

Velostigmat Lenses

SERIES I F: 6.3
SERIES II F: 4.5
SERIES III F: 9.5



The Wollensak
Optical  *Company*
ROCHESTER NEW YORK

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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, not only involving the installation of expensive machinery and 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.

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 one of the various shutters of our manufacture, is furnished in a leather-covered, velvet-lined case.

Rare B&Os
ZZ
6000
RB
W64

RB-22881



A Helpful Testimonial from the View Point of the Prospective Purchaser

THE problems that confront one when attempting the selection of a lens or set of lenses, either for general or for special work, are even to the initiated very often most complex, and for one who is buying his first anastigmat lens it is largely a matter of luck, pure and simple. Perhaps he hits upon a good lens exactly suited to his work, but very unfortunately is far oftener both sadly disappointed and disheartened in that wonderful tool, the "anastigmat," of which he has heard and read so much. Had only some honest friend who had paid his forfeit and passed through the mill been at hand to advise, things might have been altogether different, and much valuable time, effort and money saved.

In the event of there being no such friend to advise you, I am going to ask that, for the time being, you will accept me for that friend. I do not pretend to be either a lens crank nor yet an expert, but I have dearly paid that instructor, "Experience."

I will not start out by saying that I consider "Velostigmats" the best and only worth-while lenses, for in my ten years' experience with anastigmats, I have owned at one time or another practically every well-known and many now obsolete or almost unknown makes and types, and appreciate their qualities.

My first introduction to the Velostigmat came six winters ago, when I purchased one of the old-style Series I, in an Autex shutter. At the time I had need for an all-round anastigmat lens that was capable of giving microscopic definition at the greatest possible aperture. Pre-

viously I had been using an imported lens of worldwide fame. It was, however, of too short a focal length for the work I then had to do, and having heard very favorably of the Velostigmat, I determined to give it a trial. At the comparatively low price that I paid (about one-half of what my imported lens had cost me), I did not expect it to produce work of quite such a high standard, but aperture for aperture, the work of the Velostigmat was at least the equal of that produced by the imported lens and in some instances pleased me even better.

After a few weeks' use I became intensely interested in my new find, and in the general run of work had many opportunities to put it to the most severe tests possible, and found that for a general-purpose lens it fitted my needs to perfection.

Within their limits, general-purpose lenses are handy tools, but I often needed, for either home portraiture or press work, a lens with more speed; and when the Series II Velostigmat with its high speed of $F:4.5$ was introduced, I was not slow in trying one, and again found out that the highest-priced imported lenses were not without a strong competitor manufactured on this side of the Atlantic, and selling at a much lower figure.

Just a few words upon the different Series (types) of Velostigmats, and their special adaptabilities, may possibly save someone from getting a lens that is not the best suited to the line of work desired.

The Series II 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. The addition of a diffusing attachment to the three larger sizes raises it to the class of the very high-priced high-speed portrait-lenses, and because of its fine corrections goes that class one better, besides being much less bulky. The smaller sizes are intended for speed photography or for portraiture when fitted to small hand cameras. Being most compact for a lens of this type, they may be mounted in an inter-lens shutter—such as the "Optimo"—and will then fit the average hand camera or may be used when mounted in a barrel on cameras of the reflecting type (Graflex or Reflex, etc.) equipped with focal-plane shutters. The Series II has both covering and illuminating power that for an ultra-rapid lens is truly remarkable. There are on the market today a few makes of ultra-rapid anastigmats that will give equally fine detail in the center of the picture, but at the corners the loss of detail is indeed most perceptible. This is especially true of the larger sizes, for the larger the lens the more difficult is it for the manufacturer to retain all of the perfect corrections possible in the smaller lenses. The Wollensak Company, however, seems to have solved the problem in a most satisfactory manner, for there is not a particle less detail in a picture taken with their largest size Series II than with the smallest.

In the three larger sizes, the diffusing attachment mentioned makes this particular type of Velostigmat of great value to either the professional portraitist or to the advanced amateur who seeks to express his individuality in his pictures. Fine detail has its place in scientific and general view work, but in portraiture there are many times when soft effects with diffused detail are desirable or even necessary. This diffusing attachment possesses the peculiar 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 and distracting sharpness.

For groups, no matter how large they may be, this lens far excels any other that I have ever used; for, on account of its exceedingly flat field, it is necessary to stop down but slightly to gain sufficient depth of field. There are portrait lenses that have a speed rated equally as high as Series II, but we know only too well that, because of the excessive curvature of field, it is necessary to stop down considerably, besides so posing the group as to still further help to bring the different rows and ends into correct focus. This necessarily requires prolonged exposure, and so greatly increases the danger of movement on the part of one or more of the group, thus making "expression" most difficult to catch. Unless the group is exceptionally close or deep, it is but seldom necessary to stop down the Series II Velostigmat slower than $F:5.8$. If so desired, the diffusing attachment may again be used to good advantage in bringing the different planes into relatively better focus. What I have said about the Series II does not begin to cover its many superior points and uses, but space will not permit of discussing it any further—so we will speak of the Series I.

The Series I has quite recently been still further improved upon and the speed increased to the utmost possible for a lens that will satisfactorily meet the many and varied uses to which a truly universal lens is put.

