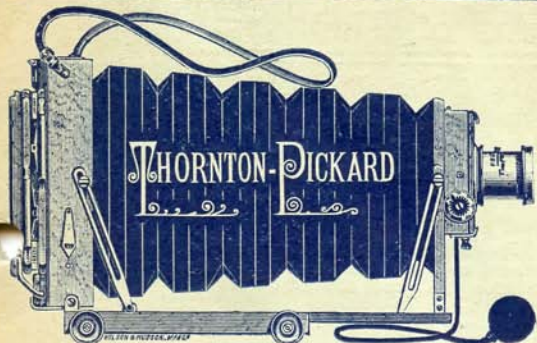


1898.



Catalogue

OF

THE
THORNTON-PICKARD

PATENT

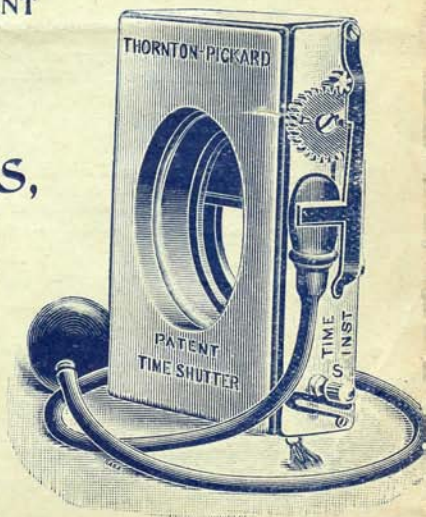
CAMERAS,

SHUTTERS,


And other Specialties.

*May be obtained from all Dealers in
Photographic Materials, or direct from*

**The Thornton-Pickard
Manufacturing Co., Ltd.,
Altrincham.**



Terms of Business.



DISCOUNTS.

A discount of 5 per cent. will be allowed from the prices of all Goods of our manufacture for cash with order.

FIRST ORDERS.

It is respectfully requested that first orders should be accompanied by references, or a remittance. Compliance with these conditions insures prompt dispatch of Goods.

REMITTANCES.

Cheques or Post Office Orders to be made payable to the THORNTON-PICKARD MANUFACTURING Co. LIMITED, and may be crossed CUNLIFFES, BROOKS, & Co. P. O. Orders should be made payable at ALTRINCHAM. Postage Stamps may be used for the payment of small amounts. Foreign Orders are payable by P. O. Orders at ALTRINCHAM, or by Draft on a London or Manchester Bank.

ACCOUNTS.

Accounts monthly, due on the First of the month following the date of the invoice, net.

ON APPROVAL.

All goods made by the THORNTON-PICKARD MANUFACTURING Co. LIMITED, may be obtained through any dealer in Photographic Apparatus, or they will be sent on approval if remittance for the amount accompanies order. The goods to be returned upon receipt if not approved.

CARRIAGE.

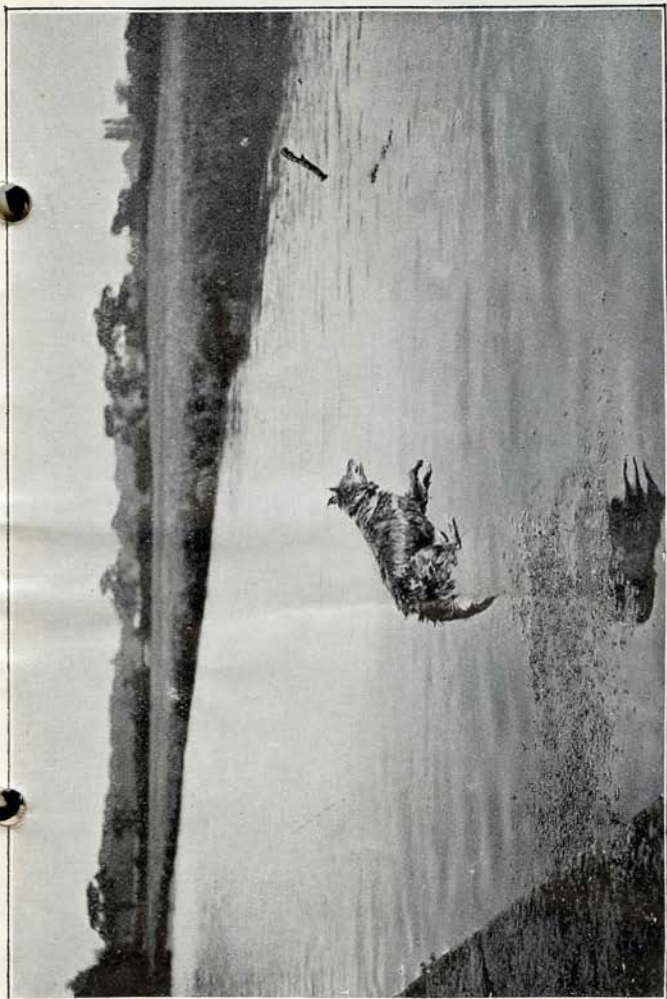
Carriage paid on all retail orders within the British Isles, and on foreign retail orders to port of shipment. All small parcels are sent per parcel post, and larger ones by passenger train unless otherwise ordered. Wholesale orders are sent carriage forward.

EMPTIES.

Packing boxes, &c., are charged at the lowest rate, and are not returnable.

ADDRESS:

THE
THORNTON-PICKARD MANUFACTURING Co. LTD.
Altrincham.

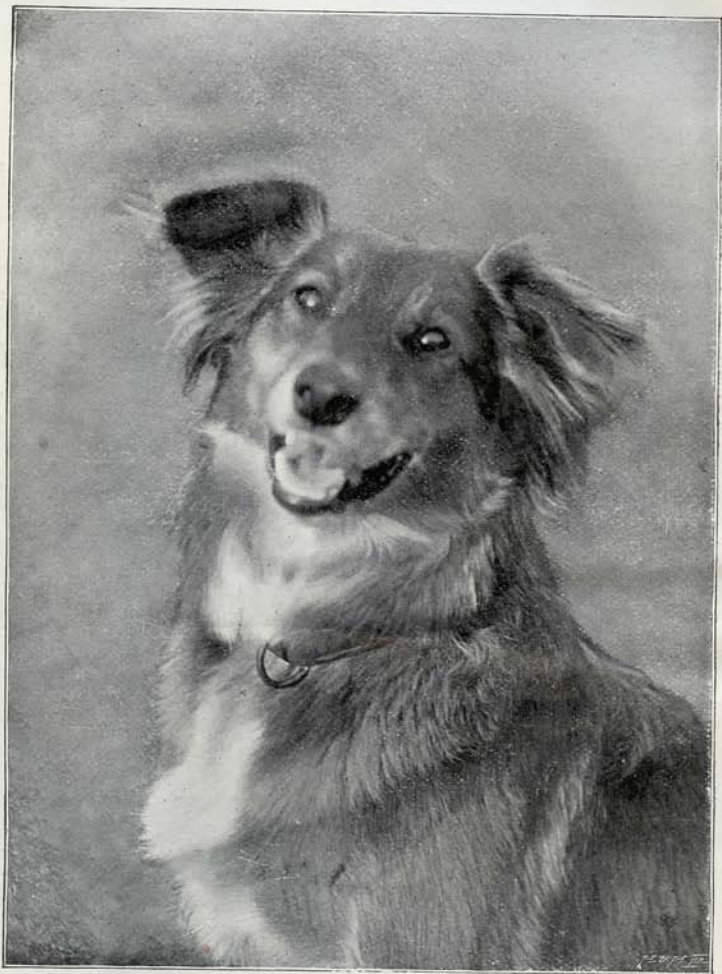


JUMPING FOR STICK.

Exposure $\frac{1}{100}$ sec. Taken by Mr. J. E. Thornton, with a

THORNTON-DICKARD CAMERA AND FOCAL PLANE SHUTTER.

COPYRIGHT



EXPECTATION.

Exposure $\frac{1}{10}$ sec. Taken by Mr. J. E. Thornton, with a

THORNTON-PICKARD CAMERA & TIME & INSTANTANEOUS SHUTTER.

Introduction.

THE THORNTON-PICKARD SHUTTERS.

THERE are doubtless few, if any, practical photographers at the present day who would question the superiority of the Roller Blind Shutter over every other type; and no doubt all who have carefully studied the theory, construction, and practical use of various kinds of Shutters are agreed that there is no other form so satisfactory and reliable. It is now some years since we became convinced of this fact, since which we have made it our business to improve and perfect this particular form of Shutter, and to make it THE SHUTTER OF THE DAY. How far we have succeeded may be judged from the fact that the Thornton-Pickard Shutters have

THE LARGEST SALE IN THE WORLD.

THE introduction of our Patent Time and Instantaneous Shutter made it possible to give any exposure, from fractions of a second up to minutes or hours, without vibration, and therefore to dispense with the use of the lens cap entirely. This Shutter is used for all kinds of work, both by professional and amateur photographers.

The merits of the Thornton-Pickard Patent Time and Inst. Shutter are so widely known that it is unnecessary to dwell upon them here. We may, however, mention that last season's sales again show an enormous increase upon previous records—another proof of this Shutter's sterling quality and suitability for its purpose.

For the information of those who may not have studied the matter, we beg to offer the following remarks upon the

Requirements of a Perfect Shutter:

It should be simple in construction and not liable to get out of order; it should be well made and carefully fitted; it should work without vibration, or the picture will be blurred and the lens will eventually suffer by the constant jar; there should be no sudden reversal of the moving parts, they should be light and well-balanced, and travel in one direction only, otherwise vibration will be unavoidable; the Shutter should work equally well in front of or behind the lens, and upside down, sideways, or in any other position; it should be safe and not liable to go off accidentally; it should give even illumination all over the picture; it should open instantly, remain completely open for the greater part of the exposure, and then close instantly; the "Time" exposure should be completely under the control of the operator, so that should the subject show signs of movement he can close the Shutter by the pneumatic ball instantly, and so prevent the picture being blurred; the release should work with one squeeze of the pneumatic ball, so that short exposures (such for instance as 1-4th, 1-6th, or 1-10th of a second which would be too quick to get with a lens cap, and too slow to get with an instantaneous Shutter) may be obtained by squeezing the ball to open the Shutter, and letting it go quickly to close; these short exposures cannot be got when two squeezes are necessary. Both in theory and practice the above points are necessary in a perfect Shutter for all-round work. The Thornton-Pickard Time and Instantaneous Shutter possesses every one of them.

BEWARE OF IMITATIONS. LOOK FOR THE NAME

THORNTON-PICKARD

All our goods bear our name. None genuine without.

THE THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

PATENT

Time & Instantaneous Shutter.

Standard Pattern.

To fit on either the Hood or Tube
of the Lens.

*

Particulars of the smallest size:

Price 18/6.

SPEED, up to $\frac{1}{50}$ of a second.

DIMENSIONS, $3\frac{3}{8} \times 2\frac{3}{4} \times \frac{1}{2}$ inches.

WEIGHT, $4\frac{1}{2}$ ozs.

Price List on page 46.



*Speed Indicator, 3/6 extra.

*

THE above illustration shows the external appearance of the THORNTON-PICKARD Time and Instantaneous Shutter, which is the one recommended for general all-round work.

The Shutter is simplicity itself.

There is no complicated mechanism to get out of order.

It is a perfect substitute for the lens cap, and much more handy and reliable.

The same Shutter may be used with any number of lenses, of different sizes, by the use of our Patent Adaptors (price from 8d. each) described on page 19.

The Shutter is fully described on the two following pages.

*When a Speed Indicator is not fitted, an ivory label is attached to every Shutter showing the highest, medium, and lowest speed at which the Shutter will work for Instantaneous Exposures.

Price List on page 46.

THORNTON-PICKARD THE MANUFACTURING CO. LTD.
Altrincham.

6

ALL OUR GOODS BEAR OUR NAME.

Patent Time & Instantaneous Shutter, Standard Pattern—(continued).

THE illustration below shows the Shutter in section, and the one on the preceding page shows its external appearance. In the interior of the case (which is made of mahogany of a rich dark colour and is nicely polished and finished) there are two rollers A and B, one at the top and the other at the bottom. A piece of flexible and perfectly light-proof cloth D, the full width of the case, is joined at its opposite ends to these rollers, so that it can be wound off one on to the other like a blind or curtain. Midway in the blind a rectangular hole is cut, somewhat larger than the lens hood; this is indicated by the thick dotted line H. The interior of the bottom roller contains a spiral spring, made of the best fine steel wire. This spring can be wound up to increase the speed by the knob S (shown in the illustration on the preceding page). The spring catch (shown in the same illustration) drops into a notch cut in the knob, for the purpose of holding it when wound up. A slight downward pressure on this catch will allow the spring to run down to its lowest tension. After letting the driving spring run down to the lowest, one or two turns should be given to the knob, if necessary, so as to put sufficient tension on the spring to just pull the blind down. This remark does not apply if the Shutter is fitted with a Speed Indicator, as the latter forms a stop and prevents the spring from unwinding too far and also from overwinding. At the end of the top roller is a small pinion, which works into a toothed wheel on the outside of the case. The arm, or pointer, also seen in the engraving, may be placed at "TIME" or "INST." When the Shutter is worked with the pointer at "Inst.," as shown, it keeps clear of the wheel, and allows the blind to run to the bottom, giving an instantaneous exposure; but if the pointer is placed at "Time," the wheel is stopped by means of a projecting stud, which causes the half-unwound blind to remain open and give a prolonged exposure until the ball is released. At the end of the top roller, inside the case, there is a pulley P, on to which the cord C winds. This cord, which is made specially strong for the purpose, terminates in a small tassel. The Shutter has a large round aperture through it from back to front. The back part is recessed, and is lined with a piece of Patent Rubber Moulding R, of special form for the purpose of accurately fitting the lens. Should the fit be rather too slack, it may be made tighter by turning an adjusting screw at the side of the Shutter not shown in the engraving.



The action of the Shutter is as follows:—

For an Instantaneous Exposure place the lever opposite the word INST. The cord is then pulled out as far as it will come by means of the tassel, which causes the wheel to revolve until the second stud catches in the notch of the lever, making two clicks. The pulling of the cord winds up the blind on the top roller, so that the opaque bottom end covers the opening and consequently the lens. If, now, the pneumatic ball is pressed, it will lift the lever clear of the stud and release the wheel, allowing the blind to rapidly re-wind upon the bottom spring roller. The aperture in the blind therefore passes rapidly across the opening in the Shutter case, which is instantly covered again by the opaque end of the blind. The exposure thus given is an instantaneous one.

The Duration of the Exposure can be ascertained by counting the number of turns given to the speed knob S, and referring to the ivory label on the side of the Shutter, which gives the highest, lowest, and the medium speed. Intermediate numbers of turns may be given to the speed knob, which will give intermediate speeds. To obtain the lowest speed, represented by "0" turns, the spring is allowed to run down, and then re-wound up by the knob a sufficient number of turns to only just carry the blind to the bottom and so close the Shutter. For a small extra charge the Shutter is fitted with a SPEED



[Continued on next page.]

THE THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

Patent Time & Instantaneous Shutter, Standard Pattern—(continued).

INDICATOR, shown in the accompanying illustration, also on page 20. This consists of a dial, marked in fractions of a second, attached to the side of the Shutter, and a pointer on the end of the spring-roller spindle. The speed is indicated on the dial in fractions of a second by the pointer, which can be set to the speed desired by means of the knob. The Indicator is a great acquisition; it does not retard or affect the working of the Shutter in any way, and is strongly recommended.

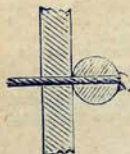
The speeds of each size of Shutter have been arrived at after a series of very careful tests with apparatus constructed specially for the purpose.

For Time Exposures the cord is pulled to its limit as before, but the lever is placed opposite the word "TIME." On squeezing the pneumatic ball the blind stops open by means of the stud, which catches in the notch of the lever as before described; it remains open until the pressure on the ball is released. Thus a Time exposure of any required duration may be given. In this case the exposure commences instantly the ball is squeezed, and terminates immediately the pressure is released. Beyond this there is no limit to the duration of the exposures that may be obtained.

For very long Exposures, such, for instance, as are required for INTERIORS, there is no necessity to hold the ball all the time. Without first setting the Shutter, pull the cord *half-way*, that is, until the first click is heard. This sets the Shutter full open, and it may be left so for the desired time of exposure, after which it can be closed by simply squeezing the ball.

