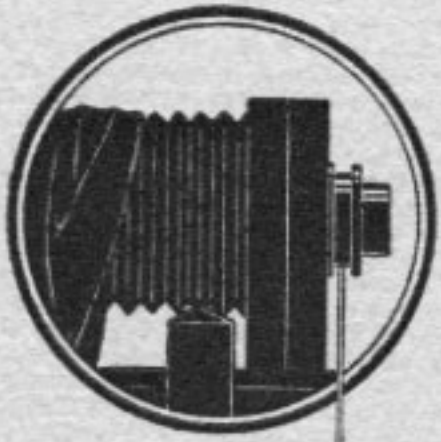
"PRICES DO NOT INCLUDE TAX"

SIGMAR LENSES



For

Portrait Photography

THE SIGMAR LENS

In making a portrait, the artist who is a painter applies oils by means of a brush to canvas, and the photographer who is an artist *paints with light and shade* and records these by means of a photographic lens on a film or plate. From the record so made he creates the portrait.

It is not necessary that the photographer should have a great deal of knowledge of lens construction to obtain pleasing portraits—but an understanding of the capabilities and the limitations of the lens that he is using, is of great value to him in producing artistic and pleasing results.

The most desirable lens for portrait photography is that one by which the photographer is best able to register the personality of the sitter. It is the lens by which the skilled photographer is best able to obtain a true artistic expression through the medium of light and shade.

The Sigmar Lens, introduced scarcely three years ago by the Bausch & Lomb Optical Company, is recognized as being without a superior for artistic portrait photography.

The Sigmar Lens avoids equally the extreme of too sharp an image, and of too soft a focus. The Sigmar cannot be classed as a soft focus lens—the image that it gives is only moderately soft even when the lens is used at its full aperture. Likewise, the Sigmar cannot be classed as a sharp anastigmat—the extreme optical refinements of the photographic anastigmat lens are purposely avoided, so that the negatives will not be wire sharp in any position.

The Sigmar Lens possesses to an outstanding degree those qualities that count most in portrait photography—the long focal length, great speed and superb "lens quality," and because of the simplicity of its design the price at which the Sigmar Lens can be obtained is very attractive.

Factors In Portraiture

THE photographer has control over posing and lighting the subject, exposing and developing the negative, and making the print. The film or plate determines the color values, and records the contrast of light and shade—*but the lens makes the picture.*

The artistic ability of the photographer is perhaps best

shown in posing and lighting the subject—in choosing what part of the portrait shall be accentuated, and what shall be subdued—and in determining the key of the final picture. This is craftsmanship—not art.

The art is the result.

In simplest terms, the result is nothing more nor less than the record of a photographic image. This image depends upon the lens, and so the final portrait depends upon the lens just as much as it does upon the posing and lighting, or upon the plate or film.

We are here concerned with the part that the lens plays in portraiture. The important factors regarding the lens which affect the photographer are:

1. The perspective
2. The depth of field
3. The photographic quality of the portrait

These are the factors by which the portrait photographer can judge the success of a portrait lens, and are briefly discussed in the pages of this booklet, particularly as they apply to the Sigmar Lens.

Perspective in Portraiture

EVERY photograph, except the copy of a perfectly flat surface, shows perspective, therefore a photograph in

general is a portrayal in perspective of objects seen in space. Perspective may be true or false, and the success of a portrait depends in a very large measure upon the character of its perspective.

True perspective in a photograph means that all of the objects as seen in the picture appear in their natural positions, and in their proper relative sizes, just as they are seen by the eye in actual life.

In taking a picture the perspective is determined by the position that the lens occupies when the exposure is made. If the photograph is held at the same distance in front of the eye as the lens was from the plate or film when the picture was made, then the perspective will be true in every respect; but if the photograph is viewed from any other position the perspective will be false, and the features will appear more or less distorted.

Because we are all accustomed to look at pictures from different distances, few people notice the perspective in a photograph. Most people sense it, rather than analyze it, but most people have very decided opinions upon whether or not a picture looks "natural." In a great many cases, an otherwise excellent photograph fails to please simply because the perspective is faulty. In order that a portrait shall look natural, the perspective must be natural—and the only natural perspective is true perspective.

In portraiture the error is often made of using a lens with too short a focal length and then placing the camera too close to the subject—the effect being to give a false perspective, and in a portrait to show only the front part of the face. This results in "flatness," or lack of roundness in the image.

Experience has shown that pleasing perspective in portraits can be had only when the focal length of the taking lens is long as compared with the size of the picture. Pleasing perspective has too often been sacrificed in order to make cameras small, to save the expense and bulk of large lenses, and to enable the photographers to work within a restricted space.

