

March 3, 1953

R. S. SMITH

2,629,933

GUN SIGHT

Filed Jan. 24, 1949

2 SHEETS—SHEET 1

Fig. 1.

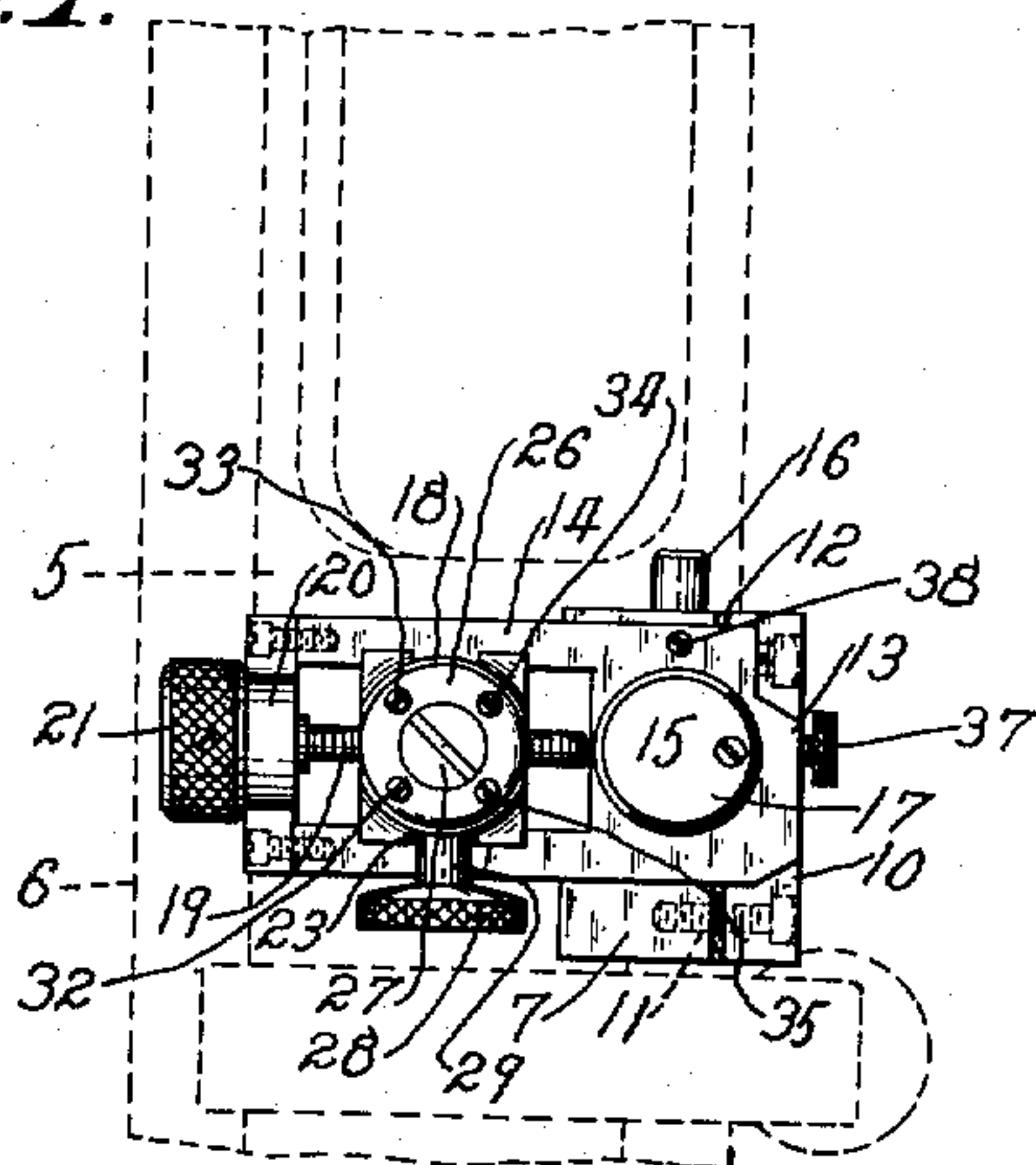


Fig. 2.

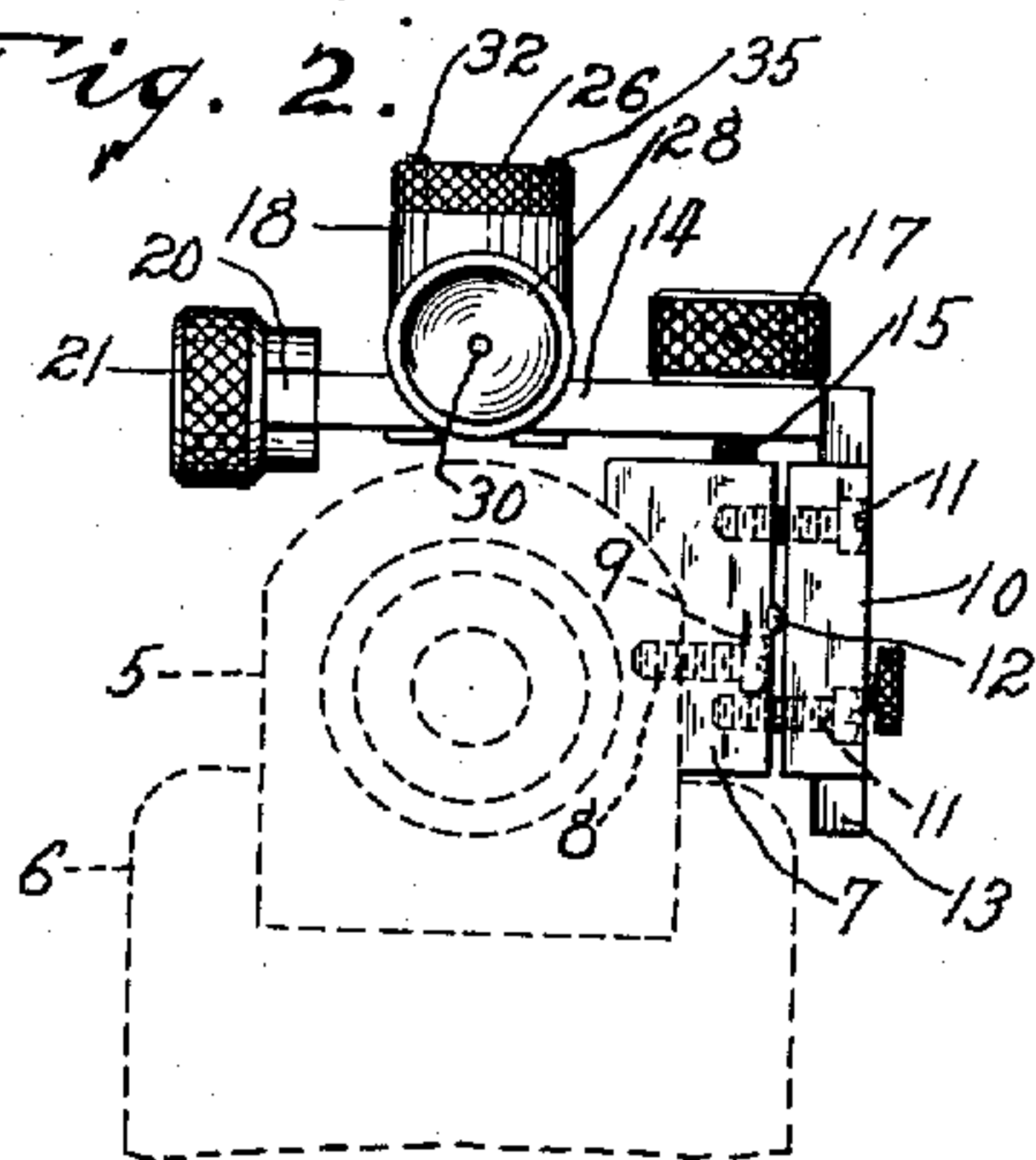


Fig. 3.

