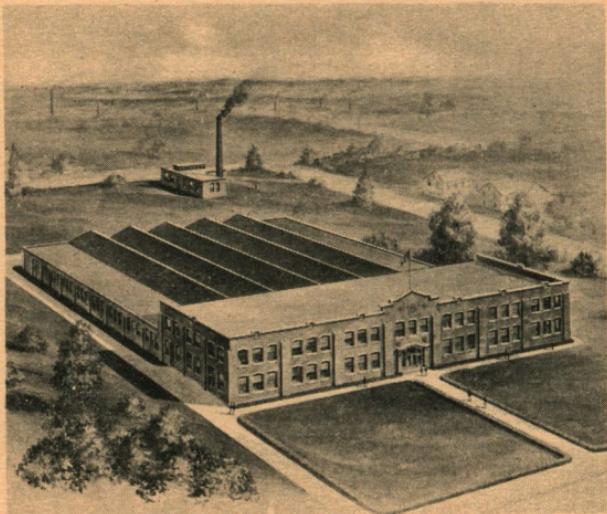




WOLLENSAK
LENSES & SHUTTERS



The growth of this company made necessary the erection of the above plant, (completed March 1st, 1914) which indicates, we think, that our products and business methods have found favor with the trade and public.

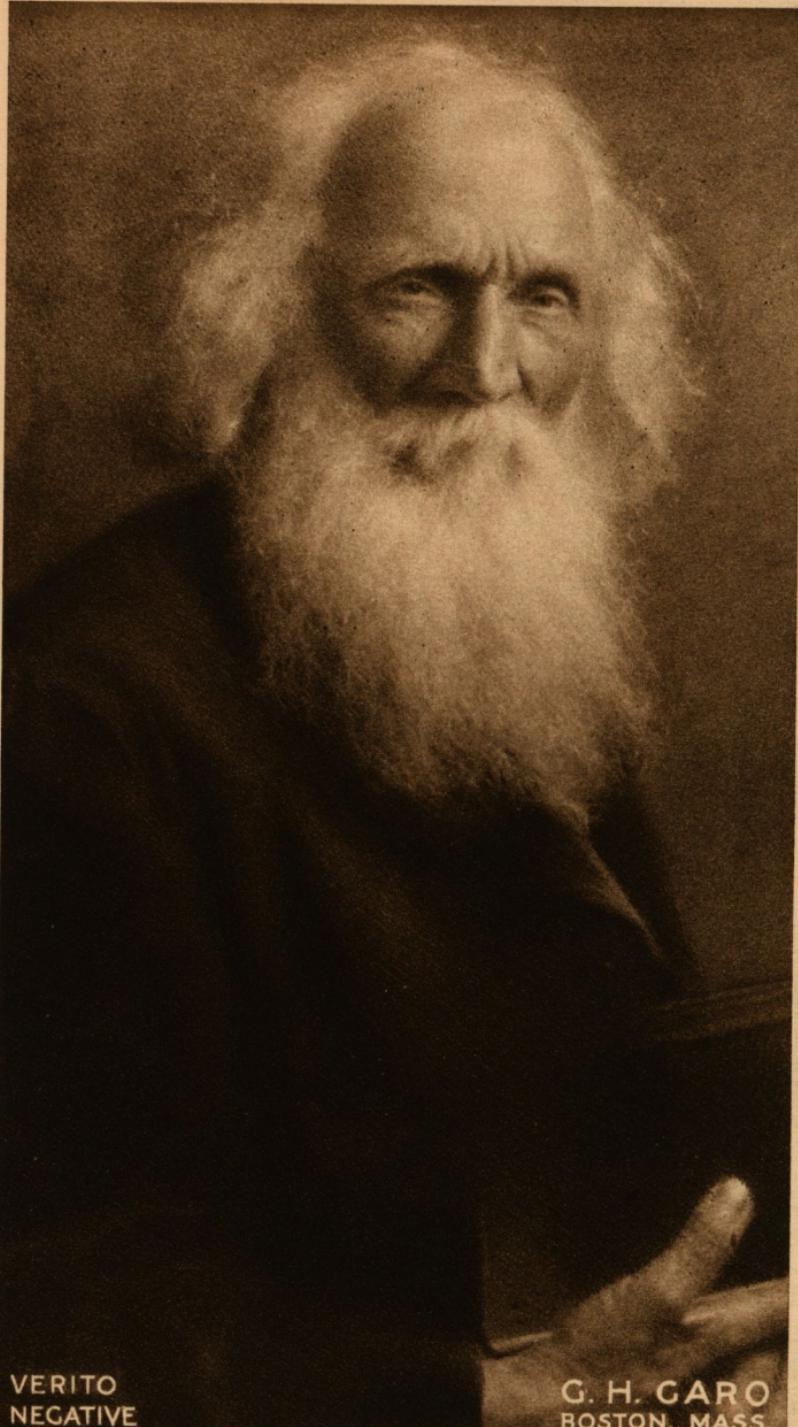
It will be our pleasure to have you visit this modern factory when in Rochester, that you may learn of the organization, equipment and skill employed in the manufacture of Wollensak lenses and shutters.

A Catalogue of
PHOTOGRAPHIC
LENSES AND
SHUTTERS

1914

1915

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



VERITO
NEGATIVE

G. H. GARO
BOSTON, MASS.

Introductory

About fourteen years ago the Rauber & Wollensak Optical Co. was organized to manufacture photographic shutters, and in due course of time placed upon the market a line having many improvements not found in those then upon the market. This new line met with instant success, and during the early part of 1902 it was decided to re-organize the company, increase the shutter manufacturing facilities, and as well engage in the manufacture of photographic lenses.

The first product of the new lens department was completed September 6th, 1902—a single achromatic lens—listing at 75 cents. The growth of the company since that has been continuous, each year witnessing many improvements not only in the products, but service as well. As a result, Wollensak lenses and shutters are now favorably known throughout the country, and are generally accepted as being standard.

The policy of the company, since its inception, has been to keep abreast with the times, to produce but one grade of products—the best—and to market the same at a reasonable price. This, together with the liberal and courteous treatment extended our customers, coupled with prompt and efficient service, made it necessary to increase our production each year in order to keep up with the demand.

The year 1914 sees the Wollensak Optical Co. installed in their new and modern plant, with the latest and most approved machinery, employing about 300 people, and with an increase in floor space of double that in use during the previous year. With these increased facilities we will be in a better position to take care of the trade than ever before, and at the same time maintain our high standard of quality, and yet market our product at the lowest possible price.

Wollensak lenses and shutters are being used in the principal studios, and in all other branches of photography, and it is generally conceded that our name on a lens or shutter is an absolute guarantee of quality and perfection.

Attention is directed to the numerous changes in construction, etc., in both lenses and shutters listed in this catalogue. The list prices shown herein supersede all previous lists and quotations.

What Type of Lens is Best For My Purpose?

Seldom a day goes by that we do not have this question asked a number of times, and while it is a difficult one to answer (without having at hand a multitude of details, etc., touching upon the particular case) we will endeavor to give a plain, non-technical, general answer to the question, and trust that the information given will prove of interest and value.

The principal branches of photographic work can be divided into seven divisions, which we will take up and discuss one at a time.

Amateur Work

A majority of workers who have as a hobby, photography in its various branches, desire and have need for a lens to do various kinds of work, and while no one lens has ever been perfected that would handle all classes of work in the best possible manner, yet it is universally conceded that a moderate speed Anastigmat (of the Symmetrical type) is the nearest approach to the ideal.

Therefore, for general or "all-around" work, we recommend our Series I Velostigmat F:6.3, as it will be found equally suitable for landscape, architectural and general view work, speed photography of the ordinary kinds, as well as for copying and enlarging. The half combinations being corrected for use separately, make it practical for telephoto work, and when the doublet is stopped down and is used on a plate larger than listed for, it will be found entirely practical for wide angle work.

The Series I Velostigmat mounted in Optimus shutter makes an ideal outfit for hand camera work of every description.

Speed and Newspaper Work

Speed work with reflecting type and other cameras advocated for work of this character requires a lens with great speed, and critically fine optical corrections. Speed is essential because it is oftentimes necessary to obtain results under adverse light conditions, etc., and with the higher speeds of the shutter, whether it be of the Focal Plane, or between-the-lens types.

Our Series II Velostigmat F:4.5 is an ideal objective for this work, as it has all the fine optical corrections, and gives a crisp, brilliant image, free from flare and ghost, and sharp to the extreme corners of the plate, even when the lens is used at its larger apertures.

