

**I**llustrated  
**C**atalogue  
of  
PHOTOGRAPHIC  
EQUIPMENTS and  
MATERIALS  
FOR  
AMATEURS

E. & H. T. ANTHONY & CO.,  
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ILLUSTRATED

CATALOGUE

OF


Photographic

Equipments and Materials,

FOR

AMATEURS.

November, 1898.

 The prices given in this catalogue are liable to fluctuation. When any article is reduced, the buyer will get the benefit, without reference to the printed list.

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### Read Carefully these Few Facts.

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PROBABLY the reader of the following pages is somewhat acquainted with the interesting art-science of photography, for which the apparatus and general supplies enumerated in this catalogue are provided. If not, we would strongly recommend him or her to read our photographic text-book, entitled "How to Make Photographs—A Manual for the Amateur," which has been penned and edited by eminent theoretical and practical photographers, for the purpose of stating in simple and concise language everything necessary for the production of a finished picture. This manual is fully illustrated, and the price of it is fifty cents. A full list of our publications will be found at the end of this catalogue, and the progressive photographer should study the literature of photography, if he desires to become fully acquainted with what has been done by his co-workers. To keep fully posted on recent developments, the amateur should subscribe to "Anthony's Photographic Bulletin," an illustrated monthly journal, devoted to photography and photo-reproduction. The "International Annual," published in November of each year, contains the best thoughts of the most eminent photographic authorities.

The introduction of the Gelatino-bromide Dry Plate, some fifteen years ago, so revolutionized photography, that the various manipulations necessary for the production of a finished picture have been so simplified, that any one may, with confidence, take up photography as a pastime or as a business. With taste and judgment, totally inexperienced amateurs may produce good results, while after a little practice really artistic results are easily obtained.

It is hardly to be supposed that success will attend one's first efforts, but rapid progress can generally be made by old or young, lady or gentleman, who may manifest the slightest disposition to excel.

The dry plate has the great advantage of admitting of a much wider latitude of exposure than the old wet plate, and the various operations necessary are entirely free from the former objections of complexity, uncertainty, and trouble from staining of the hands or clothes. Our ingenuity and skill have been for the past fifty years devoted to simplifying the various materials and methods, and the result is that everything necessary for the attainment of good results can be purchased at a low cost, ready for use, without calling on the chemical knowledge of the amateur. Another obvious improvement is recognized in the compactness and portability of the outfits, and their great adaptability to the requirements of the public.

In selecting an outfit from those described in the following pages, it is well to bear in mind:

First.—The larger the camera the greater the bulk and weight.

Second.—While a small picture can be made with a large camera, a large picture cannot be made with a small camera.

Third.—That for ordinary use, for tourists and travelers generally, the hand camera will be found the most convenient.

PRESS OF JENKINS & McCOWAN,  
30 GREENWICH AVENUE,  
NEW YORK

Fourth.—That for really serious work with the camera, where really artistic results are desired, the tripod camera is essential.

Remember, we do not make toy cameras. All the instruments listed in this catalogue are thoroughly practical and efficient, and are such as are in constant use by professional photographers.

Our tripod cameras are fitted with our patent double dry plate holders, which are by far the lightest, tightest and handiest holders made, and which have done as much as any other one thing toward giving popularity to our outfits.

As regards lenses, while excellent work can be done with our single achromatic lenses, we would advise those amateurs wishing to excel, and with whom cost is only a secondary consideration, to examine the more expensive double achromatic lenses, especially those made by Dallmeyer, which can be relied upon as being absolutely the best in the market. With these the very finest results are possible.

When purchasing, remember that you are not going to make an experiment. Success is assured if directions are implicitly followed. Thousands of people are to-day using cameras successfully, and every year sees large accessions to the ranks of amateur photographers; so, when you buy, get as good an outfit as you can afford. With a cheap instrument you can do good work, but with the better grade the work can be done more easily. Decide on the size of picture you desire to make, and then purchase the best you can afford of that size.

With these few hints and explanations we take pleasure in submitting for your consideration the pages of this book, with the further assurance that everything therein mentioned is guaranteed to be absolutely as described.

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#### TERMS.

*Cash, or Collect on Delivery.*

*Persons unknown to us will remit part of the estimated amount of bill with order, remainder to be sent C. O. D.*

*Orders for shipment per freight lines must be accompanied with the amount of invoice.*

*As prices of all kinds of goods fluctuate, this catalogue gives merely their value at date of issue.*

*We pack with the utmost care, but we cannot be accountable for breakage in transportation.*

*New customers, seeking to establish a line of credit, will avoid delay by sending their references with order.*

*Remit by Express, Money Order, Draft, Post-office Order or Registered Letter.*

*At places where the American Express Co. have offices, any of our goods can be ordered through their agents, who will furnish blanks for the purpose, saving postage and trouble.*

*We make a special discount of five per cent. on the prices quoted in this catalogue, when cash accompanies orders.*

## A WORD ON CAMERAS.

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In this list the prices of many cameras, lenses, tripods, etc., are given separately, for those who desire to make up an equipment different from those presented herein.

Taking the tripod cameras, when the price is given for camera, holder and carrying case, it does not include the lens or tripod. This list has been prepared with great care, and we have endeavored to be explicit enough to enable one to select such articles as will make a harmonious equipment. The sizes given are the largest that each camera will admit of, though small plates can be used in each by means of our dry plate kits, for which we give outside dimensions and size of plate that can be used. Our equipments, the Champion and O. N. A., are sold at a less price than the various parts could be bought for separately, as can be ascertained by adding together the cost of the several items. A complete tripod outfit, for making pictures measuring 4 x 5 inches, can be furnished for \$13.40, as follows:

No. 1 Champion Equipment (see page 7,	. . . . .	\$10.00
4 x 5 Printing and Developing Outfit (see page 97),	. . . . .	3.40

This will include everything necessary for making and developing one dozen negatives, and for making one dozen prints. The cost of making subsequent pictures will be trifling, for the outfit includes trays, printing frame, and other accessories that will last for years, and sufficient chemicals for making several dozen additional prints and negatives.

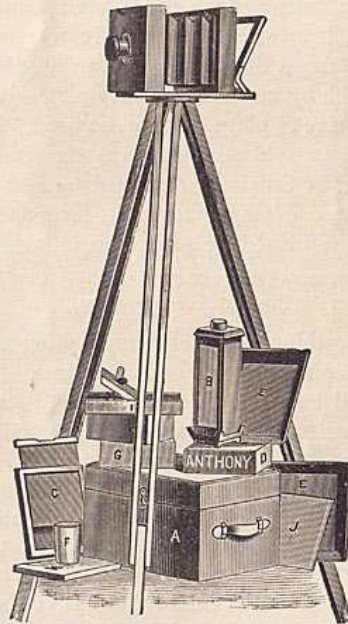
In the line of hand cameras, we offer a large number for our readers to choose from. The Buckeye, Quad and Klondike Cameras will commend themselves to those who are in search of something small and efficient. For large work, the Marlborough Camera stands without a peer. It is, perhaps, the most complete and handsome camera that has yet been offered.

We are glad at all times to give advice to prospective purchasers, and to those who are in any difficulty whatever.

## Catalogue for Amateurs.

### Eureka School Outfit.

- A. Carrying Case.
- B. Ruby Lamp.
- C. Double Plate Holder.
- D. Dry Plates.
- EE. Developing Trays.
- F. Glass Graduate.



- G. Developing and Toning Solution.
- H. Hyposulphite Soda.
- I. Printing Frame.
- J. Sensitized Paper.
- K. Card Mounts.
- Focusing Cloth.

**T**HIS EQUIPMENT is intended as a means of learning the elementary steps of photography by practical working, at an extremely low price, and, while none of the several parts of the equipment are made with elaborate finish or ornamentation, they are all practicable and good results can be obtained with them, as the pictures produced by the

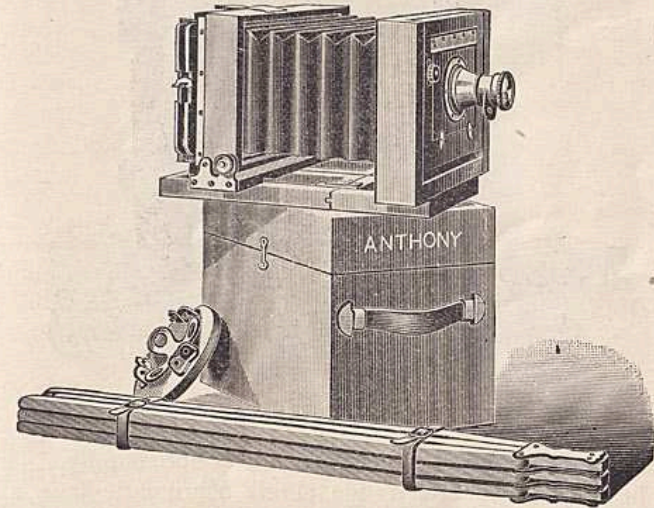
## Catalogue for Amateurs.

equipment demonstrate. The equipment comprises a 4 x 5 camera, with lens, folding tripod, and complete developing and printing outfit, as indicated in above cut.

Price complete, . . . . . \$7.50

### Champion Equipment.

**T**HE CAMERA included in this Equipment is of mahogany, with fine varnish finish, and is provided with folding bed (made rigid by the use of our patent clamps), rising front and swing back, and is adapted to either vertical or horizontal pictures. In addition to the

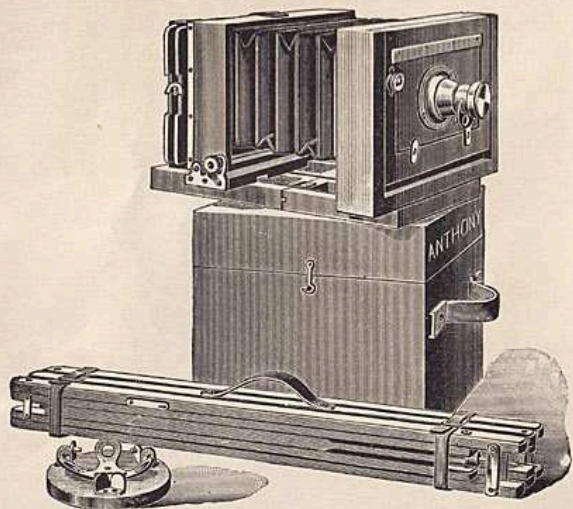


above camera, the equipment includes one patent zephyr double dry plate holder, carrying case, fine single achromatic lens, and improved folding tripod.

Size of View.	Price.	Extra Double Zephyr Plate Holders, each.	Extra Double Eclipse Plate Holders, each.
4 x 5	\$10.00	\$1.20	
5 x 7	12.00	1.25	
5 x 8	12.00	1.35	
6½ x 8½	14.00	1.60	
8 x 10	20.00	1.85	1.60

O. N. A. Equipment.

THE CAMERA which forms a part of this Equipment, is of highly polished mahogany, the metal work having the draw file finish like that on the finest mathematical instruments, and being lacquered to prevent tarnishing. It is provided with a bed which folds for convenience in packing and has single swing and rising front.



This camera can be used either vertically or horizontally. The outfit includes, beside the camera, a fine single achromatic lens, a patent zephyr double dry plate holder, an improved triple jointed climax tripod and carrying case, except in the case of the two sizes  $6\frac{1}{2} \times 8\frac{1}{2}$  and  $8 \times 10$ , which have our patent telescopic folding tripod, as stated below.

Equipment Number.	Size of View.	Price.	Extra Double Zephyr Plate Holders, each.
1 B	4 x 5	\$12.00	\$1.20
$1\frac{3}{4}$ B	5 x 7	14.00	1.25
*2 B	5 x 8	15.00	1.35

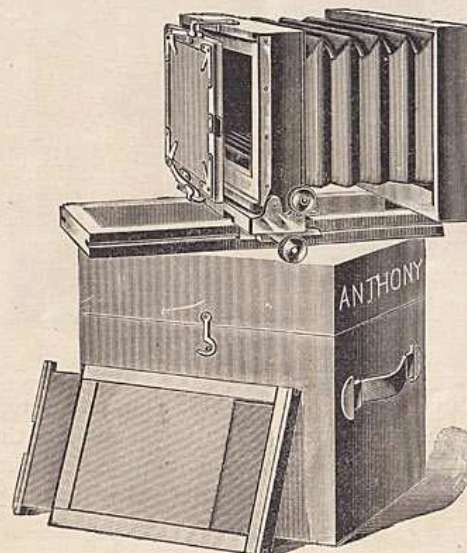
O. N. A. equipments, numbers 7 B and 8 B, are similar to those previously described, except that they are fitted with a patent telescopic folding tripod.

Equipment Number.	Size of View.	Price.	Extra Double Zephyr Plate Holders, each.	Extra Double Eclipse Plate Holders, each.
7 B	$6\frac{1}{2} \times 8\frac{1}{2}$	\$20.00	\$1.60	\$1.60
8 B	8 x 10	26.00	1.85	....

\* This Equipment is also fitted with a shutter for instantaneous work, which is included in the price named.

The N. P. A. Camera.

THIS is a highly polished mahogany camera with patent swing back, rising front, folding bed, patent clamp hooks (to make the bed rigid), extra front and stereoscopic partition. The metal work has the

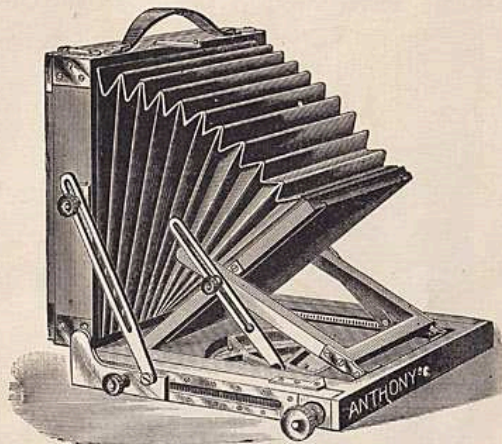


draw file finish, similar to that on the finest mathematical instruments. By means of a plate on the side, this camera can be reversed on the tripod and used to make a vertical picture. This is the same camera as used in our O. N. A. Equipment. Prices, including camera as above, one patent double Zephyr dry plate holder and carrying case:

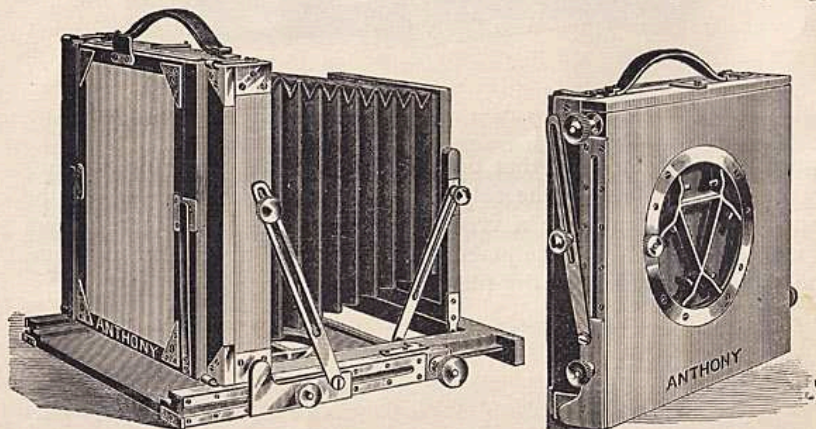
4 x 5	.....	\$6.00
5 x 7	.....	8.00
5 x 8	.....	9.00
$6\frac{1}{2} \times 8\frac{1}{2}$	.....	12.50
8 x 10	.....	16.00

### The Anthony Compact Camera

IS a recent improvement in folding cameras, similar in effect to the noted English makes. This camera is constructed with reversible back, which makes it almost square when folded, and measures (5 x 8 size)  $9\frac{1}{8} \times 9\frac{1}{8} \times 3\frac{1}{8}$  inches. The bed telescopes with rack and pinion, and when closed for carrying, forms the outside of the box. The bellows has an extension (5 x 8 size) of 16 inches, and the telescopic bed makes it



capable of use with very short focus lenses. The tripod top is built into this camera, and is of brass, arranged in such a manner that it revolves freely, thus giving the advantage of changing the field without moving the tripod legs. The ground glass is attached with our patent spring

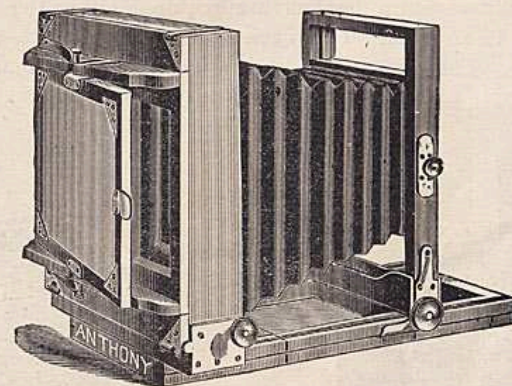


action, which keeps it out of the operator's way and prevents its becoming detached from the box, and the entire instrument, with ground glass and double holder, weighs only  $5\frac{1}{2}$  pounds.

Prices, with zephyr holder and carrying case :

5 x 7, single swing...	\$28.00	6 1/2 x 8 1/2, single swing,	\$35.00
5 x 8, " " " " " " " "	30.00	8 x 10 " " " " " "	40.00

### Anthony's "Normandie" Reversible Back Camera

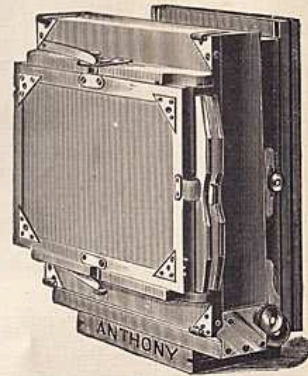
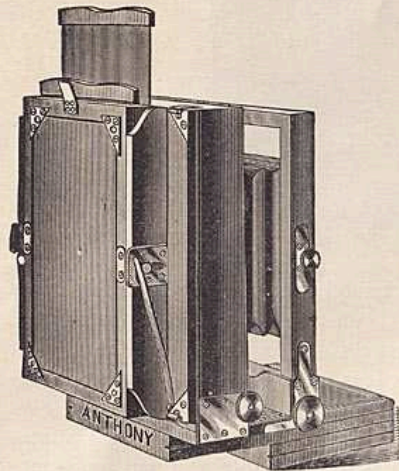


THIS is probably the most practical tripod camera on the market. It is made of polished mahogany, and is constructed so as to withstand the rough usage that a view camera often gets. It is the lightest and most compact practical view camera made. It is free from complicated movements, and all the parts, both wood and metal, are strongly made. This camera is certainly the most serviceable for the professional view photographer. The amateur, too, will find it easily adjustable, and will appreciate the smoothness with which every part of it works. Every desirable attachment to a camera is to be found on the Normandie, and yet there are no complicated movements or puzzling devices. The bed drops down into position, and is firmly clamped, making it perfectly rigid. By means of an accurately working rack and pinion movement, the front is racked out. The bellows is of fine leather, and will not crack or become useless through the after formation of fine pinholes. There is ample rising front, this being fixed in any place by a milled-head screw. The front part of the bed is hinged, and can be folded away under the camera when wide-angle lenses are used.

The back of the Normandie Camera makes this box one of the most useful of cameras. First, it is completely reversible, so that, without removal of the camera from the tripod, either vertical or horizontal pictures may be made. Reversing is accomplished by simply raising the two springs at the top of the back of the camera, slipping out the entire back, reversing it, and replacing it. The back of the camera swings, that is, it may be placed at any reasonable angle to the bed. This is useful when photographing objects which necessitate a tilting of the camera. A screw at the bottom right hand side of the back permits of the clamping of this back at any angle.

Another special feature of this back is the self-adjusting ground glass. Instead of being hinged, and thus being liable to get broken, the ground glass is held in a frame in such a way that the frame itself serves to hold the plate holder in position.

The Normandie is fitted with the Zephyr Double Dry Plate Holder, in all sizes up to 8 x 10 inclusive; above that size, the Eclipse Holder is furnished. Where extra holders are required, either the Zephyr or the Eclipse may be ordered. This camera may be had with either single or double swing. The prices quoted below include camera, one double holder and one carrying case:

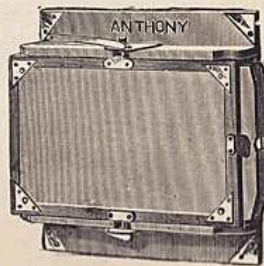


Size.	Single Swing.	Double Swing.	Extra Double Zephyr Holders, Each, to 8-10.	Extra Double Eclipse Holders, Each.
5 x 7	\$17.00	\$19.00	\$1.25	\$1.25
5 x 8	18.00	20.00	1.35	1.35
6½ x 8½	20.00	22.00	1.60	1.60
8 x 10	22.00	24.00	1.85	1.85
10 x 12	28.00	30.00		6.00
11 x 14	30.00	33.00		7.00
14 x 17	40.00	45.00		10.00

Reversible Back Adjusters.

