

"ROVING EYES"

AUG 20 1931



GROVER

MB

BAUSCH & LOMB
STEREO ~ PRISM
BINOCULARS

C 1233

ROVING EYES

Keen-sighted sovereign of the skies, emblem
of American ideas and ideals, the eagle
is a fitting emblem, too, of BAUSCH & LOMB

Stereo-Prism BINOCULARS



COPYRIGHT 1930

BAUSCH & LOMB OPTICAL CO.

ROCHESTER, NEW YORK

NEW YORK, CHICAGO, SAN FRANCISCO, FRANKFORT a/M, LONDON



MB



MB

About Binoculars

BINOCULARS represent a phase in the efforts of man and his science to push back the boundaries of distance—to increase and vary human experience—to give roving eyes a far view, a wide view and a clear view.

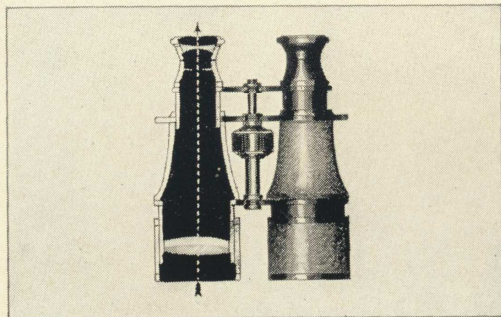
Binoculars, like other products of modern science, are manufactured in various styles and types. Some glasses that look quite similar are in reality very different. A brief study, and perhaps a test, should greatly aid you in choosing a glass that will fit your individual requirements, and will be of a quality that will afford lasting pride.

Efforts to extend vision date back to 1608 when the first telescope was produced. Galileo devised a telescope to use for his astronomical work in 1609 and the simple type of instrument still bears his name. By 1823 binocular field glasses were in use; they were patterned after the early

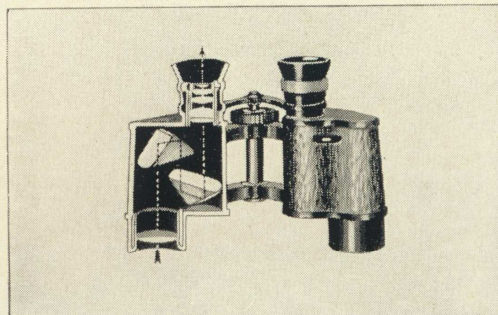
telescopes and are known today as Galilean field glasses. About 1900 the prism type—a powerful, compact, lightweight, and efficient glass was developed. This type has become most popular.

The prism binocular has been developed to meet various uses: high power glasses for observation at great distances; medium power glasses for studying distant objects, and lower power for following moving objects.

It is quite natural for one to demand the highest possible magnification when purchasing binoculars. Yet the characteristics of the medium power glasses render them far superior for the usual work. Before you make your selection, consider each of the important characteristics. Make the tests suggested in the section entitled "The Third Degree for Binoculars," and you will be rewarded with lasting satisfaction.



Galilean Field Glass



Prism Binocular



The Third Degree *for* Binoculars

EVEN though the processes of manufacture of a good pair of binoculars are intricate and the detailed scientific knowledge required is great, the tests by which you can measure the quality of a glass are simple and can easily be performed.

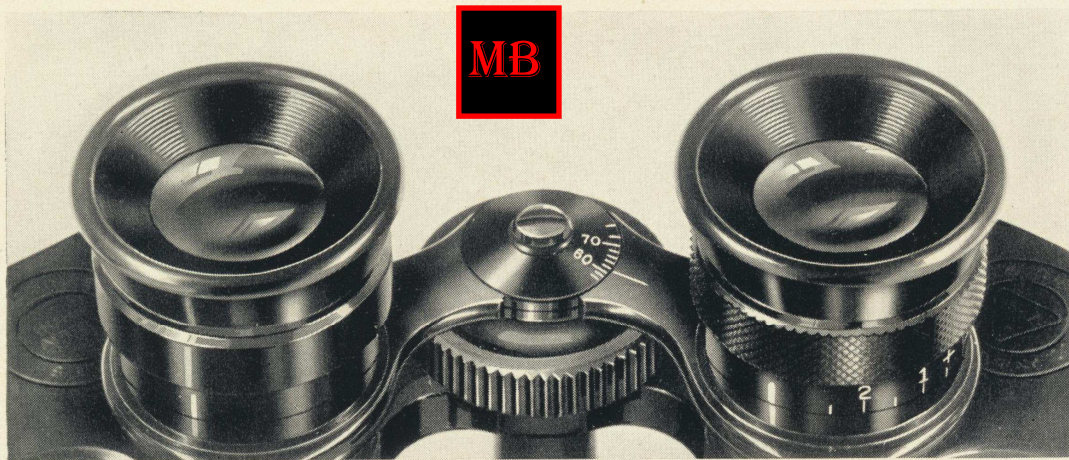
The following tests will enable you to go into a store and intelligently examine and compare different glasses.

Focusing

TWO adjustments are necessary to render a pair of binoculars adaptable to any pair of eyes having normal or abnormal vision. The barrels must swing on a hinge to provide for adjusting to the distance between the eyes. Secondly, to accommodate those having eyes of unequal vision, one eyepiece must be individually adjustable. Both of these ad-

justments should be graduated for convenient resetting.

Then, because binoculars are used for varying distances, it is necessary to focus the eyepieces simultaneously by means of a central focusing device. To adjust a glass, place it before your eyes and move the barrels together or apart until it comfortably fits the eyes. Next cover, with the hand, the objective which is on the same side as the adjustable eyepiece and keeping both eyes open, adjust the glass with the central focusing attachment until the object is as clear and distinct as possible. Then cover the other objective and turn the individual eyepiece adjustment until the object can be seen clearly and the glass will be set. By taking the readings which are on the adjustment scales, you can, at any future time, readily reset the glass to fit your eyes.



Stereo-Prism BINOCULARS



Magnification

BY magnification (or power, as it is sometimes designated) we mean the number of times the image seen through the glass is greater or nearer than the object appears to the naked eye. Magnification is a comparatively easy characteristic to obtain in a pair of binoculars. By placing lenses of the proper curvature the proper distance apart, any desired magnification within reason can be had.

It is obtaining the numerous other desirable qualities necessary to a good binocular, which requires workmanship and skill of the highest degree. Do not, however, take for granted the power which is stamped on a glass. Glasses of obscure make are sometimes much lower in power than they are claimed to be. The following experiments will enable you to check up

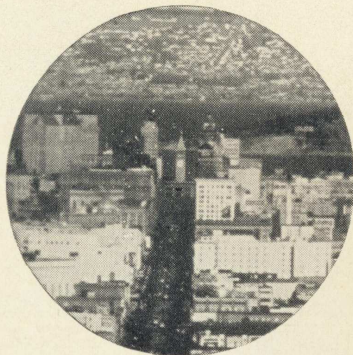
on the power of binoculars.

Select an object about one hundred feet away, place the glass upon a rest, adjust it to your eyes and focus it on the object. Any object which does not occupy the entire field will do. Now instead of looking through both barrels, look at the object through one barrel, having the other eye exposed so that it is peering down the outside of the glass at the object. Then with both eyes looking at the object you will see two images, a large one seen through the glass and a small one seen with the naked eye. Then move the glass about until the large image overlaps the smaller. Now compare the sizes of the images. The number of times the large image exceeds the small image in size is the actual power of the glass. In other words, if the glass is 8 power, the large image should be eight times as large as the small image.

