INCH) PRINTS. Unmounted. Each print 1.00

PAVELLE 3V (3 1/2 x 4 3/4-INCH) PRINTS. Unmounted. Each print 1.25

PAVELLE COLOR FILM PROCESSING SERVICE

Pavelle is a manufacturer-approved processor of Ansco and Ektachrome film. Quality is excellent and service is fast—completed work is usually on its way to you within 5 working days.

Standard 35mm transparencies will be finished in cardboard ready-mounts. Mercury, Robot, and all other sizes unmounted. Wrap your film carefully (only one type film to the package), and print "Exposed Color Film" plainly outside. Mail to Pavelle Color Inc., Box 575 G.P.O., New York 1, N. Y. Do not send to Wards. Include your name, address, and the amount of processing charge. Work returned Postpaid, by 1st Class Mail, if you live East of the Mississippi River, by Air Mail if you live West of the Mississippi River. (Minimum order for sheet film \$1.50.)

Sheet film 2 1/4 x 3 1/4—ea. sheet, Ansco Color or Ektachrome... 30c

3 1/4 x 4 1/4—ea. sheet, Ansco Color or Ektachrome..... 30c

4x5—each sheet, Ansco Color or Ektachrome..... 40c

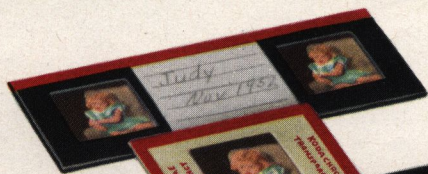
5x7—each sheet, Ansco Color or Ektachrome..... 50c

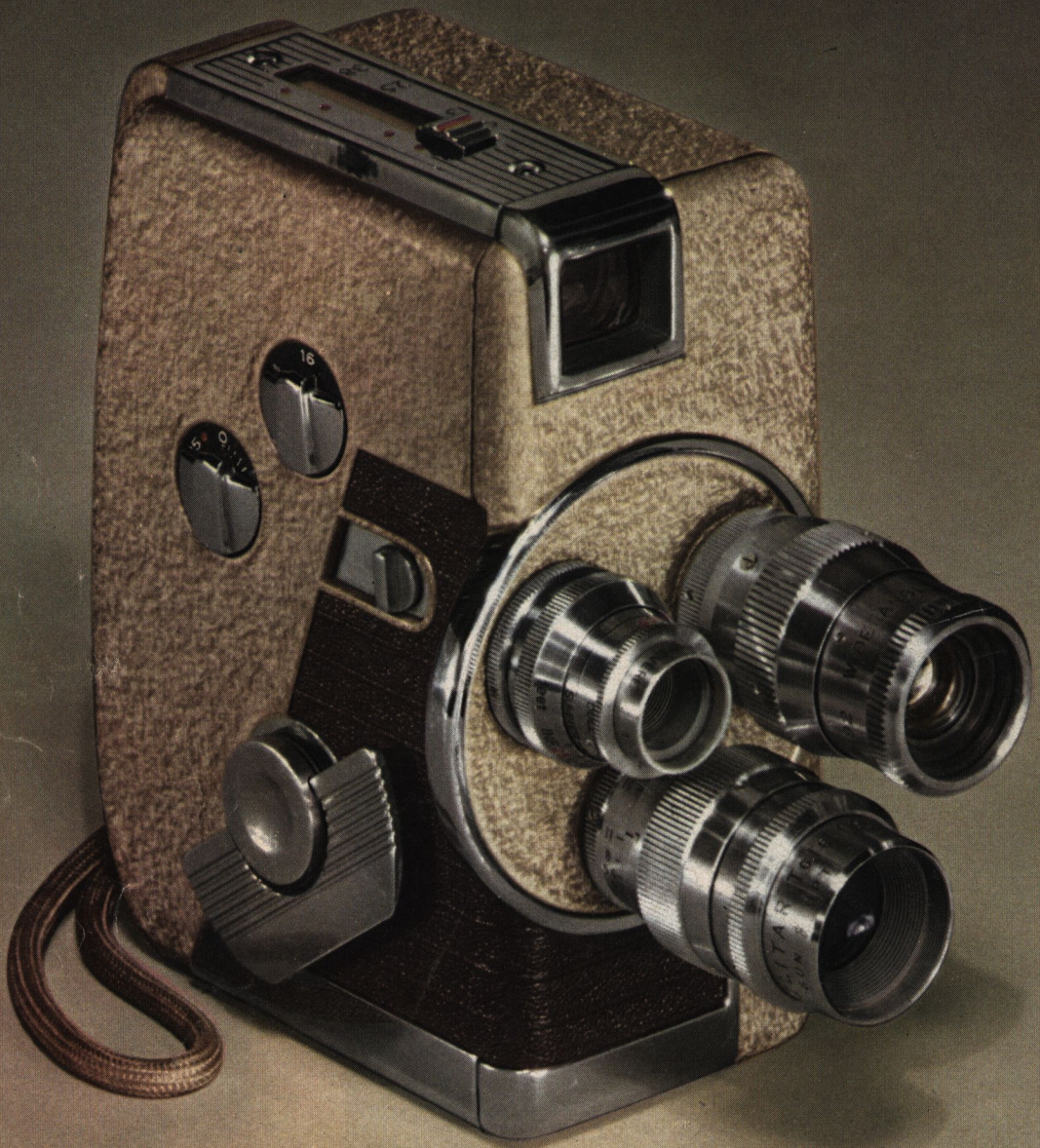
120 or 620 Roll Film Ansco Color or Ektachrome.... Each roll 1.00

35mm Film 20 exposure Ansco Color..... Each roll 1.00

35mm Film 21 to 36 exposure Ansco Color..... Each roll 2.00

PROCESS AND PRINT SERVICE FOR 120 AND 620 FILM. 2R print service at same time film is processed may be had at a saving. Color prints will be made of all printable transparencies. Price (plus processing charge above)..... Each 50c





THE PHOTOGRAPHIC CATALOG

The Revere "84" reel-loading 8mm turret camera above is described on Page 51. Ward's complete selection of movie equipment on Pages 46 to 63.

The Convenient Index for this Book is on Page 3. For Monthly Payment Terms, turn to Page 100. Ordering Information and Parcel Post Rates are on Page 101.

Montgomery Ward 1954