

A. J. SHELLMAN.  
OPTOMETER.

APPLICATION FILED FEB. 19, 1903.

NO MODEL.

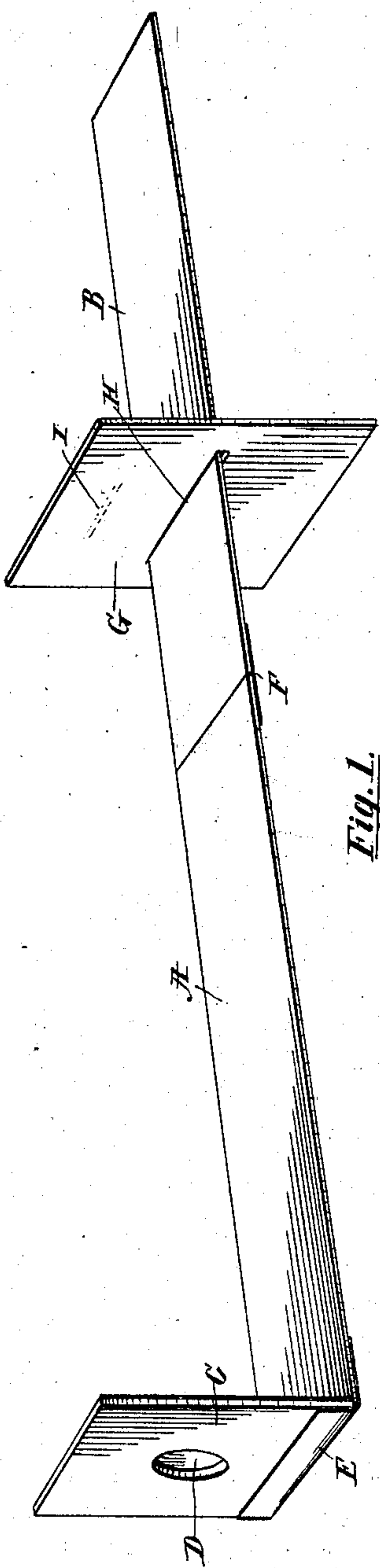


Fig. 1.

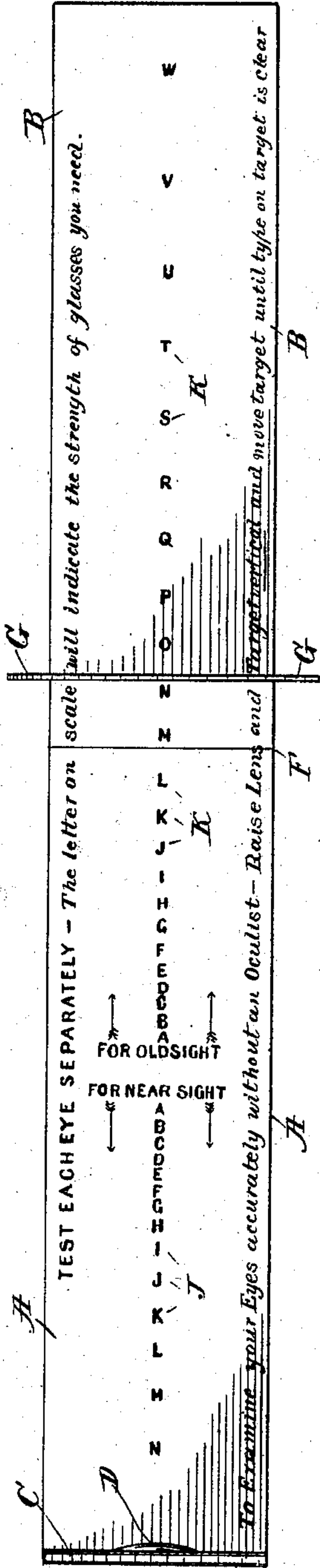


Fig. 2.

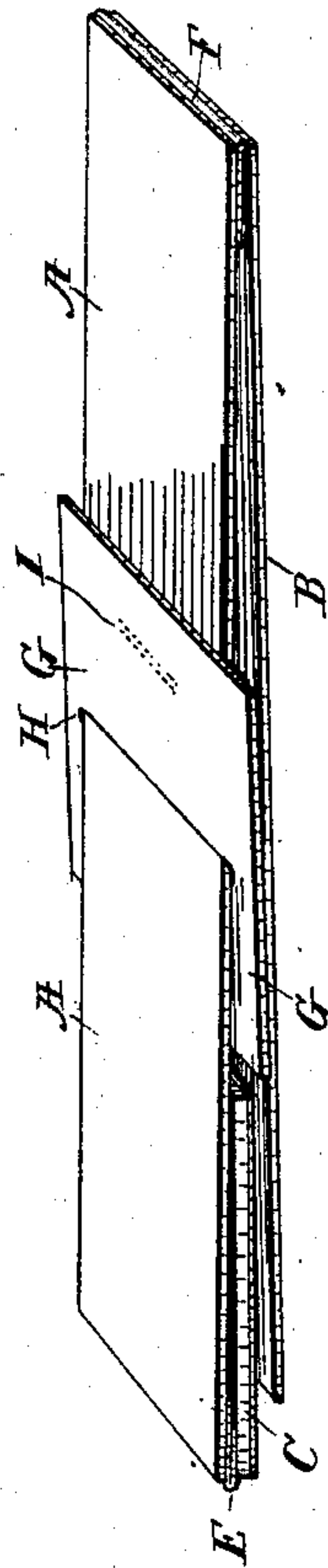


Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## OPTOMETER.

