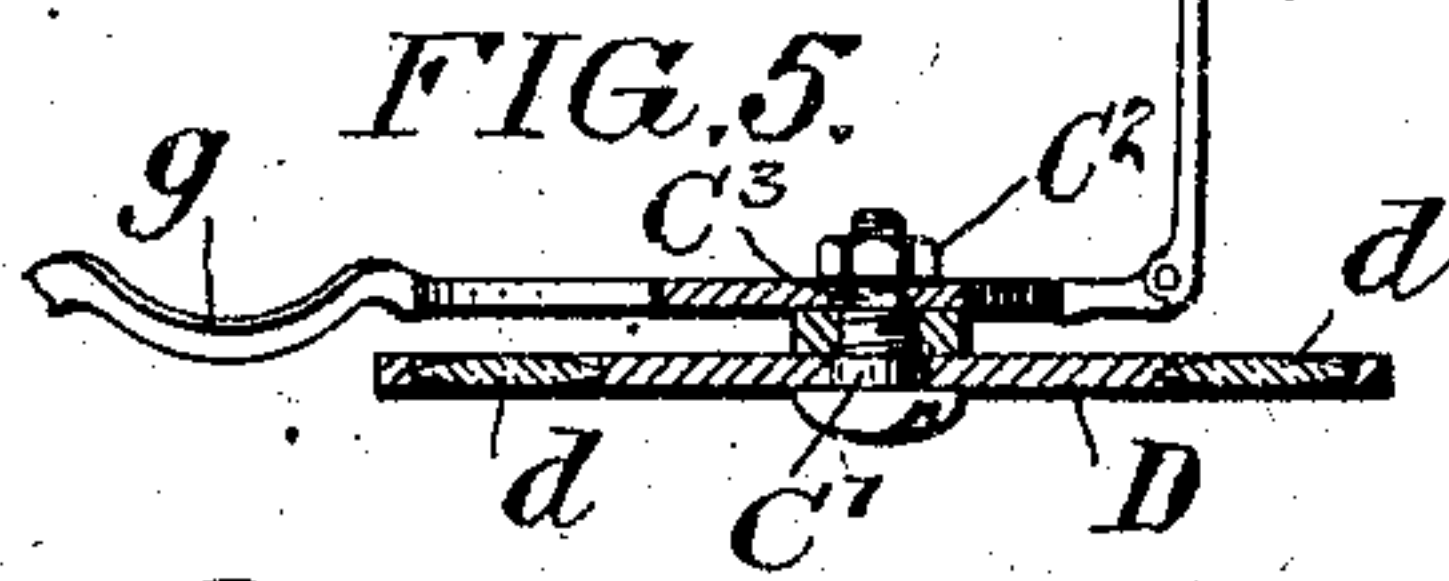
