

No. 766,969.

PATENTED AUG. 9, 1904.

H. C. PAUL.  
OPTOMETER.

APPLICATION FILED APR. 9, 1904.

NO MODEL.

Fig. 1.

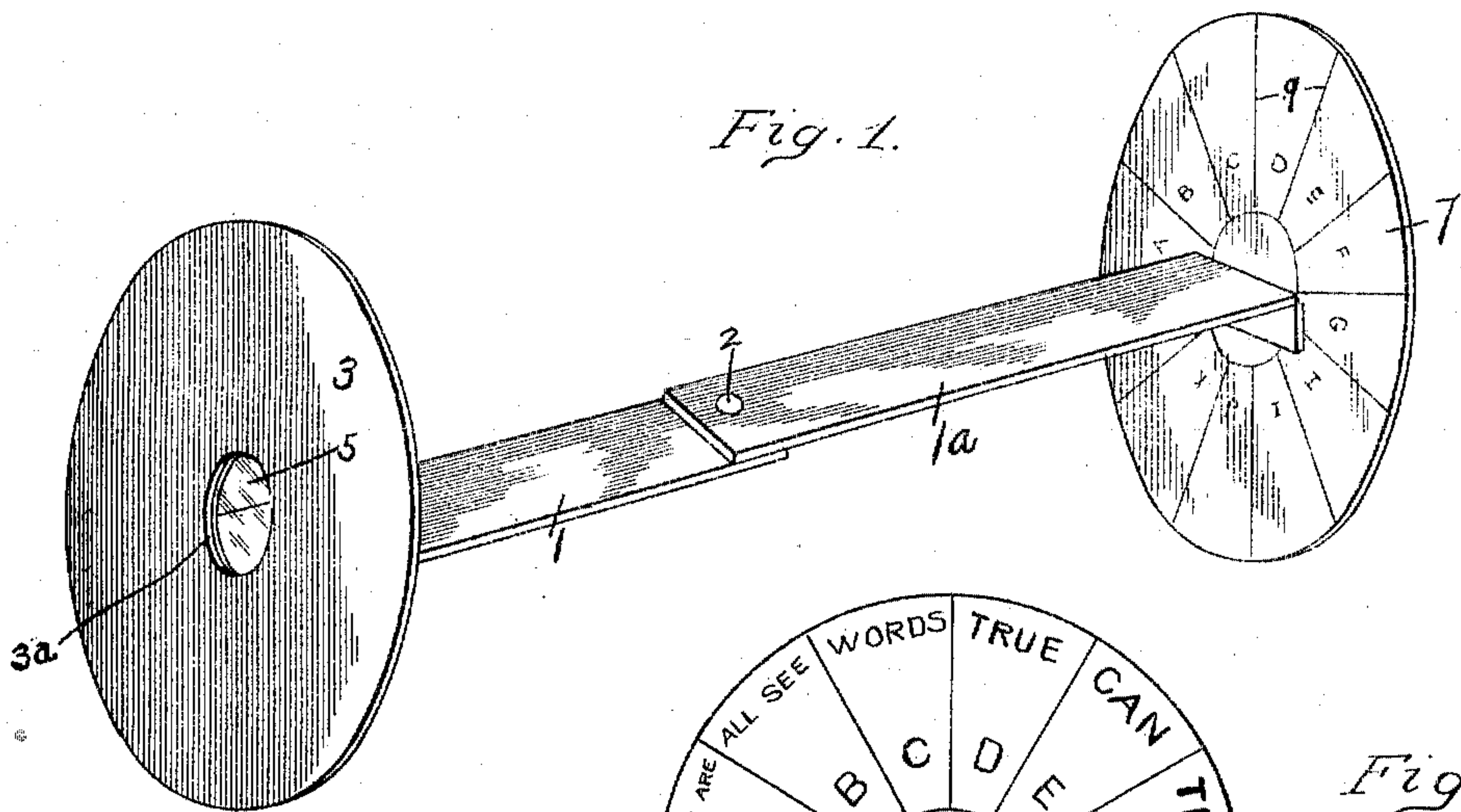


Fig. 6.