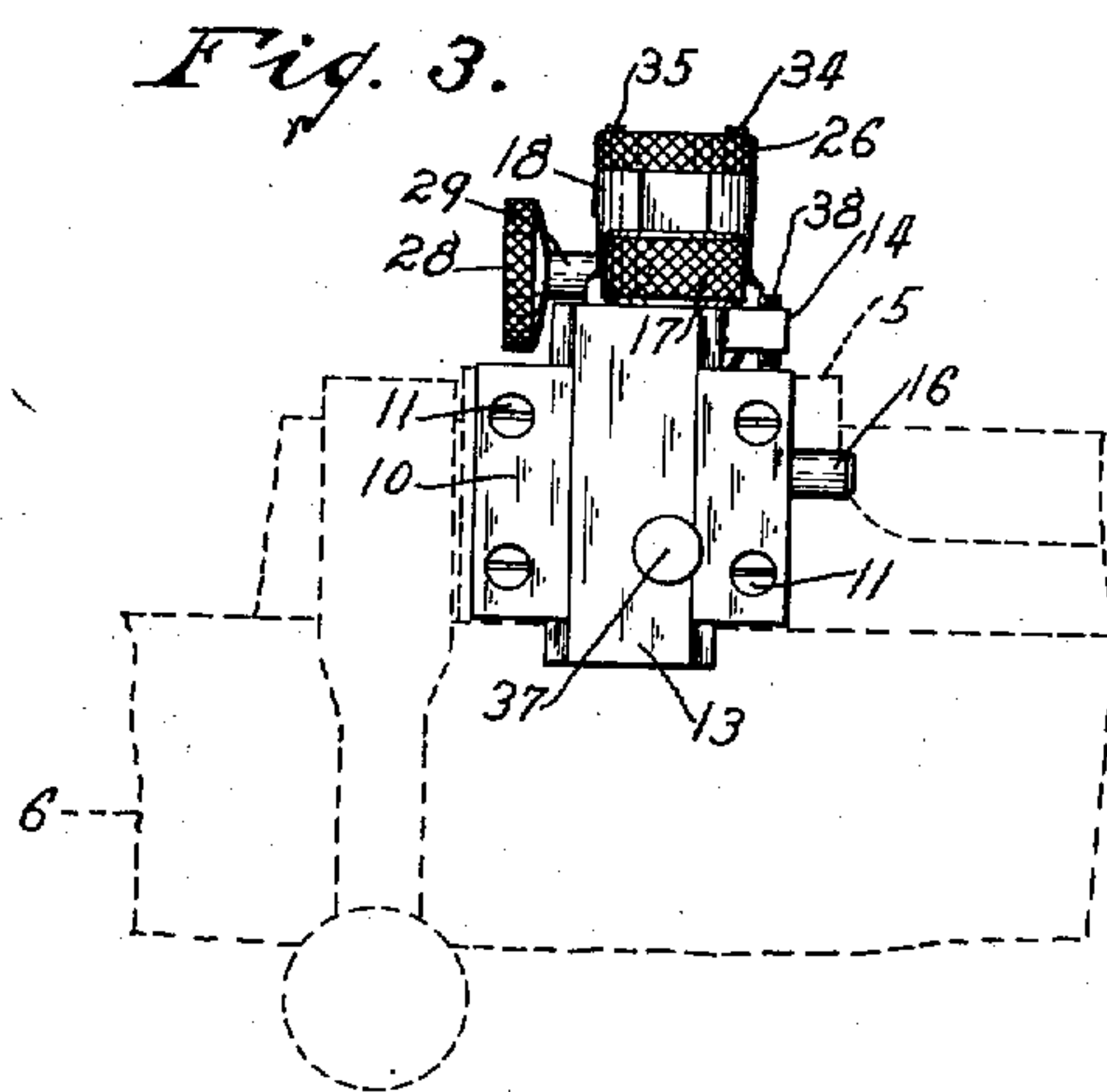


Fig. 4.