For Focussing, the Shutter remains open in the same manner, that is if the cord is pulled only half-way—until the first click is heard.

For Hand Cameras. This Shutter is very suitable for HAND CAMERAS. It may be fitted in front or behind the lens, and sideways or upside down. It is equally efficient in any position, and gives all exposures from fractions of a second up to any desired length of prolonged "Time" exposures. It is quickly adjusted, and free from vibration. The winding or setting cord of the Shutter is left extra long, so that it may be cut to the desired length after fitting to the Camera. When the Shutter is fitted with a cord and Button Release, as shown in the engraving, the price is 1/- less. See Price List at the end.



BUTTON RELEASE.

TESTIMONIALS.

"Its action is really admirable, the mechanism being both ingenious and simple. It is well made, and the various actions are effected without any jar."—*British Journal of Photography*.

"I have used your Shutters since '88; they were the best then, and have been improving ever since."—W. H.

"Your Shutters are the best in the market by far."—A. Bros.

"I find absolutely no vibration in either the Time or Instantaneous movements, freedom from which I have found in no other Shutter (and they are many) that I have tried."—F. D., India.

"I work with no other. It never fails me, and there is no vibration. This Shutter is especially good for India, as there is nothing to rust about it."—*Journal of the Photo Society of India*.

"I have now had this Shutter for several years, and have found it to work most successfully."—Rev. B. W. B.

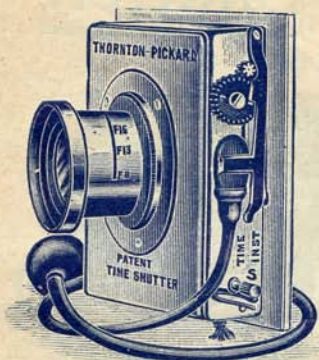
"I have had this Shutter over four years, and have used it many hundreds of times, and it has never failed me. When I got the Shutter several of my friends prophesied that it would not stand this tropical climate, but I am pleased to say that it has done all that could be desired. It was the first of its class to come out here, and now there are several dozens in the settlements, and I have not heard of one falling."—A. W. B., Singapore.

THE HORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

PATENT

Behind-Lens Shutter.

Time and Instantaneous.



THIS Shutter is of exactly the same construction as the Standard Pattern, but is arranged to be screwed to the panel of the Camera front, as in the illustrations of our "Amber" and "Ruby" Cameras, practically acting as an inside Shutter. It then forms a part of the Camera, and is always firmly attached and in position. The back is fitted with velvet, which insures a light-tight joint when the Shutter is screwed to the panel of the Camera front. The lens flange is screwed to a detachable panel which fits into the front of the Shutter. Extra panels for other flanges may be had, so that any number of lenses may be used with the same Shutter, and any one instantly dropped into its place ready for immediate use.

PRICE from 21/-
Speed Indicator, 3/6 extra.
Price List, page 46.

Other Patterns of Shutters made as Behind-Lens Shutters to order, price from 2/6 extra.

The Shutter should be attached to the Camera front panel by four ordinary small screws passed through from the back of the panel into the velvet-covered back of the Shutter. Care should be taken that these screws are not too long so as to injure the blind.

TESTIMONIAL.

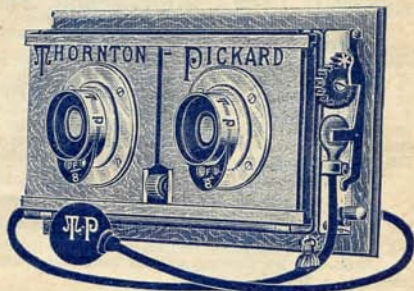
"It may interest you to know that this Shutter has travelled nearly all round the World, and was in constant daily use for eighteen months in the tropics, answering its purposes perfectly on every occasion."—G. F. R.

* * *

Patent
Stereoscopic
Behind-Lens
Shutter,

With Adjustable Panels.

For particulars see next page.



THORNTON-PICKARD THE MANUFACTURING CO. LTD.
Altrincham.

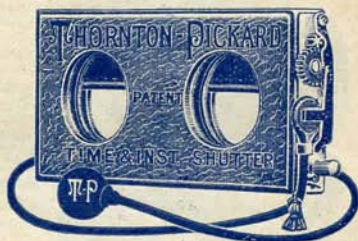
PATENT
Stereoscopic

Time and
Instantaneous

Shutter.

To fit on the Hoods or Tubes of Lenses.

FOR Stereoscopic work a good Time and Inst. Shutter is an *absolute necessity*. This is the Simplest and the Best Shutter for the purpose. It is constructed upon exactly the same lines as the Standard Pattern Time and Inst. Shutter, of which a detailed description is given on pages 6 to 8. It has a great range of speed for Instantaneous Exposures, in addition to Time Exposures, and will, therefore, give any exposure from fractions of a second up to minutes or hours. The exposure is exactly the same to each lens, and there is NO VIBRATION.



THIS SHUTTER IS UNEQUALLED FOR STEREOSCOPIC WORK.

Particulars of the Smallest Size:

Price 26/-

SPEED, up to $\frac{1}{10}$ of a second.

DIMENSIONS, $\frac{3}{4}$ x $6\frac{1}{2}$ x 1 inches.

WEIGHT, 8 ozs.

Price List and Instructions for ordering, pages 46 and 47.

Speed Indicator, 3/6 extra.

BEHIND-LENS Stereoscopic Shutter (For Engraving, see page 9.)

For both Single and Stereoscopic Lenses.

THIS is a special form of the above Shutter to be attached to Camera Front. The lenses are mounted upon a detachable panel that fits into the front of the Shutter. The Shutter therefore works behind the lenses, practically forming an Inside Shutter, and is always in position ready for work. The detachable panel can be removed when it is desired to substitute another lens. The opening in the blind being the full width of the Shutter permits the using of either a pair of lenses for Stereoscopic work, or a single lens opposite the centre of the plate for ordinary views.

Price, with One Panel, from 29/6. Extra Panels, 2/- each.
Speed Indicator, 3/6 extra. *Price List, page 46.*

PANEL WITH ADJUSTABLE CENTRES.

IN this pattern the panel carries two smaller panels to which the lens flanges are attached. By turning a small knob the distance between the centres can be varied from $2\frac{1}{4}$ to $3\frac{1}{4}$ inches.

Price 5/- *Price List, page 46.*

THORNTON-PICKARD THE MANUFACTURING CO. LTD.
Altrincham.

PATENT

Self-Capping Blind.

FITTED TO
TIME AND INSTANTANEOUS,
OR
SNAP SHOT SHUTTER.

Covers the Lens whilst Setting the Shutter.

The Cord runs back into the Shutter after Setting.

THIS makes an exceedingly useful Shutter for Hand Cameras, which is unequalled for that class of work. The setting cord runs back into the case when the Shutter is set, which is a very great advantage. The Self-Capping Blind automatically covers the lens whilst setting the Shutter for the next exposure, and then springs back again; thus the sensitive plate may always remain uncovered in the Camera for immediate use. It is specially necessary when using a magazine or roll-holder with the Camera. The accompanying illustration shows a section of the Shutter. The exposing blind is indicated by the dotted line, and the Self-Capping Blind is shown by the thick black line immediately in front of the exposing blind. When the cord is pulled both blinds wind up together, the Self-Capping Blind covering the opening in the other. When the cord is released the Self-Capping Blind immediately rewinds into its former position, the setting cord goes into the case, and the exposing blind protects the plate from light until the exposure is made. The Shutter is very compact, measuring only $1\frac{1}{4}$ inches thick.

The following particulars relate to the Time and Instantaneous (Standard Pattern) when fitted with Self-Capping Blind:—

Particulars of the smallest size Shutter fitted with Self-Capping Blind:

SPEED, up to $\frac{1}{50}$ of a second.

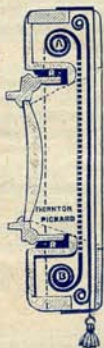
DIMENSIONS, $3\frac{1}{2} \times 3\frac{3}{8} \times 1\frac{1}{8}$.

WEIGHT, 6 ozs.

Price of the Self-Capping Blind, from 5/- to 7/6 Extra, with either Time and Instantaneous or Snap Shot Shutters, see Price List, page 47.

A Speed Indicator is strongly recommended with this form of Shutter, 3/6 extra.

The Self-Capping Blind is fitted to the Snap Shot pattern also. This is equal to the Time and Instantaneous Shutter when prolonged exposures are not required, and is a very good Shutter.



THE
THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

PATENT

Snap Shot Shutter.

Particulars of the smallest size:

Price 10/-

SPEED, up to $\frac{1}{750}$ of a second.

DIMENSIONS, $3\frac{1}{2} \times 2\frac{1}{4} \times \frac{7}{8}$ inches.

WEIGHT, $4\frac{1}{2}$ ozs.

Price List page 46.



Speed Indicator, 3/6 extra.

For all kinds of Instantaneous Subjects. It is the Simplest. It is the Cheapest and Most Efficient. It is well made and beautifully finished.

AS its name implies, this is an Instantaneous Shutter. It has the merit of great simplicity, coupled with a great range of speed.

LIKE the Thornton-Pickard Time and Instantaneous Shutter it is made upon the roller-blind principle, and is therefore absolutely free from vibration when working. Although low in price, it is just as well made and finished. The motive power is obtained by a spiral spring made of the best fine steel wire.



THE general construction and working of the Shutter will be readily understood by reference to the description to the Time and Instantaneous Shutter (Standard Pattern) the main point of difference being that this Shutter is not adapted for prolonged Time exposures. For Instantaneous work it is all that can be desired, and is readily adjusted for various speeds.

THE Speed Indicator, illustrated above, is strongly recommended. It shows the speed of the Shutter at a glance.

For Hand Cameras this Shutter is very suitable, and when required is fitted with special form of release and Self-Capping Blind, as described for Time and Inst. Shutter on page 11.

No Vibration with the Snap Shot Shutter.

The Shutter Works equally well whether fitted to the lens hood or the lens body.

TESTIMONIALS.

- "The Snap Shot Shutter is a little 'gem.'"—W. E. P.
- "I am very pleased with it, and believe it capable of doing all that it has been designed to do."—
- "I have an 14in. Snap Shot Shutter, with which I am very well pleased."—A. K. W. V. W.
- "The Snap Shot Shutter works perfectly."—A. T.
- "I have a Snap Shot Shutter and am very pleased with it."—I. M. R.
- "The Shutter works well, without perceptible vibration."—U. F.
- "To all the people I have shown your Shutter they say it is a marvel. It is truly the simplest, lightest, and cheapest of all the Shutters I have seen and tried, and that is a goodly number."—Miss R.
- "I am very much pleased with the Snap Shot Shutter. I have shown the Shutter to several of my friends, and they think it is so very simple and effective, and not liable to go off accidentally, that they all think of purchasing one similar to mine."—F. C.

THE
THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

PATENT
Special Shutter.

For High Speed Instantaneous Work.

Particulars of the smallest size :

Price 23/6.

SPEED up to $\frac{1}{16}$ of a second.

DIMENSIONS, $5 \times 3 \times 1\frac{1}{4}$ inches.

WEIGHT, $6\frac{3}{4}$ ozs.

Price List page 46.



Speed Indicator, 3/6 extra.

FOR those who require a quicker Shutter than the ordinary Time and Inst. pattern, for special work, we recommend the Focal Plane Shutter, as described on page 14, and which fits at the back of the Camera. But in cases where the Focal Plane Shutter cannot be adapted, and a very rapid Shutter to fit on the lens is preferred, this "Special" Shutter is the next best for speed. It has a double blind having two openings, which pass across the lens in opposite directions at the same time; the Shutter therefore opens from and closes to the centre.

Although it cannot be made to give such short exposures as our Focal Plane Shutter, it is fast enough for many subjects that require a very rapid Shutter, and possesses the great advantage of being small in bulk. It is fitted in front of the lens, and has a great range of speed.

It is specially suitable for yachting pictures, also for animals in motion, running and jumping, &c.

It is used by all the best and noted yacht photographers.

The Shutter is wound up by turning a knob. An extra strong driving-spring is used, and the various parts are made specially strong to withstand the extra strain.

The other details of its general construction and working will be readily understood by reference to the description of the Time and Instantaneous Shutter (Standard Pattern), the main point of difference being that this Shutter works at twice the speed, and is not adapted for prolonged Time Exposures.

The Speed Indicator is strongly recommended. It shows the speed of the Shutter at a glance.

No vibration with the Special Shutter.

WHEN ORDERING

Please send a narrow strip of paper just long enough to meet round the Lens Hood or Tube.

NOTE.—This Shutter is recommended to be used on the Lens Tube in preference to the Hood, so that a smaller Shutter may be used and therefore be more rapid.

TESTIMONIAL.

WE have fully tested the Special Shutter upon the Chronograph, and find the claim of the Company for very high speed is fully justified; the image which it cast at all speeds being sharp and clear, thus denoting full illumination. We congratulate the Company upon the undoubted success they have obtained in the construction of this Shutter.—HENRY STURMEY, Esq., Editor of *Photography*.

THE HORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

PATENT

Focal Plane Shutter,

WITH PATENT ADJUSTABLE SLIT.

Fits at the back of the Camera.

Particulars of the smallest size :

Price 35/-

SPEED (all sizes), $\frac{1}{20}$ up to $\frac{1}{1000}$ of a second.

DIMENSIONS, $5\frac{1}{2} \times 6\frac{1}{4} \times 1\frac{1}{2}$ inches (not including Adaptors).

WEIGHT, 10 ozs.

Price List and Instructions for Ordering,
page 47.

Speed Indicator, 3/6 extra.

(Always supplied with this Shutter, unless otherwise ordered.)



FOR those who desire to obtain instantaneous Photographs of subjects having an extremely rapid movement, such as flying birds, animals, and men leaping, jumping, &c., &c., this is the best Shutter. It gives a short exposure and passes a larger percentage of light than any other form.

The "Focal Plane" Shutter is made upon the roller-blind principle, like all the Thornton-Pickard Shutters. It fits at the back of the Camera, and the dark slide fits into the back of the Shutter. The Shutter Blind, therefore, works just in front of the plate, and has a narrow slit in it the full width of the plate, which gives the exposure as it passes rapidly across. The speed is regulated by means of a small knob that winds up the driving spring, and also by altering the width of the Adjustable Slit. The Speed Indicator is always fitted to this Shutter unless otherwise ordered.

The Winding Indicator is an arrangement which automatically prevents the blind being wound up too far when setting the Shutter, and will be found on the opposite side of Shutter from the winding knob. When it is required to focus, wind the blind up as far as it will go, then press the spring lever over the Winding Indicator with the finger of the other hand, and continue the winding.

For prolonged exposures the Shutter is wound up to the top as when focussing, and a cap or a Time Shutter may be used in the ordinary way without removing the Focal Plane Shutter from the Camera.

THE PATENT ADJUSTABLE SLIT

IS fitted to all Focal Plane Shutters, in addition to the adjustable spring roller, without extra charge. This improvement adds greatly to the range of speed of the Shutter, extending from 1-20th of a second to 1-1000th of a second, in all

[Continued on following page.]

THE THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

Patent Focal Plane Shutter—(continued).

sizes of Shutters, and allowing not only for the fastest instantaneous work possible, but also for all ordinary instantaneous work down to the slowest. This simple and ingenious invention is the only practical and perfect method which has yet been devised for varying the width of the slit in a Focal Plane Shutter. It is done by means of a chain at each end of the slit, which can be lengthened and shortened at will, making the sides of the slit perfectly parallel without any skill in manipulation.

DIRECTIONS FOR ALTERING THE WIDTH OF SLIT.

AFTER removing the focussing screen take hold of the two struts which form the parallel sides of the slit in the blind, and turn them askew, at the same time drawing them forward out of the Shutter. The chains at the ends of the slit can then be manipulated. It will be observed that one end of the chain is fixed permanently to one strut, while the other part of the chain is linked on to the extreme end of the other strut, the end of it passing inwards along the length of the strut. This part may be pulled out and linked on to the end of the strut to make the slit wider, or allowed to spring back into the strut which makes the slit narrower. All that is necessary is to see that the same number of links are used at each end of the slit.