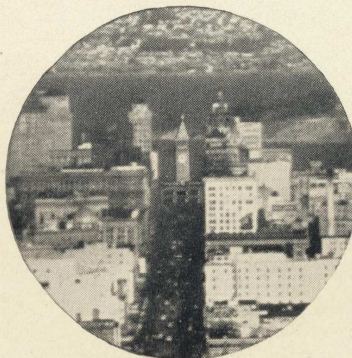
Market Street, San Francisco, from the Twin Peaks



as seen without the use of Binoculars.



With 6-Power Glass



With 8-Power Glass



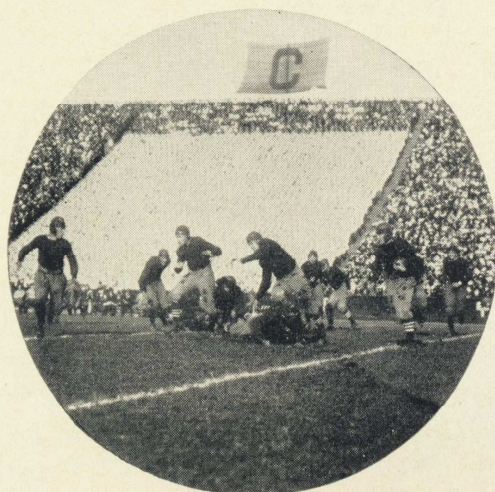
With 10-Power Glass



Field of View

FIELD of view is the term used to designate the width of the view which can be seen through a binocular at a given distance. A wide field of view is highly desirable, both in making it easy to locate any par-

Focus each pair on the same object at a moderate distance. A brick building can be used for this purpose. Place one pair of binoculars to your eyes and count the number of bricks which you can see across the widest part of the field without moving



The Field of View of a B & L Binocular

The Field of View of a Galilean Glass

ticular object which you wish to observe and in being able to see more of a view without moving the glass.

But this feature can be carried too far. An excessively large field will result in poor definition around the margin of the field and will actually distort the image.

Comparing two glasses for field of view is a simple matter. First be sure that the two glasses are of the same rated power because a low power glass will generally allow a greater field to be seen than a high power glass.

the glass. Repeat this performance with the other glass. Of course the glass showing the larger number of bricks has the wider field. If a brick building is not available, this test can be performed by focusing both binoculars on any object or landscape which is larger than the area covered by the glass, and observing the most widely separated points which can be seen through each glass. The glass which has the more widely separated objects in its field is the glass which has the greater field.

Stereo-Prism BINOCULARS

Clearness to the Edge of the Field

IN testing to determine if a large field of view is clearly defined to the edge, hold the head still and swing the binocular so that the object appears

through a series of prisms set at opposing angles. The Galilean glass is seldom constructed to magnify more than $3\frac{1}{2}$ or 4 times, because the length overall would make it so ponderous that it would be an impractical glass to carry. Then, too, the



MB



Large clear field of a B & L Binocular

Excessively large field showing poor quality

to move to the edge of the field. If the object is distorted as it passes to the edge of the field, the glass is either poorly made or too large a field has been attempted in its design.

Size and Construction

BINOCULARS are divided into two distinct classes, the old fashioned Galilean type and the modern prismatic type. The former is nothing more or less than a double telescope with direct vision through the lenses. The prismatic type reflects the image

field of view is necessarily very small. In the prismatic type the light passes through the objective lens and is reflected by the first prism into the second prism and then is reflected through the eyepiece lens system, as shown on page 11. Directing the path of light back and forth permits a lighter weight, more compact binocular and, more important, permits achievement of relatively large fields combined with high power, even illumination, clear definition and enhanced stereoscopic effect.

Alignment

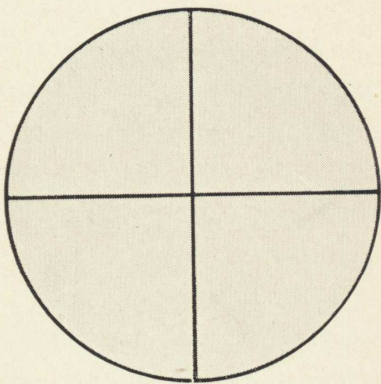
IN order that a glass may function properly, both optical and mechanical axes must be aligned. This calls for extreme precision and rigid inspection, especially in a glass which has an interpupillary adjustment, because the alignment must be correct at every possible interpupillary distance. To test a binocular for alignment, a rest upon which to place the glass is necessary. First draw upon a piece of paper two lines about two or three feet long, crossing each other at right angles. Place this cross line diagram about one hundred feet away and focus the glass on it. If the glass is correctly aligned you will see a single image of the cross line. If not, you will see two images of one or both of the lines. The alignment of a binocular may be correct when the glass is new, but very little wear or the

slightest impact may throw it out of adjustment unless it is rigidly constructed to give a life time of service.

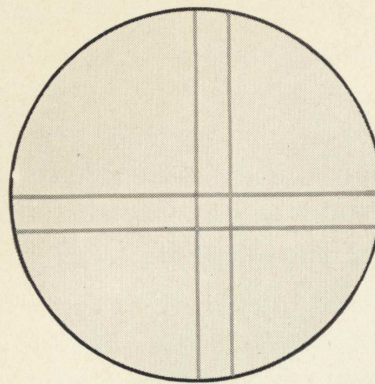
Stereoscopic Effect

THE stereoscopic effect of a binocular is its quality of giving the view depth as well as breadth and height. If you will close one eye and observe several objects within your view, you will find that it is quite difficult to determine their respective distances from you and from each other. Yet when you look with two eyes, the relative positions become apparent. The reason for this is that when you look with two eyes you are looking at the objects from two slightly different angles. The greater the angles, the greater the stereoscopic effect will be.

A good pair of binoculars, therefore, will have the objective lenses



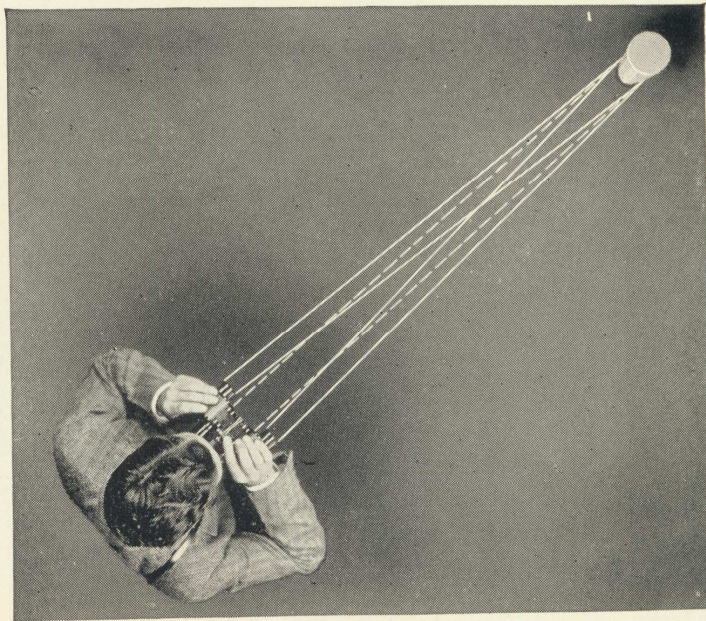
In Perfect Alignment



Out of Alignment

Stereo-Prism BINOCULARS

much further apart than the eyepiece lenses (See illustration). This feature should be considered when you are purchasing a prism binocular. Particularly in hunting, you will find that stereoscopic effect will aid you in determining the relative distance of game and its surrounding objects. Stereoscopic effect is of great importance if correct observations are to be made.