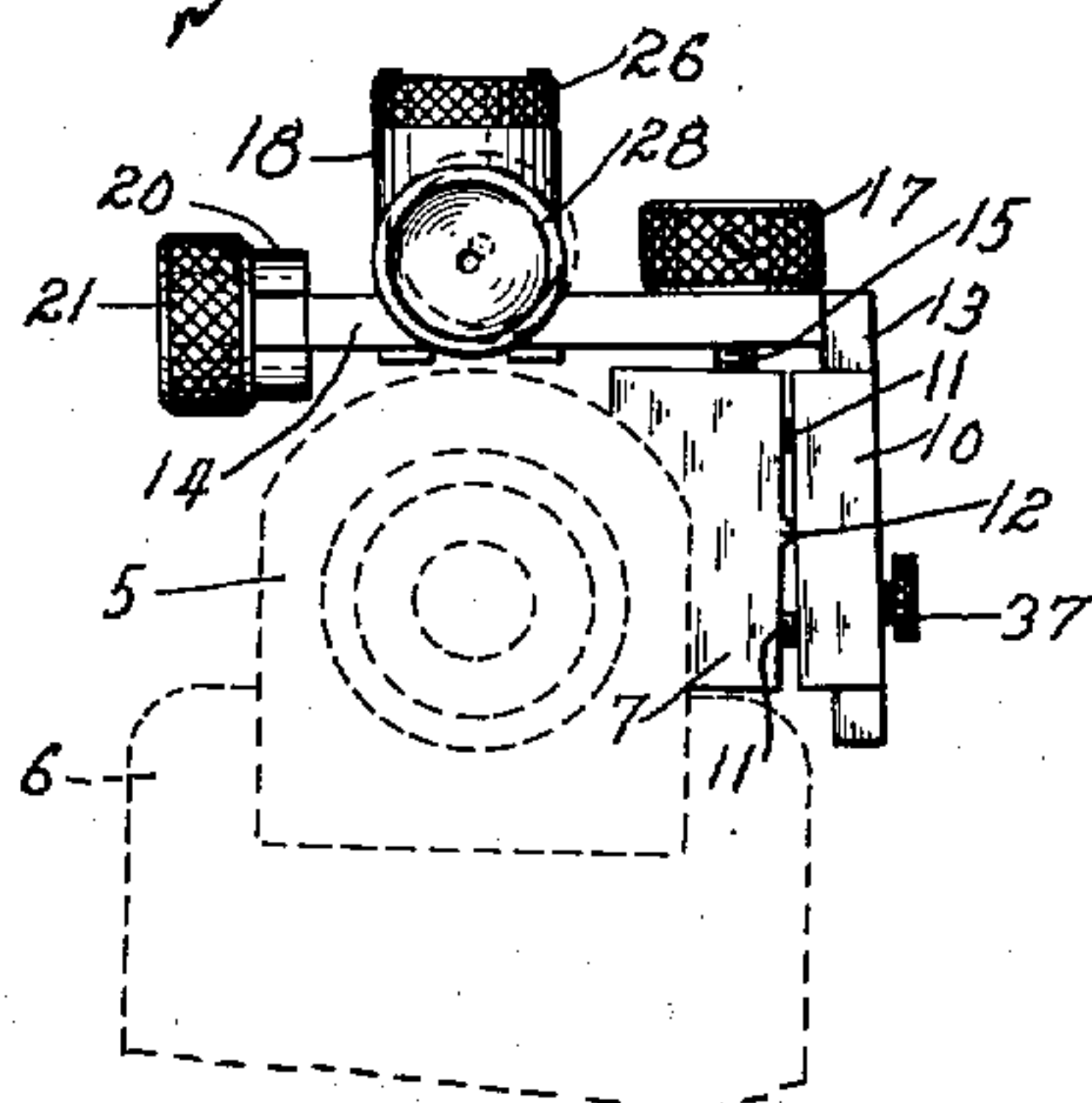
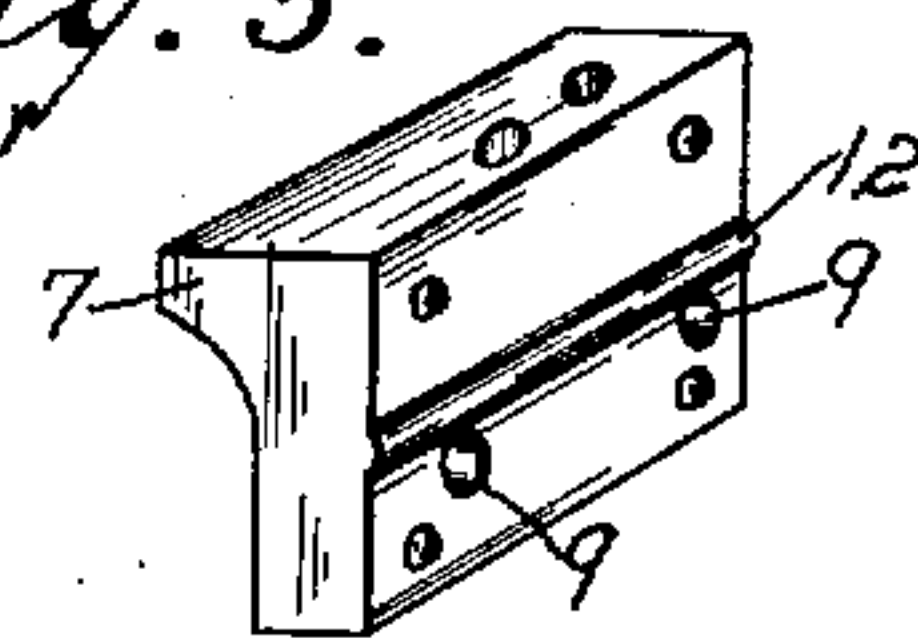


Fig. 5.