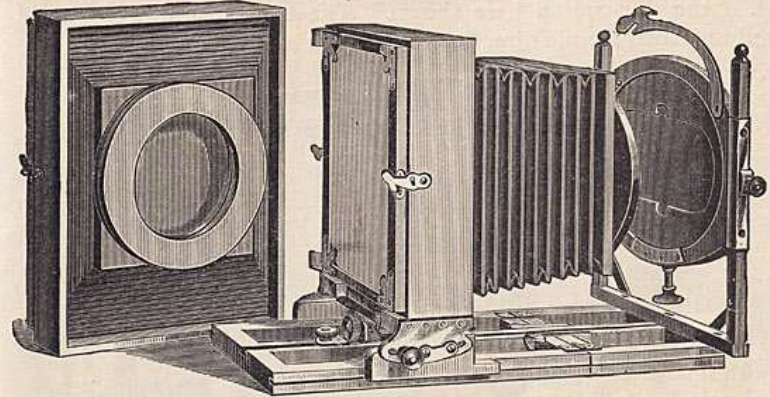
THE reversible back adjuster, applied to Compact and Normandie Cameras, unless otherwise ordered, will be fitted for Victor holders in sizes up to 11 x 14 inclusive, above which, Zephyr holders.

For 4 x 5 Cameras,	\$4.00	For 6½ x 8½ Cameras,	\$5.00
" 4¼ x 6½ "	4.50	" 8 x 10 "	6.00
" 5 x 7 "	4.50	" 10 x 12 "	8.00
" 5 x 8 "	5.00	" 11 x 14 "	9.00



Anthony's Patent Duplex Novelette Camera.

CONSISTING of an 8 x 10 bellows and ground glass, with a 5 x 8 camera, and an 11 x 14 bellows and ground glass, with an 8 x 10 camera, making two cameras in one.



This is of especial value to commercial photographers, and, indeed, amateur photographers who have occasion to make fairly large work will find it particularly useful. It will be seen that, for very little more than the price of one camera, two cameras may be obtained, with the added advantage that the two cameras are in exceedingly compact form. The general arrangement of these boxes is the same as that of the Novelette Cameras, the back being reversible and fitted with swing movement. This style of box is in use by most professional photographers, for it is rapidly and easily adjustable, and is a very reliable box. The method of converting the camera from one size to another is very simply accomplished. The cut shows the general method of making the change. The brass catch in the front is raised, when the front of the bellows may be withdrawn. The back is then removed, and the other bellows and back placed in position. Each part is provided with separate carrying case and double holder, and makes, when attached to the bed, a perfect camera of either size.

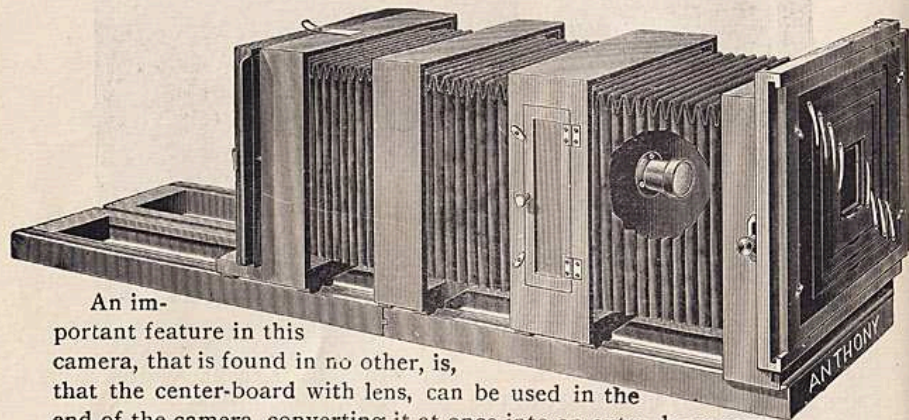
Price complete for  $\frac{8 \times 10}{5 \times 8}$  with one Patent Double Dry Plate Holder for each size, and carrying case for each, . . . . . \$36.00

Price complete for  $\frac{11 \times 14}{8 \times 10}$  with one Patent Double Dry Plate Holder for each size, and carrying case for each, . . . . . \$65.00



### Climax Enlarging, Reducing and Copying Cameras.

THE form of construction of this new camera is made apparent by the illustration here shown. The experienced copyist will not need any such simple directions for use as we append.



An important feature in this camera, that is found in no other, is, that the center-board with lens, can be used in the end of the camera, converting it at once into an extra long copying camera. This will be found very advantageous in enlarging small pictures by one operation.

Size, 4 x 5 .....	\$12.00	Size, 14 x 17.....	\$72.00
" 8 x 10 .....	35.00	" 17 x 20.....	90.00
" 10 x 12 .....	48.00	" 18 x 22.....	100.00
" 11 x 14 .....	60.00	" 20 x 24.....	110.00

Both the outside kits and the holder kits are fitted with springs, and are interchangeable, thus making possible any transposition of sizes desired.

Holder Kits for 8 x 10—4½ x 5½, 5 x 7, 5 x 8, 6½ x 8½.

" " 10 x 12, same as above, with the addition of 8 x 10.
" " 11 x 14, " " " " 10 x 12.
" " 14 x 17, " " " " 11 x 14.

Outside Kits, the same as above, in all sizes, with the addition of 3¼ x 4, 3¼ x 4½, and 4 x 5.

#### DIRECTIONS FOR USE.

To copy a negative in the natural size, place it in the kit on the front of the camera and button it in. Attached to the center frame of the camera is a division upon which, on the side toward the camera front, a lens is mounted. Suppose this to be a quarter-plate portrait lens, the focal length of which we will suppose to be 4 inches; draw back the center frame and the lens twice the focal length of the lens (8 inches); slide the back frame with ground glass the same distance from the center frame. To enlarge with the same lens to eight times the size of the original, the center of the lens must be 4½ inches from the negative, and the ground glass be 36 inches from the center of the lens. To reduce in the same proportion, reverse, and have 36 inches from the center of the lens to the negative, and from the center of lens to ground glass 4½ inches.

These examples will furnish a key to the following table:

### TABLE FOR ENLARGEMENTS.

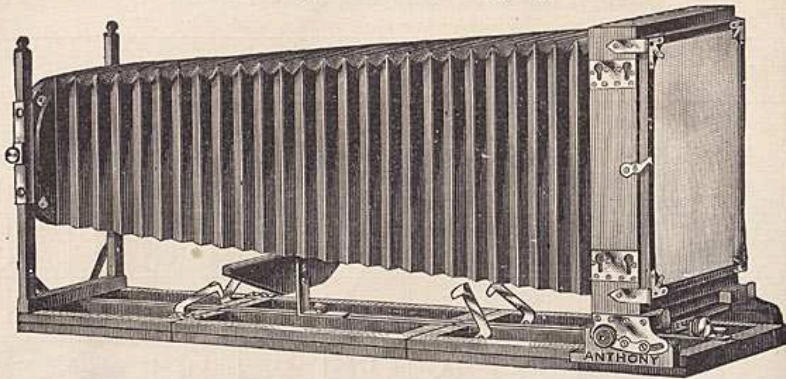
[Copied from the "British Journal Almanac" for 1882.]

FOCUS OF LENS.	TIMES OF ENLARGEMENT AND REDUCTION.							
	1	2	3	4	5	6	7	8
In.	In.	In.	In.	In.	In.	In.	In.	In.
2	4	6	8	10	12	14	16	18
	4	3	2½	2½	2⅔	2⅔	2⅔	2½
2½	5	7½	10	12½	15	17½	20	22½
	5	3½	3½	3½	3	2½	2⅔	2½
3	6	9	12	15	18	21	24	27
	6	4½	4	3½	3⅔	3½	3⅔	3⅔
3½	7	10½	14	17½	21	24½	28	31½
	7	5½	4½	4½	4½	4½	4	3½
4	8	12	16	20	24	28	32	36
	8	6	5½	5	4½	4⅔	4½	4½
4½	9	13½	18	22½	27	31½	36	40½
	9	6½	6	5⅔	5⅔	5¼	5½	5⅔
5	10	15	20	25	30	35	40	45
	10	7½	6⅔	6½	6	5⅔	5⅔	5⅔
5½	11	16½	22	27½	33	38½	44	49½
	11	8½	7½	6⅔	6½	6⅔	6⅔	6⅔
6	12	18	24	30	36	42	48	54
	12	9	8	7½	7½	7	6⅔	6½
7	14	21	28	35	42	49	56	63
	14	10½	9½	8⅔	8⅔	8½	8	7½
8	16	24	32	40	48	56	64	72
	16	12	10½	10	9⅔	9½	9½	9
9	18	27	36	45	54	63	72	81
	18	13½	12	11½	10½	10½	10½	10½

It is assumed that the photographer knows exactly what the focus of his lens is, and that he is able to measure accurately from its optical center. The use of the table will be seen from the following illustration: A photographer has a carte to enlarge to four times its size, and the lens he intends employing is of six inches equivalent focus. He must, therefore, look for 4 on the upper horizontal line, and for 6 in the first vertical column, and carry his eye to where these two join, which will be at 30—7½. The greater of these is the distance the sensitive plate must be from the center of the lens, and the lesser, the distance of the picture to be copied. To reduce a picture any given number of times the same method must be followed, but in this case the greater number will represent the distance between the lens and the picture to be copied; the lesser, that between the lens and the sensitive plate. This explanation will be sufficient for every case of enlargement or reduction. If the focus of the lens be 12 inches, as this number is not in the column of focal lengths, look out for 6 in this column and multiply by 2, and so on with any other numbers.

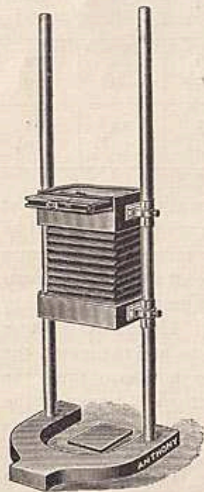
**Anthony's Long Bellows Novelette Camera,**

*For View, Portrait and Copying Work.*



**T**HIS instrument is a most useful camera for view and portrait photography and enlargements combined. It consists of a regular 8 x 10 Novelette Camera, made however with an extra long bellows and arranged with an extension to the bed which gives it a focal length of 32½ inches. As shown in the cut, the bellows is fitted with a movable support, which serves to hold it in position and prevent sagging when in use for enlargements.

The extra bed is held firmly in position by means of dowels and our patent clamp hooks, and may be attached or detached almost instantly. This camera is furnished with carrying case, and its entire weight is only 7 pounds. Price, including one of our new style double Novelette holders and carrying case, \$40.00.



**Anthony's Micrographic Camera,**

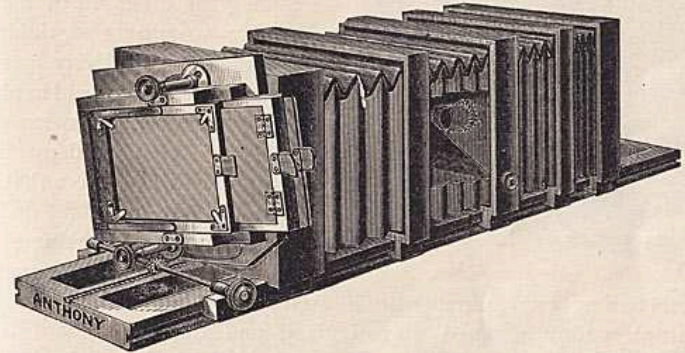
**A**S shown in the cut, is a finely finished and beautifully adjusted camera for microscopic work, adapted to the making of lantern slide plates directly from the microscope. It works freely on the perpendicular supports, and may be set at any height by turning the set screws on the sides.

Price.....\$35.00

**Anthony's Lantern Slide Camera.**

*For Copying 4 x 5 Negatives, or smaller, on 3¼ x 4 or 3½ x 4¼ Plates for use in the Lantern.*

**I**S made with special reference to transparency work, and has an oscillating frame carriage for ground glass and plate holder, to facilitate the adjustment of picture on plate.



It is well made, light and simple of construction and unsurpassed for excellence and convenience.

An important feature in this camera, that is found in no other, is that the center-board with lens can be used at the end of the camera, converting it at once into an extra long copying camera. This will be found very advantageous in enlarging small pictures by one operation.

For table of enlargements and general instructions see Catalogue, page 15.

Price.....\$12.00  
Special Holders, 3¼ x 4, or 3½ x 4¼..... 1.50

**Anthony's Carrying Cases.**

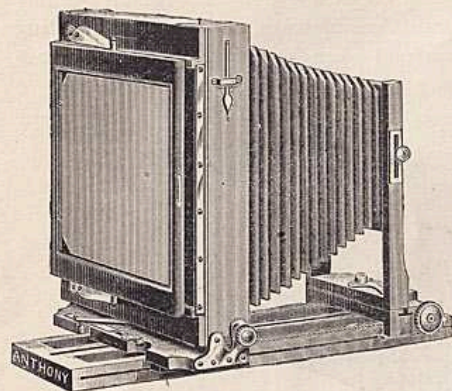
**O**UR Canvas Carrying Cases are very strongly made, and are extremely neat and tasteful in appearance. They are made of the best material and in the most thorough manner. These cases are supplied with all our tripod cameras, and many years of experience in this direction have given us ideas which have been adopted, with the result that our cases will be found absolutely reliable.

PRICES.

Size.	Price.	Size.	Price.
4 x 5, . . . . .	\$1.60	6½ x 8½, . . . . .	\$2.00
4¼ x 6½, . . . . .	1.75	8 x 10, . . . . .	3.00
5 x 7, . . . . .	1.75	10 x 12, . . . . .	3.50
5 x 8, . . . . .	1.75	11 x 14, . . . . .	4.00

Odd sizes made to order at an advance of 50 per cent. on above prices.

The Clifton Camera.



THIS is an entirely new departure in view cameras, and embodies every good feature without detracting in any way from the three great essentials of a perfect camera—compactness, rigidity and ease of working. Every movement is provided for and held in place by the best device that experience furnishes. There is no demand to be made upon this camera that it will not meet. It has front and back focus, the latter making possible the use of extreme wide-angle lenses;

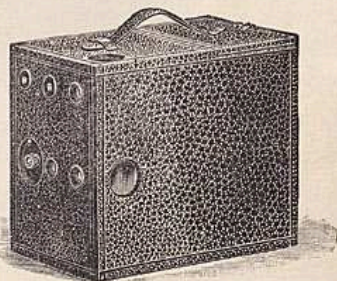
double-swing back, double-swing front, reversible back, sliding and rising front, spring actuated ground glass, and the front board is very large, overcoming the difficulty so often experienced when it is desired to attach special lenses. It is handsome in appearance, constructed of the very best material, and fitted with Zephyr Holder and a substantial canvas carrying-case.

The 6½ x 8½ size measures only 8 x 11½ x 5 inches, and weighs only four and one-half pounds. Price, \$22.00.

The 8 x 10 is only 11½ x 13¼ x 5, and weighs five pounds. Price, \$24.00.

The Klondike Camera.

THE most thoroughly practical, best made, fixed focus, plate camera for the money in the market. Neat, light and efficient. The camera is made in two sizes, for use with glass plates, 3¼ x 4¼ or 4 x 5 standards size everywhere, and is supplied with double holder. It has tripod plate on two sides, so that it may be used with the tripod either horizontally or perpendicularly. It is fitted with a reversible shutter for time and instantaneous exposures, and has also a series of movable diaphragms, and two finders. Two extra plate holders can be carried in the camera, if desired.

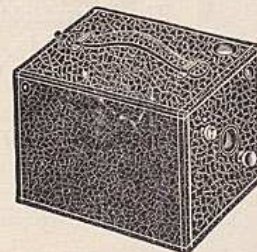


PRICES.

3¼ x 4¼ or 4 x 5 camera, with one double holder . . . . . \$5.00  
 Extra double plate holders, each . . . . . 1.00

The "Quad" Camera.

THE "QUAD" CAMERA is one of the simplest and most efficient hand cameras. It measures 4½ x 4½ x 6 inches, is fitted with the quadruplex undetachable plate holder, a corrected achromatic lens, finder, tripod plate, and a shutter for time and instantaneous exposures. The covering is genuine leather of the very finest quality. Four exposures may be made on



3½ x 3½ plates without drawing a slide or opening the camera. For the wheelman or tourist the "Quad" is unequalled.

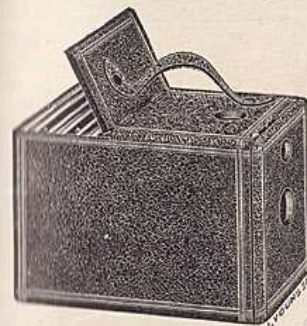
By the use of the "Quad" Changing Bag, for changing plates in daylight, any number of exposures may be made without having recourse to a dark room.

PRICE LIST.

The "Quad" Camera, . . . . .	\$4.00	Changing Bag, . . . . .	\$1.00
Developing Outfit, . . . . .	1.00	Carrying Cases for Bicyclists, . . . . .	2.00
Extra Printing Frames, each, . . . . .	.25	Tourist's Carrying Case, . . . . .	2.00
Dry Plates, per dozen, . . . . .	.40		

The Northboro' Camera.

THE Northboro' is made to meet the demand for a camera having the simple construction and shutter mechanism of the Buckeye, for those preferring for any reason to use glass plates altogether, with no provision for film cartridges.



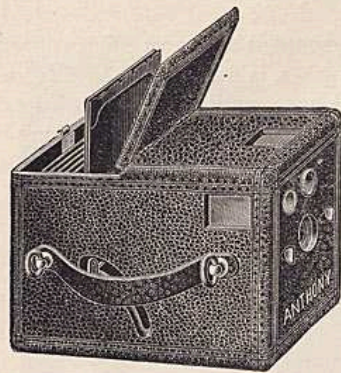
But little larger than the regular Buckeye, it carries three double plate holders,

as shown in the illustration, the lens being of fixed focus.

It is thoroughly well made, with best quality leather covering.

Price, complete, with one Double Plate Holder, . . . \$5 00  
 Plate Holders, 3½ x 3½, each, . . . . . 1 00  
 Glass Plates, 3½ x 3½, per dozen, . . . . . 40

**The Adlake Camera.**



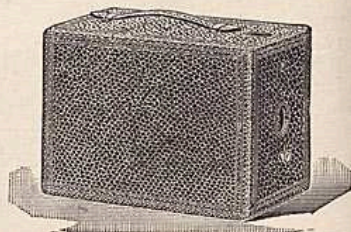
**T**AKES twelve pictures at one loading, on 4 x 5 Dry Plates. Can use any make of Dry Plates. No extras. No failures. No mistakes. Is fitted with an expensive, universal focus, rapid single achromatic lens and two oblong finders of large size. The Lens Holder is held in place by two springs, and is removable for cleaning the lens. The Adlake Shutter has no projecting levers, nothing to break off, give out or get lost, and is always set. The diaphragm has three stops. The Metal Plate Holder used in the Adlake is light, strong and neatly

finished. It is ingeniously made and extremely simple. No dust from slides. No bulky holders to carry.

Complete, with 12 light-tight steel plate holders ..... \$10.00  
 " Aluminum holders and fittings.....12.00

**The Ray Camera.**

**S**IMPLE of manipulation and construction, and thoroughly efficient. It makes a 3 1/2 x 3 1/2 picture. Has a revolving diaphragm with three openings, brilliant square view finder (properly adjusted), universal tripod socket, and our Improved Patent Revolving shutter, simple and practical. The covering is genuine Morocco Grain Leather, with trimmings of Polished and Lacquered Brass.

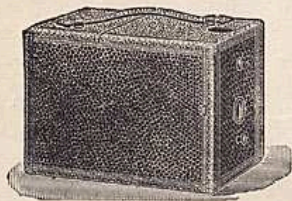


The Ray has a capacity of six plates, measures 6 1/2 x 4 3/4 x 4 1/2 inches, and weighs less than 14 ounces.

Price, including 2 holders ..... \$5.00  
 Extra holders..... .35

**The Ray Jr.**

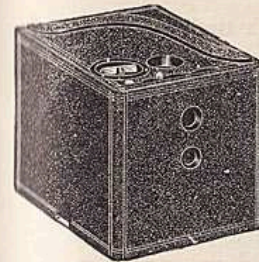
**T**HIS Camera was designed to meet the demand for something cheaper than the RAY, and still give a fair sized picture with good results. The same care is taken in the selection of lenses and material as in the more expensive Cameras. It has a Single Achromatic Lens that covers the plate perfectly, has a round View Finder, Single Diaphragm and our Rotary Shutter. It is covered with Seal Grain Leather, has Leather Handle and a capacity of six Plate Holders, and measures but 5 1/8 x 3 5/8 x 3 1/2 inches, and weighs 7 ounces.



2 1/2 x 2 1/2

Price, including 2 plate holders..... \$2.50  
 Extra holders..... .25

**The Buckeye Camera.**

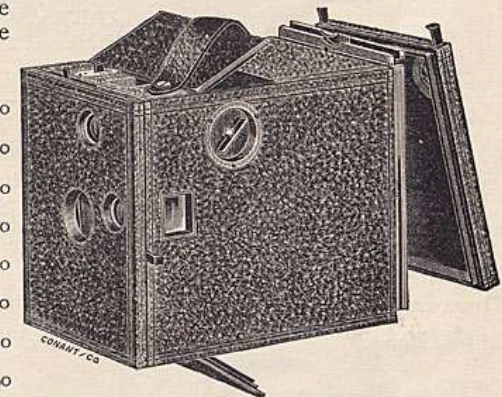


3 1/2 x 3 1/2 BUCKEYE.  
 1899 MODEL.