THE SPEED OF THE SHUTTER

IS found by MULTIPLYING THE FRACTION GIVEN ON THE INDICATOR BY THE NUMBER OF LINKS IN USE at each end. That is to say, with only one whole link the speed is that given on the Indicator; with two whole links the speed is half; with three whole links one third; with five whole links one fifth; and with ten whole links one tenth; and so on all through the ten links.

NOTE.—Unless ordered otherwise, a Speed Indicator is fitted to all Focal Plane Shutters.

Hints on the development of very short exposures will be found on page 49.

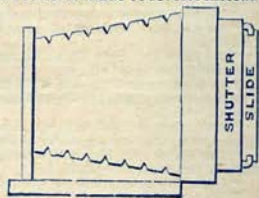
FITTING THE SHUTTER TO THE CAMERA.

(No extra charge is made for fitting if the Reversible Back with Focussing Screen and a Dark Slide are sent us when ordering.)

THIS Shutter can be readily fitted to almost every kind of Camera, including those of the American type in which the focussing screen is fast to the Camera. We make the shutter to fit at the back of the Camera in place of the reversible back, which is therefore not required, as the Shutter itself is made to reverse instead. It does not alter the Camera in any way, and the reversible back can be substituted in a moment, whenever desired. The shutter is made with a wooden flange which may be cut down to the required size. Similar pins or catches should be fitted to those that are used on the reversible back. The focussing screen sent out with the Shutter should be made to register with the slides.

In a few Cameras (such for instance those having no reversible back) we make the Shutter to occupy the same grooves in the Camera that the dark slide fits; or if preferred, fix the Shutter permanently at the back of the Camera. In either method the back of the Shutter is made to receive the dark slide.

NOTE.—When the Focal Plane Shutter has been fitted to a Camera it does not interfere with other Shutters working on the lens, nor with the use of lens cap for Time exposures.



[Focal Plane Shutter continued on next page.]

THE
THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

Patent Focal Plane Shutter—(continued).

SOME ADVANTAGES OF THE FOCAL PLANE SHUTTER.

FOR High Speed Instantaneous work the advantages of the Focal Plane Shutter have not been thoroughly appreciated. It is capable of giving results that cannot be obtained by any other form of Shutter. For the information of those who may not have studied the matter, we beg to draw attention to the following facts.

In the first place it should be remembered that the speed at which a Shutter ought to be worked is limited by the rate of movement of the object photographed, and its distance from the Camera. This is the *primary factor* in all instantaneous work.

The second important factor is the quality of the light, and the intensity or rapidity of the lens. We are assuming that the speed of the plate is the most rapid obtainable. A fast plate is an *absolute necessity* for extremely short exposures.

To obtain the best results with an exposure of say 1-200th of a second, a lens having a large focal aperture must be used, or the plate will be very much under-exposed.

A lens working at $f65$ will pass twice as much light as $f8$, and will, therefore, take a photograph with a proportionately shorter exposure.

The short exposures obtainable with the Focal Plane Shutter are due to the fact that only a part of the plate is exposed at once. The Shutter consists of a roller blind working in front of and close to the plate. The blind has a narrow slit in it which travels rapidly across the plate. The whole exposure is made, say, for the quarter-plate size (4 $\frac{1}{2}$ in. by 3 $\frac{1}{2}$ in.) in 1-50th part of a second; but assuming that the slit is only 1-10th the width of the plate, each particular portion of the plate will receive only 1-10th of that exposure, viz., 1-500th of a second.

Exception might be taken on the ground that in a subject such as an athlete running, or a man diving into water, the portion of the figure exposed last would be slightly in advance of the portion exposed first. This is, in fact, theoretically true, but the whole duration of the exposure from first to last being so very rapid this slight distortion is practically nothing, and is quite invisible to the eye. This may be proved by reference to the photographs reproduced in this Catalogue.

We may mention one minor advantage of the Focal Plane Shutter, viz., that it protects the plate from rays reflected from the inside of the bellows during exposure; none can pass except through the narrow slit, owing to the opaque portion of the blind being close in front of the plate.

TESTIMONIALS.

"We have been using your Focal Plane Shutters for two years now, without anything getting out of order, and with very good results even in poor weather."—H. Bros.

"I took a very fine picture of 'feeding gulls' some time ago with your Focal Plane, 1-800th of a second. I am sure it is a good sample of what the perfect Shutter can do."—D. W.

"The best results I ever obtained are due to these Shutters."—F. K.

"I am satisfied with one of your Focal Plane Shutters which I bought of you in 1895."—J. A. de S.

"We have had your Focal Plane Shutter in use some two years now, and cannot say too much of its value."—L. B.

"I am extremely pleased with the Focal Plane Shutter, which I have tried under every adverse circumstances, and I must say it is infinitely the best kind of Shutter I have ever handled."—T. C. P.

"I am very pleased with the Focal Plane Shutter. The principle upon which it works is, I am sure, the best one yet invented for a Shutter of such high speed."—E. H.

"The Adjustable Slit is a wonderfully ingenious arrangement, and adds much to the utility of the Shutter."—R. B. L.

"I am very much pleased with the Shutter, and I think the Slit is a splendid thing."—R. W. P.

"The Prints before us are marvellous specimens of clearness and sharpness, and quite sufficient proof of the makers' statement as to speed, &c."—*Hand Camera and Lantern Review*.

"It works splendidly. I am very much pleased with it."—M. E.

"With the Focal Plane Shutter I got a result which I never got before in the matter of rapidity and exposure combined."—A. P.

"I am much pleased with its workmanship and smoothness of action."—C. W. W.

"The Shutter gives the most complete satisfaction, being perfectly reliable and covering such a large range of exposures. I cannot speak too highly of it."—B. T. N.

THE
THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

PATENT
Studio Shutter.

WORKS IN FRONT OF THE LENS OR INSIDE THE CAMERA.

Particulars of the smallest size:

Price 20/6

EXPOSURE, from $\frac{1}{8}$ of a second.

DIMENSIONS, $3\frac{1}{2} \times 4\frac{3}{8} \times \frac{3}{8}$ inches.

WEIGHT, $3\frac{1}{2}$ ozs.

Price List, page 46.

NO VIBRATION.

THIS Shutter is specially suitable for taking children, animals, and all other subjects where silence in the working of the Shutter is a desideratum.

It is made on the blind principle, and is constructed with two separate blinds which wind upon rollers at opposite ends of the box.

In their normal position the blinds cover the aperture and overlap each other. On squeezing the pneumatic ball to make an exposure, each blind instantly winds on to its roller, causing the Shutter to open from the centre as shown partly accomplished in the illustration. On releasing the ball the blinds immediately close.

In this manner any exposures may be given from 1-8th of a second to any longer period desired.

The length of exposure is under the perfect control of the operator, so that in case the subject shows any sign of movement the Shutter can be instantly closed.

It is fitted in front of the lens, or inside the Camera.

When placed in front, on the hood or tube of the lens, it is fitted with our Patent Rubber Moulding in the usual manner, and will work in any position, either as shown in the illustration, or upside down, or sideways.

When fitted inside the Camera it is screwed to the back of the frontboard, or fitted on to the back of the lens, and a hole is made in the front or side of Camera, into which the little brass socket fits, which is supplied with each Shutter that is required for inside the Camera. This, then, makes a light-tight joint.

The Shutter is set open for focussing by first squeezing the ball and then turning the tap which is near the ball on the tube.

Extra Balls and Tubes 2s. each for this Shutter. For extra Tubing and Teats, see next page.

TESTIMONIALS.

"The large Studio Shutter you made for me about a year ago works without a hitch. In use every day."—W. D., Sheffield.

"The Studio Shutter I consider a great success."—H. S., Uxbridge.

"I have one of your Silent Studio Shutters. I may say I am well pleased with the working of it."—R. B. N., Cullen.

"May I congratulate you on your Silent Studio Shutter."—F. D. T., Chicago.

"I am delighted with the Studio Shutter; it is just what I wanted."—O. S.



THORNTON-PICKARD THE MANUFACTURING CO. LTD.
Altrincham.

PATENT
Pneumatic **Balls and Tubes.**

EVERY Thornton-Pickard Shutter (except the Hand Camera Shutter) is sent out fitted with a Pneumatic Ball and Tube, unless specially ordered without it. This consists of an India-rubber Ball, Tube, and Teat joined together perfectly air tight.

The rubber of which these goods are made is absolutely the best pure rubber that can be obtained for the purpose, and although no rubber goods will last indefinitely, these Balls and Tubes will last a long time with ordinary care.

The Balls and Tubes supplied by us are all specially made for our Shutters. They are much better than anything obtainable from other sources. We would caution purchasers to see that they obtain only those of our make, as there are others of very inferior quality on the market, which only result in disappointment to the user. All of our make are now marked with the words **THORNTON PICKARD** which is moulded on the ball, as shown above.

The ball is joined to the tube by an air tight screw connection, so that should the ball ever become deflated it can be unscrewed; the ball will then instantly re-fill with air, and after screwing up tight again is ready for use. The end of the rubber tube overlaps the metal connection so as to be squeezed between the two parts of the connection when screwed up, therefore making its own air tight joint, as shown in the above illustration.

Care of the Balls and Tubes.—The best way to preserve these in good condition is to keep them in a place that is not exposed to extreme changes of temperature (such as a cupboard or drawer for instance). The more even the temperature the better. They should not be kept in the sun nor in a brilliant light, as the rubber is then liable to oxidise.

PRICES.

Ordinary Pattern, as supplied with every Thornton-Pickard Shutter except the Studio and Hand Camera Patterns, consisting of No. 0 Small Ball, 2 feet of Tubing, and Teat joined up air tight, 1/6 each, or post free, 1/7.

For Studio Shutter, No. 1 Ball, with 2 feet tubing, 2/- each.

Large Size, to enable the photographer to release the Shutter when he is some distance from the Camera, for Self-Portraiture with Groups, &c., and for Studio use. Consists of a large Ball, with Tubing of any required length, and Teat, joined up with air tight connection.

No. 3 Ball, suitable for Tubing up to 30 feet long, 2/-

No. 4 do. do. do. over 30 feet long, 4/-

Tubing, 4d. per foot. When ordering, please state length of Tubing required.

Extra Teats, Ordinary Pattern, 3d. each; Studio Pattern, 1/- each. Screw Connections, 3d. per pair (these can be used for joining two short lengths of Tubing together).

NOTE.—When ordered we supply the Long Tubing with a screw connection, so that it may be attached to the short length already on the Shutter by simply unscrewing the small Ball. Thus, either the long or short lengths are readily interchangeable.

TESTIMONIALS.

"I have had one of your Shutters three years, and the Ball and Tube is yet in good condition."—J. E. W., Darwen.

"It is but fair that I should compliment you on the lasting quality of the Rubber you supply."—J. R. M., Melbourne.

"Kindly send me a Ball, as the one I have collapsed entirely to-day after being in hard wear every day for 2½ years, which is about three times as long as any other I ever used."—J. R.

"I have had the Tubing in use over four years so cannot complain."—D. B.

PRICE FROM 1/6 (see below).



THE THORNTON-PICKARD MANUFACTURING CO. LTD
Altrincham.

PATENT

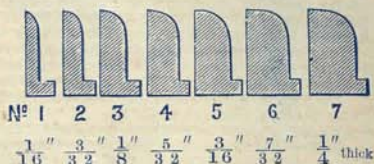
Rubber Moulding

and Adaptors,

For FITTING SHUTTERS to LENSES, and for ADAPTING ONE
SHUTTER to TWO or MORE LENSES.

MADE IN SEVEN DIFFERENT THICK-
NESSES, AS SHOWN.

Price 8d. per foot.



FITTING.—It should be cut to the required length with a sharp knife, and sprung into the aperture with the rib or flange on the inside, as shown in the engraving.

ADJUSTMENT.—The screw in the side of Shutter will give the exact adjustment by turning with a screw-driver. An accurate fit upon the lens hood is thus insured.

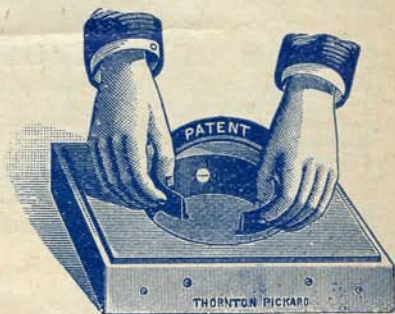
Any thickness may be rubbed down on the back with a piece of sandpaper when too thick, or in case of emergency a piece of cardboard may be used as packing behind the Moulding when it is not thick enough.

ADAPTORS.

When it is desired to fit two or more lenses to the same Shutter a second piece of Moulding may be used inside the first one, so as to form an adaptor which can be put in or taken out as required.

Price 8d. each.

In case a very large Shutter has to be adapted to a very small lens, a Wooden Adaptor is necessary; price $\frac{1}{6}$ up to 2 $\frac{1}{2}$ in. diameter, and 2/- if larger.



THE
THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

Speed Indicator,

For the THORNTON-PICKARD Shutters.

PRICE 3/6.



VERY SIMPLE AND RELIABLE. SHOWS AT A GLANCE AT WHAT SPEED THE SHUTTER IS SET. PREVENTS OVER-WINDING OR RUNNING DOWN TOO FAR.

WE strongly recommend customers to order their Shutters fitted with the Speed Indicator. It consists of a dial and pointer, as shown in the illustration. It is fixed to the side of the Shutter. The speeds are shown on the dial in fractions of a second, and the pointer is set to the desired speed by turning the Speed Knob that winds up the driving spring of the Shutter, and the speed is reduced or the pointer set back upon pressing a spring catch that holds the Speed Knob. Very careful tests have been made for each size of Shutter in order to obtain reliable marking of the Indicator Dials.

The Indicator is fitted to any of the Shutters in this Catalogue (except the Studio Shutter, which does not require it), price 3/6 extra. No Shutter ought to be without it. When ordering please state if it is required.

Shutters that have been previously purchased without the Speed Indicator can be afterwards fitted with it for 5/- They must be sent to us for fitting.

Shutters ordered without the Speed Indicator are fitted with a small ivory label, marked with three speeds, viz., the lowest, medium, and highest, as shown in the Table of Speeds below. By counting the number of turns given to the Speed Knob the speed may be ascertained from this label, and any intermediate speed can, of course, be obtained.

To set the Shutter for the lowest speed the Speed Knob should be wound up only just sufficient to cause the blind to run down gently and to close properly. This is counted as "0" turns, and additional turns of the knob must be counted from this.

Table of Speeds OF THE THORNTON-PICKARD SHUTTERS.

THESE approximate Speeds have been arrived at after a series of very careful tests with apparatus constructed specially for the purpose. The method used gives undeniably accurate results. This Table applies to Shutters that are not fitted with a Speed Indicator.

Speeds of the TIME AND INSTANTANEOUS Shutter (Standard Pattern).

Also of STEREOSCOPIC and SNAP SHOT Shutters.

Size of Shutter up to	1½in.	2in.	2½in.	3in.	3½in.	4in.
No. of turns of Speed Knob.....	0 5 15	0 5 15	0 5 15	0 5 15	0 5 15	0 5 15
Speed in fractions of a Second	1½ 1¼ 1⅓	1½ 1¼ 1⅓	1½ 1¼ 1⅓	1½ 1¼ 1⅓	1½ 1¼ 1⅓	1½ 1¼ 1⅓

Speeds of the SPECIAL Shutter.

Size of Shutter up to	1½in.	2in.	2½in.	3in.	3½in.	4in.
No. of turns of Speed Knob.....	0 5 10	0 5 10	0 5 10	0 5 10	0 5 10	0 5 10
Speed in fractions of a Second.	1½ 1¼ 1⅓	1½ 1¼ 1⅓	1½ 1¼ 1⅓	1½ 1¼ 1⅓	1½ 1¼ 1⅓	1½ 1¼ 1⅓

The FOCAL PLANE Shutter has a range of speed from 1/20 to 1/1000 of a second, all sizes.

The SILENT STUDIO Shutter can be worked from about 1/2 of a second up to any longer period desired.

THE THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.



A GOOD STORY.

Exposure $\frac{1}{5}$ sec. Taken by Mr. J. E. Thornton, with a

THORNTON-DICKARD CAMERA AND TIME AND INSTANTANEOUS SHUTTER.

