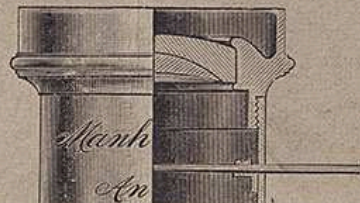


MANHATTAN OPTICAL CO.,

MANUFACTURERS OF



SPECIAL NOTICE.

In order to reduce our large stock of Cameras,
we will allow a discount of 25 per cent. on within
prices on same until August 1st, 1896.
The above applies to Cameras only.

MANHATTAN OPTICAL CO., Cresskill, N. J.

LENSES, CAMERAS AND SUPPLIES.

MANHATTAN OPTICAL CO.,

CRESSKILL, NEW JERSEY.

APRIL, 1896.

CITY SHOWROOM:

1209 BROADWAY, NEAR 29TH ST.

NEW YORK.

TERMS.

All prices quoted are net and include proper packing and boxing. All goods are perfect when they leave our works, are packed with the utmost care, and we cannot, in consequence, be held responsible for any breakage or damage during transportation.

Where customers are unknown to us and order goods sent C. O. D., they must remit with the order sufficient to cover express charges both ways.

Packages under four pounds in weight can be sent by mail, but, unless registered, are not receipted for, and if shipped in this manner, the risk of loss in transit is the purchaser's.

Orders for shipment by mail must include the necessary postage, otherwise goods will be forwarded by express.

Lenses only are sold with privilege of ten days' trial.

Remittance should be made by draft on New York, registered letter, express or post office money orders, payable at New York City, N. Y., or Cresskill, N. J., offices.

Please give full shipping instructions with every order.

NOTE.—All previous catalogues, prices, etc., are hereby withdrawn.

APRIL, 1896.

Address all communications to

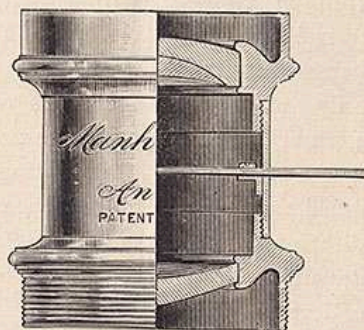
MANHATTAN OPTICAL CO.,

Cresskill, N. J.

LP1370

MANHATTAN OPTICAL CO.,

MANUFACTURERS OF



PHOTOGRAPHIC

LENSES, CAMERAS AND SUPPLIES.

MANHATTAN OPTICAL CO.,

CRESSKILL, NEW JERSEY.

The Manhattan Cameras.

Our Cameras are all manufactured under our own supervision, of first quality wood, thoroughly kiln dried, are well and accurately put together, and are in all respects of superior workmanship.

They are made to last, and if properly used, will do so for years.

They are fitted with lenses of our own manufacture, made from the highest grade optical glass, manufactured especially for us by the leading glassworks of Europe.

We are the only camera manufacturers who make their own lenses. We can thus guarantee our entire product, and the highest standard of excellence is thereby maintained.

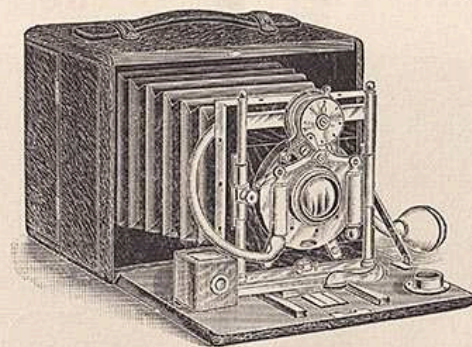
We have simplified the mechanism of all the cameras, so that it is all but impossible to disarrange it, and the taking of a picture with cameras of our make is a pleasure instead of the laborious attention to details and the careful recollection of the rules of procedure required by the old time machines of elaborate and often unnecessary mechanism. The fewer the parts, the less the chance of their getting out of order, while the result is always certain and satisfactory.

Explicit printed instructions accompany every camera. The various steps for taking a photograph are clearly and concisely enumerated in their proper order, and very successful pictures are readily taken by the veriest beginner. Experience is therefore desirable only, not essential.

We have in every case fitted them with the lens best adapted to the respective box, and amateurs wishing to substitute any other lens are reminded, among other considerations, that the focal length required by a lens must not be lost sight of.

All our cameras and lenses are tested by experienced photographers, and photos are taken with every one—thus our goods are in perfect working order when sent out.

The "Wizard" Camera.



The "Wizard" Camera is ideally a "thing of beauty"; is the most ornate camera made.

It is fitted with our Rapid Rectilinear Lens (see page 30), working at high speed and constructed for highest results. Has a Bausch & Lomb Patent Iris Diaphragm Shutter, working automatically at a speed of from three seconds to the one-hundredth part of a second.

The "Wizard" has a combination rising and falling front, which may be operated also either in a vertical or horizontal position. It has a removable front board, permitting the substitution of another lens very readily; has a swing back of improved pattern, easily adjusted; is equipped with our new brilliant finder, containing a series of lenses instead of ground glass for showing the image. It has also an accurately scaled focussing dial plate and a spirit level to aid in securing parallel lines.

The Camera carries two double plate holders. It is made of highly seasoned cherry, hand-polished throughout. All the metal parts are of triple nickel plate, and the camera is covered with the finest red or black Russia leather.

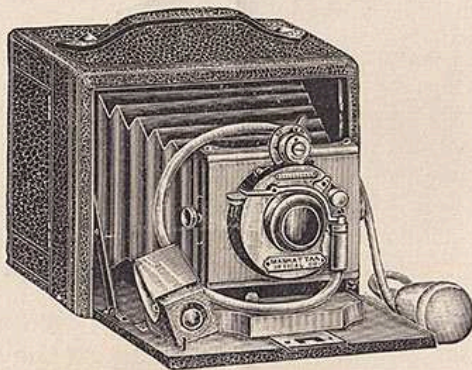
This Camera is not adapted for use of film roll holders.

PRICE.

Wizard, including two Double Plate Holders, 4 x 5.....	\$40.00
" " " " " " " " 5 x 7.....	60.00
Extra Double Plate Holders, 4 x 5.....	1.00
" " " " " " " " 5 x 7.....	1.25

THE "BO-PEEP" CAMERA.

