No. 664,732. Patented Dec. 25, 1900.

W. H. DRIGGS.

GUN MOUNT.

(Application filed May 14, 1900.)

(No Model.) 3 Sheets—Sheet 1.

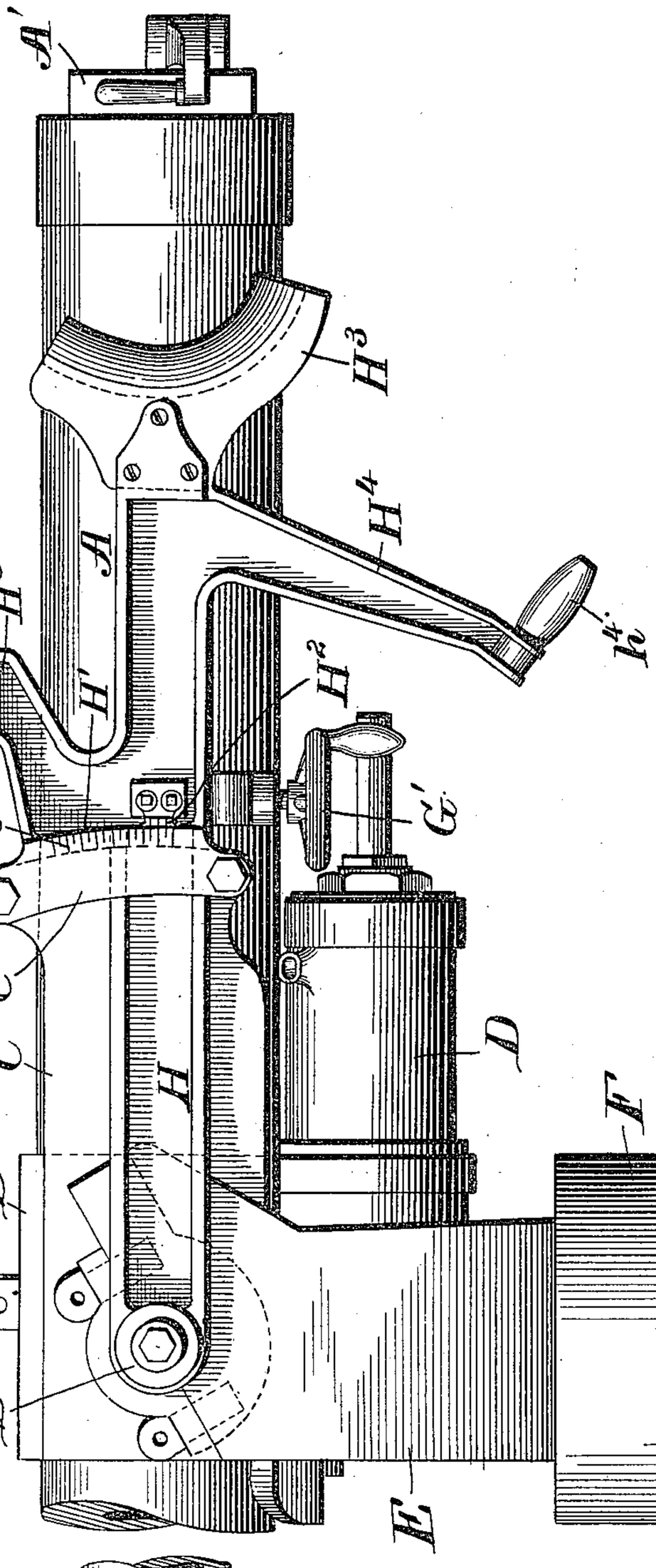

Fig. 1.

