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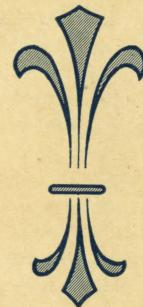
LENSES
AND
SHUTTERS

875 377

Catalogue of
**PHOTOGRAPHIC
LENSES and SHUTTERS**

1916

1917



Made by the
WOLLENSAK OPTICAL CO.
ROCHESTER, N.Y., U.S.A.

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WOLLENSAK OPTICAL CO.

IN compiling this catalogue it has been our desire to set before you in a concise, intelligent and truthful manner, a description of the complete line of Wollensak Photographic Lenses and Shutters.

It has been the aim of this Company to always keep a trifle ahead of the times, anticipating the trend of Modern Photography; hence we have taken the initiative in making changes and additions to our line, so we solicit the pleasure of serving you, feeling confident that our line now constitutes a lens and shutter that will satisfactorily cover your particular field of endeavor.

During the past year our products have scored many high awards in the hands of leaders in the profession, and the name Wollensak on a lens or shutter is accepted as a guarantee of Quality throughout the world.

Descriptions and price lists heretofore issued are superseded by those contained herein.

The picture on the cover of this catalogue is of Miss Justine Johnston, whose portrait, reproduced on page 15, was awarded first prize in the AnSCO \$5,000 Loveliest Women Contest. We are prompted to use it, as it represents the highest type of American beauty.

Photographic Objectives



THE manufacture of photographic objectives is indeed a complicated one. It involves the utmost care in preparing formulas, the employment of most skilled labor, and the installation of expensive machinery. In fact, everything entering into the construction of the lens should be of the highest grade possible to obtain.

In the manufacture of Wollensak Lenses no expense is spared to eliminate any possible error in process of manufacture from the time of the first operation to the completion of the lens. Our modern and adequate plant of over 40,000 square feet floor space, with an average of 300 employees, places us in a position to offer a most complete line of photographic lenses at a reasonable price, guaranteed to be at least equal to any competing objectives of their respective types, regardless of make or price.

We call particular attention to the new construction of the Series I Velostigmat. This lens is now triple convertible and truly represents in both workmanship and adaptability a modern Anastigmat.

All lenses are now being supplied in a rich black finish, and the engraving on the anastigmats is in gold and on the rest of the line in white. The Velostigmats in all three series are supplied in attractive leather-covered, velvet-lined cases. The different lenses are described under their respective names in the succeeding pages, and a reference to the guarantee furnished with each will be found on page 33.

Velostigmat Series I F:6.3



HIS truly is "The Lens of To-day"; the ideal objective for general, allround work. The Series I is a perfect Anastigmat, being triple convertible in construction, with full correction for astigmatism, spherical and chromatic aberration, has a flat field and absolute freedom from coma, distortion and flare.

The working aperture of F:6.3 is sufficiently rapid for all general work, excepting extreme speed photography.

The half combinations are corrected for use alone, each being of sufficiently different focal length so that the Series I is truly three lenses in one. The single elements may be employed to advantage where a reasonably large image is desired, or for improving perspective in photographing distant scenes, tele-photo work, etc. In using an element singly, it is necessary to stop down to the relative aperture of 11 or 16 for the doublet to get good definition over the entire plate.

The smaller sizes may be readily fitted to Ansco, Seneca, Kodak, Ensign, Ingendo and other roll film cameras, as well as the numerous compact plate cameras to be found upon the market.

The Series I Velostigmat is equally suitable for landscape and view work, architectural and commercial photography, copying and enlarging, and for all other classes of work requiring a fully corrected objective.

The finish, whether mounted in barrel or in shutter, is black enamel with gold engraving, making it durable, practical and beautiful in appearance.

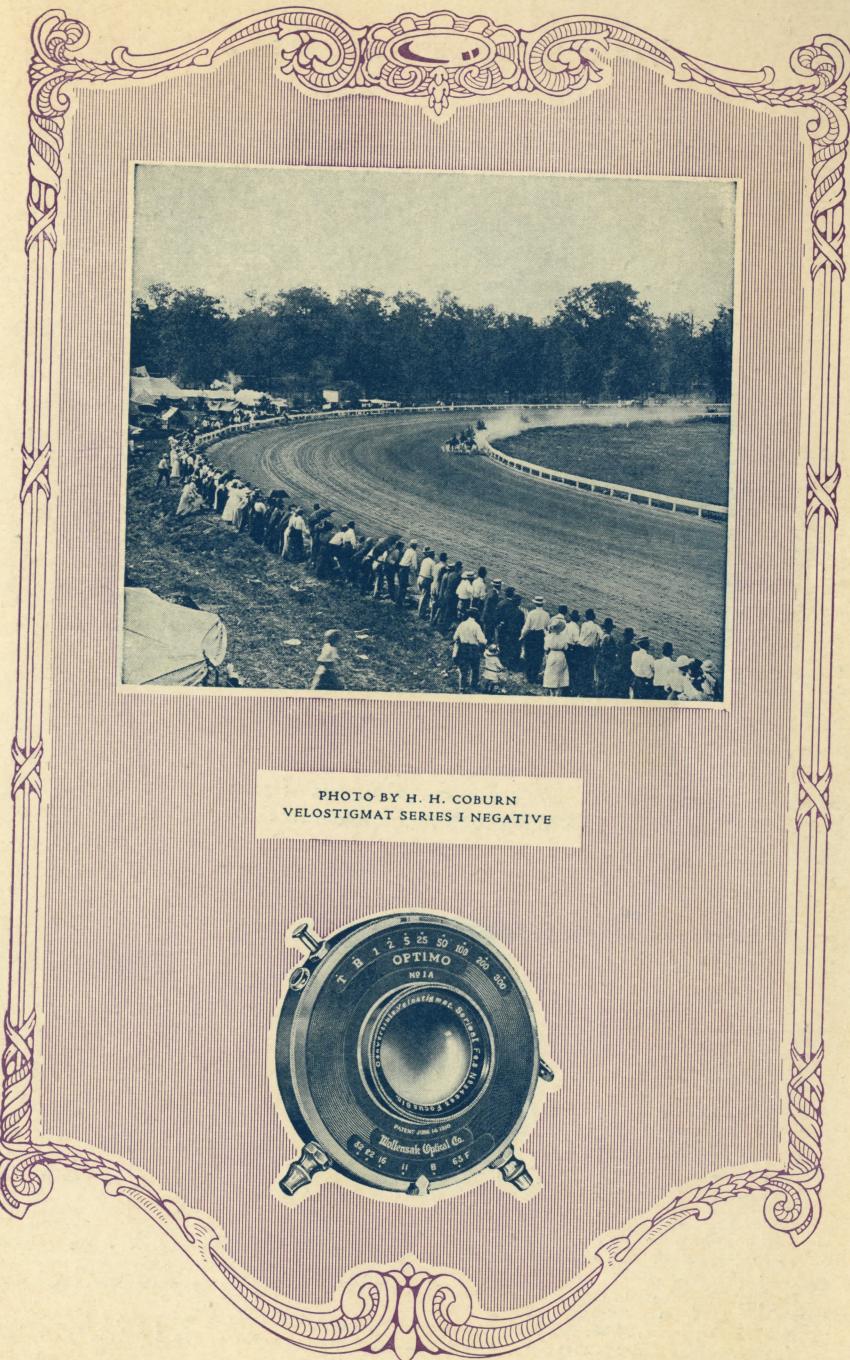
No.	Plates Covered Sharply at F:6.3	Diameter of Lens	Equivalent Focus	With Barrel or Regno Shutter	With Auto Shutter	With Optimus Shutter
0	2 ¹ / ₄ x 3 ¹ / ₄	2 ⁷ / ₈ in.	3 ¹ / ₂ in.	\$20.00	\$23.00	\$30.00
1	3 ¹ / ₄ x 4 ¹ / ₄	2 ¹ / ₈ "	5 "	23.00	26.00	33.00
2	4 x 5	1 ¹ / ₈ "	6 "	27.00	30.00	37.00
2A	3 ¹ / ₄ x 5 ¹ / ₂	1 ¹ / ₁₆ "	6 ¹ / ₂ "	27.00	30.00	37.00
3	5 x 7	1 ³ / ₈ "	7 "	35.00	39.00	47.00
4	6 ¹ / ₂ x 8 ¹ / ₂	1 ¹ / ₁₆ "	9 ¹ / ₂ "	53.00	57.00	65.00
5	8 x 10	1 ¹ / ₁₆ "	12 ¹ / ₂ "	65.00	70.00	80.00
6	11 x 14	2 ¹ / ₈ "	16 "	112.00		

Focus of Separate Combinations when Used Singly

Size	Front Lens	Rear Lens	Size	Front Lens	Rear Lens
3 ¹ / ₄ x 4 ¹ / ₄	11 ³ / ₄ in.	8 ¹ / ₄ in.	6 ¹ / ₂ x 8 ¹ / ₂	21 ¹ / ₂ in.	16 ¹ / ₂ in.
4 x 5	14 "	10 "	8 x 10	28 "	20 "
3 ¹ / ₄ x 5 ¹ / ₂	16 "	10 "	11 x 14	38 "	26 "
5 x 7	17 "	11 "			

The approximate working speed of the single elements when the diaphragm indicator is set at F:6.3 is F:16 for the front lens, and F:12.5 for the rear.