A wider angle of vision gives a greater stereoscopic effect

Illumination

BRIGHTNESS of image is a factor that must be considered when using binoculars at night, or under conditions of low visibility, as in

wooded country or in the early morning. In a good binocular, the prisms and other optical parts are made of glass of high light transmission, preventing a reduction of brightness of image by absorption.



BRIGHT IMAGE

Optical system of high transmission glass.



DARK IMAGE

Optical system of low transmission glass.



How B & L Glasses Measure up to the Test

MB

IN giving you the foregoing information, we have furnished you with a club to hold over our heads. If there are any defects in our glasses you will be able to detect them. However, we have no fear as to what your choice will be if all of the above tests are made.

Bausch & Lomb Binoculars have never been donated by the company for use on any scientific expeditions. When B & L glasses have been used for that purpose, they have been purchased because of their fine quality.

The superiority of B & L glasses is made evident by the fact that they have been used by the U. S. Army and Navy for a number of years and are the ultimate choice of those who must have the best.

Bausch & Lomb glasses are as light and compact as it is possible to make them. Their weight has been decreased to a minimum, yet without sacrifice of the sturdiness requisite to permit rough usage and furnish proper protection for the optical parts.

Bausch & Lomb glasses have remained in alignment and adjustment even after they have been subjected to severe impacts. This is entirely due to their sturdy construction. The prisms, instead of being cemented in as they are in many glasses, are held in place by a spring clamp which locks them into a closely machined groove in the body of the binoculars. Because the collimating adjustment

in B & L Binoculars is made with the objective lenses, the prisms can be firmly held in place.

If the prisms were merely cemented in, a slight impact would cause them to loosen and get out of place. Glasses of this construction are constantly in need of repairs and are a source of dissatisfaction to the owner.

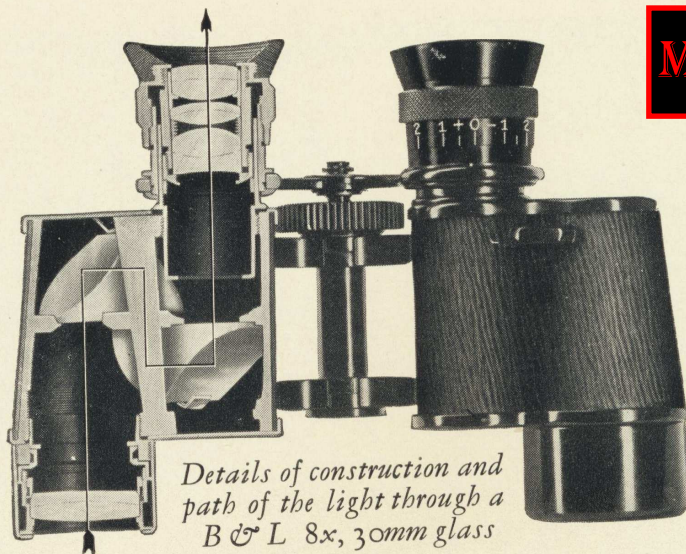
Some of the better types of glasses have prisms held in the body by means of three screws which are used to adjust the prism for collimating. Although this method of mounting is superior to cementing the prisms in, the prisms are likely to get out of adjustment and ruin the alignment or collimating of the glass.

Bausch & Lomb glasses are made in a range of powers to cover practically every use, and the power which is marked on the glass is guaranteed to be correct. Bausch & Lomb glasses are easy to carry and easy to swing into position and they give excellent stereoscopic effect, due to wide separation of the objective lenses.

The field of view is as large as possible without sacrifice of other desirable qualities. Any B & L glass has a field of view about three times larger in diameter and nine times larger in area than that of the Galilean type.

The eye cups on a B & L glass are formed to fit comfortably against the brow; they do not exert pressure against the eye itself, and thereby irritate it,—a valuable and comfortable

Stereo-Prism BINOCULARS



Details of construction and path of the light through a B & L 8x, 30mm glass

characteristic in prolonged observation. An adjustment of one eyepiece enables the user to adjust the B & L glass to his own eyes and a scale enables him to reset them in a fraction of a minute. Except for two types, all models of B & L Binoculars are equipped with a central focusing device.

Bausch & Lomb glasses are tried and tested until the alignment of the barrels are correct to 1% from one extreme of the adjustment to the other.

The Bausch & Lomb Optical Company is the only American manufacturer who has been able to manufacture glass for use in precision instruments. The same quality of glass is used in B & L Binoculars as is used in high grade scientific instruments. This assures a binocular which will show clear bright images, free from color fringes and grayness.

In making a pair of binoculars, the

lenses and prisms must be accurate to within a wavelength of light of the specifications. That means that the measurements must be made in millionths of an inch. Such fine measurements cannot be obtained by any mechanical device. They can only be made by actually using light waves as units of measurement.

Consider the workmanship and scientific knowledge required for work of a character to produce binoculars measuring up to these high standards. It is only men who have the utmost patience, skill and pride in their accomplishment who can do this type of work.

Decide what power of glass will suit your needs, compare the B & L glass by means of these tests which we have suggested or any other test which you might conceive. Then make your decision. If you desire any further information about binoculars, write us and we will gladly assist you.

BAUSCH & LOMB

MB



Choosing a Binocular

THERE is a binocular which is best suited for every individual use. We cannot, however, say that one type of glass and that type only can be used for a particular purpose. Many, in spite of adverse opinions, have successfully used some "pet" glass for numerous purposes.

In choosing a pair of binoculars, first of all, one must decide the chief purpose or purposes for which this glass will be used. Let us first consider the glass for the hunter.

HUNTING

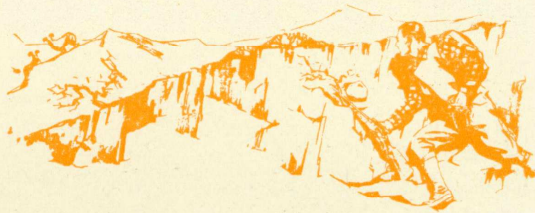
If the sportsman expects to spend the greater part of his time hunting in wooded country, illumination is an exceedingly important factor. In the dim borders of the woodland the light is often poor and the atmosphere is seldom as clear as it is in the higher altitudes of mountain country. Also in the dusk of early morning and evening the visibility is poor.

In all types of hunting, of course, weight and size enter into consideration. As long as the glass has sufficient magnification and illumination the smaller and more compact it is, the less the sportsman has to carry around.

In wooded country it is seldom necessary to observe the game at

great distances. Therefore, a glass of high power is unnecessary.

In hunting mountain sheep or goats, or any animal where long range stalking is necessary, a light glass of fairly high power is by far the best. A glass of too high a power is difficult to hold steady, and in this type of hunting one is generally climbing and travelling quite some



distances. After one has made a long climb to an advantageous point of observation, he is usually breathing heavily and will find a glass of high power difficult to hold steady.