**T**HE BUCKEYE is the latest development of the hand camera, and has the desirable features of compactness and portability. The roll of film is carried between the lens and the plane of focus, thus shortening the length considerably. The Buckeyes are all fitted with excellent shutters, which will admit of both time and instantaneous exposures. The film rolls are of the cartridge variety, and may be loaded in daylight. Two forms of Buckeye Cameras are made, Regular and Special. The Regular model is adapted for the use of roll film only, and is the ideal box for the tourist who desires the best of

results with the least amount of trouble. The Special Buckeye may be used with both roll film and plates. It is a very complete camera, and will find favor with those who aim to make pictorial photographs. The prices given do not include the roll of film.

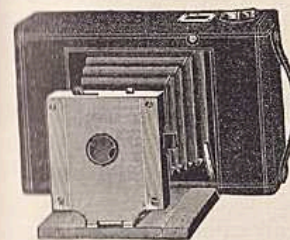
- 3 1/2 x 3 1/2 Buckeye, for Film only, old style ..... \$6.00
- 3 1/2 x 3 1/2 Buckeye, for Film only, 1899 Model..... 8.00
- 3 1/2 x 3 1/2 Special Buckeye, with one holder..... 9.00
- 4 x 5 Buckeye, for Film only, old style..... 10.00
- 4 x 5, Special Buckeye, with one holder..... 16.00
- 3 1/2 x 3 1/2, Film Cartridge, 12 exposures..... .60
- 3 1/2 x 3 1/2 Film Cartridge, 6 exposures..... .30
- 4 x 5, Film Cartridge, 12 exposures..... .90
- Extra Holders for 3 1/2 x 3 1/2 or 4 x 5, each..... 1.00



4 x 5 SPECIAL BUCKEYE.

**Tourist Buckeye,**

3 1/2 x 3 1/2,



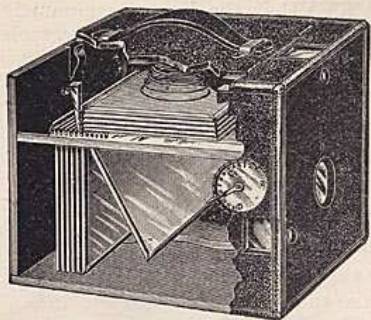
**I**S, as shown in the cuts, the *ne plus ultra* of Film Cameras. It folds into the smallest possible compass; carries films for exposures 3 1/2 x 3 1/2, and for compactness, fine finish and practicability cannot be surpassed. Adapted to any film.



**PRICES.**

- Tourist Buckeye, 3 1/2 x 3 1/2 ..... \$9.00
- Cartridges for same, containing 12 exposures..... .60
- Cartridges for same, containing 6 exposures..... .30

### The "Chic" Magazine Camera.



IS fitted with twelve aluminum plate holders. This camera is built on scientific principles, and is practical and simple in every sense of the word. It is fitted with an achromatic meniscus lens, guaranteed to make a sharp picture the full size of the plate. The shutter is the acme of simplicity, and is always set; it is provided with stops for time and instantaneous exposures, and the camera is furnished with two large Brilliant View

Finders. The holders have no slides to draw, and there is only one motion required to get ready for an exposure.

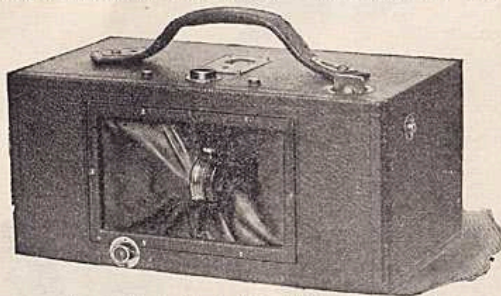
PRICES.

3¼ x 4¼, including 12 Aluminum Holders.....	\$6.50
4 x 5, including 12 Aluminum Holders.....	10.00

### The "Al-Vista" Panoramic Camera No. 4.

Makes a Picture 4 x 12 Inches, taking in an Angle of 180 Degrees.

THE exposures are made on a strip of transparent film, which is wound from one roller or spool to another by means of a key. The camera has an indicator showing when enough film is brought into position for the next exposure, and is provided with a punch, perforating the film after each exposure, thus indicating to the operator in the dark-room where to cut it.



Patented September 8, 1896. Other patents pending.

A spirit level is attached in a convenient position, showing (when level is centered) that the camera is in perfect position for making exposure. It is also provided with a counter, registering the number of exposures made. The mechanism operating the lens is so constructed that the speed may be regulated—fast or slow, as required—according to the light. It can be loaded and unloaded in broad daylight. It takes in the ordinary four-inch film now in the market, which can be readily procured from any photographic supply dealer.

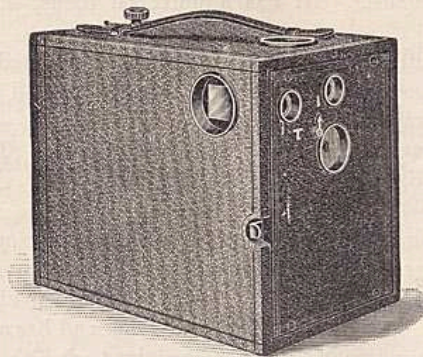
Size of camera, 5 x 5¾ x 10½ inches. Weight only 2 pounds and 4 ounces.

PRICES.

"Al-Vista" No. 4, with Extra Rapid Special Double Lens, detachable front and back, different size stops, complete.....	\$30.00
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### Magazine Cyclone No. 1.

THIS camera holds twelve plates at one loading; does not require any extra plate holders, but is complete in itself. It is so simple of construction that it is practically impossible to make the errors so common to the beginner.



The Cyclone No. 1 is for plates 2½ inches square, and measures only 3 x 5¼ x 5⅞ inches, weighing only 22 ounces.

No. 2, for plates 3¼ x 4¼, measures 5 x 6¼ x 7½ inches and weighs 45 ounces.

No. 3, for plates 4 x 5, measures 5¾ x 7 x 8 inches and weighs 62 ounces.

The plates can be exposed very rapidly, it being possible to take twelve pictures in as many seconds.

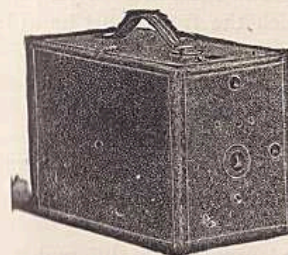
The lens is a universal, fixed focus, achromatic combination, which for depth of focus and sharpness of definition cannot be excelled.

The shutter is always set. You touch the button to expose your picture, and it flies back into position ready for another exposure. There are no levers to turn; merely touching the button does the work.

PRICES.

No. 1 Cyclone for pictures 2½ x 2½, complete with 12 plate holders.....	\$3.50
" 2 " " " 3¼ x 3¼, " " " .....	6.00
" 3 " " " 4 x 5, " " " .....	10.00

### The Premo V.



PREMO V has been designed for the purpose of enabling those who are anxious to enjoy the pleasures of Amateur Photography, but wish to invest at first but a moderate amount in an outfit—"to try their hand," as it were. This camera will appeal very strongly to the novice in photography. So simple is the manipulation that any one can readily operate it.

Premo V is a thoroughly practical Camera—not a toy. It possesses many advantageous features entirely its own, and is, without question, one of the best instruments yet offered at so low a price.

It may be used to advantage for portraits, groups, marine and landscape views; in fact, is adapted for the general work of amateur photographers.

Premo V has a compartment at the back for three holders.

The Lens furnished with Premo V is a Single Achromatic Lens. It gives sharp definition, has a flat field, and is conceded to be one of the best of the moderate priced Lenses. It has a universal focus, no adjustment being necessary.

The Premo is fitted with a new Safety Shutter adapted for both Time and Instantaneous Exposures. It is set by turning a small milled head at the front, the plate always being covered.

The Premo V may be used on a tripod when desired. Two screw-plates are fitted for both upright and horizontal pictures. Two view-finders are also attached.

The Plate Holder is the Perfection Jr. with Registering Slides, recognized as the easiest holder to load and unload in the market.

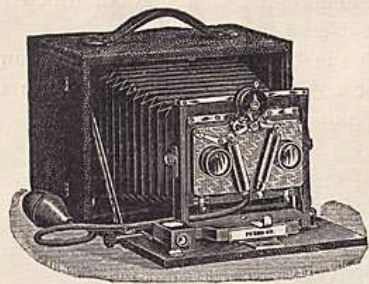
Though moderate in price, Premo V is carefully made and free from all complicated parts. It is finished in black leather and has a neat leather handle for carrying. Instruction Manual accompanies each Camera.

Price includes Camera complete with one Double Plate Holder.

PRICES.

Premo V, 3 1/4 x 4 1/4 or 4 x 5.....	\$5.00
Extra Plate Holders, each.....	1.00

The Stereoscopic Premo.



STEREOSCOPIC photography is one of the most interesting branches of the art, and as the Hand Camera is now designed especially for this class of work, it will undoubtedly gain favor among a large number of amateurs, who have heretofore never attempted the production of Stereoscopic pictures.

We can furnish Premo A, Premo Sr., and Long Focus Premo in both 5 x 7 and

6 1/2 x 8 1/2 sizes, arranged for Stereo-work, for which the front must be wider than regular.

The Stereo Lenses are a matched pair of 4 x 5 Rapid Rectilinear Lenses, same as used with 4 x 5 Premo A, and fitted with Bausch & Lomb Stereo Shutter, which is constructed closely after the Diaphragm Shutter.

This Shutter is designed especially for use with Stereoscopic Lenses. The action is so perfect that exactly the same amount of light is admitted through both lenses.

The regular lens and shutter and the stereo lenses are on different lens boards, so that the change from regular full sized views to stereo work requires but a moment's time.

The price includes the Victor Rapid Rectilinear Lens and Victor Shutter for full-sized views, and the Stereo Lenses and Shutter, together with a division in the camera, and one Plate Holder. Glass plates, cut and roll films may all be used.

Wide Angle Lenses may be adjusted for full-sized views, same as with the Premo A or Premo Sr.

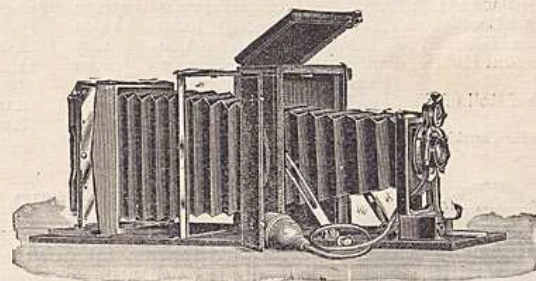
PRICES.

	5 x 7.	6 1/2 x 8 1/2.
Stereo Premo A.....	\$70.00	\$80.00
Stereo Premo Sr.....	75.00	85.00
Stereo Long Focus Premo.....	80.00	90.00
Wide Angle Lens, extra.....	12.00	15.00
Hinged Bed, extra.....	3.00	3.50
Extra Premo Holders.....	1.25	1.60
Cartridge Roll Holder, empty.....	6.50	12.50*
Light Proof Roll of Film		
{ 12 Exposures.....	1.60	
{ 24 ".....		4.00
{ 48 ".....		8.00

\* Not made for Cartridge Film.

The Reversible-Back Premo.

THE Reversible-Back Premo is the outgrowth of a constantly increasing demand, especially among the more advanced amateur photographers, as well as our professional friends, for a combined Hand and Tripod Camera—an instrument possessing the advantageous features of the former pattern, together with the many useful adjustments heretofore found only in the latter style.



In the Reversible-Back Premo we have evolved a camera designed to cover a field so wide in range as to be almost universal in its application. In general appearance the camera resembles the regular Long Focus Premo, though it possesses even a greater focal capacity, and, as its name indicates, has a Reversible Back. This adjustment is especially desirable when the camera is used on a tripod, as the position of the plate may be instantly changed without moving the camera.

The Reversible-Back Premo is provided with all modern improvements. It has Double Swing Back, both Rising and Sliding Front and a fine Rack and Pinion movement, permitting most delicate focusing.

The horizontal and vertical swings both oscillate at the centre of the plate, which is optically correct.



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measuring the film, and indicator for registering the number of exposures made. The change from glass plates to films is but the work of a moment, and can be made in full daylight.

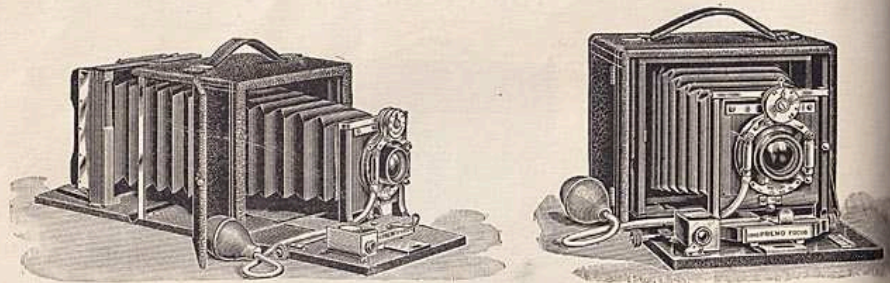
The size of the 4 x 5 Premo Sr. when closed is only 7 x 4 5/8 x 5 5/8 inches, including space for three holders, or Roll Holder. Weight 2 1/2 lbs.

The price includes Camera, Lens, Shutter, and one Plate Holder.

	PRICES.		
	4 x 5	5 x 7	6 1/2 x 8 1/2
Premo Sr. ....	\$30.00	\$40.00	\$50.00
Extra for Wide Angle Lens.....	10.00	12.00	15.00
Extra for Hinged Bed.....	3.00	3.00	3.50
Extra Plate Holders.....	1.00	1.25	1.60
Cartridge Roll Holder, empty.....	5.00	6.50	12.00*
Light Proof Roll of Film.... 12 Exposures, .90	12 Exp., 1.60	24 Exp., 4.00	48 Exp., 8.00

\*Not made for Cartridge Film.

**The Long Focus Premo.**



The Victor Lens being symmetrical, the front combination may be removed, and the rear lens used alone when desired, which approximately doubles the length of focus. For distant views this is desirable, as objects in the view are larger in the picture. As the lens board is removable, any other lens may be readily attached, if desired.

The Victor Shutter, fitted with Iris Diaphragm and pneumatic release, is furnished with the Long Focus Premo. It is the same in every respect as supplied with the Premo Sr.

The ground glass screen is spring actuated, and recedes to allow the insertion of the Plate Holder. The Perfection Jr. Holder, with rubber slides, is furnished. Glass Plates, Cut and Rolled Films, may all be used, the holders being interchangeable.

The Roll Holder is the latest pattern, fitted with automatic device for measuring the film, and an indicator for registering the number of exposures

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made. The change from glass plates to film is but the work of a moment, and can be made in full daylight.

FOCAL CAPACITY, OR LENGTH OF BELLOWS.

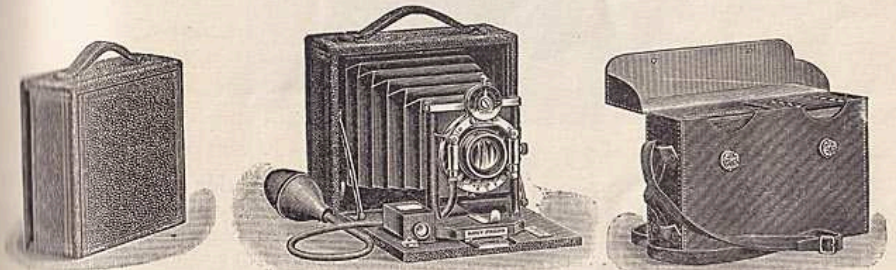
4 x 5	5 x 7	6 1/2 x 8 1/2	8 x 10
15 inches.	19 inches.	22 inches.	28 inches.

Price includes the Camera, Lens, Shutter, and one Plate Holder.

PRICES.

	4 x 5	5 x 7
Long Focus Premo.....	\$35.00	\$45.00
Extra for Wide Angle Lens.....	10.00	12.00
Extra for Hinged Bed.....	3.00	3.00
Extra Plate Holders.....	1.00	1.25
Cartridge Roll Holder, empty.....	5.00	6.50
Light Proof Roll of Film..... 12 Exposures, .90	12 Exp., 1.60	

**The Pony Premo.**



A brilliant View Finder is conveniently located on the bed, and is reversible for upright and horizontal views.

The full-sized image may be seen upon the ground glass when desired, by simply turning the small button at the back. The panel covering ground glass will open upward, and act as a shield for focusing.

The Pony Premo has adjustable front, and is adapted for use either in the hand or on a tripod.

The plate holder is the Perfection Jr., the simplest and best double holder ever made. Its weight is but two ounces, yet it is perfectly strong and durable.

The Pony Premo is furnished with a neat leather case, as shown in the illustration. It contains the Camera, Lens, Shutter, Plate Holders, or Roll Holder, and may be carried by the Shoulder Strap, or attached to the frame of a bicycle in the same manner as a tool bag.

The Roll Holder is the latest pattern fitted with automatic indicator for registering the number of exposures made. The change from glass plates



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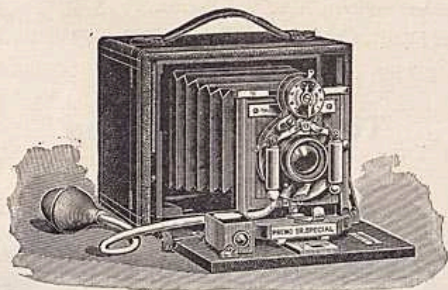
to film is but the work of a moment, and as the Roll Holder is fitted with a shield, the change can be made in full daylight.

The price includes Camera, Lens, Shutter, one Double Plate Holder, and Leather Case, with Strap. The case will carry three Holders.

PRICES.

	Size, 4 x 5
Pony Premo.....	\$22.00
Extra Plate Holders.....	1.00
Cartridge Roll Holder, empty..	5.00
Light Proof Roll of Film, 12 exposures .....	.90

**The Premo Sr. Special.**



The Diaphragm Shutter is about as near perfection as anything mechanical can be made, and will be found to meet every requirement of both the amateur and professional photographer. It is constructed in the best possible manner, operates without concussion, and is practically noiseless in action. This Shutter works automatically from three seconds to the one hundredth part of a second, and by simply moving a small lever it may be set for time exposure of any desired duration.

With the wide reputation enjoyed by the Premo Camera, as well as the Zeiss Lens and Diaphragm Shutter, both at home and abroad, no argument is necessary to emphasize the strength of such a combination, photographically considered.

Glass Plates, Cut and Roll Films may all be used. The change from plates to film is but the work of a moment, and as the Roll Holder is fitted with a shield the change can be made in full daylight.

The Roll Holder is the very latest style, and is fitted with an automatic device for measuring the film, and an indicator for registering the number of exposures made.

The price includes Camera, Zeiss Lens Series IIA, Diaphragm Shutter and one Plate Holder.

PRICES.

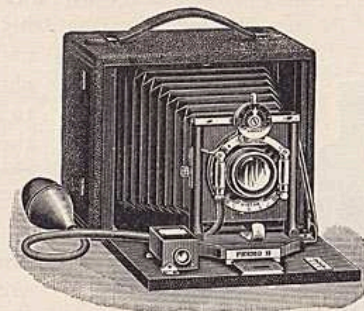
	4 x 5	5 x 7	6½ x 8½	8 x 10
Premo Sr. Special.....	\$67.00*	\$84.00	\$103.00	\$120.00
Extra Plate Holders.....	1.00	1.25	1.60	2.00
Cartridge Roll Holder, empty....	5.00	6.50	12.00†	
Light Proof Roll of Film..	12 Exp., .90	12 Exp., 1.60	{ 24 Exp., 4.00 48 Exp., 8.00	

\* Fitted with No. 2 Lens.

† Not made for Cartridge Film.

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**The Premo B.**



Premo B has proved one of the most popular style Cameras in the whole series. It follows closely in design Premo A, though not made of mahogany, and is not so highly finished. The same care, however, is exercised in its construction throughout, and for a high grade camera at a moderate price it stands second to none.

It is provided with our new Central Swing Back and Rising and Falling Front, thus adapting it for both hand and tripod work.

Premo B is fitted with the Victor Shutter, having Iris Diaphragm and pneumatic release.

Either the R. O. Co.'s Single Achromatic, or the Victor Rapid Rectilinear Lens, is fitted, as may be preferred. The Rapid Rectilinear Lens is precisely the same as furnished with Premo A.

A reversible View Finder is fitted to the bed for both vertical and horizontal pictures; also two tripod plates for attaching the camera to a tripod. The ground glass screen is spring actuated.

Premo B will carry three double plate holders. The outside dimensions of 4 x 5 are only 4 5/8 x 5 7/8 x 5 5/8 inches, and the weight a little over two pounds. It is handsomely covered with fine black leather.

Glass Plates, Cut and Roll Films may all be used.