NOTE—To ascertain cost of Velostigmat in mounts fitted to customer's own shutter, deduct following amounts from list prices in barrel:
No. 1, \$3.00; No. 2, \$4.00; No. 2A, \$4.00; No. 3, \$5.00; No. 4, \$6.00; No. 5, \$7.00; No. 6, \$8.00.



Velostigmat Series II F:4.5



HE Series II, having the corrections found in the Series I, with greater speed, is in every sense of the word a *modern lens*, and will do well all branches of work that are within the scope of any ultra-rapid Anastigmat; i. e., Studio, speed, press, commercial, group and home portrait work, also copying.

The addition of a diffusing attachment to the three largest sizes raises it to the class of the highest priced portrait lenses, and with its fine corrections, goes that type one better, besides being much less bulky.

The smaller sizes are most popular on cameras of the reflecting type for press and speed work, or if mounted to hand cameras in a between-the-lens shutter, will serve the advanced amateur admirably for general work.

Its flatness of field and perfect covering power make it an ideal objective for groups, and these same qualities, together with its compactness and moderate focal length, render it almost indispensable for satisfactory home portraiture.

In the three largest sizes, the diffusion attachment mentioned adapts this series in no uncertain way to the needs of the professional in his studio endeavors. It possesses the faculty of not destroying detail, but of blending the lights and shadows in such a manner as to best bring out the expression and character without showing every hair and wrinkle with wiry, distracting sharpness.

The amount of diffusion is variable at will and so places in the hands of anyone artistically inclined, a powerful means of expressing their individuality. It is by no means difficult to manipulate this attachment, by turning the front mount around to the marks 1, 2, 3, 4 or 5, as desired, then focus. When the indicator is set at 0, the lens is ready for general work, producing negatives with snap and life; set at 1, you have a slight diffusion; at 2 a greater degree of diffusion, and so on, the higher the number the greater the diffusion. The single elements cannot be used alone.

This series is also suitable for autochrome color photography.

No.	Plates Covered Sharply at F:4.5	Equivalent Focus	Diam. of Lens	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
0	2 $\frac{1}{4}$ x 3 $\frac{1}{4}$	3 $\frac{1}{2}$ in.	7 $\frac{1}{2}$ in.	\$30.00	\$35.00	\$40.00
1	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	5 "	1 $\frac{1}{8}$ "	32.00	37.00	43.00
2	4 x 5	6 "	1 $\frac{1}{8}$ "	38.00	43.00	49.00
3	5 x 7	7 "	1 $\frac{1}{8}$ "	45.00	50.00	57.00
4	5 x 8	8 $\frac{1}{4}$ "	1 $\frac{1}{8}$ "	60.00	65.00	72.00
5	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	9 $\frac{1}{2}$ "	2 $\frac{1}{8}$ "	73.00	78.00	85.00
6	8 x 10	12 "	2 $\frac{3}{4}$ "	110.00		
7	11 x 14	15 $\frac{1}{2}$ "	3 $\frac{1}{8}$ "	180.00		

The No. 5, 6 and 7 sizes have diffusing adjustment which makes them particularly valuable for portrait and group work.

NOTE—To ascertain cost of Velostigmat in mounts fitted to customer's own shutter, deduct following amounts from list prices in barrel:

No. 1, \$3.00; No. 2, \$4.00; No. 3, \$5.00; No. 4, \$6.00; No. 5, \$7.00; No. 6, \$8.00; No. 7, \$9.00.

The largest size Series II that can be mounted in Regno shutter is No. 6. No. 5 and the larger sizes can be mounted in our Studio shutter.



Velostigmat Series III Wide Angle F:9.5

SEEKING generally, no photographer's equipment is complete except it include a fast Wide Angle lens. There are so many times when a picture must be made in a small room where a long focus lens would be out of the question, or, where the subject is a building in a narrow street, or an interior, or perhaps a banquet, where the focal length of the general commercial lens, such as the Series I Velostigmat, is too great.

So, for just such emergencies we created the Series III—a perfectly corrected Anastigmat Wide Angle objective, covering the plate for which it is listed at the unusual speed of F:9.5, and embracing an actual 90 degree angle of view. By this it will be readily seen that stopping down is only necessary to obtain depth, and not covering power. While there may not be many exposures made at the full aperture, yet it is always available, and will prove a valuable asset in focusing in dimly lighted interiors, etc. This large aperture will also be found very desirable for flashlight work and is sufficiently rapid to snapshot groups, or scenes out of doors.

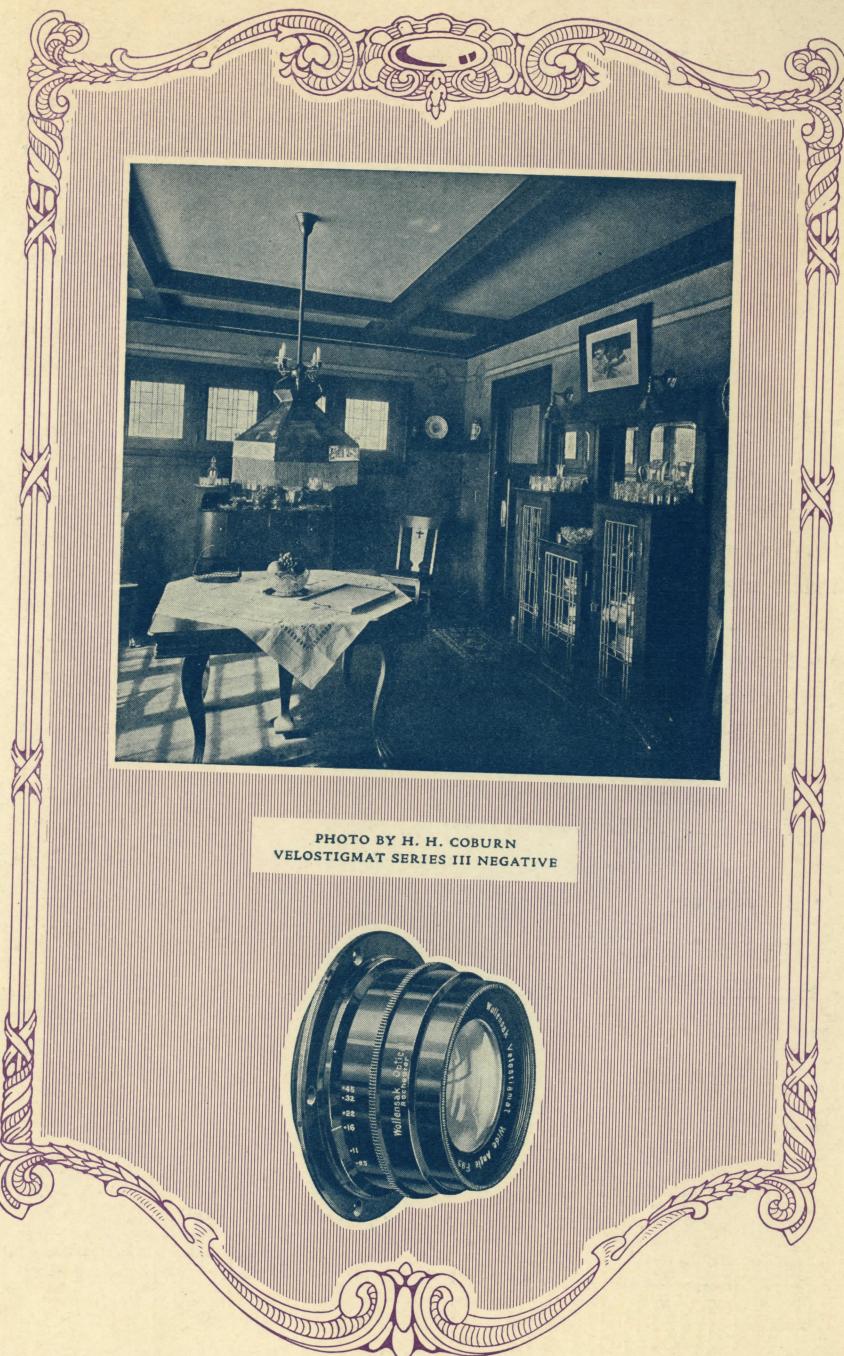
Particular attention is directed to the fact that the Series III is a convertible lens, each element being corrected for use alone and each being about twice the focal length of the doublet.

This lens has all the finer corrections to be found in the other two series, and is highly recommended for all work where it is necessary to work in confined space.

The finish in black enamel with gold engraving, is both handsome and durable.

No.	Plate Covered at F:9.5	Equivalent Focus	Working Aperture	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
1	5 x 7	4.3 in.	1/16	\$28.00	\$30.00	\$38.00
2	6 1/2 x 8 1/2	5.4 "	1/16	34.00	36.00	44.00
3	8 x 10	6.25 "	5/16	43.00	45.00	53.00
4	11 x 14	9 "	1/8	65.00	67.00	75.00

NOTE: For price in mounts see note on page 4.



Vinco-Anastigmat F:6.3-F:6.8



ANY are the amateur and commercial photographers whose ambition it is to rid themselves of the R. R. type lens, which so handicaps the Progressive, and replace it with an Anastigmat, but the relatively high price of Anastigmats has made this heretofore impossible.

It was to meet this demand that we added to our line the Vinco. It is guaranteed to be equal to any lens selling at a lower price than our Velostigmat Series I, F:6.3.