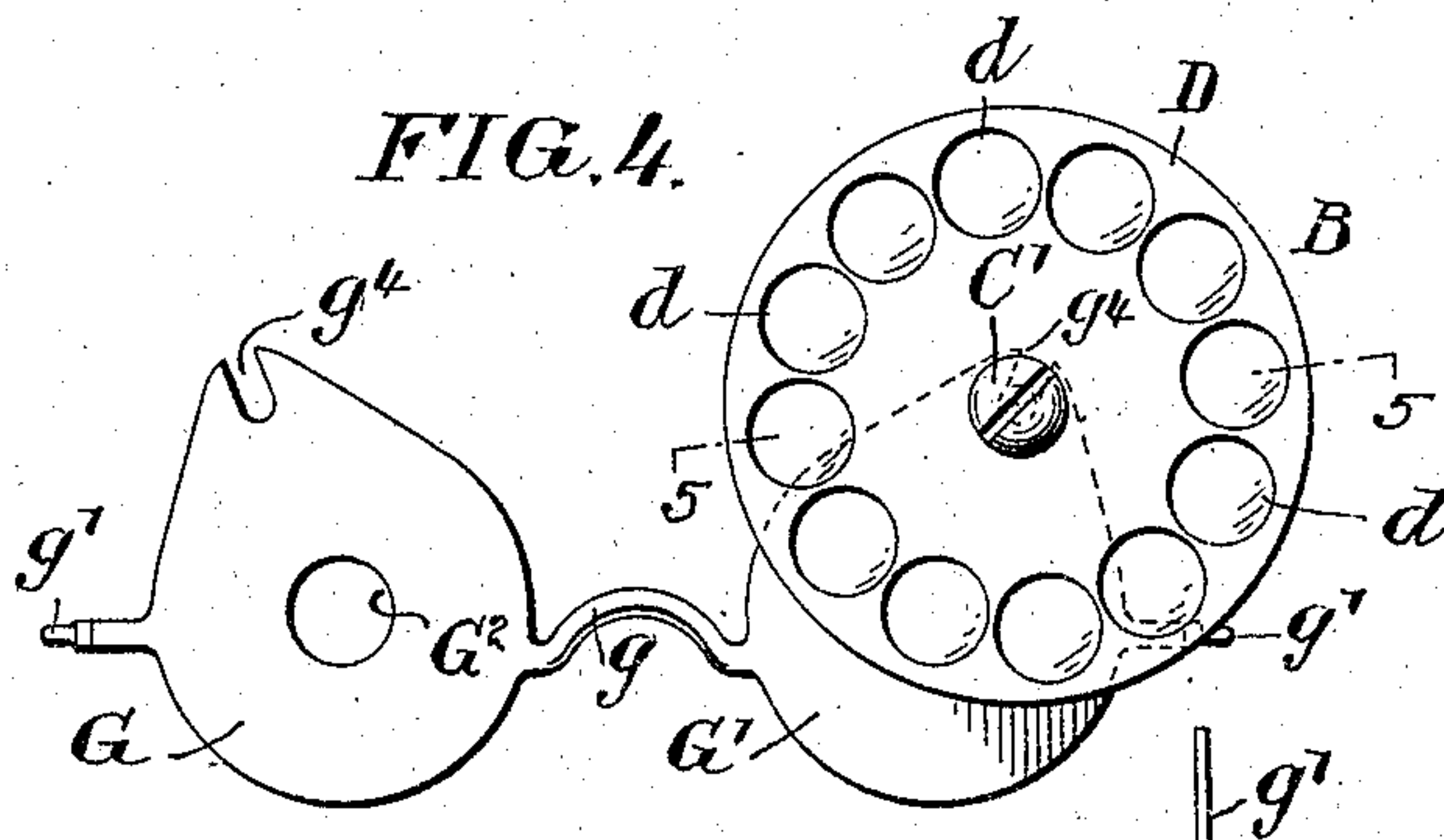
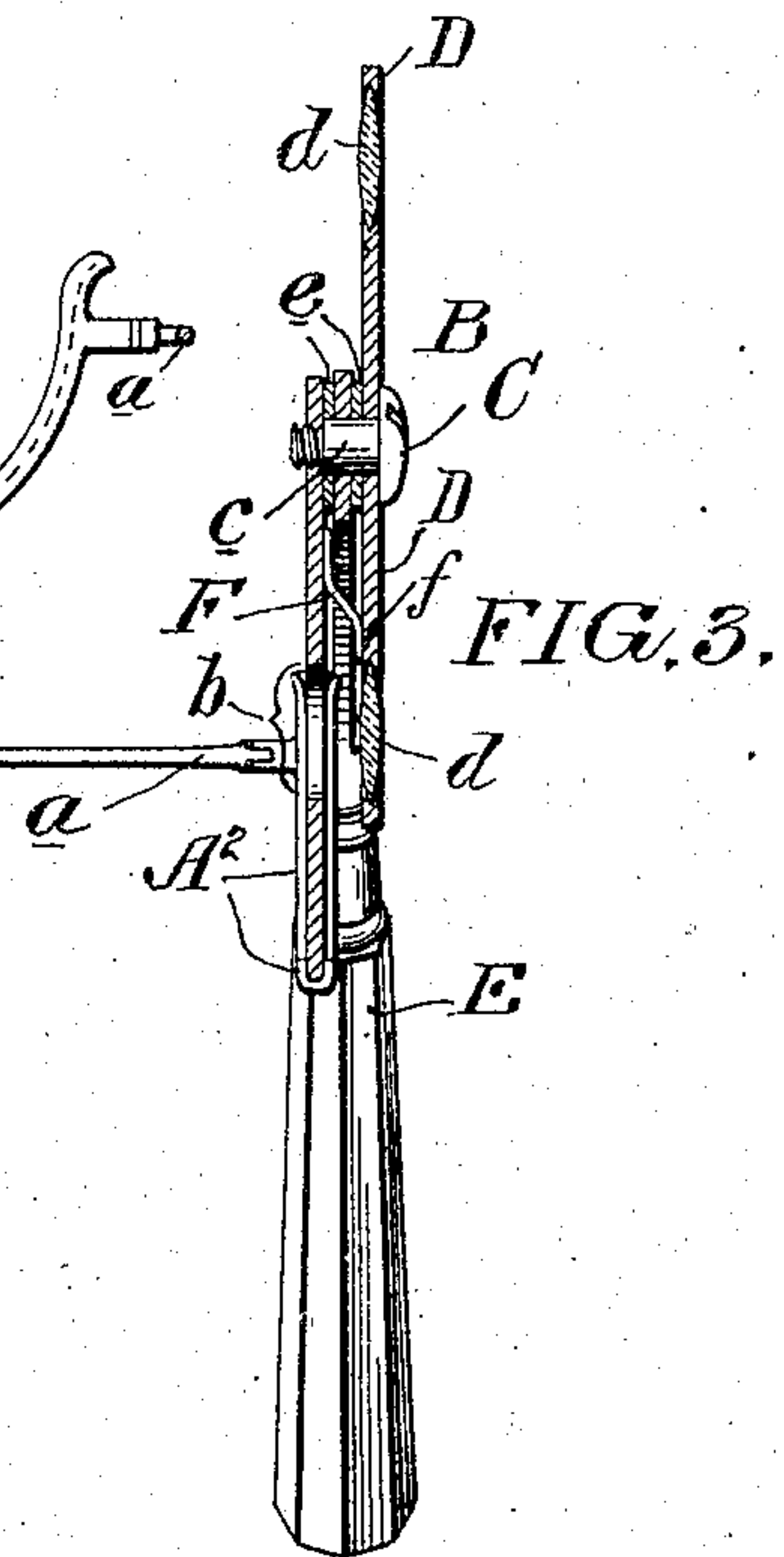
