

WOLLENSAK PHOTOGRAPHIC SHUTTERS *and* LENSES

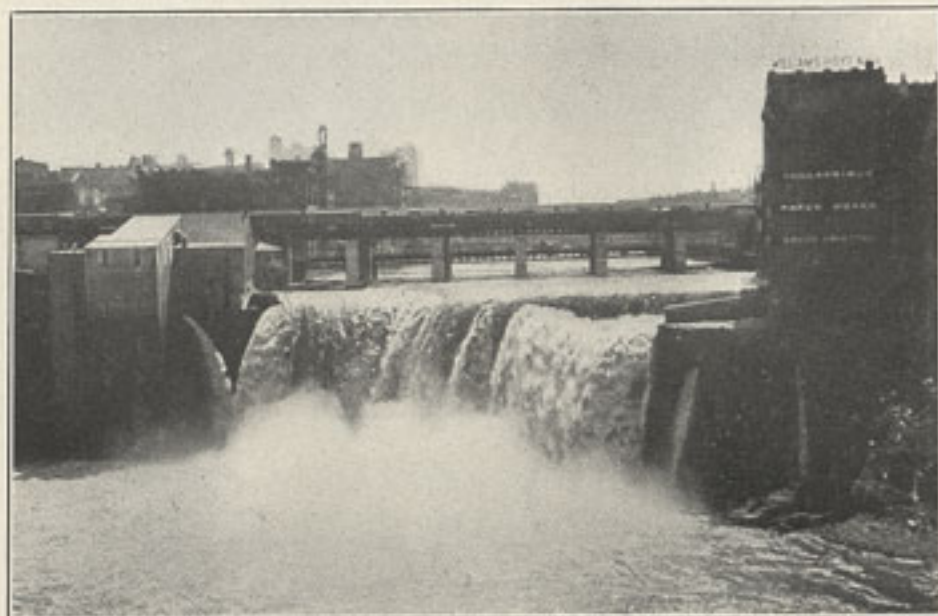


For sale by
John Haworth Co.
641 Arch Street
Philadelphia, Pa.

Catalogue and Price List
— of —

WOLLENSAK

Photographic Shutters and Lenses



UPPER FALLS OF THE GENESEE

1 9 0 3

WOLLENSAK OPTICAL COMPANY

Rochester, N. Y., U. S. A.

President
ANDREW WOLLENSAK

Vice-Pres. and Treas.
H. C. GORTON

Secretary
J. C. WOLLENSAK

Photographic Shutters

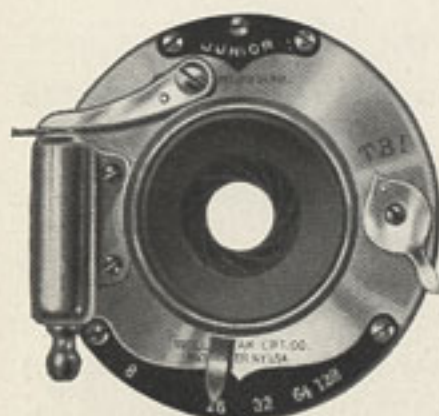
WOLLENSAK shutters are now so well and favorably known that we do not consider it necessary to write a long dissertation on their merits but will endeavor in this catalogue to furnish all possible information in a brief and matter-of-fact manner. This, we believe, will be sufficient to induce the prospective purchaser to examine them and we depend on the shutters to effect the sale.

The cases of all shutters are yellow brass, highly polished and finished with three coats of transparent lacquer. The pumps and levers are nickel plated and the dials and diaphragm plates are black with white figures. The blades are made of a special material which will not warp or break and shaped to give the most illumination possible. The shutters are made from the best material by skilled workmen under the personal supervision of Mr. Andrew Wollensak, who for the past fifteen years has devoted himself exclusively to perfecting and manufacturing photographic shutters. Our shutters are used by many of the leading camera and lens manufacturers, but can be obtained with any camera or lens by specifying them when giving the order. 4 x 5 shutters are used for all ordinary 5 x 7 lenses as well as 4 x 5.

For weights, dimensions, etc., see page 16.