In all kinds of hunting a wide field of view is extremely important—the widest possible field permitting clear definition.

We, therefore, recommend for hunting in wooded country the following glasses which we list according to their preference.

Hunting in wooded land: 6x, 30; 6x, 25.

Long range stalking: 8x, 30; 6x, 30; 8x, 25; 6x, 25.

NAVIGATION

Perhaps the most important feature of a glass which is to be used for navigation is the ease with which it can be held steady. The action of the water and the throb of the engine make it necessary for the navigator



to have a glass which he can hold steady. Then, too, the chief use which a navigator has for a binocular is to sweep the horizon and locate other boats. Where distances are great a higher power glass brings the objects closer.

Therefore, we recommend the following glasses for navigation in the order in which they are given: 10x, 50; 10 x, 45; 10 x, 30; 7 x, 50.

AVIATION

The aviator uses a glass for such purposes as identifying landmarks, other planes and locating and observing the nature of landing fields. Like the navigator, he needs a glass which he can hold steady in spite of the vibration and motion of the plane. We, therefore, recommend the B & L Sport Glass, the 6 x, 30, and 6x, 25.

NIGHT GLASS

Illumination is the most important feature, of course, to be looked for in a glass which is to be used for work under poor light conditions.

You will find that in all of the Bausch & Lomb Binoculars light losses due to absorption are reduced to a minimum. A glass of the largest possible exit pupil size is called for. We suggest the 6 x, 30 and 8 x, 30.

OUTDOOR SPORTS

For use in observing track racing, boat racing and numerous other outdoor sports, wide field of view is perhaps the most important feature of a glass. A wide field of view will enable the observer to see a larger number



of the entrants than will a small field. High power is not important, as the objects are seldom far enough away to make real high magnification necessary. A wide field will enable the observer to follow the scene with considerable ease. We, therefore, recommend the following glasses for this purpose: 6 x, 30; 6 x, 25 and the B & L Sport Glass.

Stereo-Prism BINOCULARS

TARGET WORK

For target work a binocular is usually placed on a rest and the target is stationary. The purpose is to obtain as much detail as possible, still having the entire target in the field of view. Hence, magnification is the chief consideration. Due to the fact that the binocular is used on a rest, high magnification is not objectionable. We therefore recommend the 10 x, 45; 10 x, 30; and 8 x, 30 glasses.

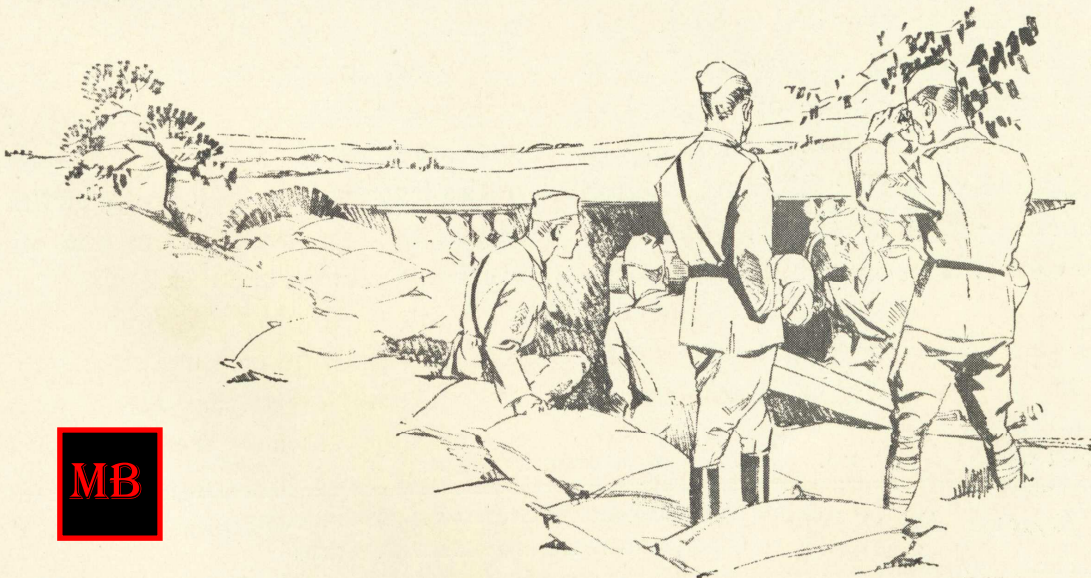
FOR GENERAL ALL'ROUND USE

For the person who can afford but one good binocular, we suggest the 6x, 30 glass. Its wide field of view, exceptionally bright illumination, small size, light weight and large exit pupil, together with the fact that its

magnification is best suited to all-round use, make this glass the ideal for general purposes.

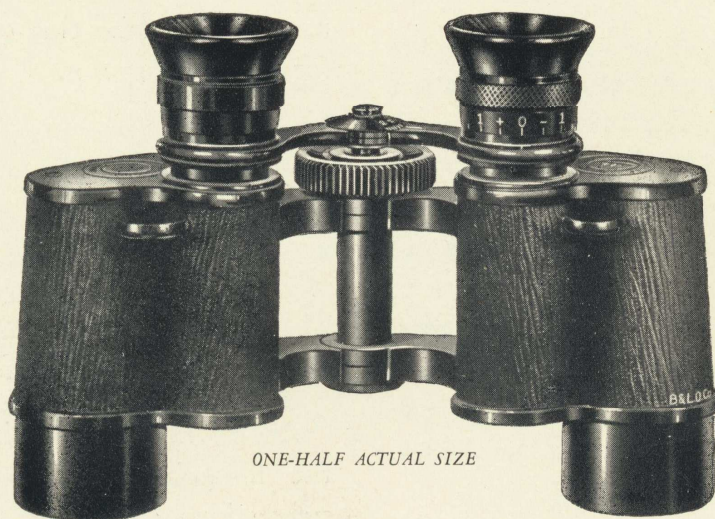


Again, may we remind you that the foregoing suggestions are *only* suggestions and after all, the glass which gives you the best results and which you find most convenient for your own personal use is the glass which should be your choice. If you have gained any knowledge or useful information from the above suggestions, we shall consider ourselves well repaid for offering them to you.



MB

BAUSCH & LOMB



ONE-HALF ACTUAL SIZE

6×, 25 mm Diameter
STEREO BINOCULAR



THIS compact, light-weight glass is easy to carry and to hold. It is well adapted to the study of birds and animals, because of its good illumination. Its power makes it a desirable model for following moving objects—races or games. The field of view is large enough, and the mag-

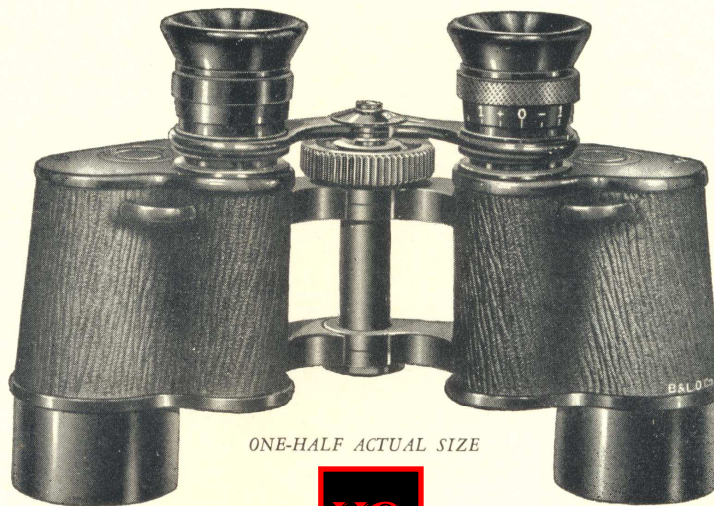
nifying power sufficient for such purposes.