The Vinco is fully corrected for spherical and chromatic aberration, and Astigmatism, and is free from coma, flare and distortion. Mounted in the Optimo or other of our shutters, it makes an excellent outfit for hand cameras and generally it is suitable for landscape, commercial and architectural work, speed photography of the ordinary kinds, copying and enlarging, and home portraiture where lighting conditions are ideal. The Vinco is not convertible, but will be found a "sufficient" lens for single bellows cameras, and fully meets the requirements of those who do not need extreme speed, or the convertible feature.

The finish is the same as the Velostigmats.

No.	Size Plate Covered F:6.8	Equivalent Focus	Diameter Lens	Speed	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
00	2 $\frac{1}{4}$ x 3 $\frac{1}{4}$	3 $\frac{1}{2}$ in.	2 $\frac{1}{2}$ in.	F:6.3	\$16.00	\$18.00	\$24.00
0	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	5 $\frac{1}{4}$ "	3 $\frac{1}{8}$ "	F:6.3	18.00	20.00	26.00
1	4 x 5	6 "	3 $\frac{1}{16}$ "	F:6.3	20.00	22.00	28.00
1A	3 $\frac{1}{4}$ x 5 $\frac{1}{2}$	6 $\frac{3}{4}$ "	3 $\frac{1}{16}$ "	F:6.3	20.00	22.00	28.00
2	5 x 7	7 "	3 $\frac{3}{8}$ "	F:6.8	25.00	28.00	35.00
3	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	9 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	F:6.8	35.00	38.00	45.00
4	8 x 10	12 "	1 $\frac{7}{8}$ "	F:6.8	45.00	48.00	57.00

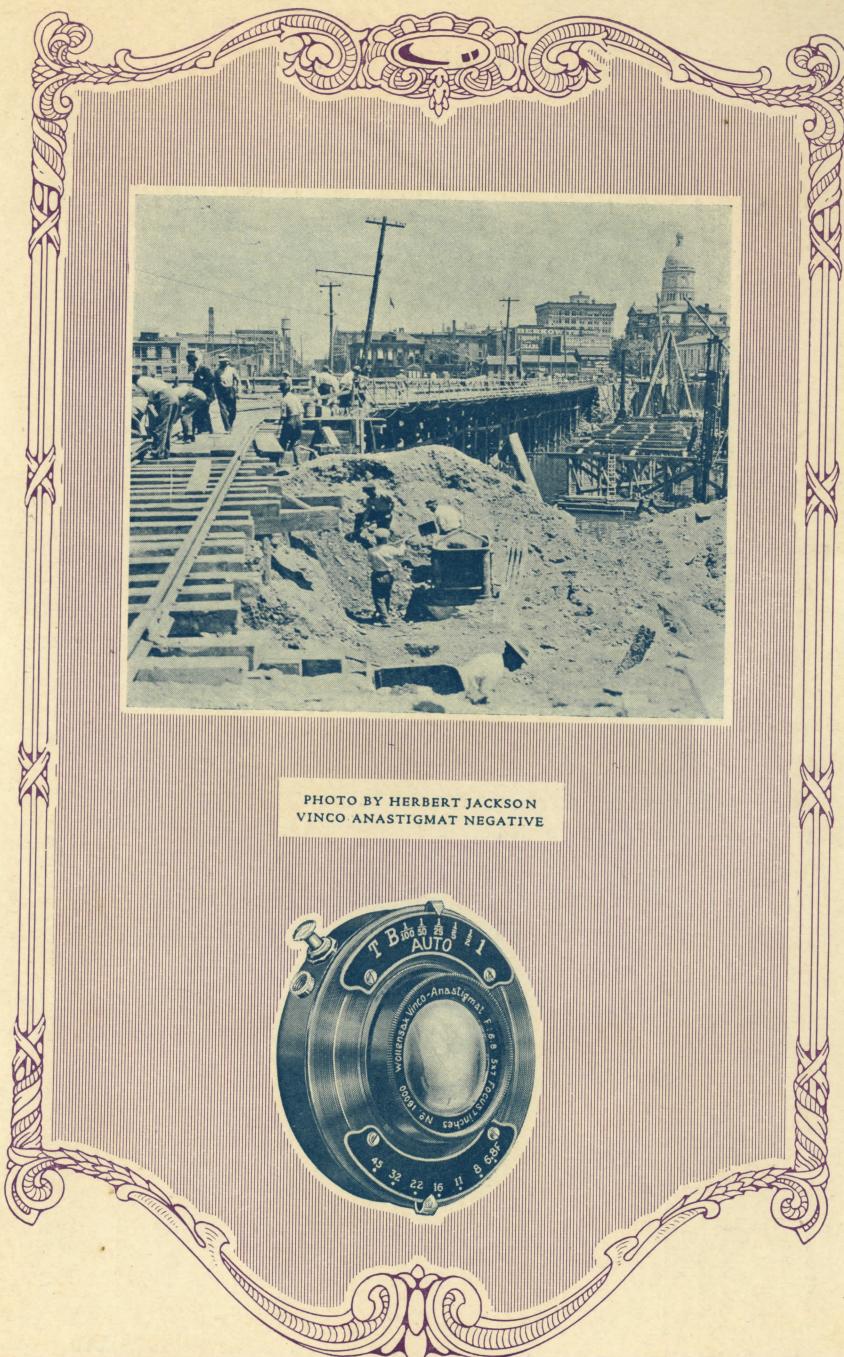
When the No. 00 size is desired to fit very compact cameras, the camera should be sent to us and we will fit the lens to the shutter on the camera at the same price as it is listed in barrel.

For price in mounts see note on page 4.

F:7.5 Anastigmat

A fully corrected Anastigmat, differing essentially from the Vinco only in speed. For prices in mounts see page 22.

Focus	Size Plate	Victo	Regno	Auto	Optimo
5 $\frac{1}{4}$ in.	{ 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ } { 2 $\frac{1}{2}$ x 4 $\frac{1}{4}$ }	\$14.00	\$15.00	\$17.00	\$23.00
6 $\frac{5}{8}$ "	{ 4 x 5 } { 3 $\frac{1}{4}$ x 5 $\frac{1}{2}$ }	15.00	16.00	18.00	24.00



Versar Portrait and View F:6



HE Versar is what might be termed a general-purpose objective, moderate in price, and entirely suitable for general work where the fine corrections, etc., obtained with the Velostigmat are not essential.

The two elements of the Versar are of the same focal length, being about double the equivalent focus, and can be used separately by stopping down, the speed of the single element being about one-fourth that of the doublet, taking aperture for aperture. We recommend using the rear lens, as the proper place for the diaphragm in such cases is before the lens. Only the best imported optical glass is used in its construction, and the grinding, polishing, etc., have the same care as is given the Velostigmats.

The high speed of the Versar makes it desirable for ordinary studio work, including busts, full lengths and groups, and because of its small size, and high speed, is a practical objective for home portraiture, and work of similar character. General view, commercial and architectural work can be done with the Versar when slightly stopped down, and its construction is such that it is very desirable for enlarging and copying.

Its merits as a portrait enlarging lens are deserving of special emphasis, as it possesses the faculty of practically eliminating the traces of retouching in the original.

The Versar is furnished in highly finished black barrels, with iris diaphragm and cap, or fitted to the various shutters of our manufacture, as listed below.

Attention is directed to the fact that the Versar will not give fine definition to the extreme corners of the size plate for which it is listed unless stopped down to an aperture of about F:11.

No.	Size	Equivalent Focus	Diameter	Mounted in Barrel	With Regno or Studio Shutter	With Auto Shutter	With Optimo Shutter
1	4 x 5	6½ in.	1½ in.	\$16.00	\$17.00	\$19.00	\$25.00
2	5 x 7	8½ "	1½ "	19.00	20.00	22.00	28.00
3	6½ x 8½	9½ "	1¾ "	25.00	27.00	30.00	38.00
4	8 x 10	11½ "	2 "	33.00	35.00	40.00	48.00
5	10 x 12	15 "	2½ "	42.00	45.00	50.00	60.00
6	11 x 14	16½ "	2½ "	54.00	57.00	62.00	75.00
7	14 x 17	18 "	3 "	70.00	75.00	82.00	100.00
8	17 x 20	22½ "	3¾ "	90.00	95.00	105.00	125.00

NOTE—No. 5 is the largest size that can be mounted in Regno shutter. No. 3 and the larger sizes can be mounted in our Studio shutter.



Verito Diffused Focus F:4



HE Verito has met with a most welcome reception by the best known workers in artistic portraiture and landscape work, as it is a tool that allows the operator to put individuality into his work.

The speed of the Verito—F:4, makes it especially desirable for portraiture, either in the studio or at home, and even at this large aperture, it is possible to obtain an image remarkably free from flare and "running around," and with that beautiful "roundness" or "standing-out" effect, gradually growing sharper as the aperture is decreased in size.

The Verito is a double lens, made on an original formula, which gives the desired diffusion, yet shows little or no distortion, double lines, and being rectilinear, gives an even definition over the entire plate. The owner of a Verito can make portraits, groups, landscapes, etc., "as the eye sees," but sharp negatives cannot be made with it unless stopped down to an aperture of F:11 or smaller.

The rear combination of the Verito is especially desirable for large heads and other work requiring ideal perspective. Thus the owner of the Verito in reality has two lenses in one,—a fact that should be borne in mind when considering the purchase of a lens for artistic work.