In studio portraiture these are not advantages—certainly not advantages to be compared with the outstanding advantage of being able to produce portraits in which the perspective is true and pleasing. There is no one factor of greater importance in distinguishing the work of the professional from that of the best amateur work than the superior perspective that the long focus portrait lens of the professional photographer gives.

There is probably no way in which the photographer can do more to lend the distinction to his work than by selecting for his studio portraiture a lens of generous focal length.

It is generally advisable to select a lens with as long an equivalent focal length as the size of the studio and the extension of the camera will permit.

A good rule to follow is this: *Use a Lens Whose Equivalent Focal Length is Twice as Great as the Longer Side of the Photograph.* For 8 x 10 photographs this means the use of a lens of 20-inch equivalent focal length. Such a lens will require a camera extension of at least 30 inches for large heads, with the sitter 5 feet from the lens. For full length figures and groups the same lens will take less camera extension, but will require a distance of about 22 feet to 25 feet from lens to the subject.

When the size of the studio, or the extension of the camera, do not permit the use of the 22-inch lens, the 19-inch focal length is particularly adapted to making portraits in the 8 x 10 size for contact printing.

For amateur photography the rule is to use a lens whose focal length is approximately equal to the diagonal of the plate, but for studio portraiture this is entirely too short, and leads to a false rendering of perspective. The very least that the professional photographer should be satisfied with is that the focal length of the taking lens should be equal to the sum of the two sides of the picture—for example, in an 8 x 10, this would require an 18-inch lens. A longer focal length is better if it can be had.

Very beautiful results can be obtained by using the 16-inch Sigmar Lens on half of an 8 x 10 plate or film, for 5 x 8-inch portraits. When a 5 x 8 negative is enlarged to 7 x 11 inches the perspective is the same as it would be in a 7 x 11-inch contact print made with the 22-inch lens.

The four photographs by Dudley Hoyt, reproduced in this book, were made on 8 x 10 films, using a 19-inch Sigmar Lens. No reproduction of the size shown in this book can possibly do justice to the beauty of the original photographs, partly because of the limitations of the half-tone process of reproduction, but partly also because the beauty of the original perspective is lost in the reduction. The perspective shown in the original photographs is perfect when the pictures are held at a distance of a little over two feet from the eye, but the perspective of these reproductions is true only when the printed page is brought to a distance of about 10 inches from the eye.

Depth of Field

In using a long-focus lens, or a lens of large aperture, there is but slight depth of field. This is an inherent limitation in photography, and one calling for the greatest skill on the part of the photographer to use to artistic advantage in the making of portraits.

One common expedient is to select a lens with as short a focal length as circumstances will permit, but in so doing, the photographer sacrifices the outstanding advantage of giving pleasing perspective in his portraits.

It is far better to use the unequal sharpness of objects at different distances, to emphasize some features, and to subdue others, and then to "stop down" the amount that is found necessary to produce sufficient sharpness to give the desired photographic quality.

Because of its extreme speed and length, the Sigmar Lens has but slight depth of field, and therefore the photographer should not hesitate to stop down. He should experiment with the diaphragm opening to find that exact combination of speed, depth of field, photographic quality, and time of exposure that will yield the most pleasing results.

The extreme speed of the Sigmar Lens should be kept in reserve rather than used on every occasion. By a slight amount of stopping down, that aperture can be easily found at which the lens quality is most pleasing.

TABLE OF IMAGE SIZES FOR STANDING FIGURES

(For average height of 5 feet 8 inches)

Lens Used	Cat. No.	Focal Length	Height of image on ground glass at		
			10 ft.	15 ft.	20 ft.
SIGMAR	16-P	16″	10¾″	6¾″	4¾″
"	19-P	19″	12¾″	8″	5¾″
"	22-P	22″	15¼″	9½″	6¾″

TABLE OF IMAGE SIZES FOR HEADS

(For average head of 9 inches)

Lens Used	Cat. No.	Focal Length	Height of image on ground glass at		
			6 ft.	8 ft.	10 ft.
SIGMAR	16-P	16″	2⅝″	1⅞″	1¼″
"	19-P	19″	3¼″	2¼″	1¾″
"	22-P	22″	4″	2¾″	2″

PRICE LIST

Code	Cat. No.	Focal Length	Size of Plate	Speed	Price
Hewaz	16-P	16″	8 x 10″	*f*.4	$155.00
Hewab	19-P	19″	11 x 14″	*f*.4	190.00
Hexaz	22-P	22″	12 x 15″	*f*.4.9	215.00

NOTE—The above prices include lens fitted to studio shutter, 10 feet of tubing and large bulb, correctly designed hood, and mounted on a 9 x 9-inch or 10 x 10-inch dark mahogany finish frontboard, ready to attach to studio camera.