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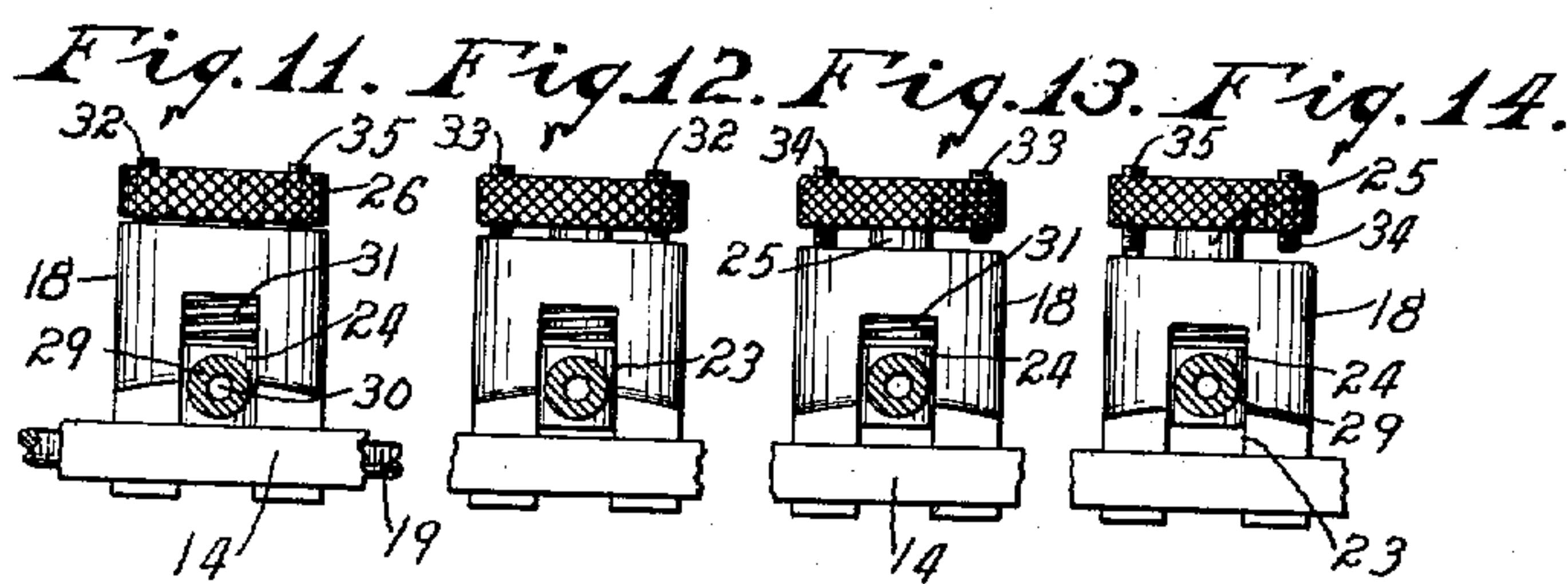
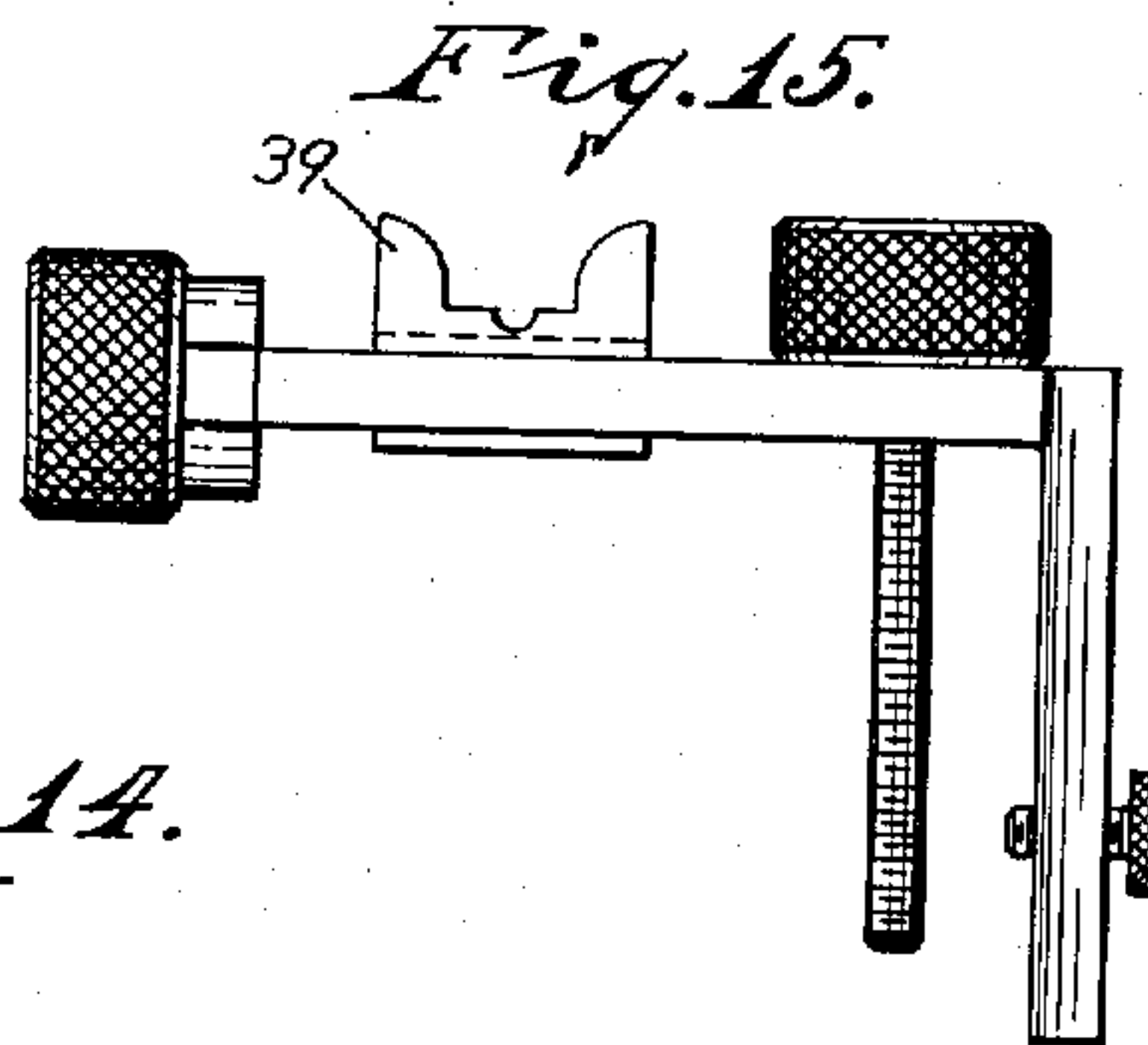