Architectural Work

An optically perfect objective is necessary for this work, for straight lines must be rendered straight, and the finished result technically correct from every standpoint. While any of our Anastigmat lenses can be used to good advantage, we recommend our Series I Velostigmat as being the ideal lens for architectural work in all its branches.

Commercial Work

Either our Series I or II Velostigmat will be found entirely practical for work of this character, as both have the necessary optical corrections, combined with speed, which, while not always essential, is a valuable asset at times when it is necessary to combine fast exposures with optically perfect work.

On account of its fine color corrections, the Series II Velostigmat is especially valuable for process work, the Autochrome and all other methods of color photography.

Wide Angle Work

Where a wide angle of view is desired, or it is necessary to work in confined space, the wide angle lens becomes a necessity, for while it is short in focal length, it gives a wide angle of view. Good results can be obtained with our Symmetrical or Extreme Wide Angle lenses, when conditions are ideal, but our Series III Velostigmat F:9.5 90 degrees, is by far the most desirable objective because of its great speed, brilliant illumination and fine optical corrections.

It has a perfectly flat field, covers the plate at its largest working aperture, and on account of its high speed, can be used with the greatest possible success for flashlight exposures.

Home Portraiture

“Portraiture at home” requires a lens working at the greatest possible speed, combined with short focal length and perfect covering power, and this can only be obtained in a lens of the Anastigmat type. As fine definition or detail is not always desired in portraiture, we have equipped our Series II Velostigmat F:4.5 (in the three largest sizes) with a simplified diffusing attachment, which gives the operator his choice of several degrees of diffusion, or wiry sharp definition.

The No. 5 Series II Velostigmat is recommended for home portraiture, as the focal length is sufficiently short to make it practical in the average size room, and still have it possible to get perfect covering qualities, etc., on the larger size plates, and at the larger apertures. This lens is small in size, and therefore entirely practical for portable outfits, and when equipped with our Studio shutter, gives the operator as near an ideal outfit as it is possible to obtain.

Where a less expensive lens is desired, either the Series I Velostigmat F:6.3 Nos. 3 or 4, or the Versar Portrait and View F:6 No. 3 are recommended, either of which will be found quite suitable for the work in question, but of course, do not have the high speed, etc., found in the Series II Velostigmat.

The Series I Velostigmat would be preferable where sharp detail is wanted; the Versar Portrait and View where rounded effects are preferable. The lenses mentioned above will be equally suitable for 5 x 7 and 6½ x 8½ plates for large heads, busts and half lengths. The Velostigmat would be more desirable if a great many full lengths and groups are made, on account of its fine covering power and other optical corrections.

Studio Work

The nearest approach to an ideal objective for general studio work is one constructed on the Anastigmat type and equipped with a diffusing device. We therefore recommend our Series II Velostigmat in the larger sizes for this work, and can refer to a majority of the best known photographers in all parts of the country, who have adopted and are using this lens in their studios. The Series II is equally suitable for groups, standing figures, children's work, busts, one-half and three-quarter lengths.

While it is true that this type of lens will take care of all the various kinds of work mentioned, yet there are a great many photographers who prefer and are using two or three lenses entirely different in type for their work.

There is a certain charm and a distinctive character about results obtained with a lens constructed on a modification of the original Petzval formula, when used for large heads, busts and half lengths. This effect is what has been termed “stereoscopic” “rounded,” “standing out,” etc., and is caused by the fact that lenses of this type give a sharp image in the

center of the plate, or field, gradually falling off in definition towards the edges, making it possible for the operator to emphasize or place his point of interest (fine definition) where so desired, while the balance of the picture has a greater or lesser degree of diffusion, all of which has a tendency to make the point of interest predominate, or stand out from the balance of the composition.

For this reason our Vitax Portrait lens F:3.8 is to be found in a majority of the leading studios, and we have been repeatedly told by those in a position to know, that the Vitax is the ideal portrait lens for work of this character. The equalizing and diffusing attachment with which it is equipped makes it very suitable for groups and full lengths, and at the same time enables the operator to get almost any desired effect without removing the lens from camera front board. Its great speed of F:3.8 makes it especially valuable for exposures on those dull dark days, (when a slower lens would be impractical) as well for any class of studio work, requiring a lens with a maximum amount of speed, without a flat field.

Many of our leading photographers are making a specialty of diffused or soft focus work of a peculiar character, that can only be obtained with a lens built specially for this effect, and we point with pride to the fact that while our Verito Diffused Focus lens, speed F:4, has only been upon the market about two years, it is being used by almost every well known photographer doing this class of work.

The Verito gives an image entirely different from that obtained with any other objective upon the market, and this, together with the fact that it has a flat field, which gives an even diffusion throughout the plate, with great speed, makes it a perfect lens for artistic photography, equally suitable for portraiture, either at home or in the studio, and as well for landscape work in its many branches.

In the foregoing we have given what is in our estimation the best lens of our manufacture for each class of work, but attention is directed to the fact that the less expensive types of our lenses will answer the purpose at times when conditions are ideal, and for this reason we append first, second, third and fourth choice of lenses for the various kinds of work mentioned.

AMATEUR WORK First choice—Series I Velostigmat F:6.3. Second choice—Series II Velostigmat F:4.5. Third choice—Vinceo-Anastigmat F:6.8. Fourth choice—Versar Portrait and View F:6. For diffused or artistic effects—Verito F:4.

SPEED AND NEWSPAPER WORK First choice—Series II Velostigmat F:4.5. Second choice—Series I Velostigmat F:6.3. Third choice—Vinceo-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—Vinceo-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—Vinceo-Anastigmat 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.

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.

Velostigmats

Velostigmats are objectives of the Anastigmat type, the name "Velostigmat" being a trade name (adopted to distinguish Anastigmats made by this company from other makes) derived from the Latin words meaning velocity and stigmatism.

Everything entering into the construction of this series of lenses is of the highest grade possible to obtain, and no expense is spared to eliminate any possible error in process of manufacture that might occur from the time the glass is fused until the finished lens is completed. The manufacture of Anastigmat lenses is a complicated one, involving not only the installation of expensive machinery, the employment of skilled labor, but requiring the utmost care in preparing formulas, etc. Thus the Anastigmat is more expensive to produce than lenses of the older types.

Many have been the arguments for and against air space and cemented lenses, but it is generally conceded that both formulas have their good points. Therefore we perfected a formula using a combination of both air spaces and cemented surfaces, thus retaining the good qualities of both types. Velostigmats have now been upon the market for a number of years, thousands have been sold, and invariably they have given the best possible service and satisfaction.

As to the matter of variance in prices between the Anastigmats of different manufacturers, attention is called to the fact that we have repeatedly said—"There are cheaper Anastigmats than the Velostigmat, but they are not as good; there are higher priced ones, but they are no better"—and this claim, backed by our broad guarantee, gives absolute protection to every purchaser of a Velostigmat.

Each Velostigmat, whether mounted in barrel or the various shutters of our manufacture, is furnished in a leather-covered, velvet-lined case.



SERIES I VELOSTIGMAT
NEGATIVE

H. H. COBURN
INDIANAPOLIS, IND.

Velostigmat Series I F:6.3



The nearest approach to an ideal lens for general or all-around work, is one of the Anastigmat type, working at moderate speed, and of symmetrical or convertible construction. As our Series I Velostigmat has these qualities, in addition to full correction for astigmatism, spherical and chromatic aberration, a flat field and absolute freedom from coma, distortion and flare, we unhesitatingly recommend it for general work. The working aperture of F:6.3 is sufficiently fast for practically every kind of work, with the exception of extreme high speed photography.

As the half combinations are corrected for use separately, telephoto and other work requiring a moderately large magnification of image, can be taken care of, and by stopping down the doublet, or complete lens, and using plates one or two sizes larger than listed for, wide angle work can be done to good advantage.

The smaller sizes can be readily fitted to Ansco, Senco, Kodak 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.	Diam. of Lens	Equivalent Focus	Plates Covered Sharply at F:6.3	With Barrel or Regno Shutter	With Auto Shutter	With Optimus Shutter
1	7/8 in.	5 in.	3 1/4 x 4 1/4	\$23.00	\$26.00	\$33.00
2	1 "	6 "	4 x 5	27.00	30.00	37.00
2A	1 1/16 "	6 1/2 "	3 1/4 x 5 1/2	27.00	30.00	37.00
3	1 5/16 "	7 "	5 x 7	35.00	39.00	47.00
4	1 7/16 "	9 1/2 "	6 1/2 x 8 1/2	53.00	57.00	65.00
5	1 31/32 "	12 1/2 "	8 x 10	65.00	70.00	80.00
6	2 9/16 "	16 "	11 x 14	112.00		

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.

