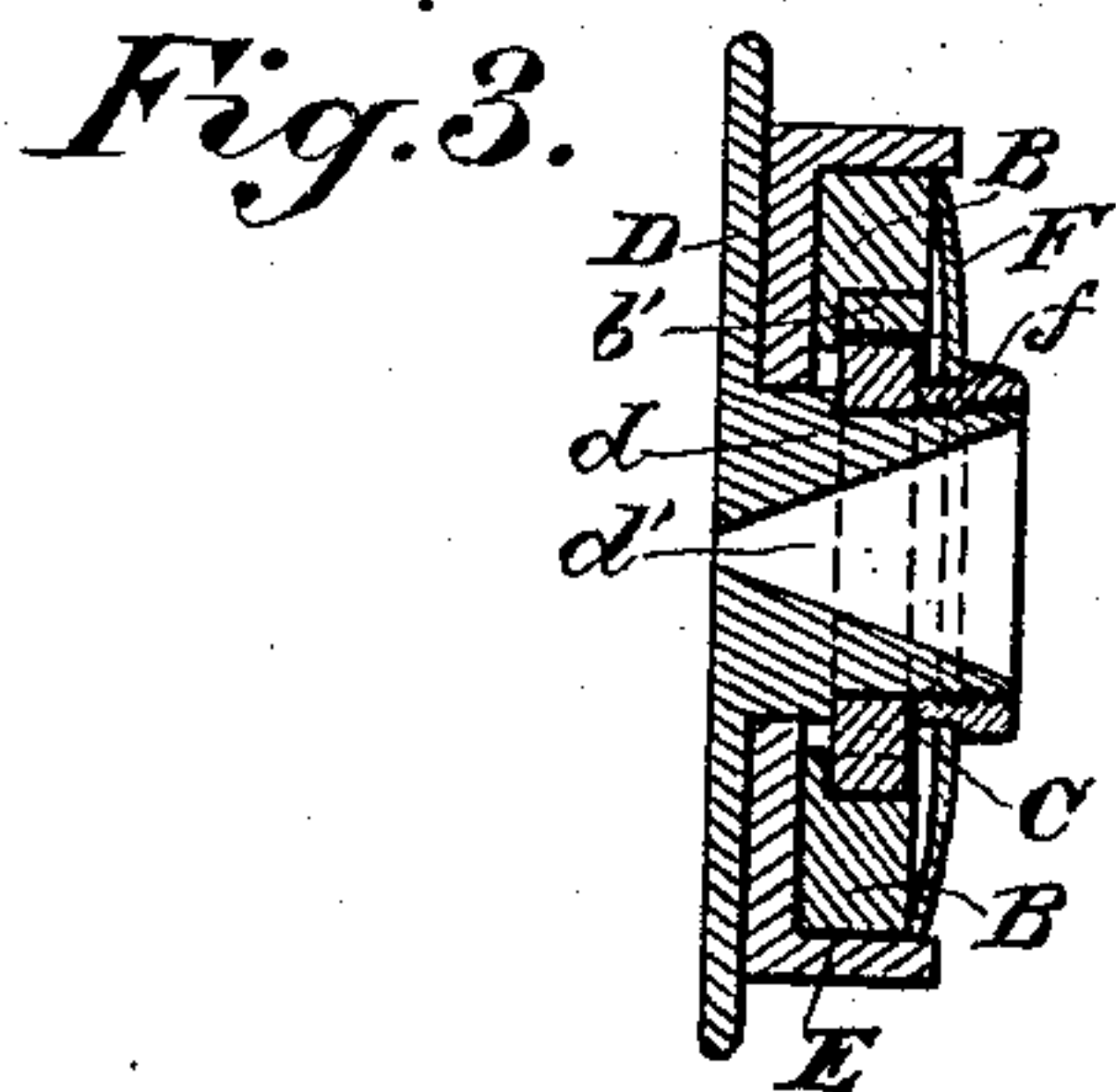