COPYRIGHT



SHUTTLECOCK AND BATTLEDORE.

Exposure $\frac{1}{100}$ sec. Taken by Mr. J. E. Thornton, with a

THORNTON-PICKARD CAMERA AND FOCAL PLANE SHUTTER.

THORNTON-PICKARD PATENT

Cameras.

For Hand or Stand.

“Amber” and “Ruby.”



AWKWARD Cameras, which served their requirements a few years ago, are no longer adequate for the amateur and professional photographer of the present day.

The Thornton-Pickard Cameras have been designed and brought to their present form in the first place to suit our own personal wants, which we have realised while taking pictures such as are illustrated in this catalogue. We have therefore introduced the “Amber” and “Ruby” Cameras, which may be used either as first-class Tripod Cameras or as Hand Cameras. This advantage is made possible by their special construction. The Shutter is attached to and forms part of the Camera.

The front and back when erected lock themselves in position at right angles to the baseboard. This, and the arrangement of the spring focussing screen, and also the method of holding the Dark Slide or Plate Holder in the back, is entirely novel, and certainly superior to anything of the kind introduced before.

As to construction, quality is our leading feature; all the goods manufactured by us are of the highest possible quality.

They are scientifically made by the aid of the finest and latest labour-saving machinery, and are mathematically constructed by the most expert workmen. When quality is taken into consideration they are the cheapest in the market.

TESTIMONIALS.

“The Camera is most satisfactory. I would not exchange it for any other in the market.”—Rev. B. T. T. EASTBURY VICARAGE.

“I consider that it fulfils in a marked degree all the requirements of a perfect Tripod Camera, and one that can be used equally well for hand work.”—D. G., NEW YORK, U.S.A.

“It is a beautifully finished instrument, even to the smallest details.”—D. G., CALRO.

THORNTON-PICKARD THE MANUFACTURING CO. LTD.
Altrincham.

THE THORNTON-PICKARD PATENT

"Amber" Camera

FOR HAND OR STAND.

Includes all Necessary
Movements.
Swing Back and Swing
Front.
Long and Short Extension.
Folding Front and Double
Pinion.
Independent Rise to the
Front.
Reversible Back.
Spring Focussing Screen.
Self-Locking Stretchers.
Plumb Indicator.



THE CAMERA COMPETES WITH THE MOST EXPENSIVE IN QUALITY AND THE CHEAPEST IN PRICE.



THE "Amber" Camera is constructed on the same lines as the "Ruby" (a full description of which is given in the following pages).

The "Amber," however, is somewhat simpler, and is not suitable for Stereoscopic Photography.

[Continued on next page.]

THE THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

Patent "Amber" Camera—(continued).

WHEN opening the "Amber" Camera, the notches in the stretchers or struts lock the front and back at right angles to the baseboard; but vertical swing is obtained at will by lifting the stretchers slightly before moving the back.

The folding front makes the closing of the Camera a very simple matter; the two springs inside the fork must be pressed downwards at each end, the stretchers disengaged from the screws by slight upward pressure with the fingers under the stretchers; the front will then fold down into the baseboard without detaching.

The back is folded by pressure under the stretchers in a similar way.

For Hand Camera work it is advisable, but not necessary, to have a Turntable. The Shutter and Lens will then fold through the baseboard without detaching. When the Camera is supplied without Turntable, the patent folding tripod screw is fitted to the top without any extra charge. The Turntable fitted to this Camera is the same as that supplied with the "Ruby" (see page 27).

The Spring Focussing Screen has been designed specially to meet the demand for a Camera which will work equally well as a Hand Camera. (See engraving on previous page.) It guides the Plate Holders and Slides into position.

The Focussing Screen is fitted at the bottom with a spring hinge, which always holds it in its place. The Plate Holder is slipped in from the top between the screen and the Camera. The Plate Holder simply snaps into position, without any pushing sideways, and is as easily removed by lifting up the spring bar which holds it. This is unquestion-

ably the most convenient method of securing the Plate Holders to the back of the Camera, and adapts itself perfectly for use in the hand.

When a Lens is supplied with the Camera, an ivory Focussing Scale is attached to the baseboard without extra charge. When customer's own Lens is fitted to the Camera, a small extra charge is made for engraving the Focussing Scale to suit the Lens.

A small Finder is advised when the Camera is used in the hand. We recommend a "Bright Finder"—see Price List, page 44. This is fitted on the top of the Camera, and may be used for both horizontal or vertical pictures.

A shoulder strap is provided, which supports the weight of the Camera, and at the same time leaves the hands more at liberty. An adjusting buckle is provided, so that the length may be altered to suit the user.

When a Roll Holder or Plate Magazine is used with the Camera instead of Plate Holders, and it is desired to make successive exposures without inserting the Covering Shutter of the Roll Holder or Magazine, we recommend that a Self-Capping Blind be fitted to the Exposing Shutter (see page 11).

TESTIMONIALS.

We have no hesitation in saying that with such an instrument as the "Amber" photography in winter is nearly as pleasant as during the warmer months. It is the best Camera we have ever had the pleasure of working with. The explorer, the traveller, the artist, or the snapshooter will find it to fulfil their respective needs.—*Practical Photographer.*

The Camera, in spite of its cheapness, is beautifully made and finished, and folds and unfolds, racks in and out, and generally comports itself with all the precision of the most delicately constructed scientific instrument.—*British Journal of Photography.*

The workmanship of this Camera is first class; and after a thorough trial we can confidently recommend it as a thoroughly practical instrument for all classes of work.—*Photo News.*

The "Amber" Camera is thoroughly well planned in every particular, and the workmanship, materials, and finish are of the best.—*Photo Dealer.*

We consider the "Amber" Camera wonderfully good value for the money.—R. & Co.

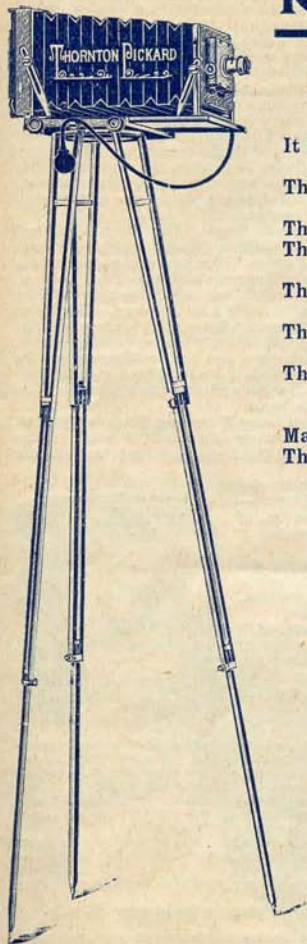


THE
THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

UP TO DATE.

PATENT "Ruby" Camera

FOR HAND OR STAND.



It is a Stand Camera, but may also be used as a Hand Camera.

The Shutter is attached to and forms part of the Camera.

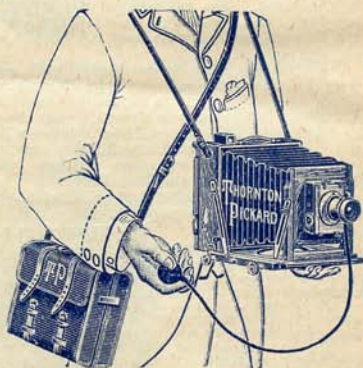
The Shutter folds up into the baseboard. The front has an unlimited amount of Rise and Fall.

The Camera is fitted with Vertical and Horizontal Swings.

The Back may be pushed right up to the front for use with Wide Angle Lenses.

The Camera has a Double Pinion, so that it may be racked from the longest to the shortest focus.

May be arranged for Stereoscopic Work. The Workmanship is perfection and unsurpassed in any other Camera.



TESTIMONIAL.

"The Princess wishes to express her appreciation of the 'Ruby' Camera, which has such beautiful finish, ingenious contrivances, and perfect workmanship. It is a splendid instrument"—PRINCESS O.S.

THE THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

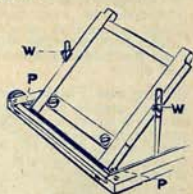
PATENT "RUBY" CAMERA—(continued).

Perfect as a Tripod Camera.

Perfect as a Hand Camera.

Perfect as a Stereoscopic Camera.

The Shutter is the Thornton-Pickard Time and Instantaneous Behind Lens Pattern. It is attached to the Camera front, works behind the lens, and is always in position ready for use. It is fitted with a detachable panel, to which the lens flange is attached. The lens being mounted on the Shutter may remain attached, and fold up with the Camera. When a Roller Slide or Magazine is used it is advisable to have the Shutter fitted with a Self-capping Blind. For *extremely* rapid Instantaneous work we recommend the Focal Plane Shutter in addition to the Time and Inst. one. One Shutter does not in any way interfere with the other.



The Turntable forms part of the Camera. This arrangement is infinitely superior to the old-fashioned loose triangle, as there is no chance of leaving it behind, and so rendering the Camera useless when away from home. The Thornton-Pickard form of Turntable is superior to the ordinary design, as it allows the legs to be spread to any extent when erecting the Camera in awkward situations. Its large size insures a very rigid base for the Camera. The Camera may be revolved upon the Turntable in either direction, and is clamped firmly in position by a winged nut, which will be found on the right-hand side of the Camera baseboard, in a most convenient position.

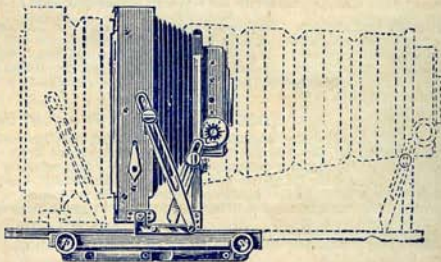
The Folding Front of the Camera is very simple. It can be quickly erected, and is rigid and firm when in position. The engraving shows how to fix it. After opening the Camera place the Front in the position shown, leaning backwards so that the segment plates at the bottom of the Front are over the pivots marked P. Press the front down between the pivots, and then place it in the vertical position, as shown in the other illustrations.

Patent Spring Stretchers. The Front will at once lock itself by means of the Patent Spring Stretchers at right angles to the baseboard. When used as a Hand Camera the Front is always in this position, that is, at right angles to the baseboard. When required to be swung or inclined to any other position it is clamped by the thumbscrew W. All clamping screws have flat or winged heads, which are much more convenient to use than the old form of round milled head.

Wide Front. The Front is much wider than usual in Cameras having tapering bellows. Owing to the special design and arrangement of the Camera, we are able to obtain a wider front and wider bellows than in any other Camera having taper bellows, without sacrificing compactness when folded.

The wide Front and bellows are a great advantage, as there is no danger of cutting off part of the picture when using wide angle lenses, and the same Camera can be used for Stereoscopic pictures. This is the only Camera of its kind which can be used for Stereoscopic work in the half-plate size. Our own pattern Stereoscopic Lenses are specially mounted for use with this Camera.

Double Pinion for focussing. The Camera is fitted with two focussing pinions, which enable it to be racked from the shortest to the longest focus without any unscrewing or shifting of the frontboard, and without removing the head from beneath the focussing cloth.

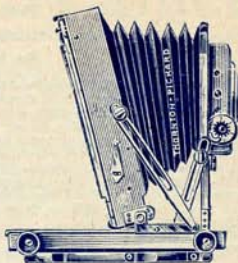


THE THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

PATENT "RUBY" CAMERA—(continued).

Wide Angle Lenses may be used with this Camera without danger of the Baseboard cutting off part of the picture. This is done by pushing the back of the Camera nearer to the front, and then clamping it in position by the screw at the side. It is necessary to first depress the two springs on the back of the Baseboard which hold the cross rod. The brass racks attached to the Extension Frame are marked on each side to indicate when the Camera body is parallel with the front. If desired, the front may be racked backwards instead, by means of the back pinion.

Rising and Falling Front. The range obtainable is perhaps greater in the "Ruby" Camera than in any other. It works independently of the other movements, and can, therefore, be altered after focussing if desired. The Frontboard works in grooves in the fork, and is fixed at any height by two clamping screws at the bottom. When the top of the frontboard is level with the top of the fork, the lens is opposite the centre of the plate.



As a rule it is best to have the lens a little above the centre of the plate; otherwise where there are buildings in the picture, there will be too much foreground.

A CORRESPONDING amount of fall may be obtained, so as to bring the lens below the centre of the plate, which is useful and necessary when taking photographs from a window or elevated situation.

Spring Stretchers. Both the folding front and the back of the Camera are fitted with our patent Spring Stretchers, so that they automatically lock themselves at right angles to the Baseboard. This is of great importance for Hand Camera work, as otherwise the focussing could not be depended on. Unless the front and back are intentionally placed at an angle, they will lock themselves into position at right angles to the baseboard, and the focus is indicated by the Focussing Scale attached to the baseboard. The Camera may then be viewed in the hand or on the tripod without focussing on the ground glass, the picture being viewed in miniature on the finder.

All Swinging Movements. These are complete, every necessary movement being obtainable.

VERTICAL SWING.—The back may be swung backwards or forwards, and clamped by the set screw at each side as shown above. The front may be swung and clamped in a similar manner.

HORIZONTAL OR SIDE SWING is obtained by depressing the two springs at the back of the Baseboard and then loosening the clamping screw that secures the back at any position on the Baseboard. One side may then be placed nearer to the lens than the other, after which the screw should be tightened up again. This movement is to obtain objects in sharp focus that are nearer to the Camera at one side than the other.

Plumb Indicator. This is fitted to the side of the Camera body. For subjects having straight vertical lines, such as buildings, &c., whatever the position of the Camera, the back must hang plumb. If it does not, the vertical lines will converge instead of being parallel. By swinging the back until the point of the Plumb Indicator coincides with the pin or stud on the side of the Camera, and then tightening the setscrews, the back will be made upright.

1,000 FRANCS WON WITH A RUBY CAMERA.

"You may perhaps be pleased to hear that the First Prize of Fr.1,000, offered by the European Edition of the *New York Herald*, was won by me in the International Competition for Amateur Photographers recently held in Paris. The winning Photograph was taken by me with the beautiful Thornton-Pickard Half-Plate 'Ruby' Camera which you sent to me in Egypt last winter. The Camera has now been in use nearly a year, under very many trying atmospheric conditions, and it has never failed to give entire satisfaction."—D. G.

"I have not met with anything to surpass the 'Ruby' in beauty or excellent work, and three of my friends have each purchased one through seeing it and its results."—E. J. C.

"The workmanship is beautiful, nothing better can be desired."—Bishop of G.

"I like the Camera very much. I am particularly pleased with the easy way in which the Plate-holders can be slipped in for use."—H. G. D.

THE
THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

PATENT "RUBY" CAMERA—(continued).

The Reversible Back or frame to which the Focussing Screen is attached, and into which the Dark Slides fit, can be placed either way up for horizontal or vertical pictures. So that if the Shutter of the Slide cannot be drawn out, owing to the Camera being close to a wall, say, as is often the case when taking interiors, the Back can be turned upside down, so that the Shutter of the Slide can be drawn out at the opposite side of the Camera. The Plate Holder or Dark Slide is placed in position between the Spring Focussing Screen and the Camera.

The Patent Spring Focussing Screen has been designed specially for using the Camera as a Hand Camera, and is most convenient in practice. It guides the Plate Holder and Slides into position.

Patent Plate Holder. This is simple, light, and efficient. It is not made book form, but solid, the Plates being inserted by drawing the Shutters on either side and pulling back the Spring-Bar at one end of the Holder. The Plate can then be dropped into place, and is held securely by the Spring-Bar. They are fitted with Spring Snaps to prevent the Shutters being accidentally withdrawn, and with our Patent Recorders, which show whether the plates have been exposed or not.

Full particulars under Plate Holders, page 34.

The Plate Holders or Dark Slides are equally suitable for plates or films.

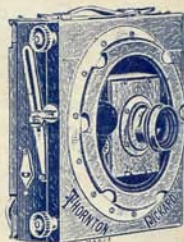
The Dark Slides are of the best finished workmanship, and have hinged folding Shutters, which may be folded back, so as not to catch the wind during exposure. They are fitted with Improved Spring Snaps which securely fasten the Shutters when pushed in. Additional Dark Slides can always be supplied to fit by mentioning size of Camera. The Slides are perfectly light-tight, and are therefore suitable for the most sensitive plate. This is due to the careful workmanship, to the special form of velvet packing placed under the Shutter, and to the Snap being on the outside instead of recessed into the Shutter. They are book form, and hold two plates each, which are separated by a hinged division that cannot be misplaced or lost in the dark room. They are fitted with the Patent Dark Slide Recorder shown in the above illustration. This is a great acquisition, as it shows at a glance which plate has been exposed, and prevents mistakes, such as taking two pictures on one plate.