It gives an angular field of $8^{\circ} 36'$, or a linear field 150 yards wide at a distance of 1,000 yards.

The length of the glass is $4\frac{5}{16}$ inches closed, or $4\frac{9}{16}$ inches open, and its weight 17 ounces.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jabat</i>	FG-26H	Bausch & Lomb Stereo-Prism Binocular 6x, 25 mm diam., in case with straps	\$53.00

Stereo-Prism BINOCULARS



ONE-HALF ACTUAL SIZE

MB

6x, 30 mm Diameter STEREO BINOCULAR

EXCEPTIONAL illumination makes this a most popular Binocular. It has the same magnifying power as the preceding model, but its larger objectives permit a brighter image.

This is the favorite model for observing sporting events where distance and speed require its power and

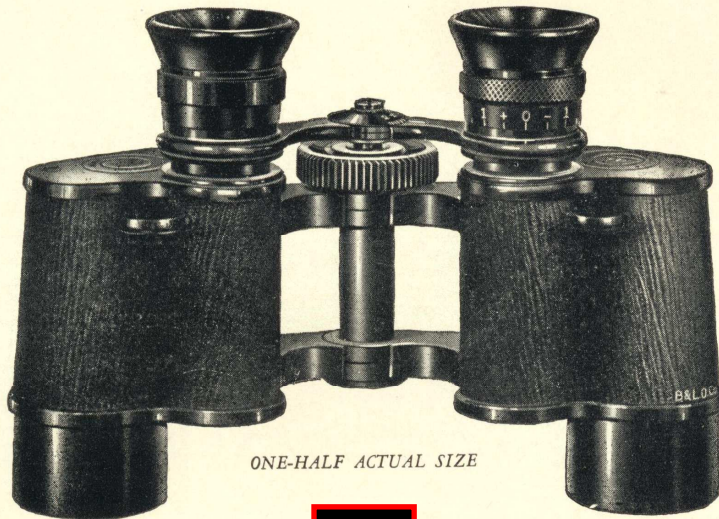
large field of view. It is also popular for touring, aviation, hunting and nature study.

The angular field is $8^{\circ} 36'$, or the linear field 150 yards at a distance of 1,000 yards.

Its length is $4\frac{5}{16}$ inches closed, or $4\frac{5}{8}$ inches open. It weighs $19\frac{1}{2}$ ounces.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jabev</i>	FG-36H	Bausch & Lomb Stereo-Prism Binocular 6x, 30 mm diam., in case with straps	\$66.00

BAUSCH & LOMB



ONE-HALF ACTUAL SIZE



8x, 25 mm Diameter
STEREO BINOCULAR

LIGHT weight and higher power are combined in this popular glass, a convenient and comfortable traveling companion, appreciated for observing at considerable distance.

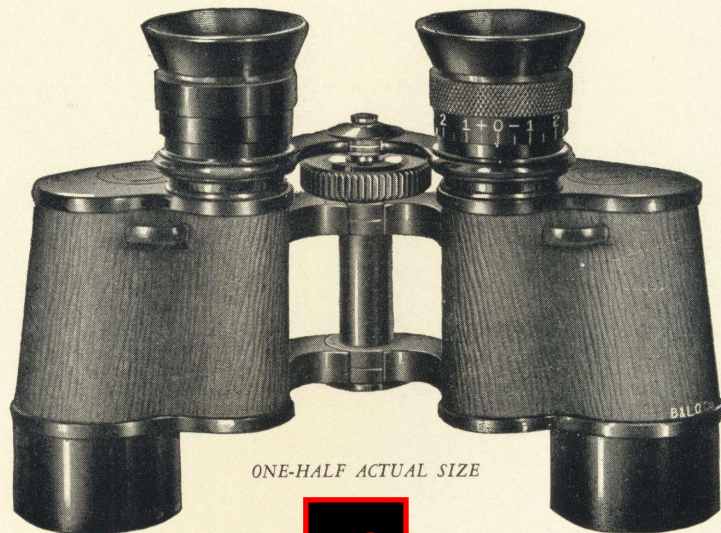
Tourists, mountain climbers, hunters, architects, nature students—in fact, all who find it necessary to

have a combination of power and light weight—will be pleased with this glass.

The angular field is $6^{\circ} 30'$, or a linear field of 114 yards at a distance of 1,000 yards. Its length is $4\frac{5}{16}$ inches closed, or $4\frac{9}{16}$ inches open, and its weight 22 ounces.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jabox</i>	FG-28H	Bausch & Lomb Stereo-Prism Binocular 8x, 25 mm diam., in case with straps	\$60.00

Stereo-Prism BINOCULARS



ONE-HALF ACTUAL SIZE

MB

8×, 30 mm Diameter STEREO BINOCULAR

POWER and good illumination in addition to a wide field characterize this glass. The larger objectives have greater light-gathering capacity and bring in distance with remarkable brightness.

This is an excellent Binocular for yachtsmen, hunters, tourists, in fact,

anyone who desires good illumination, a wide field and a magnification not too high for comfort.

The angular field is $7^{\circ} 15'$; its linear field 127 yards at a distance of 1,000 yards. The length closed is $4\frac{5}{8}$ inches; open $4\frac{5}{8}$ inches; weight 22 ounces.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jabuv</i>	FG-38H	Bausch & Lomb Stereo-Prism Binocular 8 x, 30 mm diam., in case with strap	\$72.00

BAUSCH & LOMB



ONE-HALF ACTUAL SIZE



10×, 30 mm Diameter
STEREO BINOCULAR

THIS Binocular has the high magnifying power required for marine and mountain work; yet it is of the same light-weight, compact style as the six and eight-power glasses. It weighs no more than the lower power glasses, making it an ideal companion

on expeditions, or when stalking game in mountainous country.