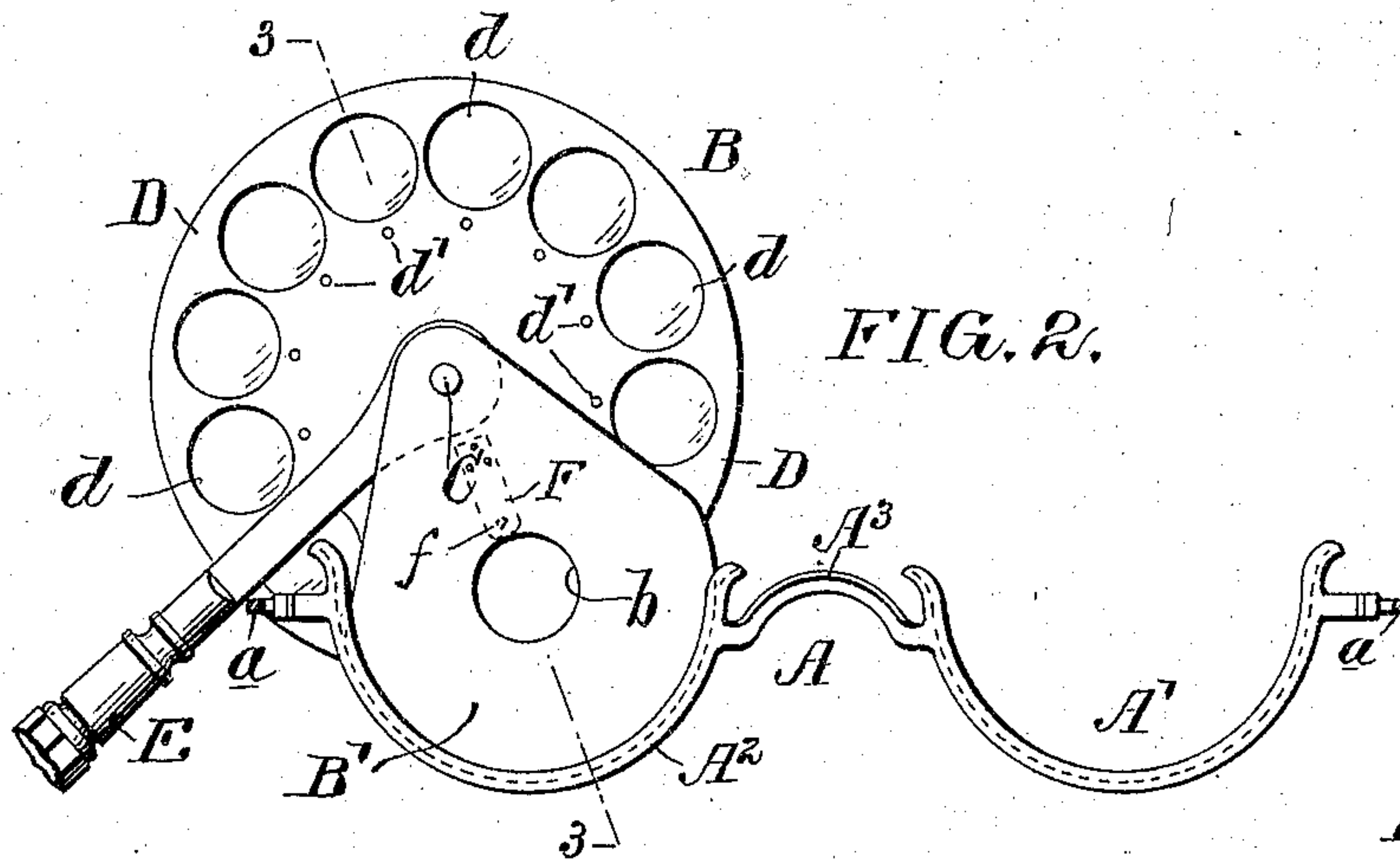