If everyone liked the Series I Velostigmat as well as I do, the factory would be swamped with orders.

—W. R. Bradford, Art Dept., North American, Philadelphia, Pa.

I am very much pleased with the Velostigmat Series I.

—Claude Solomon, Philadelphia, Pa.

My Series I Velostigmat in Optimus shutter is giving excellent satisfaction.

—John A. Puett, Colfax, Ill.

In my estimation your Series I Velostigmat is the best lens on the market.

—A. Dreyfus, Galveston, Tex.

That I am well pleased with the Series I Velostigmat is rather a mild form of expressing my entire satisfaction.

—Geo. R. Haskell, Warrensburg, N. Y.

I would not exchange my Series I Velostigmat for any other lens I have ever used, and I have had most all of them.

—H. A. Williams, Amherst, O.

Your Series I Velostigmat in Optimus shutter is a wonderful combination.

—Alexander Buechner, Brooklyn, N. Y.

Your Series I Velostigmat does most excellent work.

—L. C. MacDonald, Pasadena, Calif.

Velostigmat Series II F:4.5



For high speed or press photography, portraiture, groups, etc., an Anastigmat with a maximum speed of F:4.5 is very desirable, if not an absolute necessity, and although our Series II F:4.5 Velostigmats sell at very moderate prices, they are absolutely guaranteed to be at least equal to any objective of this type and speed on the market.

They have all the corrections to be found in the Series I, combined with greater speed, and as the three larger sizes are equipped with

a simplified diffusing adjustment, it makes them desirable and practical for the studio, and all classes of professional work, including groups and home portraiture.

The smaller sizes are particularly desirable for hand cameras of the Reflex and other types, where extreme high speed is desired.

The diffusing adjustment enables the operator to obtain an even degree of diffusion or softness over the entire plate, thus doing away with the wiry, sharp image given with the average Anastigmat lens, and which is not desirable as a rule in portraiture.

The Series II is recommended for groups in or out of the studio, home portraiture, press or speed photography, commercial and general view work, as well as for copying, enlarging, etc. The single combinations of the Series II cannot be used separately, as they are not corrected for use alone.

No.	Diam. of Lens	Equiva-lent Focus	Plates Covered Sharply at F:4.5	Price		
				With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
1	1 $\frac{1}{8}$ in.	5 in.	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	\$ 32.00	\$37.00	\$43.00
2	1 $\frac{3}{8}$ "	6 "	4 x 5	38.00	43.00	49.00
3	1 $\frac{15}{16}$ "	7 "	5 x 7	45.00	50.00	57.00
4	1 $\frac{1}{8}$ "	8 $\frac{1}{4}$ "	5 x 8	60.00	65.00	72.00
5	2 $\frac{1}{8}$ "	9 $\frac{1}{2}$ "	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	73.00	78.00	85.00
6	2 $\frac{3}{4}$ "	12 "	8 x 10	110.00		
7	3 $\frac{9}{16}$ "	15 $\frac{1}{2}$ "	11 x 14	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.

My No. 7 Series II Velostigmat is giving entire satisfaction.

—E. R. Springer, Indiana, Pa.

The Series II Velostigmat is the finest F:4.5 lens I ever saw.

—J. H. Smith, Winchester, O.

I am delighted to be the possessor of a 15 $\frac{1}{4}$ in. Series II Velostigmat.

—H. B. Schaeffer, Altoona, Pa.

My No. 5 Series II Velostigmat is a dandy lens.

—H. A. Mourey, Ashland, O.

After a very severe test of nine different portrait Anastigmat lenses I decided in favor of your Series II Velostigmat.

—D. Spellman, Detroit, Mich.

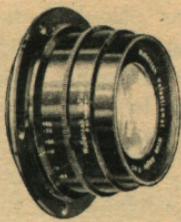
My 6 $\frac{1}{4}$ x 8 $\frac{1}{4}$ Series II Velostigmat excels any lens I have ever used for portrait work.

—Wm. Jensen, Chicago, Ill.

Our 8 x 10 Series II Velostigmat is perfectly satisfactory for home portraiture and autochrome work.

—The Shoberg Co., Sioux City, Iowa.

Velostigmat Series III Wide Angle F:9.5



A fast wide angle lens makes a valuable addition to any photographic equipment, being essential for interior, architectural, mechanical and all other classes of work where it is necessary to work in confined space, or where a wide angle view is desired.

Our Series III Velostigmat has all the fine corrections that it is possible to incorporate in a lens of this type, and covers the size plate for which it is listed, sharp to the corners, at the remarkably large aperture of F:9.5, and with an angle of 90 degrees.

While it is true that a majority of wide angle subjects will require a smaller working aperture than F:9.5, yet this large aperture makes it possible to focus correctly, even in dimly lighted interiors, etc., and as the plate is covered and full corrections are given at this large aperture, the operator can feel assured that it is only necessary to stop down in order to obtain the desired depth of focus. This large aperture will also be found very desirable for flashlight work, groups in and out of doors, and work of similar character.

The Series III Velostigmat can be furnished in barrel with iris diaphragm and cap, or with shutters listed below. The finish is black enamel, with gold engraving—a durable and beautiful finish.

No.	Working Aperture	Equivalent Focus	Plate Covered at F:9.5	With Barrel or Regno Shutter	With Auto Shutter	With Optim Shutter
1	7/16 in.	4.3 in.	5 x 7	\$28.00	\$30.00	\$38.00
2	9/16 "	5.4 "	6 1/2 x 8 1/2	34.00	36.00	44.00
3	5/8 "	6.25 "	8 x 10	43.00	45.00	53.00
4	15/16 "	9 "	11 x 14	65.00	67.00	75.00

My Series III Velostigmat Wide Angle lens is O. K. in every respect.

—W. S. Edwards, Paonia, Colo.

Baltimore, Md., June 30, 1913.

Am using your Velostigmat and Verito and the Optim shutter with full satisfaction.

N. Wright Crowder,

Secy. Photographic Section,

Maryland Academy of Sciences,

106 W. 25th Street Photo. Club of Balt.

Somerville, Mass., Dec. 30.

It now gives me pleasure to inform you that during last summer and fall I became the owner of two of your lenses which I bought through my dealer, C. W. Shepard, of Boston, namely an 8 x 10 Verito 14 $\frac{1}{2}$ inch focus and an 8 x 10 Velostigmat Ser. II F:4.5 12 inch focus. Both of these have given me entire satisfaction.

Norman D. Hill.

I own two of your wide angle F:9.5 Velostigmats. I doubt if any other lenses on the market even compare favorably with them.

—Eugene H. Hardy, Rock Island, Ill.

I was surprised that your Vincenzo lens covered a 5 x 7 plate very satisfactorily at full opening. The picture of the train taken with this lens and Optim shutter at 1-300 of a second, proves the indicated speed to be far more correct than that of the Focal Plane shutter working at the same alleged speed, and although the train was going 30 miles an hour and the picture taken at a distance of some 60 feet giving an angle of about 35 degrees. This picture taken with an 8-inch lens, shows no motion and better still, no distortion.

—H. Kroening, St. Paul, Minn.

Vinco-Anastigmat F:6.3-F:6.8



The Vinco-Anastigmat was placed on the market to meet the demand for a moderate priced Anastigmat lens that could be fully guaranteed to be equal to any Anastigmat selling at a lower price than our Series I Velostigmat F:6.3.

The Vinco is not a convertible lens, as the separate combinations are not corrected for use singly, but for all work where the complete lens is used, this objective will be found thoroughly satisfactory, as it will cover sharply at full aperture, the size plate for which it is listed, or plates one size larger by stopping down.

The Vinco is fully corrected for spherical and chromatic aberration and astigmatism, and is free from coma, flare and distortion. When mounted in the Optimo shutter or any other shutter of our manufacture the Vinco makes an especially desirable outfit for the Ansco, Senco, Kodak and all other roll film cameras, as well as for compact machines using plates.

The Vinco is equally suitable for landscape, commercial and architectural work, speed photography of the ordinary kinds, copying and enlarging, and home portraiture where the lighting conditions are ideal.