It is possible in a lens of this type to obtain the highest order of corrections, and for work that requires microscopic definition combined with considerable depth of field at a moderately large aperture, the Series I will give the most perfect satisfaction. It would actually take a fair-sized book to illustrate the many lines of work to which

this versatile Velostigmat is suited, so we will just briefly sum up some of the more important branches. When mounted in the "Optimo" shutter, the Series I is sufficiently fast to permit quite rapid snapshots in poor light, and exposures up to $\frac{1}{500}$ of a second in good light. Being very compact, the Series I may be fitted to the Ansco, Seneca, Ensign, Kodak and other small folding film or plate cameras and makes an ideal equipment. Its perfect corrections render this type of lens best suited to scientific work, copying, enlarging or reducing, architectural, and general view work, also as a medium wide-angle lens on larger plates than listed. It is not strictly a wide-angle lens, but will obtain many a picture in confined situations. If one has need for a strictly wide-angle lens, the Series III will be found satisfactory in every respect.

It will take but a few words indeed to effectually describe the Series III Velostigmat. In short, it possesses the virtue of perfect corrections common to both the Series I and Series II, but is intended primarily for wide-angle work. The very remarkable feature of this type is its extremely high speed for a lens that will actually embrace an angle of ninety degrees.

To the professional who must take banquets and the like, this little lens will very soon pay for itself, not alone because of its high speed, requiring less flash-powder, but mainly from the increased number of sales due to the fact that it does not distort the faces at the sides and corners of the picture as do many other lenses commonly used for this work.

When the Series III was introduced, its speed of $F:9.5$ greatly appealed to me as some of my work was wide-angle exteriors, and this speed permitted of my giving a reasonably rapid snapshot, sufficiently short in good

light to completely arrest all ordinary motion such as in a street scene or from moving foliage.

The word "speed" that I have used in connection with the different lenses may possibly be confusing to some, and can perhaps be best understood by substituting "power." Speed is more a question of the shutter. One of the great advantages of these lenses is their power; and if they are mounted in a slow type of shutter such as commonly supplied with rapid rectilinear lenses, this high power is to a great extent wasted. The difference in price between the Optimo, a first-rate high-speed shutter, and the common slow type is but a very few dollars; and not only will it permit of using the lens for speed photography, but by the shutter-blades revolving in opening and closing will give far more illumination, and therefore, exposure for exposure, better results.

I feel that this has been a most ineffectual attempt upon my part to set down upon paper my experience with, and opinions of, what I consider a truly wonderful set of lenses. I do not refer alone to their many peculiar properties and corrections, but to something more substantial—the saving in price between these instruments and the higher-priced but often actually inferior lenses.

Any worker, either amateur or professional, who is equipped with a set of these lenses is fitted to undertake practically any line of photographic work and produce the best possible results. There is a deal of satisfaction in knowing that one possesses the best lenses that can be made, and with high ideals in view, one's chances of attaining them are vastly better than going along in a slipshod manner with any old lens.

FREDERICK F. AMES, JR.



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

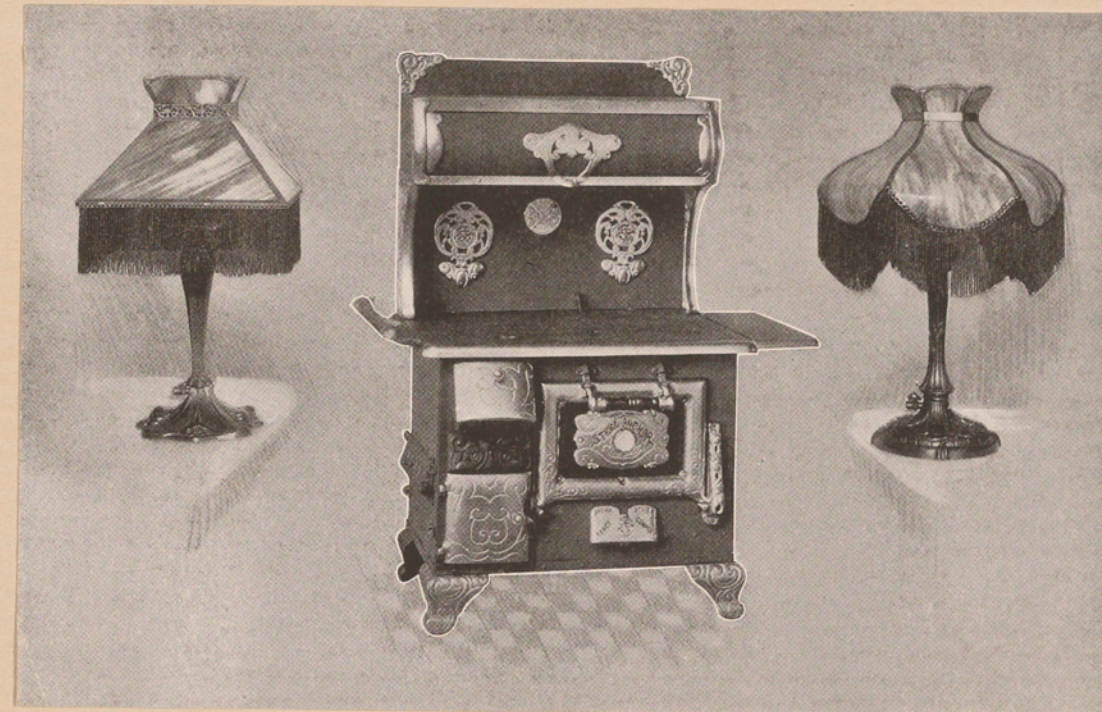
image can be taken care of; and by stopping down the doublet, or complete lens, and using plates one or two sizes larger than listed, wide-angle work can be done to good advantage.

