

(No Model.)

W. LYMAN.
SIGHT FOR FIREARMS.

No. 541,560.

Patented June 25, 1895.

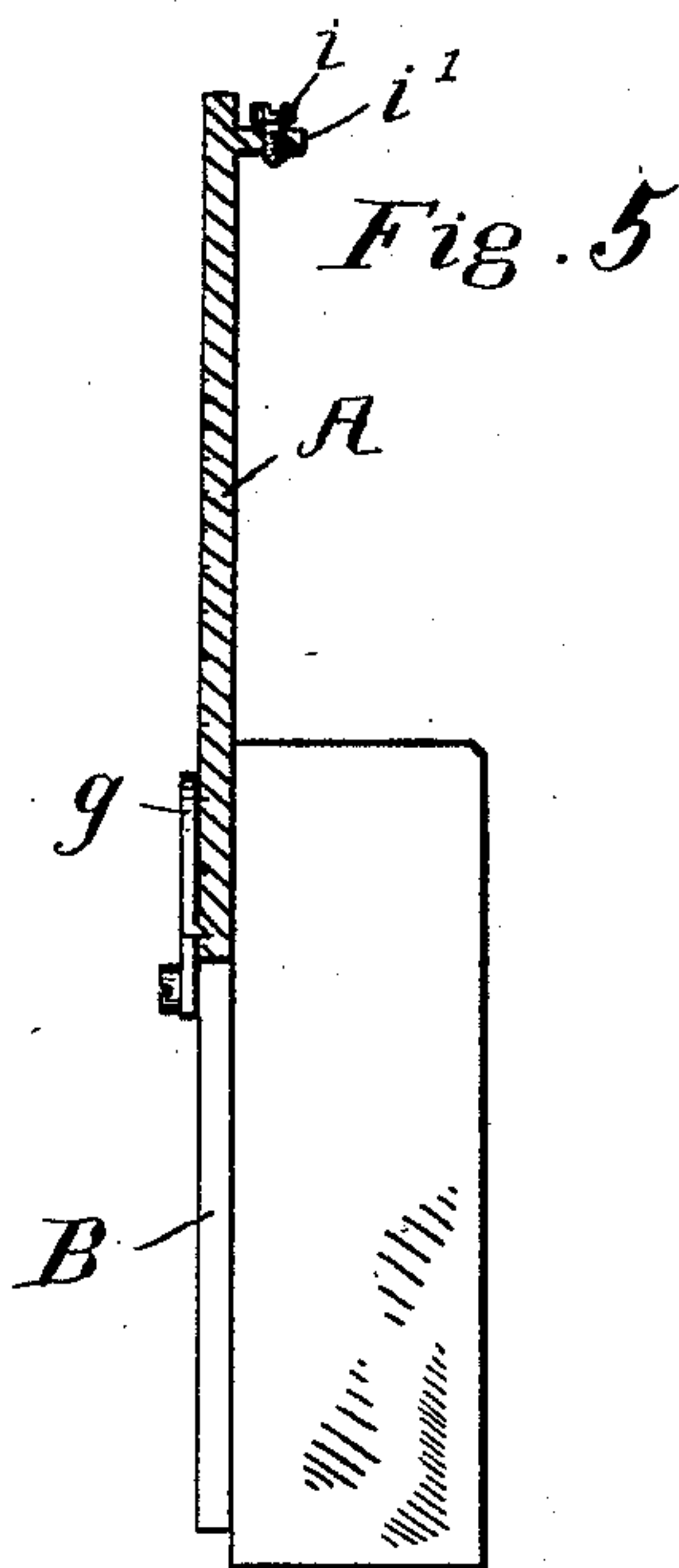
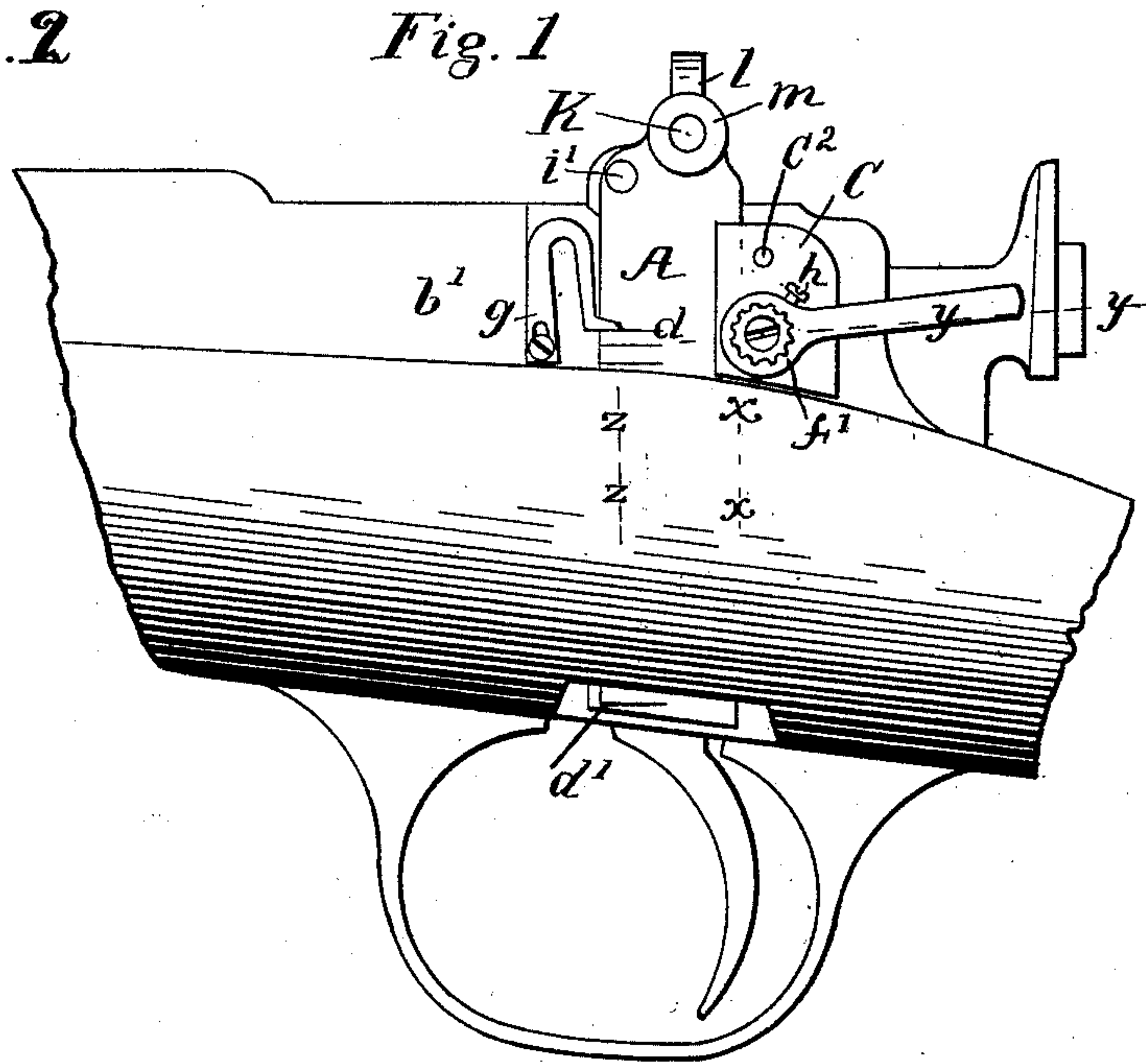