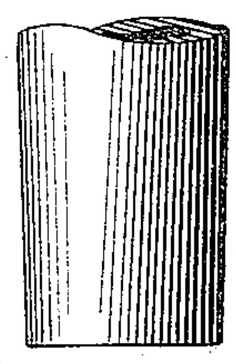

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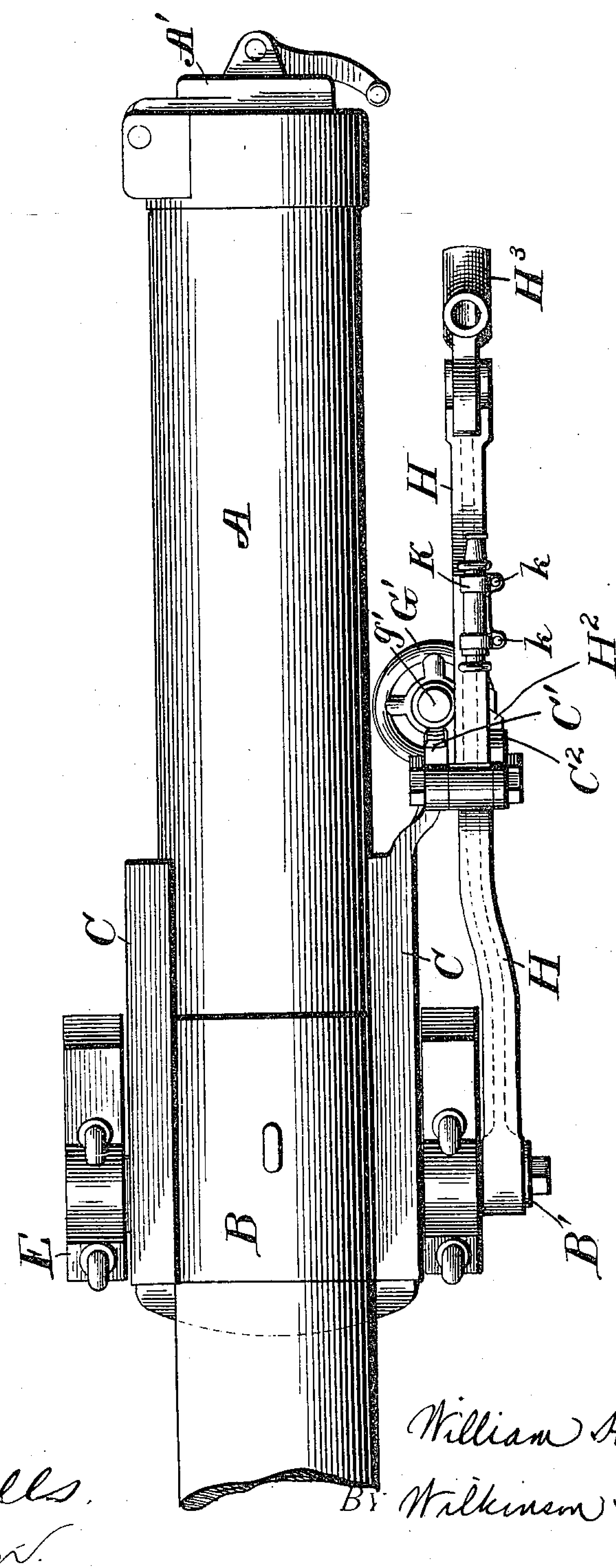
Fig. 2.



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(No Model.) 3 Sheets—Sheet 3.