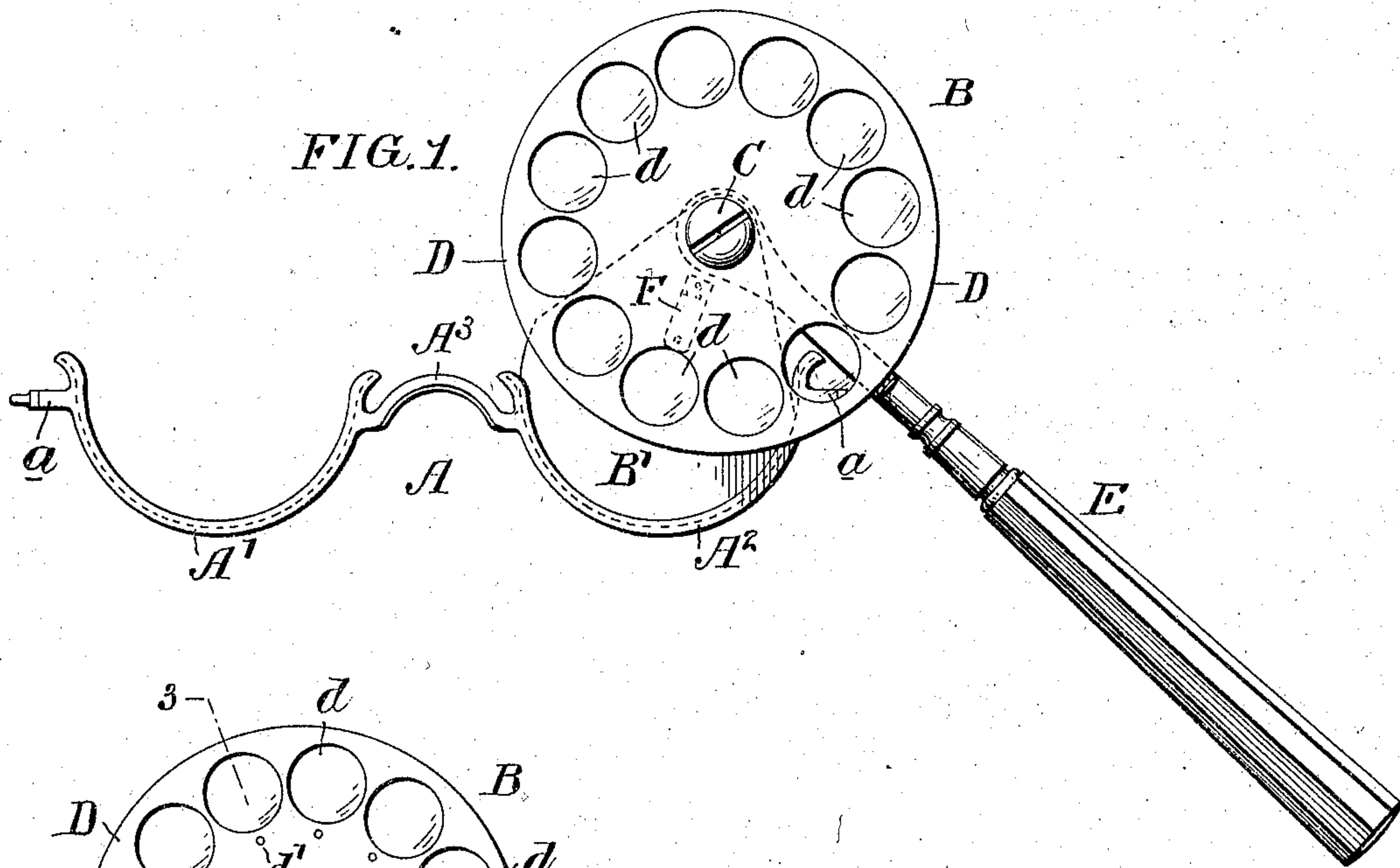