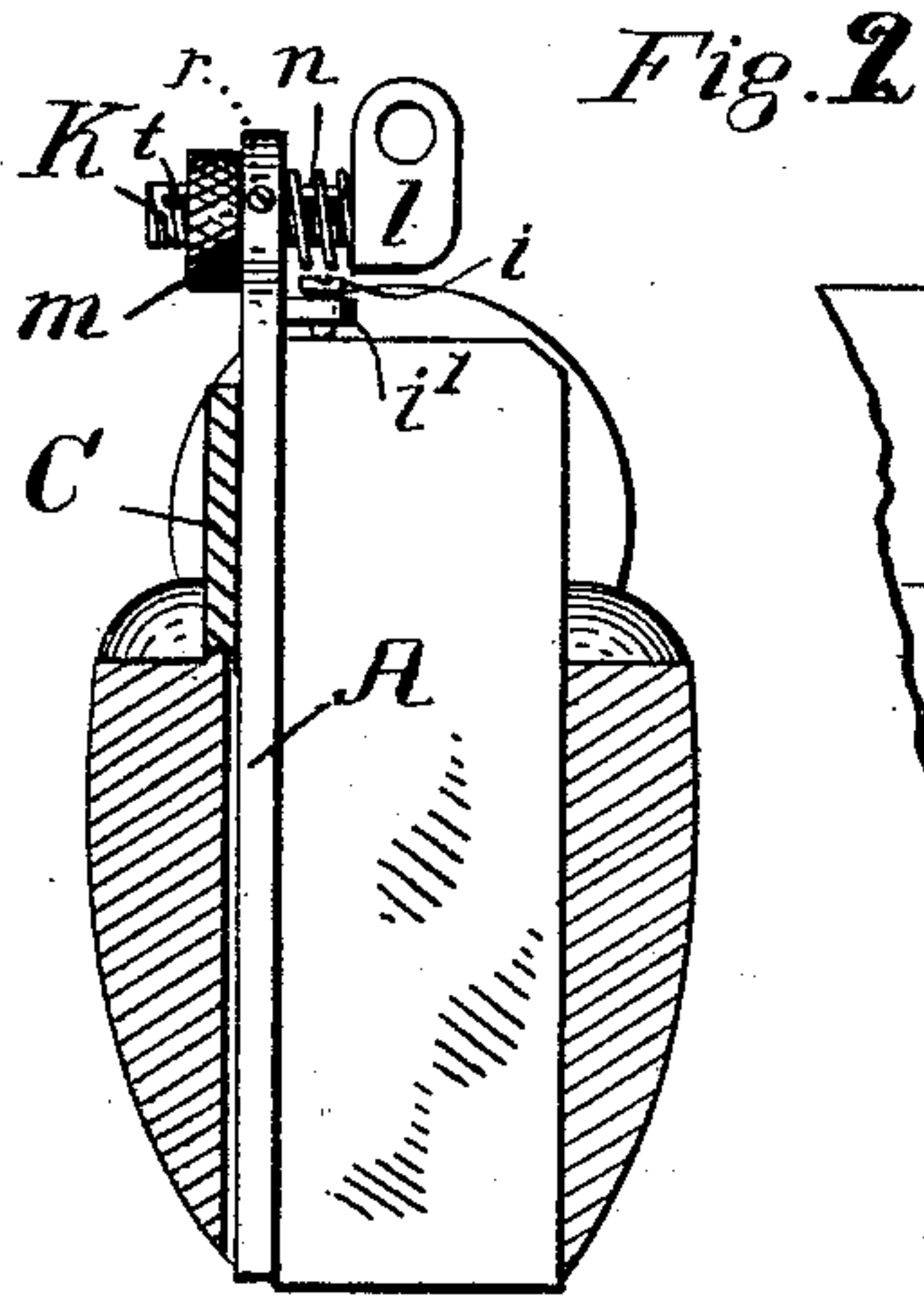
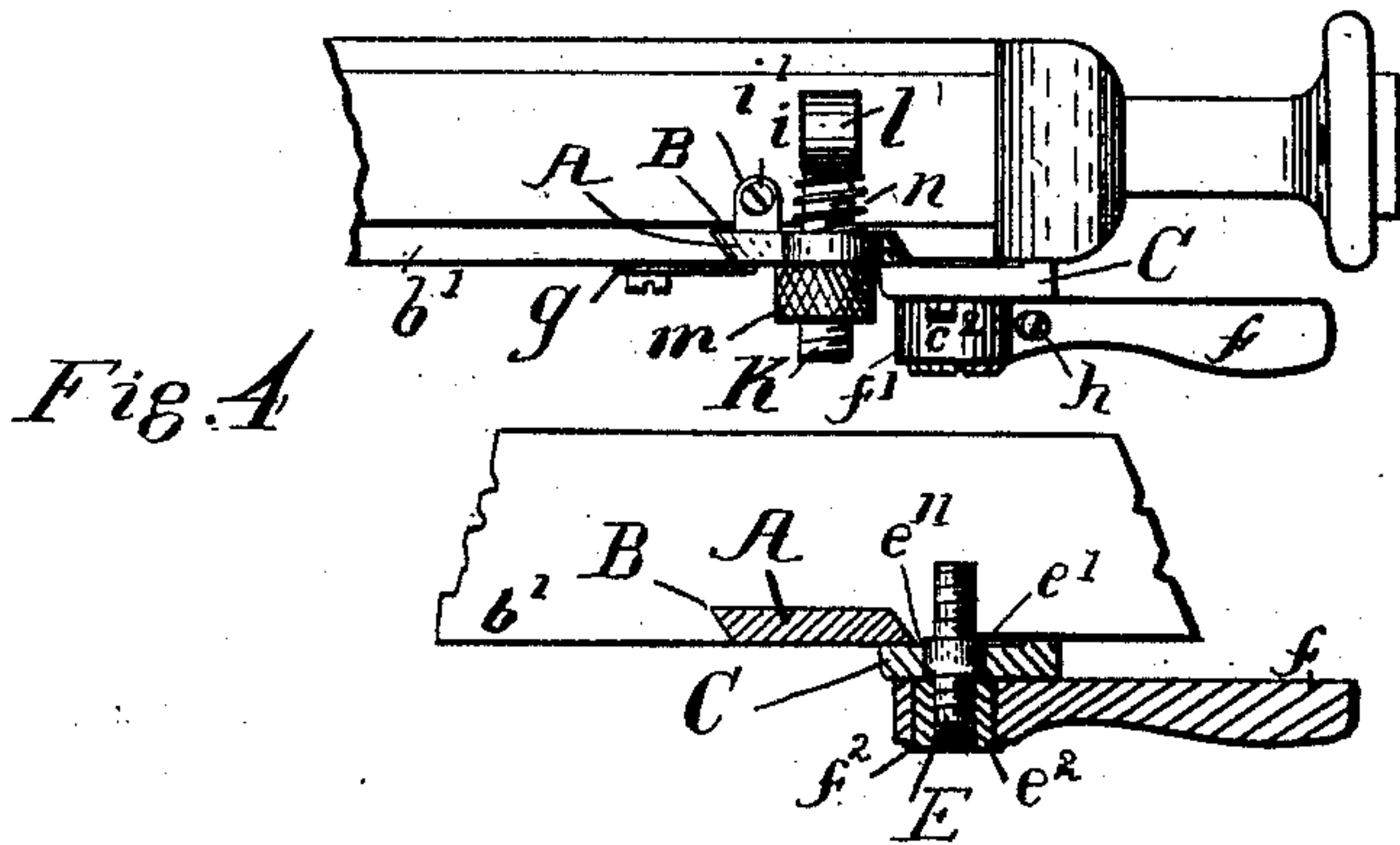