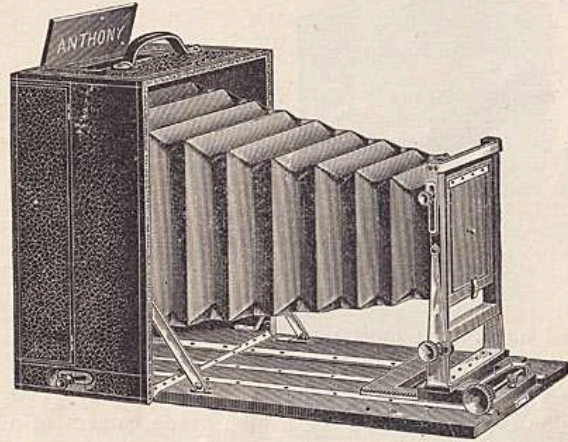
Price includes Camera, Lens, Shutter and one Double Plate Holder.

PRICES.

	4 x 5	5 x 7
Premo B, with Achromatic Lens.....	\$15.00	\$23.00
With Victor Rapid Rectilinear Lens .....	20.00	30.00
Extra Premo Plate Holders.....	1.00	1.25
Cartridge Roll Holder, empty.....	5.00	6.50
Light Proof Roll of Film .....	12 Exposures, .90	12 Exp., 1.60

The Marlborough Camera.

THIS is probably the most perfect combined hand and tripod camera in existence. It is the only hand camera with a reversible, self-adjusting spring swing back, and this improvement alone makes it superior to all others. In addition it is fitted with rising and falling front, swing-front, swing-back and rack and pinion movement, and is covered with leather of the finest quality. The bellows is of the highest grade leather, and the interior of the camera has an ebony finish.



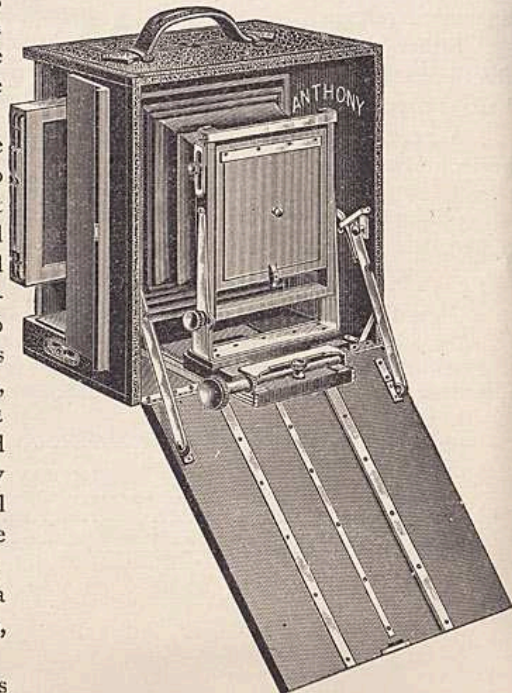
Showing Camera for use with Rapid Rectilinear Lens.

The back is reversed by simply pressing back a spring, withdrawing the back, reversing it, and replacing it. The plate holder can be inserted with one hand only, and is firmly held in position by means of the back. The swing movement is simple and under direct control.

For wide-angle lenses the baseboard is constructed so that it will fall and be at such an angle as to afford an entirely unobstructed view. To drop the baseboard, it is only necessary to press on the nicked supports at each side, and it will drop, as shown in the cut. The front may now be pulled forward and adjusted by fastening down the small bed, and focusing with the rack and pinion movement.

The Marlborough Camera is made in three sizes: 8 x 10, 6½ x 8½, and 5 x 7.

The 8 x 10 camera is probably the most compact



Showing Camera for use with Wide-Angle Lens.

and portable box ever offered. It can be carried with greater ease than many 4 x 5 tripod cameras. Being fitted with reversible back, self-adjusting ground glass, swing-back, rising, falling, and swing front, and adjustment for long and short focus lenses, it certainly stands without a rival. Two double plate holders are furnished with each camera.

The 6½ x 8½ Marlborough is exactly similar to the above, except in point of size. It is a camera that will highly commend itself to all who desire this particular size of picture.

The 5 x 7 Marlborough Camera is probably the one that will appeal most to the amateur photographer. It has all the fittings and movements found on the 8 x 10 box, and room is left for a roll holder. This camera, it must be remembered, is the only 5 x 7 hand and tripod camera fitted with reversible, self-adjusting spring swing-back. It is sold either with or without lens and shutter.

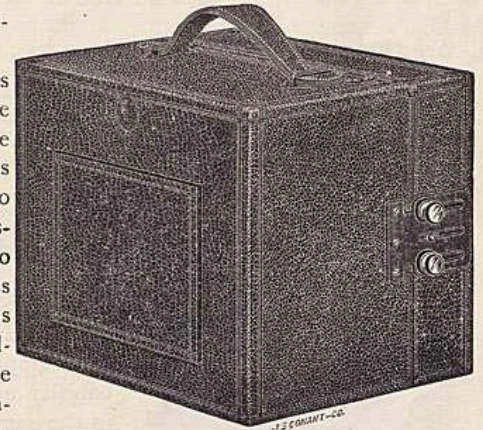
- 8 x 10 Marlborough Camera, including 2 Marlborough Holders, with Rubber Slides . . \$40.00
- 6½ x 8½ Marlborough Camera, including 2 Marlborough Holders, with Rubber Slides, 36.00
- 5 x 7 Marlborough Camera, including 2 Marlborough Holders, with Rubber Slides. . . . . 35.00
- 5 x 7 Marlborough Camera, including Rapid Rectilinear Lens, Bausch & Lomb Pneumatic Release, Diaphragm Shutter, and 2 Marlborough Holders, with Rubber Slides. . . . . 50.00

The 5 x 7 Folding Hawk-Eye

IS the acme of simplicity and convenience, measuring only 7 x 7½ x 9 inches, it takes 5 x 7 pictures, carries three double holders for glass plates or cut films, or automatic tally-roll holder for fifty continuous exposures.

One great advantage of this camera in addition to its extreme portability is its adaptability to use with either glass plates, cut films or films in rolls, as desired. No special connecting frame is necessary for the change from one to the other, but holders for glass plates, for cut films, or for films in rolls, are slipped into the Folding Hawk-Eye in exactly the same manner. It is the acme of simplicity, free from bothersome complications, and instantly adjustable in speed for "snap shots" or for time exposures of any duration.

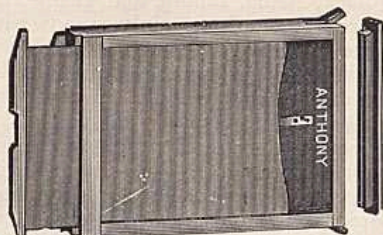
The lens is a double achromatic Rapid Rectilinear, of excellent working capacity, and is provided with revolving diaphragm. This camera may also be used on a tripod, and is provided with swing back.



PRICES:

- The Folding Hawk-Eye, 5 x 7, with ground glass screen for visual focusing, three "Feather Weight" double holders for glass plates, or same for cut films. . \$30.00
- Roll Holder, with Automatic Tally. . . . . 8.00
- Blair's Film, for 25 5 x 7 Exposures. . . . . 3.00
- Blair's Film, for 50 5 x 7 Exposures. . . . . 6.00

Anthony's Patent Zephyr Double Dry Plate Holders.



THESE holders are of extremely light and convenient construction. The plates are placed into and removed from the holder at one of the ends, which is opened by pressing aside the metal band that secures the wooden cover. They are provided with paper slides, and an ingenious device for holding the slides in place and preventing their being accidentally drawn out when the holder contains plates.

4 x 5	..... \$1.20	5 x 8	..... \$1.35
4 1/4 x 6 1/2	..... 1.25	6 1/2 x 8 1/2	..... 1.60
5 x 7	..... 1.25	8 x 10	..... 1.85

Phantom Holders

Are the same as Zephyr Holders, but with hard rubber slides.

4 1/4 x 6 1/2, each	..... \$1.50	5 x 8, each	..... \$1.60
5 x 7, " "	..... 1.50	6 1/2 x 8 1/2, " "	..... 1.85
8 x 10, each	..... \$2.10		

Film Holders.

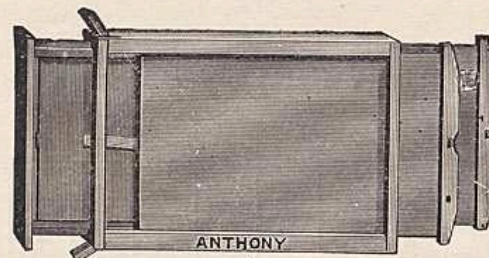


THESE HOLDERS are for use with our Climax Negative Films, and for compactness, lightness and practicability are unequalled. They are made in the same style as our Patent Novelette Holders for glass plates; but, being adapted to the use of the Climax Films,

are consequently very much lighter than they could be made to carry a heavier plate.

2 1/2 x 2 1/2, each	..... \$0.75
4 x 5, " "	..... 1.20
4 1/4 x 6 1/2, " "	..... 1.25
5 x 8, " "	..... 1.35
6 1/2 x 8 1/2, " "	..... 1.60
8 x 10, " "	..... 1.85

Anthony's Patent Eclipse Double Dry Plate Holders.



THESE are the most compact plate holders in the market, the rabbit commonly found on the plate holder being dispensed with and placed on the camera instead.

Outside Dimensions of Plate Holders.	For Plates.	Price.
3 3/4 x 7 1/2 x 10	6 1/2 x 8 1/2	Each, \$1.60
1 x 11 1/2 x 13 1/2	10 x 12	" 6.00

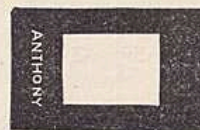
Anthony's Patent Metal Film Kits.



THESE KITS are, as their name implies, made of metal, and are provided with a lip on each of two sides under which the film is slipped; they are light and easier of handling than any other kit in the market. They are made in the following sizes:

2 1/2 x 2 1/2, each	..... \$0.05	4 3/4 x 6 1/2, each	..... \$0.11
3 3/4 x 4 1/4, " "	..... .05	5 x 7, " "	..... .11
4 x 5, " "	..... .06	5 x 8, " "	..... .13
4 1/4 x 6 1/2, " "	..... .09	6 1/2 x 6 1/2, " "	..... .15
		8 x 10, " "	..... .18

Inside Dry Plate Kits.



THIN WOODEN FRAMES to hold small sized plates, fitting in any ordinary plate holder, thus enabling the amateur who has a large camera, to use small plates as well as large ones.

To fit Holders.	Each.	To fit Holders.	Each.
4 x 5 — 3 3/4 x 4 1/4	..... \$0.25	8 x 10 — 4 1/4 x 6 1/2, 5 x 7, 5 x 8,	
5 x 8 — 3 3/4 x 4 1/4, 4 x 5, 4 1/4 x 6 1/2	..... .30	6 1/2 x 8 1/2	..... \$0.35
6 1/2 x 8 1/2 — 4 x 5, 5 x 8, 4 1/4 x 6 1/2, 5 x 7,	..... .30	10 x 12 — 8 x 10	..... .55
		11 x 14 — 8 x 10, 10 x 12	..... .60
		14 x 17 — 11 x 14	..... .75

Extra Parts of Apparatus.

	3¼ x 4¼	4 x 5	4¼ x 6½	5 x 7	5 x 8	6½ x 8½	8 x 10	10 x 12	11 x 14	14 x 17
Press Board Slides for Dble. D. P. Holders . . . . .	\$.10	\$.10	\$.15	\$.15	\$.15	\$.20	\$.20	\$.35	\$.45	\$.75
Rubber Slides for Dble. D. P. Holders . . . . .	.15	.20	.25	.30	.30	.40	.50	1.00	1.30	2.25
Front Boards for Dry Plate Outfits . . . . .	...	.20	.20	.20	.20	.45	.45	...	...	...
Straight Rubber Bellows for Dry Plate Outfits . . . . .	1.00	1.25	1.35	1.50	1.50	2.00	2.50	...	...	...
Cone Rubber Bellows for Novelette Cameras . . . . .	1.50	2.00	2.50	3.00	3.00	3.30	4.00	5.00	7.00	10.00
Cone Rubber Bellows for Rever. Back Cameras . . . . .	...	2.25	2.75	3.25	3.25	3.75	4.50	5.50	7.75	11.00
Stereo Partitions for Cameras . . . . .	...	...	...	...	.20	.30	.30	...	...	...
Ex. Fine Ground Glass for Cameras . . . . .	.10	.10	.15	.20	.20	.25	.32	.50	.75	1.00
Tripod Screws for Cameras . . . . .	.25	.25	.25	.25	.25	.25	.25	.50	.50	.50

Dry Plates.

AS the manufacture of dry plates has advanced and the many plate makers have come to more uniform manipulations in the working of the process, the plates produced have gradually been improving in all the qualities essential to good results, until it has become no easy matter to select any one make as pre-eminently the best for any and all kinds of work, and the operator is at liberty to make his own selection from the successful brands which are recognized by all as being reliable, or to experiment for himself in new directions. We supply at manufacturers' regular list prices, all regular brands, such as Climax, Cramer, Carbutt, Seed, New York, Stanley, etc., as follows :

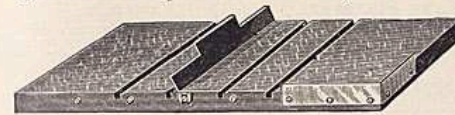
	Per Doz.	Per Doz.
2 x 2 . . . . .	\$0.20 .25*	5 x 7 . . . . . \$1.10
2 x 2½ . . . . .	.25	5 x 8 . . . . . 1.25
2½ x 2½ . . . . .	.25 .30*	6½ x 8½ . . . . . 1.65
2½ x 4 . . . . .	.35	7 x 10 . . . . . 2.10
3 x 3½ . . . . .	.35	8 x 10 . . . . . 2.40
3¼ x 3¼ . . . . .	.35 .40*	10 x 12 . . . . . 3.80
3½ x 3½ . . . . .	.40	11 x 14 . . . . . 5.00
3¼ x 4¼ . . . . .	.45	14 x 17 . . . . . 9.00
4¼ x 4¼ . . . . .	.60 .65*	16 x 20 . . . . . 12.50
4 x 5 . . . . .	.65	17 x 20 . . . . . 13.00
4¼ x 5½ . . . . .	.75	18 x 22 . . . . . 15.50
4¼ x 6½ . . . . .	.90	20 x 24 . . . . . 18.50
4¼ x 6½ . . . . .	1.00	

\* List price varies according to brand of plate.

Special sizes to order.

Anthony's Film Cutter.

THE accurate cutting of the sensitive film in the dark room is a matter of no little difficulty. During the rolling up of the film upon the take-up roller, the punctures made are very apt to be squeezed back again into the plane of the film, or else smoothed down so as to be barely perceptible. Again, when the film is cut by a knife or by scissors, it frequently happens that, through carelessness, want of skill, or because of the rolling



of the film, the cut is not correctly made. With the Anthony Film Cutter, these troubles are obviated. The film is accurately measured, and the cutting is done by tearing against a metal edge, just as a check is torn from a check book by the aid of a ruler.

Price. . . . . 75 cents.

The "New American" Rollable Film.

THIS film is manufactured by an improved patented process. The factory has been erected especially for the purpose, and is located under exceptionally favorable conditions; it is equipped with the latest and most perfectly made machinery. No expense has been spared to insure the production of a superior article, which will be uniform, reliable and easily manipulated.

It has NO JOINS OR SEAMS, in rolls of any length. The Standard rolls are wound in such a manner as to admit of their being used in both makes of roll-holders.

THE DAYLIGHT LOADING ROLLS are adapted for use not only in the Buckeye Cameras, but the other daylight-loading cameras copied after the same principle.

PRICE LIST.—STANDARD ROLLS.

Width.	Length.	Equal to following Exposures.	Price.
3 1/4 ins.	108 ins.	25 3 1/4 x 4 1/4,	\$1.00
3 1/4 "	215 "	50 3 1/4 x 4 1/4,	2.00
3 3/4 "	90 "	25 3 1/2 x 3 1/2,	1.00
3 3/4 "	180 "	50 3 1/2 x 3 1/2,	2.00
4 "	130 "	25 4 x 5,	1.50
4 "	255 "	50 4 x 5,	3.00
4 1/4 "	135 "	40 4 1/4 x 3 1/4, or 22 4 1/4 x 5 1/2, or 20 4 1/4 x 6 1/2,	2.00
4 1/4 "	265 "	80 4 1/4 x 3 1/4, or 48 4 1/4 x 5 1/2, or 40 4 1/4 x 6 1/2,	4.00
4 3/4 "	170 "	25 4 3/4 x 6 1/2,	2.50
4 3/4 "	335 "	50 4 3/4 x 6 1/2,	5.00
5 "	180 "	44 5 x 4, or 25 5 x 7, or 22 5 x 8,	3.00
5 "	355 "	88 5 x 4, or 50 5 x 7, or 44 5 x 8,	6.00
5 1/4 "	105 "	25 5 1/4 x 4,	2.00
5 1/4 "	205 "	50 5 1/4 x 4,	4.00
6 1/2 "	218 "	25 6 1/2 x 8 1/2,	4.00
6 1/2 "	435 "	50 6 1/2 x 8 1/2,	8.00
7 1/4 "	128 "	25 7 1/4 x 5,	3.25
7 1/4 "	255 "	50 7 1/4 x 5,	6.50
8 "	255 "	25 8 x 10,	6.00
8 "	505 "	50 8 x 10,	12.00

DAYLIGHT LOADING-ROLLS.—IN CARTRIDGES.

Adopted to be used in the following cameras:

	BUCKEYES AND BULLSEYES.	CARTRIDGES.	Price.
Buckeyes, Bullseyes and Bullets		Containing 12 Exposures.	\$0.60
Buckeyes, Bullseyes and Bullets		3 1/2 x 3 1/2	
		4 x 5	.90
	KODAKS.		
No. 4 Cartridge Kodak		4 x 5	0.90
Folding Pocket Kodak		2 1/4 x 3 1/4	.40
Pocket Kodak		1 1/2 x 2	.25
	HAWKEYES.		
Hawkeye Jr.		4 x 5	.85
Hawkeye Jr.		3 1/2 x 3 1/2	.60
Baby Hawkeye		2 x 2 1/2	.40
Tourist Hawkeye		3 1/2 x 3 1/2	.60
Tourist Hawkeye		4 x 5	.85

Special quotations given on application for special widths and lengths.

"Climax" Dry Plates.

Regular, Extra, Process, Stripping, Ground Glass Transparency and Lantern Slide Plates.

PRICE LIST.

Size.	No. of Doz. in Case.	PER DOZEN. Regular, Extra and Process.	PER DOZEN. Stripping Plate.	PER DOZEN. Ground Glass Transp.
Lantern Plates }				
3 1/4 x 4	36	\$0.55		
2 x 2 1/2	.48	.25		
2 1/2 x 2 1/2	.48	.25		
2 1/2 x 4	.48	.35		
3 1/4 x 3 1/4	.48	.35		
3 1/2 x 3 1/2	.48	.35		
3 1/4 x 4 1/4	.48	.45		
4 x 5	.24	.65		\$0.70
4 1/4 x 4 1/4	.24	.65		
4 1/4 x 6 1/2	.24	.90		1.15
4 3/4 x 6 1/2	.24	1.00		
5 x 7	.24	1.10	\$1.45	1.40
5 x 8	.24	1.25	1.65	1.60
				1/2 dozen
6 1/2 x 8 1/2	.12	1.65	2.20	1.15
7 x 10	.12	2.10	2.80	
8 x 10	.12	2.40	3.20	1.65
10 x 12	4	3.80	5.00	2.50
11 x 14	3	5.00	6.60	3.20
14 x 17	2	9.00	12.00	5.50
16 x 20	1 1/2	12.50	16.60	
17 x 20	1 1/2	13.00	17.30	
18 x 22	1 1/2	15.50	20.00	
20 x 24	1 1/2	18.50	24.50	

10 x 12 and larger sizes are packed Half Dozen in a box.  
"Every Plate in every box will yield a Perfect Negative."

Recent improvements in the methods of manufacture have made the CLIMAX EXTRA undoubtedly the most rapid plate on the market.

Carbutt's Celluloid Films

REQUIRE precisely the same treatment as glass plates. Coated with Eclipse "B," and Orthochromatic 23 to 27 Emulsions.

Sizes.	Per doz.	Sizes.	Per doz.
3 1/4 x 4 1/4	\$0 55	5 x 8	\$1 55
4 x 5	80	6 1/2 x 8 1/2	2 10
4 1/4 x 5 1/2	90	8 x 10	3 00
4 1/4 x 6 1/2	1 10	10 x 12	4 75
4 3/4 x 6 1/2	1 20	11 x 14	6 25
5 x 7	1 40	Any size made to order up to 20x49 inches.	

### Carbutt's Lantern Plates.

On specially Imported Thin Crystal Glass, 55 cents per dozen.

### Carbutt's Non-Halation Plates.

Sizes.	Price.	Sizes.	Price.
3¼ x 4¼ .....	\$0.55	8 x 10 .....	2.90
4 x 5 .....	.80	10 x 12 .....	4.50
4¼ x 6½ .....	1.10	11 x 14 .....	6.00
4¾ x 6½ .....	1.20	14 x 17 .....	10.80
5 x 7 .....	1.30	16 x 20 .....	15.00
5 x 8 .....	1.50	17 x 20 .....	15.60
6½ x 8½ .....	2.00	18 x 22 .....	19.80
7 x 10 .....	2.50	20 x 24 .....	22.20

10 x 12 and larger sizes are packed ½ dozen in a box.