Our Patent Automatic Tripod Stand is supplied with the Camera, and fits the Turntable. It is the simplest and most convenient Stand made. The joints of the Stand rigidly lock themselves when they are opened out. Each leg is made with three sections, the bottom one of which slides, so that the length may be adjusted when required for uneven ground, and is clamped by a set screw. The Stand opens out to a height of 4ft. 7in., and closes up to 22 inches in length for convenience in carrying. This Stand is described in greater detail on page 32.

The Focussing Screen is made of the finest Ground Glass, and is marked with the sizes of smaller plates. This is a convenience when using smaller plates, which is done by means of Carriers that fit inside the Plate Holders or Slides.

When closing the Camera, do not thread the Pneumatic Ball and Tube through the Turntable; this is not necessary. Let it hang down in front of the Camera. A notch is made in the woodwork (close to the Spring Snap that closes the Camera) into which the tube should be placed as the Camera body is folded down. The ball and tube then comes out and rests on the top of the Camera when placed in the bag.



THE
THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

The "Ruby" Camera

Arranged for Stereoscopic Work.

BOTH the Half-plate and $7\frac{1}{2}$ in. x 5in. sizes are suitable. The Half-plate takes a pair of lenses of $1\frac{1}{2}$ in. diameter at 3in. centres, and the $7\frac{1}{2}$ in. x 5in. size takes larger lenses at wider centres. A DETACHABLE STEREOSCOPIC DIVISION is fitted so that either one lens for full-sized pictures or a pair of Stereoscopic lenses may be used at will.

A Stereoscopic Behind-Lens Time and Inst. Shutter is recommended. This is permanently fixed to the front, and a pair of lenses are mounted on a panel that fits into the front of the Shutter. This panel is removable, and another panel with the lens mounted in the centre can be quickly substituted for taking full-sized pictures. To fold the Camera, the panel carrying the Shutter and Lenses should be removed.

We supply Stereo Lenses, specially mounted to suit the "Ruby" Camera and Stereoscopic Shutter. These are first-class Lenses.



PRICES OF STEREOSCOPIC LENSES, INCLUDING SPECIAL MOUNTING.

See Price List, page 41.

Particulars of the "Ruby" Camera.

Size when folded, including Turntable, } Shutter, and all projections	Half-plate. 9in. x $8\frac{1}{2}$ in. x $3\frac{1}{2}$ in.	Whole-plate. $11\frac{1}{2}$ in. x $10\frac{1}{2}$ in. x $3\frac{1}{2}$ in.
Longest Focus with Shutter attached	16in.	20in.
Weight	$3\frac{1}{2}$ lbs.	5lbs.
Do. including Shutter	$3\frac{1}{2}$ lbs.	$5\frac{1}{2}$ lbs.

Aluminium Fittings save about one-quarter of the weight.

TESTIMONIALS.

"The Camera is extremely satisfactory and fully capable of dealing with any subject which could possibly arise. The permanent Shutter is a great acquisition."—V. D.

"We may say that for utility, lightness, and beauty of finish, we consider your "Ruby" Camera unexcelled, and the stand and plate-holders marvels of ingenuity."—J. S. & Sox.

"The Camera works well and smoothly in every way, and there is none of the sticking and other drawbacks one so often meets with. Every detail seems to have been well studied and worked out, and though it is a handsome piece of apparatus, the working qualities have in no way been sacrificed to this."—A. J. B. U.

THE
THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

PATENT

Recorder, For DARK SLIDES or PLATE HOLDERS.

Price **SIXPENCE** each. Fitting to Slide, **3d.** extra.

One Recorder is required for each plate—that is, two for a Double Slide or one for a Single Slide.

NOTE.—The Recorder is fitted to all Dark Slides and Plate Holders of our manufacture without extra charge.

Shows at a glance which plates have been exposed. Prevents two pictures being taken on one plate.

THIS simple little device has proved a great success. It ought to be fitted to every Dark Slide and Plate Holder. It records automatically which plates have been exposed and which have not.

The Recorder is fitted at the top of the Slide (as shown in the illustration), and can therefore be seen without taking the Slides out of the carrying case or bag. It lies down flat before exposure, but flies up and stands upon edge after exposure, so that it can be seen at a glance which plates have been exposed and which have not. At the same time, it does not lock the Shutter of the Slide, and if this has been drawn, and the plate has not been used, the Shutter can be pushed back again and drawn a second time when required.



This simple device prevents the danger of taking two pictures on one plate. It saves a world of trouble, and is an infallible substitute for the memory.

The Recorder consists of a small hinged plate or lid, which lies down flat before exposure. It is fitted in such a position that the handle or projecting part of the Shutter holds it down. As soon as the Shutter of the Slide is withdrawn to expose the plate, the lid flies open by means of a steel spring, which at the same time forms the hinge of the Recorder, and discloses the word "EXPOSED," remaining in this position until the Slide is again charged with a fresh plate in the dark room. The Recorder may then be set ready for the next exposure by simply closing down the lid with the forefinger, at the same time closing the Shutter of the Dark Slide.



The Recorder is easily fitted to Slides, but we prefer to do this where possible. Slides may be sent to us direct or through any dealer. As a rule they can generally be returned fitted the next day. A convenient way to send them is by parcel post.

TESTIMONIALS.

"I can't tell you how valuable I have found your little Dark Slide Recorder to be. Many a time they have saved me from exposing a plate twice over. I would not be without them at any cost."—E. H.

"Your Recorder is an excellent one; most simple and most effective."—W. L.

"I am very pleased with the Dark Slide Recorders, which I have found invaluable when exposing many plates in one day."—M. C.

"The Dark Slide Recorder is a very simple and useful indicator. It does not lock the Shutter after an exposure, but it shows that the slide has been withdrawn."—P. *otografy*.

THE
THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

PATENT

Automatic Stands,

With Patent Self-Locking Joints.

PRICES.

Twofold. Threefold.

No. 1. For Quarter-Plate, Half-Plate, and Whole-Plate } Cameras.....	13/-	17/6
Stand Top for same	2/6	2/6
No. 2. Extra Strong, for 10 x 8 and 12 x 10.....	18/-	22/6
Stand Top for same	2/6	2/6
Patent Folding Tripod Screw fitted to above to suit Thornton-Pickard Cameras, FREE.		
Do. do. to fit other makers' Cameras	1/6	1/6

These Stands are supplied with the "Amber" and "Ruby" Cameras, and are also suitable for use with other makers' Cameras.

When the Camera is fitted with a Turntable, the Stand Top and Tripod Screw are not required.

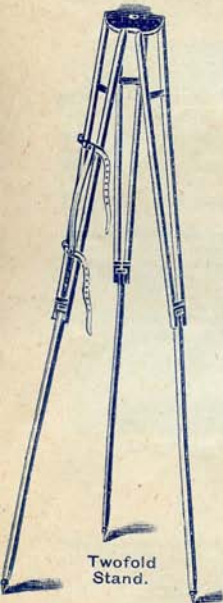
When the Camera is supplied without Turntable, the Patent Folding Tripod Screw is fitted to the top without extra charge.

Both the Twofold and Threefold Stands are easily erected, the joints automatically lock themselves on being opened. They are released by simply pressing the spring bolt with the finger, as shown in the illustration on opposite page.

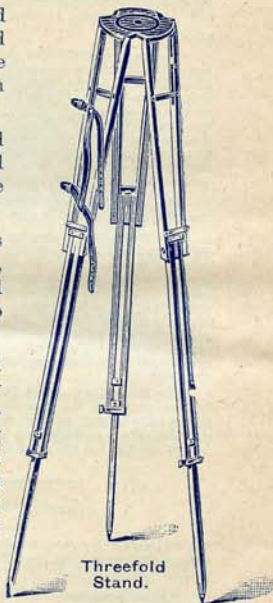
The particular method by which the arms are attached

to the stand top allows of the legs being spread to almost any extent; this applies both when used with a Turntable or with a top.

Continued on next page.



Twofold Stand.



Threefold Stand.

THE THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

Patent Automatic Stands—(continued).

Well-seasoned timber is used in the construction, and the finish and workmanship are the best.

In the Threefold Stand the lower section is adjustable for uneven ground.

Handle straps are provided for convenience in carrying.

Waterproof cases, see page 38.

No.	Weight.	Height when open.	Length when closed.
No. 1.	2lbs. 5ozs.	4ft. 7ins.	22ins.
No. 2.	3lbs.	4ft. 7ins.	22ins.

The Stand Top.



This is made of well-seasoned mahogany, French polished, and the top side covered with cloth, so as not to scratch the Camera.

It is of handsome appearance, and has no sharp corners or projections.



STAND CLOSED.



SELF-LOCKING JOINTS.

When the top is fitted with the Patent Folding Tripod Screw there is no loose part to be lost or left behind. This is an ordinary



OPEN



FOLDED

This is a most desirable thing for a Camera which is not fitted with a Turntable.

Tripod Screw, but the socket through which it works is pivoted, allowing it to fold flat into the top, as shown in the engraving.



TESTIMONIALS.

- "Your Camera Stand is excellent, and I like your workmanship."—F. A. J.
 "The Automatic Stand is very convenient and quickly erected, besides being rigid."—H. R. P.
 "The Stand is a marvel of ingenuity and compactness."—L. J.
 "We think the Stand is the best and neatest we have seen, and is cheap."—T. O. B.
 "I obtained from you about a year ago one of your Tripod Stands. I have used it constantly since then, and consider it to be the most convenient Tripod on the market."—E. R.
 "I am exceedingly well pleased with the Tripod I had from you last year."—W. B.
 "I cannot tell you how I am charmed with the Stand, it is perfectly rigid, beautifully light, and packs up into such a small compass."—J. L. C.
 "I am greatly pleased with the Camera Stand."—W. H. B.

THE THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

PATENT

Plate Holder, WITH PATENT SPRING BAR.

PRICE from 7/- each.

See page 37 for prices.

For Plates or Films.

Absolutely light-proof to the most sensitive plates.

Plates changed in half the time, and in the dark.

The Shutters pull right out.



OF BEST
WORKMANSHIP
AND
WELL-FINISHED.



DESCRIPTION.

THE important feature of this Plate Holder is the automatic Spring Bar, which allows of the plate being instantly put in or taken out by simply pressing with the finger.

This Plate Holder carries two plates. It is perfectly light-tight, and safe for the most sensitive plates, and is the most convenient and successful form of Dark Slide yet invented.

It is fitted with an improved form of Spring Snap, which prevents the Shutter from being drawn accidentally, and also with our patent Recorders that show at a glance which plates have been exposed—adding greatly to its efficiency.

The Shutters are printed as shown in the illustrations, so that particulars of the exposure, &c., may be filled in the blank spaces with a lead pencil.

To remove the pencil marks from the Shutter, wet the surface and rub with the fingers, or better still, a piece of india-rubber.

The Plate Holder is suitable for use with SMALLER PLATES by using Plate Carriers, and also for CUT FILMS by using Film Carriers. (See page 48.)

The Plate Holder can be supplied to fit almost any Camera without alteration to either the Camera or existing Slides, and fits into the same grooves as the latter.

It is beautifully made of mahogany and French polished.

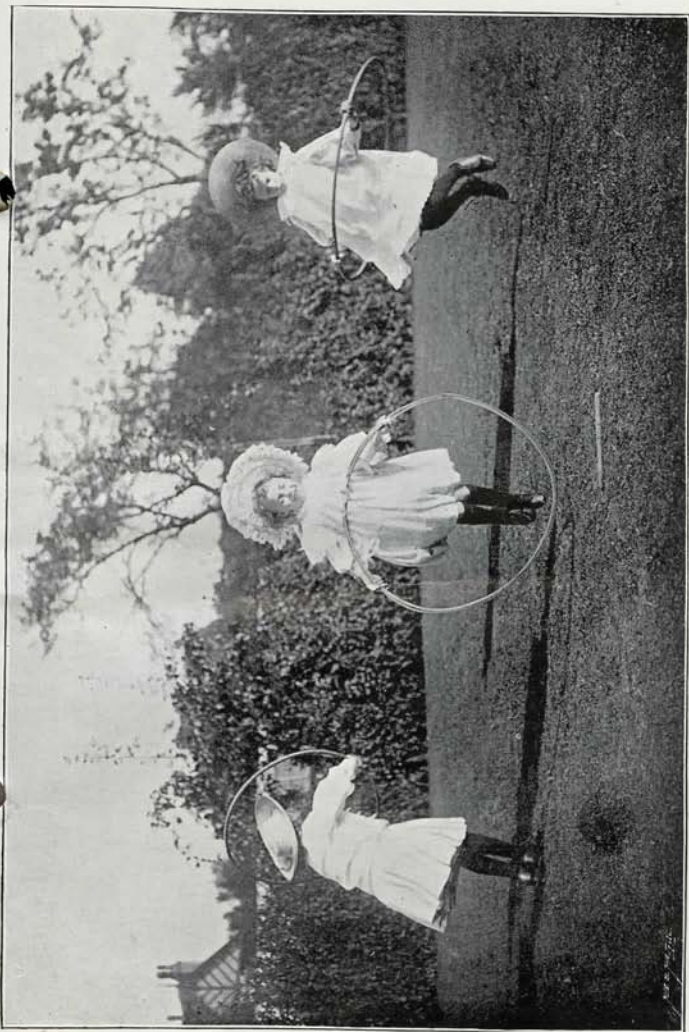
INSTRUCTIONS FOR USE.

TO INSERT A PLATE IN THE HOLDER pull out one of the Shutters. Then taking hold of the plate in the left hand, push the plate under the rebate at the top end of the Plate Holder, and press back the Spring Bar with the forefinger of the right hand. The plate will now be in the position shown in the illustration, resting upon springs which are not shown. Now with the left hand press the plate down into position, then the Spring Bar is allowed to spring forward and holds the plate firmly.

[Continued on page 37.]

THE
THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

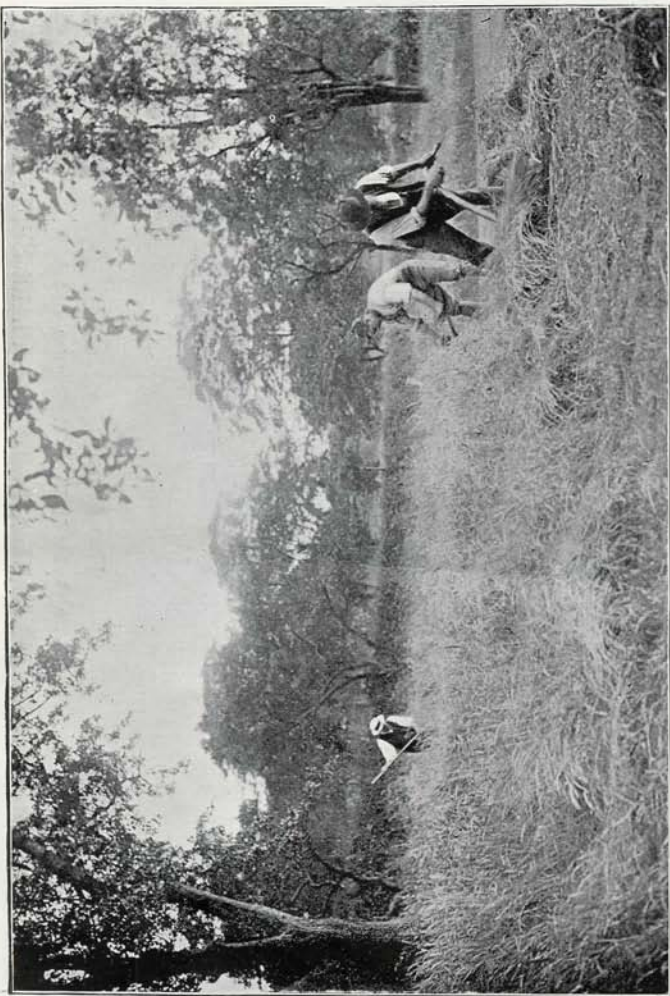


HOOP JUMPING.