The smaller sizes can be readily fitted to Ansco, Seneca, Kodak, Ensign and other roll film cameras, as well as the numerous 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.	Diameter of Lens	Equivalent Focus	Plates Covered Sharply at F:6.3	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
1	$\frac{1}{8}$ in.	5 in.	$3\frac{1}{2} \times 4\frac{1}{2}$	\$23.00	\$26.00	\$33.00
2	1 in.	6 in.	4 x 5	27.00	30.00	37.00
2A	$1\frac{1}{8}$ in.	$6\frac{1}{2}$ in.	$3\frac{1}{2} \times 5\frac{1}{2}$	27.00	30.00	37.00
3	$1\frac{1}{4}$ in.	7 in.	5 x 7	35.00	39.00	47.00
4	$1\frac{3}{8}$ in.	$9\frac{1}{2}$ in.	$6\frac{1}{2} \times 8\frac{1}{2}$	53.00	57.00	65.00
5	$1\frac{7}{8}$ in.	12 in.	8 x 10	65.00	70.00	80.00
6	$2\frac{1}{8}$ in.	16 in.	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.



Uses of the Series I Velostigmat

THE uses to which the Series I may be put are varied, and we will just briefly refer to each in what we hope will be a helpful way.

Landscape and View Work

It is a well-known fact that most pictures of landscapes are to be desired with fine definition, showing every detail, from foreground to infinity; that no falling off of detail toward the edges of the plate, or even the extreme corners, should be perceptible, and distortion should be eliminated entirely. Hence it is essential that the objective be of Symmetrical Convertible construction, and in addition have all corrections for astigmatism, so as to insure correct color and full covering power.

Therefore, the Series I Velostigmat, having all these corrections, is ideal for landscape and view work. We would add that the camera should be of strong construction, with double-draw bellows, to permit use of the single combination of the lens for reasonable telephoto work. The plate should be of the Orthochromatic type and used in connection with a

Wollensak Ray Filter, so as to give full color value to foliage and cloud effects.

The developer might be any good Metol Hydrokinone formula, or Pyro will be found splendid.

Architectural Work

It will be found that this branch of photography is most profitable. Real-estate men are always in the market for pictures of property which they are developing, and homes which they are constructing. Construction companies record the progress of a structure by means of the photograph. Properly equipped, even the advanced amateur can make a fair bid for this work, and should not let it slip by. It is necessary, however, to have a lens which will show the minutest detail, one covering the plate to the extreme corners with absolute definition; a lens with full corrections, for it will be found that contractors, etc., are somewhat conceited about their work, and every line must be true. Hence, we recommend the Series I for this type of work, it being fully corrected.

It has been found that the backed, or non-halation plate is best suited for this work, for it will hold back the high lights, while exposure enough can be given to bring out detail in the shadows. Be sure to have everything in focus, and a pleasing foreground to the picture. A contrast developer should be used—one having excess of Hydrokinone, or other recommended contrast developer.

It is quite necessary to have a camera with rising, falling and sliding front, and swinging and tilting back, so as to obtain true lines in photographing high buildings.

Commercial Photography

By this term we include the photographing of all still subjects for catalog purposes, etc. The selection is varied, including homes, interior and exterior; articles of manufacture, such as silverware, stoves, draperies, etc., and also store-windows. As can readily be seen, the lens must play an important part, for as in the architectural field, the keynote of success in commercial photography is detail. Nobody wants to reproduce their products in catalogs or circulars unless the detail is there. Many

salesmen sell their goods from catalogs alone, hence they must be reproduced as they are.

The lens should be the Series I Velostigmat—a perfect Anastigmat corrected for spherical and chromatic aberration, with a flat field and absolutely free from coma and flare.

It is necessary to prepare many of the articles to be photographed, such as silverware, nicked parts of stoves, and all similar articles, that will ordinarily cast strong reflections of the light. This is best done by the use of an oil paste shoe-polish, free from turpentine, and some common putty. The polish is rubbed over the design, then rubbed off, so as to leave a little in the pattern, then the surface of the article is covered with the putty. This does away with all the high lights, and the polish in the design is contrasted against the white putty, bringing out the design in splendid detail. Note illustration of stove in this booklet. A little gasoline will readily remove the polish and the putty without harming the surface of any metal.

Cut glass can be sprayed either with aluminum paint or blue Diamond Dye; some photographers find gold bronze to be excellent.

In photographing highly polished furniture such as mahogany tables, bookcases, pianos, etc., it is impossible to "dope" the surface, so the best idea is to enclose the object in what might be termed a "house of sheets." This is done by running a sheet from object to camera on either side, and then hanging a third sheet so as to form a roof. The high lights are then diffused, and reflection broken. Shadows are also done away with, because the sheets reflect the light and banish the hard, deep shadows.

It is well to use a process plate; or, if color value in the woodwork is to be brought out, an orthochromatic plate, with a Wollensak Ray Filter.

Store-windows are best photographed by night, using the electric lights for illuminant. A weak flash from the outside will help a lot to show the window-frame. If exposure is made in the day-time, spread a dark screen behind the camera to avoid reflection from objects across the street.