J U N I O R



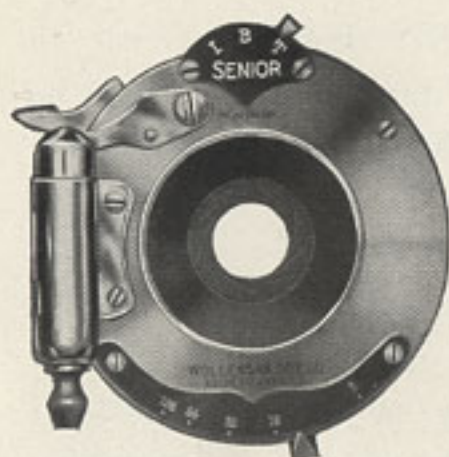
THIS shutter is made in one size only, but can be used for all ordinary lenses either single or double in $3\frac{1}{4} \times 4\frac{1}{4}$, 4×5 or 5×7 sizes. On account of the low price and the extreme lightness and simplicity of this shutter, it is largely used for small and inex-

pensive cameras. It is self-setting or automatic, can be operated by finger or bulb, and is fitted with iris diaphragm. It can be used for time, bulb or instantaneous exposures and is reliable in action and attractive in appearance. By moving the indicator at the right the shutter is quickly adjusted for the desired exposure. The Junior is made without a flange and is attached to the camera front by three small screws through the outer edge of the shutter.

PRICE, - - - \$2.00



SENIOR



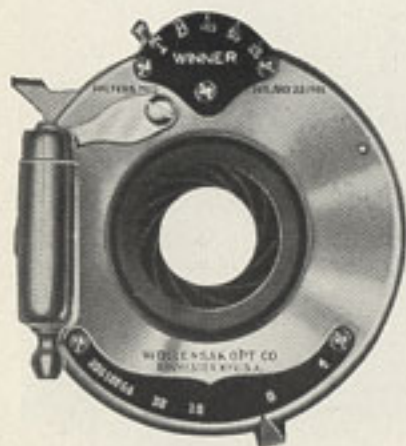
THE "Senior" is a new model made to meet the demand for a light, compact, low-priced shutter for use by amateurs on cameras of the smaller sizes. It is made in one size only, but can be used for all ordinary lenses both single and double up to and

including 5 x 7 size. It is self-setting or automatic, can be operated by finger or bulb, and is fitted with iris diaphragm. It gives three different exposures, *viz.*: time, bulb and instantaneous, and is, we believe, the most attractive and reliable low-priced shutter on the market. By moving the indicator at the top the shutter is quickly adjusted for the desired exposure. Like the Junior it has no flange and is attached to the camera front by small screws through the outer edge.

PRICE, - - - \$3.00



W I N N E R



THIS is a popular-priced shutter made on the same lines and after the same model as the more expensive ones. In addition to the time and bulb exposures it gives three speeds of instantaneous exposures and is automatic in its action. It has iris diaphragm,

bulb and finger release and is attached to the front board with a flange which makes it readily removable. A small lever at the top which can be instantly adjusted insures the desired exposure. The "Winner" is made in four sizes and is by far the most satisfactory shutter at the price on the market. We recommend the larger sizes to the professional photographer who wishes an inexpensive shutter.

PRICE

$3\frac{1}{4} \times 4\frac{1}{4}$, .	\$4.00	$6\frac{1}{2} \times 8\frac{1}{2}$, . .	\$7.00
4 x 5, . .	5.00	8 x 10, . .	8.00



THE "AMPERSAND," ADIRONDACKS

Single Achromatic Lens



THE AMATEUR PHOTOGRAPHERS

Rapid Rectilinear Lens



REGULAR



THE "Regular" is a double pump shutter of high grade, and in addition to the time and bulb exposures gives three different speeds of instantaneous and three automatic time exposures. At the top is a milled disc on which is an indicator, and to set the shutter for the desired exposure the disc is revolved until the indicator is opposite the proper figures on the dial. The shut-

ter is set by pressing down the lever to the right and released either by the bulb which is attached to pump on the left or by pressure on the left hand lever. It has an iris diaphragm and is attached to the front board with a flange. The "Regular" is made in four sizes and is one of the best types for general use yet devised. It is easy of adjustment and even in the largest size releases smoothly and without vibration.

PRICE

3¼ x 4¼, . \$5.00
4 x 5, . . 6.00

6½ x 8½, . . \$ 8.00
8 x 10, . . . 10.00



AUTOMATIC



THIS shutter is similar to the "Regular" except that it has the advantage that after each exposure it automatically sets itself for the next one. It is made in four sizes, and even in the largest size releases smoothly and easily. The Wollensak Optical Company was the first manufacturer to put on sale a photographic shutter which did not require setting before each exposure.