Exposure $\frac{1}{50}$ sec. Taken by Mr. J. E. Thornton, with a

THORNTON-DICKARD CAMERA AND FOCAL PLANE SHUTTER.

COPYRIGHT



HAYTIME.

Exposure $\frac{1}{5}$ sec. Taken by Mr. J. E. Thornton, with a

THORNTON-PICKARD CAMERA & TIME & INST. SHUTTER, USED AS A HAND CAMERA.

COPYRIGHT

The Thornton-Pickard Patent Plate Holder—(Continued).

To TAKE THE PLATE OUT, it is only necessary to press back the Spring-Bar with the fore-finger, as previously described; the plate is at once lifted up by the spring underneath to the position shown in the same illustration, and is then taken out with the other hand.

There is an opaque division inside the Holder which divides the two plates and carries on each side the two above-mentioned springs. These springs serve the two plates and carries of keeping the plates close up to correct focus, and lifting them out when required.

TESTIMONIALS.

"I am more than pleased with the Plate Holders; they are simply perfection."—T. M. B.

"I think the Plate Holders exceptionally simple and perfect."—J. C.

"I am very well pleased with your Double Plate Holders; will you send me five more ½-plate size."

"The Plate Holders work very nicely."—E. E. B.

"They are first class. I am much pleased with them, and my client delighted."—E. M.

"I like the Plate Holder immensely. It is wonderfully clever."—W. S. B.

"I am well satisfied with its finish, and consider it the best of its kind in the market."—P. B.

"The Plate Holders I had from you a short time ago are most satisfactory in every way, and much more convenient to use than the book pattern."—E. W.

"I am very pleased indeed with the Plate Holders, as they are convenient in every way, and I am recommending them to many of my friends."—G. B.

PRICES.

Each Plate Holder takes two plates, or two cut films in Carriers.

Size in inches	4½ x 3¼	5 x 4	6½ x 4¾	7½ x 5	8½ x 6½	10 x 8
Price each	7/-	8/-	9/-	12/-	15/-	21/-

Intermediate sizes same price as the next size larger. Special and Continental sizes made to order. When ordering please state what numbers are to be put on the Plate Holder. Two ivory numbers are fitted into each Holder.

If required for a Thornton-Pickard Camera it is not necessary to send a slide as a pattern, and in that case no charge is made for fitting. For other Cameras, a slide is required, or better still, the reversing back, and a small charge is made for fitting according to the time taken.

PLUMB INDICATOR.

FOR ATTACHING TO CAMERA.

CANNOT GET LOST. NO SKILL REQUIRED TO FIX.

Price **SIXPENCE** each.

(Post Free, Sevenpence.)

Including Screws complete for Fixing.

Also supplied to dealers on Show Cards containing one dozen.

WHEN photographing any subject in which there are vertical lines, such as buildings, &c., it is **absolutely necessary** that the sensitive plate should **hang plumb**, or the vertical lines will not be parallel in the resulting photograph. It is difficult to judge when the plate does hang plumb without a **Plumb Indicator**.

It is shown full size in the accompanying illustration.

FITTING TO CAMERA.

DECIDE upon a position on one side of the Camera that does not interfere with the brass plates or stretchers. Place one edge of the black plate carrying the swinging Plumb exactly parallel with the straight edge of the Camera, and fasten with the screws supplied.



THE THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

Waterproof Cases.



A.



INSIDE ARRANGEMENT OF A.



C.



INSIDE ARRANGEMENT OF C.



INSIDE ARRANGEMENT OF D.



D.



LUGGAGE CARRIER FOR
BICYCLE.



STAND CASE.

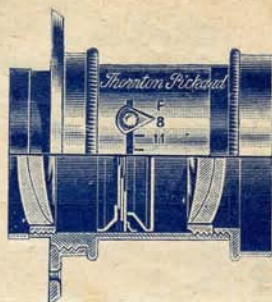
THORNTON-PICKARD THE MANUFACTURING CO. LTD.
Altrincham.

PRICE LIST of THORNTON-DICKARD WATERPROOF CASES.

SIZE	Quarter-plate. 4½ in. x 3½ in.	5½ in. x 4 in.	Half-plate. 6½ in. x 4½ in.	7½ in. x 5½ in.	Whole-plate. 8½ in. x 6½ in.	10 in. x 8 in.	12 in. x 10 in.
For CAMERAS.							
Waterproof Cloth Case, Leather Bound, with Collapsible Sides and Loose Division, Lined with Green Baize, and Fitted with Snap Lock and Key and Shoulder Strap.							
A To hold Camera, three Slides, Shutter, Lens, Focussing Cloth, &c.	- 7 6	- 8 6	- 9 6	- 11 6	- 13 6	- 16 0	-
B To hold three extra Slides only	- 5 6	- 6 6	- 7 6	- 8 6	- 9 6	-	-
Strong Waterproof Cloth Case, Leather Bound, with Staff Sides and Fast Division, Lined with Green Baize, and Fitted with Snap Lock and Key, Handle, and Shoulder Strap, which may also be used Knapsack fashion.							
C To hold Camera, three Slides, Shutter, Lens, Focussing Cloth, &c.	- 14 0	- 15 0	- 16 0	- 18 0	1 0 0	1 3 0	1 8 0
D To hold Camera, six Slides, Shutter, and accessories; or Camera with Lens attached <i>in situ</i> , five Slides, Shutter, and accessories; or Stereoscopic Camera, five Slides, Shutter, and accessories.....	- 17 6	- 19 0	1 0 0	1 2 0	1 4 0	1 8 0	1 15 0
E To hold Camera, Focal Plane Shutter, three Slides, and accessories.....	1 0 0	1 2 6	1 3 6	1 5 6	1 7 6	1 12 0	2 0 0
Solid Leather Case, of Best Quality and Finish.							
F To hold same as C	1 5 0	1 10 0	1 15 0	1 17 6	2 2 0	2 15 0	3 0 0
G To hold same as D	1 10 0	1 15 0	2 0 0	2 2 6	2 7 0	3 0 0	3 5 0
H To hold same as E	1 12 6	1 17 6	2 2 6	2 5 0	2 9 6	3 2 6	3 7 6
For STANDS.							
Strong Waterproof Cloth Case, Leather Bound, to hold Tripod Stand.....							
	- 7 0	- 7 0	- 7 0	- 7 0	- 7 0	- 9 0	- 9 0
FOR LENS. Solid Leather Case, Round.....							
	- 3 6	- 3 6	- 4 0	- 4 0	- 4 6	- 5 6	- 7 6

THORNTON-PICKARD

Lenses.



THESE lenses are of the finest quality that can be obtained at the price quoted, and are constructed specially for use with the Thornton-Pickard Cameras.

Any one of them will be provided with a Certificate of Merit from the Kew Observatory at an extra cost of 10s. each.

Amber Rapid Rectilinear Lens, f8, with Iris diaphragm.

This is a good general all-round lens for all kinds of Photography, including instantaneous work. It is free from distortion, and gives perfectly straight lines and fine definition. This lens may also be converted into a long focus lens by using one of the combinations only. This practically gives two lenses of different focus. The single lens is specially useful for landscape work, where a long focus is necessary. With the single lens it is advisable to use a small stop, and give a proportionately longer exposure. The same number on the Iris diaphragm with single lens will require approximately four times as much exposure as the complete lens.

	Quarter-plate.	Half-plate.	Whole-plate.	
To cover plates inches	$4\frac{1}{2} \times 3\frac{1}{4}$ Also 5×4	$6\frac{1}{2} \times 4\frac{3}{4}$	$7\frac{1}{2} \times 5$	$8\frac{1}{2} \times 6\frac{1}{2}$ 10×8
Price	£1 7 6	£1 12	£2 15	£2 15 £4 10
Focus... .. inches	$5\frac{1}{2}$	9	11	11 $13\frac{1}{2}$
Focus when the front combination only is used as a single lens... inches	$10\frac{1}{2}$	16	20	20

Ruby Rapid Rectilinear Lens, f8, with Iris diaphragm.

This is a very fine lens for all-round work. It has a flatter field than the previous lens, and is of the highest finish. It can also be converted into a long focus lens, as above.

	Quarter-plate.	Half-plate.	Whole-plate.		
To cover plates inches	$4\frac{1}{2} \times 3\frac{1}{4}$ Also 5×4	$6\frac{1}{2} \times 4\frac{3}{4}$	$7\frac{1}{2} \times 5$	$8\frac{1}{2} \times 6\frac{1}{2}$	10×8 12×10
Price	£2 10	£3	£4	£4 10	£6 5 £7 10
Focus inches	$5\frac{1}{2}$	9	$9\frac{1}{2}$	11	$13\frac{1}{2}$ $17\frac{1}{2}$
Focus when the front combination only is used as a single lens inches	$10\frac{1}{2}$	16	17	20	

THE THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

Wide Angle Rectilinear, *f*11, with revolving diaphragm, suitable for confined situations, &c.

	Quarter-plate.	Half-plate.	Whole-plate.		
To cover plates... inches	$4\frac{1}{2} \times 3\frac{1}{2}$ also 5×4	$6\frac{1}{2} \times 4\frac{1}{2}$	$7\frac{1}{2} \times 5$	$8\frac{1}{2} \times 6\frac{1}{2}$	10×8 12×10
Price	£2	£2 10	£4	£4	£5 £6
Focus inches	4	$5\frac{1}{2}$	7	7	9 11

Stereoscopic Lenses, *f*8, $5\frac{1}{2}$ in. focus, with Iris diaphragm.

"Amber" Rapid Rectilinear Lenses, accurately paired, £3 per pair.

"Ruby" Rapid Rectilinear Lenses, accurately paired, £5 5 per pair.

These Lenses are constructed specially for use with the Thornton-Pickard Cameras.

The above Lenses are subject to a discount of 5 per cent. for cash with order.

TESTIMONIALS.

"I tried the Lens; it is very good value for the money, and as good as some I have seen at double the price."—J. P.

"I am very pleased with the Lens indeed."—E. H. B.

"I have tested the Lenses and find them both first class."—T. E.

"The Rectilinear Lens has done some excellent portraits, first-class landscape work, and some very interesting instantaneous pictures."—J. J. K.

"Our customer who had the Lens a short time ago is very pleased with it."—C. G. & Sox.

"I have used the Lenses and find them first class."—T. E.

"The Lens is excellent, and gives splendidly sharp definition."—H. R. P.

"The Stereoscopic Lenses are excellent, and produce beautiful results. I am greatly pleased with them, and have used them with great satisfaction."—W. J. L.

Cooke Lenses, *f*6.5, Series III., with Iris diaphragm.

	Quarter-plate.	Whole-plate.	
To cover plates inches	$4\frac{1}{2} \times 3\frac{1}{2}$	5×4	$6\frac{1}{2} \times 4\frac{3}{4}$
Price	£4 2	£4 12	£5 12
Focus inches	5	6	$7\frac{1}{2}$

Ross-Zeiss Convertible Anastigmat, *f*6.3, Series VIIa.

Most of the photographs reproduced in this catalogue were taken with this lens.

For rapid instantaneous work it is the best we know of. It works at a large aperture, viz.: *f*6.3, and covers perfectly to the extreme edge of the plate. If stopped down it covers a plate nearly twice the size.

We prefer to supply these lenses ourselves, and when supplied with a Thornton-Pickard Camera, a focussing scale is engraved on the baseboard without extra charge.

	Quarter-plate.	Half-plate.		Whole-plate.	
To cover plates inches	$4\frac{1}{2} \times 3\frac{1}{2}$	5×4	$6\frac{1}{2} \times 4\frac{1}{4}$	$7\frac{1}{2} \times 5$	$8\frac{1}{2} \times 6\frac{1}{2}$
With Iris Diaphragm	£7 5	£8 5	£9 15	£11 15	£15 5
Focus of the complete lens ins.	$4\frac{1}{2}$	5	$6\frac{1}{2}$	8	$9\frac{1}{2}$
Focus of either the back or front lens, used singly ... inches	$7\frac{1}{4}$	9	$11\frac{1}{2}$	14	$16\frac{1}{2}$

The prices of Ross Lenses are net.

THE THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

Complete Outfits.

THE sets of apparatus below have been arranged for the convenience of purchasers who are requiring Complete Outfits, and may be taken as the best selection that can be made in proportion to the cost. At the same time we shall be glad to alter the arrangement of any outfit to suit the requirements of the purchaser.

See price list page 44 for larger sizes.

"AMBER" OUTFITS.	Quarter-plate. 4½ x 3¼	5 x 4	Half-plate. 6½ x 4½	7½ x 5	Whole-plate. 8½ x 6½	10 x 8
"AMBER" Outfit No. 1.						
Camera	2 13 6	3 2 6	3 8 6	4 5 0	4 18 6	5 17 6
Double Plate Holder	- 7 0	- 8 0	- 9 0	- 12 0	- 15 0	1 1 0
Stand, Two-fold, including Top.....	- 15 6	- 15 6	- 15 6	- 15 6	- 15 6	1 0 6
"Amber" Rapid Rectilinear Lens.	1 7 6	1 7 6	1 12 0	2 15 0	2 15 0	4 10 0
	5 3 6	5 13 6	6 5 0	8 7 6	9 4 0	12 9 0
Waterproof Cloth Case, pattern A extra	- 7 6	- 8 6	- 9 6	- 11 6	- 13 6	- 16 0
"AMBER" Outfit No. 2 (for Hand or Stand).						
Camera	2 13 6	3 2 6	3 8 6	4 5 0	4 18 6	5 17 6
Double Plate Holder	- 7 0	- 8 0	- 9 0	- 12 0	- 15 0	1 1 0
Turntable	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 5 0
Stand, Two-fold	- 13 0	- 13 0	- 13 0	- 13 0	- 13 0	- 18 0
Time and Inst. Shutter, with Speed Indicator fitted to front of Camera	1 4 6	1 4 6	1 6 6	1 6 6	1 9 6	1 14 6
"Amber" R. R. Lens.....	1 7 6	1 7 6	1 12 0	2 15 0	2 15 0	4 10 0
Bright Finder.....	- 8 6	- 8 6	- 8 6	- 8 6	- 8 6	- 8 6
	7 14 0	8 4 0	8 17 6	11 0 0	11 19 6	15 14 6
Waterproof Case, pattern A	- 7 6	- 8 6	- 9 6	- 11 6	- 13 6	- 16 0
"AMBER" Outfit No. 3 (most complete for Hand or Stand).						
Camera	2 13 6	3 2 6	3 8 6	4 5 0	4 18 6	5 17 6
Three Double Plate Holders	1 1 0	1 4 0	1 7 0	1 16 0	2 5 0	3 3 0
Turntable.....	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 5 0
Stand, Three-fold, to fit Turntable.	- 17 6	- 17 6	- 17 6	- 17 6	- 17 6	1 2 6
Time and Inst. Shutter, with Speed Indicator fitted to the front of Camera	1 4 6	1 4 6	1 6 6	1 6 6	1 9 6	1 14 6
"Ruby" R. R. Lens	2 10 0	2 10 0	3 0 0	4 0 0	4 10 0	6 5 0
Wide Angle Lens. See page 41.....	2 0 0	2 0 0	2 10 0	4 0 0	4 0 0	5 0 0
Bright Finder.....	- 8 6	- 8 6	- 8 6	- 8 6	- 8 6	- 8 6
	11 15 0	12 7 0	13 18 0	17 13 6	19 9 0	24 16 0
Waterproof Case, pattern C	- 14 0	- 15 0	- 16 0	- 18 0	1 0 0	1 3 0
Brassblinding Camera	- 15 0	- 16 6	- 18 0	- 18 0	1 0 0	1 3 0
Brassblinding Plate Holders ..each	- 3 0	- 3 6	- 4 0	- 4 0	- 5 0	- 5 6
Focal Plane Shutter, with Speed Indicator fitted to Camera	1 18 6	2 3 6	2 8 6	2 16 0	3 3 6	3 13 6
Dark Room and Chemical Outfit, including Chemicals, Dishes, Ruby Lamp, &c.	- 15 0	1 0 0	1 5 0	1 10 0	2 0 0	-
Dovetailed Box, partitioned for Camera, Plate Holders, Shutter, Chemicals, Accessories, &c.....	- 12 6	- 14 0	- 15 0	- 18 0	- 18 0	1 3 0
Strong Dovetailed Box, fitted with lock and key to contain Complete Outfit, and Chemicals, &c., for travelling or storing	- 17 6	- 19 0	1 0 0	1 3 0	1 3 0	1 8 0

THE THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

COMPLETE OUTFITS—(continued).

