

No. 737,677.

PATENTED SEPT. 1, 1903.

G. H. TANSLEY.  
SIGHT FOR FIREARMS.  
APPLICATION FILED FEB. 2, 1903.

NO MODEL.

Fig. I.

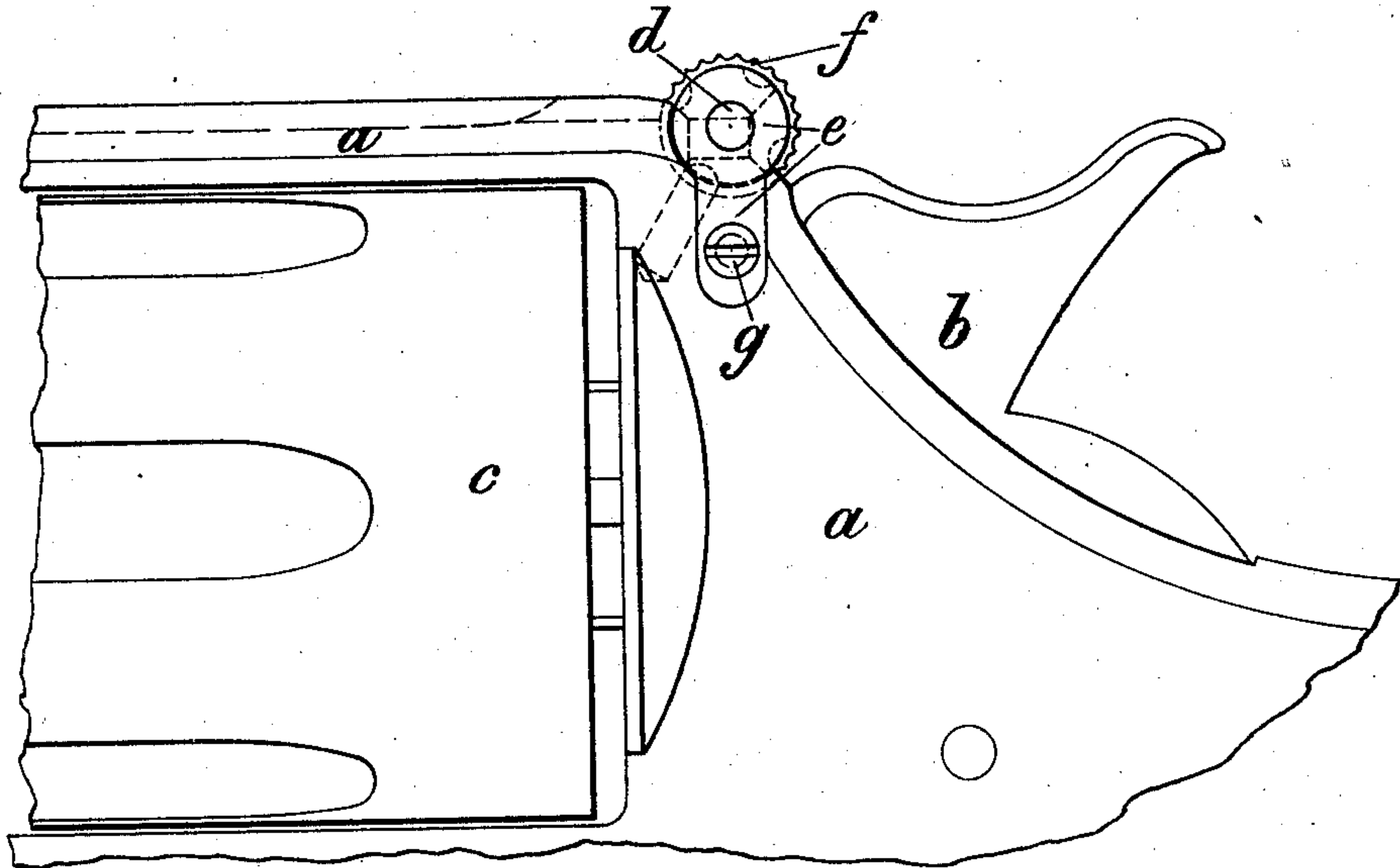


Fig. II.