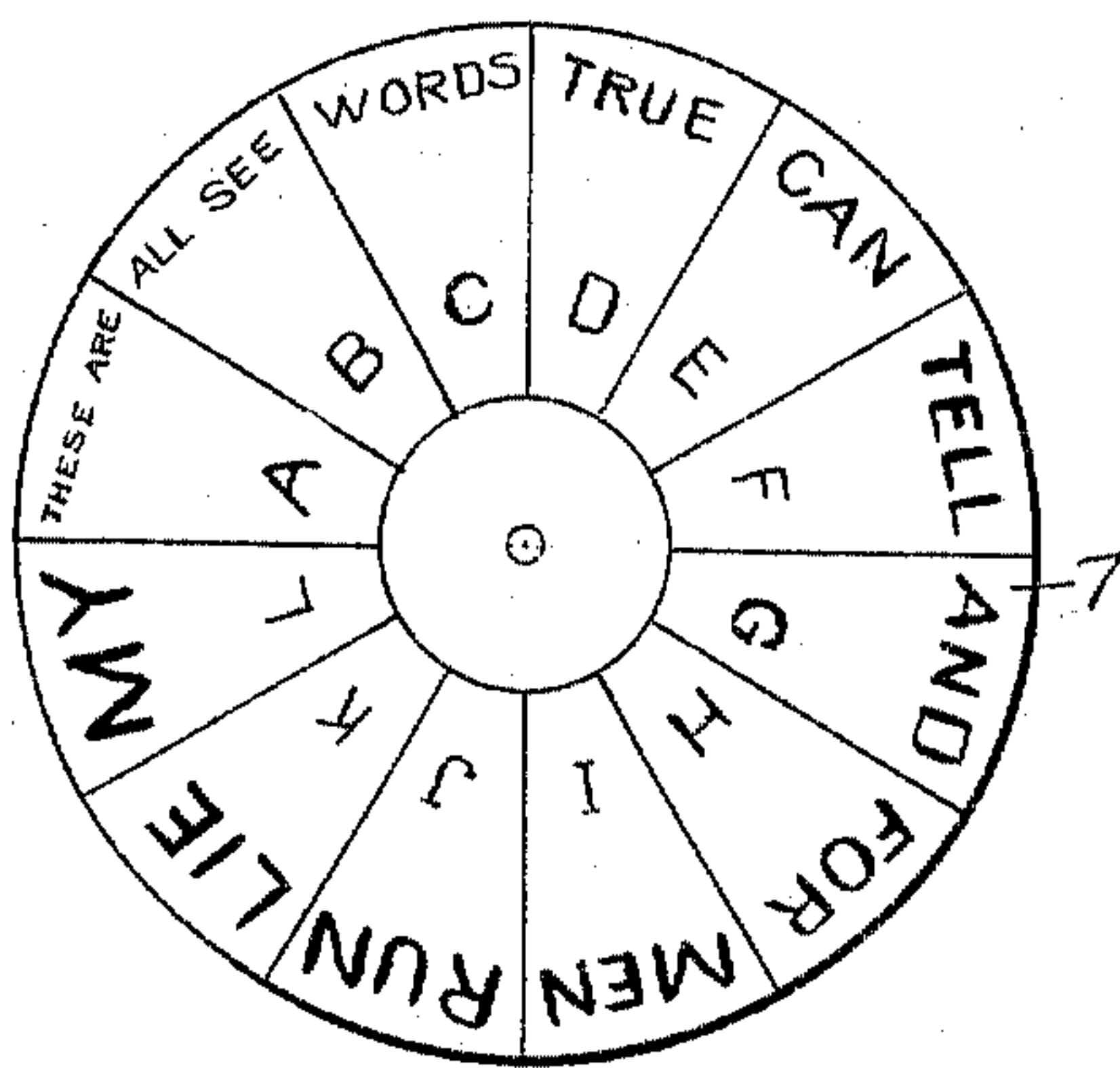


Fig. 2.

