

J.Lizans



MANUFACTURER OF

Photographic, Optical and Scientific Instruments.

Lizars' CHALLENGE CAMERAS.

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The Advantages of Tropical Cameras Explained.



In Camera construction few manufacturers, if any, have departed from the usual method of making these instruments in Mahogany, with the result that, in tropical and sub-tropical climates, with their varying temperatures, much annoyance has been caused through the shrinking and twisting of this wood.

My experience, from practical knowledge, is that Cameras made from the finest quality of Indian Teakwood are more suited to resist extreme climatic changes, thus practically bringing to an end the worry, trouble, and inconvenience which has existed in the past. The advantage of Teakwood over Mahogany will be apparent at a glance to the uninitiated when the relative natures are considered.

TEAKWOOD.

This wood being full of the natural oil of the tree, which it retains, offers resistance to the two great extremes, moisture and dry heat. Warping and twisting will therefore be reduced to a minimum. The appearance of the wood when polished is very like that of Mahogany.

MAHOGANY.

This is a harder and closer-grained wood, and before it can be built into a Camera it is necessary to expel the natural sap by years of air drying. In such a dry condition it is capable of absorbing a large quantity of moisture, which, should this happen, would naturally cause the wood to swell and twist. If after absorption it should be subject to a dry heat, it will then have a tendency to warp and split, and cause a general disablement of the instrument.

It will therefore be seen that Teakwood is the most suitable material for a varying climate, and in addition to causing little or no trouble, the lifetime of the Camera is enormously prolonged.

All "Challenge" Cameras are supplied in Teakwood, if desired, at slightly increased prices, namely, Camera and three slides, \(\frac{1}{2}\)-plate, \(10\)/-; \(5 \times 4\), \(15\)/-; \(Post-card size\), \(17/6\); \(\frac{1}{2}\)-plate, \(20\)/-; \(1/1\)-plate, \(30\)/.





Lizars' "Challenge" Dayspools.



20% LIGHTER THAN SIMILAR CAMERAS.



LOADED AND UNLOADED IN DAYLIGHT.

ADVANTAGES.

The Camera can be used with plates as well as films, without any increase in bulk. It is fitted with a special Automatic Locking Device for the Infinity Distance.

Made of the finest Mahogany throughout, and absolutely free from any thin sheet metal so liable to get dented, twisted and out of order.

Charming appearance and of unique simplicity in loading, unloading and manipulation generally.

Opens ready to take an oblong picture, and consequently of infinitely greater service than those opening in the vertical form (ten out of twelve exposures are, as a rule, oblong). Particularly Compact. Exceedingly light.

CONSTRUCTION.

Camera,—Of the Folding Pocket type, made of thoroughly seasoned and finest Spanish Mahogany, either polished or covered in best hard Morocco-grained leather. Handsome leather bellows, with a new and improved method of fixing to the Camera, safeguarding all risks of admission of stray light. A carefully graduated scale for various distances is fixed to the baseboard. Rising and cross front for horizontal and vertical pictures. No projection beyond the flush of the Camera, therefore nothing to catch on the sides of the pocket. Can be used on a stand.

Shutter.—The Shutter supplied is the popular "Ibso" Automatic with time and instantaneous movements, approximately from 1 to the 100th part of a second, and released either by Antinous Release or finger trigger, both of which are supplied. Being constructed of metal throughout, extreme climatic changes do not affect it. Other makes of shutters can also be fitted.

Lenses.—All lenses are carefully selected and tested before fixing to the cameras, and each is fitted with Iris disabragem.

with Iris diaphragm.

Finder.—The new brilliant form, giving approximately the same view as that shown by the lens, and reversible for horizontal or vertical pictures.

Finish.—Great exactness and most beautiful work throughout.

TROPICAL MODEL (in 1-plate size only).