### Anti-Halo.

A BACKING for dry plates, to prevent halation, or the spreading of light beyond its proper boundary in the film. Anti-Halo is easily applied to the back of the plate, dries rapidly, will not scratch off, but is readily removed by rinsing under the faucet.

#### PRICES.

Size No. 1 .....	\$0.60
Size No. 2 .....	1.00

Postage, extra, 10 cents.

### Jointed Tripods.

No. 1, Anthony's Improved Folding Tripod, 6-in. circular top, \$2.25.

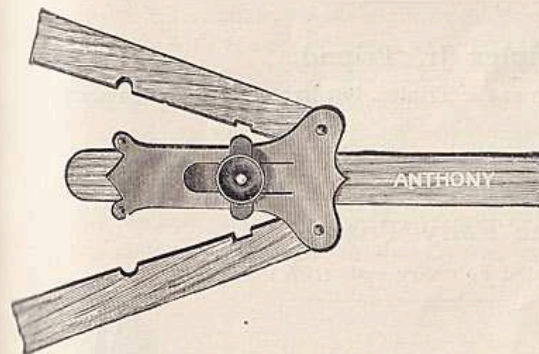
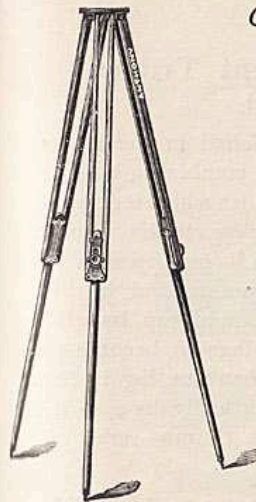
No. 2, Anthony's Improved Folding Tripod, 8-in. circular top, \$2.25.

No. 4, Telescopic Legs, adapted to Stereoscopic and 8 x 10 sizes, \$3.50.

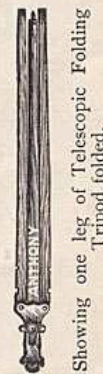
No. 5, Telescopic Legs, adapted to 11 x 14 size, \$3.75.

No. 6, Large Tripod, with unjointed legs and 12-inch top, sufficiently strong for the heaviest view cameras, \$6.00.

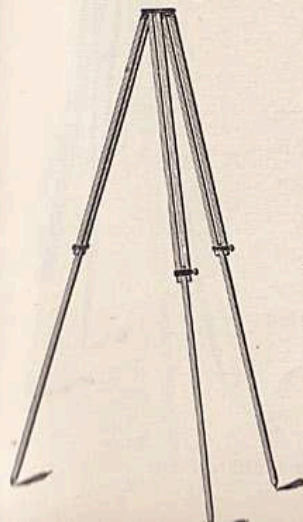
Nos. 1, 2, 4 and 5 have patent adjustment for preventing accidental displacement of legs from top.



Showing Telescopic Folding Joint.



Showing one leg of Telescopic Folding Tripod folded.



### The Brighton Tripod

IS a thoroughly practical and efficient tripod, manufactured from selected stock and finished in plain nickel.

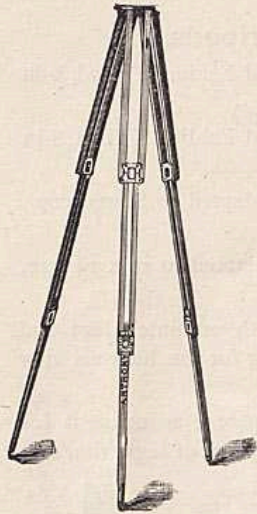
It is light, strong and inexpensive, and capably adapted to use with hand cameras.

Price..... \$1.50

### Anthony's Patent Triplex Tripod.

**T**HIS is the finest finished in the market and perfectly rigid, combining both the folding and telescopic, besides which it occupies little space, and for transportation can be packed with clothing in a large grip sack. It is made of cherry throughout, and has the patent springs on under side of top, by which it is impossible for the legs to become unfastened accidentally. When the leg is fully extended, it is held automatically by a spring, saving necessity of using thumb screw for clamping same.

Price, . . . . . \$4.00



### Triplex Jr. Tripod.

**I**S of the same construction as the Triplex, but lighter, for hand cameras.  
Price . . . . . \$3.00

### The Fairy Tripod.

(Patented February 23d, 1886.)



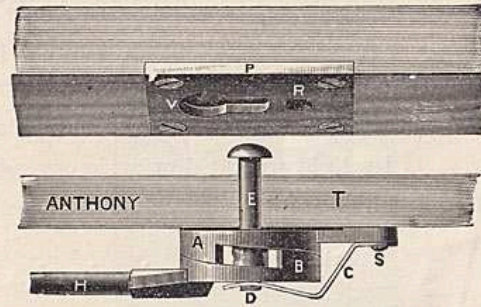
**O**UR aim has long been to make all apparatus connected with outdoor photography as light and compact as is consistent with strength and durability. Until now the tripod has successfully resisted all efforts in that direction. But at last we can offer to our customers a tripod which is a marvel of lightness, compactness and rigidity, and which can be readily carried in an ordinary hand bag. When folded it is only 16 inches long, and weighs but 1 lb. 15 oz.



Price, each . . . . . \$5.00  
Fine sole leather carrying cases for legs of above tripod, with shoulder straps, each . . . . . 2.50

### Clamp Tripod Top.

(Patented.)



**W**E give a sectional view of our Clamp Tripod Top, which dispenses entirely with the tripod screw, and by means of which the camera is instantly clamped to the tripod. This attachment entirely does away with the annoying delays and difficulties of the old method, and is a most essential part of a complete photographic equipment.

We have these Clamp Tripod Tops to fit our Triplex, Telescopic, Climax and Folding Tripods.

Price of top and patent clamp and plate for camera bed, \$1.40.

For complete tripod, fitted with above and plate, add 40 cents to price of tripod.

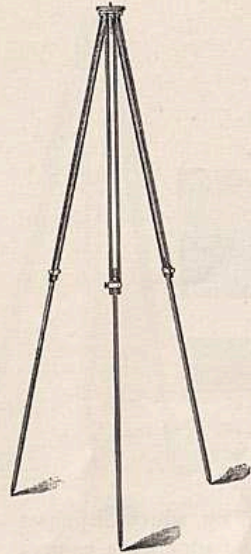
### Compact Tripod.



**T**HIS tripod is, as shown by the cut, a very light, portable and efficient piece of apparatus, and is adapted to view and hand cameras of all sizes up to 8 x 10.

Price . . . . . \$3.50





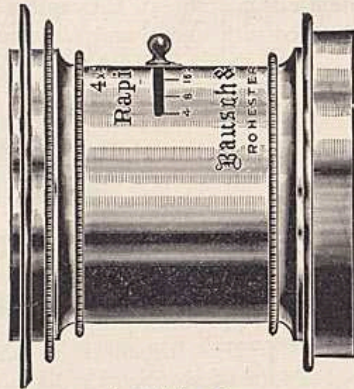
The Popular Tripod.

A VERY light, strong and low-priced tripod, adapted to any hand camera and the smaller sizes of cameras for regular field work. Its light weight, low price, strength and durability are its principal advantages.

Price, . . . . . \$2.00

Rapid Universal Lenses.

THESE lenses are of the rectilinear, compound type, and are intended for studio and general outdoor photography. Every lens is supplied with morocco cap and iris diaphragms.

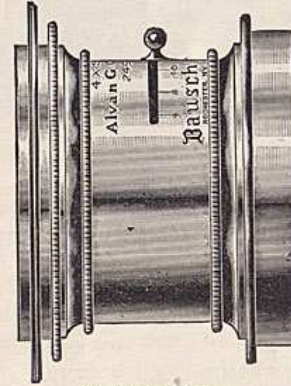


Cut full size No. 5.

Nos.	Large Stop Covers.	Medium Stop Covers.	Diameter of Lenses.	Back Focus.	Equivalent Focus.	Brass   Aluminum Mounting.	
						Price.	Price.
4 1/4	3 1/4 x 4 1/4	4 x 5	7/8 in.	4 3/4 in.	5 1/4 in.	\$18.00	\$21.00
5	4 x 5	5 x 8	1 1/8 in.	5 3/4 in.	6 3/4 in.	22.00	25.00
8	5 x 8	6 1/2 x 8 1/2	1 3/8 in.	7 3/4 in.	8 7/8 in.	26.00	30.00
8 1/2	6 1/2 x 8 1/2	8 x 10	1 5/8 in.	10 3/8 in.	11 3/4 in.	35.00	39.00
10	8 x 10	10 x 12	1 7/8 in.	12 1/4 in.	13 7/8 in.	48.00	52.00
12	10 x 12	12 x 15	2 1/8 in.	15 in.	17 in.	60.00	66.00
15	12 x 15	16 x 18	2 5/8 in.	18 in.	20 1/4 in.	75.00	82.00
18	16 x 18	20 x 22	3 1/8 in.	22 1/4 in.	24 3/4 in.	95.00	108.00
22	20 x 22	21 x 25	4 1/8 in.	28 in.	31 5/8 in.	125.00	139.00

Alvan G. Clark Lenses.

THESE lenses are of such quality and capacity that they mark an epoch in the construction of photographic objectives. They are the invention of Alvan G. Clark, the celebrated manufacturer of telescopes, and are of a construction dissimilar from anything heretofore followed, and are as striking in their results as Mr. Clark's success in the telescope objective has been.



Cut full size No. 5.

They may be used: In all work to which the Rapid Rectilinear type may be adapted, when they give an angle of about 55 degrees with stop *F*. 8, on size of plate as listed.

As wide angle objectives, giving an aperture of about 90 degrees with stop *F*. 45, on larger sizes of plates up to the stated limit of image circle. They are quite free from marginal distortion and magnified perspective, so common to lenses of this class.

The lenses are uncemented, each lens of the combination being mounted for itself, and are therefore free from danger of gradual decrease in speed, so common in many lenses owing to the chemical change in the cement. The crown glass is on the outside, and therefore less liable to become scratched.

They possess less astigmatism than any known lenses of the symmetrical type. The back combination may be used on larger plates at one-half the speed.

They are Supplied only with Improved Iris Diaphragm.

Waterhouse stops in place of Iris at the same prices.

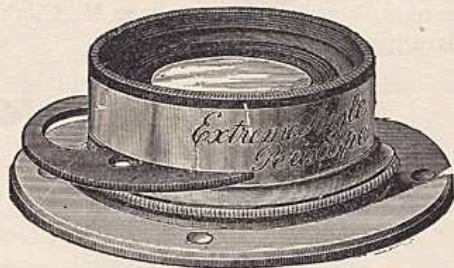
No.	Size of Plate working with Stop <i>F</i> . 8.	Diameter of Image Circle.	Diameter of Lenses.	Back Focus.	Equivalent Focus.	Brass   Aluminum Mounting.	
						Price.	Price.
4 1/4	3 1/4 x 4 1/4	8 1/2 in.	3/4 in.	4 3/4 in.	5 1/8 in.	\$20.00	\$23.00
5	4 x 5	13 in.	7/8 in.	5 3/4 in.	6 1/8 in.	24.00	27.00
8	5 x 8	16 in.	1 1/8 in.	7 3/4 in.	8 1/4 in.	30.00	34.00
8 1/2	6 1/2 x 8 1/2	21 1/2 in.	1 1/2 in.	10 1/4 in.	11 1/8 in.	38.00	42.00
10	8 x 10	24 3/4 in.	1 3/4 in.	12 3/8 in.	13 1/8 in.	50.00	54.00
12	10 x 12	33 in.	2 1/8 in.	15 in.	16 in.	64.00	70.00
15	12 x 15	38 in.	2 5/8 in.	18 in.	19 1/4 in.	82.00	89.00
18	16 x 18	47 in.	3 in.	22 in.	23 7/8 in.	105.00	113.00
22	20 x 22	64 in.	4 1/8 in.	28 in.	30 in.	145.00	155.00



### The Extreme Angle Periscope Lens.

For use where Views of an unusually Wide Angle are Desired.

THIS objective is a symmetrical combination, and is absolutely free from astigmatism and secondary image, or "ghost," besides which it is achromatic and perfectly rectilinear. As each lens is individually achro-



matized, the front one can be removed, and the back one used as a single landscape lens, of about double the focal length of the entire combination.

No.	Equivalent Focus.	Size of Plate Largest Stop.	Largest Plate Covered.	Largest Aperture.	Price.
1	2.9 in.	2½ x 2½	5 x 7	f-10	\$24 00
2	3.6 "	3 x 3	6½ x 8½	f-10	27 00
3	4.2 "	3¼ x 4¼	8 x 10	f-10	32 00
4	5. "	4 x 5	10 x 12	f-14	40 00
5	5.9 "	4¼ x 6½	11 x 14	f-14	51 00
6	7.1 "	5 x 8	14 x 17	f-14	66 00
7	8.4 "	6½ x 8½	16 x 20	f-16	87 00
8	10. "	8 x 10	20 x 24	f-16	116 00

### The Periscope Lens

IS a rectilinear combination of the wide angle variety, having an angle of 80 degrees, and is suitable for taking interior and exterior views—a very satisfactory instrument for general open air work.



The largest aperture, F-14, admits sufficient light for instantaneous views. The larger sizes are suitable for taking life size portraits in the studio.

No.	Diameter of Lens.	Equivalent Focus.	Size of Plate Largest Stop.	Size of Plate Smallest Stop.	Price.
2	5/8	4½	3¼ x 4¼	4½ x 6	10.00
3	¾	6	4 x 5	5 x 8	12.00
3A	1	7¾	4¼ x 6½	6½ x 8½	13.50
4	1 1/8	8½	5 x 8	8 x 10	15.00
5	1 1/4	10½	6½ x 8½	10 x 12	18.00
6	1 3/8	12	8 x 10	11 x 14	22.00

### The Rectigraphic and Perigraphic Lenses.

PATENTED DECEMBER 9, 1890.

THE Rectigraphic and Perigraphic lenses consist of two aplanatic triplets of a novel device, which makes each lens capable of performing the work of three.

The brilliancy of the image, and especially the flatness of field and fine definition at the extreme margin of the plate, place these lenses very high in the esteem of those who have used them.

The two triplets constituting the new lenses are of different focal length, the back lens having a much shorter focus than the front lens, and the relative curvatures are so calculated as to secure perfect optical (not geometrical) symmetry of the compound, and, at the same time, to form perfect achromatic and aplanatic objectives, for themselves, if used singly. This novel plan offers the important advantage that these new lenses, the Perigraphic as well as the Rectigraphic, contain or consist of three objectives of different powers or focal lengths. The latter are of the following approximate proportion:

Equivalent of Compound 2,  
Back lens alone 3,  
Front lens alone 4,

thus giving, on the same plate, pictures differing in size about as 2 to 3 to 4. To use the back lens alone the front lens is to be removed and the hood screwed into its place. To use the front lens alone, the back lens is to be removed and the front lens screwed into its place; *i. e.*, the place of the back lens. The focal length of the compound and of each separate lens are engraved on the mounts of the lenses.

The Rapid Rectigraphic Lens.

No.	Size of Plate.	Diam. of Lenses.	Equivalent Focus.	Focus of Back Lens.	Focus of Front Lens.	Price.
0	3 1/4 x 4 1/4	1 1/8 in.	5 in.	8 in.	11 in.	\$14 00
1	4 x 5	1 1/8 in.	6 1/4 in.	10 in.	13 1/2 in.	20 00
1 1/2	4 1/4 x 6 1/2	1 1/8 in.	7 in.	11 in.	14 3/4 in.	25 00
2	5 x 8	1 1/4 in.	8 1/2 in.	13 1/2 in.	18 in.	30 00
3	6 1/2 x 8 1/2	1 1/2 in.	11 in.	17 in.	23 in.	38 00
4	8 x 10	1 3/4 in.	13 in.	20 1/2 in.	28 in.	50 00
5	10 x 12	2 in.	16 in.	25 1/4 in.	34 in.	64 00
6	11 x 14	2 1/4 in.	18 1/2 in.	29 1/4 in.	39 1/2 in.	76 00
7	14 x 17	2 3/4 in.	22 in.	34 3/4 in.	47 in.	100 00
8	17 x 20	3 1/8 in.	26 in.	41 in.	56 in.	125 00

The Perigraphic Lens.

No.	Size of Plate.	Diam. of Lenses.	Equivalent Focus.	Focus of Back Lens.	Focus of Front Lens.	Price.
0	4 x 5	3/4 in.	3 3/4 in.	5 5/8 in.	8 in.	\$18 00
1	5 x 7	1 in.	5 in.	8 in.	11 in.	28 00
2	6 1/2 x 8 1/2	1 1/8 in.	6 1/4 in.	10 in.	13 1/2 in.	36 00
3	8 x 10	1 1/4 in.	8 1/2 in.	13 1/2 in.	18 in.	46 00
4	10 x 12	1 1/2 in.	11 in.	17 in.	23 in.	60 00
5	11 x 14	1 5/8 in.	13 in.	20 1/8 in.	28 in.	74 00
6	14 x 17	2 5/8 in.	16 in.	25 1/4 in.	34 in.	85 00

Turner-Reich Anastigmats.

THE astigmatic errors are entirely corrected with the full aperture, so that for the given size of plate they need not be diaphragmed, and the image will be as sharp at the edge as in the centre.



SERIES III.—Plate covered sharply with opening of F. 7.5; covering size larger at F. 15: 4 x 5, \$35; 5 x 7, \$40; 6 1/2 x 8 1/2, \$75; 8 x 10, \$85; 10 x 12, \$110; 11 x 14, \$160.

SERIES IV.—4 x 5, Equiv. Focus, 6 in. . . . . \$36.00  
 5 x 7, " " 7 1/4 in. . . . . 45.00

Dallmeyer's Lenses.

THE extraordinary unanimity of opinion regarding the excellence of Mr. Dallmeyer's lenses, both in Europe and America, is one of the most gratifying evidences of their great superiority. There is not a photographer of any note on either side of the Atlantic who is not the possessor of one or more—some can count them by the dozen—and the difference in cost between these and the inferior ones is very slight, when their great superiority is considered. None others approach them, and they have long been justly held to be the most indispensable of all the requisites of the art.

In the quality of the glass used; in the perfection of finish and adjustment; in softness, crispness and depth; in rapidity, delicacy and every quality a lens should possess, the Dallmeyer lenses are unrivaled. With or without diaphragms, they are better adapted to the particular work in hand than any others ever made, and every kind of photographic requirement is provided for. Before purchasing, carefully read the information contained in the catalogue, particularly that regarding the series of rapid rectilinear and the wide angle rectilinear.

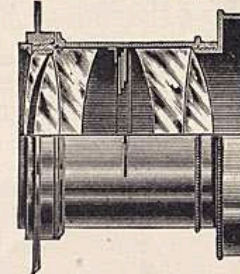
The first requirement in making photographs of great merit, whether for portraiture, landscapes, architectural views, or copying, is a lens that in skilled hands promises the very best results. Those who excel uniformly select Dallmeyer lenses and pronounce them indispensable.

The PATENT PORTRAIT combinations have an adjustment of the back lens by which a diffusion of focus or depth of definition is obtained. This is not found in any other make. They also have a full set of the Waterhouse diaphragms in morocco cases.

Mr. Dallmeyer's line of lenses is the most complete of any in market, embracing everything that can be wanted for any possible operation.

The Dallmeyer Stigmatic Lens.

Series II. F/6.



THIS is a new universal lens of more simple construction than Series I., consisting of 5 lenses only. It is intended to be a lens suitable for every class of Photography from Portraiture to Wide-

Angle work, and is the quickest stigmatic lens made, except the Dallmeyer Stigmatic Portrait Lenses, Series I., which work in F 4. The smaller sized plates mentioned in these specifications are the size we should advise for general work with lenses of the respective foci, since the use of a lens of too short focus tends to the production of exaggerated perspective. At full aperture these lenses cover slightly larger plates than those given, and include an angle along the diagonal of the plates of about 85°.

Moreover, being perfectly free from spherical aberration, the full aperture of the lens may be used in focusing; there being no fear of any alteration taking place in the focal length of the lens, when changing the size of the stop, as is the case with many lenses of the Wide-Angle type.

By using either the back or front combination singly the choice of two extra focal lengths is obtained, and for the best results the single lens used should be screwed into the back of the mount. The equivalent focus of the front lens will then be found to be 1½ times and the back 2 times that of the whole combination, and they require respectively 3 times and 5 times the exposure of the combined lens at the same aperture. For such subjects as large heads the single lenses may be used with full aperture, but for general use the Iris diaphragm should be set to an aperture not larger than F 11 or F 8, for front or back respectively.