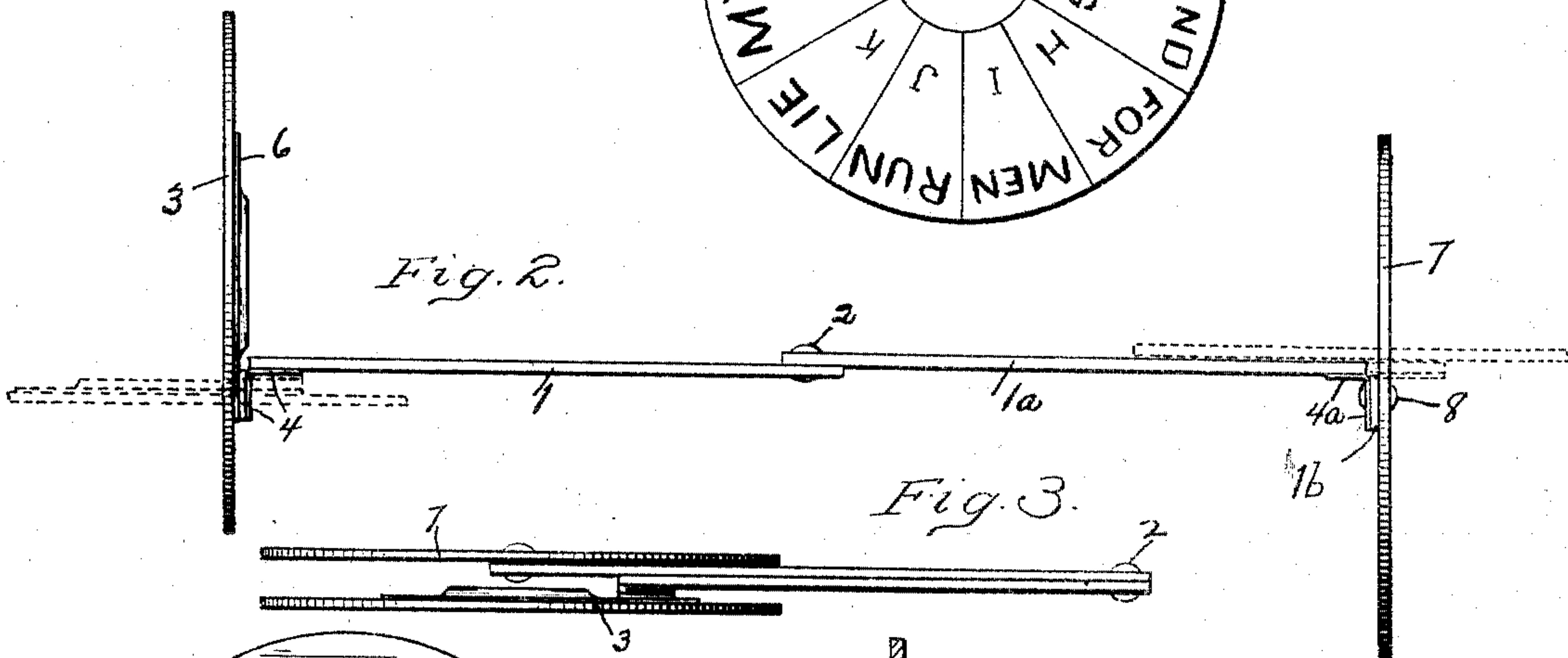


Fig. 3.