In using the Verito, set the diaphragm at the aperture or opening at which it has been found to give the most pleasing or desired degree of diffusion, after which focus the same as with ordinary types of lenses.

Negatives made with the Verito should be fully timed, and slightly under-developed, using any standard developer, with a minimum amount of carbonate of soda, one-quarter to one-half of the amount called for in the standard formulas being sufficient. This will give, with proper handling, a thin, quick-printing negative. Soft diffused lighting effects will be found preferable in every instance, and it will be noted that a very moderate degree of contrast in the lighting will give a decided degree of contrast in the finished negative.

Nos. A and B are compact in size, and primarily intended for roll film and plate cameras. The maximum working speed or aperture F:6 is ample for hand camera work, and at that aperture a very pleasing degree of diffusion is obtained, the quality of which is practically the same as obtained with the F:4 lenses when used at an aperture of F:6.

No.	Size	Equival- ent Focus	Focus Rear Combi- nation	Diameter Lens	Speed	Mounted in Barrel or Studio Shutter	With Regno Shutter	With Auto Shutter or Barrel	In Mounts
A	3 1/4 x 4 1/4	5 in.	10 in.	1 in.	F:6				\$15.00
B	4 x 5	6 1/2 "	14 "	1 1/4 "	F:6				17.50
0	4 x 5	7 "	11 "	1 1/8 "	F:4	\$20.00	\$25.00		
1	5 x 7	9 "	14 "	2 1/4 "	F:4	25.00	30.00		
2	6 1/2 x 8 1/2	11 1/2 "	20 "	3 "	F:4	35.00			
3	8 x 10	14 1/2 "	20 "	3 1/2 "	F:4	50.00			
4	11 x 14	18 "	24 "	4 1/8 "	F:4	70.00			



PHOTO BY PHILLIP CONKLIN
AWARDED FIRST PRIZE
ANSCO LOVELIEST WOMAN CONTEST
COURTESY ANSCO CO.
VERITO NEGATIVE

Vitax Portrait F:3.8



IT IS true that Anastigmatic portrait lenses, such as our Series II Velostigmat, with diffusion attachment, have come into great favor; yet it cannot be denied that in a modern studio lens, one built on a modification of the Petzval formula, as the Vitax, will produce superior results for some classes of work. For this reason the Vitax will be found in a vast number of leading studios, including many where there is also a Series II Velostigmat.

The Vitax has a curved or saucer-shaped field, a point in its favor for portraiture, against the flat field of the Anastigmat. Therefore, the Vitax produces an image with beautiful "roundness" or "stereoscopic" effect, and by diffusing, free from wiry definition, yet not fuzzy.

The diffusion is controlled by a knob, accessible without removing lens from front board, as is necessary with some types. There are two ways of using it, either of which will give pleasing results. First, turn diffusion adjustment to any desired number, and then focus on subject—stopping down just enough to get the desired depth of focus: or, focus with the lens wide open and as sharp as possible, and then turn diffusion until the entire field is equally soft or diffused.

With the first method (which is generally used), the diffusion will be very slight and the use of a small aperture will have a tendency to eliminate it, while in using the second method, a marked degree of diffusion is obtainable. In group work the attachment set at about "3" serves to equalize the focus and overcome to a degree the curved field of the lens.

The scope of the Vitax is large heads, busts, three-quarter and full lengths; also small groups. Larger groups should be formed in a semi-circle, to allow for the curved field of the lens. For child photography the Vitax stands supreme.

We do not list sizes with the Vitax, as the different numbers are used on different plates, from 5 x 7 to 11 x 14, according to the class of work, and selection depends upon this and the size of the studio generally must govern focal length.

No.	Equivalent Focus	Outside Diameter of Flange	Diameter of Lens	Price in Barrel with Iris Diaphragm	Price with Studio Shutter
1	10 in.	4 $\frac{5}{8}$ in.	3 in.	\$ 70.00	\$ 78.00
2	13 $\frac{1}{2}$ "	5 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	90.00	100.00
3	16 "	6 "	4 $\frac{1}{8}$ "	125.00	137.00



Vesta Portrait F:5



BUILT on a modification of the Petzval formula, the Vesta, like the Vitax, produces "rounded" or "stereoscopic" effects so much desired in portraiture.

It is unlike the Vitax, principally because of its slower speed, and lack of a diffusion or equalizing attachment.

To those photographers who are in need of a most satisfactory studio lens but who cannot invest the price of the Vitax or Series II Velostigmat, we very highly recommend the Vesta.

The Vesta will be found entirely practical for busts, large heads and three-quarter lengths, and by slightly stopping down, it will take care of standing figures and groups where speed in exposure is not essential.

The front lens is corrected for use alone, hence the owner of a Vesta has two lenses in one. The focal length of the single element is considerably greater than the doublet (see table below) and serves admirably in photographing large heads or other subjects requiring a long focus lens to obtain proper perspective. In using the front lens, place it behind the diaphragm by first removing the rear element.

The Vesta is beautifully finished in black, with white engraving.

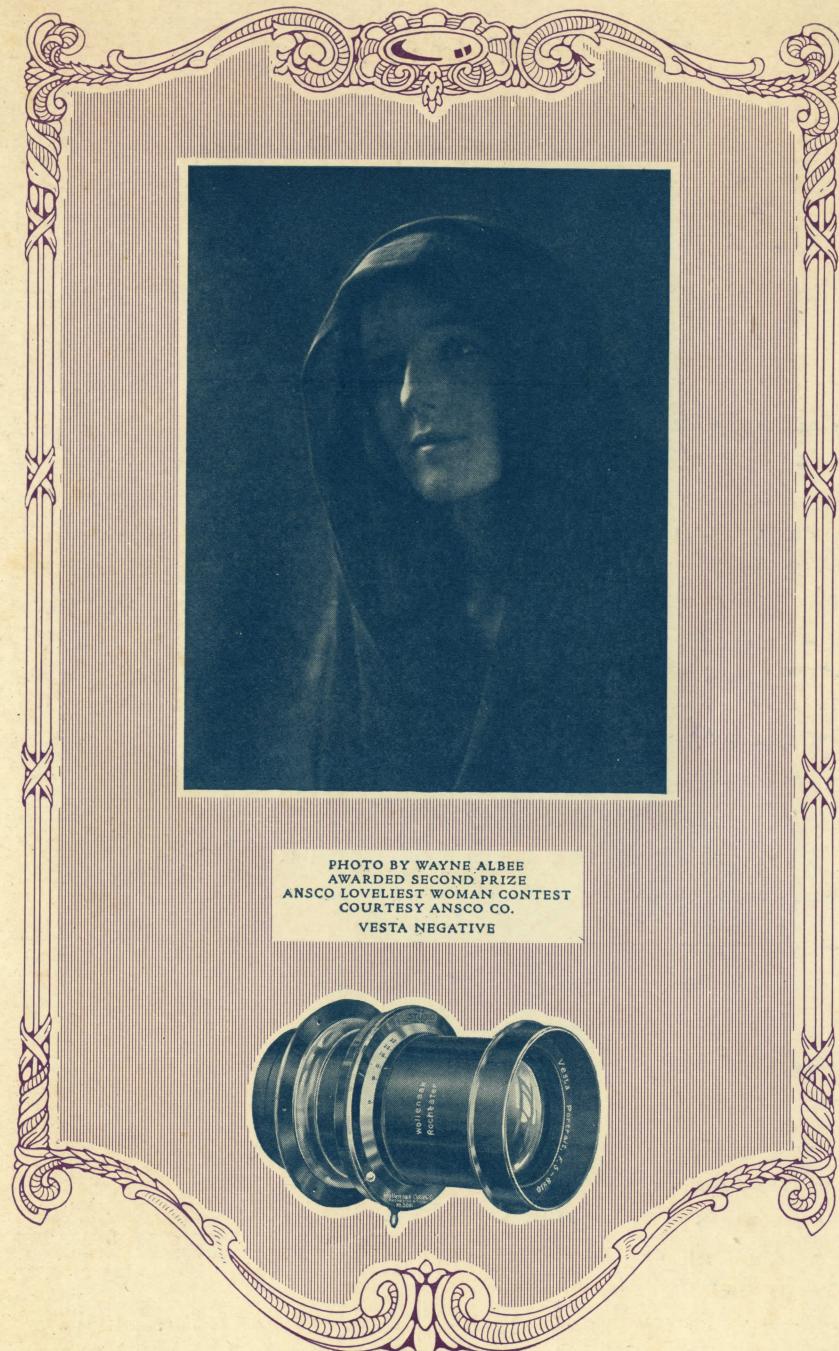
No.	Size	Equivalent Focus	Focus Front Combination	Outside Diameter of Flange	Diameter of Lens	Price Barrel with Iris Dia.
1	3 1/4 x 4 1/4	6 in.	9 in.	3 1/4 in.	1 5/8 in.	\$15.00
2	4 x 5	7 "	11 "	3 3/4 "	1 7/8 "	20.00
3	5 x 7	10 "	14 "	4 "	2 1/4 "	25.00
4	6 1/2 x 8 1/2	11 1/2 "	17 "	4 1/2 "	2 1/2 "	35.00
5	8 x 10	14 "	21 "	5 1/4 "	3 "	50.00

List prices if equipped with Wollensak between the lens Studio shutter: No. 3, \$32.00; No. 4, \$42.00; No. 5, \$58.00.