No.	Plate covered at full aperture.	Largest plate covered at	Diameter of Lens.	Eq. Focus.	PRICE with Iris Diaphragms.
	F-6.				
1	3¼ x 3¼	4¾ x 6½	.8	4.5	\$38.00
2	3¼ x 4¼	5 x 8	.9	5.3	46.00
3	4 x 5	6½ x 8½	1.1	6.4	54.00
4	4¾ x 6½	8 x 10	1.3	7.6	65.00
5	5 x 8	10 x 12	1.6	9	84.00
6	6½ x 8½	12 x 15	1.9	10.7	108.00
7	8 x 10	15 x 15	2.2	12.7	148.00
8	10 x 12	16 x 18	2.6	15.1	196.00
9	12 x 15	20 x 22	3.1	18	252.00

NOTE.—We have had numerous inquiries for Lenses for Groups, to be used in galleries of limited length, and up to the present no Lens has been found to supply the want, but this new Lens of Mr. Dallmeyer's will perform the work, and is very rapid, covering the *largest plates* at *f-16*.

## Dallmeyer's Wide-Angle Rectilinear Lenses.\*

(PATENT.)

THESE LENSES embrace angles of pictures from 90 to 100 deg., and enable photographers to take views of buildings, interiors, etc., in confined situations, where lenses of longer focus cannot be used, and where absolute rectitude of lines is imperative.



\* This lens is also well adapted for stereoscopic views.

The wide-angle rectilinear lens has the following advantages over existing non-distorting double combination lenses: It is entirely free from a central spot. It can be used with a larger stop, *i. e.*, it is quicker in action. It produces a more brilliant picture. The lenses of which it is

composed are smaller and thinner, for a given sized plate, than those of other lenses intended for the same size of picture.

The lenses are mounted in rigid settings or tubes, and each is furnished with a rotating diaphragm plate. In the column below, the largest size of plate covered by each lens is recorded; and if microscopic definition up to the corners be required, the smallest, or smallest but one stop should be used.

No.	Largest Dimension of Plate.	Dia. Front Combination.	Back Focus.	Equivalent Focus.	Price.	Remarks.
1A	4½ x 7¼	¾	3½ in.	4 in.	\$34.00	No. 1A and No. 1 are made to screw into the same flange as the No. 1 Triple Achromatic.
1A	6½ x 8½	1¼	4¾ "	5¼ in.	42.00	
1B	8 x 10	1¾	5½ "	6¼ "	50.00	
1	10 x 12	1½	6¼ "	7 "	58.00	
2	12 x 15	2	7½ "	8½ "	80.00	
3	16 x 18	2½	11 "	13 "	106.00	
4	20 x 22	3	14 "	15½ "	152.00	

## Dallmeyer's New Rectilinear Landscape Lens.

THIS LENS works at an intensity, with the first stop, of ¼, and is therefore somewhat slower in action than the rapid landscape, requiring an exposure of about ½ longer and, similarly to those lenses, may be used with a larger aperture than the first stop. It is particularly constructed for views, architectural subjects, copying, etc., where it is essential that straight lines should be accurately portrayed, and has been constructed specially to meet this long-felt want in the form of a single combination.

No.	Largest Dimensions of Plate.	Diameter.	Equivalent Focus.	Price.
1	4¼ x 6½ in.	1½ in.	8½ in.	\$36.00
2	6½ x 8½ "	1¾ "	11½ "	46.00
3	8 x 10 "	2 "	13½ "	62.00
4	10 x 12 "	2¼ "	16½ "	78.00
5	12 x 15 "	2¾ "	20 "	96.00
6	16 x 18 "	3 "	25 "	122.00
7	20 x 22 "	3½ "	32 "	160.00

## Dallmeyer's Rapid Rectilinear Lenses.

(Patent.)

THE RAPID RECTILINEAR LENS is emphatically "The Lens" for all kinds of outdoor photography. It works at an intensity of  $\frac{1}{5}$ , and, although not so rapid as the D Lens, requiring nearly double the exposure, is superior to it for views because of its having only *four*, instead of six, reflecting surfaces. It is composed of two exactly symmetrical cemented combinations, and unlike most existing double combination cemented lenses, requiring small stops to cure the inherent excessive spherical aberration, the Rapid Rectilinear is aplanatic, *i. e.*, it works with the full opening. Hence its superiority for all kinds of *quick* outdoor pictures, groups, instantaneous effects, landscapes, architectural subjects, or for dimly-lighted interiors. For copying and enlarging this lens is unrivalled. With smaller stops each



lens covers the next larger, or even two sizes larger plates than those recorded, thus embracing angles of pictures from sixty to eighty degrees, and this without any trace of flare or central spot. Many fine large portrait studies have been taken with this lens, and it is to be found in the possession of almost every photographer of eminence wherever the art is practiced. Either combination can be used singly as an ordinary landscape lens; focus, about twice that of the compound lens.

Each lens is supplied with a set of Waterhouse diaphragms. If required, any of the lenses marked below can be used, with smaller stops, for the next size larger view.

N. B.—It is recommended that all rapid rectilinear lenses above the 10 x 12 size should always be *focused* with a medium stop (No. 3), whether the picture is to be afterwards taken with a larger or smaller stop. Each lens is constructed to give the greatest possible "depth of focus" which involves the above conditions.

Size of View or Landscape.	Size of Group or Portrait.	Diameter.	Back Focus.	Equivalent Focus.	Price Rigid Set.	Price, Iris Diaph.
3½ x 4½ in.	3½ x 3½ in.	¾ in.	3⅝ in.	4 in.	\$28.00	\$31.00
4 x 5 "	3½ x 4½ "	1 "	5½ "	6 "	34.00	37.00
4½ x 6½ "	4 x 5 "	1 1/8 "	7½ "	8 1/4 "	42.00	45.00
5 x 8 "	5 x 6 "	1 1/4 "	10 "	11 "	48.00	52.00
6½ x 8½ "	5 x 7 "	1 1/2 "	10½ "	11 "	53.00	57.00
8 x 10 "	6½ x 8½ "	1 3/4 "	12½ "	13 "	68.00	74.00
10 x 12 "	8 x 10 "	2 "	15 "	16 "	84.00	90.00
12 x 15 "	10 x 12 "	2 1/2 "	18 "	19 1/2 "	114.00	124.00
16 x 18 "	12 x 15 "	3 "	23 "	24 "	152.00	164.00
20 x 22 "	16 x 18 "	3 1/2 "	28 "	30 "	206.00	218.00
21 x 25 "	20 x 22 "	4 "	31 "	33 "	252.00	264.00

4 x 5 furnished in matched pairs for stereo. work.

## Dallmeyer's Rapid Landscape Lens. (Long Focus.)

THIS is a single combination landscape lens specially constructed for obtaining large images in distant views, mountain scenery, balloon photography, etc. Each lens is supplied with a set of Waterhouse diaphragms, the apertures of the stops of these lenses being too large to admit of their arrangement in the form of a rotating diaphragm as supplied with the "wide angle" landscape series. It has a working intensity somewhat more than  $\frac{1}{15}$  (or about twice as quick as the wide angle landscape lens), and in this condition is entirely free from outstanding spherical aberration, *i. e.*, gives a perfectly defined image.

No.	Largest Dimensions of Plate. Inches.	Diameter.	Equiv. Focus. Inches.	Price.
1AA	3¼ x 4¼	1.	5	\$24.00
1A	4 x 5	1.25	7	30.00
1	4¾ x 6½	1.3	9	34.00
2	6½ x 8½	1.6	12	44.00
3	8 x 10	2.125	15	58.00
4	10 x 12	2.6	18	72.00
5	12 x 15	3.	22	88.00
6	16 x 18	3.5	25	106.00
7	20 x 22	4.25	30	134.00

## Dallmeyer's New Wide Angle Landscape Lens.

THIS is a single combination landscape lens, working at an intensity of  $\frac{1}{15}$ , and is the best lens for landscapes, pure and simple, embracing large angles. Being a single combination, like the rapid landscape, it has but *two* reflecting surfaces, and therefore produces a more brilliant picture than the wide angle multiple lenses. It works with a proportionally large stop, *i. e.*, it is quicker in action and the illumination is more equally distributed from the center to the margin of the plate. Being composed of *three* lenses cemented together, it is superior to the old Meniscus, composed of *two*, inasmuch as it produces less distortion, gives better marginal definition, and is of much smaller size.

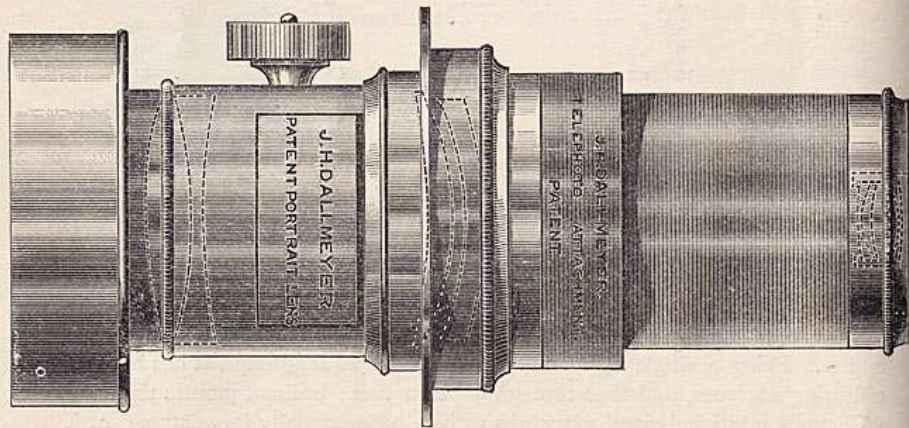
The Lenses are mounted in "Rigid" Tubes or Settings, with "Rotating" Stops.

No.	Size of Plate.	Diameter.	Equivalent Focus.	Price.	Remarks.
1A	4 x 5	1½	5¼	\$24.00	No. 1A and No. 1 are made to screw into the same flange as
1	4½ x 7¼	1½	7	28.00	No. 1 Triple Achromatic Lens.
2	6½ x 8½	1¾	8½	34.00	Nos. 2 and 3 screw into No. 2 Triple Achromatic flange.
3	8 x 10	2½	10	42.00	
4	10 x 12	2½	12	54.00	
5	12 x 15	2½	15	64.00	
6	16 x 18	3	18	80.00	
7	20 x 22	3¾	22	106.00	
8	21 x 25	4¼	25	144.00	

### Dallmeyer's Telephotographic or "Large Image" Lenses and Attachments.

THE Telephotographic Lens is now recognized as forming an essential part of the photographer's outfit. The Telephoto Lens consists essentially of a fixed *positive* focus lens system in front, with a fixed *negative* focus system behind, the distance between the two being adjustable, and the alteration of this distance giving a large range of equivalent or corresponding foci, thus enabling the operator to obtain different sized images of one and the same object at a given distance, and greatly magnified as compared with the size of image given by the positive lens employed alone.

#### HIGH POWER TELEPHOTO



#### I. HIGH POWER TELEPHOTO LENSES,

consisting of a Portrait Lens and a high power negative element of about one-fourth the focus of the Portrait Lens.

	Mounted in Brass.	Mounted in Aluminium.
No. 1. Patent Stereo. Lens, with Iris Diaphragms, and No. 1 Negative Attachment.....	\$62.00	\$74.00
No. 2. 1B Patent Portrait Lens, with Iris Diaphragms, and No. 2 Negative Element.....	92.00	111.00
No. 3. 2B Patent Portrait Lens, with Iris Diaphragms, and No. 3 Negative Element.....	151.00	169.00

The negative elements alone can be adapted to any existing Patent Stereo., 1B, or 2B Patent Portrait Lenses, at the following prices:

	Mounted in Brass.	Mounted in Aluminium.
No. 1. Negative Element.....	\$22.00	\$26.00
No. 2. " " .....	30.00	39.00
No. 3. " " .....	39.00	45.00

#### II. MODERATE POWER TELEPHOTO LENSES,

consisting of a Portrait Lens and a moderate power negative element of about one-half the focus of the portrait lens.

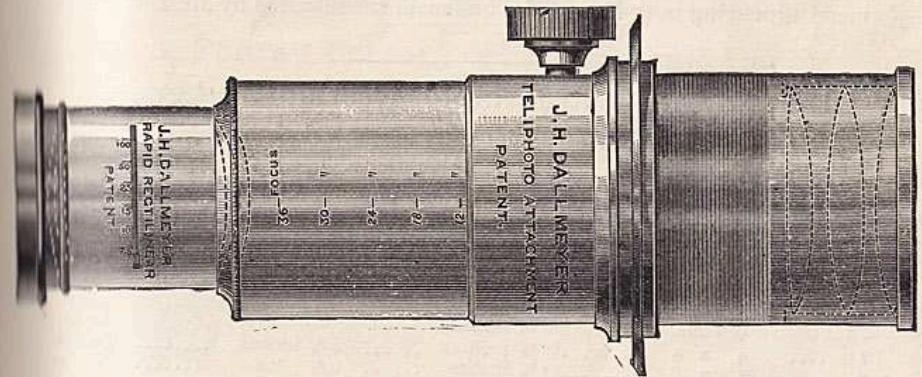
	Mounted in Brass.	Mounted in Aluminium.
No. 1. Patent Stereo Lens, with Iris Diaphragms, and 2½ in. focus negative element.....	\$68.00	\$80.00
No. 2. 1B Patent Portrait Lens, with Iris Diaphragms, and 3 in. focus negative element.....	90.00	105.00
No. 3. 2B Patent Portrait Lens, with Iris Diaphragms, and 4 in. focus negative element.....	146.00	164.00

The negative elements alone are supplied at the following prices:

	Mounted in Brass.	Mounted in Aluminium.
2½ in. Negative Element.....	\$28.00	\$32.00
3 " " " .....	28.00	33.00
4 " " " .....	34.00	40.00

#### MODERATE POWER TELEPHOTO LENSES,

consisting of a *Rapid Rectilinear* Lens, and a moderate power negative element of about half its focus.



#### MODERATE POWER TELEPHOTO.

Focus of Negative Element.....	2½ in.	3 in.	4 in.	5 in.	6 in.	7 in.	8 in.	10 in.	12 in.
Diameter .....	1½ in.	1½ in.	1½ in.	1¾ in.	2 in.	2¼ in.	2¾ in.	2¾ in.	3 in.
Price, with Rack and Pinion mounted in Brass.....	\$30.00	30.	36.	42.	48.	56.	68.	88.	112.
Price, with Rack and Pinion mounted in Aluminium.....	36.00	36.	42.	52.	58.	68.	80.	100.	124.
Suitable for R. R. Lenses (F/8).....	.....	4 x 5	5 x 6	5 x 8	6½ x 8½	8 x 10	10 x 12	.....	.....

Dallmeyer's New Patent Lantern Lenses.

*Especially constructed for use with the Optical Lantern.*

THESE Lenses (intended for use for exhibiting with the Optical Lantern only, and not for photography) produce the most brilliant enlargements upon the screen, true to the original, both in outline and coloring; they are free from all distortions, the images are well defined throughout and the field is flat.

No. 1. Lantern Lens (patent) consists of two combinations,  $1\frac{1}{2}$  and  $1\frac{3}{4}$  in. diameter respectively, and  $3\frac{1}{2}$  in. back focus (5 in. equivalent), mounted in tubes with rack and pinion movement; suitable for  $3\frac{1}{2}$  in. condensers.

Price, each.....\$32.00  
Condensers,  $3\frac{1}{2}$  in. diameter, mounted, pair..... 40.00

No. 2. Lantern Lens (patent) consists of two combinations,  $1\frac{3}{4}$  in. and 2 in. diameter respectively, and 4 in. back focus (6 in. equivalent) mounted in tubes, with rack and pinion movement; suitable for 4 in. condensers.

Price, each.....\$40.00  
Condensers, 4 in. diameter, mounted, pair..... 48.00

To any one desiring a strictly first class Magic Lantern, we recommend procuring both Lens and Condensers as supplied by Mr. Dallmeyer.

Dallmeyer's Extra Rapid Rectilinear Lenses.

THESE Lenses work at an intensity of  $\frac{1}{8}$ ; they are made of specially tested Jena glass, and are aplanatic. They produce very sharp and brilliant images, and are most suitable for instantaneous work in dull weather, when the intensity of  $\frac{1}{3}$  is not sufficient. Nos. 1, 2 and 3 are unsurpassed for Hand Camera work. All are fitted with Iris Diaphragms.

No.	Largest Dimensions of Plate.	Diameter of Lenses.	Equivalent Focus.	Price each.
1	4 x 5	$\frac{7}{8}$ inch.	$4\frac{1}{10}$ inches.	\$50 00
2	5 x 6	$1\frac{1}{4}$ inches.	$6\frac{3}{10}$ "	60 00
3	5 x 8	$1\frac{3}{8}$ "	$7\frac{1}{10}$ "	72 00
4	$6\frac{1}{2}$ x $8\frac{1}{2}$	$1\frac{1}{2}$ "	$8\frac{1}{10}$ "	80 00
5	7 x 9	$1\frac{5}{8}$ "	$9\frac{1}{10}$ "	96 00
6	8 x 10	$1\frac{3}{4}$ "	$9\frac{1}{10}$ "	114 00
7	10 x 12	2 "	$11\frac{2}{10}$ "	130 00

Larger sizes can be made to order, but above the 10 x 12 size the ordinary Rapid Rectilinear should be chosen in preference.

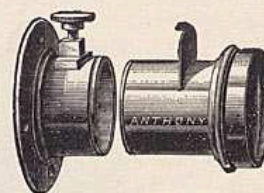
E. A. Instantaneous Stereo. Lenses.

FOR instantaneous outdoor views, for indoor stereo. groups, C. de V., etc., etc. These are portrait combinations, and so constructed that the back lenses can be removed and the front ones screwed in their places, thus making a pair of single combination landscape lenses. They are in matched pairs, have Waterhouse diaphragms in leather cases, and rack and pinion movement.

E. A. Rapid Lens (Hemispherical).



Lens ready for use.



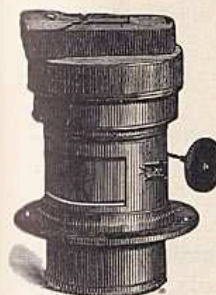
Showing how the central stops or diaphragms are inserted.

HAS a double achromatic combination for making instantaneous views, portraits, groups, etc. The lens should be focused with the full opening.

Price, No. 1, for 4 x 5 pictures, . . . . . \$13.50  
" No. 2, for 5 x 8 " . . . . . 20.00  
" No. 3, for 8 x 10 " . . . . . 30.00

The No. 1 is supplied in rigid mounting.

E. A. Portrait Lenses. With Rack and Pinion.



Back Focus.

THE attention of those who wish to procure a good portrait lens, but do not desire so expensive an instrument as that made by J. H. Dallmeyer, is respectfully invited to the following, which will be found good and uniform, as well as the best for the price. By removing the back combination, and screwing the front combination in its place, an excellent landscape lens is secured.

	Inches.	Each.
1-4 central stop,	$4\frac{1}{2}$	\$8.75
1-3 " "	5	14.50
1-2 " "	6	17.50
4-4 " "	10	35.50



E. A. Wide-Angle Lens.

THIS LENS being of short focus and of wide angle, and made on the rectilinear principle, is a useful one for architectural photography, and is not equaled at the price by any in market. Those who do not care to invest in the best—the Dallmeyer—will find this an excellent substitute.

No. 2,  $4\frac{1}{4}$  x  $6\frac{1}{2}$ .....\$15.00  
No. 3,  $6\frac{1}{2}$  x  $8\frac{1}{2}$ ..... 20.00  
No. 4, 10 x 12..... \$25.00  
No. 5, 14 x 17..... 35.00

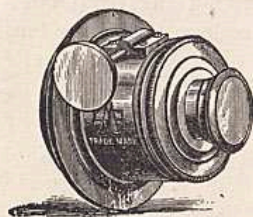
Anthony's Single Combination Lenses.



FOR ordinary landscape work these lenses give very brilliant effects, fully covering the plates specified. They are the best lenses in the market at the price. All have rotating diaphragms, so that the time of exposure may be varied to suit the subject.

No. 0, for 3 1/4 x 4 1/4 plates.....\$3.50 | No. 2, for 5 x 8 plates.....\$4.50  
 " 1, " 4 x 5 " ..... 3.75 | " 3, " 6 1/2 x 8 1/2 " ..... 7.00  
 No. 4, for 8 x 10 plates.....\$7.00

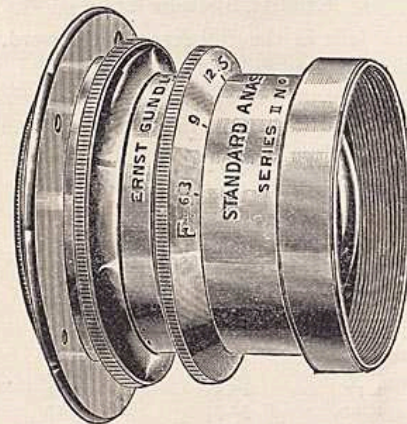
E. A. View Lenses.



THESE are single combination lenses, used for landscape work only, but cover the plate very sharply. They have diaphragms in the front of the tube, and rack and pinion movement.

1-4 size, for 5 x 8 view, 10 inch focus, each ..... \$6.00  
 1-3 " " 7 x 9 " 12 " " ..... 7.25  
 1-2 " " 10 x 12 " 15 " " ..... 9.00  
 4-4 " " 14 x 17 " 20 " " ..... 18.00

The Standard Anastigmat.