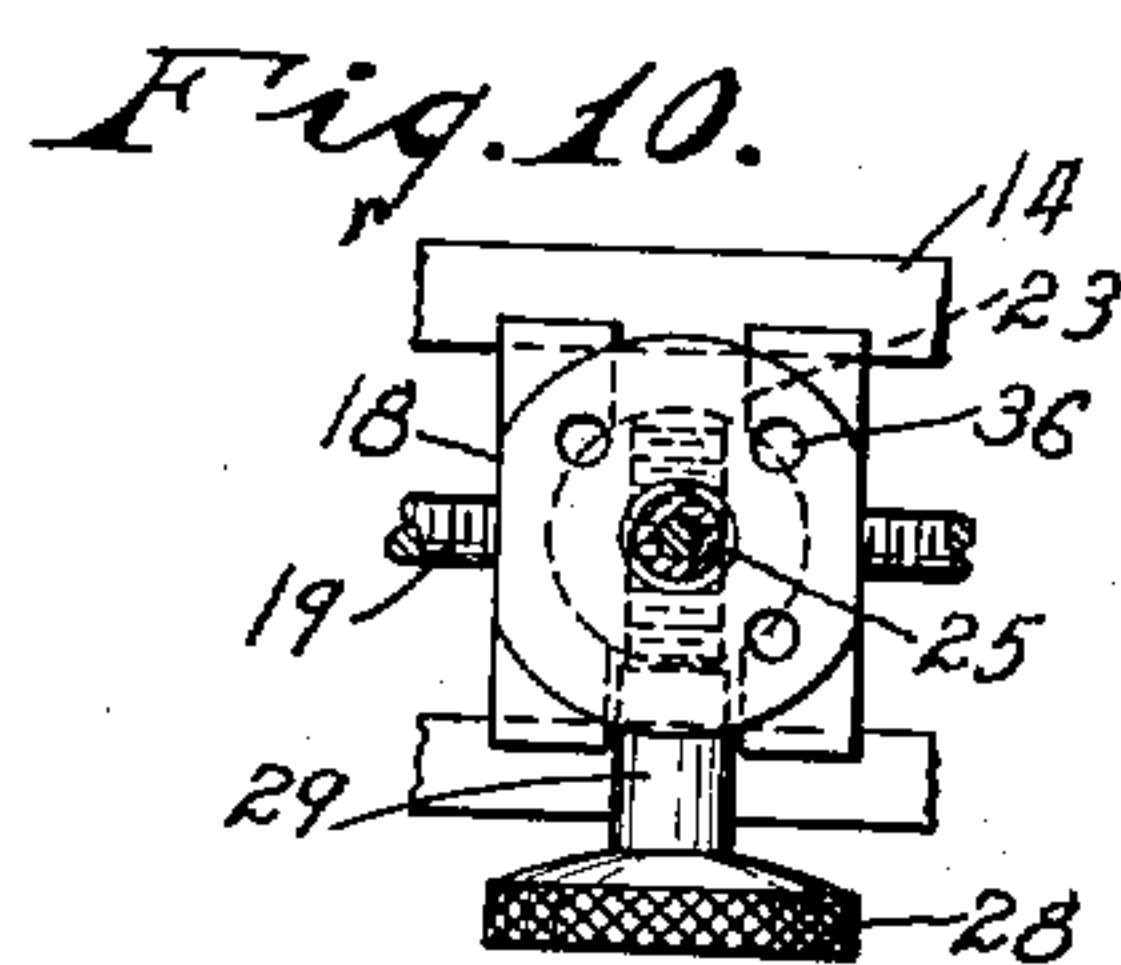
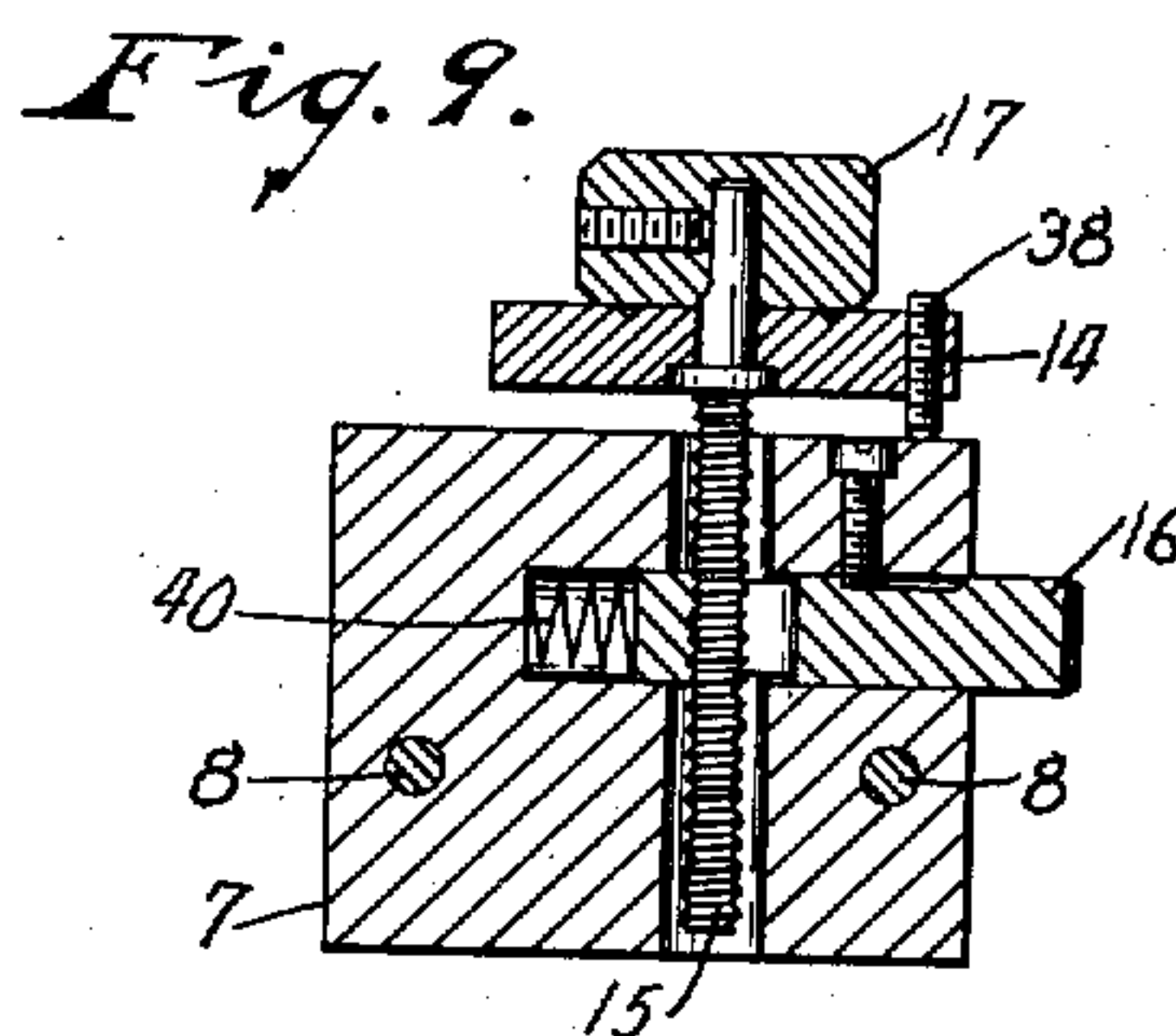
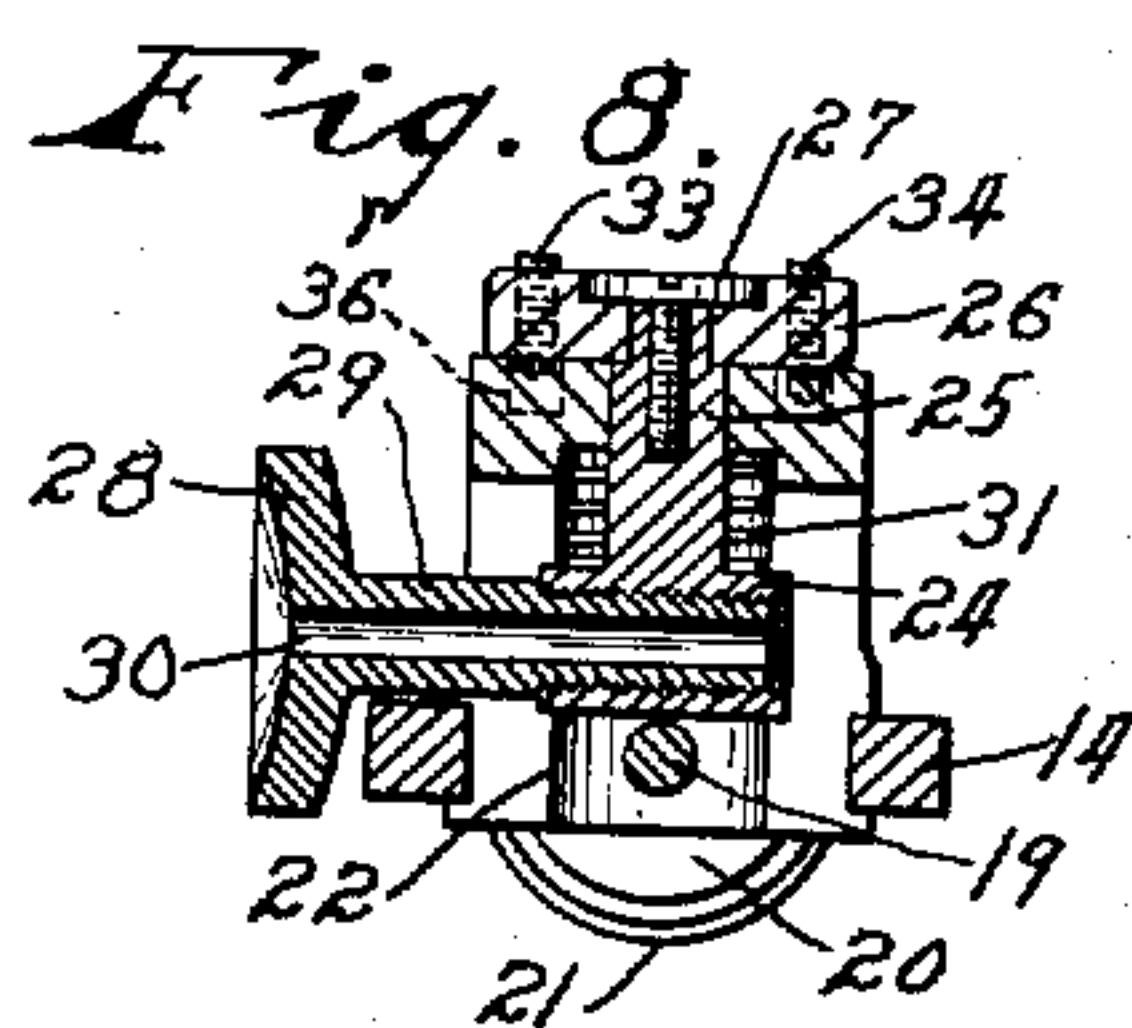