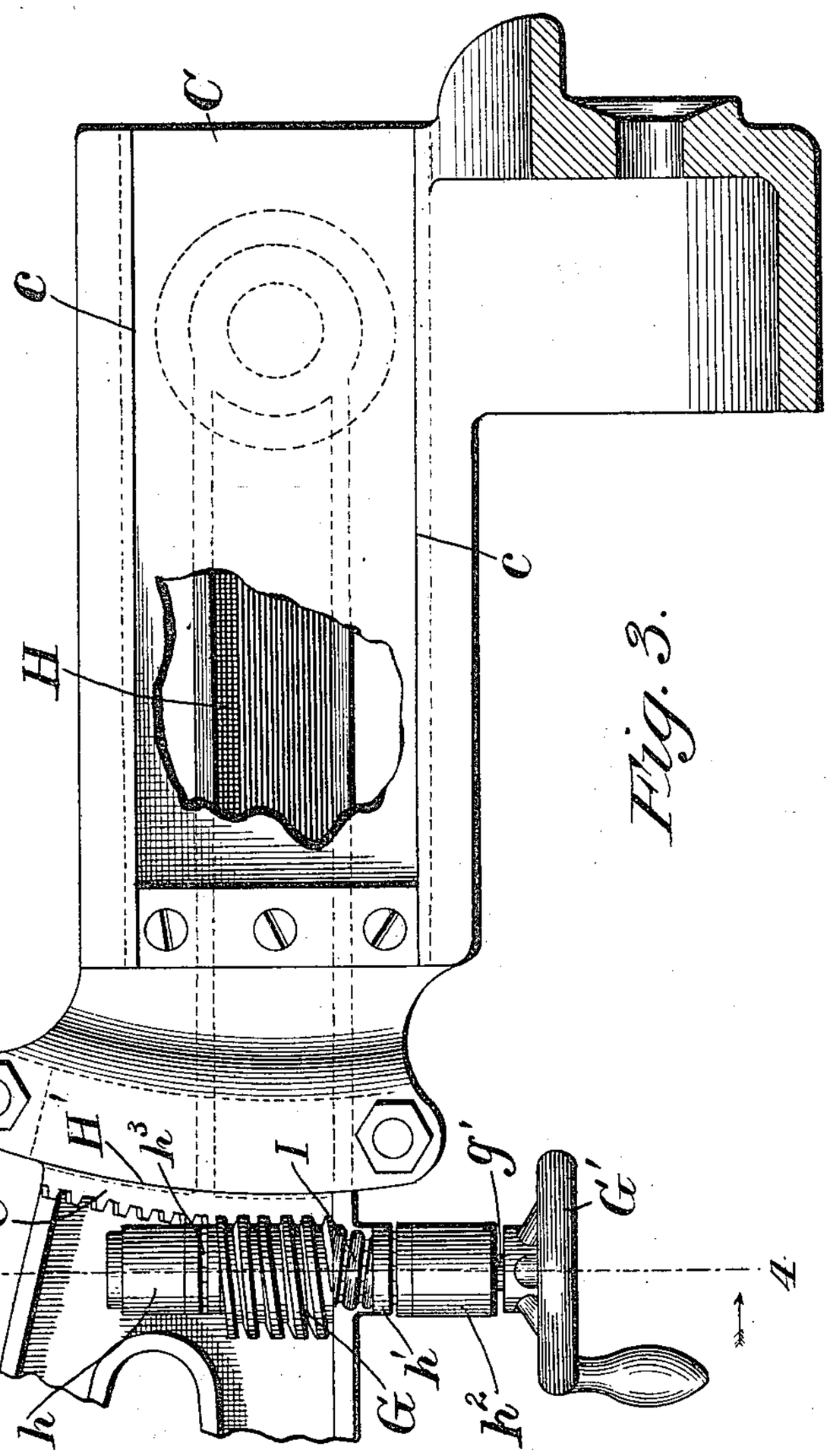

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM HALE DRIGGS, OF WASHINGTON, DISTRICT OF COLUMBIA.

GUN-MOUNT.

SPECIFICATION forming part of Letters Patent No. 664,732, dated December 25, 1900.

Original application filed October 28, 1898, Serial No. 694,815. Divided and this application filed May 14, 1900. Serial No. 16,634. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HALE DRIGGS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Gun-Mounts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in mounts for guns, and especially for rapid-fire guns of light caliber; and the said invention consists more especially in improved and simplified means for pointing the gun and for keeping it trained on the target and also in certain improved details of construction and combinations and arrangements of parts, that will be hereinafter more fully described and claimed.

Reference is had to the accompanying drawings, in which the same parts are indicated by the same letters of reference throughout the several views.

Figure 1 represents a side elevation of the improved gun-mount, parts being broken away. Fig. 2 represents a plan view of the device shown in Fig. 1. Fig. 3 represents a vertical central section through the rocking slide, showing the connection of the pointing-arm therewith, parts being broken away; and Fig. 4 represents a section along the line 4 4 of Fig. 3 and looking in the direction of the arrows.

A represents the gun-body, which is provided with any suitable breech mechanism A′, the gun-body being screwed into the sleeve B, which sleeve travels in guideways *c* of the rocking slide C, as well known in recoil-mounts of the general type herein shown.

The recoil-cylinder D, yoke E, and pedestal F and correlated parts are fully described in my application, Serial No. 694,815, filed October 28, 1898, and entitled "Improvements in gun-mounts," of which application this is a division.

The rocking slide C carries on one side the segmental rack C′ to engage the elevating-worm G and also on the same side segmental scale C^2, graduated as at c^2. Between this rack C′ and this scale C^2 the pointing-arm H projects. This arm is loosely pivoted to one of the trunnions B′ of the rocking slide, and passing rearward between the racks C′ and the scale C^2 is held in adjustable relation to the rocking slide by means of the elevating-worm G, which is journaled in the pointing-arm, as at *h* and h^2, and is rotated by means of the hand-wheel G′. The downward whip of the elevating-gear is eased by means of a stout coil-spring I, interposed between the worm G and the ball-bearing *h*′, supported by the lower bearing h^2 of the worm-shaft *g*′, and the worm is free to move longitudinally on this shaft, but is normally pressed by the said spring against the upper ball-bearing h^3. (See Fig. 4.) The pointing-arm H is preferably provided with a curved shoulder H′, concentric with the scale C^2, and carries an index H^2, by means of which the elevation of the gun relative to the pointing-arm is indicated. The said pointing-arm terminates in a shoulder-piece H^3 and is preferably provided with a downwardly-projecting arm H^4 for the hand-grip h^4.