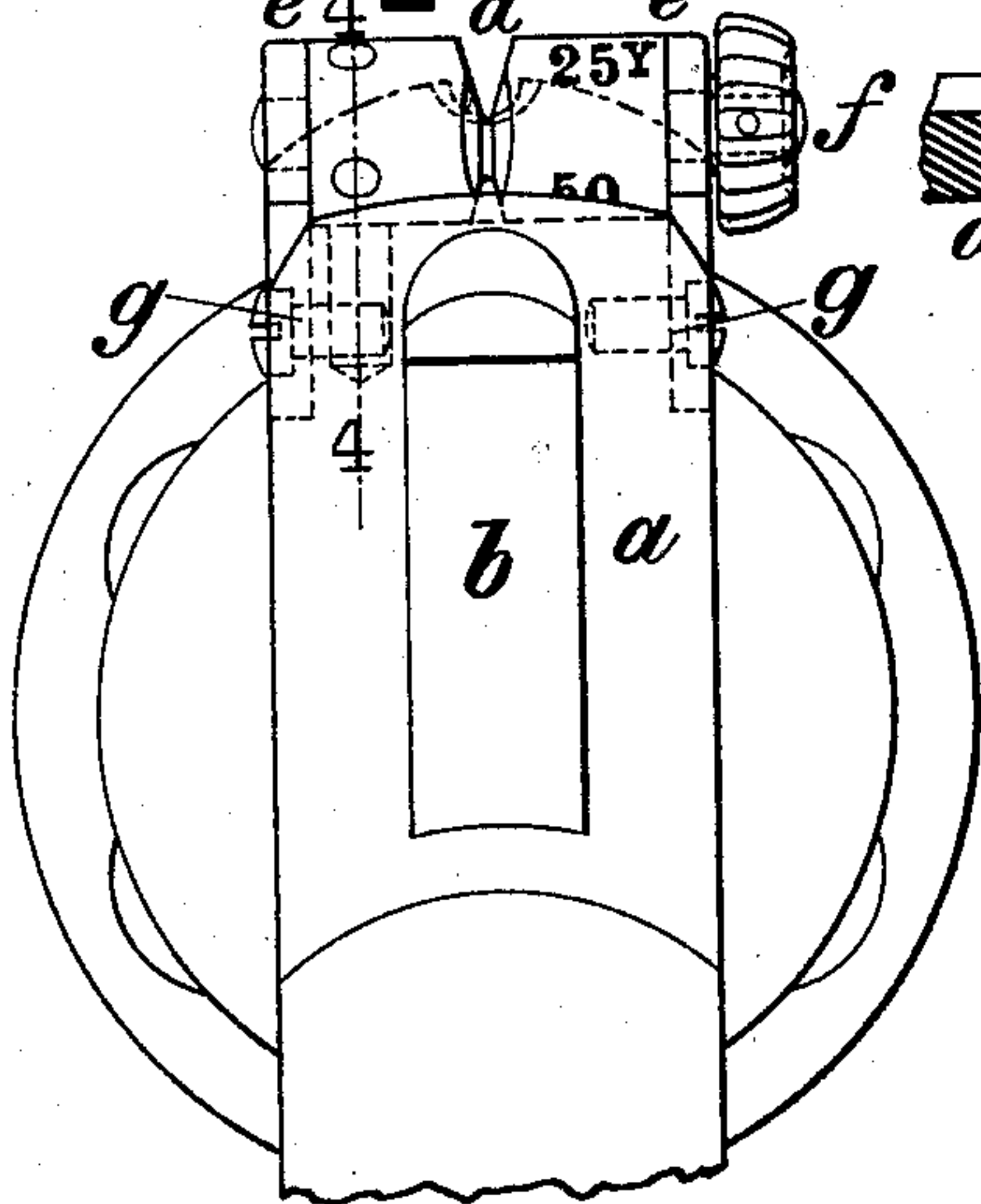


Fig. III.