Size of Camera
for 4 x 5 plates,
5½ x 6 x 7.



Weight,
2½ pounds.

(Showing Camera "A.")

ADAPTED FOR ROLL HOLDER OR DRY PLATES.

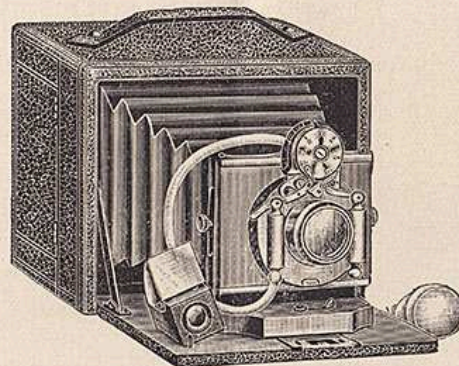
A most complete and elaborate camera, embracing positively all the improvements known to modern photography, made of the best material, and finished in the most elaborate manner throughout.

We have placed in this camera lenses of the highest quality, embracing all requirements for executing the finest class of work.

We offer the choice of three lenses and two kinds of shutters (see following page), thus offering the amateur a variety found in no other cameras.

The "Bo-Peep" has a combination rising and falling front, which can be worked in either a vertical or horizontal position; this latter feature is one possessed by only our cameras. The swing back is of improved pattern, easily adjusted. Is fitted with an accurately scaled focussing dial-plate, reversible view finder and two tripod sockets. This camera carries three featherweight plate holders and is highly polished throughout; all trimmings are of burnished brass, and the covering is of the finest morocco leather.

Prices of the Bo-Peep Camera for Pictures 4 x 5 Inches.

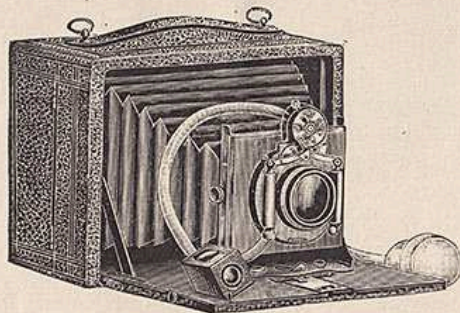


(SHOWING CAMERA "D.")

A	Bo-Peep 4 x 5 Camera, fitted with our Rapid Achromatic Lens (see page 24) and a Gundlach Optical Company's Iris Diaphragm Shutter, with one Plate Holder	\$15.00
B	Bo-Peep Camera, same as above, but fitted with our New Patented Anastigmat Lens (see page 26) ..	20.00
C	Bo-Peep 4 x 5 Camera, fitted with our Extra Rapid Rectilinear Lens (see page 30) and a Gundlach Optical Company's Iris Diaphragm Shutter.....	25.00
D	Bo-Peep same as C but fitted with a Bausch & Lomb Patent Iris Diaphragm Shutter.....	30.00
E	Bo-Peep 4 x 5 Camera, fitted with the Goerz Double Anastigmat Lens No. 1, Series III., F.7.7, and Bausch & Lomb Iris Diaphragm Shutter.....	75.00
	Additional Plate Holders for above.....	1.00
	Roll Holder (empty) for forty-eight exposures.....	10.00
	Film for forty-eight 4 x 5 exposures	3.00

THE BO-PEEP CAMERA,

FOR 5 x 7 AND 6½ x 8½ PICTURES.



Size of 5 x 7
only 5¼ x 7 x 9.

Size of 6½ x 8½
only 6¼ x 8½ x 10¼.

(Showing Camera C.)

Adapted for both Dry Plates and Rollholder.

Essentially the same as the 4 x 5 Bo-Peep Camera described in previous pages, but elaborated in detail. It has the same rising and falling front board, swing back, focussing dial and reversible view finder.

The ground glass screen is readily detachable if rollholder is to be used.

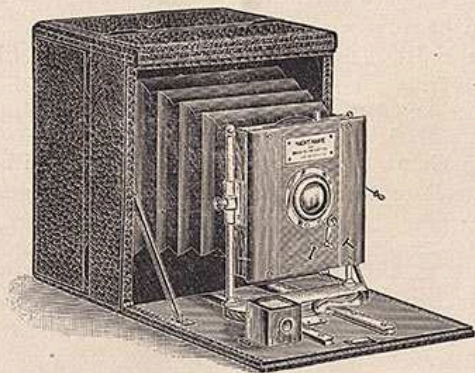
The special feature of this Camera which will recommend it to all experienced amateurs is the unique and delicate rack and pinion movement for the accurate focussing generally used only on professional boxes. This movement is hidden in the bed of Camera, operates only for the distance required by the various foci of the lens, and is remarkably delicate.

Prices of the Bo-Peep 5 x 7 and 6½ x 8½ Cameras.

A	Bo-Peep Camera fitted with our Rapid Achromatic Lens (see page 24), and Gundlach Optical Company's Iris Diaphragm Shutter, with one Plateholder.	
	5 x 7 Size	\$20.00
	6½ x 8½ Size	30.00
B	Bo-Peep Camera same as above, but fitted with our New Patented Anastigmat Lens (see page 26), with one Plateholder.	
	5 x 7 Size	\$25.00
	6½ x 8½ Size	35.00
C	Bo-Peep Camera same as B, but with Bausch & Lomb Patent Iris Diaphragm Shutter, with one Plateholder.	
	5 x 7 Size	\$30.00
	6½ x 8½ Size	40.00
D	Bo-Peep Camera fitted with our Extra Rapid Rectilinear Lens (see page 30), and Gundlach Optical Company's Iris Diaphragm Shutter with one Plateholder.	
	5 x 7 Size	\$35.00
	6½ x 8½ Size	45.00
E	Bo-Peep Camera same as D, but fitted with Bausch & Lomb Patent Iris Diaphragm Shutter with one Plateholder.	
	5 x 7 Size	\$40.00
	6½ x 8½ Size	50.00
F	Bo-Peep Camera fitted with the Goerz Double Anastigmat Lens. Series III. F: 7. 7. and Bausch & Lomb Patent Iris Diaphragm Shutter, with one Plateholder.	
	5 x 7 size	\$ 90.00
	6½ x 8½ Size	120.00
Additional Plateholders for above.		
	5 x 7 Size	\$1.25
	6½ x 8½ Size	1.50
Roll Holders (Empty) for 48 Exposures.		
	5 x 7 Size	\$12.50
	6½ x 8½ Size	16.00
	Spool of Film for 48 Exposures, 5 x 7.....	4.00
	" " " " " " 6½ x 8½	8.00

THE NIGHT-HAWK FOLDING CAMERA.