No. 791,808.

PATENTED JUNE 6, 1905.

J. C. McALLISTER.
TRIAL FRAME OPTOMETER.
APPLICATION FILED OCT. 22, 1903.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES COOK McALLISTER, OF MEDIA, PENNSYLVANIA.

TRIAL-FRAME OPTOMETER.

SPECIFICATION forming part of Letters Patent No. 791,808, dated June 6, 1905.

Application filed October 22, 1903. Serial No. 178,014.

To all whom it may concern:

Be it known that I, JAMES COOK McALLISTER, a citizen of the United States, residing at Media, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Trial-Frame Optometers, of which the following is a specification.

My invention relates to an improved trial-frame optometer in which a series of lenses of different foci are mounted upon a revoluble disk, so that each lens may be brought consecutively before the eye of the patient for the purpose of testing or examining the eyesight.

The object of my invention is to construct an optometer which may be used in connection with a trial-frame and readily placed in either rim of said trial-frame or shifted from one to the other of said rims.

A further object of my invention is to provide a diaphragm which will be held between the patient's eye and the lens-disk, so that but one lens may be seen through the aperture in said diaphragm.

A still further object is to provide a handle by which the instrument may be held in its proper place on the trial-frame and more readily changed from one to the other of the rims of said trial-frame.

A still further object of my invention is to construct a trial-frame which is particularly adapted to receive said optometer.

Referring to the drawings, Figure 1 represents a front view of the optometer resting in one of the rims of a trial-frame. Fig. 2 represents a rear view of the same. Fig. 3 is a sectional view as on line 3 3, Fig. 2. Fig. 4 is a front view of the optometer, showing a trial-frame particularly constructed to receive the optometer. Fig. 5 is a sectional view as on line 5 5, Fig. 4.