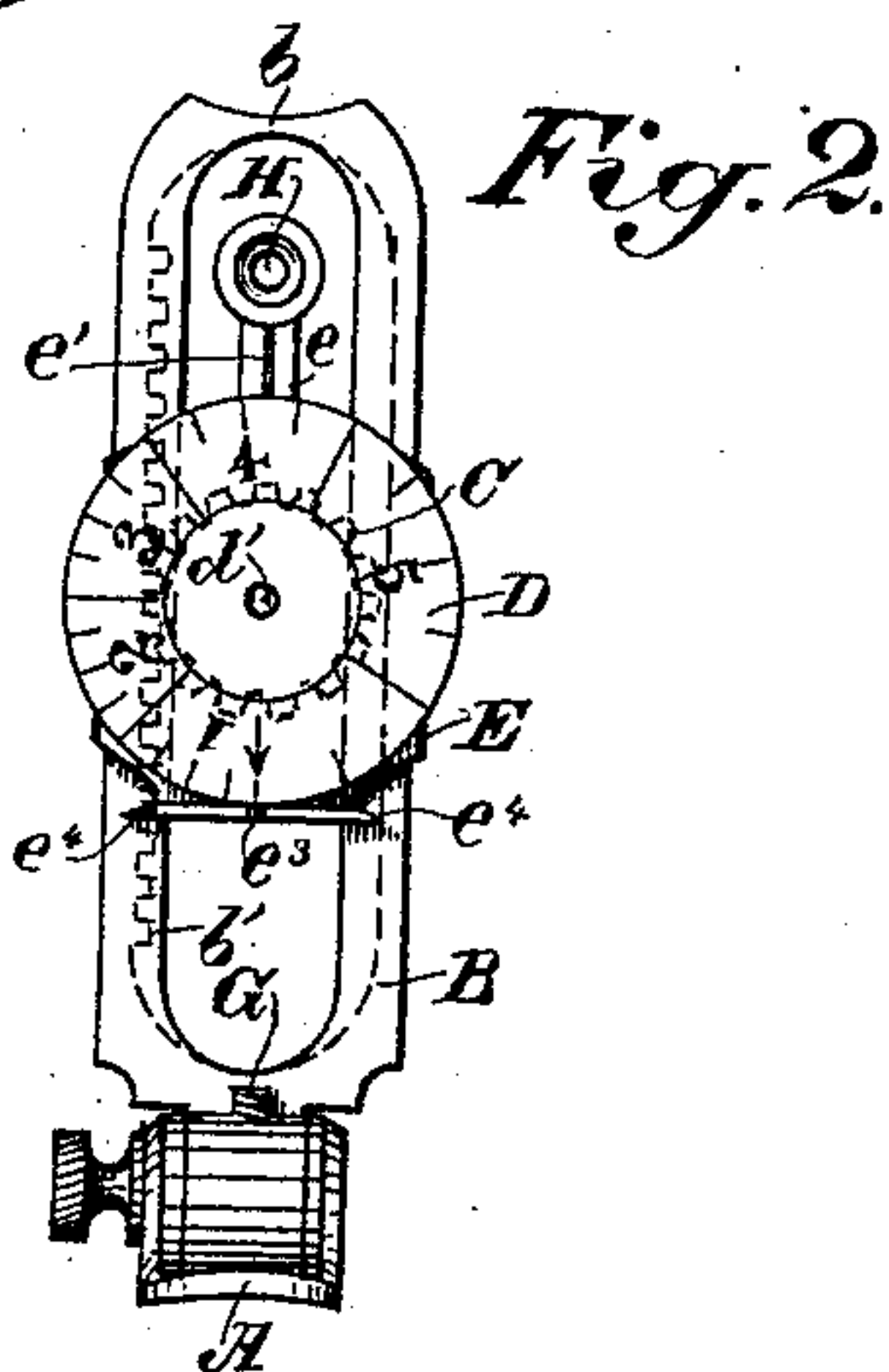