"RUBY" Outfit No. 1 (for Hand or Stand).	Half-plate. 6½ x 4½	7½ x 5	Whole-plate. 8½ x 6½	10 x 8	12 x 10
Camera, including Turntable and one Double Plate-Holder.....	5 11 6	6 16 0	7 17 6	9 12 0	12 0 0
Stand, three-fold, to fit Turntable	- 17 6	- 17 6	- 17 6	1 2 6	1 2 6
Time and Inst. Shutter, with Speed Indicator fitted to Camera front.....	1 6 6	1 6 6	1 9 6	1 14 6	1 19 6
"Ruby" R.R. Lens.....	3 0 0	4 0 0	4 10 0	6 5 0	7 10 0
Bright Finder.....	- 8 6	- 8 6	- 8 6	- 8 6	- 8 6
	11 4 0	13 8 6	15 3 0	19 2 6	23 0 6
Waterproof Case (Pattern C).....	- 16 0	- 18 0	1 0 0	1 3 0	1 8 0
"RUBY" Outfit No. 2 (complete outfit for Stereoscopic and ordinary Photography, for Hand or Stand).					
Camera, Turntable, and three Double Plate-Holders.....	6 9 6	8 0 0	9 7 6	—	—
Stand, three-fold, to fit Turntable	- 17 6	- 17 6	- 17 6	—	—
Time and Inst. Shutter, with Speed Indicator fitted to front of Camera, both for ordinary or Stereoscopic Photography..	1 13 0	1 15 0	1 18 0	—	—
Stereoscopic Division fitted.....	- 5 0	- 5 0	- 5 0	—	—
"Ruby" R.R. Lens.....	3 0 0	4 0 0	4 10 0	—	—
Pair of "Amber" Rapid Rectilinear Stereo Lenses.....	3 0 0	3 0 0	3 0 0	—	—
Bright Finder.....	- 8 6	- 8 6	- 8 6	—	—
	15 13 6	18 6 0	20 6 6	—	—
Waterproof Case (Pattern D).....	1 0 0	1 2 0	1 4 0	—	—
Pair of "Ruby" Rapid Rect. Stereo Lenses.	5 5 0	5 5 0	5 5 0	—	—
"RUBY" Outfit No. 3 (for Hand or Stand).					
Camera, Turntable, and three Double Plate-Holders.....	6 9 6	8 0 0	9 7 6	11 14 0	15 5 0
Stand, three-fold, to fit Turntable	- 17 6	- 17 6	- 17 6	1 2 6	1 2 6
Time and Inst. Shutter, with Speed Indicator fitted to Camera front.....	1 6 6	1 6 6	1 9 6	1 14 6	1 19 6
Ross Zeiss Lens, Series IIIa.....	4 10 0	5 0 0	6 0 0	10 0 0	15 0 0
Wide Angle Lens. See page 41.....	2 10 0	4 0 0	4 0 0	5 0 0	—
Bright Finder.....	- 8 6	- 8 6	- 8 6	- 8 6	- 8 6
(Cooke Lens may be substituted if preferred. See page 41.)	16 2 0	19 12 6	22 13 0	29 19 6	—
Waterproof Case (Pattern C).....	- 16 0	- 18 0	1 0 0	1 3 0	1 8 0
Focal Plane Shutter fitted to Camera, with Speed Indicator.....	2 8 6	2 16 0	3 3 6	3 13 6	4 13 6
"RUBY" Outfit No. 4 (for Hand or Stand).					
Camera, Turntable, and six Double Plate-Holders.....	7 16 6	9 16 0	11 12 6	14 17 0	20 2 6
Stand, three-fold, to fit Turntable	- 17 6	- 17 6	- 17 6	1 2 6	1 2 6
Time and Inst. Shutter, with Speed Indicator fitted to Camera front.....	1 6 6	1 6 6	1 9 6	1 14 6	1 19 6
Focal Plane Shutter fitted to Camera, with Speed Indicator.....	2 8 6	2 16 0	3 3 6	3 13 6	4 13 6
Ross Zeiss Lens, Series VIIa.....	9 15 0	11 15 0	15 5 0	—	—
Wide Angle Lens. See page 41.....	2 10 0	4 0 0	4 0 0	5 0 0	—
Bright Finder.....	- 8 6	- 8 6	- 8 6	- 8 6	- 8 6
	25 2 6	30 19 6	36 16 6	—	—
Waterproof Case (Pattern E).....	1 3 6	1 5 6	1 7 6	1 12 0	2 0 0
Case for three extra Plate-Holders.....	- 7 6	- 8 6	- 9 6	—	—
Case for Legs.....	- 7 0	- 7 0	- 7 0	- 9 0	- 9 0
Brassbinding Camera.....	- 18 0	- 18 0	1 0 0	1 3 0	1 9 0
Brassbinding Plate-Holders.....each	- 4 0	- 4 0	- 5 0	- 5 6	- 7 0

THE THORNTON-PICKARD MANUFACTURING CO. LTD., ALTRINCHAM.

PRICE LIST of the THORNTON-PICKARD CAMERAS.

	Quart'-plate 4 1/4 in. x 3 3/4 in.		5 in. x 4 in.		Half-plate 6 1/2 in. x 4 3/4 in.		7 1/2 in. x 5 in.		Whole-plate 8 1/2 in. x 6 1/2 in.		10 in. x 8 in.		12 in. x 10 in.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Camera only, "Amber" pattern	2	13	6	3	2	6	3	8	6	4	18	6	5	17	6
Camera only, "Ruby" pattern							4	2	6	5	4	0	7	6	0
Double Plate Holder															
Double Slide Bookform															
Turntable fitted to either Camera	1	0	0	1	0	0	1	0	0	1	0	0	1	5	0
Two-fold Stand to fit Turntable															
Three fold Stand to fit Turntable															
Top for Stand with folding Tripod screw															
Time and Inst. Shutter fitted to front	1	1	0	1	1	0	1	3	0	1	3	0	1	11	0
Speed Indicator to Shutter															
"Amber" Rapid Rectilinear Lens, with Iris	1	7	6	1	7	6	1	12	0	2	15	0	4	10	0
"Ruby" Rapid Rectilinear Lens, with Iris	2	10	0	2	10	0	3	0	0	4	0	0	4	10	0
Bright Finder for Hand Camera work															
Larger Bright Finder for Hand Camera work															
Shutter with Self-Capping Blind (see page 11)															
Waterproof Cloth Cases (see page 39)															
Brassbinding Camera, "Amber" or "Ruby"															
Brassbinding Double Plate Holder or Slide															
Aluminium Fittings to Camera and three Slides, extra	2	10	0	2	15	0	3	0	0	3	5	0	4	0	0

SIZE OF PLATE IN INCHES

Aluminium Binding, same as Brassbinding
Extra Panels for "Amber" Camera front ..
 Do. for "Ruby" Camera front ..
 Do. for **Shutter front**

Plate Carriers for smaller sizes of Plates
 outside measure (two required for each
 Plate Holder or Dark Slide)

Film Carriers for Cut Films (two re- } each
 quired for each Plate Holder or Dark Slide...) } six...

Stereoscopic Shutter Behind Lens, for a
 pair or one Lens only, fitted to Camera...}

Speed Indicator, extra

Adjustable Centres to Stereo. Shutter, extra ..

Stereoscopic Divisions, detachable

Roll Holder

Fitting same to Camera, extra

Complete Darkroom and Chemical Outfit to
 commence

Dovetailed Box, partitioned for Camera, Plate
 Holders, Shutter, Chemical Accessories...}

Strong Dovetailed Box, with Lock and Key, to
 contain everything for travelling or storing }

Luggage Carriers, for Handles of Bicycle,
 per pair. (See page 38)

	4 1/4 in. x 3 3/4 in.		5 in. x 4 in.		Half-plate. 6 1/2 in. x 4 3/4 in.		7 1/2 in. x 5 in.		Whole-plate 8 1/2 in. x 6 3/4 in.		10 in. x 8 in.		12 in. x 10 in.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Aluminium Binding, same as Brassbinding	-	1 6	-	1 6	-	1 6	-	1 6	-	1 6	-	2 6	-	2 6
Extra Panels for "Amber" Camera front ..	-	1 6	-	1 6	-	2 6	-	2 9	-	2 9	-	3 0	-	3 6
Do. for "Ruby" Camera front ..	-	1 6	-	1 6	-	1 6	-	1 6	-	1 6	-	2 6	-	2 6
Do. for Shutter front	-	1 6	-	1 6	-	1 4	-	1 6	-	1 8	-	2 0	-	2 6
Plate Carriers for smaller sizes of Plates	-	5	-	6	-	6	-	10	-	1 0	-	—	-	—
outside measure (two required for each	-	2 3	-	2 6	-	2 6	-	4 6	-	5 6	-	—	-	—
Plate Holder or Dark Slide)	-	—	-	—	-	1 9 6	-	1 11 6	-	1 14 6	-	—	-	—
Film Carriers for Cut Films (two re- } each	-	—	-	—	-	3 6	-	3 6	-	3 6	-	—	-	—
quired for each Plate Holder or Dark Slide...) } six...	-	—	-	—	-	5 0	-	5 0	-	5 0	-	—	-	—
Stereoscopic Shutter Behind Lens, for a	-	—	-	—	-	5 0	-	5 0	-	5 0	-	—	-	—
pair or one Lens only, fitted to Camera...}	-	—	-	—	-	2 17 6	-	3 0 0	-	3 15 0	-	4 10 0	-	6 15 0
Speed Indicator, extra	-	—	-	—	-	3 6	-	3 6	-	4 6	-	5 0	-	7 6
Adjustable Centres to Stereo. Shutter, extra ..	-	15 0	-	1 0 0	-	1 5 0	-	1 10 0	-	2 0 0	-	—	-	—
Stereoscopic Divisions, detachable	-	12 6	-	14 0	-	15 0	-	18 0	-	18 0	-	1 3 0	-	1 8 0
Roll Holder	-	17 6	-	19 0	-	1 0 0	-	1 3 0	-	1 3 0	-	1 8 0	-	1 15 0
Fitting same to Camera, extra	-	5 6	-	5 6	-	5 6	-	5 6	-	5 6	-	—	-	—
Complete Darkroom and Chemical Outfit to	-	—	-	—	-	—	-	—	-	—	-	—	-	—
commence	-	—	-	—	-	—	-	—	-	—	-	—	-	—
Dovetailed Box, partitioned for Camera, Plate	-	—	-	—	-	—	-	—	-	—	-	—	-	—
Holders, Shutter, Chemical Accessories...}	-	—	-	—	-	—	-	—	-	—	-	—	-	—
Strong Dovetailed Box, with Lock and Key, to	-	—	-	—	-	—	-	—	-	—	-	—	-	—
contain everything for travelling or storing }	-	—	-	—	-	—	-	—	-	—	-	—	-	—
Luggage Carriers, for Handles of Bicycle,	-	—	-	—	-	—	-	—	-	—	-	—	-	—
per pair. (See page 38)	-	—	-	—	-	—	-	—	-	—	-	—	-	—

The above Prices are subject to a Discount of 5% for Cash with Order.

Postal and Telegraphic Address:
"THORNTON-PICKARD," Altrincham.
 Telephone No. 69, Altrincham.

THE MANUFACTURING CO. LTD.
THORNTON-PICKARD ALTRINCHAM.

PRICE LIST of the THORNTON-PICKARD SHUTTERS.

SIZE, to fit on a Lens Hood or Tube up to Inches diameter—	1½	1⅝	2	2½	3	3½	4	4½	5
TIME & INSTANTANEOUS.									
STANDARD PATTERN.....	18/6	18/6	20/6	23/6	27/6	32/6	37/6	42/6	47/6
Do. BEHIND LENS	21/-	21/-	23/-	26/-	31/-	36/-	41/-	46/-	51/-
Speed Indicator, 3/6 extra.									
<i>If fitted with cord release instead of ball and tube for Hand Camera, 1/- less.</i>									
NEW METAL SHUTTER, see page 52.									
STEREOSCOPIC.									
TIME AND INSTANTANEOUS, at 3in. or 3¼in. centres	26/-	26/-	28/-	31/-	—	—	—	—	—
Do. BEHIND LENS do.	29/6	29/6	31/6	34/6	—	—	—	—	—
3½in. centres, 2/- extra; 3¾in. centres, 4/- extra.									
ADJUSTABLE PANEL FOR BEHIND LENS, extra 5/-									
Speed Indicator, 3/6 extra.									
SNAP SHOT , for Instantaneous only	10/-	10/-	12/-	15/-	—	—	—	—	—
Speed Indicator, 3/6 extra.									
SPECIAL , for more Rapid Instantaneous... ..	—	23/6	25/6	28/6	32/6	37/6	42/6	47/6	52/6
Speed Indicator, 3/6 extra.									
SILENT STUDIO	—	—	20/6	23/6	27/6	32/6	37/6	42/6	47/6

FOCAL PLANE.

ENGLISH AND AMERICAN SIZES.		CONTINENTAL SIZES.	
4½ by 3¼ (quarter-pl.)	£1 15 0	6½ by 4½ (half-plate)	£2 5 0
5 " 4 " "	2 0 0	8½ by 6½ (whole-pl.)	£3 0 0
5½ " 4½ " "	2 5 0	10 " 8 " "	3 0 0
6 " 4½ " "	2 10 0	12 " 10 " "	4 10 0
6½ " 4½ " "	2 10 0	15 " 12 " "	5 10 0
6½ " 3½ " "	2 10 0		

Speed Indicator, 3/6 extra.

Intermediate sizes are made to order at same price as next size larger.

ACCESSORIES.

SPEED INDICATOR,

Pneumatic Ball and Tube, price 3/6 extra.

No. 1, for Studio Shutter, Ball, and Tube only, price 2/-; Teat, 1/-

Large Balls, Long Lengths of Tubing, and Teats, see page 18.

Patent Rubber Moulding, for fitting Shutters to Lenses, made in seven different thicknesses, 8d. per foot.

Adaptors, for fitting Shutters to more than one Lens: Rubber, 8d. each; Wooden, lined with Rubber, 1/6 up to 2½ in., 2/- if larger.

Brass-binding Shutters, for hot and damp climates, 5/- extra up to 3½ in. size; larger sizes in proportion.

Self-Capping Blind. Both Time and Inst. and Snap Shot Shutters are fitted with this (see page 11), at the following extra cost: up to 2½ in. size, price 5/-; up to 3½ in. 7/6; larger sizes, and also Stereoscopic, 10/-

Aluminium Fittings to Time and Inst. Shutters, 5/- extra.

Extra Panels for Behind-Lens Shutters, ordinary patterns, up to 2½ in. size, 1/6; 3½ in. size, 2/-; 5 in. size, 2/6

do. do. Stereoscopic Pattern, 2/-; with adjustable centres, 5/-

INSTRUCTIONS FOR ORDERING.

FOR ORDINARY SHUTTERS—Please send a narrow strip of paper just long enough to meet round the Lens Hood or Tube. Not an impression or pencil drawing. Insist upon having the Shutter made a good fit upon the Lens. The Shutters work equally well fitted to the Lens Hood or the Lens Body.

FOR STEREOSCOPIC SHUTTERS—In addition to strip as above, please state exact distance apart of Lenses from centre to centre. Takes the Place of it. The Dark Slide or Plate Holder fits into the back of the Camera in the same way as the Reversible Back, and in fact, otherwise we supply the Shutter with an adapting frame which may be cut down and fitted to the required size by any cabinet-maker. If the Camera has no Reversible Back it is sufficient to send a Dark Slide or Plate Holder.



THE THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

Postal and Telegraphic Address:

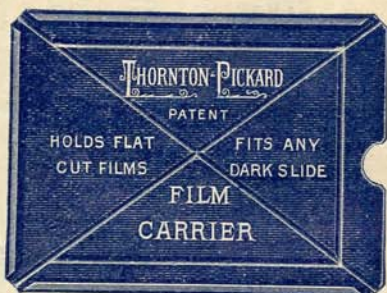
 "THORNTON-PICKARD," Altrincham.