For Pictures 4 x 5 Inches.



NOW FITTED WITH OUR NEW ANASTIGMAT LENS.

For Hand or Tripod.

The Night-Hawk Folding Camera is the only hand camera having a reversible back enabling the operator at will to change the plate from a vertical to a horizontal position.

We have placed in this camera our new Anastigmat Lens (see page 26) of high power and speed, being the best adapted for general work, and have fitted same with a time and instantaneous shutter, regulated by spring release of delicate mechanism, very simple and not likely to get out of order.

A rising and falling front is provided, moving easily on brass guide posts; also a swing back which insures perfectly rectilinear lines in photographing high elevations. The camera can be focussed with either ground glass or focussing dial and has an accurate view finder attached to bed.

The woodwork is of mahogany, well jointed, and the camera is covered with black morocco leather; all mountings are of highly polished brass. It carries two double plate holders and can be adapted to roll holder where the use of film is desired.

PRICE.

4 x 5, with one Double Plate Holder ~~\$15.00~~ ^{12.00}

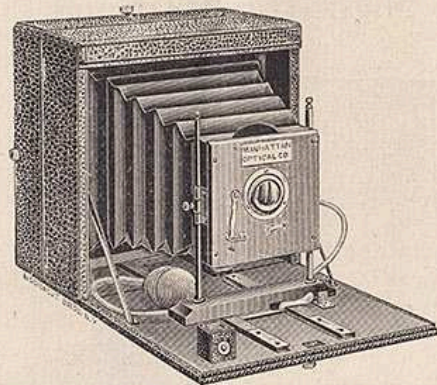
EXTRA DOUBLE PLATE HOLDERS.

4 x 5, each \$1.00

4 x 5, Roll Holders for 48 Exposures (empty) 10.00

Film for 48 Exposures 3.00

The 5 x 7 Night-Hawk Folding Camera.



The same as the Night-Hawk Folding Camera described on preceding page, but for 5 x 7 pictures.

Is fitted with our New Patented Anastigmat Lens (see page 26) and has a time and instantaneous shutter with pneumatic release. Has a reversible back.

PRICES.

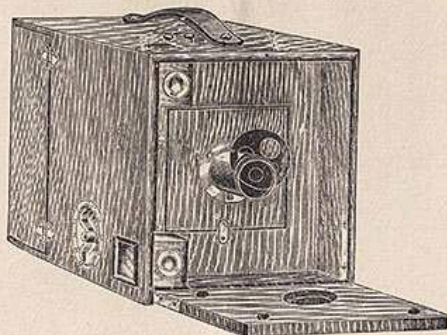
A Fitted with New Patented Anastigmat Lens and pneumatic shutter, with one plateholder \$25.00

B Same as above, but fitted with Gundlach Optical Co.'s pneumatic release Iris Diaphragm Shutter, with one plateholder 30.00

Additional plateholders \$1.25 each.

The Improved "1896 Night-Hawk" Hand Camera.

Size
6 x 6½ x 10 inches.



For picture
4 x 5 inches only.

(Showing Camera "A.")

The latest detective hand camera, embracing all improvements. Is fitted with our Rapid Achromatic Lens (see page 24), and a silent safety shutter, giving both time and instantaneous exposures. Is the best suited for general snap shot work, as it is always ready and is operated in but two movements. Can be readily fitted with other lenses.

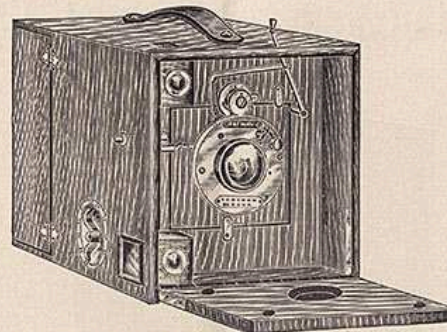
This Camera has two view finders; also two tripod sockets for either horizontal or vertical pictures; also ground glass screen in back for accurate focussing, which is indicated by a circular plate, accurately scaled on the side of box. It carries three double plate holders, or a film roll holder of 48 exposures.

It is made of highly polished hardwood, has burnished brass trimmings and padded leather handle for carrying.

N. B.—The plate holders of this camera have the slide removable on the 5-inch side, and cannot in consequence be used with any other of our cameras.

This point must be specially mentioned in ordering plateholders.

The Improved "1896 Night-Hawk" Hand Camera.



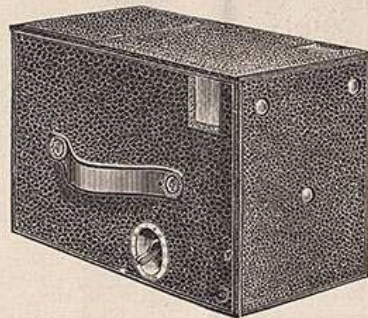
(SHOWING CAMERA "E.")

PRICES.

A	The Improved 1896 Night Hawk, fitted with our Rapid Achromatic Lens (see page 24) having a rotary diaphragm, and our new Silent Safety Shutter with 1 plate-holder	\$10.00
B	Same as above, but with Gundlach Optical Co.'s Iris Diaphragm Shutter	15.00
C	Same as B, but with our New Patented Anastigmat Lens (see page 26)	20.00
D	Same as C, but with Bausch & Lomb Iris Diaphragm Shutter	25.00
E	Same as B, but with our Extra Rapid Rectilinear Lens (see page 30)	25.00
F	Same as D, but with our Extra Rapid Rectilinear Lens (see page 30)	30.00
	Any of the above Cameras can be had, covered in first quality black grain leather, additional	2.50
	Extra plate-holders for above	\$ 1.00 each.
	Roll-holder (empty) for 48 Exposures	10.00
	Spool of Films, 48 Exposures	3.00

Manhattan Improved Hand Camera.