The difficulty experienced in warm or damp climates with the ordinary forms of Cameras has induced me to place on the market an instrument specially designed to withstand the most severe climatic variations. and one that will be serviceable and reliable in every working detail.

This model does not depart in any way, so far as the working parts are concerned, from the ordinary Dayspool Camera, but the manner in which it is put together and the materials employed in the

instruments.

manufacture are entirely different.

Teakwood, so well known as a damp and heat resisting product, is exclusively used in the framework of camera, and this is brass bound at all the important parts.

All tongues and mitres, where not bound with brass, are of metal in place of wood as usually employed, and these parts, in addition to being glued, are carefully screwed right through the metal bindings.

The Bellows is made of real Russian leather, and attached to the camera with brass plates.

The Cameras are supplied polished in place of being leather covered, the latter being so liable to decay

and leave its support when exposed to a damp atmosphere. Care and consideration are features which have predominated extensively in the construction of these

LONG EXTENSION MODELS.

The "Challenge" Dayspool series of Cameras are also made with a long double extension baseboard. The additions in prices are: -4-plate, 15/-: 5×4, 18/6; Post-card size, 20/-; 7×5, 25/-



"Junior" Dayspool Models.

The "Junior" Dayspool Cameras are ideal pocket models, and have been designed to meet the demand for a high-class and really compact instrument, suited for the most serious workers.

They are in every respect identical with the specification of the Dayspool, with the exception of the shutter, which is a Bausch & Lomb, with time and instantaneous movements, approximately from 1-25th to 1-100th part of a second. The shutter is automatic, or everset. The Lenses are Rapid Rectilinear of superior quality, and have Iris diaphragms.

The Cameras can be loaded and unloaded in daylight, and are supplied with the new Brilliant view-finders. Deica List of the Daysnool Camer

Description of Lens.					Size. 5 × 4			Size Post-C 5½×3	ard	Size. 7 × 5	
Beck "Neostigmar" Lens, F/7.7, Series III. N Aldis Lens, Series II., F/6 Taylor, Taylor & Hobson Lens Ross' Symmetric Anastigmat Lens Dallmeyer Stigmatic Lens, Series IV F/6.3 Ross Homocentric Lens, Series III., F/6.3 Taylor & Hobson "Cooke" Lens, F/6.5 Zeiss "Tessar" Lens, Series II. B., F/6.3 Goerz Double Anastigmat Lens, "Dagor," F/6.8 Dallmeyer Stigmatic Lens, F/6 "Dallmeyer Stigmatic Lens, "Serrac" F/4.5 "Coorz Double Anastigmat Lens, "Dogmar," F/4.5		£3 4 4 6 7 7 7 8 8 9 9 9	12 0 15 	606666666666666666666666666666666666666	£4 5 6 6 7 7 8 8 9 10 9 11 11	10 0 2 4 5 10 10 12 0 5 15 15 19 10	0 0 6 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	£4 12 5 2 6 5 6 7 7 7 7 12 8 12 8 14 9 2 10 7 9 17 11 17 12 1	660066666666666	£5 10 8 4 7 14 9 5 9 12 10 12 10 12 12 12 14 5 14 16 14 16	5 0 6 6 7 6 6 6 7 6 6 6 6 6 6 6 6 6 6 6 6 6

The prices quoted for the cameras with these lenses are for the lenses mounted in Compound shutters. Note. The Dallmeyer Stigmatic F/6 Lens included in above price is No. 2 for 4-plate, No. 2 for 5×4 and No. 3 for 7×5.

The Koilos and Compound Shutters can be fitted to these Cameras. Prices on Application.