This model has an angular field of 6°, or linear field of 105 yards at a distance of 1,000 yards. Its length is 4³/₈ inches closed, or 4⁵/₈ inches open. It weighs 20¹/₂ ounces.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jacav</i>	FG-310H	Bausch & Lomb Stereo-Prism Binocular 10x, 30 mm diam., in case with straps	\$85.00

Stereo-Prism BINOCULARS

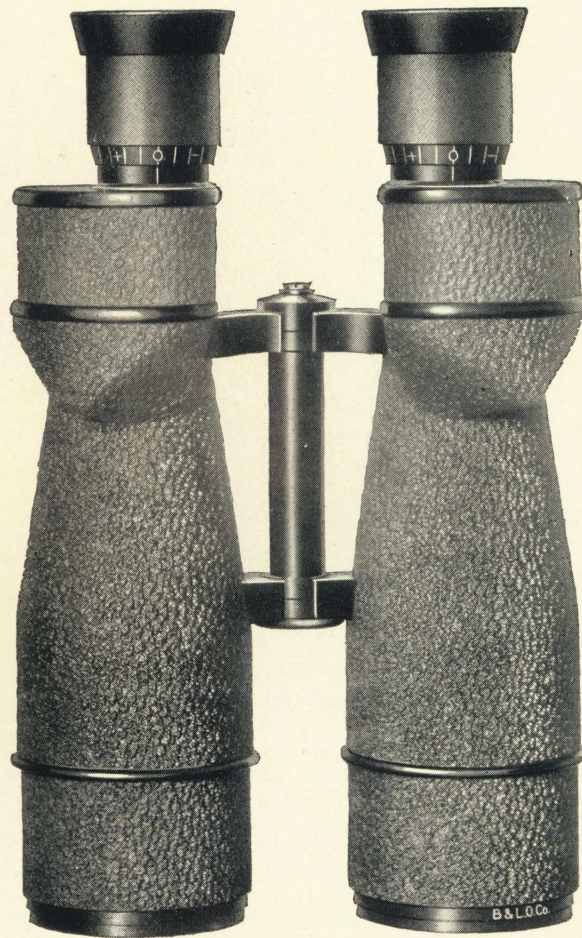


10x, 45 mm
Diameter

STEREO
BINOCULAR

BRILLIANT illumination combined with high power makes this glass ideal for long distance observation. Its remarkable light-gathering capacity is especially appreciated at night or in dark, cloudy weather.

Although originally designed to meet the requirements of navy and army officers, this glass has had a brisk welcome from yachtsmen and sportsmen generally.



Its angular field is $4^{\circ} 23'$; the linear field 76.5 yards wide at a distance of 1,000 yards. Its length closed is $7\frac{1}{8}$ inches; open $8\frac{1}{8}$ inches. It weighs 36 ounces.



CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jacew</i>	FG-45H	Bausch & Lomb Stereo-Prism Binocular 10x, 45 mm diam., in case with straps	\$95.00



7x, 50 mm Diameter
STEREO BINOCULAR

THIS new Binocular, incorporating new ideals of design—a rugged one piece body, assuring a dust tight water proof construction, and prism mounting of a new type which keeps the prisms secure in their positions more rigidly and with less strain—is a favorite where the utmost in quality is essential. When width of field, brilliance of illumination and perfect

definition of image are prerequisites, and size and weight are not too big considerations, these glasses are unequaled.

The 7x, 50 mm model has an angular field of 7.3° , or linear field of 128 yards at a distance of 1000 yards. Its length is $7\frac{1}{16}$ inches closed or $7\frac{7}{16}$ inches open. It weighs 42 ounces.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jadex</i>	FG57H	Bausch & Lomb Stereo Prism Binocular 7x, 50 mm diam., in case with straps	\$95.00

Stereo-Prism BINOCULARS



10x, 50 mm Diameter
STEREO BINOCULAR

THE 10x, 50 mm Binocular is of the same plan of construction as the 7x, 50 mm glass, but with higher power eyepieces. The same one piece body and special prism mounting shelf makes it strong and durable.

This higher power glass was designed primarily for marine use, but

will find favor wherever a 10 power glass of definitely superior optical qualities is desirable.

The angular field is 5.2°; its linear field 93 yards at 1000 yards. The length closed is $6\frac{13}{16}$ inches; open 7 inches; weight 41 ounces.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jadoz</i>	FG510H	Bausch & Lomb Stereo Prism Binocular 10x, 50 mm diam., in case with straps	\$100.00

Correction: The 10x 50 mm Binocular is pictured on the opposite page.



Bausch & Lomb Prism Monoculars



WHERE extreme compactness and quick adjustment are necessary, the Bausch & Lomb Prism Monocular has a particular appeal. In construction, this instrument is very much like one barrel of the Bausch & Lomb Stero-Prism Binocular.

Most prominent among the advantages of the Monocular is the ease with which it can be used with one hand, leaving the other free. Focusing is rapid since only one eye is used.

Bausch & Lomb Monoculars are offered in two powers, the 6X, 30 mm instrument and the 8X, 25 mm. The first gives greater covering and light-gathering power, but less magnification.



CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jacix</i>	MG36H	Bausch & Lomb Prism Monocular, 6x, 30 mm, with leather case and straps	\$27.00
<i>Jacoy</i>	MG28H	Bausch & Lomb Prism Monocular, 8x, 25 mm, with leather case and straps	27.00

Summary of Binocular and Monocular Specifications and Prices

Code Word	Cat. No.	Power	Diam. of Obj. in mm.	Exit Pupil in mm.	Relative Brightness	Objective Field		Weight in oz.	Length in In.		Price With Case
						Angular	Linear in Yds. at 1,000 Yds.		Open	Closed	
<i>Jabat</i>	FG26H	6X	25	4.1	16.8	8°36'	150	17	4 ⁹ / ₁₆	4 ⁵ / ₁₆	\$53.00
<i>Jabev</i>	FG36H	6X	30	5.0	25.0	8°36'	150	19.5	4 ⁵ / ₈	4 ⁵ / ₁₆	66.00
<i>Jadex</i>	FG57H	7X	50	7.1	50.4	7.3°	128	42	7 ⁷ / ₁₆	7 ¹ / ₁₆	95.00
<i>Jabox</i>	FG28H	8X	25	3.1	9.6	6°30'	114	22	4 ⁹ / ₁₆	4 ⁵ / ₁₆	60.00
<i>Jabuv</i>	FG38H	8X	30	3.8	14.1	7°15'	127	22.2	4 ⁵ / ₈	4 ⁵ / ₁₆	72.00
<i>Jacav</i>	FG310H	10X	30	3.0	9.0	6°	105	20.5	4 ⁵ / ₈	4 ³ / ₈	85.00
<i>Jacew</i>	FG45H	10X	45	4.4	19.4	4°23'	76.5	36	8 ¹ / ₈	7 ⁷ / ₈	95.00
<i>Jadoz</i>	FG510H	10X	50	5.0	25.0	5.2°	93	41	6 ¹³ / ₁₆	7 ⁵ / ₁₆	100.00
<i>Jacix</i>	MG36H	6X	30	5.0	25.0	8°36'	150	11	4 ¹ / ₂	4 ¹ / ₈	27.00
<i>Jacoy</i>	MG28H	8X	25	3.1	9.6	6°30'	114	8	3 ⁷ / ₈	3 ¹ / ₁₆	27.00

Stereo-Prism BINOCULARS



Binocular Cases



THE standard carrying case is made of the best quality black sole leather, solidly built to give real protection and long service. Its cover fits tightly, preventing rain, snow and dust from entering. It is shown above on the right hand side. The standard style carrying case is also furnished equipped with a compass, as illustra-

ted on the left.

The carrying case shown in the center above is of light-weight flexible leather. It is the alternate when weight is to be considered.

Two straps come with each Binocular: one to sling the carrying case from the shoulder, and the other a neck strap for the Binocular.