For 4 x 5 inch pictures.



Adapted for Roll Holder or Dry Plates.

A Hand Camera especially arranged for use either with roll holder or dry plates at the will of the operator. It is fitted with our highest grade Rapid Achromatic Lens and safety time and instantaneous shutter, insuring good definition and great speed.

The circular focussing dial at side of camera is accurately scaled. It has two view finders, also two tripod plates, enabling the camera to be used in either a vertical or horizontal position; is highly finished throughout, covered with the best morocco leather, and will carry three double plate holders.

PRICE.

Camera complete with one Double Plate Holder	\$12.00
Roll Holder (empty) for 48 exposures	10.00
Films for 48 exposures	3.00
Extra Double Plate Holders, each	1.00

Developing and Printing Outfits.

For the "Wizard," "Bo-Peep," "Night-Hawk Folding" and "The 1896 Improved Night-Hawk Hand" Cameras.

We will furnish the following complete outfits for developing, printing and mounting pictures, only if purchased with one of our cameras, at the following prices:

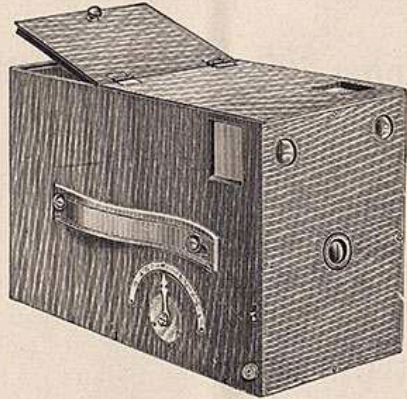
For 4 x 5 Cameras	\$5.00
For 5 x 7 "	7.00
For 6½ x 8½ "	8.50

These outfits include the following, listed separately at—

	FOR 4 x 5 CAMERAS.	FOR 5 x 7 CAMERAS.	FOR 6½ x 8½ CAMERAS.
1 Dozen Dry Plates	\$.65	\$1.10	\$1.65
1 Eight-oz. bottle N. H. Developer ..	.25	.25	.25
1 Eight-oz. bottle Floragraph Toning Solution .....	.30	.30	.30
1 Dozen sheets Floragraph Paper .....	.25	.40	.65
2 Japanned Developing Trays .....	.40	.50 (rubber)	1.70
1 Printing Frame .....	.38	.50	.60
25 Card Mounts .....	.20	.40	.60
1 Jar Paste for mounting .....	.20	.20	.20
1 lb. Hyposulphite Soda .....	.10	.10	.10
1 Manhattan Brass Ruby Lamp	1.00	1.00	1.00
1 Four-oz. Glass Graduate .....	.30	.30	.30
1 Tripod	2.00	3.50	3.50
	<hr/> \$6.03	<hr/> \$8.55	<hr/> \$10.85

Securely packed in wooden case.

THE NIGHT-HAWK HAND CAMERA.



Especially adapted for Beginners in Photography.

The well-known **Night-Hawk** Camera is acknowledged to be the cheapest 4x5 hand camera on the market and will take a photograph equal to many claiming to be of higher grade and much more expensive.

The **Night-Hawk** is fitted with an excellent achromatic lens of our own manufacture; the shutter is adapted for either time or instantaneous exposures, is very simple, easily worked and will not get out of order.

It has two view finders and a brass focussing dial; the former enabling the operator to view the subject to be photographed either vertically or horizontally, and the latter indicating the number of feet the camera should be placed from the object to be photographed. Each camera is fitted with a stationary ground glass screen, full size of plate, for focussing for time exposure.

This camera is not a toy, but is substantially and durably constructed of well seasoned oak, highly polished; it can also be had in morocco leather covering.

PRICE.

Polished Antique Oak (including one Double Plate Holder).....	\$6.00
Morocco Leather Covering " " " " " "	7.00
Extra Double Plate Holders.....	each 1.00

The "Night-Hawk" will carry three Double Holders.
Explicit printed instructions accompany each Camera.

The Night-Hawk Outfit, \$3.00.

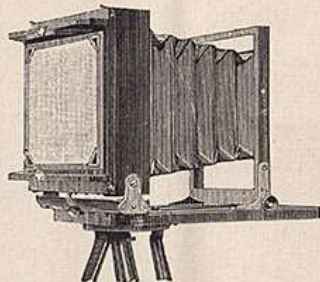
For Developing and Printing!

We will furnish the following complete outfit for developing, printing, and mounting pictures, aggregating \$3.63, for \$3.00, if purchased with one of our "Night-Hawk" Oak \$6.00, or leather-covered \$7.00 Cameras. This outfit will not be sold at this reduced price if purchased separately.

1 Dozen Dry Plates.....	\$.65
1 Eight-oz. bottle "Night-Hawk" Developer.....	.25
1 Dozen sheets Floragraph Paper.....	.25
1 Eight-oz. bottle Floragraph Combined Toning and Fixing Bath..	.30
2 Japanned Developing Trays.....at .20	.40
1 Printing Frame.....	.38
25 Card Mounts.....	.20
1 Jar of Paste for mounting.....	.20
1 lb. Hyposulphite of Soda.....	.10
1 Ruby Lamp.....	.60
1 Four-oz. Glass Graduate.....	.30
	<hr/>
	\$3.63

Securely packed in wooden case.

THE MANHATTAN TRIPOD CAMERA.



This camera is especially arranged for field work and has many improvements over other tripod cameras which will especially appeal to the artist. It is very light and compact, but perfectly rigid in construction, enabling the operator to use the camera in any position without danger of vibration.

This camera is made of selected mahogany with highly polished brass trimmings. It has a forward focus, with rack and pinion, and the front is held perfectly rigid by means of a small brake. It has a sectional bed, rising and falling front which is held in place by a unique catch.

The reversible back is so arranged that plate holder slide can be drawn from top, bottom or either side. The "Manhattan" is made both single or double swing, which can be adjusted with the greatest possible ease to the operator.

PRICE.