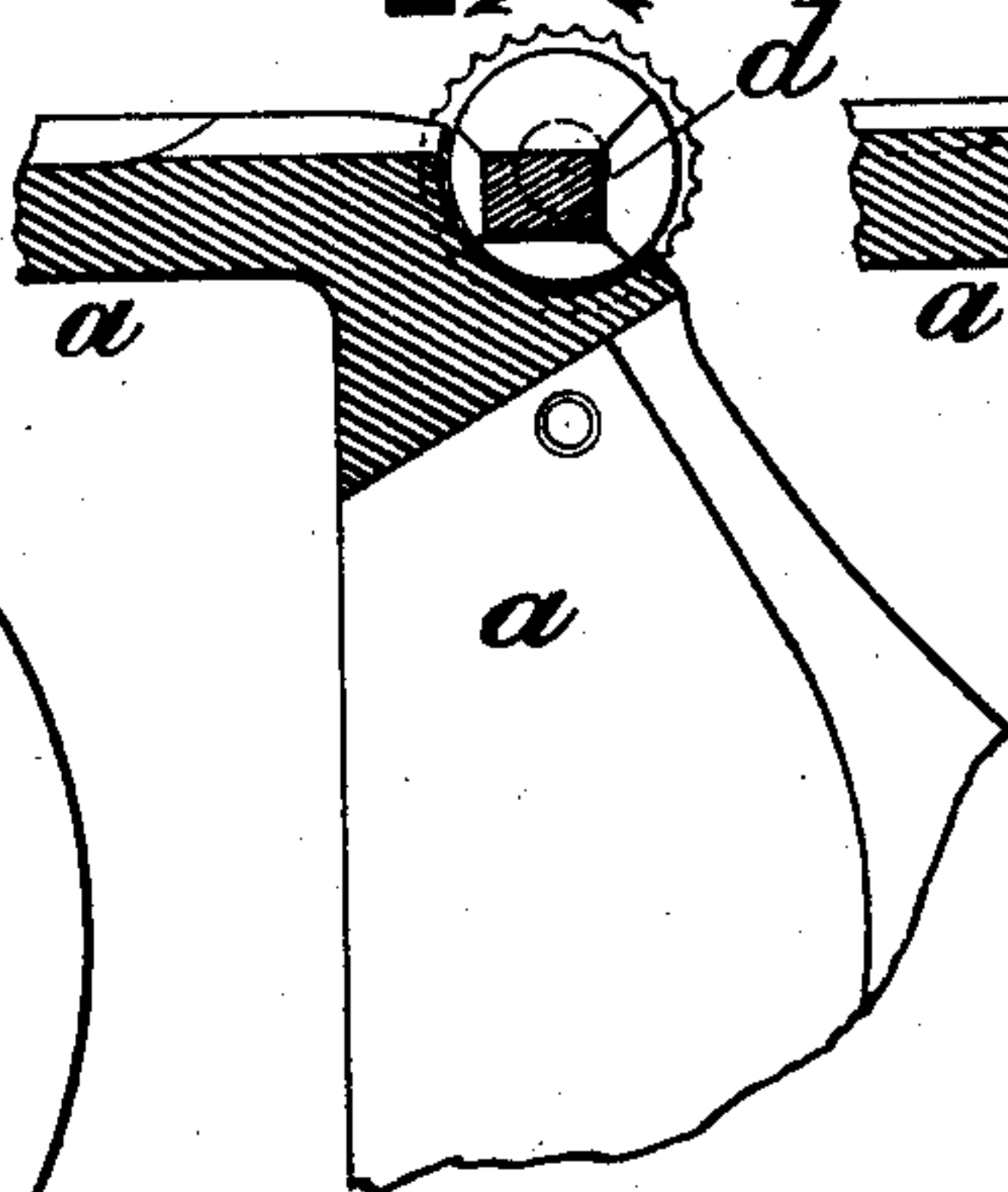
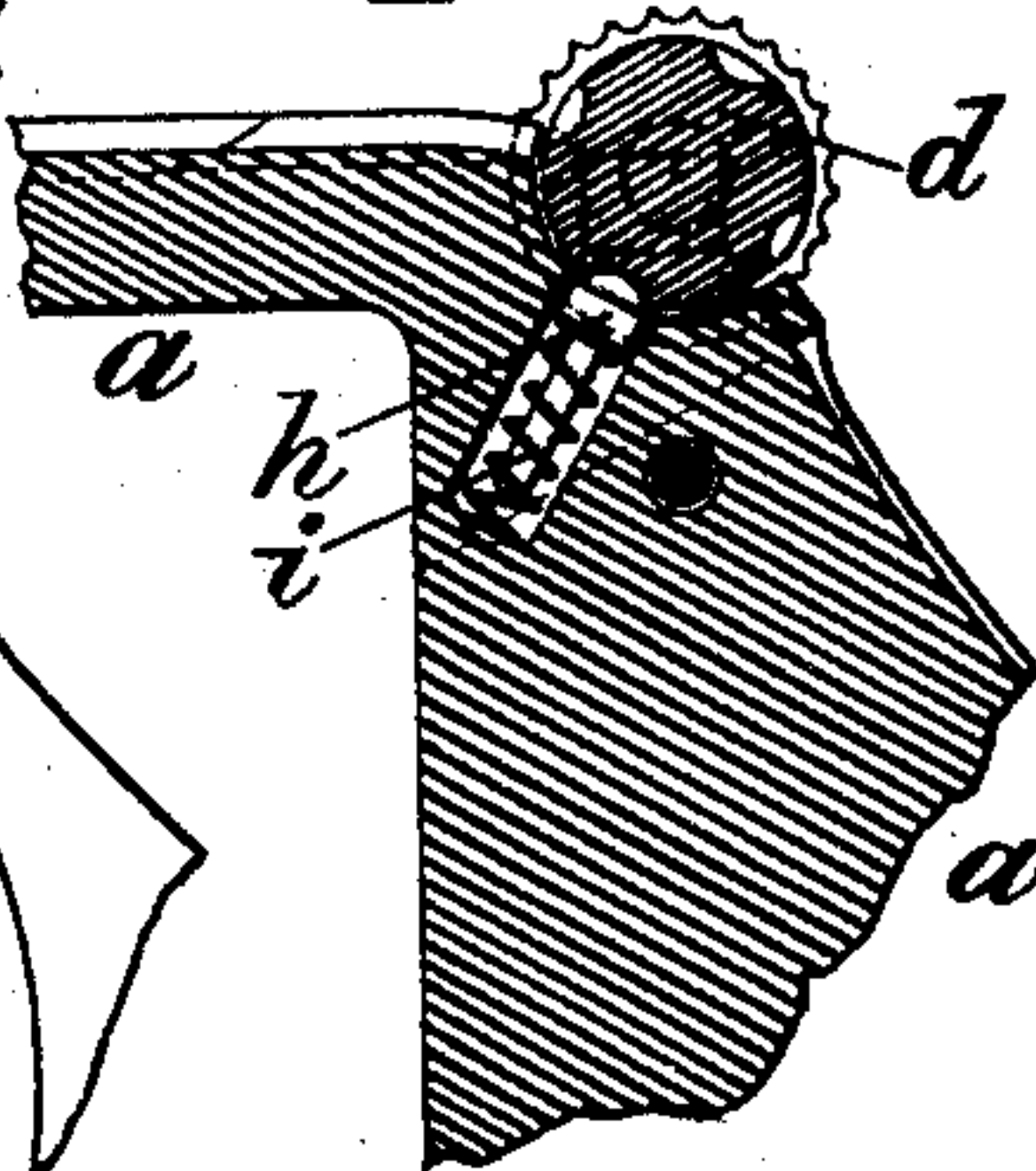