No.	Size Plate Covered F:6.8	Equiva- lent Focus	Diameter Lens	Speed	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
0	3 1/4 x 4 1/4	5 1/4 in.	1 3/16 in.	F:6.3	\$18.00	\$20.00	\$26.00
1	4 x 5	6 "	1 5/16 "	F:6.3	20.00	22.00	28.00
1 A	3 1/4 x 5 1/2	6 1/4 "	1 1/16 "	F:6.3	20.00	22.00	28.00
2	.5 x 7	7 "	1 3/32 "	F:6.8	25.00	28.00	35.00
3	6 1/2 x 8 1/2	9 1/2 "	1 1/2 "	F:6.8	35.00	38.00	45.00
4	8 x 10	12 "	1 7/8 "	F:6.8	45.00	48.00	57.00

My Vinco is the finest little lens that I have ever seen, and can compare with any of them selling at from five to ten dollars more in price.

—Guy F. Hieber, Ligonier, Ind.

My Vinco-Anastigmat has proved entirely satisfactory.

—A. H. Barricklow, Coffeen, Ill.

Your Vinco is chain lightning.

—C. H. Wolfe, Greeley, Colo.

Your Vinco-Anastigmat can't be beat, and I will have no other regardless of cost.

—Jas. E. Colenaro, Beach City, O.

Your Vinco cannot be beat for sharpness, definition, correctness of image, or any other quality possessed in a lens by any other make I have ever used, regardless of price.

—F. Ray Patchin, San Bernardino, Calif.

Those to whom we have sold the Vinco-Anastigmats are loud in their praise.

—Newark Photo Supply Co., Newark, N. J.

Can't say enough for the Wollensak products. Don't think the higher priced ones are any better, if they are as good. This Vinco which I am buying will make my fourth Wollensak lens.

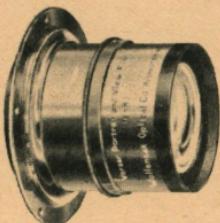
—W. H. Schannel, Oakland, Calif.



VITAX
NEGATIVE

W. H. TOWLES
WASHINGTON, D. C.

Versar Portrait and View F:6



The 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. Only the best imported optical

glass is used in its construction, and the grinding, polishing, etc., has 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.

The Versar can be furnished in polished and lacquered 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	Diameter	Equivalent Focus	Mounted in Barrel	With Regno or Studio Shutter	With Auto Shutter
1	4 x 5	1 $\frac{1}{4}$ in.	6 $\frac{1}{2}$ in.	\$16.00	\$17.00	\$19.00
2	5 x 7	1 $\frac{1}{2}$ "	8 $\frac{3}{4}$ "	19.00	20.00	22.00
3	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	1 $\frac{3}{4}$ "	9 $\frac{1}{2}$ "	25.00	27.00	30.00
4	8 x 10	2 "	11 $\frac{5}{8}$ "	33.00	35.00	
5	10 x 12	2 $\frac{1}{2}$ "	15 "	42.00	45.00	
6	11 x 14	2 $\frac{7}{8}$ "	16 $\frac{1}{2}$ "	54.00	57.00	
7	14 x 17	3 "	18 "	70.00	75.00	
8	17 x 20	3 $\frac{3}{4}$ "	22 $\frac{1}{2}$ "	90.00	95.00	

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.

I am thoroughly pleased with my Versar lens.

—W. R. Jones, Scranton, Pa.

My Versar lens does everything that many will do that cost twice as much.

—R. Kastendek, Jersey City, N. J.

My 6 $\frac{1}{2}$ x 8 $\frac{1}{2}$ Versar lens is perfectly satisfactory in every way.

—Charles F. Pierce, Winchester, Ind.

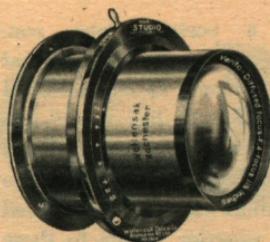
The results obtained with my Versar Portrait and View lens have exceeded all expectations.

—E. B. Ellias, Tropico, Calif.

Would not take twice the price I paid for my 8 x 10 Versar lens if I could not get another.

—C. A. Harmon, Manassas, Va.

Verito Diffused Focus F:4



The 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, with wiry definition, 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.

Verito lenses are furnished mounted in polished black barrels, trimmed with black enamel, and equipped with shutters of our manufacture as listed below.

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 E:4 lenses when used at an aperture of F:6.

When so ordered, special jamb nut flange will be furnished without extra charge, making it possible to fit these outfits to cameras having metal front boards.

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

The Verito is a wonderful lens.
—Will H. Towles, Washington, D. C.

The quality of the Verito lens is an inspiration in itself, and for pictorial work nothing better could be made.
—John H. Garo, Boston, Mass.

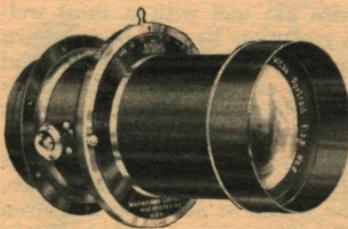
I cannot say enough in praise of the Verito. It is way ahead of all the other soft focus lenses, and I have tried them all.
—Frederick A. Hodges, Rome, N. Y.

My experience with the Verito lens has been one of entire satisfaction.
—J. P. Edwards, Sacramento, Calif.

The Verito comes nearer to my ideal than any other lens I have ever tried.
—I. Milton Watkins, Limpfield, Surrey, England.

I endorse every good thing I have heard or read about the Verito.
—Belle Johnson, Monroe City, Mo.

Vitax Portrait F:3.8



obtained with a lens built on the original Petzval formula, or a modification of same, and for this reason the Vitax will be found in a majority of the leading studios.

When used wide open for head and bust work at the extreme high speed of F:3.8, fast exposures are possible under almost any light, and by stopping down slightly, and the use of the equalizing and diffusing adjustment, the Vitax can be used for full lengths and groups—a point in its favor not to be found with lenses of this type not equipped with an adjustment of this kind.

The diffusing adjustment is simple and effective, any desired degree being obtained by a simple turn of the knob, making it unnecessary to remove the lens from front board, as is necessary with some lenses. The diffusion is obtained by separating the lenses in the rear combination, thereby preserving the optical formula, and enabling the operator to secure an image with a beautiful "roundness" or "stereoscopic" effect, free from wiry definition, and still not fuzzy.

The Vitax is handsomely finished in black enamel, with nickel trimmings, and can be furnished either in barrel with iris diaphragm and cap, or mounted in our Studio shutter.

No.	Diameter of Lens	Equivalent Focus	Outside Diameter of Flange	Price in Barrel with Iris Diaphragm	Price with Studio Shutter
1	3 in.	10 in.	5 $\frac{3}{8}$ in.	\$ 70.00	\$ 78.00
2	3 $\frac{1}{2}$ "	13 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	90.00	100.00
3	4 $\frac{1}{8}$ "	16 "	7 $\frac{5}{8}$ "	125.00	137.00

I think my Vitax the finest I ever saw, and would not be without it.

—J. L. Cusick, Louisville, Ky.

My Vitax No. 2 is the best lens I have ever used. Have never found any other that even approaches it.

—J. G. Kinner, Hazard, Ky.

We are thoroughly pleased with our Nos. 2 and 3 Vitax lenses.

—Knaffi & Brakebills, Knoxville, Tenn.

Our No. 2 Vitax is perfect.

—Pottenger & Sargent, Williamsport, Pa.

While a portrait lens, constructed on the Anastigmat type, (such as our Series II Velostigmat F:4.5) has come into favor in the past few years, yet it is generally conceded that for studio work, no formula has ever been evolved which gave superior results to those

obtained with a lens built on the original Petzval formula, or a modification of same, and for this reason the Vitax will be found in a majority of the leading studios.

When used wide open for head and bust work at the extreme high speed of F:3.8, fast exposures are possible under almost any light, and by stopping down slightly, and the use of the equalizing and diffusing adjustment, the Vitax can be used for full lengths and groups—a point in its favor not to be found with lenses of this type not equipped with an adjustment of this kind.

The diffusing adjustment is simple and effective, any desired degree being obtained by a simple turn of the knob, making it unnecessary to remove the lens from front board, as is necessary with some lenses. The diffusion is obtained by separating the lenses in the rear combination, thereby preserving the optical formula, and enabling the operator to secure an image with a beautiful "roundness" or "stereoscopic" effect, free from wiry definition, and still not fuzzy.

The Vitax is handsomely finished in black enamel, with nickel trimmings, and can be furnished either in barrel with iris diaphragm and cap, or mounted in our Studio shutter.

After trying out a number of other lenses, our operator in our new photographic department has discarded all but the Vitax.

—J. A. Seitz Co., Syracuse, N. Y.