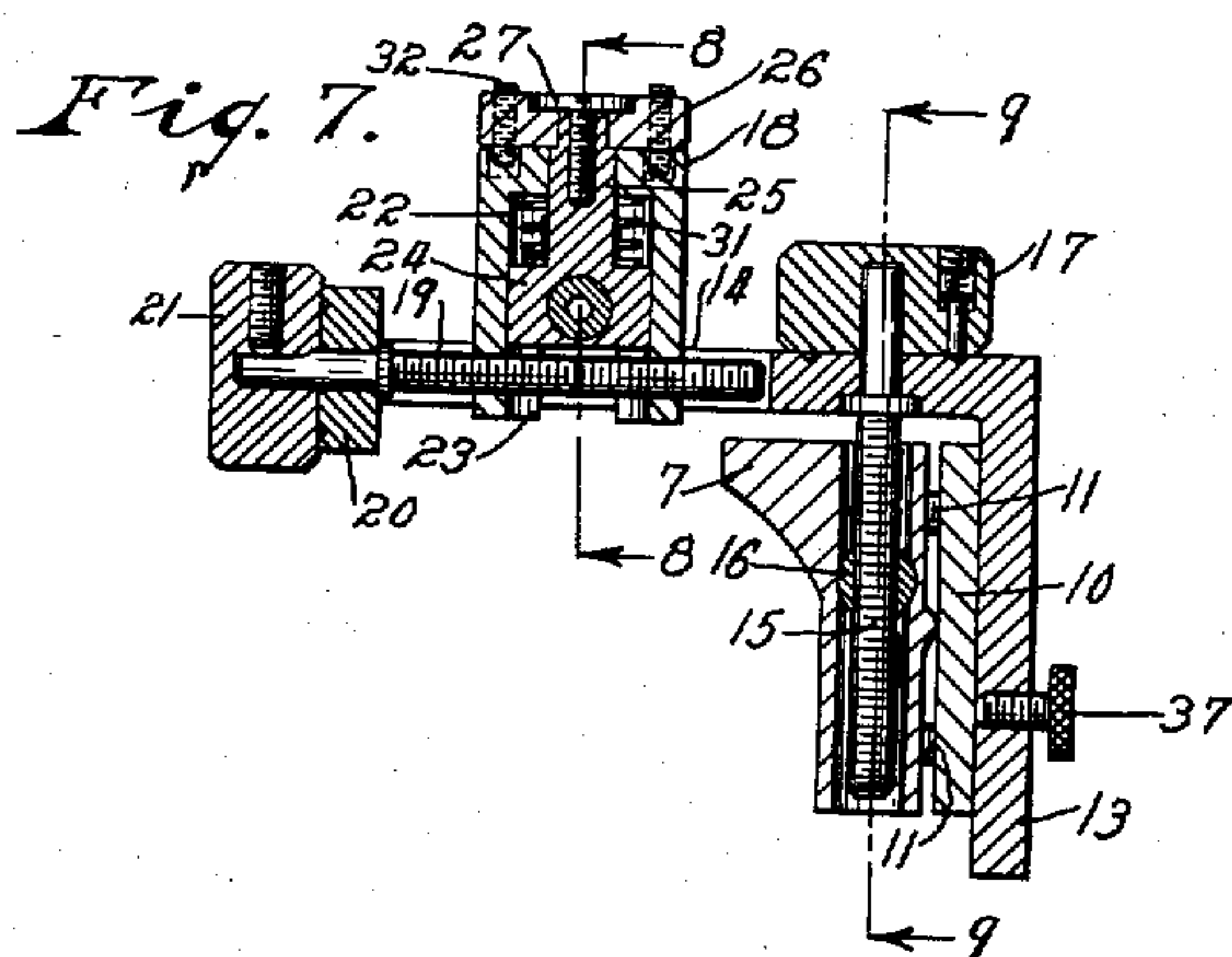
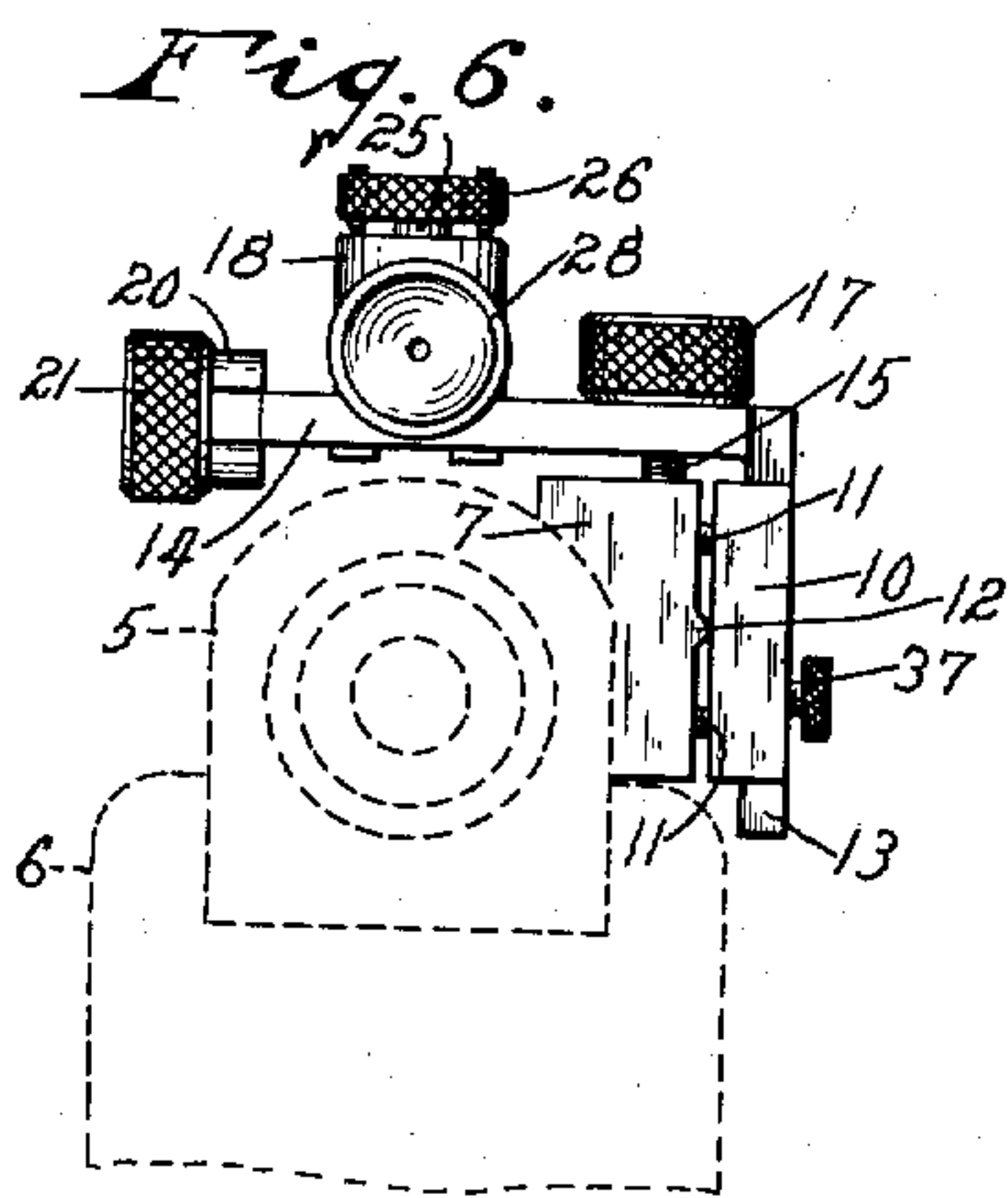
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2 SHEETS—SHEET 2