Testimonials

Many will express surprise at the absence of testimonials from this catalogue, inasmuch as past editions have always contained quite a number, but in truth—we have accumulated such a quantity from enthusiastic users of Wollensak products that it would be neither just nor practical to select so few as might find room in these pages.

We have instead incorporated these testimonials into a little booklet, entitled "The Verdict," and will be pleased to send a copy on request.



Voltas F:8



HE Voltas F:8 represents an improvement on the older Three Focus Symmetrical type, and while it lacks the speed of the Versar, it is more compact, and is recommended for hand camera work, copying, enlarging and general view work, as well as portraiture and groups, where the lighting is ideal and the finer optical corrections and great speed are not essential.

Each element is corrected for use alone and is of different focal length, giving the owner three lenses in one. The long focal length of the front lens makes possible telephoto work, and the photographing of other subjects requiring a large magnification of the image.

It is hoped that the Voltas will not be confused with the ordinary R. R. or R. S. type of lenses, as it has been our endeavor to make the Voltas excel in its class and we urge those interested in this type to secure one for trial.

Attention is directed to the fact that this lens will not cover the size plate for which it is listed to the extreme corners with fine definition, unless stopped down to an aperture of F:11; also that the single elements must be used at a small aperture to give satisfactory definition.

The finish is the same as the higher priced lenses, being black enamel but with white engraving.



No.	Size	Equivalent Focus	Diameter	Mounted in Barrel	With Regno Shutter	With Auto Shutter
1	3 1/4 x 4 1/4	5 in.	3 3/4 in.	\$ 5.00	\$ 6.00	\$ 8.00
2	4 x 5	6 1/2 "	1 "	6.00	7.00	9.00
3	5 x 7	8 "	1 1/8 "	7.00	8.00	10.00
4	6 1/2 x 8 1/2	10 1/2 "	1 1/2 "	12.00	14.00	16.00
5	8 x 10	12 1/2 "	1 3/4 "	16.00	18.00	20.00
6	10 x 12	16 "	2 "	26.00	28.00	
7	11 x 14	18 1/2 "	2 1/4 "	30.00	33.00	
8	14 x 17	22 "	2 3/4 "	47.00		
9	17 x 20	26 "	3 1/4 "	60.00		

Focus of Separate Combinations when Used Singly

Size	Rear Lens	Front Lens	Size	Rear Lens	Front Lens
3 1/4 x 4 1/4	8 1/4 in.	11 1/2 in.	10 x 12	26 in.	38 in.
4 x 5	11 "	14 1/2 "	11 x 14	31 "	43 "
5 x 7	14 "	17 1/2 "	14 x 17	37 "	51 "
6 1/2 x 8 1/2	18 "	23 1/2 "	17 x 20	44 "	60 "
8 x 10	20 "	28 1/2 "			

Wide Angle F:16

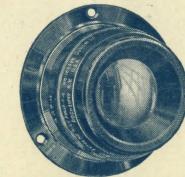


HE Symmetrical and Extreme Wide Angle lenses, as listed below, are equal in every respect to any of their type and price on the market, but like all lenses built on these formulas, must be stopped down to cover the size plates for which they are listed, when fine definition is desired to the corners of the plate.

The Symmetrical Wide Angle gives an angle of approximately 80 degrees, the Extreme Wide Angle of approximately 90 degrees. Neither of the above lenses will cover sharply the size plates for which they were listed, unless stopped down to an aperture of F:32, and while they will give perfect results when all conditions are ideal, we advise the purchase of our Series III Velostigmat F:9.5 where a fully corrected wide angle objective is desired. The different uses to which these lenses are adapted will be found under Series III Velostigmat, on page 9.

The Symmetrical and Extreme Wide Angle lenses can be furnished in barrel with iris diaphragm, fitted to the various shutters of our manufacture or in mounts to fit any standard make of shutter, but it is always advisable to send the shutter to the factory so as to insure accurate fitting and the maintenance of proper separation between the front and rear element.

The barrel and mounts are highly finished in black with white engraving and are furnished complete with cap and iris diaphragm.



Symmetrical Wide Angle F:16—80 Degrees

For plates size	4 x 5	5 x 7	6 1/2 x 8 1/2	8 x 10	10 x 12	11 x 14
In barrel	\$7.00	\$9.00	\$12.00	\$15.00	\$18.50	\$22.50
In mounts	5.00	6.00	8.00	10.00	13.00	16.00
In Regno shutter	8.00	10.00	13.00	16.00	20.00	24.00
Focal length	4 in.	5 1/4 in.	6 1/2 in.	7 1/2 in.	9 in.	10 1/2 in.

Extreme Wide Angle F:16—90 Degrees

For plates size	5 x 7	6 1/2 x 8 1/2	8 x 10	10 x 12	11 x 14	14 x 17
In barrel	\$12.00	\$17.00	\$22.00	\$26.50	\$31.50	\$36.50
In mounts	8.00	11.00	14.00	18.00	23.00	28.00
In Regno shutter	13.00	18.00	23.00	28.00	33.00	38.00
Focal length	4 in.	5 in.	6 1/2 in.	7 1/2 in.	8 in.	10 1/2 in.

Wollensak Anastigmat F:7.5 Lens

A Perfect Lens at a Popular Price.



In response to popular demand from those who are using cameras or kodaks with the ordinary R. R. lenses, and are not satisfied, but cannot do better because of the high prices of Anastigmat lenses in general, we have added to our already extensive line of lenses the F:7.5 Anastigmat in mounts.

The Wollensak Anastigmat F:7.5 lens in mounts is a perfectly corrected lens and will give microscopic definition over the entire film or plate, even to the extreme corners at the full aperture, which the R. R. lens cannot do.

The F:7.5 Anastigmat comes in mounts, ready to screw into the shutter on practically all $3\frac{1}{4} \times 5\frac{1}{2}$ or 4 x 5 cameras of the better grade, both roll film and plate, such as Ansco, Seneca Roll Film, Ensign, Kodak, etc. The exceptions to the above are two of the 3a Seneca, when fitted with Trio shutters.

No change is essential to the diaphragm scale, and a very slight adjustment if any, to the focus scale. Those desiring the F:7.5 indication on the diaphragm scale should send shutter to us when ordering lens.

The Wollensak Anastigmat F:7.5 is a boon to the amateur who wants better pictures, but cannot pay the price of the speedier Anastigmat such as our Velostigmats, or Vinco.

Price complete in case, \$10.00.

This series can be supplied in the smaller sizes, but as threads vary, the shutters should be sent to us for fitting. Price, including fitting, is \$10.00.



Auxiliary Lens Set

In offering this set of auxiliary lenses to the trade our aim has been twofold; first, that it should be practical and attractive, and second, that it should be reasonable in price.

The set consists of four supplementary lenses, namely: Portrait, Telephoto, Wide Angle, Copying and Enlarging, also a Duplicator and Ray Filter.

The lenses represent a standard of excellence for their types and the sets are supplied in a beautiful, velvet-lined leather-covered case. The lenses fit any hand camera lens up to $3\frac{1}{4} \times 5\frac{1}{2}$ size, and will increase the efficiency of such cameras materially.

Price of set, \$4.00. Single lenses, 50 cents. Duplicator, 25 cents.



Which Lens for My Purpose?



HERE is no doubt but that volumes could be written on this subject, but let us just outline here the chief requisites for the different branches of photography as they are generally classified—a sort of an explanation for the following table. First let us take

Amateur Work

Here the call is for a perfectly corrected lens, covering plate to the corners, giving good definition and with speed enough to take snapshots in ordinary daylight and reasonably short exposures indoors.

Speed and Newspaper Work

require a similar lens, but of greater speed, as many exposures are made in the neighborhood of $\frac{1}{1000}$ of a second. Critical definition is essential as most of these pictures are for reproduction and much detail is sacrificed in this process.

Architectural Work

Besides demanding a negative with detail to the extreme corners of the plate it requires that the lines be perfectly straight, hence the lens must be rectilinear.

Commercial Work

In this profitable branch the need is practically the same as for speed and architectural work combined. Critical definition must be present and covering power and rectilinearity is essential, while speed is an asset. A convertible lens is preferable as it is sometimes necessary to use a single combination to increase size of the image, and to improve perspective.

Wide Angle Work

It is generally conceded that for such work a special lens should be used. There are numerous wide angle objectives, but of them all the Anastigmat type is most to be desired, because of its covering power and flat field to say nothing of increased speed over the less expensive types.

Home Portraiture

In selecting a lens for this work, one must consider first speed, as the lighting is none too good; then focal length, as the average room is small, and will not permit the use of a lens over 12" in focal length. Of course,

other corrections should be considered along with these essentials, and the diffusion attachment as found on our Series II Velostigmat will be found most practical and useful.

Studio Work

In the studio the primary need is for a "straight portrait" lens, i. e.; one built on a modification of the old Petzval formula, for it is this type which gives the standing-out effect desired. Speed is a most important consideration, as photos of children must be practically snapshots. For groups a rapid Anastigmat with diffusion is most suitable.

And for those diffused pictures showing more diffusion and of a better quality than obtainable with an attachment on any lens, the Verito stands supreme.

Enlarging

Choices in same order as for commercial work but attention is called to the fact that the Series II and Vinco must be reversed for commercial work, although for portrait enlarging they produce most pleasing effects with a slight diffusion when used in the regular way.