Fig. 3



Witnesses.
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UNITED STATES PATENT OFFICE.

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SIGHT FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 541,560, dated June 25, 1895.

Application filed March 2, 1895. Serial No. 540,347. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LYMAN, a citizen of the United States, residing at Middlefield, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Sights for Firearms, of which the following is a specification.

My invention relates to a sight for firearms, the object being to provide a simple, compact and effective rear sight for military use, adapted for quick adjustment and to withstand rough service without liability to become damaged or inoperative.

The invention consists in the novel vertically sliding bar sight, and the arrangement, combination and construction of parts as hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of my improved sight mounted upon a military rifle and adjusted to the lowest or "point blank" position. Fig. 2 is a rear end elevation of the sight as taken upon the vertical cross-section of the rifle denoted by the line $x x$ in Fig. 1. Fig. 3 is a plan view. Fig. 4 is a horizontal section on the line $y y$, Fig. 1. Fig. 5 is a vertical cross-section on line $z z$, Fig. 1, showing the sight-bar in elevated position.

Referring to the drawings, A designates the sight bar, which is a flat steel strip, fitted and adapted to slide in a vertical groove or way B, milled in the side of the breech b' of the firearm. The forward edge of the said groove is beveled under, dovetailed, or otherwise formed to project over and hold the forward edge of the sight bar in place, and the rear edge of the sight bar is held by a suitable clamping plate C lapped over upon and clamped tightly against it by any suitable means, but I prefer the clamping mechanism shown, comprising a screw or stud E screwed into the breech, having a middle cylindrical portion e' fitting and passing through a hole e'' in the clamping plate C, the outer end of the screw also being threaded and adapted to receive a clamping nut e^3 upon which is fitted a clamping handle f by means of which the nut may be screwed down on the stud to force the clamping plate tightly against the sight

bar and thus hold it stationary at any required elevation.