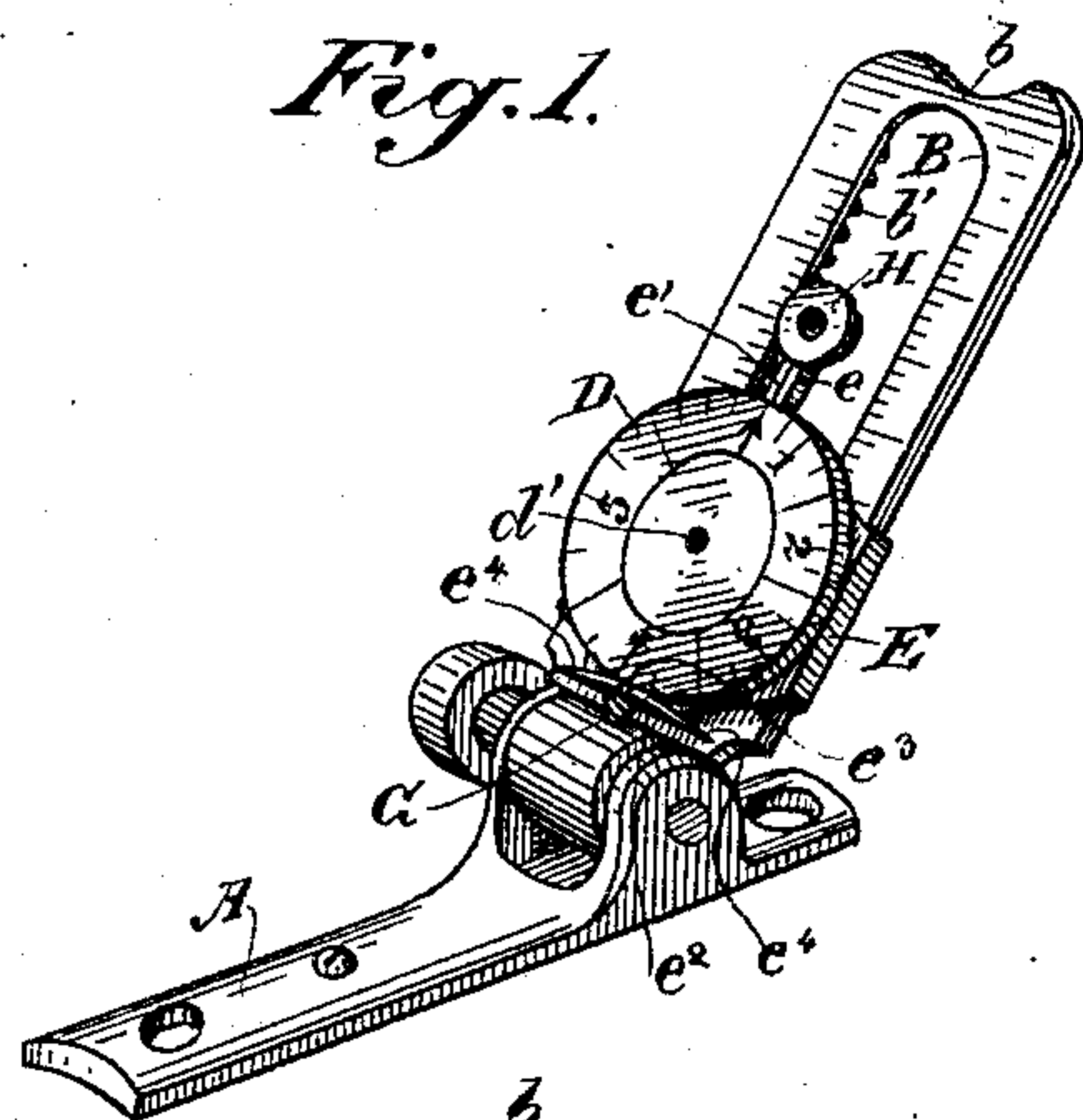