Price includes canvas carrying case and one double plate holder, but no lens nor tripod.

SIZE OF VIEW.	SINGLE SWING.	DOUBLE SWING.
6½ x 8½	\$20.00	\$22.00
8 x 10	22.00	24.00

MANHATTAN DOUBLE PLATE HOLDERS.

6½ x 8½	\$1.50
8 x 10	2.00

NOTE.—We recommend for the above camera our New Anastigmat, Emil, Rapid Rectilinear or Daisy Lenses.

Manhattan Ruby Lamp.



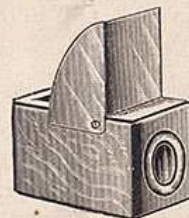
Made of highly polished brass and having perfect ventilation.

The neatest and most compact lamp manufactured.

For use of kerosene or any illuminating oil.

Price, brass finished	\$1.00
" " nickered	1.50

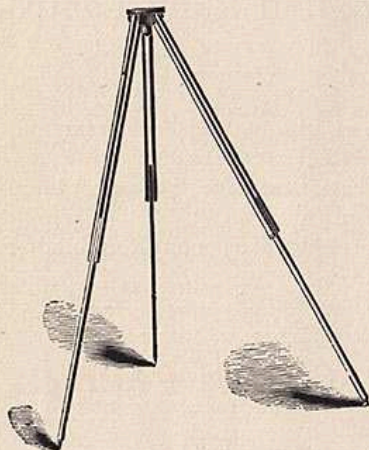
Manhattan Brilliant View Finder.



Has a series of high grade lenses in place of the usual ground glass and gives, therefore, a highly illuminated miniature of the negative. Excels anything heretofore offered. The lenses are set in a polished mahogany box, which is readily attachable to the camera by a reversible brass catch permitting either vertical or horizontal views.

Price, complete for 4 x 5	\$1.00
" " " 5 x 7, 6½ x 8½	1.50

The Manhattan Tripods.

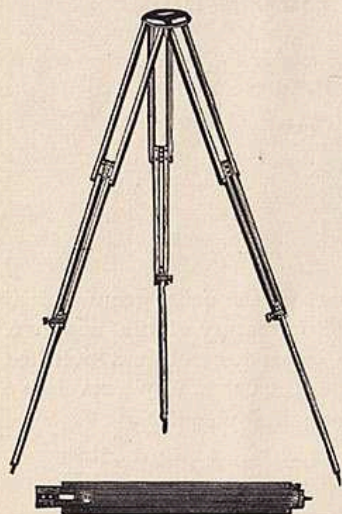


No. 1.

SUITABLE FOR 4 x 5 TO 6½ x 8½ CAMERAS.

Has iron head with brass thumb screw, which is not removable, and therefore cannot be lost. Legs of best ash, finely polished, and as light as possible. Will fold once to half length.

Price.....\$2.00



No. 2.

SUITABLE FOR 5 x 7 TO 8 x 10 CAMERAS.

In three sections—the lowest one sliding—and thereby permitting ready adjustment. Is perfectly rigid. When folded is but 22 inches long, and very light.

Price.....\$8.50

DRY PLATES.

ALL BRANDS, SUCH AS CARBUTT, CRAMER, SEED, WUESTNER, STANLEY, ETC.

3¼ x 4¼	per dozen	\$ 0.45
4 x 5	"	.65
5 x 7	"	1.10
5 x 8	"	1.25
6½ x 8½	"	1.65
8 x 10	"	2.40
10 x 12	"	3.80
11 x 14	"	5.00
14 x 17	"	9.00
16 x 20	"	12.50
20 x 24	"	18.50

THE FAVORITE FLORAGRAPH PAPER.

READY SENSITIZED CELLOIDINE PAPER, SPECIALLY ADAPTED FOR THE AMATEUR'S USE.

Gives superior results with simple manipulation.

PRICE LIST.

Floragraph Celloidine Paper.

SIZE.	PER DOZ.	PER GROSS.
3¼ x 4¼	\$0.20	\$ 1.50
4 x 5	.25	2.00
3¾ x 5½ (Cabinets)	.25	2.00
5 x 7	.40	3.00
5 x 8	.45	4.00
6½ x 8½	.65	6.00
8 x 10	.90	8.00
10 x 12	1.25	12.00
11 x 14	1.50	15.00
16 x 20	3.00	30.00
20 x 24	4.00	42.00

The Well-Known Manhattan Solutions.

FLORAGRAPH.

COMBINED TONING AND FIXING BATH.

Having no equal for *Floragraph* and all *Gelatine Papers*. Gives no muddy tones. No prints turning yellow nor becoming sticky.

TONO-COLLODIO.

FOR ALL BRANDS OF COLLODION PAPERS.

Tones and fixes in one bath. No limping nor curling. Gives clear, high lights and extreme brilliancy.

GELATINO.

FOR ALL BRANDS OF GELATINE PAPERS.

Tones and fixes in one bath. Equalled only by the professional's best baths.

PRICE.

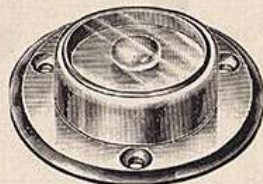
8 oz. bottle	30 cents.
16 " "	50 "

CONCENTRATED DEVELOPER.

Being highly saturated solution capable of being used over and over again. By far the cheapest developer offered.

8 oz. bottle.....	each, 25 cents.
-------------------	-----------------

SPIRIT LEVELS.



To attach to camera beds ; are of nickered metal mounting.

Price	each, 75 cents.
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SUNDRIES.