Copying

For this it is merely necessary to set the object to be copied so that the light is full on

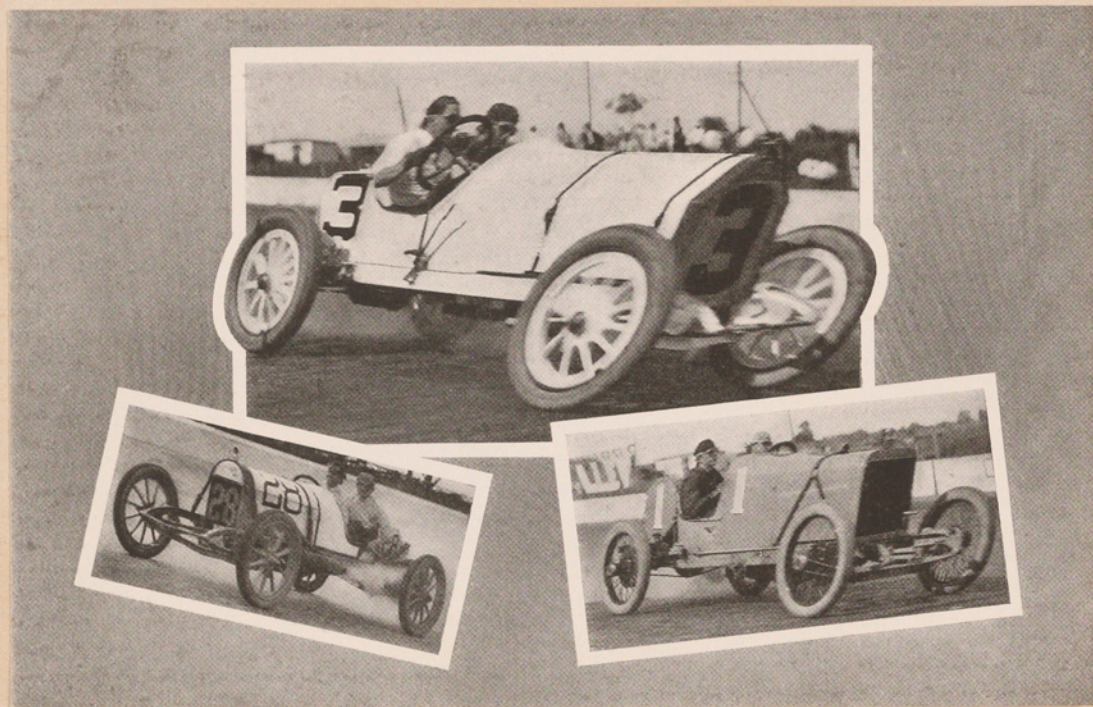
it, yet not reflected into the lens. Use the Series I at a small opening, and the process plate for ordinary work. However, for copying paintings and other colored articles, an orthochromatic plate, with a Series I lens and a Wollensak Ray Filter, is the ideal outfit. The Series I will also be found ideal for enlarging and lantern-slide making.

For the Hand Camera

Regardless of how young a novice you may be, it is your desire to turn out bright, snappy prints, full of detail. It is impossible to do this except with a lens of the Anastigmat type having all corrections and capable of covering the plate or film clear to the corners without falling off of detail. The regular Rapid Rectilinear lens supplied will not give details to corners of picture, and considering their slow speed compared to the Anastigmat it should prompt every enthusiastic amateur to start out right with an outfit capable of the best, by having the Series I in Optimo fitted to his camera.

In ordering a new camera regardless of make insist upon a Velostigmat Lens in Optimo.





PHOTOS, H. H. COBURN
80 MILES PER HOUR, 1-1100 SEC.
SERIES II VELOSTIGMAT
Speed Work

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, 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.	Diameter of Lens	Equivalent Focus	Plates Covered Sharply at F:4.5	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
1	1½ in.	5 in.	3½ x 4½	\$ 32.00	\$37.00	\$43.00
2	1¾ in.	6 in.	4 x 5	38.00	43.00	49.00
3	1⅝ in.	7 in.	5 x 7	45.00	50.00	57.00
4	1¾ in.	8½ in.	5 x 8	60.00	65.00	72.00
5	2½ in.	9½ in.	6½ x 8½	73.00	78.00	85.00
6	2¾ in.	12 in.	8 x 10	110.00		
7	3⅞ in.	15½ in.	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.