Fig. IV.



Witnesses.

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# UNITED STATES PATENT OFFICE.

GEORGE H. TANSLEY, OF HARTFORD, CONNECTICUT, ASSIGNOR TO COLT'S PATENT FIRE ARMS MANUFACTURING COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

## SIGHT FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 737,677, dated September 1, 1903.

Application filed February 2, 1903. Serial No. 141,516. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. TANSLEY, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Sight for Firearms, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in sights for firearms, and particularly to rear sights intended for use with pistols and revolvers adapted to military service.

An effective military pistol must be reliable, ready for instant use, but safe under all conditions of service. It must therefore be of simple, strong, and compact construction to withstand rough service without becoming damaged or inoperative, and this applies especially to the exposed exterior parts of the arm, which must be compact and strong and have a rounded form, avoiding sharp projections and corners in the outline of the pistol by which the instant drawing of the pistol from holster or pocket might be interfered with or delayed.

Adjustable rear sights heretofore devised for target practice with sporting pistols are not suitable for military service because they are too delicate and too prominent and require too much time and care for adjustment.

Revolvers are mainly intended for shooting at short range, and even with the more modern improved ammunition their maximum effective range is a limited one compared with the effective ranges of rifles and other small-arms. Therefore the vertical adjustment required of the rear sight of a revolver is a correspondingly-limited one both in respect to its maximum elevation and in respect to the number of steps between the lowest and the highest elevations. Three or four different elevations of the sight are sufficient, corresponding to the minimum and the maximum ranges of the arm, with one or two intermediate elevations for ranges between the maximum and minimum ones. The short barrel of a pistol and the correspondingly short distance at which it is practicable to locate the front

sight from the rear sight in these arms cause a small difference in the elevation of the rear sight of a pistol to produce a large difference in the angle of elevation and in the range of the arm. Consequently the differences in the height of an adjustable pistol-sight at the several successive steps of elevation are very minute, and the adjustment would be very difficult without the aid of some device for readily setting the sight to the desired elevation and for securely keeping it in position after its adjustment.