Developing Trays, Japanned Tin, for 4 x 5, each.....	\$0.20
" " " " " 5 x 7, "25
" " " " " 6½ x 8½, "30
" " Rubber, " 4 x 5, "50
" " " " " 5 x 7, " .....	.60
" " " " " 6½ x 8½, " .....	.85
" " " " " 8 x 10, "	1.15
" " " " " " Compressed Fibre," 4 x 5, " .....	.28
" " " " " " 5 x 7, " .....	.56
Printing Frames, 4 x 5 .....	.38
" " 5 x 7 .....	.50
" " 6½ x 8½ .....	.60
" " 8 x 10 .....	.75
Hyposulphite of Soda, per lb.....	.10
Glass Graduates, 4 oz.....	.30
Tripod Brass Plates .....	.25
Glass Funnels, 1 pt .....	.25
Camel's Hair Duster, 2 inches wide.....	.50
Negative Racks.....	.50
Hard Rubber Fixing Baths, 4 x 5	2.00
" " " " 5 x 7	2.25
" " " " 6½ x 8½	3.00
Rubber Finger Tips, per set of 3.....	.15
Glass Cutter, for Trimming Dry Plates.....	.25
Magnesium Cartridges, per box of ½ doz., small size.....	.25
Squeegee Rollers, 8 inch.....	1.00
Paste for Mounting, per jar .....	.20
Card Mounts, 4 x 5, per 25.....	.20
" " 5 x 7, " .....	.40
Ruby Lamp, Tin .....	.60
Finders, Ground Glass, in morocco covered box.....	.40

LENSES AND THEIR SELECTION.

As the eye is to the brain in the human organism so is the lens to the camera, and it is of the utmost importance that this essential part of the photographic mechanism be carefully selected. In purchasing a lens it is poor economy to buy the cheapest article that the market affords, as such too often proves a bad investment. We are making lenses of superior quality and the highest grade of workmanship, and the gratifying endorsements received, warrant us in feeling assured that our lenses are equal to the best.

Our lenses are made from the finest imported glass, by skilled mechanics and under eminent supervision. In order that we may aid the amateur as well as the professional photographer in the selection of a lens most suitable to his wants, we place before him the following facts relating to photographic objectives: (we would also state that our technical experience is at all times at the disposal of our customers and we shall esteem it a pleasure to furnish any information that may aid the intending purchaser).

ACHROMATISM.—Is that quality which concentrates the chemical and visual rays, making them coincidental, and is of the first importance in photographic objectives. If a lens is not strictly achromatic the image will not fall upon the ground glass as intended but either before or behind it, making the image indistinct.

ANGLE OF VIEW.—Is the field covered by the lens: thus a lens covering 100 degrees covers $\frac{1}{18}$ of a circle. For average outdoor work the rapid rectilinear or anastigmat type of lens embracing an angle of from 50 to 70 degrees is most serviceable, but where the operator is limited to space as in the case of interiors, etc., the wide angle lens covering an angle from 80 to 100 degrees is essential. Owing to this fact and the necessity of using smaller stops the latter type of lens cannot be worked with as great rapidity as the former.

RAPIDITY.—Owing to the increasing demand for lenses of superior quality suitable for instantaneous exposures it will be readily seen that rapidity combined with the other qualities is a highly essential feature. While the proportion of working aperture to focal length should be considered, in regulating speed in lenses it should be remembered that the stop is of paramount importance, the speed decreasing in the same proportion with the size of the stop.

FLATNESS.—This all important feature has received more attention from constructors of photographic lenses than any other and is dependent upon the science and skill of the optician as well as upon the focus, aperture and angle. To obtain a flat field the lens must cut the plate evenly from the centre to its farthest extremity with no perceptible curvature. We claim this feature for our lenses.

DEPTH OF FOCUS.—Here is met one of the difficulties in photographic objectives as it is most difficult to produce a lens by which objects at different distances from the plate will be focussed on the same plane, yet by our method of construction we have succeeded in making a lens of extraordinary depth and have come nearer the accomplishment of this end than other manufacturers.

DEFINITION.—This quality in the lens may be taken by the purchaser as a standard of its value and consists in its power, by concentration of the rays, to produce the image sharp and clear at any given point; a lens not possessing this feature is worthless.

All Lenses manufactured by us are thoroughly and rigidly tested according to scientific principles with new apparatus, designed especially for this purpose, and are guaranteed to be perfect in every respect and to do all that is claimed for them.

MANHATTAN OPTICAL CO.

Daisy Single Achromatic Lens.

For all ordinary work, especially the amateur's, these lenses give universal satisfaction, showing very brilliant effects and fully covering the plates specified. The smaller sizes are highly recommended for instantaneous work and for use in hand cameras.

Each lens is mounted in brass, highly finished, and is furnished with rotary diaphragm having five stops, and is fitted with a morocco cap.

No.	BACK FOCUS.	SIZE OF PLATE WITH STOP F16.	DIAMETER OF LENS.	PRICE.
1.....	4 inches.....	3¼ x 4¼.....	⅝ inch.....	\$2.50
2.....	6¼ ".....	4 x 5.....	1 ".....	3.00
3.....	8 ".....	5 x 7.....	1⅜ ".....	3.75
4.....	11 ".....	5 x 8.....	1⅜ ".....	4.50
5.....	14 ".....	6½ x 8½.....	1⅝ ".....	6.00
6.....	17 ".....	8 x 10.....	1⅞ ".....	7.00

Rapid Achromatic Lens.

This lens is of similar construction to the "Daisy"; made from superior glass, giving greater rapidity and much finer definition. It is therefore especially adapted for general landscape photography and can be used by amateurs for portrait work.

No.	EQUIVALENT FOCUS.	SIZE OF PLATE WITH STOP F16	DIAMETER OF LENS.	PRICE.
1.....	8 inches.....	4 x 5.....	1 inch.....	\$5.00
2.....	11 ".....	5 x 7.....	1.4 ".....	7.00
3.....	12 ".....	5 x 8.....	1.6 ".....	8.00
4.....	13 ".....	6½ x 8½.....	1.8 ".....	10.00
5.....	16 ".....	8 x 10.....	2.2 ".....	14.00
6.....	22 ".....	11 x 14.....	3.0 ".....	20.00
7.....	28 ".....	14 x 17.....	3.8 ".....	24.00
8.....	32 ".....	16 x 20.....	4.4 ".....	30.00

NOTE.—No. 1 furnished in matched pairs for stereoscopic work at \$10.00 per pair.

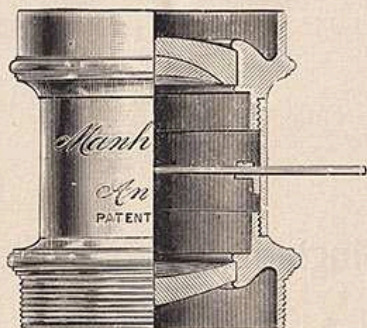
Single Long Focus Lens.