Camera only, and fitting customer's own Shutter and Lens (not exceeding 5½ in. focus for ½-plate, 6 in. for 5×4	I											
and Post-card size, and 8 in. for 7×5), supplying and fitting view-finder, and sealing	£2	10	0	£3	5	0	£3	7	6	£4	7	6
Focussing Screen with Hood, and one Double Dark Slide with Safety Light Traps and Aluminium Draw-out	1505			1			1286			SAM		
Shutters	0	10	0	0	12	0	0	12	0	1 0	1	0
Extra Double Dark Slides	0	5	0	0	6	6	0	7	6	0	8	0
Ordinary Pattern Book-form Double Dark Slides in place of the Solid Pattern, each extra	0	3	6	0	4	0		_		0	4	6
"Challenge" Changing Box, with leather bag to carry six											5	0
Stand Attachment for taking upright pictures	0	3	6	0	4	0	0	4	6	0	5	0
Solid Leather Case to hold Camera Focussing Screen and 3 Slides	0	6	6	0	8 8	6	0	9	6	1 0 0 0	12	0

THE TROPICAL MODEL in 4-plate size only is £1 15s. additional to above prices.

Price List of the "Junior" Dayspool Cameras.

	Junior A		pictures $2\frac{1}{4} \times 3\frac{1}{4}$	pictures $2\frac{1}{2} \times 4\frac{1}{4}$
With "Challenge" R.R. Lens Solid Leather Case to hold Camera	 £2 7 0 5	6	£2 12 6 0 5 6	£2 15 0 0 6 0

The lunior "B" Model is also made suitable for use with plates.

Focussing Screen and one Slide, 9s; Extra Double Dark Slides, 4s each.

These Cameras can also be had fitted with high-class Anastigmat Lenses. Prices given in complete catalogue.



Lizars' "Challenge" Celtic Hand Camera.

In Quarter-Plate Size only.

The "Challenge" Celtics are the most compact, the lightest and yet strongest hand pocket Cameras on the market. They possess all the advantages and features necessary for rapid snap-shot or stand work.



ADVANTAGES.

The Front of the Camera is of an entirely original design, it pulls out on brass guide rails to the infanity distance, where it is stopped automatically (no binding being necessary). For closer distances the front is extended by means of rack and pinion, and without in any way interfering with the infanity catch.

There is a double extension of 104

There is a double extension of 104 inches, thus permitting the use of single

components of most lenses.

Extensive Rising and Cross Move-

ments are provided.

Simplicity is the keynote of the entire construction.

The Camera is supplied in two forms.
Style 1. With the "Challenge"
Daylight Loading Adapter of special
pattern, which can be used with either
plates or films. With this fitment the
Camera is at all times complete in
itself, there being no delay as in the
changing of dark slides. The focussing
screen also forms part of the adapter,

Camera is at all times complete in itself, there being no delay as in the changing of dark slides. The focussing screen also forms part of the adapter, and is provided with a very efficient hood. In this way loose parts are entirely obviated.

Style II. With three Double Dark Slides having Aluminium Draw-out Shutters and Ground Glass Focussing Screen.

19.00 Part 19.00 Table 19.00		Charles St.	美国国际国际	
Description of Lens.			STYLE I.	STYLE II.
Beck Symmetrical Lens			£4 0 0	£3 12 6
Beck "Neostigmar" Lens, F/7.7, Series III. N	***	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 7 6	4 0 0
Aldis Lens, Series II., F/6	***	•••	5 3 0	4 15 6
Dallmeyer Stigmatic Lens, Series IV., F/6.3	***	10.000	6 10 0	6 2 6
Ross' Homocentric Lens, Series III., F/6.3	***	***	7 10 0	7 2 6
Taylor & Hobson "Cooke" Lens, Series III., F/6.5	***	***	7 12 0	7 4 6
Zeiss "Tessar" Lens, Series II. B., F/6.3	***	***	8 5 0	7 17 6
Goerz Double Anastigmat Lens, "Dagor," F/6.8	***		8 15 0	8 7 6
*Dallmeyer Stigmatic Lens, "Serrac," F/4.5	***	***	9 15 0	9 7 6
Goerz Double Anastigmat Lens, "Dogmar," F/4.5	100 100		9 15 0	9 7 6
Zeiss "Tessar" Lens, Series I. C., F/4.5	***	***	9 18 0	9 10 6
Dallmeyer Stigmatic Lens, F/6		•••	9 5 0	8 17 6

The prices quoted for the Cameras fitted with these Lens are for the Lens mounted in Compound Shutters.