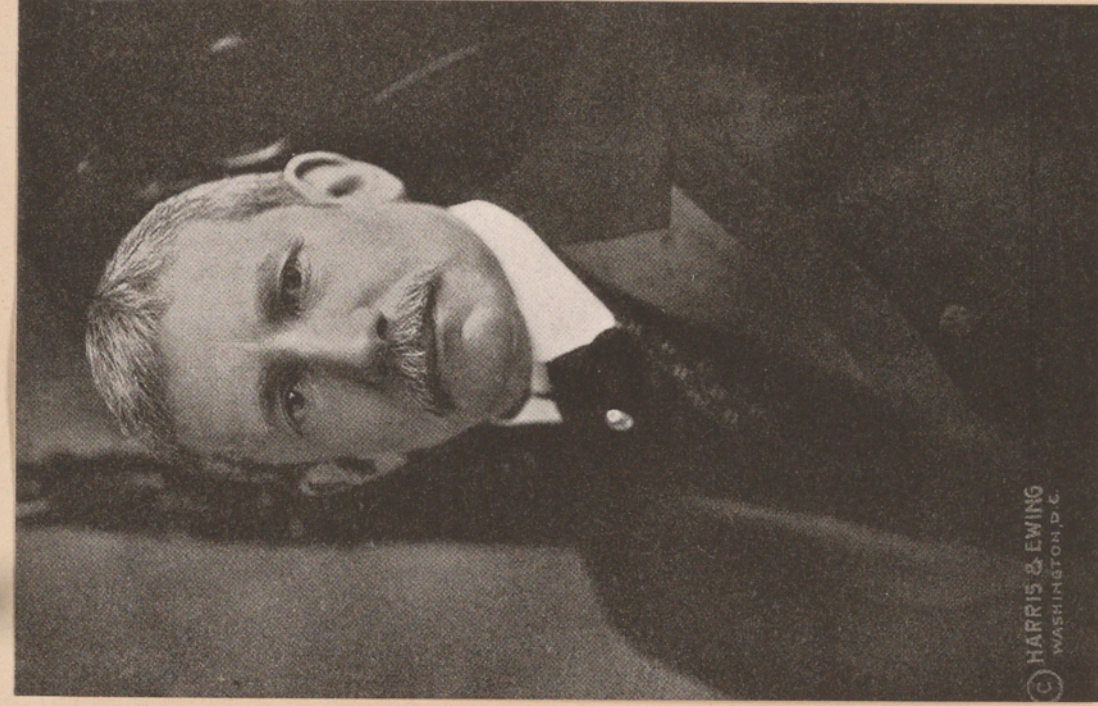
The largest size Series II that can be mounted in Regno shutter is No. 6. No. 5 and the larger sizes can be mounted in our Studio shutter.



HARRIS & EWING ©
WASHINGTON, D.C.

Mrs. Wm. J. Bryan

SERIES II VELOSTIGMAT
Portrait Work



HARRIS & EWING ©
WASHINGTON, D.C.

Elihu Root

SERIES II VELOSTIGMAT

Uses of the Series II Velostigmat

IN giving a synopsis of the varied uses to which the Series II lens can be put, we will not dwell upon those branches of photography already referred to, except to say that the Series II, stopped to similar apertures as the Series I, will cover this work with practically the same degree of satisfaction as will the Series I Velostigmat. This type Velostigmat, however, is made primarily for speed—portrait—studio and group work—and we will cover these briefly.

Speed Work

This branch of photography is most interesting. The amateur craves for it, the professional is compelled to do it, and the press photographer can not escape it. However, it is much abused because of the lack of proper equipment. Without doubt there are three essentials which must have careful attention. First, the lens must be a fully corrected, high-speed Anastigmat, having a flat field, rendering fine definition and covering the plate with entire satisfaction at the largest aperture. The Series II is recommended as ideal for all kinds of speed photography.

The second consideration is the shutter, and here we would say that many photographers sidestep speed work because they have not a focal-plane outfit. This is not essential to the best results. The Optimo shutter in which the "leaves revolve" gives a uniform exposure of $\frac{1}{800}$ of one second, which is fast enough to stop most any action. The focal-plane outfit we admit is very effective, but it is said by our customers that the Optimo is more efficient, exposure for exposure, and absolutely eliminates distortion.

The third consideration is the plate. It is quite necessary to use a very rapid plate, having the qualities of blending the light and shade so as to give good detail at little exposure.

Home Portrait Work

For this most profitable branch of the art, the Series II becomes indispensable. Its flatness of field, compactness, extreme speed, and moderate focal length make it most suitable. The diffusion attachment opens up the soft focus field to a marked degree. The amount of diffusion is variable at will, and so



places in the hands of any one artistically inclined a most powerful means of expressing their individuality. It is by no means difficult to manipulate this attachment, but one should bear in mind that they should focus first, and after having obtained a sharp focus, gain the desired amount of diffusion by turning the front around to the marks 1, 2, 3, 4 or 5 as the case may be. When the indicator is set at 0, the lens is intended for general work; set at 1, you have a slight diffusion; at 2, a greater degree of diffusion, and so on—the higher the numbers, the greater the diffusion. Photos taken at 0 should be fully developed, but those diffused may be a trifle under-developed, and produce most pleasing effects.

Studio Work

In the studio the Series II will be found of invaluable assistance, the diffusion mentioned above making it very desirable for busts and full figures, its flatness of field and depth rendering it unsurpassed for groups.

Groups

This objective is also most practical for such gatherings as home or church weddings,

graduating classes, club meetings, theatrical work and all manner of groups out of the studio. Its flatness of field, compactness and speed make it both desirable and convenient.

Flashlight Work

This is an important yet frightfully abused department of the photo game which we might well have listed under the Series I Velostigmat or the Series III, but will give it space here.

Many photographers have sidestepped flashlighting, because of repeated failures and lack of knowledge regarding how to tackle the job. Hence we hope our few remarks will stimulate anew the dying interest in what we might term a most profitable part of photography.

Speculation has perhaps ruined this field of work to a large degree, but we would advise that no job be undertaken without a guarantee from those persons in charge of the affair to be photographed.