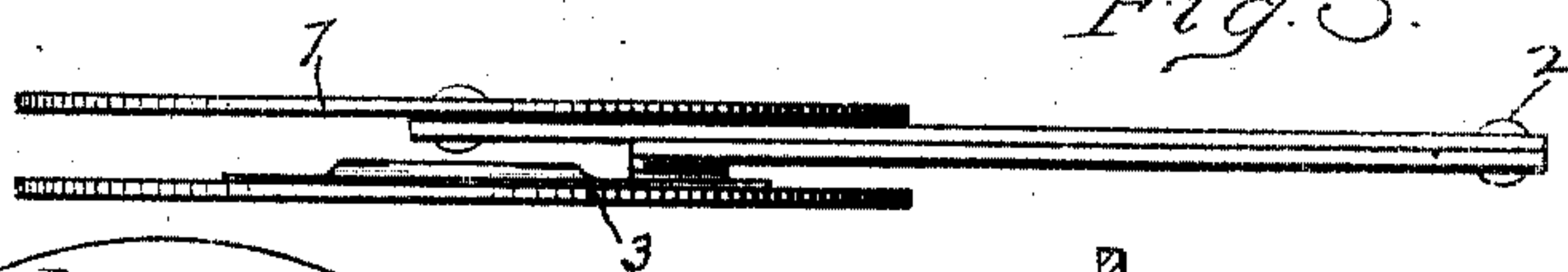


Fig. 4.