This style of lens is very desirable for photographing far distant objects, such as mountain scenery, marine views, etc., giving highly magnified details of the same which it would be impossible to secure with an ordinary view lens.

They can be used in most cases by the amateur in place of the Tele-photo lens, with the same results.

No.	BACK FOCUS.	DIAMETER.	SIZE OF PLATE WITH STOP F16.	PRICE.
1.....	13 inches.....	1 inch.....	4 x 5.....	\$8.00
2.....	16 ".....	1½ ".....	5 x 7.....	10.00
3.....	19 ".....	1¾ ".....	6½ x 8½.....	14.00
4.....	25 ".....	2 ".....	8 x 10.....	18.00
5.....	30 ".....	2½ ".....	10 x 12.....	22.00
6.....	38 ".....	3 ".....	11 x 14.....	28.00
7.....	50 ".....	3½ ".....	14 x 17.....	36.00

MANHATTAN NEW ANASTIGMAT LENS.



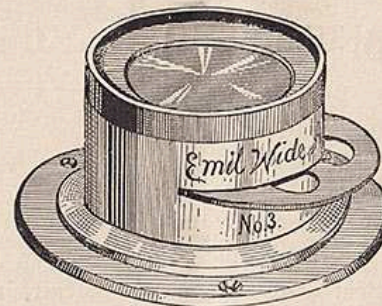
By the introduction of this lens upon the market we supply the long felt want (especially with the amateur) for a lens that is free from astigmatism and at the same time moderate in price.

This lens has a perfect anastigmatic flatness of field without distortion, even when used with full aperture. It has extremely sharp definition, even illumination, and unusual depth combined with the greatest rapidity. It is well adapted for outdoor photography and surpasses any known lens for use in hand cameras.

The "New Anastigmat," for studio work, will give unusually fine results, combining great speed, delicate definition and depth, resulting in a soft artistic diffusion so desirable in portraits, groups and large heads. This lens is also adapted for copying and photo-mechanical purposes, giving minutest detail with extreme flatness to the edges. The "New Anastigmat" is without question the most desirable lens for the general requirements of the photographer.

No.	EQUIVALENT FOCUS.	SIZE OF PLATE WITH STOP F10.	DIAMETER OF LENS.	PRICE.
1.....	7 inches	4 x 5	1.0 inch	\$15.00
2.....	9 "	5 x 7	1.4 "	18.00
3.....	11 "	5 x 8	1.5 "	20.00
4.....	12 "	6½ x 8½	1.6 "	25.00
5.....	13½ "	8 x 10	1.9 "	30.00
6.....	16¾ "	10 x 12	2.3 "	38.00

EMIL IMPROVED WIDE ANGLE LENS.



These lenses are highly recommended for those desiring a cheap lens for general use; such as high buildings, interiors and architectural work.

They have an angle of from 80 degrees to 90 degrees, depending upon the stop used.

These lenses have rare covering capacity and equality of illumination, and where the larger stops are used a speed suitable for instantaneous or flash light exposures can be obtained.

Each lens is mounted in highly finished brass and is provided with revolving diaphragm and morocco cap.

No.	SIZE OF PLATE WITH STOP F16.	BACK FOCUS.	PRICE.
1.....	4 x 5	3½ inches	\$6.00
2.....	5 x 8	4½ "	8.00
3.....	6½ x 8½	5 "	10.00
4.....	8 x 10	6 "	14.00
5.....	10 x 12	7 "	18.00
6.....	11 x 14	8¼ "	24.00
7.....	14 x 17	10 "	30.00

WIDE ANGLE SYMMETRICAL LENS.

These lenses are an entirely new series of Wide Angle lenses, being the result of careful calculation with the new Jena glass. They are free from all optical distortion and have extraordinary definition, with a flatness of field and depth of focus which far surpass all other wide angle lenses. They have an angle of from 90° to 100° , and cover the plate with a brilliant and equal illumination of light over the entire surface, which make them the most rapid lenses of this class known.

No.	EQUIVALENT FOCUS.	BACK FOCUS.	SIZE OF PLATE WITH STOP F16.	DIAMETER OF LENS.	PRICE.
1	5 inches	$4\frac{2}{3}$ inches	4 x 5	.80	\$15.00
2	7 "	$6\frac{1}{4}$ "	5 x 7	1.	20.00
3	$7\frac{1}{2}$ "	7 "	5 x 8	1.11	22.50
4	$8\frac{1}{2}$ "	$7\frac{3}{4}$ "	$6\frac{1}{2}$ x $8\frac{1}{2}$	1.49	25.00
5	10 "	$9\frac{1}{4}$ "	8 x 10	1.64	30.00
6	$12\frac{1}{4}$ "	$11\frac{1}{2}$ "	10 x 12	1.86	36.00
7	14 "	13 "	11 x 14	2.22	45.00
8	$17\frac{1}{3}$ "	16 "	14 x 17	2.71	65.00
9	20 "	$18\frac{2}{3}$ "	16 x 20	3.09	90.00
10	$24\frac{1}{2}$ "	$22\frac{3}{4}$ "	20 x 24	3.82	125.00

MANHATTAN RAPID LENS.

This series of lenses will be welcomed by those desiring a lens for general use, landscape work, portraits, etc.

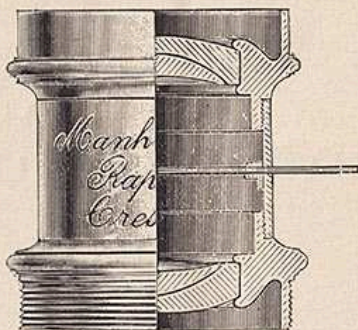
The "Manhattan" lens is carefully made, is very rapid, perfectly rectilinear and gives sharp definition. It is quite free from marginal distortion. The back combination may be used separately, either as a single-view, long-focus or tele-photo lens with excellent results, and when thus used will give a magnified image.

The smaller sizes of this lens are especially recommended for amateur work with hand cameras, and the larger sizes for portrait work.

