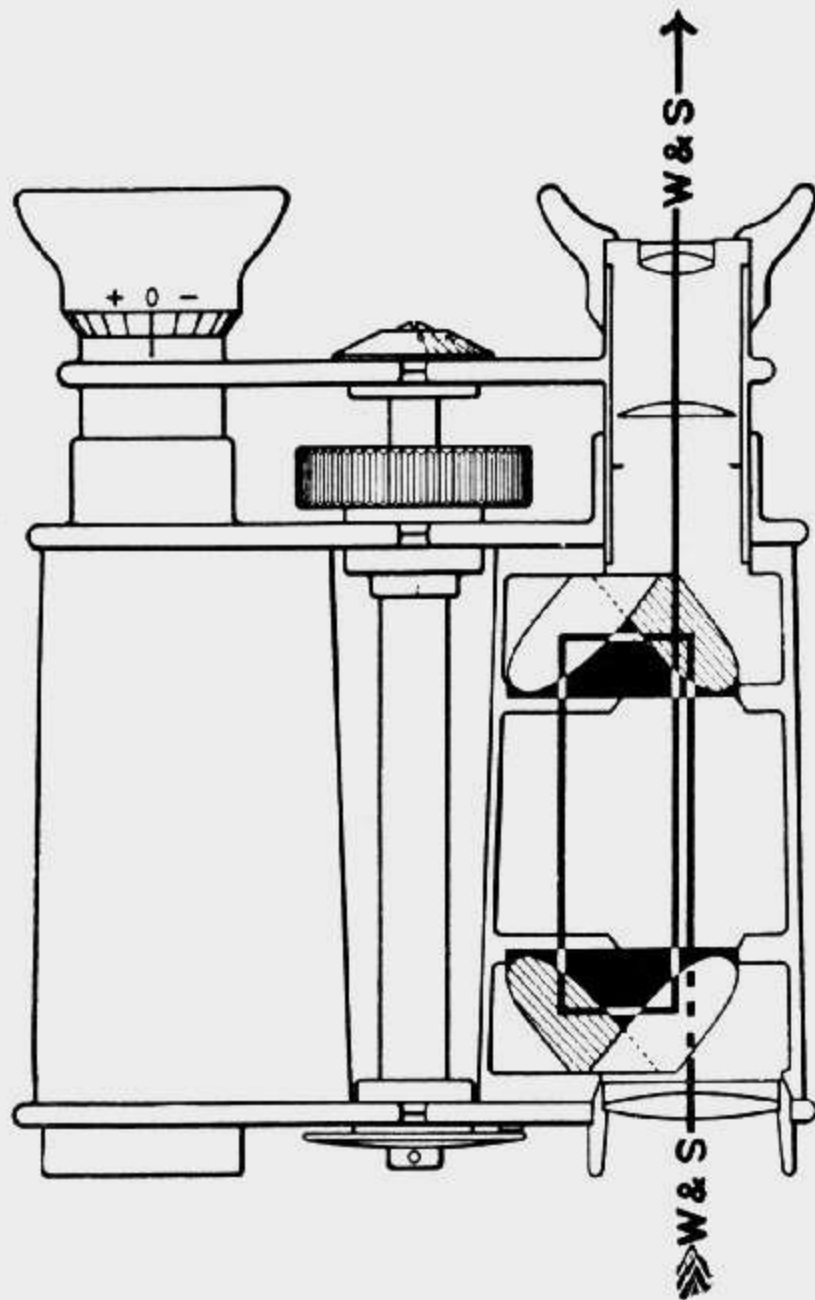


YEAR 1904

THE WARNER & SWASEY PRISM BINOCULAR

Powerful as a Telescope—Small as an Opera Glass



Sectional View Showing Path of Light Through the Telescope



THE WARNER & SWASEY PRISM BINOCULAR is characteristically American in its design and construction, embodying simplicity, compactness, lightness of weight, and elegance of form and finish, together with large field, clearness of definition, ease of manipulation, and freedom from strain to the eyes.

High Power—Large Field of View

The common opera glass magnifies about $2\frac{1}{2}$ or 3 diameters, which is sufficient for its purpose, but not for field work.

The old type of field glass (opera glass style) usually magnifies 4 or 5, and never more than 6 diameters. With these powers the fields of view are respectively but 4, 3 and $2\frac{1}{2}$ degrees diameter. Our lowest power of binocular magnifies 6 diameters and has a clear field of view of $6\frac{3}{4}$ degrees. They are made in three sizes, magnifying respectively 6, 8 and 10 diameters.

The surprisingly large field of view presented by the Warner & Swasey Prism Binocular naturally leads the student to make one of two inquiries: either, "How can the field be so large?" or, "Why is the field shown by the old styles of field glass so small?" Let us try to get a correct comparison of the two types of telescope:

The rays of light emerging from the eye-lens of the Galilean telescope (opera glass style) are divergent, and cover an area many times the size of the pupil of the eye. As all the rays falling outside the pupil of the eye are lost, but a small field of view can be seen, as when looking through a paper cone from the larger end.