So we have skimmed over these headings and give herewith a table which will aid you in making your choice.

Complete description of each lens and shutter, together with prices and other information, will be found under the respective headings.

AMATEUR WORK. First choice—Series I Velostigmat F:6.3. Second choice—Series II Velostigmat F:4.5. Third choice—Vinco-Anastigmat F:6.3. Fourth choice—Versar Portrait and View F:6. For diffused or artistic effects—Verito F:4 or F:6.

SPEED AND NEWSPAPER WORK. First choice—Series II Velostigmat F:4.5. Second choice—Series I Velostigmat F:6.3. Third choice—Vinco-Anastigmat F:6.8. Fourth choice—Versar Portrait and View F:6.

ARCHITECTURAL. First choice—Series I Velostigmat F:6.3. Second choice—Series II Velostigmat F:4.5. Third choice—Vinco-Anastigmat F:6.8. Fourth choice—Versar Portrait and View F:6.

COMMERCIAL WORK. First choice—Series I Velostigmat F:6.3. Second choice—Series II Velostigmat F:4.5. Third choice—Vinco-Anastigmat F:6.8. Fourth F:6.8. Fourth choice—Versar Portrait and View F:6.

WIDE ANGLE. First choice—Series III Velostigmat F:9.5. Second choice—Extreme Wide Angle F:16. Third choice—Symmetrical Wide Angle F:16.

HOME PORTRAITURE. First choice—Series II Velostigmat F:4.5. Second choice—Series I Velostigmat F:6.3. Third choice—Versar Portrait and View F:6. For diffused focus or artistic effects—Verito F:4.

STUDIO. For general work: First choice—Series II Velostigmat F:4.5. Second choice—Vitax F:3.8. Third choice—Vesta Portrait F:5. For diffused focus or artistic effects—Verito F:4. For large heads, busts, etc.: First choice—Vitax F:3.8. Second choice—Vesta F:5. For diffused focus or artistic effects—Verito F:4. For children: First choice—Vitax F:3.8. Second choice—Series II Velostigmat F:4.5.

NOTE—Always use a lens hood when possible, especially in studio work and home portraiture. A hood prevents reflections and flare and helps make snappy, sparkling negatives.

Lens Terms Frequently Used

And What They Mean.



STIGMATISM—A fault which makes impossible the photographing of both vertical and horizontal lines with equal sharpness near the margins of the plate.

CHROMATIC ABERRATION—A lens with this fault will not bring to a focus at the same plane the yellow and green rays of light to which the eye is most sensitive when focusing, and the blue and orange rays to which the sensitized plate is most sensitive. Hence while the image is focused sharply, it is out of focus on the negative.

COMA—The unequal magnification of the zones of a lens (these zones being defined as imaginary circles dividing the surface into concentric rings) which causes a pear shape blemish near the margin of the plate.

COVERING POWER—The ability to sharply and evenly define an image over a given area.

CURVATURE OF FIELD—A lens with a curved field will not focus a flat image equally sharp at both center and margin of a plate. Portrait lenses in general have a curved field while Anastigmats have a flat field.

DEFINITION—The degree of sharpness with which a lens renders an object.

DEPTH OF FOCUS OR DEPTH OF DEFINITION—The distance (near to far) over which an objective sharply defines the subject. This is governed by the focal length and aperture of the lens. All lenses of the same focus and aperture have the same depth.

EFFECTIVE APERTURE—The diameter of the largest stop as seen through the front lens.

FOCAL PLANE—The plane in which a lens sharply defines a distant object.

SPHERICAL ABERRATION—A fault which focuses rays of light passing to the plate in different planes, so the image will be sharp in some parts of the negative and out of focus in other parts.

Photographic Shutters



HIS company has been making shutters for over fifteen years and being pioneers we hold many basic patents covering mechanical improvements that places us at a decided advantage in manufacturing shutters which are both reliable and effective.

We call particular attention at this time to the improved construction of the "Studio," described on page 30; also to the listing of a No. 0 Optimo, to meet the demand for this "shutter of shutters" in a size smaller than the No. 1.

Worthy of note also is the new finish of several styles, which adds additional attractiveness to their other good qualities. All Wollensak shutters are now operated by wire release, although should a bulb and tube be desired, a "bulb attachment" can be supplied, which screws into the release socket and to which the bulb and tube is attached. The cost of these attachments is 50 cents list.

Wollensak shutters are made a part of the regular equipment of all the large camera manufacturers and can be obtained of any dealer in photo supplies and with any camera or lens, by specifying same at the time of placing order.

Each shutter is described and illustrated separately on the following pages and a table showing sizes required for the different lenses will be found on page 35, with a table of weights and measures.

The prices given are for shutter, wire release, flange and a set of screws for attaching the shutter to camera front board.

Optimo



VER since it was placed upon the market seven years ago, the Optimo has been giving universal satisfaction and the unprecedented demand for this type during the past two years has demonstrated that the Optimo rates A-1 in the "between-the-lens" shutter class.

The Optimo is compact in size, absolutely reliable in action, and gives exposures as near the rated or marked speeds as is possible to make. The Optimo has been justly called "The shutter of shutters" as it is as fine mechanically as a watch, and as practically all the working parts are made of German silver, it is remarkably free from the corrosive effects of salt water atmosphere and the elements.

In making exposure the five leaves revolve, one end passing from in front of the opening, and the other, coming from the shutter casing, taking its place, which makes high speed possible, and in opening and closing it shows a star-shaped aperture, the points of the star reaching to the edges of the opening, thus giving the greatest possible illumination to the plate.

In addition to bulb and time, it has a range of exposures from one second to $\frac{1}{300}$ of a second (in all sizes) which is generally conceded to be sufficiently fast to cover almost any emergency. It sets by a push button, and can be released by pressure on push button, wire or bulb release, without recoil or jar. A turn of the large milled disc on which is engraved an arrow indicator, makes adjustment for any desired exposure simple and quick. The iris diaphragm is regulated by a separate indicator.

The Nos. 1 and 1a can be furnished without extra charge with a setting lever to take the place of the push button, which makes it possible to fit the same to Ansco, Seneca Roll Film, Ensign, Ingento, Kodak and other roll film cameras.

The Optimo is light in weight, compact in size, and being finished in black enamel with gold engraving, and nickel trimmings, makes it handsome in appearance and durable as well.



No.	Light Aperture	Price	No.	Light Aperture	Price
0	$\frac{1}{8}$ in.	\$13.00	2	$1\frac{1}{8}$ in.	\$16.00
1	$\frac{3}{8}$ "	14.00	3	$1\frac{3}{8}$ "	18.00
1A	$\frac{7}{8}$ "	15.00	4	$1\frac{3}{4}$ "	20.00

Auto



HE Auto is a practical and reliable shutter, recommended for general work. It automatically sets itself after each exposure and is small in size and light in weight. The five leaf system is incorporated in its construction, thus giving a star-shaped opening, the points of the star reaching to the edge of the opening, thereby passing a maximum of illumination to the plate.

All the working parts are concealed in the case, thus protecting them from dust and injury.

Exposure is made either by pressing the push button or with wire release supplied with each shutter.

The duration of exposure is governed by the indicator at the top of the shutter, and in addition to the three fast and three slow "instantaneous" exposures, Time and Bulb exposures can be had. To open for focusing set indicator at "T." The scale at the bottom of the shutter regulates the iris diaphragm with which the shutter is supplied.

No.	Light Aperture	Price	No.	Light Aperture	Price
1	1 $\frac{3}{4}$ in.	\$7.00	3	1 $\frac{3}{8}$ in.	\$10.00
2	1 in.	8.00	4	1 $\frac{3}{4}$ in.	12.00

Regno

The Regno is quite similar in appearance, construction and operation to the Auto; practically the only difference being that it must be set each time before making the exposure, whereas the Auto is automatic.

The speeds of the two shutters are the same and their scope of work identical. The Regno is made in one larger size than the Auto.

Both are finished in black enamel, with nickel trimmings.

No.	Light Aperture	Price	No.	Light Aperture	Price
2	1 $\frac{1}{8}$ in.	\$6.00	4	1 $\frac{3}{8}$ in.	\$10.00
3	1 in.	8.00	5	2 $\frac{1}{8}$ in.	14.00

NOTE—The No. 4 Auto and the No. 4 and No. 5 Regno are not ready in the new model, and until further notice these sizes will be supplied with the two-leaf system having 1 $\frac{9}{16}$ in. and 2 $\frac{1}{16}$ in. apertures respectively.



Victo



HE Victo is a popular priced shutter giving four instantaneous exposures in addition to time and bulb, and is similar in appearance and general construction to the Auto and Regno, but lacks the slow instantaneous exposures. It works automatically, and is equipped with push button and wire release for making exposure. It has an iris diaphragm, five-leaf exposure system, is small in size, light in weight, and beautiful in finish.

The Victo is recommended for small hand cameras, and will be found reliable and efficient for general work.



No.	Light Aperture	Price
0	1 $\frac{9}{16}$ in.	\$3.00
1	1 $\frac{3}{4}$ "	4.00
2	1 "	5.00

Ultro

This shutter is simple in construction and sells at a moderate price. It is automatic in operation, and can be released by lever or wire release, is fitted with iris diaphragm, and finished the same as the Victo.



The Ultro is adjustable for time, bulb and one instantaneous exposure only, this being sufficient for all ordinary single or inexpensive double lenses, which can be fitted to it in sizes from 1 $\frac{5}{8}$ x 2 $\frac{1}{2}$ " to 5 x 7".