Each lens is mounted in highly finished brass, has a complete set of Waterhouse diaphragms and morocco cap.

No.	EQUIVALENT FOCUS.	SIZE OF PLATE WITH STOP F10.	DIAMETER OF LENS.	PRICE.
1	7 inches	4 x 5	1 inch	\$9.00
2	$9\frac{3}{4}$ "	5 x 7	1.4 "	12.00
3	11 "	5 x 8	1.5 "	14.00
4	12 "	$6\frac{1}{2}$ x $8\frac{1}{2}$	1.6 "	18.00
5	$13\frac{1}{2}$ "	8 x 10	1.9 "	22.00
6	$16\frac{3}{4}$ "	10 x 12	2.3 "	30.00

EXTRA RAPID RECTILINEAR LENS.



Lenses of this series are made according to a new formula from the famous Jena optical glass of highest quality, made especially for us, and are introduced in this country for the first time. They are of the Rapid Symmetrical type and are adapted for architectural subjects, copying and enlarging, where absolute freedom from distortion is required. It is possible to secure with these lenses the greatest rapidity obtainable, without the sacrifice of definition due to spherical aberration, and for this reason they are especially adapted for instantaneous work.

The larger lenses of this series are suitable for studio work, having unusually sharp definition, uniform illumination and great depth, being qualities so much sought for in groups, figures, large heads, etc.

The back lenses may be used alone, covering about twice the size of plate with about one-half the speed. These lenses are furnished in superior brass mounting, with Waterhouse diaphragms and morocco cap.

No.	EQUIVALENT FOCUS.	SIZE OF PLATE WITH STOP F8.	DIAMETER OF LENS.	PRICE.
1	6 inches	4 x 5	$\frac{3}{4}$ inch	\$24.00
2	$7\frac{3}{4}$ "	5 x 7	$1\frac{1}{8}$ "	30.00
3	$8\frac{1}{4}$ "	5 x 8	$1\frac{1}{4}$ "	36.00
4	$9\frac{1}{2}$ "	$6\frac{1}{2}$ x $8\frac{1}{2}$	$1\frac{1}{8}$ "	40.00
5	$11\frac{1}{2}$ "	8 x 10	$1\frac{3}{8}$ "	45.00
6	$14\frac{1}{2}$ "	10 x 12	2 "	70.00
7	17 "	11 x 14	$2\frac{1}{4}$ "	80.00
8	20 "	14 x 17	$2\frac{3}{4}$ "	100.00
9	23 "	16 x 20	$3\frac{1}{8}$ "	125.00
10	$26\frac{1}{4}$ "	18 x 22	$3\frac{3}{4}$ "	160.00
11	30 "	20 x 24	4 "	200.00

Improved Portrait Lens.

These lenses, being a great improvement over the old style Portrait Lenses of the past, are invaluable to the professional for either standing or sitting figures with full aperture, and are so constructed with the use of the new Jena optical glass, as to give as flat a field as possible, and with greater definition and brilliancy than are found in any other lens of this class on the market.

We have so improved our Portrait Lenses as to enable the artist to work same with great rapidity and still preserve absolute sharpness and brilliancy.

No.	BACK FOCUS.	EQUIV. FOCUS.	DIAMETER.	SIZE PLATE.	PRICE.
1	6 inches	8 inches	2 inches	4 x 5	\$35.00
2	8 "	$10\frac{1}{2}$ "	$2\frac{1}{4}$ "	5 x 7	70.00
3	10 "	$13\frac{1}{2}$ "	$3\frac{1}{4}$ "	$6\frac{1}{2}$ x $8\frac{1}{2}$	100.00
4	12 "	16 "	$4\frac{1}{10}$ "	8 x 10	140.00
5	$16\frac{1}{2}$ "	$22\frac{1}{4}$ "	$5\frac{1}{2}$ "	11 x 14	225.00
6	$20\frac{1}{2}$ "	$27\frac{1}{2}$ "	7 "	14 x 17	350.00
7	24 "	32 "	$8\frac{1}{4}$ "	16 x 20	450.00

NOTE.—The growing demand during the past years for higher grade objectives for photographic uses has greatly stimulated the European producers of optical glass to achieve greater perfection and higher optical qualities in their product. Great progress has been made, notably by Messrs. Schott & Co., Jena, Germany (whose glass is most generally used), but the manufacture of the improved glass presents unusual difficulties, among others, the presence of small air bubbles, which so far has proven unavoidable. We quote the manufacturers after admitting the impossibility of producing high grade glass free from air bubbles: "We must direct attention to the fact that the presence of small air bubbles even in the most unfavorable case does not cause a loss of light exceeding $\frac{1}{100}$ of 1 per cent., and therefore is entirely without effect upon the optical result of a lens system." With the above explanation we trust our customers will not prove unreasonable on this point.

C. P. GOERZ'S DOUBLE ANASTIGMAT LENSES.

Series III. F: 7.7.

No.	EQUIVALENT FOCUS	FREE APERTURE	SIZE OF PLATE SHARPLY COVERED AT			PRICE WITH IRIS-DIAPHRAGM
			F: 7.7	F: 15.5	F: 62	
00	3½ in.	½ in.	3 x 3 in.	3¼ x 4¼ in.	4 x 5 in.	\$ 33.00
0	4¾ in.	⅝ in.	3¼ x 4¼ in.	4 x 5 in.	4¾ x 6½ in.	35.00
1	6 in.	⅞ in.	4 x 5 in.	4¾ x 6½ in.	5 x 8 in.	42.00
2	7 in.	1 in.	4¾ x 6½ in.	5 x 8 in.	7 x 9 in.	48.00
3	8¼ in.	1¼ in.	5 x 8 in.	6½ x 8½ in.	8 x 10 in.	58.00
4	9½ in.	1⅝ in.	6½ x 8½ in.	7 x 9 in.	10 x 12 in.	70.00
5	10¾ in.	1½ in.	7 x 9 in.	8 x 10 in.	12 x 15 in.	85.00
6	12 in.	1⅞ in.	8 x 10 in.	10 x 12 in.	16 x 18 in.	100.00
7	14 in.	2 in.	10 x 12 in.	12 x 15 in.	18 x 22 in.	131.00

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