In operation when the clamping nut is released, the sight bar is free to be raised or lowered in its groove B, and it is suitably graduated by the lines d along its forward edge which in connection with a spring pointer or indicator g , fastened to the breech and having its pointed end placed in the path of the said graduation, serve to denote the height at which the sight is set or elevated for any required range. The clamping nut is provided with a series of notches adapted to receive the point of a suitable set screw h screwed through the eye f' of the clamping handle, whereby the handle may be set in any position with reference to the breech, when the nut is tightened up, a result that could not be obtained were the handle and nut made integral. A flange f^2 is formed on the nut to prevent endwise movement of the handle on the nut, and the space between said flange and the inner end of the nut should be somewhat less than the length of the eye of the clamping handle, which will insure a frictional bearing against the clamping plate of larger diameter than the face of the nut. A pin C^2 in the clamping plate and projecting slightly out therefrom affords a rigid stop for limiting the swing of the arm f .

A set screw i passing through a projection i' on the upper part of the sight bar and adapted to bear on the upper flat surface of the firearm, as shown in Fig. 1, serves to adjust the sight at point blank, the indicator g being correspondingly adjustable vertically on the breech, preferably by slightly elongating the hole through which the holding screw g' passes.

At the upper end the sight bar is perforated to receive a horizontal screw threaded stud K, which carries the sight l at its inner end, and is adapted to be adjusted by a thumb nut m upon its outer end, and a spiral spring n arranged between the sight bar and sight l , and adapted to actuate the stud K in the direction opposite to that in which the nut is adapted to force it. This mechanism while serving to adjust the sight laterally to bring it to the central position, is also adapted to

be used as a wind gage adjustment. A set screw *r* screwed through the edge of the sight bar with its point entering a suitable groove *t*, in the stud *K*, prevents the latter from turning in its bearings.

I prefer to make the rear edges of the groove *B*, and sight bar, substantially parallel with the front edges thereof; that is, of rhomboidal form in cross-section, whereby as the sight bar is clamped down into the groove it will be forced forward by the bevel of the rear edges of the sight bar and groove, and its opposite edge wedged under the dovetailed overhanging forward side of the groove, thus securely fastening it in place. A slot of this shape may also be more easily milled, one cut with a conical cutter being sufficient to shape both sides of the groove.

The graduated lines *d* may be cut sufficiently deep to form shallow notches, and a flange or lip may be provided on the indicator *g* as shown in Fig. 5, to enter or snap into said notches, and thus indicate by sound the height, or number of notches to which the sight bar has been raised, thus enabling the operator to adjust the sight without removing the fire arm from the shoulder. The last notch, *d'* may be made deeper than the others, serving as a stop to prevent the sight bar from being raised too far or removed from its groove. The thumb nut *m* also forms a convenient handle or knob for raising or lowering the sight bar.

I claim as my invention—

35 1. A sight comprising in combination a sight bar guided and adapted to slide in a vertical groove at the side of the breech, a sight carried thereon and overhanging the axis of the gun barrel, a stud inserted in the

breech, a clamping plate mounted thereon 40 and bearing upon the sight bar, and a clamping nut mounted on said stud and adapted to clamp the clamping plate against the sight bar to hold the same stationary at any required elevation, and an indicator for indicating the elevation of the sight, substantially as and for the purpose specified. 45

2. The combination of a sight bar guided and adapted to slide in a vertical groove at the side of the breech, a sight carried thereon 50 horizontally movable over the axis of the barrel, an adjusting nut for drawing the sight toward the sight bar and a spring for actuating it in the reverse direction, a stud, clamping plate, clamping nut and operating handle, 55 substantially as described for securing the sight bar at any required elevation, and an indicator or pointer and graduated scale for indicating the elevation of the sight, substantially as and for the purpose specified. 60

3. A sight comprising in combination a sight bar guided and adapted to slide in a vertical groove at the side of the breech, a sight carried thereon and a clamping screw for securing the sight bar stationary at any 65 required elevation, said groove and sight bar being rhomboidal in cross section with the clamping mechanism adapted to act upon that edge of the sight bar which overlaps or lies upon the beveled side of the groove, 70 whereby the opposite edge of the bar will be wedged into the corresponding V shaped part of the groove by the clamping action, substantially as specified.

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Witnesses:

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