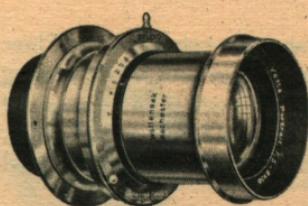
One thousand dollars would not buy my Vitax lens if I couldn't get another.

—F. L. Fadner, Neenah, Wis.

I had a couple of good high-priced lenses to use while you were repairing my Vitax, but none of them came anywhere near it in quality.

—D. S. Fuller, Battle Creek, Mich.

Vesta Portrait F:5



suitable for standing figures and groups where great speed is not essential. Where a moderate price lens is desired for average studio work, the Vesta will be found entirely practical.

A point in favor of the Vesta is the fact that the front combination is corrected for use alone, thereby giving the owner really two lenses. The single combination is considerably slower than the complete lens, but sufficiently fast for large heads and other work requiring a lens of long focus. To use the front combination alone, unscrew the rear combination and put the front one in its place.

The Vesta is built upon a modification of the Petzval formula, thus giving that "rounded" or "stereoscopic" effect so much desired in portrait work, and is made of the finest imported glass, carefully ground, polished and mounted, and is recommended to anyone desiring an inexpensive studio objective.

The Vesta is mounted in polished and lacquered black barrels, with black enamel trimmings, and with iris diaphragm and cap, or can be mounted in our Studio shutter as listed below.

No.	Size	Diameter of Lens	Equivalent Focus	Focus Front Comb'tion	Outside Diameter of Flange	Price
1	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	1 $\frac{5}{8}$ in.	6 in.	9 in.	3 $\frac{1}{4}$ in.	\$15.00
2	4 x 5	1 $\frac{7}{8}$ "	7 "	11 "	3 $\frac{3}{4}$ "	20.00
3	5 x 7	2 $\frac{1}{4}$ "	10 "	14 "	4 "	25.00
4	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	2 $\frac{1}{2}$ "	11 $\frac{1}{2}$ "	17 "	4 $\frac{1}{2}$ "	35.00
5	8 x 10	3 "	14 "	21 "	5 $\frac{1}{4}$ "	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.

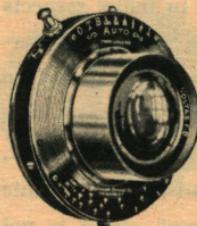
My 8 x 10 Vesta lens is giving the best possible satisfaction. I don't believe there is anything better on the market.

—W. J. Phillips, Rector, Ark.

My 8 x 10 Vesta lens is giving perfect satisfaction.

—Morris Kempe, Hempstead, Tex.

Voltas F:8



The Voltas F:8 is an improvement on the Three Focus Symmetrical type and while lacking the speed of the Versar, is more compact and is suitable for ordinary hand camera work, where the finer optical corrections and great speed are not essential.

Both elements of the Voltas are corrected for use separately; therefore making it possible to obtain three different focal lengths, but the single combinations are considerably slower in speed than the complete objective, and must be stopped down to cover sharply the size plate for which the lens is listed.

The Voltas can be used for copying, enlarging, general view work, as well as portraiture and groups, where lighting conditions are ideal. It is furnished in polished and lacquered brass barrels, trimmed with black enamel, iris diaphragm and cap, or can be fitted to various shutters of our manufacture, as listed below.

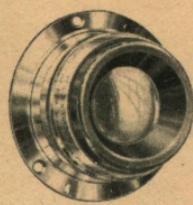
Attention is directed to the fact that this lens will not cover the size plate for which it is listed to the extreme corners with fine definition, unless stopped down to an aperture of F:11.

No.	Size	Diameter	Equivalent Focus	Mounted in Barrel	With Regno Shutter	With Auto Shutter
1	3 1/4 x 4 1/4	5/8 in.	5 in.	\$ 7.00	\$ 7.50	\$ 9.50
2	4 x 5	1 "	6 1/2 "	8.00	9.00	11.00
3	5 x 7	1 1/8 "	8 "	9.50	10.50	12.50
4	6 1/2 x 8 1/2	1 1/2 "	10 1/2 "	13.50	15.00	17.00
5	8 x 10	1 3/4 "	12 1/2 "	18.50	20.00	22.00
6	10 x 12	2 "	16 "	28.00	30.00	
7	11 x 14	2 1/4 "	18 1/2 "	32.50	35.00	
8	14 x 17	2 3/4 "	22 "	50.00		
9	17 x 20	3 1/4 "	26 "	65.00		

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



The 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 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 in order to insure perfect results, it is always advisable to send shutter to factory for fitting.

The barrel and mounts are of polished and lacquered brass, complete with cap and iris diaphragm.

Symmetrical Wide Angle F:16—80 Degrees.

For plates size	4 x 5	5 x 7	6½x8½	8 x 10	10 x 12	11 x 14	14 x 17
In barrel	\$7.00	\$9.00	\$12.00	\$15.00	\$18.50	\$22.50	\$26.50
In mounts	5.00	6.00	8.00	10.00	13.00	16.00	20.00
In Regno shutter	8.00	10.00	13.00	16.00	20.00	24.00	28.00
Focal length	4 in.	5 ¼ in.	6 ½ in.	7 ½ in.	9 in.	10 ½ in.	13 in.

Extreme Wide Angle F:16—90 Degrees

For plates size	5 x 7	6½x8½	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 in.	7 ½ in.	8 in.	10 ½ in.



VESTA
NEGATIVE

E. H. WESTON
TROPICO, CALIF.



SERIES 2 VELOSTIGMAT
NEGATIVE

HARRIS & EWING
WASHINGTON, D. C.

Photographic Shutters

The manufacture and sale of photographic shutters is confined to a comparatively few concerns, on account of the fact that the design and manufacture of an effective and reliable shutter is an extremely difficult matter. In addition to this, many of the mechanical movements are protected by basic patents, and as this company holds a number of such, it gives us a decided advantage, and enables us to produce shutters which are reliable and effective.

This company has now been making shutters over thirteen years, making such improvements and changes from time to time as were found advisable. Our line now comprises 29 different styles and sizes, covering both the amateur and professional fields in all their various branches, and our immense production makes it possible to manufacture a first class article at the lowest possible cost.

Every precaution is taken in the construction and finish to produce only perfect products. A careful record is kept of each shutter manufactured, and should there be necessity for repairs or adjustment within six months from date of shipment, no charge will be made for putting it in perfect condition.

The many improvements shown in the models as listed in this catalogue are worthy of attention—especially the change from bulb and tube to wire or cable release (excepting the Studio). This method is absolutely positive in action, and has made it possible to simplify the construction of the working parts with added durability and accuracy of speeds.

Wollensak shutters are made a part of the regular equipment of a majority of 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, the light aperture and lens opening determining the size necessary for any lens. The prices given are for shutters complete with flange and wire release, excepting for the Studio (which can only be furnished with bulb and tube) and a complete set of screws for attaching shutter to camera front board.

On page 38 will be found a table of weights, dimensions, apertures, etc., of our complete line.

Optimo



The Optimo has now been on the market for five years, during which time it has given universal satisfaction and demonstrated the fact that the years of effort necessary to design and perfect a between-the-lens shutter, working with sufficient speed to photograph rapidly moving objects satisfactorily, was time and money well spent.

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 deleterious 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 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 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, Senco, Kodak and other roll film cameras, without tipping the shutter to the right to make it clear the view finder, as has been necessary heretofore.

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
1	$\frac{3}{4}$ in.	\$14.00	3	$1\frac{3}{8}$ in.	\$18.00
1A	$\frac{7}{8}$ "	15.00	4	$1\frac{3}{4}$ "	20.00
2	1 "	16.00			

Your Optimo is surely the real shutter.
—Roscoe W. De La Mater, Medusa, N. Y.

The Optimo is without doubt the best all-around shutter made at any price.
—F. A. Tiernan, Toledo, O.

Am highly pleased with my Optimo shutter.
—C. H. Austen, Robinson, Kan.

Do you know that your Optimo is the most efficient shutter on the market today?
—A. E. Taylor, Baltimore, Md.

The Optimo gives absolute satisfaction at all times.
—W. B. Simonds, Haxtum, Colo.

For simplicity of adjustment, smooth working and results, the Optimo in my opinion is excelled by no other shutter on the market.
—P. R. Kemper, Richmond, Va.

Auto



The first self setting or automatic shutter upon the market was made by this company in 1900, since which time a number of changes have been made in both name and construction.