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UNITED STATES PATENT OFFICE

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GUN SIGHT

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9 Claims. (Cl. 33—56)

1

This invention relates to a gun sight and more particularly a rear sight of the type commonly known as a receiver sight; sights of this type being primarily designed to be attached to the side of a rifle receiver.

It is an object of this invention to provide an improved receiver sight having novel features permitting accurate adjustments of the sight for elevation and windage.

A further object is the provision of a gun sight which may be pre-adjusted for a plurality of different elevations.

A still further object of the invention is to provide a novel and highly efficient gun sight having means whereby it may be selectively adjusted for a plurality of pre-determined elevations for different increments of distance.

Another object of the invention is to provide means whereby the sight may be adjusted on the receiver to permit accurate alignment thereof with the vertical axis of the gun bore.

Further objects and advantages of this invention will be more clearly understood from the following description and from the accompanying drawings in which:

Fig. 1 is a plan view of my improved gun sight showing the same mounted to the receiver of a gun.

Fig. 2 is a rear view of the said gun sight and receiver.

Fig. 3 is a side view thereof.

Fig. 4 is a rear view illustrating an error in the adjustment of the gun sight relatively to the axis of the bore.

Fig. 5 is a perspective view of the base member of my gun sight.

Fig. 6 is a view similar to Fig. 4 but showing the accurate adjustment of the gun sight relatively to the axis of the bore.

Fig. 7 is an enlarged rear view of my gun sight in central vertical section.

Fig. 8 is a sectional side view on line 8—8 of Fig. 7.

Fig. 9 is a sectional side view on line 9—9 of Fig. 7, with some parts being omitted.

Fig. 10 is a plan view of a portion of the sight with the increment selector knob removed.

Fig. 11 is a rear view showing the position of the increment selector mechanism when adjusted for the first increment of distance.

Fig. 12 is a similar view showing the selector positioned for the second increment.

Fig. 13 is a similar view showing the selector positioned for the third increment.

Fig. 14 is a similar view showing the said selector positioned for the fourth increment.

2

Fig. 15 is a side view illustrating an accessory which may be used in my improved gun sight to substitute an open sight for a peep sight.

As illustrated in the drawings, numeral 5 denotes the receiver of a gun of a conventional type, and the numeral 6 denotes the stock on which said receiver is mounted.

In the embodiment of my invention as illustrated, my improved gun sight includes a base member 7 which is secured to the side of the receiver by means of cap screws 8 extending through holes 9—9 in said base and threaded to the receiver. A sub-base 10 is secured to the side of the base member 7, by means of screws 11 which are threaded to said base, and is rendered adjustable by means of a rib 12 on the said base member 7 which pivots the sub-base to permit adjustment thereof with the screws 11 as will be hereinafter fully described.

A slide 13 is slidably mounted in a dove-tailed groove in said sub-base and carries a bridge 14 which extends over the gun and is adjustable for height relatively thereto by means of an elevation adjustment screw 15 which is in releasable threaded engagement with a latch 16 that is slidably mounted in the base 7. The said adjustment screw 15 is provided with a knob 17 so that it may be rotated to raise or lower the bridge 14 when the sight is to be adjusted for elevation.

A post 18 is slidably mounted on the bridge 14 and is horizontally adjustable on said bridge by means of an adjustment screw 19 which is threaded to said post and is rotatably anchored in an end plate 20 on the bridge 14 and has secured thereto a knob 21 to permit rotation thereof.

The said post 18 is preferably provided with a bore 22 and slots 23 which extend across said bore. A carrier 24 is slidably mounted in the said bore 22 and has a stem 25 which extends vertically therefrom through an opening in the top of the post 18 and has an increment selector disc 26 rotatably secured to the opposite end thereof by means of a screw 27. A sight disc 28 is mounted to the carrier 24 by means of a stem 29 which is threaded to the carrier, extends therethrough and has a sight opening 30 which extends longitudinally through the said stem.

The selector disc 26 is urged downwardly, towards the top surface of the post 18, by means of a spring 31 and increment adjusting screws 32, 33, 34, and 35, of successively longer lengths, are threaded through the disc 26 at equal distances from the center thereof and project through the bottom of the disc into recesses 36 in the top of the post 18.

3

It will be noted that there are provided four adjustment screws while there are only three of the recesses 36. This leaves a blank abutment surface to be engaged by the ends of the adjustment screws for locating the sight disc 28 in different vertical positions on the post 18 and thereby permitting selective elevational adjustment of the sight for different predetermined increments of distance.

The slide 13 is preferably provided with a lock screw 37 for retaining it in position on the sub base 10 and an adjustable stop screw 38 may be provided in the bridge 14 for locating the said bridge at a predetermined height so that it may be always returned to its pre-adjusted position after the said bridge has been removed from the receiver.

In the form illustrated in Fig. 15, a slide and bridge similar to those above described are provided and an open sight member 39 of fixed height is slidably mounted to the bridge instead of the post 18.

To install my improved gun sight, the base member 7 is first secured to the side of the receiver 5 by means of the screws 8 and the sub-base 10 is then mounted on said base member by means of the screws 11. The slide 13 is then inserted in the dove-tailed groove in the sub-base and the screw 15 is inserted through the latch 16; the said latch being held inwardly until the said slide and screw are moved downwardly to a position wherein the end of the adjustment screw 38 abuts the top of the base and thereby locates the bridge at its preadjusted height. The latch 16 is then released so that it may be returned into threaded engagement with the screw 15 by means of the spring 40. Any new adjustment of the bridge 14, to locate the sight disc 28 at the proper elevation for the nearest increment of distance, may then be made by rotating the knob 17. After such adjustment has been made, the slide 14 may be locked in adjustment position by means of the screw 37 and the stop screw 38 may also be further adjusted if necessary.

Any further adjustment of the sight disc for the first increment of distance may be made by rotating the screw 32 to accurately position the disc 26 with relation to the upper surface of the post 18. Assuming that the said sight disc has now been correctly adjusted for the elevation required for the first increment of distance; my improved sight may be adjusted to locate the sight disc at the correct elevations for the succeeding increments of distance by means of the adjustment screws 33, 34 and 35. Such adjustments may be made by the use of a feeler gauge, to locate the disc 26 at the proper distances from the top of the post 18, as progressively illustrated in Figs. 11 to 14, or the said screws may be adjusted by the trial method wherein a target is placed at the desired increment of distance and the proper adjusting screw is then turned to adjust the sight disc until an accurate hit can be made upon said target when the gun is fired. The target may next be moved to the next increment of distance and the next adjustment screw then turned for adjusting the sight disc accordingly, and so on until all of the adjustment screws 32 to 35 have each been adjusted for successive increments of distance.