The lens used might be any one of the three series of Velostigmats. Perhaps the Series I F:6.3 stopped down to about F:22 and used on a plate two sizes larger than listed for, is

most popular. The Series II may be used the same way. The Series III being wide angle, can be used at the full aperture of F:9.5 on the plate for which it is listed. Any of these will give splendid negatives, free from distortion.

The camera should be placed as high as possible, about twelve or fifteen feet, then focused on the center of the group. The swinging and tilting back, and rising and

falling front are then manipulated so as to bring all heads on an even plane with the plate. This will bring all in focus, and do away with the "pin-heads" in the rear rows. The plate should be rapid, with reasonable latitude, and the ideal flash-charges are $\frac{3}{8}$ ounce of standard flash-powder, in flash-bags, using one charge for each twenty-five feet of the length and width of the room.

Vinco Anastigmat F:6.3—F:6.8

INASMUCH as this booklet treats with anastigmats, we do not believe it will be out of place to give space here to our Vinco Anastigmat.

We trust that when you have read this booklet through you will appreciate the advantage which the anastigmats have over cheaper lenses, and for fear that the price of our Series I Velostigmat may be beyond the reach of some

of our readers and so as not to deprive any the use of a fully corrected lens we offer the Vinco—very similar to the Series I—the chief difference being that it is not convertible,

It is made in sizes, $3\frac{1}{4} \times 4\frac{1}{4}$, 4×5 and $3\frac{1}{4} \times 5\frac{1}{2}$ in speed F:6.3, and in 5×7 , $6\frac{1}{2} \times 8\frac{1}{2}$ and 8×10 in speed of F:6.8. Prices ranging from \$18.00 to \$45.00 in barrel with other mountings in proportion.



PHOTO, H. H. COBURN
SERIES III VELOSTIGMAT
Wide Angle Work

Velostigmat Series III Wide Angle F:9.5 and Uses

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 space is at a premium or where a wide-angle view is desired. Interiors, where practically the whole room is wanted in the photo; groups in small rooms, when an ordinary lens would blot out half the subjects; houses in narrow streets, etc., all require the Series III, because of its perfect corrections and actual angle of 90 degrees, covering the plate to extreme corners at full aperture of F:9.5. 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.

As the above serves to give the reader an idea as to the uses of the Series III Velostigmat, and inasmuch as there are no essential features in the using of it not covered under the Series I or Series II we will not take your time by repeating them here in detail.

No.	Working Aperture	Equivalent Focus	Plate Covered at F:9.5	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
1	$\frac{7}{8}$ in.	4.3 in.	5 x 7	\$28.00	\$30.00	\$38.00
2	$\frac{9}{8}$ in.	5.4 in.	$6\frac{1}{2}$ x $8\frac{1}{2}$	34.00	36.00	44.00
3	$\frac{11}{8}$ in.	6.25 in.	8 x 10	43.00	45.00	53.00
4	$\frac{13}{8}$ in.	9 in.	11 x 14	65.00	67.00	75.00

The Advantage of the Velostigmat (Anastigmat) Over Other Type Lenses

WE herewith briefly refer to the different types of lenses that are obtainable, and with a little thought you will readily see the tremendous advantage of the Anastigmat (Velostigmat) over the other types.

Single Achromatic, also called Achromatic Meniscus, is a lens composed of a flint and crown glass. It is said to be achromatic because of its correction, so that the visual image, as focused on the ground glass, falls on the same plane as the actinic image, forming the impression on the sensitive surface. It has no other essential corrections.

Rapid Rectilinear—This type of lens, once very popular, has given way to the more advanced and general-purpose Anastigmat. It is composed of two cemented combinations, which are generally symmetrical, the speed usually being $F:8$ and $F:11$. To obtain good definition over the entire plate it is necessary to stop down to $F:16$ and 22 , respectively, the term "Rectilinear" applying to its capability of reproducing straight lines without curvature. The term is also applicable to all Anastigmats (Velostigmats) but is usually confined to the older lens which has not the finer corrections of the Anastigmat (Velostigmat).

Portrait Lens—This term is by general consent confined to the description of lenses of the Petzval formula, or a modification of it, such as the Vitax, Vesta, etc. Such a type of lens is of great speed, and for general studio portrait work, very excellent, but is by no means a general-purpose objective.

ANASTIGMAT (VELOSTIGMAT) LENSES—In addition to being corrected for chromatic aberration, so

that the yellow and green rays of light forming the visual image on the ground-glass fall on the same plane as the blue and orange rays, which form the actinic image on the sensitive surface, and the corrections found in the Rapid Rectilinear type, the Anastigmat has corrections for the following defects.

1. *Spherical Aberration*—That correction so that all the rays of light passing through the lens are brought to a focus in one plane. Were this correction not made, the image toward the edges of the plate might be sharp, while the center would be diffused.

2. *Astigmatism*—That correction which if not made would render the lens incapable of photographing vertical and horizontal lines with equal degrees of sharpness.

3. *Coma and Flare*—That correction which eliminates the pear-shaped blemish caused by the oblique rays from the bright point of light near the margin of the field of view, resulting from the unequal magnification of the different zones of a lens. These zones being defined as imaginary circles, dividing the surface of the lens into concentric rings.

4. *Distortion*—That correction in a lens which renders it capable of producing lines as they are without distorting them in any way.

Most of these defects can, to a degree, be overcome by stopping down an inferior lens, but this would make it practically useless, because of its slowness. In the Anastigmat (Velostigmat) the full corrections are enjoyed at the full aperture, which at its worst is far in advance of the old types though they be stopped down considerably.