The "Junior Celtic" is a modified form of above at prices from 30s.

Tropical Models.

The Celtic Camera is also made in Style II., specially constructed to withstand climatic variations. In this instrument Teakwood is used throughout the bodywork, which in addition is brass-bound at all important joints. A real Russian Leather bellows is also fitted in place of the usual leather one. The Dark Slides also receive due attention, being made of Teakwood. The extra cost of this model over Style II. Celtic listed above is £1 15s.

Lizars' "Challenge" De Luxe Cameras.

ADVANTAGES.—The "Challenge" De Luxe Cameras possess an invaluable range of adjustments hitherto unable to be acquired in instruments of moderate dimensions.



The fact they can be used as ordinary Hand or Stand Cameras, embracing at the same time all the requirements for copying, architectural, wide-angle, and tele-photographic work, with sufficient extension to use the single components of most lenses, will convey an idea of of most leases, will convey all leas of their many accomplishments, which are all attained in a very simple manner. For ordinary hand use the Camera is simply opened and pulled forward

to position, the universal movements being brought into action only when

actually required.

Amongst the many novel features of the "Swing Front" are: Enormous Rise. Extreme Side Movement. Great Extension. Extent to which it can be set back for short-focus lenses. Tilting of the lens to any degree upwards or downwards. Quarter-plate size fitted with revolving back.

CONSTRUCTION.

The "Challenge" De Luxe Cameras are made of the finest Spanish Mahogany,

they can be supplied polished or covered in Morocco Leather, as required.

The Brass Work & Mechanical Parts are substantially made, beautifully finished, fitted with great exactness. A Diagonal Rack and Pinion focussing movement is fitted to the travelling baseboard, and there is also an extra rack and pinion movement controlling another travelling baseboard in the body of the Camera, and built independent of the dropping baseboard, enabling very short focus lenses for wide-angle work to be accurately and easily focussed.

The Bellows is of real leather and has a great latitude of adjustment in conjunction with the swing front.

The Shutter is the well-known "Ibso," giving exposures from 1 second to the 1-100th part of a second, as well as time and bulb movements. The Slides, Finder, Level, etc., are of the best workmanship throughout, PRICES, as nor Specification with three Double Dark Slides with Aluminium Draw-out Shuttons

with the per providention, with three Done	ie Dain Dilues	WILL PLIGHTIM	um Diaw-but	Jutter 3.
FITTED WITH	$\begin{array}{c c} 4\frac{1}{4} \times 3\frac{1}{4} \\ \frac{1}{4} - \text{plate} \end{array}$	5 × 4	Post-Card	$\begin{array}{c} 6\frac{1}{2} \times 4\frac{3}{4} \\ \frac{1}{2} \text{-plate} \end{array}$
Beck "Neostigmar" Lens, Series III. N., F/7.7 Lizars' "Kram" Convertible Three-Foci Lens	£6 7 6	£7 5 0	£7 15 0	-
	6 10 0	7 10 0	8 0 0	£10 0 0
Aldis, Series II., F/6 Lens	7 8 0	8 17 6	9 7 6	11 16 6
Taylor, Taylor & Hobson Lens	7.7	8 19 6	9 9 6	11 7_0
Dallmeyer Stigmatic Lens, Series IV., F/6.3	8 15 0	10 5 0	10 15 0	13 5 0
Ross' Symmetric Anastigmat Lens	-	10 10 0	11 0 0	13 15 0
Ross' Homocentric Lens, Series C., F/6.3	9 15 0	11 5 0	11 15 0	14 10 0
Taylor & Hobson "Cooke" Lens, F/6.5	9 17 0	11 7 0	11 17 0	14 12 0
Zeiss "Tessar" Lens, Series II. B., F/6.3	10 10 0	11 15 0	12 5 0	16 0億0
Goerz Double Anastigmat Lens, "Dagor," F/6.8	11 0 0	13 0 0	13 10 0	16 5 0
Dallmeyer Stigmatic Lens, F/6	11 10 0	12 10 0	.13 0 0	15 15 0