The Warner & Swasey Prism Binocular is constructed on the opposite principle. The rays of light gathered by the objective emerge from the eye-piece in a convergent pencil of light, small enough to wholly enter the pupil of the eye, just as when we observe with the unaided eye in looking through the paper cone from the smaller end, without strain or weariness to the eye, and giving a larger field of view, three times the diameter (nine times the area) that is possible in the old style instrument of the same power.

Versus—THE OLD TYPE OF FIELD GLASS

Comparative Size



The Warner & Swasey
Prism Binocular
One-third actual size
Weight, 12 ounces



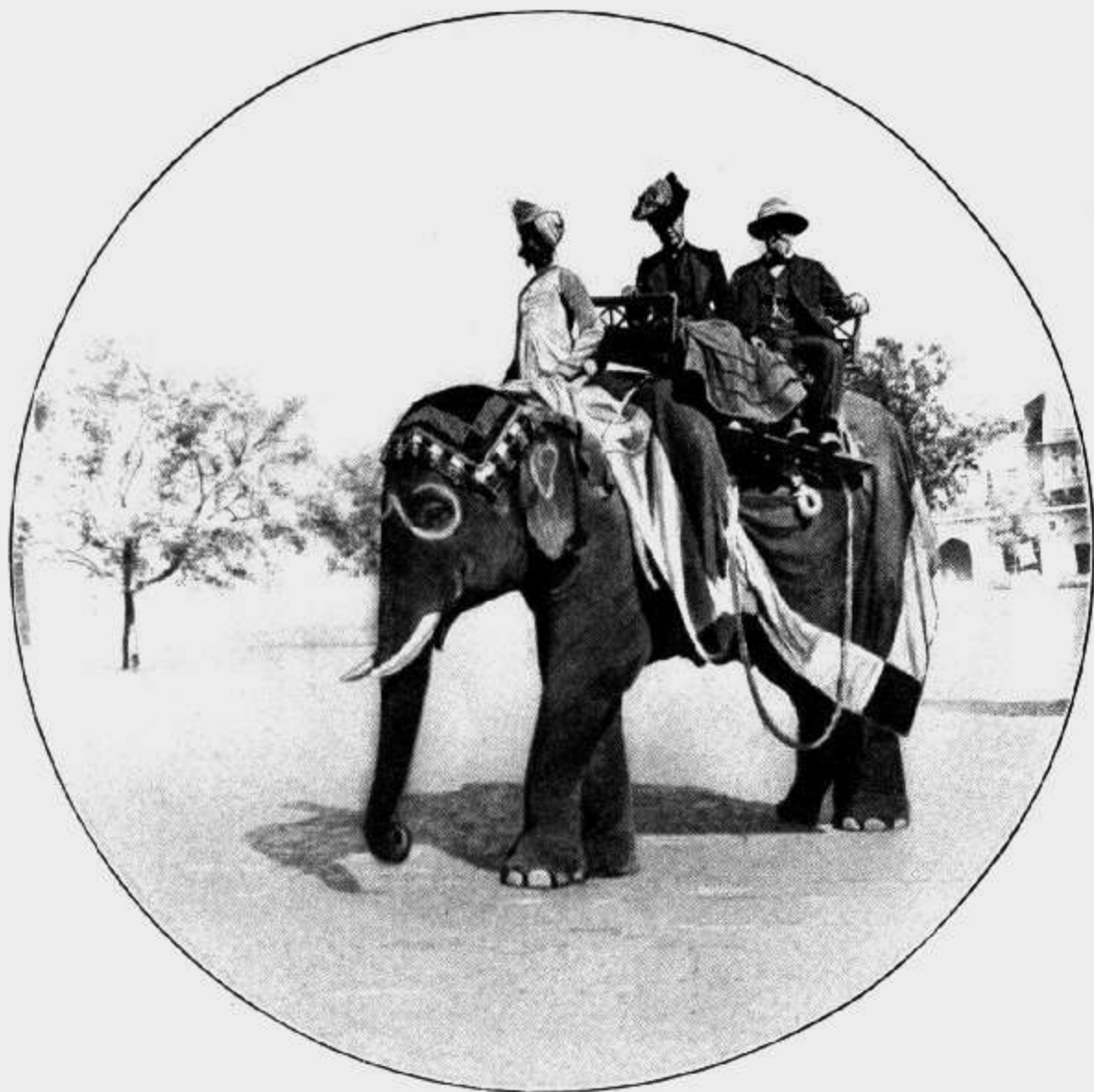
Old Type of
Field Glass
One-third actual size
Weight, 34 ounces

Our long experience in making "Optik Tubes" of all sizes, from the great Lick and Yerkes Telescopes to the Telescopic Gun Sights, Range Finders, Sextants, etc., used by the Army and Navy, especially qualifies us to develop, from both a scientific and practical standpoint, the highest type of Porro Prism Telescope.

A 32-page booklet, devoted exclusively to the illustration and description of the Warner & Swasey Prism Binocular, will be mailed to any address upon application.

THE WARNER & SWASEY COMPANY
Cleveland, Ohio

The Leading Opticians and Jewelers carry our glasses in stock



Field of View as Shown by the
Warner & Swasey Prism Binocular
Power 8 Field 5°



Field of View as Shown by the
Old Type of Field Glass
Power 5 Field 2½°