A Few Convincing Testimonials

Regarding the 8 x 10 Series II Velostigmat, I can simply say: It's the best yet, and if I could not obtain another I would not sell mine for a good deal.—GEO. W. HARRIS, Harris & Ewing, Washington, D. C.

The Series I Velostigmat does beautiful work and cuts clear up to the corners and is very rapid in its work. I am delighted with it.

—G. A. RIGHTER, Decatur, Ill.

It has been my privilege to see the working of several of these lenses (Series I Velostigmat) on a variety of subjects, so that their claim to being an "all-round" lens has in my mind been well established.

—FELIX RAYMER, Effingham, Ill.

I received your favor of the Twenty-seventh instant, and was glad to hear that you were so well pleased with the prize pictures made with your Series II Velostigmat lens.

The lens came in on October Twelfth and I made all three of the negatives, prints from which were awarded the prize, on Friday, October Sixteenth, and hung the finished pictures up at the Convention Hall Monday October Nineteenth.

Some time ago I tried two other makes of anastigmat lenses, but sent them both back. However, when I read in your catalog that you had retained the good qualities of both air-spaces and cemented surfaces in the formula for your Velostigmat, I decided to give it a trial, and I am glad I did.

I like the Series II Velostigmat better than I do my expensive anastigmat lens, because it is quicker and I find the diffusing arrangement on the front of the mount is such an advantage.

—J. LEONARD GATES, Charleston-Kanawha, W. Va.

Please send me your latest catalogue. The Velostigmat F: 4.5 you sent me is fine, and I will be on the market for a Vitax F: 3.8 a little later.—W. E. HAYNES, Monroe, N. C.

Please find enclosed check for 8 x 10 Series I Velostigmat in Optimo shutter which you sent me last month. My customer is very well pleased with the same, and says it is the best lens he has out of his collection of eight.—G. ANDERSON, Taylorville, Ill.

Our photographer is delighted with the new lenses, (Series I and Series II Velostigmat, also the Verito No. 3) and we wish to thank you for the exceptional promptness with which you responded to our request. The lenses all reached us Friday and were put to good use immediately.

We thank you for your kind offer to assist us with information from time to time, and it is more than likely that we will have occasion to avail ourselves of your courtesy.—THE ROYCROFTERS, East Aurora, N. Y.

The 8 x 10 Velostigmat Wide-Angle lens is a constant pleasure to me, as we have a great deal of work to do requiring a lens of this nature, and previous to securing it I have not been able to get one of short focus with sufficient speed. I find that I can use the Velostigmat with full opening of F-9.5, and it covers the plate perfectly.

—GEO. W. HARRIS, Harris & Ewing, Washington, D. C.

I am using one of your Series II Velostigmat 4 x 5 and would n't part with it at all.—LOGAN HAIN, Frederick, Okla.

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

—W. S. EDWARDS, Paonia, Colo.

We have given the two lenses (the Versar 8 x 10 and 8 x 10 Velostigmat Wide-Angle Series III) thirty days' trial, and to say we are pleased with them would feebly express it. We could not possibly ask for better results than we have obtained from them. We have been using some of the highest-priced lenses on the market, but they fail to hit the spot with your goods.—SMITH BROS., Martinsburg, W. Va.

A month or so ago I purchased, through Mr. Middleton of this city, one 5 x 8 Velostigmat Lens No. 19115. This is one of the nicest lenses I have ever had and certainly is the best value I have ever received.

—S. J. MCGAULEY, Richmond, Ky.

Am using your Velostigmat and Verito and the Optimo shutter with full satisfaction.—N. WRIGHT CROWDER, Photo Club of Baltimore (Md.)—Secy. Photographic Section, Maryland Academy of Sciences.

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 Optimo shutter is a wonderful combination.—ALEXANDER BURCHNER, Brooklyn, N. Y.

Your Series I Velostigmat does most excellent work.

—L. C. MACDONALD, Pasadena, Calif.

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 14½ inch focus and an 8 x 10 Velostigmat Series II F: 4.5 12 inch focus. Both of these have given me entire satisfaction.

—NORMAN D. HILL, Somerville, Mass.

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 am very much pleased with the Velostigmat Series I.

—CLAUDE SOLOMON, Philadelphia, Pa.

My Series I Velostigmat in Optimo shutter is giving excellent satisfaction.—JOHN A. PUEFF, Colfax, Ill.

In my estimation your Series I Velostigmat is the best lens on the market.—A. DREYFUS, Galveston, Tex.

Distance Required from Lens to Subject with Series II Velostigmat F: 4.5

No. 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.
No. 3	126	86			38	25	18	
No. 4	148	102	88		45	29	21	17
No. 5	171	117	91		53	33	24	20
No. 6	216	148	114	94	66	42	30	25
No. 7	279	191	148	121	85	54	39	33

"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 Velostigmats have been presented in a truthful, concise manner, no claims being made for them that can not be fully substantiated.

We don't consider it good business policy to force our goods on any one, 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 Velostigmat or other of our products they may be interested in, so that they may be tried out intelligently

Sample Prints

FREQUENTLY we are called upon for sample prints showing the work of our lenses. While we have a great many photos for advertising purposes, such as those in this booklet, yet we do not keep a supply for dis-

tribution. We realize the vital question to the prospective purchaser is not what somebody else has done, but what he himself can do with his lens. We urge that advantage be taken of our liberal trial period without obligation.