THIS lens is of the double system symmetrical type; each system consisting of five elementary lenses. The absolute freedom from any trace of astigmatism and the complete correction of the spherical and chromatic aberrations in the axial and extra-axial directions, without the least remainder of aberrations of higher order, constitute the superiority of this lens. Being thus perfectly free from chromatic difference of spherical aberration, the lens is strictly corrected for actinic light, at any aperture; hence the superior photographic result to the visual appearance of the image on the ground glass screen. This valuable feature is acknowledged by noted experts who have tested the lens.

The Standard Anastigmat is free from internal reflections, and produces a brilliant image on the ground glass, with equal illumination of the field and equal sharpness from centre to corner of plate.

Standard Anastigmat, Series I.

Relative Aperture F : 7.7

THIS is a very rapid instantaneous out-door and all-round lens, especially where a large-size picture at a moderate angle of view is desired. Also for single portraits and groups.

No.	Equivalent Focus.	Largest size of Plate covered at full Aperture (F : 7.7) sharply up to the Edge.	Diameter of Circular Field covered with Small Stop.	Most favorable size of Plate for General View Work.	Front Aperture.	Price.
	In.		In.		In.	
00	4.3	4 x 5	6.45	3 x 3	0.7	\$36.00
0	5.5	4 1/2 x 6 1/2	8.25	3 1/4 x 4 1/4	0.85	40.00
1	6.5	5 x 7	9.75	4 x 5	1.0	45.00
2	7.8	6 1/2 x 8 1/2	11.7	4 1/4 x 6 1/2	1.2	51.00
3	9.3	8 x 10	13.9	5 x 7	1.4	60.00
4	11.0	10 x 12	16.5	6 1/2 x 8 1/2	1.65	72.00
5	13.1	11 x 14	19.5	8 x 10	1.95	92.00
6	16.0	14 x 17	24.0	10 x 12	2.4	120.00
7	18.7	16 x 20	28.0	11 x 14	2.8	161.00
8	22.5	20 x 24	33.75	14 x 17	3.35	216.00
9	26.9	24 x 28	40.4	17 x 20	4.0	300.00

Large sizes on special contract.

### Standard Anastigmat, Series II.\*

Relative Aperture F: 6.<sup>3</sup>

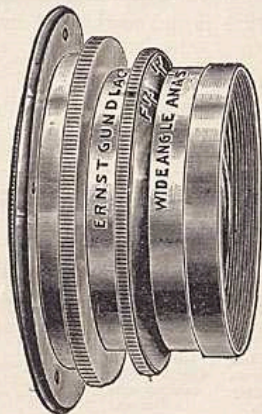
THIS is a *universal* lens in the full sense of the word. It combines with extreme rapidity an unusually large field of view, and cuts the plate perfectly sharp to the corner at full aperture. It is an excellent portrait lens, and for out-door work it will satisfy the most exacting demands.

No.	Equivalent Focus.	Largest size of Plate covered at full Aperture (F: 6.3) sharply up to the Edge.	Diameter of Circular Field covered with Small Stop.	Most favorable size of Plate for General View Work.	Front Aperture.	Price.
	In.		In.		In.	
00	3.5	3¼ x 4¼	6.2	3 x 3	0.7	\$42.00
0	4.5	4 x 5	8.0	3¼ x 4¼	0.85	47.00
1	5.3	4¼ x 6½	9.5	4 x 5	1.0	53.00
2	6.4	5 x 7	11.4	4¼ x 6½	1.2	60.00
3	7.6	6½ x 8½	13.5	5 x 7	1.4	70.00
4	9.0	8 x 10	16.0	6½ x 8½	1.65	85.00
5	10.7	10 x 12	19.0	8 x 10	1.95	108.00
6	13.1	11 x 14	23.3	10 x 12	2.4	142.00
7	15.3	14 x 17	27.5	11 x 14	2.8	190.00
8	18.4	17 x 20	32.7	14 x 17	3.35	255.00
9	22.0	20 x 24	39.1	17 x 20	4.0	340.00

Larger sizes on special contract.

\* See that the front board of your camera is accurately adjusted, so that the optical axis of the lens cuts the plane of the ground glass accurately in perpendicular direction. This is often not strictly the case, and then the lens is out of focus at the margin when sharply focused in the centre.

### The Wide-Angle Anastigmat.



THIS lens is an entire novelty in optical principle as well as in its type of construction. It is a double system symmetrical lens, each system consisting of four elementary lenses. A remarkable optical feature of this lens is the unusually flat curvatures of the surfaces of its elementary lenses.

The great superiority of our new Wide-angle Anastigmat is its flat field, showing no curvature at all, and being besides this perfectly anastigmatic to the extreme margin, the lens produces a perfect image at an aperture large enough for instantaneous exposure.

### Wide-Angle Anastigmat, Series II.\*

Angle of Field, 100 Degrees. Relative Aperture F: 9.<sup>5</sup>

FOR general instantaneous wide-angle work. Also for very large portrait groups and interior flashlight exposures. The lens cuts the plate perfectly sharp at full aperture.

No.	Equivalent Focus.	Plate covered at full Aperture (F: 9.5).	Diameter of Circular Field covered with Small Stop.	Front Aperture.	Price.
	In.		In.	In.	
1	3.53	4 x 5	8.55	0.8	\$38.00
2	4.27	4¼ x 6½	10.25	0.96	42.00
3	5.07	5 x 8	12.25	1.14	50.00
4	6.0	6½ x 8½	14.5	1.35	60.00
5	7.13	8 x 10	17.4	1.62	77.00
6	8.73	10 x 12	21.2	1.97	102.00
7	10.2	11 x 14	24.6	2.3	134.00
8	12.27	14 x 17	29.6	2.78	180.00

Larger sizes on special contract.

### Wide-Angle Anastigmat, Series III.\*

Angle of Field, 110 Degrees. Relative Aperture F: 10.<sup>7</sup>

THIS series embraces as wide an angle as any lens of the W. A. type in the market; and, while the latter can produce a satisfactory picture only with a very small stop, this Anastigmat works at full aperture, covering the plate, evenly lighted and very sharp to the edge.

No.	Equivalent Focus.	Plate covered at full Aperture (F: 10.7).	Diameter of Circular Field covered with Small Stop.	Front Aperture.	Price.
	In.		In.	In.	
1	2.95	4 x 5	8.55	0.74	\$38.00
2	3.55	4¼ x 6½	10.25	0.88	42.00
3	4.22	5 x 8	12.25	1.06	50.00
4	5.0	6½ x 8½	14.5	1.25	60.00
5	6.0	8 x 10	17.4	1.50	77.00
6	7.3	10 x 12	21.2	1.82	102.00
7	8.5	11 x 14	24.6	2.12	134.00
8	10.3	14 x 17	29.6	2.57	180.00

Larger sizes on special contract.

\* The lenses of this series require a very accurate adjustment of the front board of the camera, so that the optical axis of the lens cuts the plane of the ground glass accurately in perpendicular direction. This is often not strictly the case, and then the lens is out of focus at the margin when sharply focused in the centre. If accurately adjusted, the image is as sharp at the sides as in the centre at full aperture.



The Platyscope Lens



IS another of the Rectilinear series of Aplanatic lenses, and, while more moderate in price than the Dallmeyer or Aristoscope, gives most excellent results. Besides giving the equivalent focus and measure of plate they will cover with full opening, we also state the circle of light, the marginal sharpness of which will depend on the diaphragm used. We guarantee every one.

	Full Opening.	Small Stop.	Circle.	Diameter.	Equiv. Focus.	Price.
B.	5 x 7 in.	6 x 8 in.	10 1/4 in.	1 1/4 in.	8 1/2 in.	\$22.00
C.	6 x 8 "	8 x 10 "	14 "	1 5/8 "	11 1/2 "	27.00
D.	7 x 9 "	10 x 12 "	15 "	1 3/4 "	12 1/2 "	31.00
E.	8 x 10 "	11 x 14 "	19 "	2 1/8 "	15 1/2 "	37.00
F.	10 x 12 "	14 x 17 "	24 "	2 5/8 "	19 1/2 "	54.00
G.	12 x 15 "	17 x 20 "	32 "	3 1/4 "	24 "	80.00

The Platyscope lenses are now fitted with IRIS diaphragm in place of the central stops, the desired opening being obtained by merely turning the ring on body of tube, which shows exact measure of opening. In these there are no loose diaphragms to get lost.

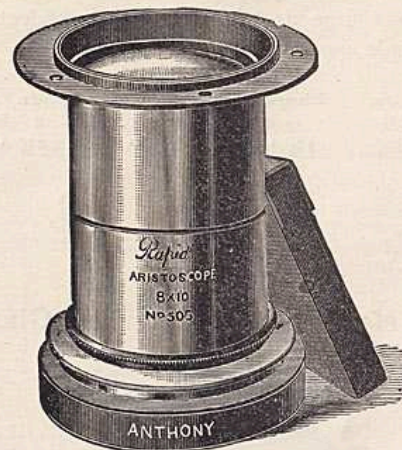
Long Focus Platyscope.

WE have also some Platyscopes of longer foci, for use on distant objects, yachts, steamers, etc., where one desires them to be larger on the negative than when lenses of shorter foci are used. This makes possible the photographing of many things which would otherwise be impossible, as, for instance, views which from their distance would be too small to be of use. This lens, in fact, is exactly the reverse of a very short focus wide angle lens, and is as valuable in its way for special work as is the wide angle in its peculiar field.

Each lens is supplied with full set of diaphragms in a leather case.

No.	Full Opening.	Small Stop.	Back Focus.	Price.
AA.	5 x 7 inches	6 1/2 x 8 1/2 inches	8 inches	\$22.00
BB.	6 1/2 x 8 1/2 "	8 x 10 "	13 1/4 "	30.00

Rapid Aristoscope Lenses.



WE have introduced these lenses in order to supply the demand for a first-class instantaneous instrument, giving rectilinear results, at a moderate price. They are unequalled at the price for instantaneous views, portraits, landscapes, architectural subjects, dimly lighted interiors, copying, etc., etc. We urge those who intend purchasing a lens for such work to try the Aristoscope before deciding. We guarantee them to be unexcelled by any lens except the Dallmeyer. Sizes, prices, etc., as follows:

No.	Size of View.	Size of Group.	Diam.	Equiv. Focus.	Price.
1	4 x 5	3 x 4 1/4	1 inch.	6 inches.	\$24.00
3	6 1/2 x 8 1/2	5 x 8	1 1/2 "	11 "	36.00
6	12 x 15	11 x 14	2 1/2 "	20 "	80.00
7	16 x 18	14 x 17	3 "	24 "	100.00

Wide-Angle Aristoscope Lenses.



THIS LENS is fast becoming a favorite, and where a really first-class instrument is required at a moderate price, cannot be excelled.

It has great depth of focus, sharp and brilliant definition, and is rectilinear in its results. We would urge its trial, and feel confident that if tested its superiority will be made apparent.

No.	Size of View.	Diameter.	Back Focus.	Equiv. Focus.	Price.
1	5 x 6½	7/8 in.	3½ in.	4 in.	\$25.00
2	6½ x 8½	1¼ "	4¾ "	5¼ "	30.00

The New Duplex Focusing Glass.



CHEAP and good. Price, \$1.25.

E. A. Compound Focusing Glass.



FOR fine work the E. A. Compound Focusing Glass is the best. It has a double compound lens. The price is \$2.50.

The Photoscript

IS an ingenious apparatus, by means of which the operator may title and number his negatives in plain type, with little or no trouble, directly on the film surface. The letters and numbers so produced, are clean cut and white, and may be put in any corner or margin desired.

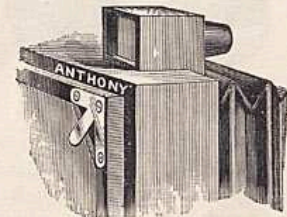
Price.....\$3.75

Finder Lenses.

THESE lenses are of first quality, and are furnished either double or plano-convex, with edges ground or unground.

No.	Diameter.	Focus.	Price, with edges unground.	Prices, with edges ground.
1	1 inch.	to 2 inch.	\$0.40 each.	\$0.60 each.
2	"	to 2 "	40 "	60 "
3	"	I to 2 "	40 "	60 "
4	"	I to 3 "	40 "	60 "
5	"	I to 3 "	50 "	70 "
6	"	2 to 3½ "	50 "	70 "
7	I "	2 to 4 "	50 "	70 "

Anthony's Universal Finder.

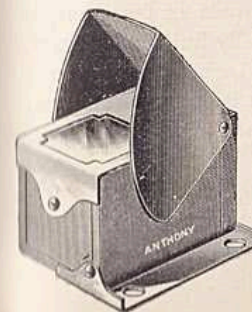


Showing method of fastening Finder to Camera. Showing Finder on Camera.

THIS is a neat, compact article that can instantly be attached to any camera, and is of great value in composing a view. The object to be photographed being plainly visible and occupying the same relative position as on the ground glass or plate, it is indispensable for instantaneous views of moving objects. It corresponds in shape to the ordinary negative. The ground side of the glass can be marked at will to denote position desired when taking instantaneous views.

Price, . . . . . \$1.50

The E. A. Brilliant Finder



HAS no ground glass, but is constructed in such a way as to show a beautifully distinct and brilliant image, which is perfectly visible in the brightest sunshine.

It is mounted on a pivot, which makes it equally useful for upright and horizontal pictures.

The angle of view is made to correspond with that of lenses ordinarily in use on hand cameras.

It is finished in mahogany, with polished brass trimmings, and also covered in leather, with nickel-plated trimmings.

It is the best Finder for the price on the market.

Price, 4 x 5... \$1.00 | Price, 5 x 7.....\$1.50

Camera Levels.

THESE levels will be found very useful, and should be on all cameras.



No. 1.



No. 2.



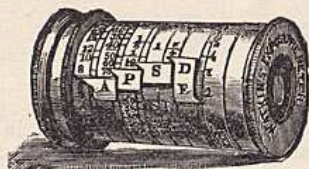
No. 5.

No.	Description.	Price.
1	In Metal Mounting, round, with flange screw holes.....	\$0.75
2	In Metal Mounting, round, large size.....	1.00
5	Pocket Level.....	.75

The Watkins Exposure Meter.

A NEW AND RELIABLE METER FOR CORRECTLY TIMING EXPOSURES.

THIS compact little instrument works splendidly for intense, difficult subjects and all daylight Camera exposures, and is a thorough practical success. It is a combination of a bromide of silver actinometer (most simple in use), a chain pendulum for timing the exposure, and a set of calculating rings, each carrying a pointer, which, when set to the correct value for each factor, causes a fifth pointer to indicate the correct exposure in seconds or fractions of a second. It is beautifully finished in brass, and measures only 2½ inches long and 1¾ inches in diameter. It is not complicated



Patented in England and America.

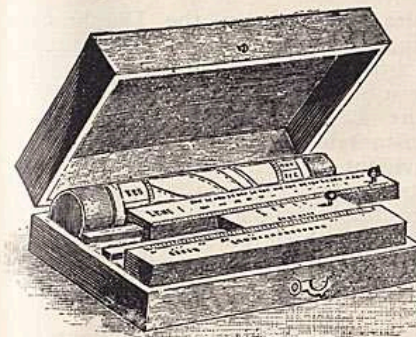
in use, and the average time occupied in testing the light and adjustment of calculator is only 30 seconds.

Each instrument is sent out complete with supply of sensitive paper for 120 exposures, full instructions for use, and an important paper on "The Elements of Photographic Exposure."

PRICE.

Regular Meter with "F." Ring.....	\$5.00
Extra Exposure Ribbons each.....	..

The Actinograph



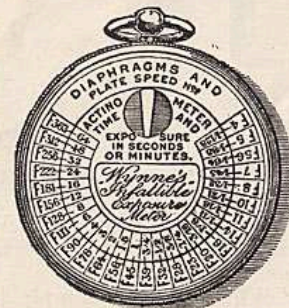
IS a simple and thoroughly practical instrument for determining the time required for exposure of a negative under varying conditions of season, light and time of day. The several factors being known, it is only necessary to move a set of indicators till they correspond with the different conditions, as marked on the instrument, when

the time required may be read at a glance.

Price..... \$1.00

Wynne's Infallible Exposure Meter.

THE simplest and most compact piece of apparatus for correctly timing exposures is Wynne's infallible exposure meter. The four conditions governing exposure are all taken into account. These conditions are: (1) the intensity of the light which illuminates the subject; (2) the diaphragm or stop employed; (3) the character of the subject; (4) the sensitiveness of the plate used. The first is determined by the time taken for the sensitive paper in the actinometer to color to standard tints. This varies from two or three seconds to a minute or so, and is called the actinometer time. There are two tints in the actinometer, the lighter tint being one-fourth the darker or standard tint, and being used in cases where the light is very weak. The instrument is marked with the diaphragm numbers. A table of the relative sensitiveness of the various brands of plates is supplied with each instrument.



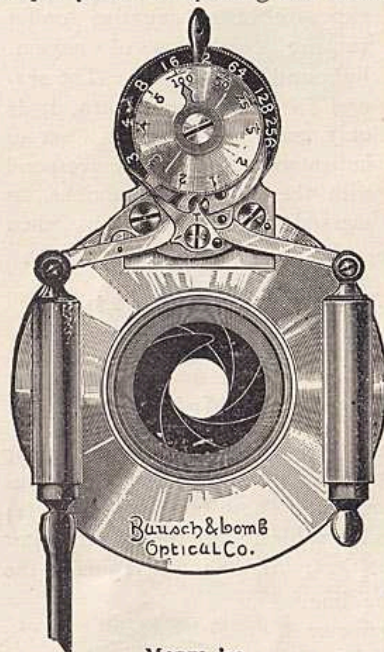
To calculate the correct exposure, one movement only is necessary. The movable scale of the instrument is turned until the actinometer time in seconds upon the exposure scale is opposite the diaphragm number of the plate. The correct exposure in seconds and fractions of seconds will be found against each stop, from the largest to the smallest.

Price, with full instructions.....	\$2.75
Box of Extra Sensitive Papers.....	.25
Extra Dials and Glasses.....	.50

Diaphragm Shutter.

TIME AND INSTANTANEOUS, WITH SILENT TIME ATTACHMENT.

THE advantages of the principles involved in the Diaphragm Shutter are so apparent that they have from the outset been fully appreciated. It requires little argument to show that the proper place for opening and closing a Shutter is in the optical axis of the Lens, and in both time and instantaneous photography, it is evident that this Shutter, starting its opening with a pin hole and gradually increasing to the size of stop for which it is set, and returning in the same manner, will give the effect of a small stop, *i. e.*, more depth and flatness.



MODEL '90.

(Cut two-thirds of actual 5 x 8 size.)

The makers have taken advantage of all the improvements, and offer the Model '90 with the confidence that it meets every condition. While the Shutter is in itself a nice piece of mechanism, the workmanship and finish are of the highest order.

The advantages of this Shutter over others are as follows:

There are no loose stops. The variation in size of stop is made by turning the black disk, which is supplied with a large index. Absolute control of time exposure. Large index giving correct indication of time, in seconds and fractions thereof. Entire independence of speed regulation from the influence of temperature or humidity. By turning a lever it is set for either

time or instantaneous exposure, and remains so until changed. The movement during exposure is almost absolutely free from concussion. The blades are changed from steel to hard rubber, so that there is no danger from rust. All parts which must be manipulated are placed at the front, easy of access. We guarantee that the Shutters and barrels are absolutely true and optically centered, whether arranged for our Lenses or others.

While we have sample barrels of almost all known Lenses, we find that there is a variation in the thread of almost all makes. We will therefore assume no responsibility in fitting the same, and recommend that the Lenses or Lens tubes be sent to us to be fitted.

PRICE LIST.

Size.	When fitted to Rapid Universal, Extra Rapid Universal with Regular Barrel and Diaphragm.	When fitted to Lenses of Other Manufacture, Leaving Barrel Intact.	Alvan G. Clark.
4 x 5	\$14.00	\$14.50	
5 x 8	15.00	15.50	} \$15.00
6½ x 8½	16.00	16.50	8½ } 16.00
8 x 10	17.50	18.00	10 } 17.50

Anthony's Drop Shutter.



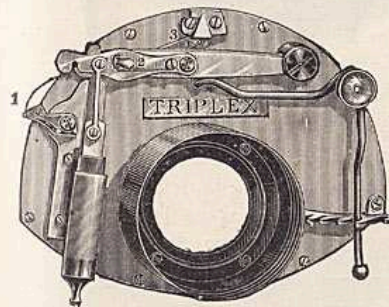
ONE of the neatest, simplest, and most practicable drop shutters ever made. It is adapted to either time or instantaneous movement by simply turning a small metal button, and the working of the shutter for either is simply perfect. The tension being obtained by the use of a rubber band, it may be set at great speed, or may be worked by gravity alone, if desired. This shutter will fit a tube 1¼ inches in diameter, or less.

PRICE.

Complete, with rubber tube and bulb, . . . \$2.00

The Improved Triplex Shutter.