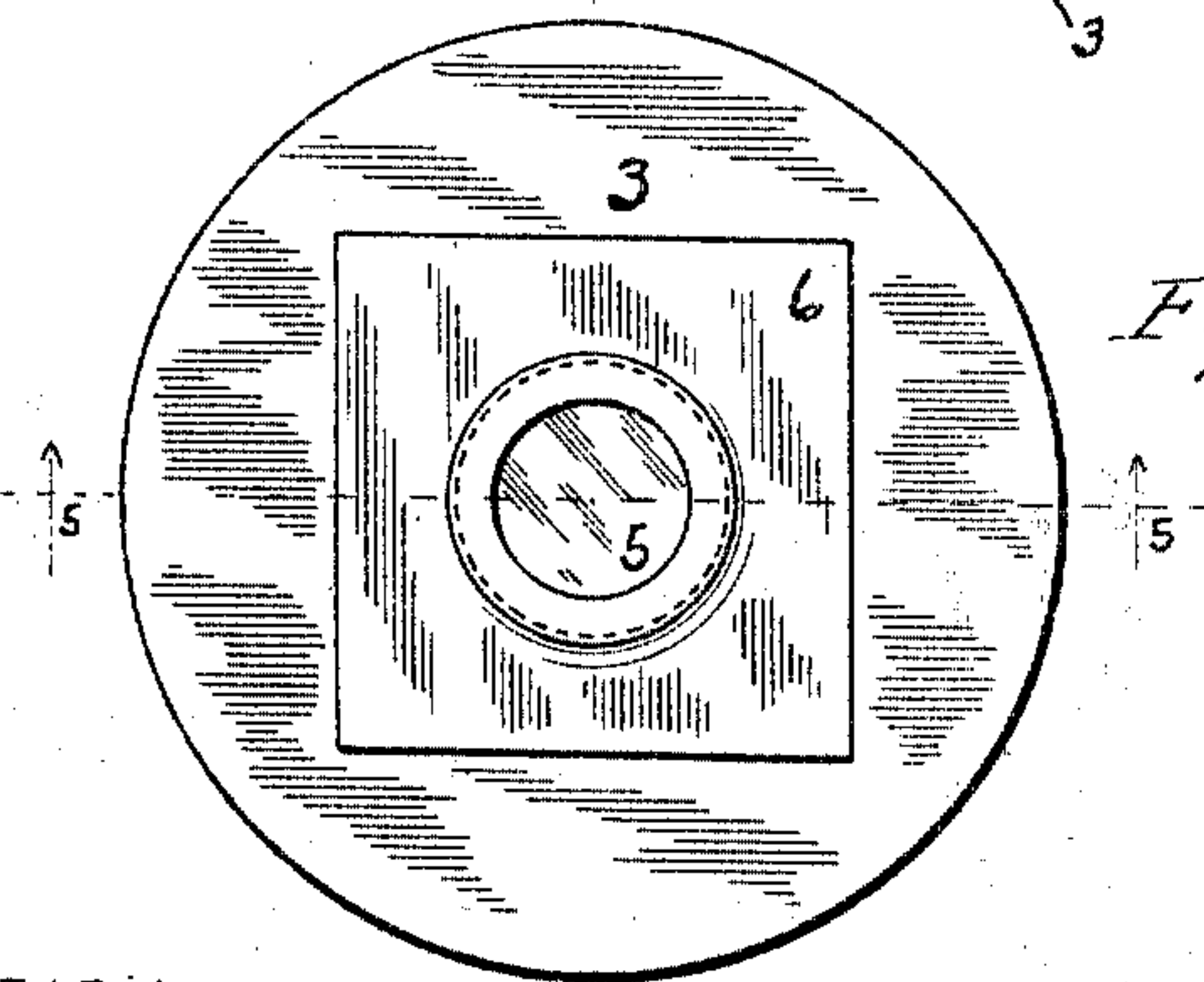
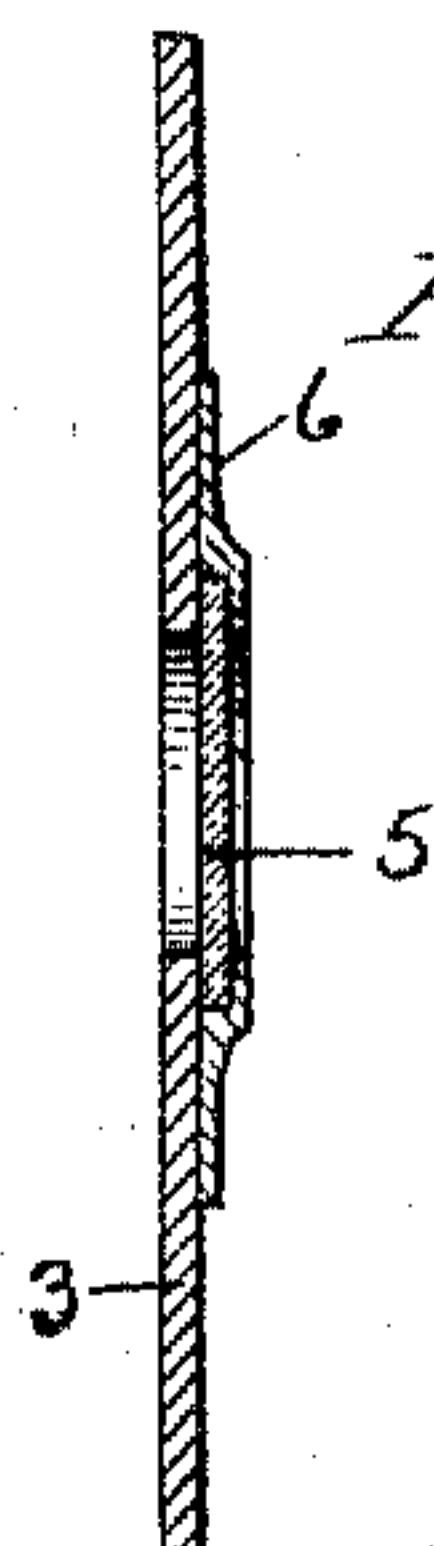