Flange size, 5⅜ inch inside by 6⅞ inch outside diameter for all focal lengths.

When ordering state which size frontboard you want.

Sigmar Lenses are obtainable either from the factory or from most photographic supply houses.

Further information will be gladly sent on request.

BAUSCH & LOMB OPTICAL CO.

ROCHESTER, N. Y.

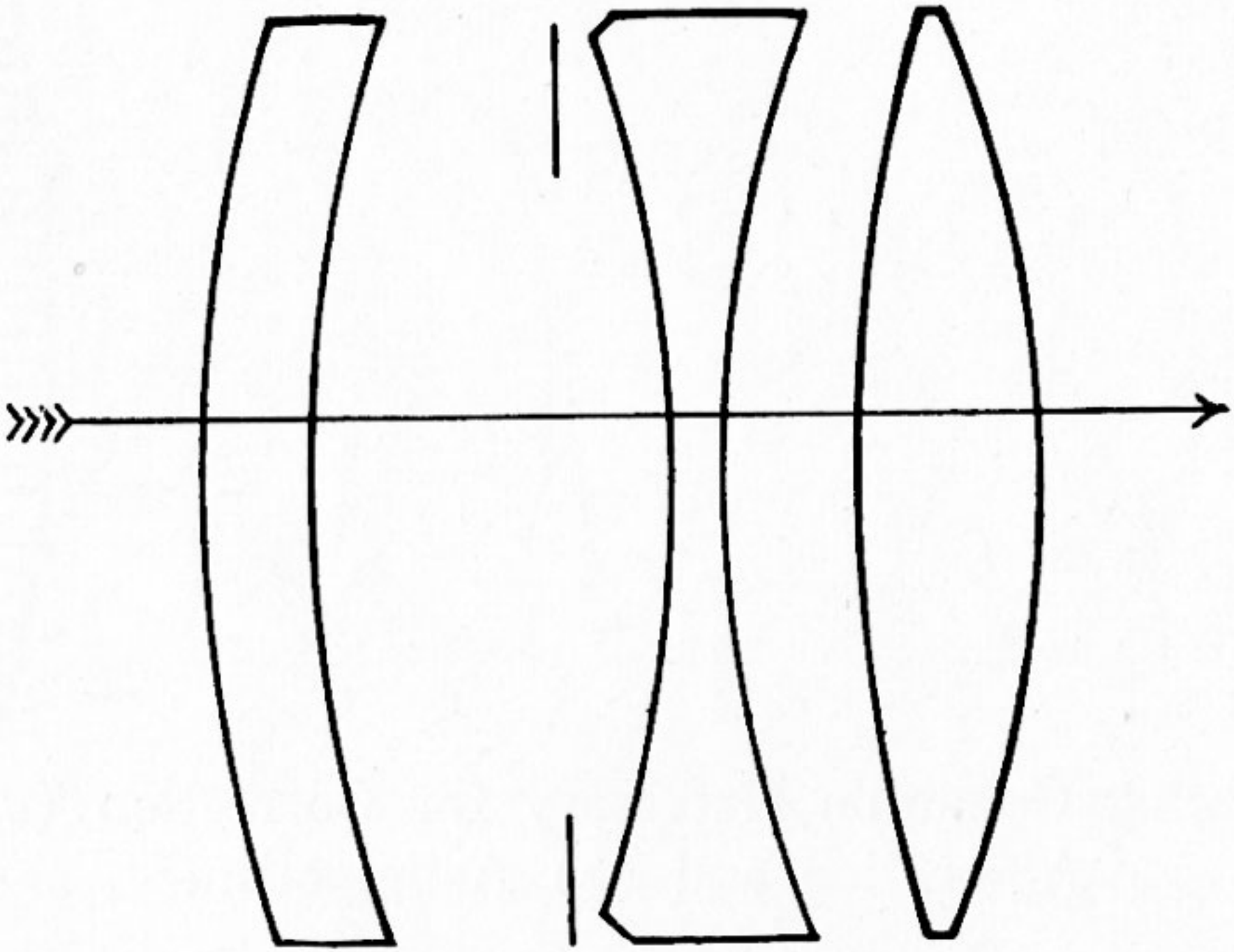


FIG. 83. The Sigmar of Bausch & Lomb