THE Triplex Shutter, an improvement on the original and well-known Duplex, has been recognized during the past five years as the leading all around Shutter. The improved Triplex is in appearance similar to the regular Triplex, the features of the improvements being:



1. A NEW RELEASE, by which the spring in use is the only factor in the duration of exposure. This enables the operator to get a range of exposure from about 1/10th to 1/100th of a second. This maximum speed is from three to four times as great as that given by the great majority of shutters.

2. FOUR SPRINGS are furnished with each shutter, instead of two as formerly. The greatly increased range of speed alluded to above is made possible in this way.

3. A SPEED CARD, also containing directions for working, accompanies each shutter. This fills a long-felt want, and will greatly enhance the value of the shutter.

In the Triplex, the shutter opens with straight edges along a diameter of the lens, and, the exposure being made by two flies, or wings, in one uninterrupted pass-by movement, perfect freedom from vibration is secured, and a high rate of speed is obtained, making the shutter an instrument of unrivalled quality.

The Triplex Improved Shutter is fitted between the combinations of the lens, at the diaphragm, and an entirely new lens tube is attached, leaving the original lens tube intact. A rotary stop is fitted, having five openings. If desired, the shutter can be fitted with Waterhouse stops.

SIZES AND PRICES.

Size.	Aperture. Inches.	Price.	Extra or Aluminium.
00	3/4	\$14.00	\$4.00
0	7/8	15.00	4.00
0A	1	15.50	5.00
1	1 1/8	16.00	5.00
1A	1 1/4	16.50	6.00
2	1 3/8	17.00	6.00
2A	1 1/2	18.00	7.00
3	1 3/4	18.50	7.00
3A	2	19.00	8.00

Prices of larger sizes on application.

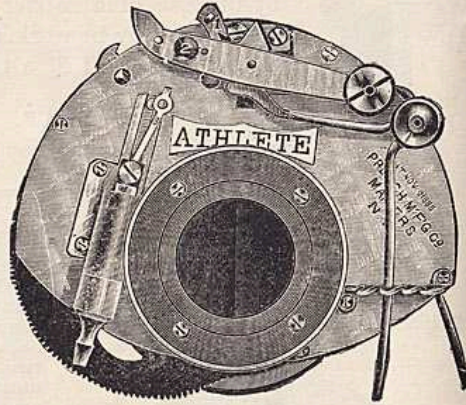
### The Athlete Shutter.

THE Athlete Shutter is unique in that it is unqualifiedly the only shutter made to work at the diaphragm rapidly enough for athletic, race-track, and general high-speed work. In appearance and essential principles it is like the Triplex, but is built more strongly throughout. It has two springs, one front and one back, and is fitted with a rotary stop inside shutter case, having four openings.

The Athlete attains a maximum speed of from 1-300 to 1-400 of a second, according to size. Using one spring on the front, the speed is, closely enough for all practical purposes, that of the Triplex.

(For working directions see our "Direction and Speed Card.")

Using both springs, the speed is somewhat more than twice that of the Triplex shutter, same size, using springs in the same relative position.

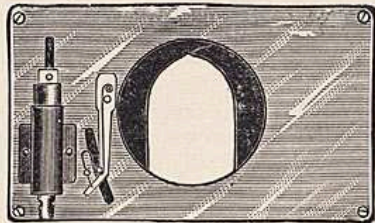


ATHLETE PRICE LIST.

Size No.	2	3	4	5	6	7	8
Aperture	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$
Price	\$20.00	\$21.00	\$22.00	\$23.00	\$24.00	\$25.00	\$26.00

### Low "Kazoo" Shutter, No. 1.

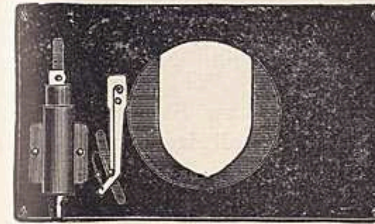
THE Low "Kazoo" Shutter No. 1 is a handsomely finished nickel plated shutter. Can be instantly changed from time to instantaneous exposure, by simply moving the small lever to one side. Gives the correct exposure, and requires no resetting after either time or instantaneous movement, as it sets itself after every exposure without opening the wings. This shutter is provided with an adjustable spring back that will fit any size of lens tube.



1	inch opening,	4	inches long by 2	wide	\$6 00
1	"	4	"	"	6 50
2	"	4	"	"	7 00
2	"	5	"	"	7 50
2	"	6	"	"	8 00

### Low "Kazoo" Shutter, No. 2.

THIS Low "Kazoo" No. 2 is designed to be placed on the inside of camera and attached to the front board. It can be operated



entirely from the outside of the camera and at any distance away. To change from time to instantaneous exposures, it is only necessary to push in or pull out a small brass pin, which passes through the front board and into the shutter. It will balance open for any length of time

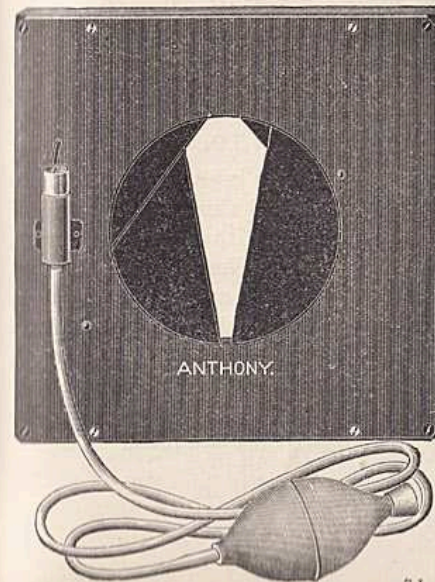
while focusing. The "Kazoo" gives the correct exposure, lighting the drapery or foreground most.

1	inch opening,	4	inches by 2	outside	\$6 00
1	"	4	"	"	6 50
2	"	4	"	"	7 00
2	"	5	"	"	7 50
2	"	6	"	"	8 00

### Low Portrait Shutter No. 5.

FOR those amateur photographers who practice portraiture at home, and who are equipped with a portrait camera, there is nothing better in the line of shutters than the No. 5 Low Compound Shutter. It is excellently made, works with pneumatic bulb, and is attached to the inner side of the front board, thus being out of sight of the sitter.

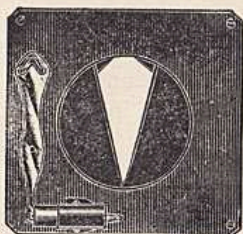
This shutter is also excellently adapted for time view work, for copying cameras, and, indeed, for every purpose where a time exposure is desired.



PRICES.

$1\frac{1}{2}$	in. opening,	3	ins. square,	\$4.00
$1\frac{3}{4}$	"	$3\frac{1}{2}$	"	4.00
2	"	4	"	4.50
$2\frac{1}{2}$	"	$4\frac{3}{4}$	"	4.50
3	"	5	"	5.00
$3\frac{1}{2}$	"	$5\frac{3}{4}$	"	5.50
4	"	$6\frac{1}{2}$	"	6.00
$4\frac{1}{2}$	"	$7\frac{1}{2}$	"	6.50
5	"	$8\frac{1}{2}$	"	7.00

**Low Shutter, No. 6.**



THE Low Shutter No. 6 is a very simple, well made, and nicely finished shutter, having the special advantage of a very large opening in a small shutter. Works lightly and easily, and gives the correct exposure. For cameras having small front-boards the Low Shutter No. 6 is especially adapted. The small sizes are admirably adapted for time view work. To change from

time to instantaneous exposures it is only necessary to push in, or pull out, a small brass pin, which passes through the front board into the shutter.

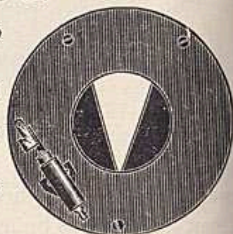
1 1/2 inch opening, 3 inches square.....\$5.50 | 2 inch opening, 4 inches square.....\$6.00  
 1 3/4 " " 3 1/2 " " ..... 5.50 | 2 1/2 " " 4 1/4 " " ..... 6.00

**Low View Shutter, No. 8.**

THE Low View Shutter, No. 8, is designed to make only time exposures.

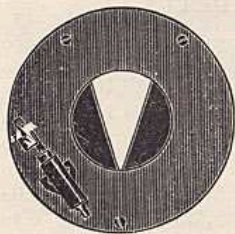
It is simply constructed and is a very practical shutter. It is nicely finished with Japan front, with brass trimmings and cherry finished back.

For work requiring only time exposure, it is a first-class shutter.



	Price,				\$4.00 each.
1 1/2 inch opening,	.	.	.	.	3 3/4 inches round.
1 3/4 " " "	.	.	.	.	4 1/4 " " "
2 " " "	.	.	.	.	4 3/4 " " "
2 1/2 " " "	.	.	.	.	5 " " "
2 3/4 " " "	.	.	.	.	6 3/4 " " "

**Low View Shutter, No. 10.**

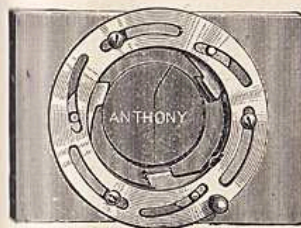


THE Low Shutter No. 10 is simply constructed and is a very practical shutter. It is nicely finished with Japan front, with brass trimmings, and cherry finished back. There are now many hundred of them in use which are giving universal satisfaction and splendid results. They can be readily changed from time to instantaneous exposures, by moving the brass lever to one side.

PRICE, \$6.00 EACH.

1 1/2 inch opening.....	3 3/4 inch round.
1 3/4 " " .....	4 1/4 " " "
2 " " .....	4 3/4 " " "
2 1/2 " " .....	5 " " "
2 3/4 " " .....	6 " " "

**The Low Adjustable Back**

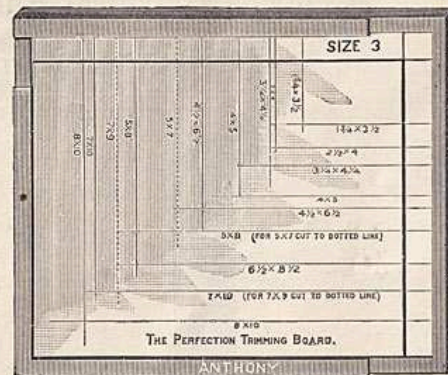


IS an automatic device for holding lens in the shutter. All Kazoo Shutters No. 1, and Low Shutters Nos. 8 and 10, are provided with this back. When ordered separately, \$1.00.

Size of Shutter.	Will fit Lens	Size of Shutter.	Will fit Lens
1 1/2 inch opening.	1 1/2 to 1 3/4 inches.	2 1/4 inch opening.	2 1/4 to 2 3/8 inches.
1 3/4 " " "	1 3/4 " 2 1/8 " "	2 1/2 " " "	2 1/2 " 2 7/8 " "
2 " " "	2 " 2 3/8 " "		

**The Perfection Trimming Board.**

AS may be seen from the cut, the trimming board consists of a solid wooden tablet with raised edges, containing a card on which are printed diagrams of all the different sizes of cards in ordinary use. This diagram is covered with a stationary thick glass, on which is a movable glass pattern. The print to be trimmed is laid in place under this glass pattern, which is held firmly against the raised edge of the board, to prevent its slipping, and a sharp knife or straight trimmer trims two sides, when the print is reversed and the other two sides cut. The operation is quick, sure and easy. This is made in three sizes, as follows :



- No. 1. For four sizes, from Petite to 4 x 5 inclusive.....Price, \$0.70
- " 2. " seven " " " 5 x 8 " ..... " 1.00
- " 3. " eleven " " " 8 x 10 " ..... " 1.25

**Yellow Screens for Use with Orthochromatic Plates.**

FOR giving the true color value to copies of oil paintings, colored pictures, and even views of nature, this article is a positive necessity. As it increases the time of exposure from six to seven times that required when the screen is not used, it is seen at once that it is unsuited to instantaneous photography.

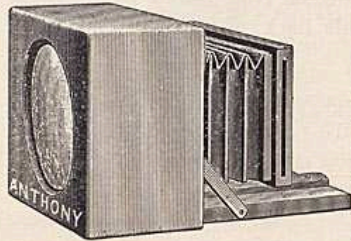
The Yellow Screen can be put on the inside of the front board of the camera, attached by screws or tacks, or, better yet, arranged to fit into a rabbet when its use is desired. It is always put in position before focusing.

PRICE.
Yellow Screen, 2 1/2 x 2 1/2 inches.....\$1.00
" " 3 1/2 x 3 1/2 " ..... 1.50

Special sizes made to order if desired.

### Anthony's Lanternoscope.

**T**HIS is a novel and beautiful contrivance for viewing lantern slides without the aid of the lantern.



It is, as shown in cut, provided with a magnifying lens at one end, after the manner of the graphoscope, while the slide is inserted in the other end against a ground glass, and may be focused by means of the extension bellows. When not in use it folds into small compass.

It is made in finely finished mahogany, and is an instrument which every amateur

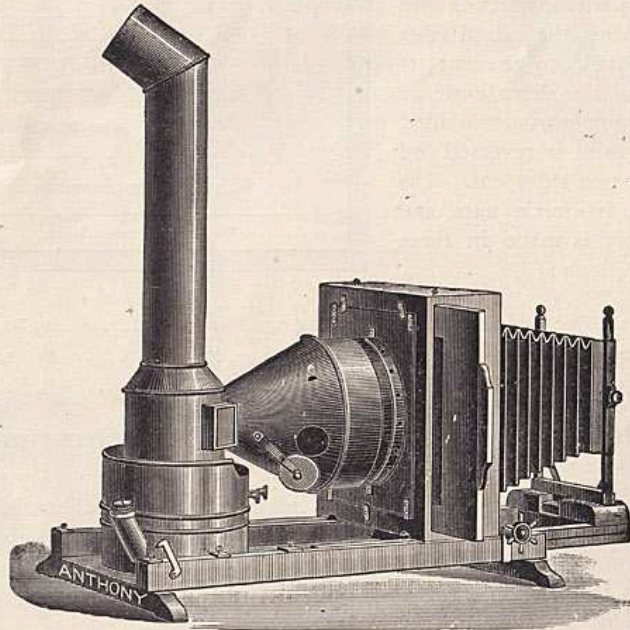
should possess.

Price.....\$10.00

### Cooper's Universal Enlarging Lantern.

Patented Cooper & Lewis October 11, 1887, No. 371,252.

T. H. McAllister April 6, 1886, No. 339,451.



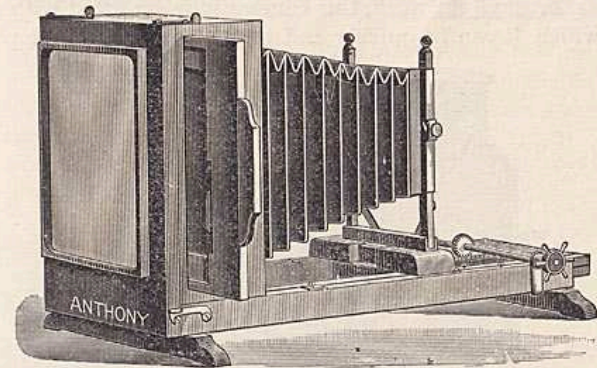
Above shows it as in use with *artificial* light.

**T**HE CUTS give an admirably clear idea of the Universal Lantern, and at a glance any one acquainted with the mechanism of projecting lanterns will see its advantages. With only a passing reference

to the camera and front, the use of which is obvious, your attention is called to the apparatus for illumination, which is by all odds the most important feature of any enlarging lantern.

The lamp, which is intended for use with kerosene, is provided with a double-wick burner, both flames emerging through a single aperture in the dome. This feature increases the volume of light two-fold; the burner is provided with a close-fitting chimney-base fitted with an aperture covered with non-actinic glass, intended both for dark room illumination and also for observing the height of the flames. A conical light conductor connects the lamp with the condensing lenses, and is made to telescope so as to adjust the light accurately to the focus of the condensers; this light conductor has an aperture at the side covered with a movable metallic disk, and is intended to admit of the operator finding the centering point of his flame on the condensers; this he will see at a glance by the reflector. The lamp is not rigid, but can be revolved so as to bring the flame in any desired position. Some negatives require a more intense light than others, and experience will show how to arrange the light for any particular occasion.

The form of this lantern is such that all heat passes upwards through the chimney, and as there is no boxing around the apparatus it is always cool, and all risk of breaking lenses or negatives is avoided. The change from the use of artificial light to daylight is better shown in the cut than described in writing. With this lantern and a half-inch stop in a half-size portrait lens, life-sized enlargements from cabinet negatives may be easily made with Anthony's Reliable Bromide Paper in from thirty-five seconds to one minute, according to density of negative.



Cooper Lantern as transformed into a *Daylight Enlarging Camera*.

The design of this lantern is the result of long practical experience with various methods of illumination for enlarging, and we can guarantee its giving results as perfect as the electric light at a cost that makes comparison ridiculous. This lantern is also admirably suited for slide projection, and is therefore of double value to societies and colleges.

*Catalogue for Amateurs.*

Any double combination lens may be used as an objective with this lantern—a portrait lens for enlarging portraits and landscape lens for landscapes.

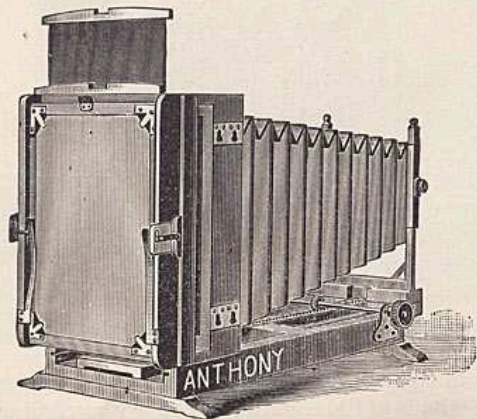
This lantern may be transformed into an 8 x 10 portrait or copying camera by the addition of an adapter, double dry plate holder, and ground glass, at an extra expense of \$10.

Price, without objective (fitted with two 5½-inch condensers),	.	\$40.00
“ “ “ 8 “ “	.	60.00
“ “ “ 9 “ “	.	80.00
“ “ “ 10 “ “	.	100.00

FOR DAYLIGHT ENLARGING.—Remove the lamp and condensers, rack the front inward as far as it will come, then raise the back of the bellows-bearing frame from its position to the back of the bed-board on which it will be securely held by the screw heads which fit into the key-hole slots corresponding. Remove the front in the same way and set it back on the screws designed for it, which will be found on the movable bed operated by the rack work. Attach the ground-glass frame to the back and the instrument is ready for use. A dark room with an aperture in the window allowing the ground glass end to fit firmly so as to exclude all outside light, but allowing an unobstructed view of the sky, is the most satisfactory.

If you cannot get a clear view of the sky use a mirror at a proper angle to reflect the sky above. White card-board reflectors may be used, but nothing equals the mirror. A shelf should be fastened to the window to support the weight of the camera.

USED AS A COPYING OR PORTRAIT CAMERA.—Besides the double use for artificial or daylight work, this camera may be fitted with an attachment by which it can be quickly and easily adapted to the purposes of



Cooper Lantern as transformed into Copying or Portrait Camera.

a copying or portrait camera. The camera being put together as in use for daylight enlarging, the ground glass and carrier are removed, and

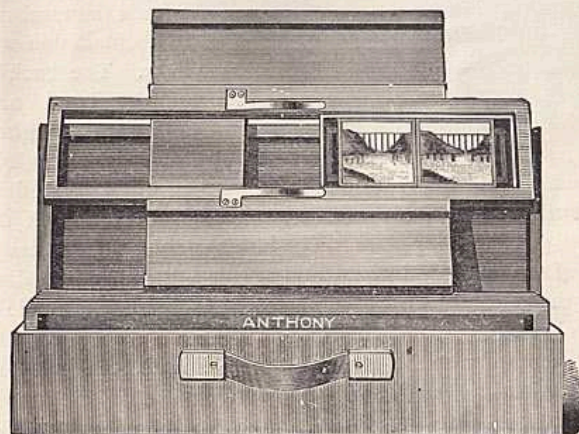
*Catalogue for Amateurs.*

in their place a regular camera back is buttoned on. This is provided with a double dry plate holder, 8 x 10, which is slid into position under the ground glass, as shown in the cut. For ordinary work up to 8 x 10 in the gallery this is as good as any camera made.

Price of Attachment with 8 x 10 Double Dry Plate Holder, in addition to cost of  
Lantern, . . . . . \$10

**Magic Lantern Attachment**

For the Cooper Lantern.



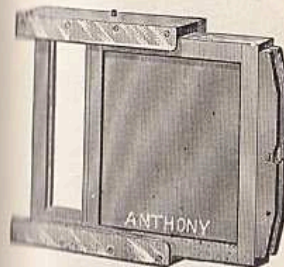
THE ABOVE CUT represents the attachments which may be used with the Cooper Lantern for the exhibition of slides of views or scientific subjects, and makes the apparatus complete and specially suited to the use of schools, colleges and societies.

Consists of frame, 6 carriers and box. Price, \$7.50.

**Kodak Adapter.**

- For Use of Glass Plates in the Folding Kodak.

CONSISTS of a false back which is to be inserted in place of the roll holder, and into which the ordinary plate holder fits, the same as in a regular camera, the adjustment being such that the plate comes into the same plane of focus as is required with the roll holder.



Price, 4 x 5..... \$2.00