(No Model.)

F. W. DOBBEL.  
ADJUSTABLE SIGHT FOR FIREARMS.

No. 548,801.

Patented Oct. 29, 1895.



Witnesses,  
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# UNITED STATES PATENT OFFICE.

FREDERICK W. DOBBEL, OF SAN FRANCISCO, CALIFORNIA.

## ADJUSTABLE SIGHT FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 548,801, dated October 29, 1895.

Application filed October 3, 1894. Serial No. 524,823. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK W. DOBBEL, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Sights for Firearms; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of firearm-sights commonly known as "peep-sights," and in which the sighting-aperture is formed in the center of a comparatively large disk adapted to have a vertical adjustment upon the standard on which it is mounted.

My invention comprises a mechanism including a slide having a fixed indicator or mark and a disk therein having range-graduations on its face to be brought into alignment with the mark or indicator on the slide, said disk being rotatable to effect the range adjustment of the sight whether said sight be a peep-hole in the center or a sight-aperture independent of, though moved by, the disk, or both.

It also comprises the means hereinafter claimed by which the disk may be initially adjusted to bring its graduations to proper coincidence with the fixed lines or pointers whereby they are read; and it further consists of the constructions and combinations of parts hereinafter described, and pointed out in the claims.

The principal object of my invention is to provide for a rapid, smooth, and accurate adjustment of the sight to the several ranges and which may be conveniently operated by the thumb of the right hand when aiming the gun.

Other objects are to provide for proper adjustments to enable the graduations to register accurately and also to provide the combination of two sights, one of which may be used for target-shooting and the other for hunting, and both of which are readily adjustable.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view, the sight H being at point-blank range. Fig. 2 is a front view showing the peep-sight of the disk at point-blank range. Fig. 3 is an enlarged

section of the disk and its adjusting mechanism.

A is a base, which is adapted to be secured to the gun. In this is pivoted and controlled by a spring in the usual manner a frame B, which consists of two separated side bars united in a common base and also united at the top, as is shown at *b*. These side bars, at the back, are rabbeted or shouldered out, and in the rabbet of one of them is formed a rack *b'*, with which a pinion C engages, said pinion being seated between the bars, in the shoulders or rabbets thereof, and being mounted on the stem *d* of the disk D.

In cases in which the disk is to be used as a sight a peep-hole *d'* is made through its center and stem; but in other cases, as where another sight, such as I show by H, is used, and the disk may then be only the means for effecting the range adjustment of said sight; it need not have a peep-sight in it.

The disk and its pinion are carried by a slide E, consisting of a plate fitted to and moving upon the frame B, so that upon rotating the disk, the edge of which is milled to furnish a good finger-hold, the pinion is rotated, and, traveling on the rack *b'*, moves up or down, carrying with it the slide and the disk. This movement is a very smooth one and is, moreover, rapid, positive, and accurate, so that the objects of this construction are attained. These parts are held to the standard with sufficient friction to enable them to remain in any position to which they are adjusted by means of a plate F, bearing upon the back of the standard-frame B. This plate may have a slight spring, so that when pressed down by the tightening-nut *f*, which is screwed upon the back of the stem *d* of the disk D, it will bear sufficiently tight upon the frame to hold all the parts thereto with any degree of firmness required, whereby the disk may be raised or lowered with more or less ease, as the operator may desire, and the range adjustment of the sight or sights effected. The sight H, heretofore mentioned, is carried by a small neck *e* on top of slide E. It is now apparent that I may have a choice of either of two sights or of both in the same device. In one case I may have only the peep-sight in the disk D. In a second case I may have only



the sight H, the disk being then imperforate and serving only as a traveling thumb-nut to run the sight H up or down, and, finally, in the third case I may have both sights, the disk sight serving for target-shooting and the other for hunting.

In order to determine accurately the several range adjustments for either or both sights and to initially adjust them to the proper reading for the blank range, and thereby to render true the registering of all the ranges, I have the following construction and arrangement: The face of the disk is marked off by properly-spaced lines and with indicating-figures to read the various ranges. Thus the arrow may represent zero, which will be the point-blank range, the adjacent figure 1 will represent one hundred yards, the 2 two hundred yards, and so on to as many ranges as may be provided for, intervening lines representing intermediate ranges. Upon the neck  $e$  of the slide E is made a groove or mark  $e'$ , which may stand for any suitable pointer. With this any of the lines upon the disk are adapted to be brought into alignment. Now when the disk is run down to its lowermost limit it should present its point-blank range-line in alignment with the pointer groove or mark  $e'$ , and the sight H is then in a position for point-blank range. Now by turning the disk so as to bring any of its other lines into alignment with the pointer-mark  $e'$  the disk will be raised to elevate sight H, and thus present the several ranges, which may be thus accurately read; but in order to get these adjustments initially I have in the base of the standard B a small screw G, which acts as a stop and upon which the base or foot  $e^2$  of the slide E finds a rest when down to its lowermost limit. Now by setting this screw up or down slightly the disk will be stopped at the point required to bring its blank-range line into perfect alignment with the pointer-mark  $e'$  in the small neck  $e$  on top of the slide, and this adjustment being once effected the permanent accuracy of the sight is insured; but to set the parts in the very first instance or to return them to position if they should become very much out of adjustment all that is necessary is to loosen the nut  $f$  at the back and to then turn the disk D so that its stem will turn in the pinion, and for this purpose the pinion is not rigidly mounted, but is simply frictionally held upon the stem. The pinion may be held from turning while the stem is turned by running it up to the top or down to the bottom of the rack, or, if more trouble be taken, the nut  $f$  and plate F may be removed and the pinion held by the fingers or other instrument, or it may be entirely removed and placed back in proper position to effect the accurate adjustment of the disk. Now in order to determine and read the range adjustments of the disk when used as a peep-sight I have in the foot  $e^2$  a pointer-mark or groove  $e^3$ , with which the graduations on the disk are to be brought into alignment. Further, to provide for the