The 1-plate and 5×4 are fitted with No. 2, and the 1-plate with No. 3 Dallmeyer Stigmatic F/6 Lens.

TROPICAL MODELS.

In the manufacture of the "Challenge" Model De Luxe Cameras in Teakwood, considerable thought has been given, and every care exercised, in order to make these instruments suitable for the most severe climatic variations.

The value of Teakwood as a damp and heat-resisting material is known to all who are resident in a Tropical country. The Cameras are Polished in place of being Leather-Covered, the latter being so liable to decay and leave its support when exposed to a damp atmosphere.

All Tragues and Mitres, where not brass-bound, are of Metal instead of wood, as usually employed, and these, and all other joints, are not only glued, but carefully screwed.

In addition, the Cameras and Book-Form Double Dark Slides are Brass-Bound at all the important parts.

The Religious area of a Paul Puresis Leather and starched to the bedies of the Cameras with Brass.

The Bellows are made of Real Russia Leather and attached to the bodies of the Cameras with Brass Plates. Otherwise, these instruments are the same as the specification of the "Challenge" De Luxe

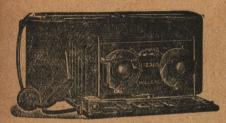
Cameras described.

The Tropical Models are fitted with Revolving Backs.

The extra cost of the Tropical Model over the ordinary model listed above, including three Brass-bound Book-Form Double Dark Slides, is—Quarter-plate £3 10s, 5×4 £4, Post-card £4 10s, Half-plate £4 15s.

Lizars' "Challenge" Model B Stereoscopic Film and Plate Cameras.

Two distinct Models—(1) For Plates only 6\(\frac{3}{4} \times 3\)\(\frac{1}{4}\). (2) For Daylight Loading Films or for Plates 6\(\frac{3}{4} \times 3\)\(\frac{1}{4}\).



These Cameras have been constructed in two forms—namely, with fixed division in bellows, and with loose division. With the fixed division, pictures, either Stereoscopic or Lantern Slide size (34 in square), two on one plate, may be produced, the latter being obtained by capping the one lens and making the exposure with the other. The instru-ment with the loose division will produce either Stereoscopic Pictures, or, by the removal of the division, the Artistic Landscape or Panel Shape, $6\frac{3}{4} \times 3\frac{1}{4}$. For the Landscape size it is necessary to have an extra front panel and a 3-plate lens, which take the place of the stereo shutter and lenses.

SPECIFICATION.

Camera. Made in finest SpanishImahogany, either polished or covered in best quality leather. Leather bellows. Focussing hood to Plate Model.

Shutter. "Singlo" automatic, giving time, bulb and instantaneous exposures. The two shutters are ever-set, and are operated simultaneously by one antinuous or trigger release. When the camera is supplied with lenses other than the Rapid Rectilinear, it is fitted with the Variable Speed Ibso Automatic Shutter,

with lenses often than the Rapid Rectiment, it is inted with the Variable Speed 1050 Automatic Shutter, and the prices quoted include this shutter.

Slides. Three in number, double, and of solid form, with aluminium draw-out shutters. The light traps which are fitted to the slides are an entirely new device, making them equal to the best book-form pattern. The Slides are only supplied with the Plate Model at the listed prices.

Lenses. All are carefully selected and tested, with Iris diaphragms, controlled by one lever.