In the drawings, A represents the trial-frame having rims A' and A², connected by a nose-piece A³. Attached to either rim is a temple α . The rims A' and A² are U shape in cross-section, as shown in Fig. 3.

B represents the optometer, consisting of a diaphragm B', having an aperture b . (More clearly shown in Fig. 2.) The lower portion of said diaphragm is semicircular in form, so as to fit into and be held by the rims of the trial-frame. A pin C is screwed into the diaphragm B'. Upon the enlarged portion c of said pin is revolubly mounted a disk D, carrying a plurality of lenses d .

Upon the pin C is loosely mounted the handle E, washers e being placed at either side of said handle to keep the same from touching the disk D or diaphragm B'.

As shown in Fig. 2, the disk D is provided with depression d' , arranged adjacent to each lens. A spring F, having a projection f , is secured to the diaphragm B', and when any one lens is brought into alinement with the aperture b the projection f on the spring will enter the depression d' and tend to keep the disk from revolving.

The optometer may readily be removed from the rim A² by means of the handle E and placed in the rim A', the handle E being turned to the opposite side of the optometer before the same is placed in the opposite rim, so that said handle will not touch the patient's face. The diaphragm B' may be rotated in the rim sufficiently to keep the inner edge of the disk D away from patient's nose, as shown in Figs. 1 and 2.

Fig. 4 illustrates a trial-frame in which the diaphragms G and G' are made part of the trial-frame and the rims shown in Fig. 1 are dispensed with. A nose-piece g connects said diaphragms, and temples g' are also attached to said diaphragms. Each diaphragm is provided with an aperture G² and a slot g^4 , into which is inserted the pin C', as shown in Fig. 5. The pin C' is provided with a nut C². Sufficient space is left on the pin C' between the nut C² and the shoulder C³ to allow said pin to be dropped into the slot g^4 on the diaphragms, so that the pin carrying the lens-disk may readily be changed from one diaphragm to the other.

In the last-mentioned construction the dia-

phragms are held rigidly, and it is therefore not necessary to use a handle to steady the optometer, as it is where the diaphragm is simply dropped into the rims of the trial-frame, as shown in Figs. 1 and 2.

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

1. In an optometer, the combination of a disk having a plurality of lenses, a diaphragm having an aperture formed therein, and a trial-frame adapted to hold said diaphragm, substantially as described.

2. In an optometer, the combination of a disk having a plurality of lenses, a diaphragm having an aperture formed therein, a trial-frame having rims, a semicircular portion on said diaphragm adapted to fit into the rims of said trial-frame, substantially as described.

3. The combination of a disk having a plurality of lenses, a pin upon which said disk is revolubly mounted, a trial-frame having diaphragms, and means of attaching said pin to said diaphragm so that said disk will be interchangeable, substantially as described.

4. The combination of a disk having a plurality of lenses, a pin carrying the same, diaphragms forming a part of a trial-frame, said diaphragms being provided with slots to re-

ceive the pin carrying said disk, substantially as described.

5. In an optometer the combination of a disk having a plurality of lenses, a pin on which said disk is mounted, a diaphragm carrying said pin and a handle loosely mounted on said pin, substantially as described.

6. In an optometer the combination of a diaphragm having an aperture formed therein, a pin carried by said diaphragm, a disk mounted on said pin, a plurality of lenses carried by said disk, and a spring adapted to hold said disk in proper relation with the said diaphragm, substantially as described.

7. In an optometer, the combination of a diaphragm having an aperture formed therein, a pin carried by said diaphragm, a disk mounted on said pin, a plurality of lenses in said disk, a handle pivoted on said pin, washers on either side of said handle and a spring carried by said diaphragm adapted to bind against said disk, substantially as described.

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

JAMES COOK McALLISTER.

Witnesses:

E. D. PATTERSON,
F. H. WOODHEAD.