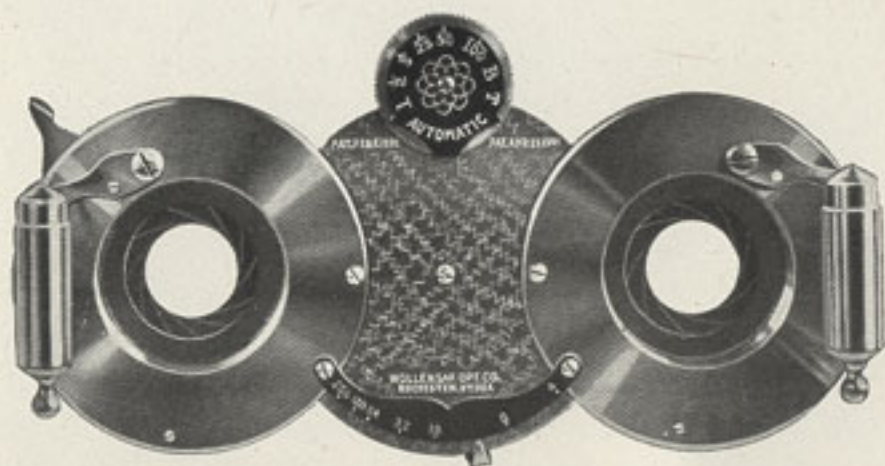
In our new automatic we have succeeded in producing a shutter which loses nothing in reliability, speed or ease of operation on account of being automatic, and has the obvious advantage that it is *always* set.

To the professional or amateur photographer desiring a perfect shutter, graceful in design, light in weight, absolute in action and reasonable in price, we recommend the Wollensak "Automatic."

PRICE

3 1/4 x 4 1/4, . . .	\$ 8.00	6 1/2 x 8 1/2, . . .	\$12.00
4 x 5, . . .	10.00	8 x 10, . . .	14.00

Stereoscopic Shutters



STEREOSCOPIC Photography has grown so rapidly in popular favor during the last few years, that in order to meet every possible demand for shutters of this nature, we now make seven different "Stereos." Each one of these shutters is specially designed for stereo work and the mechanism is so arranged as to insure uniformity in the operation of both the blades and the diaphragms. The distance from center to center is $3\frac{1}{4}$ inches. They are attached to front board by jamb nuts removable from the back.

PRICE

Senior Stereo,	.	.	.	.	.	.	.	.	\$ 8.00
Winner Stereo, $3\frac{1}{4} \times 4\frac{1}{4}$	.	.	.	.	.	.	.	.	10.00
Winner Stereo, 4×5,	.	.	.	.	.	.	.	.	13.00
Regular Stereo, $3\frac{1}{4} \times 4\frac{1}{4}$,	.	.	.	.	.	.	.	.	12.00
Regular Stereo, 4×5,	.	.	.	.	.	.	.	.	15.00
Automatic Stereo, $3\frac{1}{4} \times 4\frac{1}{4}$,	.	.	.	.	.	.	.	.	17.00
Automatic Stereo, 4×5,	.	.	.	.	.	.	.	.	20.00

Photographic Lenses

FINE results in picture taking cannot be attained without a good lens, no matter how perfect the rest of the outfit may be. We use great care in the manufacture and testing of our lenses and guarantee that all of them are free from imperfections and made of the best imported glass from the most recent and improved formulas.

Our line comprises the standard lenses ordinarily used in photographic work, the 8 x 10 being the largest size we make. Our rapid rectilinear is an extremely satisfactory lens at a very low price, but for a high-grade lens for all kinds of work we recommend our Rapid Symmetrical, which is of the convertible or three focus type. The Orthographic is a still higher grade lens, made from a special formula, and is also convertible.

For price list of lenses see page 15.

For focal lengths, diameters, etc., see page 16.

Mounting Lenses

WE have exceptional facilities for the accurate fitting of lenses of all makes and guarantee perfect satisfaction when we do the mounting. Any lens having a separation of $2\frac{1}{2}$ ^m/_m ($\frac{1}{8}$ of an inch) or more can be mounted in Wollensak shutters. The barrel is left intact, so that the lens can be used in either shutter or barrel.