The objects of my invention are to provide a simple but effective rear sight for military pistols and revolvers which shall be readily adjustable and securely supported in the adjusted position, which shall have sufficient strength to withstand rough service, and the attachment of which to the revolver shall not impair the outline of the arm by sharp projections or corners. I attain these objects by a novel form of rear sight and by the construction of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure I is a partial side elevation of a "Colt army and navy revolver" fitted with my improved rear sight. Fig. II represents a rear elevation of the same. Fig. III represents a longitudinal section through the sight and the adjacent parts of the revolver-frame in the vertical plane of the axis of the barrel. Fig. IV is a similar section through the line 4 4 of Fig. II.

To facilitate the understanding of the illustrations, the several views are drawn upon an enlarged scale, and similar letters refer to similar parts throughout the several views.

In the drawings, *a* denotes the upper rear portion of the frame of a revolver, *b* the hammer, and *c* a portion of the cylinder.

In the top of the frame *a*, above the hammer *b*, a semicircular transverse groove is provided for the reception of the rear sight. The location of this groove in the frame is thus at the greatest distance from the front sight and sufficiently in rear of the cylinder-mortise in the frame to avoid the weakening of



the frame, which would result were the groove located farther forward or if it were of an angular form.

The sight-bar *d* consists of a cylindrical roll proportioned in diameter and in length to fit into and to fill the transverse groove in the frame, from which it projects in the form of a semicylindrical rib across the top of the frame, a central groove in which serves as the sighting-notch. On each end the sight-bar *d* has a trunnion, and two small ears *e*, projecting upward from the sides of the frame, provide bearings for the trunnions and adjustably support the sight on the frame. The ears *e* may be integral with the frame of the revolver, in which case the trunnions of the sight are replaced by a central spindle removably secured in the roll; but I prefer to construct the trunnions integral with the roll *d* and to make the ears *e* separately and, as shown in the drawings, to provide a recess in each side of the frame in which the ears are fitted and secured by the screws *g*, making the outside of the ears flush with the sides of the frame. The projecting tops of the ears *e* are part cylindrical, and when secured to the frame they correspond with the projecting portion of the sight-bar *d*. One of the trunnions of the roll extends through and beyond the ear *e*, and upon it is secured a small knob *f*, by means of which the roll *d* may be rotated. This knob is knurled, and to decrease the liability of it getting caught the cross-section of the knob is of a rounded form.

The sighting-notch in the sight-bar *d* lies in the vertical plane through the axis of the barrel and forms a rearward continuation of the usual central groove in the top of the frame of the pistol which serves as the fixed rear sight. The sighting-notch in the roll *d* has the usual beveled V shape and forms a continuous central groove in the periphery of the roll. The bottom and the sides of this groove, however, are not continuous, but are of varying depths and widths. As illustrated in Fig. III of the drawings, the central groove in the roll *d* consists of four different straight grooves, and, though all lie in the same vertical plane and are connected, each of these grooves consists of a separate cut carried in a straight line across the roll, each of these cuts penetrating to a different depth into the roll and all being beveled, producing grooves varying in depth and in width and the lines of the direction of the successive cuts forming angles of ninety degrees. In this manner the central portion of the roll *d* remaining uncut, as shown in the cross-section in Fig. III, forms a parallelogram the sides of which are located at increasing distances from the center of the roll. This construction of the roll *d* provides a sight adjustable to four different elevations by being turned into the four different positions, in each of which a different one of the four grooves is uppermost, and the bottom of the said groove is parallel to the axis of the bar-