Fig. 5.



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# UNITED STATES PATENT OFFICE.

HARRY C. PAUL, OF CHICAGO, ILLINOIS.

## OPTOMETER.

SPECIFICATION forming part of Letters Patent No. 766,969, dated August 9, 1904.

Application filed April 9, 1904. Serial No. 202,348. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY C. PAUL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Optometers, of which the following is a specification.

My invention relates to improvements in optometers; and the object of my improvements is to provide a device of the character hereinafter more fully described that will be inexpensive to manufacture, of light weight, durable in use, and compact when folded, so that it may be sent through the mails at slight cost, and thereby enable parties to test their eyes and order spectacles by mail from the optician sending them the optometer.

In the drawings, Figure 1 is a perspective view of a device embodying my invention as adjusted for use; Fig. 2, a view in elevation of same; Fig. 3, an edge view of the device folded for transportation; Fig. 4, a plan view of a lens-holder employed in my invention; Fig. 5, a cross-sectional view of the lens-holder, taken on the line 5 5 of Fig. 4; and Fig. 6, a plan view of a revolving target employed in the device embodying my invention.

Referring to the drawings in detail, 1 and 1<sup>a</sup> represent two strips of suitable thin, light, and strong material, preferably cardboard, the end of one strip being pivoted by a pivot 2 to one end of the other strip, permitting the strips to be folded on the same plane with their outer ends adjacent, as indicated in Fig. 3.

The numeral 3 indicates a lens-holder consisting, preferably, of a circular piece of cardboard and having a greater diameter than twice the distance between the eyes and provided with a central opening and hinged to the outer or free end of the strip 1 by means of a piece of cloth 4 or other suitable flexible material secured with adhesive material to the inside of said lens-holder and to the under side of the end of the strip 1 in such manner that the holder may be folded against the under side of and parallel with the strip 1, as indicated by the dotted lines in Fig. 2 of the drawings. On the inside of the lens-holder 3 opposite the opening 3<sup>a</sup> is a lens 5, secured to the holder by a piece of cloth 6, which has

a central opening registering with the opening in the holder and which has its peripheral edge extending beyond the periphery of the lens and adhered to the holder.

1<sup>b</sup> is a small piece of cardboard hinged to the outer end of strip 1<sup>a</sup> by means of a piece of cloth 4<sup>a</sup>, secured with adhesive material to the said piece of cardboard 1<sup>b</sup> and to the under side of the outer end of strip 1<sup>a</sup>.

7 indicates a target consisting, preferably, of a circular piece of cardboard secured to the piece of cardboard 1<sup>b</sup> by means of a rivet 8, which passes through the piece of cardboard 1<sup>b</sup> and the piece of cloth 4<sup>a</sup> and through the center of the target 7 in such manner that the latter may revolve on the rivet or be folded against and lie parallel with the strip 1<sup>a</sup>, as indicated by the dotted lines in Fig. 2. The inside of the target is divided by lines 9 into twelve sections, designated by letters of the alphabet from "A" to "L," inclusive. In each of said sections are also printed one or more words near the peripheral edge of the target. The letters comprising said words gradually increase in size in each section from "A" to "L," as shown in Fig. 6.

To test the eyes with this device, the latter is held in the position shown in Fig. 1, with the lens near the eye. The target is then revolved, so that the words in the several sections on the target may be seen through the lens with one eye only at a time, so as to ascertain which section contains the smallest letters that can be distinctly seen in the manner stated, and from this information the optician will be able to select glasses suitable to the patient.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An optometer comprising two flat strips of cardboard, the end of one strip being hinged to an end of the other strip, a lens-holder hinged to the outer end of one of the strips and having a central opening therethrough, and adapted to be folded parallel with the strip, a lens secured to one side of the disk opposite the opening in the latter, a circular target riveted to the outer end of the other strip and adapted to revolve on said rivet or



to fold parallel with the strip, the side of the target next to the strip being divided by lines into several sections each designated by an alphabetical character and containing one or more words, the letters in said words being of a different size in each section.

2. In a device of the character described, two strips of suitable material, the end of one strip being hinged to one end of the other strip, a lens-holder hinged to the outer end of one of the strips and having a central opening and adapted to fold parallel with the strip, a lens secured to said holder opposite said opening, and a revolving target pivoted to the outer end of the other strip and adapted to fold parallel therewith.

3. In a device of the character stated, a strip of suitable material, a lens-holder hinged to one end of the strip and having an opening

therethrough, and a revolving target pivoted to the opposite end of the strip.

4. In a device of the character stated, a strip of suitable material, a piece of cardboard or the like hinged to one end of said strip and having an opening therethrough and adapted to fold parallel with the strip, and a revolving target secured to the opposite end of the strip, and adapted to fold parallel therewith, the inside of the target being divided into sections bounded by diverging lines, each section containing characters varying in size from the characters in the other sections.

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

HARRY C. PAUL.

Witnesses:

PH. D. PAUL,  
O. K. TREGO.