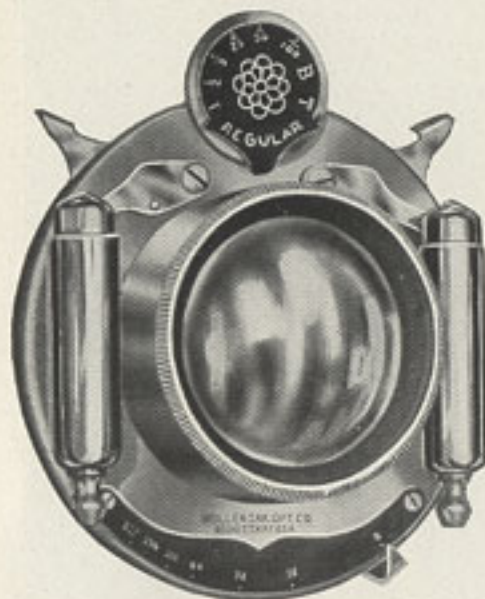
For price list for fitting special lenses, see page 16.



THE COMING STORM, LAKE ONTARIO

Taken with Rapid Symmetrical Lens

The Orthographic Lens



THIS is a convertible lens of exceptional quality, and for all general photographic purposes, including copying, enlarging and portrait work will be found equal to any lens on the market, except some of the high-grade Anastigmats.

Many camera users desire a lens which has higher speed and will give better results than the ordinary ones supplied with cameras and still do not care to pay the Anastigmat price. To this class we recommend the Orthographic with confidence

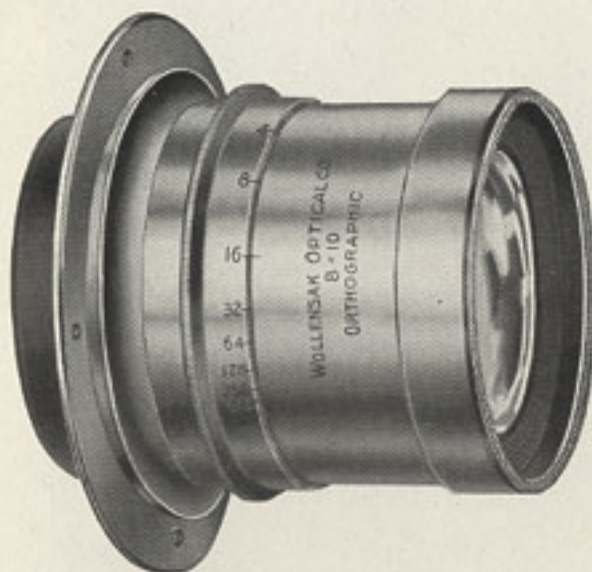
that they will feel amply repaid for the additional cost.

Wide Angle Lenses

THE SYMMETRICAL WIDE ANGLE is furnished in barrel or mounted in cells to fit our shutters so that the lens ordinarily in use can be taken off the shutter and the wide angle lens substituted. This is a very satisfactory lens at a moderate price and embraces a field of from 80 to 85 degrees.

THE EXTREME WIDE ANGLE cannot be used in shutters, as the two combinations are too close together. It is mounted in barrel with rotary stops and has the remarkably wide angle of 100 degrees.

Lenses in Barrels



OUR Rapid Rectilinear, Rapid Symmetrical and Orthographic Lenses are supplied in barrels instead of shutters if so preferred. The barrels are from a new design and are very highly finished and lacquered. They are fitted with iris diaphragm, flange and cap. The diaphragm is operated by a milled ring, the various stops being engraved on it.

The lenses are mounted in removable cells which have the same thread and diameter as the shutter openings, which makes it possible to use the same lens in either shutter or barrel without re-adjustment or remounting.

For price list see page 15.

"WOLLENSAK" SHUTTERS AND LENSES

can be purchased from any photographic stock house, or will be furnished direct from the factory where dealers are not accessible. For any further information, and for special discounts to the trade, address