rel. In the position of the sight illustrated in the drawings and best shown in Figs. II and III the deepest one of the four grooves in the roll *d* is uppermost, and the bottom of the groove is parallel to and corresponds in height with the bottom of the central groove in the top of the frame. The sight therefore is represented in the drawings as being adjusted to the lowest elevation for what is generally called the "point-blank" position, which corresponds to the minimum range of the pistol of twenty-five yards. On turning the roll *d* by means of the knob *f* in the direction indicated in Fig. III by the arrow each quarter-rotation will bring a different groove of less depth uppermost, thereby in successive steps increasing the elevation of the sight for ranges of fifty, seventy-five, and one hundred yards. To facilitate the adjustment of the sight at will to either of these four positions, I arrange in the frame *a* a small plunger *h* and a spiral spring *i* in a seat radial to the roll *d* and provide four corresponding recesses in the surface of the roll. (See Fig. IV.) By the engagement of the plunger *h* with one of these recesses the rotation of the sight is checked, and its adjustment in one of the four elevations is thereby plainly indicated. The spring-plunger *h* also serves to yieldingly secure the sight in the adjusted position. To the right of the sighting-notch numerals are engraved in each quarter of the surface of the roll *d*, which serve as a scale to indicate at a glance the range in yards of the pistol corresponding to the elevation to which the sight is adjusted, the four ranges being, as above stated, twenty-five, fifty, seventy-five, and one hundred yards.

Instead of forming the sighting-notches for four different elevations by making four cuts of different depths in the roll, as above described, it will be evident that three such cuts at angles of one hundred and twenty degrees to each other might be made, thus providing three elevations for the sight, or if only two elevations were desired two grooves only need to be cut in the roll. A larger number of cuts, symmetrically to each other, may be provided in the roll for a larger number of different elevations. In that case and particularly if it should be desired to use the arm at an increased maximum range and to increase the maximum elevation of the rear sight correspondingly the diameter of the roll *d* and of its seat in the top of the frame may be increased, thereby raising it higher above the frame and allowing a larger section of its increased circumference for each of the divisional cuts. While with such increase of diameter the projecting portion of the sight above the frame would be larger, its rounded form would prevent it even then from being objectionable.

It will be understood that my invention while specially adapted to pistols and revolvers is not restricted to use with such arms, but may be applied to any class of fire-arms,



and it will be evident that various changes in form and arrangement may be made without departing from the spirit of my invention.

What I claim, and desire to secure by Letters Patent, is—

1. A sight for firearms comprising a cylindrical sight-bar supported in bearings upon the breech-frame, transversely to the axis of the barrel, and having in the plane of said axis a plurality of sighting-notches of varying depths, means for adjusting said sight-bar by rotation and means for holding said sight-bar in adjusted position.

2. In combination, the frame of a pistol having a semicircular transverse recess, a cylindrical sight-bar mounted in bearings upon said frame to fill said recess and to rotate therein, sighting-notches of varying depths in said sight-bar in the vertical plane of the axis of said frame, means for adjusting said sight-bar by rotation and means for holding said sight-bar in position after adjustment.

3. A sight for firearms, comprising a cylindrical sight-bar journaled in bearings upon the breech-frame transversely to the axis thereof, and having a plurality of sighting-notches of varying depths, means for adjusting said sight-bar by rotation, means for checking the rotation of said sight-bar when any one of the sighting-notches is in position for use and for yieldingly keeping the sight-bar in adjusted position, and a series of numerals in the periphery of said sight-bar arranged to bring one of said series into view when any one of the sight-notches is in adjusted position, whereby the range of the arm corresponding to the sighting-notch in position is indicated.

4. The combination of a cylindrical sight-

bar journaled upon the breech-frame transversely to the axis of said frame and having in the plane of said axis a plurality of sighting-notches of varying depths, ears on said frame for securing said sight-bar thereto, said ears forming bearings for said sight-bar adapting it for adjustment by rotation, means for rotating said sight-bar, a spring-actuated piston carried in said frame and peripheral recesses in said sight-bar for checking the rotation of said sight-bar when any one of the sighting-notches is in position for use and for yieldingly holding said sight-bar in adjusted position.

5. In combination, the frame of a firearm provided with a semicircular transverse groove and with a recess in each side at the ends of said groove, two ears secured in said recesses to said frame and projecting therefrom, a cylindrical sight-bar journaled in bearings in said ears and filling said groove, sighting-notches of varying depths in said sight-bar, means for adjusting said sight-bar by rotation, means for checking the rotation of the sight-bar when any one of the sighting-notches is in adjusted position and for yieldingly holding said sight-bar in adjusted position, and a series of numerals in the periphery of said sight-bar, arranged to bring one of said series into view when any one of said sighting-notches is in adjusted position, and thereby to indicate the range of the arm corresponding to the sighting-notch in adjusted position.

This specification signed and witnessed this 27th day of January, A. D. 1903.

GEORGE H. TANSLEY.

In presence of—

C. J. EHBETS,

K. POWERS.