 Telephone No. 69, Altrincham.

THE THORNTON-PICKARD

PATENT

Film Carrier.



THIS Carrier is for Sheet or Cut Films. It will fit any make of dark slide or plate-holder that a plate will fit, and holds the film perfectly straight and flat.

The Carrier is made of extremely thin sheet metal; strength and rigidity are obtained by the indented ribs or corrugations that run in various directions.

The film is simply pushed into the grooves formed by the three turned-over edges, then the Carrier is placed in the dark slide just as though it were a plate. The notch at the end is provided in order that the film can be easily gripped by the finger and thumb for removal.

STIFF and LIGHT.
BEST in the MARKET.

The Thornton-Pickard Patent Film Carrier combines the utmost stiffness and lightness possible, and in fact is the best Film Carrier in the market.

PRICE LIST.

To take one film.	Quarter-plate. 4½" x 3¼"	5" x 4"	Half-plate. 6½" x 4¾"	7½" x 5"	Whole-plate. 8½" x 6½"
Price, each.....	5d.	6d.	6d.	10d.	1/-
Postage, extra	1d.	1d.	1d.	1d.	2d.
Price, in boxes, containing six	2/3	2/6	2/6	4/6	5/6
Postage, extra	2d.	2d.	3d.	3d.	3d.

THE THORNTON-PICKARD MANUFACTURING CO. LTD.

Altrincham.

Hints on Instantaneous Photography.

SUCCESSFUL Instantaneous Photography is easy and simple if a little care and judgment is used in observing the necessary points that apply to this kind of work. The most essential conditions are:—

Good light. A rapid plate. A shutter having a high co-efficiency. As full an exposure as the movement of the subject will allow. A suitable lens. Slow development with a very dilute developer when the plate is much under-exposed.

For Instantaneous Subjects as long an exposure should be given as the subject will allow. This depends upon the rate of motion and the distance from the Camera, both of which affect the movement of the image on the plate during the moment of exposure.

To find the Exposure required for a moving object. This may be obtained simply, as follows:—

The distance of the object from the Camera, measured in inches, must be divided by the number of yards per hour at which the object is travelling, and then multiplied by the focus of the lens in inches.

The result will be the fraction of a second, which is the longest allowable exposure that does not show movement in the resulting picture.

Putting this into a simple formula, we get

$$\text{Exposure in fractions of a second} = \frac{\text{Distance of object from Camera in inches.}}{\text{Yards per hour} \times \text{focus of lens in inches.}}$$

For example: Supposing that the object is 50 feet from the Camera and the focus of lens 6 inches, while the movement of the object is at the rate of 12 miles per hour, we get

$$\text{Exposure} = \frac{50 \text{ (feet)} \times 12 \text{ (to reduce to inches)}}{12 \text{ (mils.)} \times 1,760 \text{ (yds. in a mile)} \times 6 \text{ (ins. focus)}} = \frac{600}{126720} = \frac{1}{211} \text{ (about).}$$

This does not allow for movement of limbs, &c., which are always more rapid than that of the object itself, and a shorter exposure will be necessary in consequence; on the other hand, if the object is not moving broadside to the Camera, a longer exposure is allowable.

Below is given a table showing the correct exposure that should be given for various moving objects.

The table is made out for a distance from the Camera 100 times that of the focus of the lens; that is for a 6 inch focus lens at 50 feet, a 7 inch at 58 feet, an 8 inch at 67 feet, a 9 inch at 75 feet, or 12 inch at 100 feet.

	Towards the Camera.	At right angles to the Camera.
Man walking slowly, street scenes	.. 1/15 sec.	.. 1/45 sec.
Cattle grazing .. .. .	.. 1/15 ..	.. 1/45 ..
Boating .. .. .	.. 1/20 ..	.. 1/60 ..
Man walking, children playing, &c.	.. 1/40 ..	.. 1/120 ..
Pony and trap, trotting .. .. .	.. 1/100 ..	.. 1/300 ..
Cycling, ordinary .. .. .	.. 1/100 ..	.. 1/300 ..
Man running a race, and jumping	.. 1/150 ..	.. 1/450 ..
Cycle racing .. .. .	.. 1/200 ..	.. 1/600 ..
Horses galloping .. .. .	.. 1/200 ..	.. 1/600 ..

If the object is twice the distance, the length of allowable exposure is doubled, and *vice versa*.

DEVELOPMENT.

FOR THE DEVELOPMENT OF INSTANTANEOUS PHOTOGRAPHS we use the three necessary constituents only, viz., Dry Pyro., Ammonia, and Bromide, in the following proportions: Pyrogallie Acid (d.y.), 2 grains; Bromide of Potassium, 1 grain; Liquid Ammonia, '880, 2 minims; Water, 1 oz. (The Bromide and Ammonia are conveniently kept as 10 per cent. solutions.) If under-exposed, dilute the developer with an equal bulk of water, and add 25 per cent. extra Ammonia.

IN EXTREME CASES we take the above developer and dilute it with five times its usual bulk of water; development will be very slow, but detail should appear all over the plate. In ten minutes add an amount of Ammonia equal to 25 per cent. of that already used, to make up for that which has evaporated. Repeat the same at the end of the next ten minutes. After the developer has been used for about half an hour, replace it by another made up as at first, and continue the operation in the same manner. After an hour probably no further detail may be coaxed out. Usually sufficient density is obtained at the end of an hour (and much sooner, except in extreme cases), but, if not, sufficient density may be obtained by applying a normal developer for a short time.

ROCK THE DISH. When using Pyro. the developer must be kept moving all the time, or the negative will be covered with spots, &c. We use a simple form of rocking table, which is kept in motion by a heavy weight. Four or five plates in a large or in separate dishes may be kept going at the same time, and attended to as required.

Cover the Dish. During development the dish should be covered with the lid of a large sized plate box, or other means, so as to avoid fogging the plate by the continuous light of the dark room lamp.

The Dark Room should be comparatively brightly illuminated with a yellow or orange light; development should take place in the darkest corner away from the light, and in the shadow of the person developing.

THE THORNTON

COMPETITION.

£200 IN PRIZES.

CLASS 1.

£100 will be given in Prizes for the best sets of Inst. Photographs

Taken with the THORNTON-PICKARD "Amber" or "Ruby"

CAMERA & SHUTTER.

CLASS 2.

£100 will be given in Prizes for the best sets of Inst. Photographs

Taken with the THORNTON-PICKARD

SHUTTER.

£200

£50 of each £100 will be paid in Cash, the remainder in Apparatus of the Company's manufacture.

CLASS 1.—For Photographs taken with THORNTON-PICKARD Camera and Shutter.

FIRST PRIZE	£50 in Cash.
Second Prize	£25 in Apparatus.
Third Prize	£10 in Apparatus.
Three Prizes of £5 each	£15 in Apparatus.

£100

CLASS 2.—For Photographs taken with THORNTON-PICKARD Shutter. Any make of Camera, including Hand Cameras, allowed.

FIRST PRIZE	£25 in Cash.
Second Prize	£15 in Cash.
Third Prize	£10 in Cash.
Fourth Prize	£5 in Apparatus.
Ten Prizes of £3 each	£30 in Apparatus.
Fifteen Prizes of £1 each	£15 in Apparatus.

£100

N-PICKARD

RULES.

- Date.**—All competing photographs must be sent in on or before September 1st, 1896. Any received after that day will not be eligible.
- Quantity of Prints.**—The prizes are offered for sets of prints. Each set must consist of four prints from different negatives. Any number of sets may be entered in either class. They may all be different subjects, or a series of the same subject in different styles or positions, but must be instantaneous exposures.
- Size of Prints.**—The prints may be any size, but must be printed direct from the negatives. Enlargements not allowed.
- Mounting of Prints.**—All prints must be mounted; this may be done in any way the competitor desires, but Framing is not allowed.
- Printing Process.**—The pictures may be printed by any process, on any kind of paper, but transparencies are not allowed. Composite negatives or printing from two or more negatives not allowed.
- Retouching.**—Ordinary spotting of defects on the prints or negatives will be allowed, but retouching will result in disqualification.
- Winning Pictures.**—These prints will become the absolute property of the Thornton-Pickard Manufacturing Company, Ltd. The negatives are to be loaned to the Company upon request for six months, during which time every care will be taken of them, but the Company cannot accept any responsibility for damage. The Company reserves the sole right to publish these winning pictures, and to use them for advertising or other purposes.
- Successful Competitors** will require to furnish such information as may be deemed necessary, as a proof of *bona-fides*, and to submit the Apparatus for inspection; also to state when and where it was purchased, if desired. The judges may require the negatives to be produced for inspection upon request before making their final decision.
- Apparatus Used.** Intending competitors in Class II. may use any make of Camera (including Hand Cameras) provided the genuine Thornton-Pickard Shutter, of our own manufacture and bearing our name, is used to take the photograph. Intending competitors in Class I. must use both our Camera and our Shutter. Either the "Amber," "Ruby," or any other pattern of Thornton-Pickard Camera may be used.
- Judges.**—The pictures sent in will be judged by the following gentlemen:—
H. SNOWDEN WARD, Esq. (Editor of the *Photogram*).
A. HORSLEY HINTON, Esq. (Editor of the *Amateur Photographer*).
Two Directors of the Thornton-Pickard Manufacturing Company, Ltd.
Their decision shall be final.

- Sending in the Prints.**—Every print must be clearly marked in ink on the back of the mount with the following particulars:—
(A) The name and address of the competitor. (C) The exposure given, or full particulars of the circumstances under which taken.
(B) The Class in which it is entered. (D) The pattern of Shutter and Camera used.
Packing.—It is important that the prints be carefully packed and forwarded, *carriage paid*, addressed:—The Thornton-Pickard Manufacturing Company, Ltd., Altrincham, near Manchester.

Date sent off.....
Write a Letter as follows and send it by *separate* post, not in the parcel:—
To the Thornton-Pickard Manufacturing Company, Ltd., Altrincham.
Gentlemen,—I am sending you this day by....., carriage paid,
photographic prints from negatives made with your Shutter (or Camera and Shutter). Please enter these in your Prize Competition, Class.....
Yours faithfully,

Name.....
Address.....
Date.....

Write very clearly.

- No Director, Officer, or Employee** of the Thornton-Pickard Manufacturing Company, Ltd., nor any relative or assistant of any of the judges, will be allowed to compete.
- No competitor** can enter in both classes.
- The copyright** of the winning pictures shall be vested in the Company.
Those who have not already got them should buy a Thornton-Pickard Camera or Shutter, and enter for the above competition. The prizes are substantial and worth trying for. Everyone has a chance.

THE THORNTON-PICKARD

NEW PATENT SHUTTER,

Known as The Thornton-Pickard ALUMINIUM Shutter.

THE above has been introduced to meet the requirements of those who want a cheaper Shutter than our old and well-known standard pattern. It retains, however, the special characteristics of the Thornton-Pickard manufactures, viz. excellent workmanship and acknowledged reliability.

The case of this Shutter is made of Aluminium, and is consequently very light. It is supplied either with the ordinary silver or with black finish.

N.B.—All orders are executed with the ordinary silver finish, unless otherwise specified.

The Pneumatic Ball and Tube, of our special best quality, is fitted to the Shutter, but if desired, it is supplied with a Cord Release instead; this is sometimes preferred when the Shutter is required for fitting into a Hand Camera.

Prices of the Thornton-Pickard Aluminium Shutter.

	1½ins.	1¾ins.	2ins.	2½ins.
Time and Inst., silver finish, with Pneumatic Ball and Tube Release	12/6	13/6	16/6	19/6
Instantaneous, silver finish, with Pneumatic Ball and Tube Release	8/-	9/-	10/6	13/6
Speed Indicator, extra ...	3/6	3/6	3/6	3/6

For Hand Cameras these Shutters are specially made to order, at the same prices, but with black finish instead of silver finish, and mechanical instead of pneumatic release. The ordinary pattern and finish only kept in stock.

When ordering, please say whether the ordinary silver or the black finish is required; also whether the Shutter is to be fitted with Speed Indicator. Please send a strip of paper that just meets round the Hood or Tube of the Lens upon which the Shutter is required to fit.

For those requiring a cheap article, there is nothing in the market to equal this new Metal Shutter, but where beautiful finish and appearance are desired, such as can only be obtained with a French polished mahogany case, we strongly recommend our standard patterns, which give such universal pleasure and satisfaction.

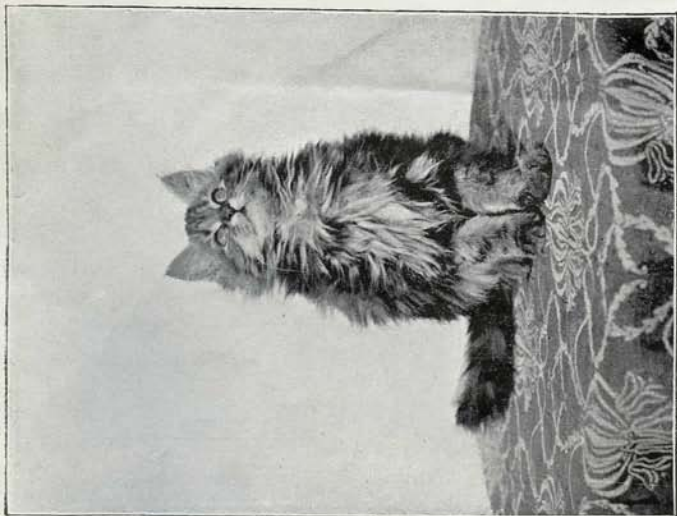
THE THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.



SKIPPING.

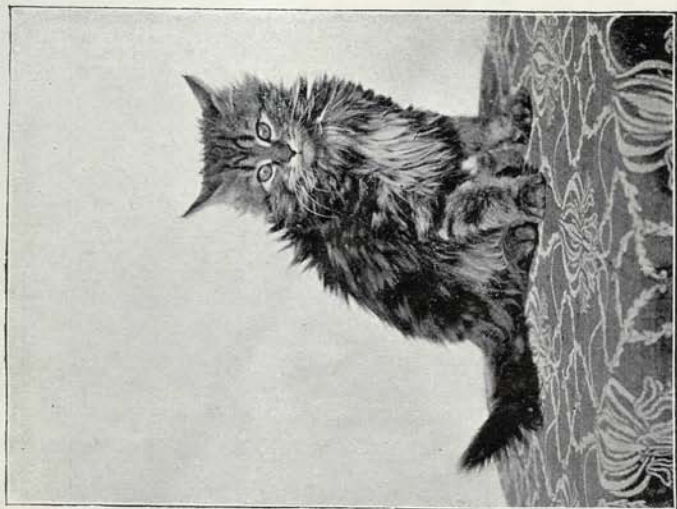
Exposure $\frac{1}{500}$ sec Taken by Mr. J. E. Thornton with a

THORNTON-PICKARD CAMERA AND FOCAL PLANE SHUTTER.



INTERESTED.

Exposure $\frac{1}{6}$ sec. Taken by Mr. G. A. Pickard, with a,



DISGUSTED.

THORNTON-PICKARD CAMERA AND TIME AND INSTANTANEOUS SHUTTER.

THE
THORNTON-PICKARD
SHUTTER

EVERY purchaser of a Hand Camera should insist upon having it fitted with a Thornton-Pickard Shutter. Most of the leading makers of Hand Cameras use it.

No other Shutter commands such an enormous sale because none other gives such good results.

The Thornton-Pickard Shutter

Is simple,

Reliable,

Perfect in design,

Perfect in construction,

Perfect in finish,

And it fulfils all requirements.

The Shutter is one of the most important parts of any Hand Camera. However good in design and construction the Camera may be, good results cannot be expected unless a good Shutter is used. Therefore, it is most essential to have the best Shutter obtainable.

Ask for the Thornton-Pickard Shutter and see that you get it.

Look for the name "THORNTON-PICKARD."

All our goods bear our name.

None genuine without it.

THORNTON-PICKARD ^{THE} **MANUFACTURING CO. LTD.**
Altrincham.

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THE
THORNTON-PICKARD MANUFACTURING CO. LTD.
Altrincham.

Postal and Telegraphic Address: "THORNTON-PICKARD," Altrincham.
Telephone No. 69, Altrincham.