The Auto takes the place of the Autex, as listed in our former catalogue, and shows many marked improvements over the same in both construction, finish and operation. The five-leaf system has been adopted for making exposures, as this gives a star-shaped aperture, the points of the star reaching to the edge of the plate, thereby giving the greatest possible illumination. All working parts are concealed in the case, thereby being protected from dust and injury.

Exposure can be made either by pressure on the push button, or with wire release, which is furnished as a regular equipment with each shutter. The various exposures are governed by the indicator at the top of shutter, and in addition to time and bulb, it is possible to obtain three fast and three slow instantaneous exposures, and can be opened for focusing by setting the lever at "T."

It is fitted with iris diaphragm and is handsomely finished in black enamel, with nickel trimmings.

The Auto automatically sets itself after each exposure, and being small in size and light in weight, is recommended as being a thoroughly practical and reliable shutter for general work.

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

I am delighted to testify to the very fine qualities of the Verito lens.

—Prof. J. H. Scott, Effingham, Ill.

Verito is the last word in scientific lens construction.

—Frank Scott Clark, Detroit, Mich.

The Verito is a grand good lens.

—A. McFarlin, Elmira, N. Y.

Am inclined to consider the Verito the most satisfactory objective which has yet been furnished to the photographic artist.

—Paul Louis Anderson, E. Orange, N. J.

I am simply delighted with the Verito.

—Dr. D. J. Ruzicka, New York City.

The Verito is without doubt just the lens pictorial workers have been waiting for.

—Malcolm D. Miller, M. D., Boston, Mass.

The Verito is surely the lens of the present and of the future.

—E. H. Weston, Tropico, Calif.

I would not take a thousand dollars for my 8 x 10 Verito if there were no more to be had.

—Jack Rivers, New York City.

I have several other lenses of this type, but the Verito seems to be the one that makes the pictures that get there.

—Arthur Hammond, Boston, Mass.

Regno



The Regno is quite similar in appearance, construction and operation to the Auto, excepting that it is necessary to set it before each exposure. It is by far the most modern shutter on the market, selling at a moderate price, and is recommended for all outfits which are subject to continued use, rough handling and exposure to dust and dirt, or decided changes in temperature.

It is made in four sizes, accommodating lenses requiring a working aperture of from $\frac{3}{4}$ " to $2\frac{1}{4}$ ", is simple to adjust, and sets and releases easily, even in the larger sizes. Like the Auto, it is small in size, and light in weight, is fitted with iris diaphragm, has the five-leaf exposure system, and is beautifully finished.

In addition to Time and Bulb, it gives three fast and three slow instantaneous exposures and can be opened for focusing on the ground glass by moving upper pointer to "T." The Regno is capable of doing its work satisfactorily under almost any conditions, and is as reliable and accurate in its operation as it is possible to make a photographic shutter.

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

Missouri Valley, Iowa, March 31, 1910.

I send you enclosed a photograph made with your Optimo shutter in 1-300 of a second. This train was moving at a speed of about 45 miles an hour and as the exposure was taken at 4 P. M. I think the result is certainly very good. I am very much pleased with the Optimo and the more I use it the better I like it.

A. N. Brown.

Port Clinton, Ohio, May 5, 1910.

I have received the Optimo shutter, and am of the opinion that it is one of the best if not the best on the market.

E. B. Mizener.

New York, Oct. 8, 1912.

"While looking over our correspondence and carbon copies, I happened to notice correspondence between our Mr. Edson and yourself.

"When I noticed your letterhead, I almost felt as though I knew you on account of the very good service I have had with Wollensak shutters. I have owned several of them and found them very satisfactory."

Robert L. Stillson,
Prest. Robt. L. Stillson Co.

Tacony, Pa., Oct. 24, 1911.
"The only shutter which ever gave me entire satisfaction." W. J. Sherwood.

Baltimore, Md., Nov. 11, 1912.

There is another matter which has lately attracted my attention and which I believe will be interesting to you also. Do you know that you are making the most efficient shutter on the market today. I recently had a discussion with the representative of a manufacturer of the Focal Plane shutter, and got on their trail, with the result that I find that their claim of 100 per cent. efficiency is pure bluff, it being in fact as low as 50 per cent. in some cases, while the Optimo has an efficiency of 75 per cent. and over. I am working up some diagrams to show how this is and believe if you will investigate this you will have a splendid selling point for all your shutters that have the five blades. To take a particular case, a Focal Plane outfit with a lens at F:4.5 had the low efficiency of 52 per cent., while the same lens in an Optimo shutter had 77 per cent. efficiency. This refers to the actual amount of light passed to the plate in the same length of time by the two shutters. In other words, the Focal Plane with lens at F:4.5 would give the same exposure as the Optimo with the lens at about F:5.6.

J. E. Taylor.

Victo



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	$\frac{9}{16}$ in.	\$3.00
1	$\frac{3}{4}$ "	4.00
2	1 "	5.00

Ultrō



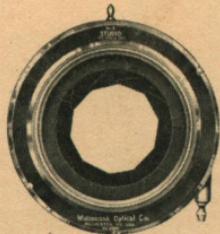
This shutter takes the place of the TIB, and has many improvements over that model. It is automatic in operation, and can be released by push button or wire release, fitted with iris diaphragm, and finished the same as the Victo.

The Ultrō 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 $1\frac{3}{4}'' \times 2\frac{1}{4}''$ to $5'' \times 7''$.

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	$\frac{9}{16}$ in.	\$2.00
1	$\frac{3}{4}$ "	3.00

Studio



The Studio shutter was primarily intended for our portrait lenses, as it is only necessary to screw on the shutter in place of iris diaphragm without special fitting. Being therefore a part of our regular equipment for these lenses, it found its way into studios in all parts of the country, where operators readily saw

the advantage of a shutter of this type, with the result that Wollensak Studio shutters will now be found mounted in lenses of all types and manufacture.

This shutter works between the lens, has ten leaves, which form the iris diaphragm, and has been made practically noiseless if operated correctly, as it has cushions at all points of contact in the mechanism.

Exposures can be made by bulb only, making it possible to give instantaneous exposures from about one-fifth of a second up to any desired length of time. 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 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, especially those of the Anastigmat type, 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 $\frac{1}{16}$ in.	No. 3		\$10.00
2	4 $\frac{1}{4}$ "	2 $\frac{7}{16}$ "	No. 4		12.00
3	4 $\frac{7}{8}$ "	2 $\frac{15}{16}$ "	No. 5	No. 1	14.00
4	5 $\frac{7}{8}$ "	3 $\frac{1}{2}$ "		No. 2	16.00
5	6 $\frac{5}{8}$ "	4 $\frac{1}{8}$ "		No. 3	18.00



Stereoscopic

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

The Ultro is automatic in action, has iris diaphragm and can be adjusted for Time, Bulb and Instantaneous exposure.

Price, \$8.00.

The Regno is a non-automatic shutter, requiring setting before each exposure, and in addition to Bulb and Time, gives six different speed exposures.

Price, \$15.00.

Lack of space prevents us from giving detailed description of Stereoscopic shutters, but this information will be furnished upon request.

Special Order Work

We are equipped to make anything in the lens or shutter line, which is possible to make. Our years of practical experience, complete equipment of labor and time-saving machinery, enable us to produce anything in this line of manufacture in the shortest possible time, and at a minimum cost.

We are pleased at all times to submit samples and prices upon receipt of proper specifications, for any special lens or shutter we are prepared to accept and make.

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. ($1\frac{1}{8}$ ") 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 mounts, for fitting of any kind.

By referring to table on page 38, giving dimensions of our various shutters, also mounting and fitting table on page 37, 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.

Ray Filters



Wollensak ray 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 used are of the highest grade possible to obtain, the coating is done by hand, is free from striae and other imperfections, and each filter is given a thorough series of tests and 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 cloud and general landscape work, as well as for commercial photography.

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.

We are prepared to make, in addition to this standard four times yellow filter, special screens or filters for all classes of work, including the three-color separation, Autochrome and other similar color processes, as well as for all branches of commercial photography and portraiture. Work of this character is special, and therefore requires full particulars at the time of making inquiry regarding same.