BINOCULARS WITH HARD SOLE LEATHER CASE CAT. NO.	STANDARD HARD SOLE LEATHER CASE ONLY CAT. NO.	STANDARD HARD SOLE LEATHER CASE WITH COMPASS CAT. NO.	FLEXIBLE TAN SOLE LEATHER CARRYING CASE CAT. NO.
FG-26H....	G-26H	Included when purchasing Binocular	G-26HC
FG-36H....	G-36H		G-36HC
FG-28H....	G-26H	When purchased separately \$6.00	G-26HC
FG-38H....	G-36H		G-36HC
FG-310H...	G-36H		G-36HC

Write for Quotations on other size cases

BAUSCH & LOMB

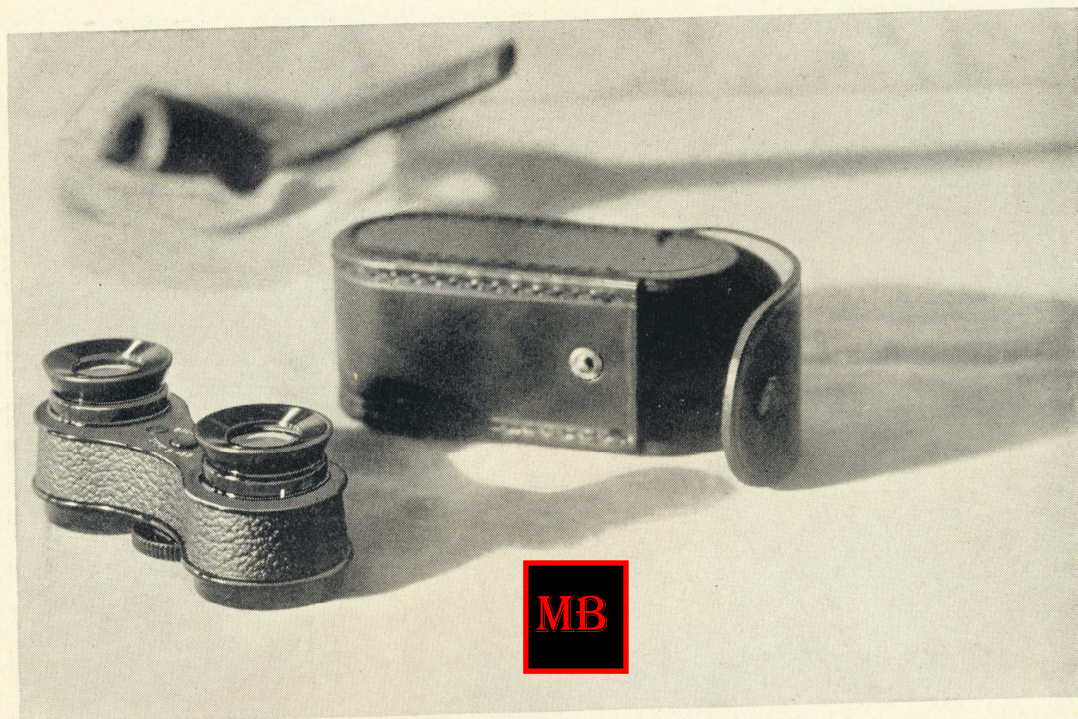


Underwood & Underwood Photo

The Sport Glass at Soldiers Field



Stereo-Prism BINOCULARS



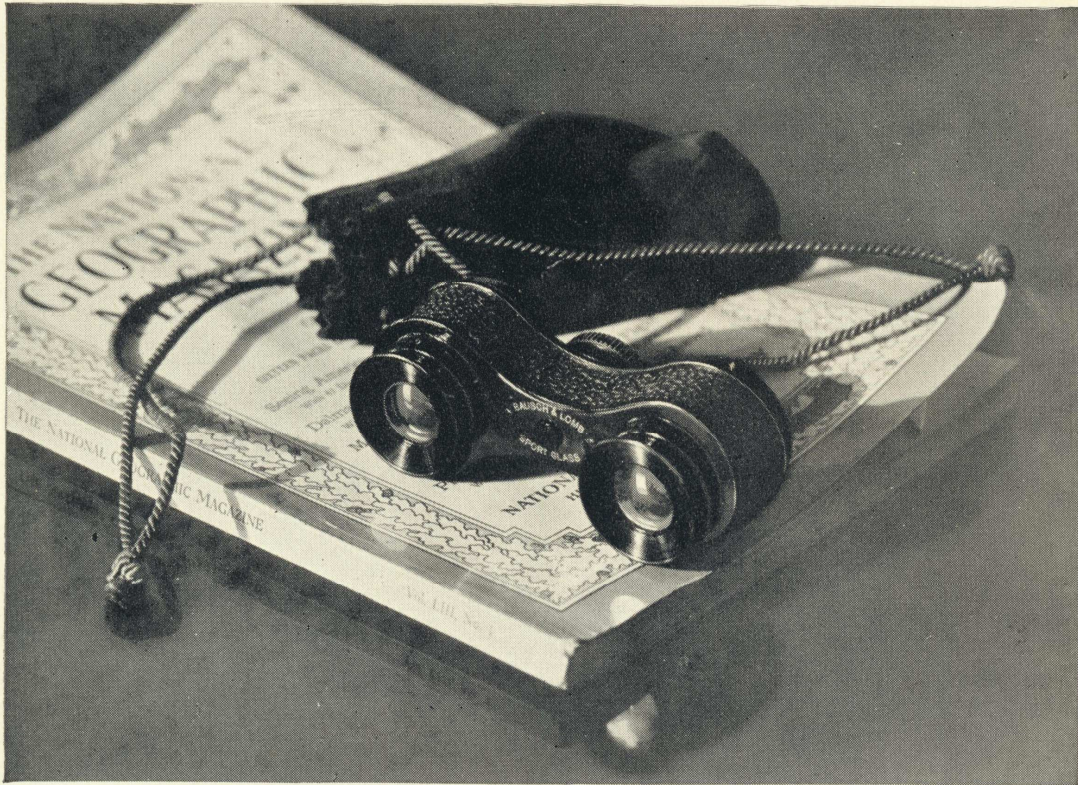
Bausch & Lomb Sport Glass

Black Model—Calfskin Case

THE Sport Glass meets universal favor because of its light weight, extremely large field and compact size. The smooth finished black model shown above is decidedly masculine. Its sturdy calfskin case is designed

to give long service, and yet the Sport Glass and case combined weigh very little and can be carried in the pocket. It has the widest field of view of any glass made. Its patented optics give a field 840 feet wide at 1,000 yards.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jaicy</i>	No. 900-A	B & L Black Sport Glass, Calfskin Case	\$16.50