WOLLENSAK OPTICAL COMPANY

Rochester, New York



A ROCHESTER RESIDENCE

Taken with Orthographic Lens

Price List of Lenses with Shutters and with Barrels

						$3\frac{1}{4} \times 4\frac{1}{4}$	4 x 5	5 x 7	$6\frac{1}{2} \times 8\frac{1}{2}$	8 x 10
Junior	shutter with	Single	Achromatic lens.	.	.	\$ 3.00	\$ 3.25	\$ 3.50		
"	"	"	Rapid Rectilinear lens,	.	.	6.00	7.00	9.00		
Senior	"	"	" " "	.	.	7.00	8.00	10.00		
Winner	"	"	" " "	.	.	9.00	11.00	13.00	\$18.00	\$23.00
Regular	"	"	" " "	.	.	10.00	12.00	14.00	19.00	25.00
Automatic	"	"	" " "	.	.	13.00	16.00	18.00	23.00	29.00
Regular	"	"	Rapid Symmetrical "	.	.	13.00	15.00	18.00	23.00	30.00
Automatic	"	"	" " "	.	.	16.00	19.00	22.00	27.00	34.00
Regular	"	"	Orthographic lens,	.	.		19.00	23.00	31.00	39.00
Automatic	"	"	" " "	.	.		23.00	27.00	35.00	43.00
Rapid Rectilinear lens in barrel,	.	.	.	.	.		11.00	13.00	18.00	23.00
" Symmetrical " " "	.	.	.	.	.		14.00	17.00	22.00	29.00
Orthographic lens in barrel,	.	.	.	.	.		18.00	22.00	30.00	38.00
Extreme Wide Angle lens in barrel,	.	.	.	.	.			24.00	30.00	35.00
Symmetrical Wide Angle lens in barrel,	.	.	.	.	.		9.00	12.00	15.00	18.00
" " " " in mounts	.	.	.	.	.		7.00	9.00	12.00	14.00

Table showing weights, dimensions and openings of shutters :

SHUTTER	WEIGHT	SIZE	LIGHT OPENING	LENS OPENING
Junior,	2 $\frac{1}{4}$	2 $\frac{1}{8}$ x 2 $\frac{1}{8}$	$\frac{5}{8}$	1 $\frac{1}{8}$
Senior,	2 $\frac{1}{4}$	2 x 2	$\frac{5}{8}$	1 $\frac{1}{8}$
Winner, 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$,	2 $\frac{1}{2}$	1 $\frac{7}{8}$ x 1 $\frac{7}{8}$	$\frac{5}{8}$	$\frac{3}{4}$
" 4 x 5,	3 $\frac{1}{4}$	2 $\frac{1}{4}$ x 2 $\frac{1}{4}$	$\frac{7}{8}$	1 $\frac{3}{8}$
" 6 $\frac{1}{2}$ x 8 $\frac{1}{2}$,	5 $\frac{1}{2}$	2 $\frac{7}{8}$ x 2 $\frac{7}{8}$	1 $\frac{3}{8}$	1 $\frac{3}{4}$
" 8 x 10,	9 $\frac{1}{4}$	3 $\frac{5}{8}$ x 3 $\frac{5}{8}$	1 $\frac{3}{8}$	2 $\frac{3}{8}$
" Stereo, 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$,	5 $\frac{1}{2}$	1 $\frac{7}{8}$ x 5	$\frac{5}{8}$	$\frac{3}{4}$
" " 4 x 5,	7	2 $\frac{1}{4}$ x 5 $\frac{1}{2}$	$\frac{7}{8}$	1 $\frac{3}{8}$
Senior Stereo,	5	2 x 5 $\frac{1}{4}$	$\frac{5}{8}$	1 $\frac{1}{8}$

The size and openings of the Automatic and Regular shutters are the same as the Winner. The weight is about 10% more.

NOTE.—Weights given in ounces, dimensions in inches.

Table showing standard focal lengths and diameters of lenses in inches :

LENSES	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	4 x 5	5 x 7	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	8 x 10
Single Achromatic,	4 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$		
All double lenses,	5	6 $\frac{1}{4}$	8	10 $\frac{1}{2}$	12
Sym. and Ortho. rear lens,		11	14	17 $\frac{1}{2}$	20
" " " front lens,		14	18	23 $\frac{1}{2}$	28
Symmetrical Wide Angle,		4	5 $\frac{1}{2}$	6 $\frac{1}{2}$	8
Extreme Wide Angle,			3 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{4}$
S. A. Diameter,	$\frac{3}{4}$	$\frac{7}{8}$	1		
Double Lens Diameter,	$\frac{3}{4}$	1	1 $\frac{1}{8}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$

Price List of Fitting Special Lenses, etc.

	3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	4 x 5	5 x 7	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	8 x 10
Mounting and fitting,	\$1.50	\$1.50	\$1.50	\$2.00	\$3.00
Extra flanges, . . . . .	.50	.50	.50	.75	1.00
Standard R. R. mounts, . . . . .	.50	.60	.75	1.00	1.50

Bulb and tubing, 25c.

Special focus or diaphragm scales, 50c.

Special front for Folding Pocket Kodak, \$2.00.