No.	Will Fit Lens Mounts from	Price	No.	Will Fit Lens Mounts from	Price
1	1 $\frac{5}{32}$ in. to 1 $\frac{13}{32}$ in.	\$2.00	6	2 $\frac{3}{8}$ in. to 2 $\frac{5}{8}$ in.	\$4.50
2	1 $\frac{7}{16}$ " " 1 $\frac{17}{32}$ "	2.25	7	2 $\frac{1}{16}$ " " 3 "	5.25
3	1 $\frac{9}{16}$ " " 1 $\frac{25}{32}$ "	2.50	8	3 $\frac{1}{16}$ " " 3 $\frac{1}{2}$ "	6.75
4	1 $\frac{13}{16}$ " " 2 "	3.00	9	3 $\frac{9}{16}$ " " 4 $\frac{5}{8}$ "	7.50
5	2 $\frac{1}{16}$ " " 2 $\frac{5}{16}$ "	3.75	10	4 $\frac{3}{16}$ " " 4 $\frac{5}{8}$ "	9.00

I now have two lenses mounted in Wollensak shutters, and they are thoroughly satisfactory.

—Will Ball, Chicago, Ill.

You will be glad to know that your lenses are doing good work in all three of my studios.

—Wm. Shewell Ellis, Philadelphia, Pa.

Every lens that I own is one of your make, and I have five of them, and they are all giving the best possible satisfaction.

—G. J. Van Horn, Portland, Mich.

I am opening a new studio in Cincinnati, and want another Vitax just like the three we now have. I am more than pleased with these lenses, and am discarding all others as fast as I can.

—L. W. Gentry, Detroit, Mich.

My Vesta and Versar lenses are both working fine.

—Edward T. Monroe, Lyons, N. Y.

Am using two lenses of your make, and they are giving perfect satisfaction.

—W. A. Amon, Clarksburg, W. Va.

Suggestions for the Use of Wollensak Lenses and Shutters

As speed is one of the essential qualities in the higher priced lenses, the prospective purchaser may be interested to learn how the rated speed of a lens is determined. The *approximate* speed of any lens can be measured by dividing the focal length by the largest diaphragm aperture at which it will cover the size plate it is listed for. For illustration—a lens marked F:6 with a focal length of 6", should give perfect definition or cut the size plate for which it is listed at a diaphragm aperture of 1". To prove up the approximate speed of this lens, divide the focal length by the free aperture which gives the answer 6, usually expressed as F:6 or its equivalent in the Uniform System—US:2.2.

When figuring the speed of lenses built on the Anastigmat type, it is quite necessary to have in addition to focal length and diaphragm aperture, refraction, dispersion, formula, construction and other matters, in order to obtain the exact working speed, but the formula given above will as a rule prove sufficiently accurate for the average answer.

For a number of years diaphragm apertures of lenses were marked with the US or Uniform system, and while this method was simple in design, it was not as practical as the sounder method of marking each stop with the F number, or ratio of focus to aperture. The F system has become standard in all countries within the past few years, although cheaper types of objectives are sometimes marked in the US system, even at this late date. The relative stops in the US and F systems are given herewith, and the easiest way to remember the relationship one system bears to the other is that 16 in the US system is the same as F:16 in the F.

US	1	2	4	8	16	32	64	128
F	4	5.6	8	11	16	22	32	45

Usually the size openings or area of the stops are so arranged that each smaller stop requires about twice the exposure of the next larger one. To illustrate: if stop F:4 requires one second exposure F:5.6 will require about two seconds, and so on.

Depth of focus is regulated by the diaphragm aperture and focal length, and all corrected lenses of the same focal length, when used at the same aperture, have the same depth of focus. The longer the focal length and larger the aperture, the less the depth of focus, and vice versa.

This is a law of optics that cannot possibly be altered, hence any claim for exceptional depth of focus for a given size lens used at any aperture, is either an error on the part of the person making the claim, or the lens is not fully corrected; or, in other words—will not give a wiry, sharp image such as should be obtained by any fully corrected lens.

For this reason modern lenses for portraiture are equipped with diffusing adjustments to overcome this critically fine definition, thus eliminating the decided contrast between the very sharp and the soft, or diffused focus planes, which at the same time give an apparent increased depth of focus.

Where great depth is desired, it is always desirable to focus sharply on the middle distance, and then to stop down or reduce the size of the diaphragm aperture until the desired depth is obtained. For example—in a landscape where it is desired to have fine detail from the immediate foreground to the extreme distance, open the lens to its largest working aperture, focus on an object in the middle distance, and then to equalize the focus, decrease the diaphragm aperture until everything becomes equally sharp. It will be found that less stopping down is required by

this method than though the lens was first focused on the immediate foreground, or extreme distance, and then stopped down.

This same rule holds good in photographing any subject with any type of lens, which requires great depth of focus. In photographing groups, always focus on the figure or figures half way between the center and edge of ground glass, and where there are several rows of figures, on the middle row, stopping down until the desired depth of definition is obtained.

Correct exposure is a matter that can only be determined by having at hand at the time of answering the question all the data pertaining to same, such as time of day, month of year, value of light, latitude, subject, focal length and speed of lens, as well as make of plate of film, and many other details, all of which enter into the making of the perfect negative, and for this reason it is impossible in a limited space to give any general instructions on exposures.

The suggestions given above apply only in a general way, and would have to be altered to a greater or less extent to fit each individual case. In the following we will call attention to only those points about our lenses and shutters which are out of the ordinary, or require special explanation.

Series I Velostigmat F:6.3

As this lens is of the Symmetrical Convertible type, either the front or rear combination of same can be used to equal advantage, as they are both identically alike in focal length and optical corrections. We advise, however, the use of the rear lens, as a single lens or combination should always be used at a point behind the diaphragm. When using the lens in this way it will be found advisable and necessary to stop same down in order to get fine covering to the corners of the size plate for which the complete lens is listed. The speed of the half combination is about one-half that of the doublet, as the focal length is just double, the working aperture remaining the same. Wherever possible, use the complete lens, as no half combination of any type or make of lens has the fine corrections, etc., to be obtained with the doublet.

Where a large magnification of image is desired, such as in copying, telephoto work, etc., it will be found that the single elements of the Series I will meet the requirements equally as well as any other half combination or single lens on the market.

Series II Velostigmat F:4.5

As the Series II Velostigmat is not of the Symmetrical or Convertible type, the half combinations of same cannot be used alone. The three larger sizes of this series are equipped with a simplified diffusing adjustment, so placed on the lens that it is readily accessible. This diffusion adjustment is operated by revolving the front mount and when the indicator is set at naught, the lens is at its sharpest without diffusion.

To obtain diffusion, first focus on your subject with indicator at 0, after which the desired softness can be obtained by revolving the front mount, and then stopping down to obtain the necessary degree of depth. Do not re-focus after having set the diffusion adjustment at any number, as this will have a tendency to do away with the desired softness. It will be found that when the lens is used in this way, it will not throw the subject out of focus, or change the general effect in any way, except to eliminate the sharp definition and give that softness or roundness so much desired in portraiture.



As this lens is constructed on the Anastigmat type, and therefore has a flat field, do not form groups, etc., in a semi-circle but in a straight row or line parallel with the camera front.

Velostigmat Series III Wide Angle F:9.5

While it is seldom indeed that a subject or view will be found at which a wide angle lens can be used at an aperture as large as F:9.5, yet this aperture is very desirable for focusing, etc., where the illumination is not of the best, and as the lens gives the desired covering power and fine definition, even at this large aperture, the operator can feel assured when it is stopped down to get the necessary depth of focus, everything will be equally sharp without the distortion sometimes found in wide angle lenses.

In using a wide angle of any kind, focus on a point midway between the immediate front and extreme distance, and then stop down to obtain the desired depth of focus.

Vitax Portrait F:3.8

As the Vitax (practically like all other portrait lenses on the market today) is a modification of the original Petzval Portrait lens formula, it has a curved or saucer-shaped field, while the corrected Anastigmat has a flat field. Therefore the Vitax will be soft on the edges of the plate when it is focused sharp in the center and vice versa, but this is a point in its favor for portraiture, and by using the diffusion and equalizing adjustment with which it is equipped, it is possible to overcome this curved field to a certain extent, thereby making the Vitax very desirable for full lengths, groups, etc.

There are two ways of using this adjustment, 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 amount of fine definition and 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, after which stop down just a sufficient amount to obtain the desired degree of definition and depth of focus.

In making groups with the Vitax, form in a semi-circle, focus with lens wide open, (following either of the methods given above) on a point one-third way from either side of the ground glass, and half way between the front and rear of group. Then stop down just a sufficient amount to bring all the figures into equal focus. If at any time negatives made with the Vitax, (especially during the summer months) have a flat appearance, reduce the exposure from one to five times, and it will be found that the difficulty will disappear at once.