SPECIFICATION forming part of Letters Patent No. 746,394, dated December 8, 1903.

Application filed February 19, 1903. Serial No. 144,163. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAHAM J. SHELLMAN, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Optometers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in optometers; and its object is to provide a device that can be folded in compact form, that will be light and not easily broken and of small cost, whereby the same is adapted to transportation by mail and can be conveniently and profitably used to send out for taking mail orders for glasses or spectacles or readily and safely carried in the pocket, and to provide the device with certain new and useful features hereinafter more fully described, and particularly pointed out in the claims.

My device consists, essentially, of a strip of suitable light and durable material, preferably cardboard, and having one or more hinged joints and on which strip is printed a suitable scale and directions for use, a target slidable on this strip, and a suitable lens mounted in a suitable holder and hinged to one end of said strip, whereby the whole structure is made light and strong and can be folded in compact form, as will more fully appear by reference to the accompanying drawings, in which—

Figure 1 is a perspective of a device embodying my invention as adjusted for use; Fig. 2, a plan view of the same, showing the scales and directions for use; and Fig. 3, a perspective of the device when folded.

Like letters refer to like parts in all of the figures.

A and B represent two strips of suitable thin and strong material, preferably cardboard and of suitable dimensions, provided with a suitable hinge F, of flexible material, preferably of cloth, and pasted or glued thereto upon the under side thereof, and the strips abutting when in the same plane, whereby the strips are stopped in the same plane by a rule-joint and may be folded opposite upon each other.

C is a lens-holder consisting of a suitable square piece of thick cardboard or other suitable material and having a central opening and hinged to the end of the strip A by means of a suitable piece of flexible material E attached to the outside of the holder and to the strip A and so arranged that said holder can be folded against the under side of the strip A and when turned to a position at right angles to said strip, as in Figs. 1 and 2, it will be stopped from going farther by the edge of the holder engaging the strip A.

D represents a suitable lens secured to the holder C opposite or within the opening therein.

G is a suitable target, preferably consisting of a rectangular piece of cardboard and having a transverse slot through which the strips A and B are inserted and slide freely, said slot being wide enough so that the target will turn to a position parallel with the strips A and B, as in Fig. 3, by slightly springing the said target at each side of the slit H. The portion of the target below the strips affords a suitable handhold to adjust the target on the strips. On this target are the usual dots or printed matter, as at I.

On the strips A and B are printed any convenient directions for use and also a scale J, consisting, preferably, of suitable letters of the alphabet, extending from the position of the target when adjusted for eyes requiring no glasses toward the lens to indicate the glasses required for "near" sight, and a corresponding scale K, extending oppositely from said position to indicate the glasses required for "far" or "old" sight. I prefer to make these scales of different colors—as, for instance, the scale J in red and the scale K in black.

By folding this device as in Fig. 3 it is compact, light, and strong and the lens between the parts A and B, where it is protected from injury. The device is thus well adapted to be sent out by mail to prospective customers, who may thereby readily test their own eyes and order glasses adapted thereto, as indicated by the letters of the respective scales. The device when so folded is well adapted to be carried in the pocket. The device is also cheaply constructed, and thus also well adapted for use in taking mail-orders, as the



loss would not be material if it were not returned.

Having thus fully described my invention, what I claim, and desire to secure by Letters

5 Patent, is—

1. In an optometer, a thin flat strip of material, a target having an opening to receive the strip and slidable thereon, said target being of flexible material whereby it may be  
10 turned parallel with the strip and partially at each side of the same, and a lens-holder having a lens attached and hinged to one end of said strip, and limited to turn from at right angles to the strip to parallel with the same.

15 2. In an optometer, the combination of two flat strips hinged to each other, a lens-holder hinged to one end of one of said strips, and a target slidable on the strips, the said strip, holder and target being adapted to fold in  
20 substantially parallel planes.

3. In an optometer, the combination of two flat strips connected by a rule-joint at adjacent ends, a target slidable on the strips, a

lens-holder hinged to one end of one of the strips, the strips, target and lens-holder being adapted to fold in substantially parallel  
25 planes, and with the lens-holder between the ends of the strips.

4. In an optometer, the combination of two flat strips connected by a rule-joint at adjacent ends, a lens-holder connected to one end  
30 of one of said strips by a joint adapted to stop the holder at right angles to the strip and to turn the holder beneath the same, and a target slidable on said strips, and having an  
35 opening to receive the same, and also adapted to turn parallel with the strips, whereby the device may be folded in substantially parallel planes, and with the lens-holder and lower  
40 part of the target between the strips.

In testimony whereof I affix my signature in presence of two witnesses.

ABRAHAM J. SHELLMAN.

Witnesses:

LUTHER V. MOULTON,  
PALMER A. JONES.