readings for both sights by means of the same disk I so locate sight H with relation to the disk that the distance between the two apertures is equal to a given distance upon the circumference of the pinion C. This distance may be either the whole circumference or any portion thereof. I have here shown it as equal to the semicircumference of the pinion, so that by turning the disk through a half-revolution one sight will then occupy the same position that the other sight previously occupied, and each can be read by the oppositely-located pointer-marks  $e'$  and  $e^3$ . When, therefore, the slide is full-down on screw G, the blank-range line of the disk is in line with the mark  $e'$ , and the hunting-sight H is then in blank range. By turning the disk up a half-revolution until the blank-range line comes in line with mark  $e^3$  its peep-sight will be where the hunting-sight was previously—to wit, at blank range.

The base or foot  $e^2$  of the slide is tapered off on each side into pointers  $e^4$ , which will play over graduations to be marked upon the faces of the side bars of the frame B, if such graduations be desired, instead of or in addition to those upon the disk.

The top bar  $b$  in the frame B is made thin, so that it will not interfere with the view through hunting-sight H, which plays both above and below it.

In order to make the device operative only with the thumb of the right hand, and thereby, in addition to the convenience of such manipulation, avoid any danger of accidental disarrangement by causes acting from the body side of the gun, I have formed the rack  $b'$  on the left side of the frame B. The disk can be easily turned from the right side to effect its travel, but cannot be turned from the left for the reason that on this side the force to turn it is acting directly against its direction of travel.

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

1. A sight for fire-arms consisting of a frame, a slide therein having a fixed indicator or mark, a rotatable disk on the slide having range graduations on its face adapted to be brought by the rotation of the disk into alignment with the indicator or mark on the slide whereby it may be read, a sight and a connection between the disk and frame, to effect by the rotation of the disk the range adjustment of the sight.

2. A sight for fire-arms consisting of a frame having a rack, a slide mounted in said frame, a disk upon the face of the slide and having a stem mounted and rotatable in said slide, a sight adjusted by the movement of the disk, a pinion frictionally mounted on the stem of the disk and engaging the rack of the frame whereby the rotation of the disk effects the range adjustment, and a nut upon the end of the stem for holding the parts to the frame.

3. A sight for fire-arms consisting of a frame



having a rack, a slide mounted upon said frame, a disk upon the face of the slide and having a stem mounted and rotatable in said slide, a sight adjusted by the movement of  
5 the disk, a pinion on the stem of the disk engaging the rack of the frame whereby the rotation of the disk effects its travel and the range adjustment of the sight, the frictional plate on the back of the frame and a nut  
10 screwed upon the stem of the disk and bearing on said plate whereby the parts are all held to the frame.

4. In a sight for fire-arms, the combination of a frame, a vertically movable disk fitted  
15 thereto, a sight adjusted by the movement of the disk, and a screw in the base of the frame

adapted to adjustably limit the downward movement of the disk.

5. In a sight for fire-arms, the combination of a frame having a rack, the rotatable gradu- 20  
ated disk having a stem, a sight adjusted by the movement of the disk, and a pinion engaging the rack and frictionally mounted upon the stem whereby the graduated disk  
25 may be initially adjusted.

In witness whereof I have hereunto set my hand.

FREDERICK W. DOBBEL.

Witnesses:

S. H. NOURSE,

WM. F. BOOTH.