Adjustments are made for exposures by moving indicator at top of shutter and diaphragm apertures are regulated by indicator at bottom.

No.	Light Aperture	Price
0	1 $\frac{9}{16}$ in.	\$2.00
1	1 $\frac{3}{4}$ "	3.00

Studio



N improvement in the Studio shutter most vital to the progressive professional, and to which especial attention is directed, is that whereas it was practically noiseless, it is now absolutely so.

A modern three-foot wire release replaces the bulb and tube and is supplied with each shutter, permitting exposures from about $\frac{1}{5}$ second to any desired length by a continuous pressure of the release, or the shutter may be left open for focusing, or time exposures, by snapping a simple "time" catch attached to the handle of the release.

The little lever which opens the shutter for focusing has been retained for the benefit of those who use the shutter in connection with a flash machine where bulb and tube may be employed as a means of releasing the shutter. See reference to bulb attachment on page 26.

As all exposures are made with the leaves opening and closing at the center (thereby diaphragming) a greater depth of focus is obtained when using this style shutter, than is possible with winged shutters when using the lens at the same working aperture.

The Studio is the "between the lens" type, has ten leaves which form the iris, is absolutely noiseless, small in size, comparatively light in weight, positive in action, extremely simple in operation, and is a thoroughly efficient shutter for the professional photographer, for both work in the studio and home portraiture. Practically all portrait lenses can be fitted with the Studio shutter, but only those of our manufacture can be mounted correctly without having them specially fitted, as all lenses require very accurate fitting and adjustment.

Our charge for this work is very reasonable, and the average fitting can be completed and returned within forty-eight hours from its receipt at our factory.



No.	Outside Diameter	Light Opening	Will fit Portrait Lenses as follows:		Price
			Vesta	Vitax	
1	3 $\frac{1}{2}$ in.	2 $\frac{1}{2}$ in.	No. 3		\$10.00
2	4 $\frac{1}{4}$ "	2 $\frac{7}{8}$ "	No. 4		12.00
3	4 $\frac{7}{8}$ "	2 $\frac{1}{8}$ "	No. 5		
4	5 $\frac{7}{8}$ "	3 $\frac{1}{2}$ "	No. 1		14.00
5	6 $\frac{7}{8}$ "	4 $\frac{1}{8}$ "	No. 2		16.00
			No. 3		18.00

Ray and Differential Ray Filters



OLLENSAK filters are made of fine imported optical glass, mounted in hand-spun brass mounts, with three adjusting screws, thereby enabling the operator to secure the filter in perfect plane or alignment, to the lens on which it is used. The color dyes are of the highest grade possible to obtain, the coating is done by hand, is free from striae and other imperfections, and each filter must conform to our high standard before being passed by our Testing Department.

Our standard filter, which is regularly supplied on all orders, requires an exposure of but four times normal, and is therefore suitable for work requiring fast exposures, and gives sufficient corrections for commercial photography.

For cloud and landscape work we suggest the Differential filter, the density of which is graduated so as to hold back the sky while full exposure is given the foreground. No additional exposure is required with the Differential or graduated screen.

Each filter is packed in a durable, velvet-lined leather case, and the range of sizes is such that they fit all products of our manufacture, as well as other standard makes.

No.	Will Fit Lens Mounts from	Price	No.	Will Fit Lens Mounts from	Price
1	1 $\frac{5}{8}$ in. to 1 $\frac{13}{16}$ in.	\$2.00	6	2 $\frac{3}{8}$ in. to 2 $\frac{5}{8}$ in.	\$4.50
2	1 $\frac{1}{8}$ " " 1 $\frac{3}{8}$ "	2.25	7	2 $\frac{1}{8}$ " " 3 "	5.25
3	1 $\frac{1}{8}$ " " 1 $\frac{1}{2}$ "	2.50	8	3 $\frac{1}{8}$ " " 3 $\frac{1}{2}$ "	6.75
4	1 $\frac{1}{8}$ " " 2 "	3.00	9	3 $\frac{3}{8}$ " " 4 $\frac{1}{8}$ "	7.50
5	2 $\frac{1}{8}$ " " 2 $\frac{1}{8}$ "	3.75	10	4 $\frac{1}{8}$ " " 4 $\frac{5}{8}$ "	9.00



Wollensak Process Lens

Attention is called to the Wollensak Process Lens. While not listed in our previous catalogue, we have been supplying them to engravers, and they have been giving entire satisfaction.

The Wollensak Process Lens is made of the finest grade of glass procurable, and on an unsurpassed formula. The front lens hood is removable and screw threads interchangeable, so as to receive the prism. It is subject to our broad guarantee and liberal trial period of thirty days.

The lens is beautifully finished in black, with gold engraving.

No.	Focus	Diameter Lens	Speed	Plates covered for reduction	Plates covered for full size copy	Price
1	10 $\frac{1}{4}$ in.	1 $\frac{11}{16}$ in.	F:8	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	10 x 12	\$65.00
2	12 $\frac{3}{4}$ "	1 $\frac{3}{8}$ "	F:8	8 x 10	11 x 14	85.00
3	15 $\frac{1}{2}$ "	2 "	F:8	10 x 12	12 x 15	105.00
4	18 "	2 $\frac{5}{8}$ "	F:8	12 x 15	14 x 17	120.00
5	25 "	3 $\frac{3}{8}$ "	F:10	16 x 20	20 x 24	175.00
6	30 "	3 $\frac{1}{8}$ "	F:16	20 x 24	24 x 30	250.00

Regno Stereoscopic



UR stereo shutter is controlled with a single mechanism, thereby guaranteeing uniformity in operation of both diaphragm and shutter. It is dust proof, light in weight, and has a standard distance from center to center of the openings of $3\frac{1}{4}$ ".

The Regno is a non-automatic shutter, requiring setting before each exposure, and in addition to Bulb and Time gives six different speed exposures. Except for the connecting attachment which works the pair simultaneously, the working parts are the same as in the Regno shutter.

Price, \$15.00.

Mounting Lenses

We have a special department for the accurate fitting and mounting of lenses of all makes, in charge of skilled workmen, and can therefore guarantee perfect satisfaction, best possible work, in a minimum length of time.

Lenses having separation of $2\frac{1}{2}$ m/m ($\frac{1}{8}$) or more can be mounted in our shutters. As a rule, the barrel is left intact, so that the lens can be used in either barrel or shutter. On account of the necessity of having correct separations, etc., in lenses of practically all types, it is advisable in every instance to send lenses in their original barrels or mounting when ordering shutters fitted.

By referring to table on page 35, giving dimensions of our various shutters, also mounting and fitting table on page 34, no trouble will be had in determining the size necessary for any objective, and price charged for mounting, fitting, special focusing scale, added to the price of the shutter, will give the total charge for fitting.

Special Order Work

In addition to the standard equipments as listed in our catalogue we make a great many lenses and shutters specially adapted to particular styles of cameras, and will be pleased at all times to receive specifications in regard to individual requirements for optical and mechanical outfits, of this nature.

Owing to the expense of tools and experimental work, it is usually not practical to make single outfits where they differ too radically from our standard goods, but we desire at all times to get in direct communication with anyone who is contemplating putting on the market cameras, projection or reflecting machines or apparatus requiring lenses or shutters of any nature.

"Let the User Judge"



E choose to view an order from a customer as but a step in a business transaction, which is completed only when he is absolutely satisfied.

It is considered by us a personal obligation to please every customer in all respects, and this we pledge ourselves fully to do. It is understood, agreed and guaranteed that any lens or shutter received from us must measure up to our description of it, and fulfill in a practical way all claims made for it.

We are perfectly content to "Let the User Judge," and will gladly send any of our products through an established photographic supply dealer on memorandum for thirty days trial without incurring obligation, so the prospective purchaser may test our product intelligently for the work desired, and in comparison with competitive articles.

We do not attempt,—neither do we desire, to force our goods on anyone, for our aim has always been "a satisfied customer, or no customer;" hence the user is the sole judge and for his best interest and our own we are glad to abide by his decision after he has tested our products.

Guarantee

As a matter of record, although entirely unnecessary, we place in the hands of each purchaser of a Wollensak lens a bona fide guarantee of quality in the form of a "guarantee certificate," signed by the inspector who subjected it to the final test, giving the name of lens, its number, size, date of test and shipment. This guarantee, together with our broad and liberal sales policy, gives absolute protection to the purchaser, and puts into tangible shape one of the most binding guarantees ever issued by any concern in the industry.

Terms

All goods are sold only through bona fide dealers in photographic supplies. Should difficulty be encountered in obtaining same, a card to that effect will enlist our effort to have you supplied promptly.

No goods are sent on consignment but every article is subject to our broad guarantee and trial privilege. (See above.)

Goods are packed and delivered to transportation companies in good order and without charge, and prices are F. O. B. Rochester.

In the absence of instructions we will use our best judgment in routing shipments.