When the said adjustments of the screws 32 to 35 have been made, the sight disc with the peer sight opening 30 therein may be selectively positioned for a desired increment of distance by

4

simply pulling the disc 26 upwardly against the tension of the spring 31, to lift the carrier 24 and the sight disc 28 thereon, then rotating the said disc, to bring the proper adjusting screw in register with the abutment surface at the top of the post 18, and then releasing the said disc and permitting the adjustment disc to be accurately positioned by the respective abutment screw for the elevation which has been pre-determined for the selected increment of distance.

It will be understood, when the disc 26 is in the position illustrated in Fig. 11, each of the screws 33 to 35 will project into the recesses 36 and the disc then being positioned by means of the screw 32. When the sight is adjusted, as shown in Fig. 14, for the farthest increment of distance, the longest screw 35 is in abutment with the top of the post 18 so that the sight disc is located at the highest elevation for which the said sight was pre-adjusted.

Any inaccuracy in the mounting of my improved sight on the gun receiver, which would result in the sight not being properly aligned with relation to the vertical axis of the receiver as illustrated in Fig. 4, will be most prominently disclosed when the sight is adjusted for the highest elevation and the gun is fired at a target located in the farthest increment of distance.

Such inaccuracy may then be readily corrected by loosening the proper screws 11, at one side of the rib 12, and tightening the screws at the opposite side of said rib; thereby rocking the sub base 7 upon the pivoting rib 12 until the bridge 14 is perpendicular to the vertical axis of the receiver and the vertical axis of the post 18 is in alignment with said axis of the receiver.

From the above description, it will be clearly understood that my invention provides a gun sight which may be pre-adjusted for selectively locating the sight member to accurately elevate the gun barrel for different increments of distances.

I claim:

1. A gun sight comprising a base member adapted to be secured to a gun, a sub-base member mounted for pivotal movement upon said base member and thereby rendered angularly adjustable relatively to the plane of the vertical axis of said gun, a bridge slidably carried on said sub-base member and extending transversally over the gun, means for vertically adjusting said bridge relatively to said gun, a sight supporting member slidable on said bridge, means for transversally adjusting said member relatively to the gun, a carrier vertically slidable in said supporting member, a stem on said carrier projecting through the top of said supporting member, a disc rotatable on said stem, a sight member mounted on said carrier, and a plurality of locating abutment members on said disc and engageable with the top of said supporting member for selectively positioning said carrier at different heights with respect to the supporting member to locate the sight member for elevating the gun to predetermined positions for different increments of distance said abutment members being independently adjustable to permit selective variation of said increments.

2. A gun sight as set forth in claim 1 wherein the said adjusting means comprise a plurality of screws threaded through said disc and projecting at different distances from the underside thereof, and abutment means on the supporting member separately engageable by the said screws.

3. A gun sight comprising a base member

5

adapted to be secured to a gun, a bridge vertically slidable on said base and extending over said gun, a sight member horizontally and vertically adjustable on said bridge, means for adjusting said sight member independently of said bridge for different elevations, separate means for selectively further adjusting said sight member for a plurality of different increments of elevation, and means for independently pre-adjusting said separate means for each of said increments.

4. A gun sight comprising a base adapted to be secured to a gun, a bridge mounted on said base and extending over said gun, means for vertically adjusting said bridge relatively to the gun, a sight member carried on said bridge, means for adjusting said sight member transversally to said gun, separate means including an adjustable member for adjusting said sight member relatively to said bridge to a plurality of different predetermined positions to elevate said gun for different increments of distance, and independent means for pre-adjusting said separate means for each of said increments.

5. A gun sight comprising a base adapted to be secured to a gun, a bridge mounted on said base, means for adjusting said bridge relatively to the gun, a sight member carried on said bridge, means for adjusting said sight member transversally to said gun, separate means carried by the sight member and including a plurality of abutments for selectively adjusting said sight member for elevating said gun for different increments of distance; the said abutments being adjustable to independently vary the increments of elevation.

6. A gun sight comprising a base member adapted to be secured to a gun, a rib projecting from the outer surface of said base member, a sub-base member mounted on said base member and engaging said rib intermediate the upper and lower ends thereof, screws threaded into said base member and engaging said sub-base member at opposite sides of said rib, a bridge carried on said sub-base member and extending over said gun, and a sight member adjustably carried on said bridge; the said bridge being angularly adjustable with relation to the vertical axis of the gun by manipulation of said screws to cause a rocking movement of the sub-base about the said rib.

7. A gun sight comprising a base adapted to be secured to a gun, a sub-base pivotally adjustable upon said base and thereby rendered angularly adjustable relatively to the vertical axis thereof, a bridge extending from said sub-base transversely over the said gun, means for vertically adjusting said bridge relatively to the gun, a sight supporting member slidable on said bridge, means for adjusting said supporting member along said bridge, a carrier vertically slidable in said supporting member, a sight member mounted on said carrier, a stem on said carrier projecting through the top of said supporting member, a plurality of locating abutment members on said disk adapted to engage an abutment on said supporting member for selectively positioning the said carrier at different heights in the supporting member to locate the sight member at predetermined positions relatively to the gun for different increments of distance; the

6

said abutment members on the disk being adjustable to permit independent selective variation of said increments, and spring means for yieldingly moving said carrier and the rotatable disk thereon to cause contact between a selected abutment member on said disk and the abutment on the supporting member whereby adjustment of said sight for a desired increment of distance may be made by moving the said disk against the tension of the spring, rotating said disk to position the selected abutment member on said disk with respect to the abutment on the supporting member, and then releasing said disk to permit positioning of the sight member under the influence of the said spring.

8. A gun sight comprising a base member adapted to be secured to a gun, a sub-base pivotally mounted on said base member and thereby being angularly adjustable relatively to the vertical axis of the gun, a bridge extending transversally to said gun from said sub-base, means permitting vertical adjustment of said bridge relatively to the gun, a sight supporting member slidable along said bridge, a carrier vertically movable in said supporting member, a sight member mounted on said carrier, means including a plurality of independently adjustable abutment members for selectively positioning said carrier upon the supporting member to set the sight for a selected elevation, an abutment on said supporting member adapted to engage the adjustable abutment member for the selected elevation, and retractable means yieldingly urging the said carrier towards adjusted position; the said retractable means permitting selective adjustment of the sight member by retracting the carrier, moving the selected abutment member into position relatively to the said abutment on the supporting member, and then releasing the carrier to permit engagement between the abutment member and the said abutment.

9. A gun sight comprising a base member secured to a gun, a bridge adjustably mounted on said base and extending over said gun, a supporting member slidable on said bridge, means for adjusting said supporting member along said bridge, a carrier vertically slidable in said supporting member, means on said carrier including a plurality of abutments adapted to be selectively positioned on the supporting member for locating said carrier at different predetermined elevations with respect to said supporting member, and a sight member carried on said carrier.

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