Certificate of Guarantee

As a matter of record, as well as to place in the hands of each purchaser of a Velostigmat or other 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 in tangible shape one of the most binding guarantees ever issued by any concern in the industry.

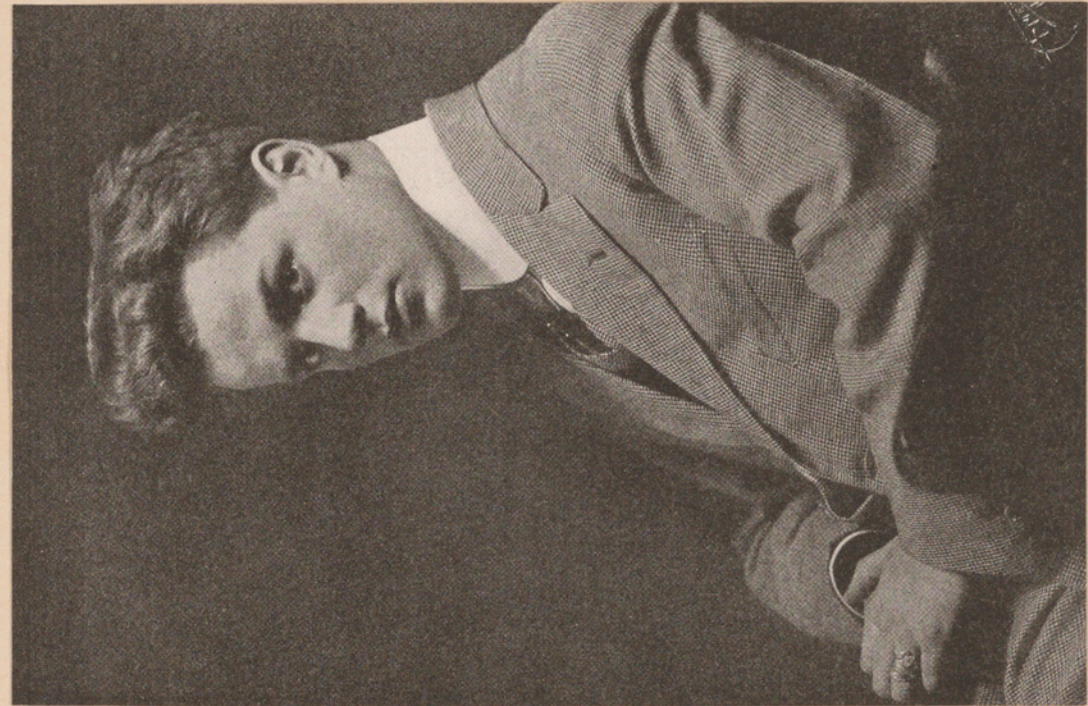


PHOTO BY FRED. F. AMES
SERIES II. VELOSTIGMAT
Portrait Work

Optimo Shutter and Other Wollensak Products

FOR your convenience we give a brief description of this, the justly called Shutter of Shutters. The Optimo has been on the market for six years, during which time thousands have been sold and are giving universal satisfaction. The Optimo is compact, fitting all standard roll-film cameras, such as Ansco, Seneca, Kodak, Ensign, etc. It is scientifically

perfect and gives speeds indicated as near as it is possible to do. In operation the five leaves revolve, making high speed possible and giving a star-shaped opening from start to finish of exposure, permitting greatest possible illumination to pass through to the plate. The Optimo is light in weight and moderate in price. It is finished in black and nickel with gold lettering.

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

No.	Light Aperture	Price
3	$1\frac{3}{8}$ in.	\$18.00
4	$1\frac{1}{2}$ in.	20.00

VITAX PORTRAIT F:3.8. An extreme speed portrait objective of the highest grade with diffusion knob, moderate in price.

VESTA PORTRAIT F:5. A moderate speed studio lens at a very reasonable price.

VERITO DIFFUSED FOCUS F:4. The human eye of photography, which photographs as the eye sees. For Portrait and Landscape.

All completely described in general catalog sent on request.

VERSAR PORTRAIT AND VIEW F:6. A very reasonable general purpose lens.

VINCO ANASTIGMAT F:6.3 and F:6.8. Produced to meet the demand for a high-grade anastigmat at a lower price than the Series I.

VOLTAS F:8. Three focus symmetrical lens.

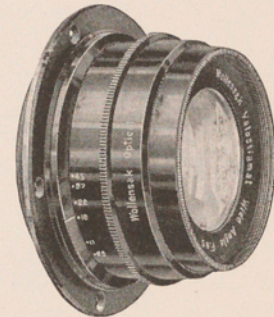
WIDE-ANGLE F:16. Symmetrical, 80 degree, Extreme, 90 degrees.



SERIES II VELOSTIGMAT
IN BARREL



SERIES I VELOSTIGMAT
IN OPTIMO



SERIES III VELOSTIGMAT
IN BARREL

Promotion of Trade Department

THIS department is peculiar to the Wollensak Optical Co., and it is the means by which the company makes manifest its policy to its kind patrons. The department is maintained for the sole purpose of helping all interested in Wollensak products. For the dealer it supplies catalogs, booklets, pictures and every form of service possible to advertise the goods; also in following 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 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.