Distance Required from Lens to Subject with Wollensak Objectives

Name and Number of Lens	Heights of image on ground glass for average standing figures of 68 inches				Heights of image on ground glass for average head of 9 inches			
	4 in.	6 in.	8 in.	10 in.	2 in.	4 in.	6 in.	8 in.
Series II Velostigmat								
No. 3	126	86			38	25	18	
" 4	148	102	88		45	29	21	17
" 5	171	117	91		53	33	24	20
" 6	216	148	114	94	66	42	30	25
" 7	279	191	148	121	85	54	39	33
Vitax								
No. 1	180	123			55	35	25	
" 2	234	160	124	101	72	46	33	27
" 3	288	197	152	125	88	56	40	34
Vesta								
No. 2	126	86			38	25		
" 3	180	123			55	35	25	
" 4	216	148	114	94	66	42	30	25
" 5	252	173	133	109	77	49	35	29
Versar								
No. 2	160	108			48	30	21	
" 3	175	118	92		51	32	23	
" 4	210	142	110	91	63	40	29	23
" 5	267	182	140	115	81	51	37	31
" 6	297	216	157	129	91	58	41	35
" 7	329	224	173	142	102	64	46	39
Verito								
No. 1	162	111			50	32	23	
" 2	207	141			63	40	29	23
" 3	279	179	138	113	80	50	36	30
" 4	324	221	171	140	90	63	45	38

Figures given in above tables are in inches and are the approximate distance from lens to subject.

Mountings and Fittings, Flanges, Caps, Scales, Releases, Etc.

Number	1	2	3	4	5	6
Diameter	1 in.	1 $\frac{1}{4}$ in.	1 $\frac{3}{4}$ in.	2 in.	2 $\frac{1}{4}$ in.	2 $\frac{1}{2}$ in.
Mounting and Fitting	\$1.50	\$1.75	\$2.50	\$3.00	3.50	\$4.00
Standard Flanges . . . . .	.40	.50	.65	.75	.85	1.00
Special Flanges . . . . .	.75	1.00	1.25	1.50	1.75	2.00
Caps . . . . .	.25	.35	.45	.60	.70	.80
Number	7	8	9	10	11	12
Diameter	3 in.	3 $\frac{1}{2}$ in.	4 in.	4 $\frac{1}{2}$ in.	5 in.	6 in.
Mounting and Fitting	\$4.25	\$4.50	\$4.75	\$5.00	5.50	\$6.00
Standard Flanges	1.25	1.50	1.75	2.00	2.25	2.50
Special Flanges	2.50	3.00	3.50	4.00	4.50	5.00
Caps . . . . .	.90	1.00	1.10	1.20	1.35	1.50

NOTE—Sizes listed are inside diameters for standard flanges and caps, and outside diameters of barrels for lens mountings or fittings.

Special focusing or diaphragm scales, 50 cents each.

Wire or cable release, 50 cents each.

Bulbs and tubes, small, 20 cents; medium, 25 cents; large, 40 cents each.

Weights, Dimensions and Openings of Shutters

Shutter	Weight	Outside Diameter	Light Opening	Lens Opening	Maximum Outside Diameter Flange	Diameter Flange Opening	Length of Shutter Barrel
Ulro No. 0 . . .	1 $\frac{1}{2}$	1 $\frac{9}{16}$	$\frac{9}{16}$	$\frac{7}{8}$	1 $\frac{1}{2}$	$\frac{15}{16}$	$\frac{23}{32}$ in.
Ulro No. 1 . . .	2	1 $\frac{15}{16}$	$\frac{3}{4}$	1 $\frac{1}{16}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{13}{16}$ "
Victo No. 0 . . .	1 $\frac{1}{2}$	1 $\frac{1}{16}$	$\frac{9}{16}$	$\frac{7}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{23}{32}$ "
Victo No. 1 . . .	2	1 $\frac{1}{16}$	$\frac{3}{4}$	1 $\frac{1}{16}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{13}{16}$ "
Victo No. 2 . . .	3	2 $\frac{1}{16}$	1	1 $\frac{7}{16}$	1 $\frac{7}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{16}$
Auto No. 1 . . .	2	1 $\frac{1}{16}$	$\frac{3}{4}$	1 $\frac{1}{16}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{16}$
Auto No. 2 . . .	3	2 $\frac{1}{16}$	1	1 $\frac{7}{16}$	1 $\frac{7}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{16}$
Auto No. 3 . . .	4 $\frac{1}{2}$	2 $\frac{1}{16}$	$\frac{13}{16}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 in.
Auto No. 4 . . .	9 $\frac{1}{2}$	3 $\frac{3}{16}$	$\frac{1}{16}$	2 $\frac{1}{16}$	3 $\frac{3}{8}$	2 $\frac{1}{2}$	1 $\frac{1}{16}$ "
Regno No. 5 . . .	17 $\frac{1}{2}$	4 $\frac{1}{16}$	2 $\frac{1}{16}$	3	4 $\frac{1}{16}$	3 $\frac{1}{16}$	3 $\frac{1}{16}$ "
Optimo No. 0 . . .	2	1 $\frac{15}{16}$	$\frac{1}{16}$	$\frac{27}{32}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{15}{16}$
Optimo No. 1 . . .	4	2 $\frac{1}{16}$	$\frac{3}{32}$	1 $\frac{1}{16}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{5}{32}$ "
Optimo No. 1-a . .	5	2 $\frac{1}{16}$	$\frac{1}{16}$	1 $\frac{7}{16}$	1 $\frac{7}{8}$	1 $\frac{1}{16}$	1 $\frac{1}{16}$
Optimo No. 2 . . .	6 $\frac{1}{2}$	2 $\frac{7}{16}$	1	1 $\frac{1}{16}$	2 $\frac{1}{4}$	1 $\frac{3}{8}$	1 $\frac{1}{16}$
Optimo No. 3 . . .	10 $\frac{1}{2}$	3 $\frac{3}{16}$	$\frac{13}{16}$	1 $\frac{7}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{9}{32}$ "
Optimo No. 4 . . .	17	4 $\frac{1}{16}$	$\frac{1}{16}$	2 $\frac{1}{16}$	3 $\frac{3}{8}$	2 $\frac{1}{8}$	2 $\frac{9}{32}$ "

The weights, diameters, openings, etc., of Regno are the same as the Auto.

NOTE—Weights given in ounces; diameters, in inches.

Lenses Showing Size of Shutter Used

Style and Number of Shutter	Velostigmat Series I	Velostigmat Series II	Velostigmat Series III	Vinco	Versar	Verito
Optimo No. 0	2 $\frac{1}{4}$ x 3 $\frac{1}{4}$	2 $\frac{1}{4}$ x 3 $\frac{1}{4}$		2 $\frac{1}{4}$ x 3 $\frac{1}{4}$		
Optimo No. 1	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$			3 $\frac{1}{4}$ x 4 $\frac{1}{4}$		3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ F:6
Optimo No. 1-a	4 $\frac{x}{5}$ 3 $\frac{1}{4}$ x 5 $\frac{1}{2}$ 5 x 7	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	5 $\frac{x}{7}$ 6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	4 $\frac{x}{5}$ 3 $\frac{1}{4}$ x 5 $\frac{1}{2}$ 5 x 7		4 x 5 F:6
Optimo No. 2		4 x 5			4 x 5	
Optimo No. 3	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	5 x 7	8 x 10	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	5 $\frac{x}{7}$ 6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	
Optimo No. 4	8 x 10	5 $\frac{x}{8}$ 6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	11 x 14	8 x 10	8 x 10	
Auto No. 1	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	2 $\frac{1}{4}$ x 3 $\frac{1}{4}$		3 $\frac{1}{4}$ x 4 $\frac{1}{4}$		3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ F:6
Auto and Regno No. 2	4 $\frac{x}{5}$ 3 $\frac{1}{4}$ x 5 $\frac{1}{2}$ 5 x 7	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	5 $\frac{x}{7}$ 6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	4 $\frac{x}{5}$ 3 $\frac{1}{4}$ x 5 $\frac{1}{2}$ 5 x 7		4 x 5 F:6
Auto and Regno No. 3	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	4 $\frac{x}{5}$ 3 $\frac{1}{4}$ x 5 $\frac{1}{2}$ 5 x 7	8 x 10	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	4 x 5 5 x 7	
Auto and Regno No. 4	8 x 10	5 $\frac{x}{8}$ 6 $\frac{1}{2}$ x 8 $\frac{1}{2}$		8 x 10	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	4 x 5 F:4
Regno No. 5	11 x 14	8 x 10			8 x 10 10 x 12	5 x 7 F:4
Victo and Ulro No. 0 . . .	2 $\frac{1}{4}$ x 3 $\frac{1}{4}$			2 $\frac{1}{4}$ x 3 $\frac{1}{4}$		

Promotion of Trade Department



IN dealing with any concern there is always a feeling of satisfaction when one knows that their particular needs are having personal attention, and that someone stands ready to competently render assistance cheerfully and without obligation.

So this company maintains the Promotion of Trade Department for the sole purpose of helping all those interested in Wollensak Products. For the dealer it supplies catalogues, booklets, pictures and every form of service possible to advertise the goods; also it follows up inquiries with them and for them. It refers prospective customers to them, and is always on the alert to put forth a helping hand in any way possible.

To the photographer (amateur or professional), the Promotion of Trade Department stands ready to lend any assistance in the selection of lenses best suited for different classes of work, or will discuss the merits of different types of lenses. This service is gratis, and places the person making inquiry under no obligation whatsoever. We must refrain, however, from making comparisons between our products and the goods of other manufacturers.

We firmly believe that a satisfied customer is the best possible advertisement for a product of any kind, and we not only use our efforts to make the sale, but are glad to be of every possible service after the purchase is made.

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