Vesta Portrait F:5

This lens is also built on the Petzval formula, but as it has no equalizing and diffusing adjustment, it is not as suitable for full lengths and groups as the Vitax, where fast exposure is desired. For large heads and work of similar character, it can be used in most instances wide open, and gives a very pleasing effect. For groups, focus as directed with the Vitax, and stop down until all figures are equally sharp. A modification of this same rule will apply to all classes of work made with the Vesta and other lenses of similar character.

Verito Diffused Focus F:4

The Verito, being a distinctive lens in every way, requires thought and attention, and the best results cannot be obtained with it until after the operator has become acquainted with its distinctive qualities. 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, stopping down until the desired increased depth of focus and definition is obtained.

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, or one not having a heavy deposit of silver, even in the high lights, but a negative of this kind will have all the fine gradation preserved, and by using the proper photographic papers, beautiful soft results can be obtained entirely different in character from those to be obtained in any other way. Do not use contrasty lightings with the Verito, even when these effects are desired, for this lens seems to have the faculty of giving luminosity in the shadows, and toning down brilliant high lights. 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.

Optimo Shutter

As the Optimo is not an automatic shutter, it is necessary to set same before each exposure. After making adjustment for exposure desired by turning the large milled disc, on which is engraved an arrow indicator, the exposure can be made by bulb and tube, a pressure on the push button on the right side of shutter, or with the wire release, with which these shutters are equipped.

The Optimo is as fine mechanically as a watch, and this in addition to its star-shaped exposure opening, and because the leaves revolve in making the exposure, the actual exposures obtained show very little or no variation from the marked shutter speeds, whereas the average shutter in which the leaves open and shut, almost invariably work considerably slower than marked speeds. Therefore, the first exposures made with the Optimo may lead the purchaser to believe that the lens used with it is slower than rated, but it will invariably be found that the trouble is caused by the high speed of shutter, in comparison with the one formerly used. For illustration—the marked speed of 1-100 of a second in the Optimo will average an actual 1-95, whereas with most of the older style shutters the marked 1-100 will be an actual 1-50 to 1-65 of a second.

Studio Shutter

To open the Studio shutter for focusing, push knob or lever at top of shutter to the left, which will throw the shutter leaves open. The desired diaphragm aperture can then be obtained by turning the large nickel ring or disc, after which the shutter is closed by moving the knob at the top to the right. Exposure is then made by pressure on the bulb, varying from 1-5 to 1-8 second, up to any desired length of time. In using bulb for making exposure it is not necessary to use more air or pressure on the bulb than is necessary to throw the leaves open, thus avoiding an unnecessary click or noise at the time exposure is half completed.

"Let the User Judge"

That we guarantee our product is a matter of course—all reputable firms do so, but we go a step further and take the attitude that we don't care to make a sale unless it is to a thoroughly satisfied customer. The merits of our products are presented in a truthful, concise manner, no claims being made for them that cannot be fully substantiated.

We don't consider it good business policy to force our goods on anyone, but aim to furnish the prospective customer with all necessary information, and will be pleased to arrange a trial period of from ten to thirty days with the customer's dealer, for any of our products they may be interested in, so that they may be tried out intelligently for the work desired, and in comparison with competitive articles. We are then content to "Let the User Judge," and purchase whatever suits him best.

Certificate of Guarantee

As a matter of record, as well as to place in the hands of each purchaser of a Wollensak lens a bona fide guarantee of quality, we include with each lens a guarantee certificate giving the name of the 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.

Distance Required from Lens to Subject with Wollensak Objectives

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			
Name and No. of Lens	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	110		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"	1 1/4"	1 3/4"	2"	2 1/4"	2 1/2"
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"	3 1/2"	4"	4 1/2"	5"	6"
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.

Shutters

Weights, Dimensions and Openings

Shutter	Weight	Outside Diameter	Light Opening	Lens Opening	Outside Diameter Flange	Diameter Flange Opening
Ultron No. 0	3	1 5/8	9/16	3/4	1 1/4	15/16
Ultron No. 1	4	1 15/16	5/8	1 1/16	1 11/16	13/16
Victo No. 1	3	1 15/16	5/8	1 1/16	1 11/16	13/16
Victo No. 2	4	2 3/8	1	1 1/16	2 3/8	1 1/8
Auto No. 1	3	1 15/16	3/4	1 1/16	1 11/16	13/16
Auto No. 2	4	2 3/8	1	1 1/16	1 7/8	15/16
Auto No. 3	7	2 7/8	1 3/8	1 23/32	2 1/2	12 1/32
Auto No. 4	11	3 11/16	1 3/4	2 5/16	3 3/8	21 7/32
Regno No. 5	18	4 9/16	2 1/4	3	4 3/8	3 1/8
Optimo No. 1	3	2 1/4	3/4	1 1/16	1 11/16	13/16
Optimo No. 1A	3 3/4	2 9/8	7/8	1 1/16	1 23/32	15/16
Optimo No. 2	4 7/8	2 7/8	1	1 7/16	2 7/32	19/16
Optimo No. 3	7 1/4	3 5/8	1 3/8	1 7/8	2 13/16	21/16
Optimo No. 4	12	4 5/8	1 1/4	2 17/32	3 29/32	21 9/16

The weight, diameter, openings, etc., of Regno are the same as the Auto.
NOTE—Weights given in ounces, dimensions in inches.

Terms

We do not sell at retail, or to the consumer,—all products being sold through bona fide dealers in photo supplies. Therefore, any dealer can supply Wollensak products, but should difficulty be encountered in obtaining same, a letter to that effect, addressed to us, giving the name of the dealer who could not, or would not supply our products, will have immediate attention, and arrangements made to have the order taken care of without further delay.

No goods are sold on consignment, but every article is shipped subject to our broad guarantee, and if unsatisfactory, can be returned for credit within thirty days from date of shipment. While no goods are sent on consignment, any product of our manufacture will be sent for trial on charge memorandum. When sent in this way, item will be charged to the dealer's account thirty days from date of shipment, unless a further extension of time on the trial period has been arranged.

All goods are carefully packed and delivered to transportation companies, after which we cannot be responsible for damage during transit. The prices quoted are F. O. B. Rochester, no charge being made for packing. Complete shipping instructions should accompany all orders, but when not specified, we will use our best judgment in routing shipments to save time and carriers' charges.

Wollensak products are regularly stocked and sold by dealers throughout the United States, Canada and Mexico, and we will be pleased to take up the matter of trade discounts with any bona fide dealer in photo supplies desirous of adding our products to their line.



VINCO
ANASTIGMAT

OPTIMO
SHUTTER

Promotion of Trade Department

This department is maintained for the exclusive use and benefit of Wollensak dealers and their customers, and is ready at all times to do everything possible to assist them. During the past three years many have taken advantage of the service rendered, and have shown their appreciation in various ways.

When an inquiry is received from a prospective purchaser of a lens or shutter, our aim is to ascertain the branch of photography he is interested in, as well as such other information which will be of assistance to us in making our services of value. When this information is obtained, the matter is given individual thought and attention, and the outfit or outfits suggested which in our estimation would be the most desirable for the work. In the meantime we refer the inquiry to the person's dealer, so that in reality the prospective customer, his dealer, and our Promotion of Trade Department work to aid one another, and all concerned are benefitted thereby.

These inquiries are "followed up" by us in a most thorough manner, and any necessary additional information is furnished in letters that follow, and the customer urged to try out the outfit recommended, placing his trial order with his dealer.

This is merely one of the numerous services rendered by this department. Questions pertaining to lenses or shutters will have careful consideration, and the answers given honest and impartial in every instance. This service is gratis, and places the person making inquiry under no obligations whatsoever. We cannot, however, make any comparisons between our products and competitive lines, but will gladly discuss in detail various types of lenses and shutters, and the particular kinds of work for which they are best suited.

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 also to keep the customer satisfied after the purchase is made.

The Promotion of Trade Department issues from time to time special booklets, folders, etc., touching upon the various products of our manufacture, and copies of same will be furnished gratis upon receipt of request, or can be obtained of any photo supply dealer.

Alcogravure

Che reproductions of photographic studies in this book were made by the Alcogravure process, and it will be noted that practically all of the fine gradations of light and shade to be found in the originals have been retained in the reproductions.

The usual method of reproducing photographs by the halftone process does not give the rich, deep and yet delicate values of the original photographs.

Alcogravure is the result of years of research and study on our part to perfect a commercially practical printing process, which would make it possible to retain practically all the good qualities of the original photograph.

We trust that this—the first catalogue in the photographic industry to be printed by Alcogravure—will prove of interest and value to the photographic fraternity.

AMERICAN LITHOGRAPHIC CO.

New York City