MB

Bausch & Lomb Sport Glass

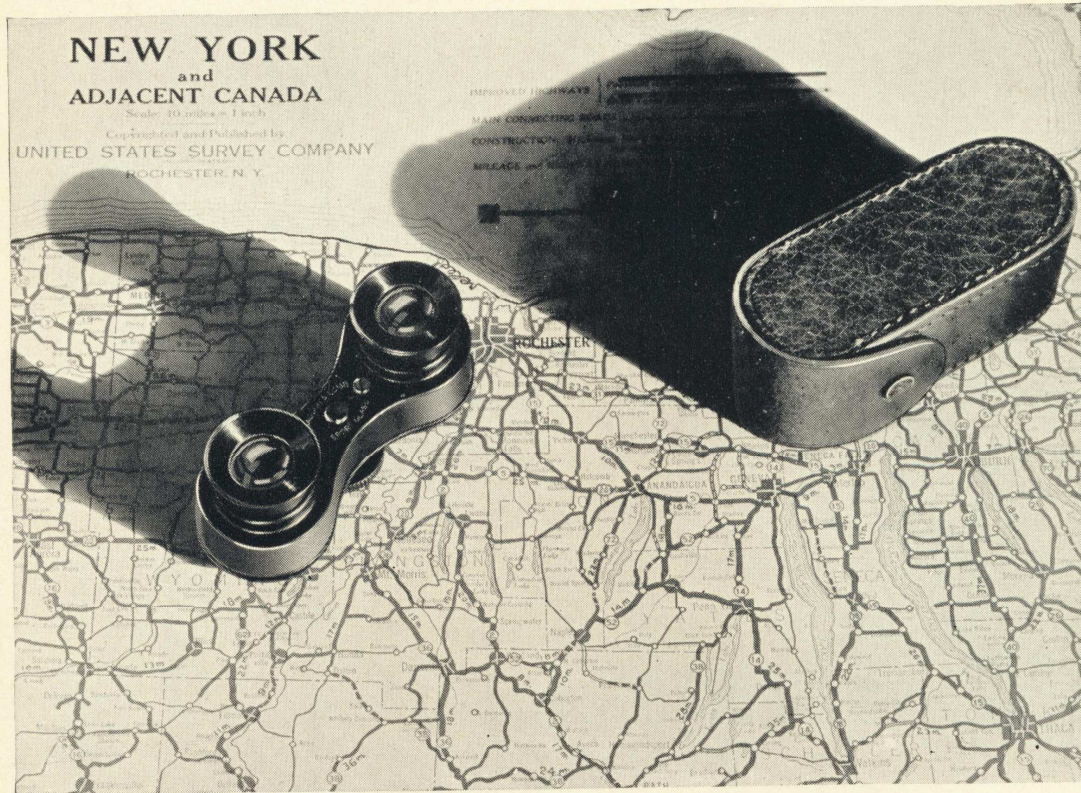
Gold Model—Silk Bag

WOMEN have been quick to appreciate the value and charm of these models, for the Sport Glass brings them to the center of things. The balcony is on a par with the orchestra, sports can be followed from a

distance, and travel becomes a more vivid experience with a Sport Glass. The beautiful gold model is available in either the moire silk bag shown above, or an attractive doe skin vanity case.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jaigc</i>	No. 910-A	B & L Gold Sport Glass, Silk Bag	\$20.00
<i>Jaibd</i>	No. 910-B	Gold Model, Doeskin Vanity Case	\$25.00

Stereo-Prism BINOCULARS



MB

Bausch & Lomb Sport Glass

Pigskin Model—Pigskin Case

THE Sport Glass is especially adapted for action—for sport, travel and aviation. That play in the far corner of the field comes near the stands; the distant view, hard to see while traveling, becomes clear and bright, for moving objects are fol-

lowed more easily in the large field of the Sport Glass.

Ask to see the pigskin model, the attractive glass you have seen at the intercollegiate games. It is supplied with a pigskin case as shown or with a soft suede bag for feminine use.

CODE WORD	CAT. NO.	DESCRIPTION	PRICE
<i>Jaidz</i>	No. 902-A	B & L Pigskin Sport Glass, Pigskin Case	\$18.00
<i>Jaijb</i>	No. 902-B	Pigskin Model, Suede Bag	\$18.00

BAUSCH & LOMB



Bausch & Lomb Telescopes

for Added Enjoyment of Life

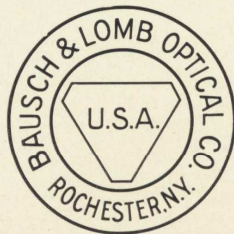
YOUR summer home is not complete without a telescope. The desire for instruments that will bring into close view distant sporting events and scenes, as well as the increasing interest in astronomy, renders the telescope an important item in the appreciation and enjoyment of life.

The Bausch & Lomb Optical Com-

pany manufactures a complete line of telescopes for terrestrial and astronomical use. All observation telescopes are equipped with prism erecting systems, which cause the object to appear in proper position instead of inverted.

Bausch & Lomb Telescope prices range from \$235.00 up.

*Many products are manufactured by the Bausch & Lomb Optical Company
and may be grouped under the following general headings:*



PERISCOPES
TELESCOPES
MAGNIFIERS
BINOCULARS
MICROTOMES
MICROSCOPES
CENTRIFUGES
SCOPOMETERS
PHOTOMETERS
OPTICAL GLASS
COLORIMETERS
SPECTROSCOPES
RANGE FINDERS
SACCHARIMETERS
READING GLASSES
REFRACTOMETERS
REDUCING GLASSES
PROJECTION LENSES
OPHTHALMIC LENSES
OPTICAL MACHINERY
SEARCHLIGHT REFLECTORS
OPHTHALMIC INSTRUMENTS
METALLURGICAL EQUIPMENT
SPECTROPHOTOMETRIC OUTFITS
PHOTOMICROGRAPHIC APPARATUS
GUN SIGHTS FOR ARMY AND NAVY
SPECTACLE AND EYEGLOSS FRAMES
INDUSTRIAL OPTICAL INSTRUMENTS
PHOTOGRAPHIC LENSES AND SHUTTERS
PROJECTION APPARATUS (BALOPTICONS AND ACCESSORIES)





*Bausch & Lomb Binoculars
can be purchased at principal
Sporting Goods and
Optical Stores*





A Popular Model— The Sport Glass

THE popular approval of the Sport Glass, resulting in a large volume of sales and more economical production, has made it possible to offer the Sport Glass at the following reduced prices:

Cat. No.	Old Price	New Price
900-A B & L Black Sport Glass, Calfskin, in case.....	\$16.50	\$13.50
902-A B & L Pigskin Sport Glass Pigskin Case.....	18.00	15.50
902-B B & L Pigskin Sport Glass, Suede Bag.....	18.00	15.50
910-A B & L Gold Sport Glass, Silk Bag.....	20.00	19.00
910-B B & L Gold Sport Glass, Doeskin Vanity Case.....	25.00	21.00



Take a
COMPANION
with you



A New 4 Power Field Glass—a fit

“COMPANION”

to have with you at all times



IT will guide you to new sights—lead you to new experiences—enable you to see events that are not revealed to the naked eye.

With it you see the inside of the outside world. You are an invisible spectator peering into the intimate lives of birds and animals who are unaware of being observed. You are always at the center of activity of your favorite sport.

The “Companion” is light and compact—can be carried conveniently in your coat pocket—small enough to be tucked out of the way in your car, boat or plane.



Its four times magnification is ideal for a general purpose glass.

It eliminates $\frac{3}{4}$ of the distance of objects seen through it—makes them appear 4 times as large. You can distinguish objects four

times as far away—see four times as much as you can see with the naked eye.

It fits the hand perfectly and holds steady. Only one hand is required to hold and focus it.



Large objective lenses furnish high light transmission—hence you are able to see objects well, even in the dusk or in misty weather.

New and original design; attractive black enamel and grained vulcanized rubber finish found only on the finest Binoculars; ample field of view; weighs only $10\frac{1}{2}$ ounces and is $3\frac{1}{4}$ inches long. Complete with an attractive durable leather case and shoulder straps. You will be proud of the “Companion” in any company. Examine it at your optical or sporting goods store. A revelation awaits you.

Price, complete with case and straps..... **\$17.50**

BAUSCH & LOMB OPTICAL CO., Rochester, N. Y.