Finder. The new brilliant series, and set as near as possible to show the same view as that given

by the lenses.
Finish. This is carried out with great exactness, and the pictures are focussed from six feet to infinity

on a carefully graduated scale.
Special Points. Camera, Lenses, Shutter, Finder, and Focussing Hood all close up together. Rising front and swing back. Focussed by diagonal rack and pinion. Admirably adapted as a Stand Camera, for which purpose bushes are provided. Instantly opened, and immediately set at infinity by the new and improved pull-out front with quick clamping action. Compactness, lightness and portability are carried out to a fine degree. Workmanship and finish throughout of the highest grade.

PRICES, as per Specification.

Description of Lenses	Fixed Division in Bellows.	Loose Division in Bellows.		
†Fitted with accurately-paired Rapid Rectilinear Lenses, F/8 Aldis Lenses, Series II., F/6	£5 10 0 0 9 10 0 0 12 4 0 0 14 8 0 0 15 14 0 16 14 0 16 14 0 0 16 14 0 0 16 14 0 0 16 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	£5 15 0 9 15 0 12 9 0 14 13 0 14 9 0 15 19 0 15 19 0 16 19 0		

† SPECIAL These Cameras are also supplied with the New Variable Speed "Ibso" Automatic Shutter at an additional cost of £1 10s.

	ch £0	2	6
Stand Attachment for taking upright pictures for film model	0	5	0
Focussing Screen with hood and one double dark slide with improved light traps, an	nd		
Aluminium Draw-out Shutters for film model eac	ch 0	17	6
Extra Double Dark Slides		8	
Book-Form Double Dark Slides		12	
		7	
Solid Leather Case with hand and shoulder straps, to hold Film Camera only		12	0
Solid Leather Case with lock, hand, and shoulder straps, lined baize, to hold Plate Camer	ra		
and Three Slides	0	12	0



Lizars' "Challenge" Model 1 B Stereoscopic Camera.

This Stereoscopic Camera, of the very best workmanship, is for plates $6\frac{4}{3} \times 3\frac{1}{4}$, with loose division in bellows, and similar in design to the Model B Stereoscopic Plate Camera described previously. It differs only so far as the shutter, front and slides are concerned, and with these alterations and extra movements it may appeal to some stereoscopic





workers as more suitable for this particular class of photography. The Shutter is the "Challenge" Focal Plane working from 1-10th to 1-1000th of a second, or the Thorton-Pickard Behind-Lens with adjustable centres, and is built into, and forms part of the Camera.

The Focal Plane Shutter is fitted with quick wind and Speed Indicator.
The Front (as shown in illustration) is con-

The Front (as shown in illustration) is constructed to give various separations to the lenses and is fitted with a carefully graduated scale. The panel is detachable, so that another with ½-plate lens may be used for single pictures.

The three Slides supplied are of the best quality Book-form, tongued in well, mitres cross-keyed on surface, rabbeted Frames and Shutters, and with Automatic Closing Springs and Sutters,

matic Stop Springs to Shutters.

PRICES, as per Specification, Polished or Leather-Covered,

Description of Lenses.		With P Beh	With "Challenge" Focal Plane Shutter.				
Fitted with accurately paired Beck Symmetrical Lenses, FAIdis Lenses, Series II., F/6	·/8	 £ 8 10 13 15 15	s. 10 12 6 4 6 16	d. 0 0 0 0 0	£ 9 11 14 16 16 17 18	s. 10 12 6 4 6 16	d. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Manufacturer of Photographic, Optical and Scientific Instruments.



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	***	***	
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PAISLEY	***		1 Old Smithhills
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ABERDEEN			171 Union Street
BELFAST			8 Wellington Place
LIVERPOOL	1		71 Bold Street

Factory: Golden Acre Works, Craignestock Street, Glasgow

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LIZARS	•••		OPTICIAN, ABERDEEN
LIZARS			BELFAST
LIZARS		***	OPTICIAN, LIVERPOOL