To facilitate and simplify the sighting of the piece, I provide an upwardly-projecting arm H^5, carrying a single telescope-sight K, which is permanently set at the desired adjustment by means of the adjusting-screws *k*. No front sight is provided. In use the index H^2 is set at the desired elevation relative to the scale c^2, and the gun captain, with his shoulder-piece H^3 and his eye on the telescope, as indicated at L, brings the line of sight on the target. The gun is then fired. In this way a cannon is aimed very much like the ordinary shoulder-rifle, with little, if any, attention necessary with regard to either elevating or training the gun, the elevation being set when desired and being changed only as often as necessary, and the mere act of pointing the gun at the target adjusts both the elevation and the train of the gun. These features, therefore, are particularly desirable either when the gun is mounted on a movable platform or when the target is in motion.

Among the advantages of the herein-described construction of the sighting apparatus it will be seen that the shoulder-piece is well in toward the trunnions, leaving the breech clear for manipulating the breech mechanism and also shortening the arm about which the shoulder-piece rotates. This is very impor-

tant where the gun is mounted on a movable platform, for on shipboard, with the long pointing-arm now ordinarily in use, and in even a moderate sea the ship rolls so that it is impossible for the gun-pointer to reach high enough or to stoop low enough to keep the gun pointed at the target.

Moreover, by the herein-described arrangement greater compactness of the parts is secured, a very important desideratum in the confined space aboard ship. Again, by having the scale c^2 with a radius struck from the center of the trunnion a large scale is secured and slight differences in elevation may be readily noted by the index H^2, which should preferably be of the vernier type. In this way a nice adjustment of the elevation of the gun is readily secured. Again, by having the downwardly-projecting arm H^4, with the handle h^4, for one hand and the support H^3 for the shoulder the gun-pointer can steady and brace himself, and thus keep the gun under better control.

Any suitable firing mechanism may be applied to the gun, but preferably as shown in my application, Serial No. 694,815, aforesaid, of which this is a division.

It will be obvious that various changes might be made in the herein-described construction which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a shoulder-pointed gun, the combination with a trunnioned rocking slide, a pointing-arm pivoted to one of the trunnions of the rocking slide, and a yielding adjustable connection between said pointing-arm and said rocking slide, substantially as described.

2. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a rocking slide and trunnions therefor, of a pointing-arm pivotally connected to one of said trunnions, a telescope-sight carried by said arm and a yielding adjustable connection between said arm and said rocking slide, substantially as described.

3. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a trunnioned rocking slide, of a pointing-arm journaled on an axis coincident with that of the trunnions of the rocking slide, and means adapted to yield to the shock of recoil for adjusting the vertical angle between the longitudinal axes of the pointing-arm and rocking slide, substantially as described.

4. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a trunnioned rocking slide, of a pointing-arm journaled on an axis coincident with that of the trunnions of the rocking slide, a fixed telescope-sight carried by said arm, and means adapted to yield to the shock of recoil for adjusting the vertical angle between the longitudinal axes of the pointing-arm and rocking slide, substantially as described.

5. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a trunnioned rocking slide, of a pointing-arm journaled on an axis coincident with that of the trunnions of the rocking slide, a telescope-sight rigidly mounted on said arm, a hand-wheel and worm-gearing for adjusting the vertical angle between the longitudinal axes of the pointing-arm and rocking slide, and a spring placed beneath said worm to yield to the shock of recoil, substantially as described.

6. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a rocking slide, of a pointing-arm pivotally connected to said rocking slide, a hand-wheel and worm-gearing, for adjusting the relative position of said arm and rocking slide, and a spring engaging one member of said worm-gearing to yield to the shock of the recoil, substantially as described.

7. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a rocking slide, of a pointing-arm pivotally connected to said rocking slide, a gun-sight carried by said arm, worm-gearing for adjusting the relative position of said arm and rocking slide, means for operating said worm-gearing, and a spring engaging one member of said worm-gearing to yield to the shock of recoil, substantially as described.

8. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a rocking slide, of a pointing-arm pivally connected to said rocking slide, a telescope-sight rigidly mounted on said arm and a hand-wheel and worm-gearing for adjusting the relative position of said arm and rocking slide, and a spring engaging one member of said worm-gearing to yield to the shock of recoil, substantially as described.

9. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a trunnioned rocking slide, of a pointing-arm journaled on an axis coincident with that of the trunnions of the rocking slide, worm-gearing for adjusting the vertical angle between the longitudinal axes of the pointing-arm and rocking slide, and a spring and ball-bearings for the worm, substantially as described.

10. In a rapid-fire gun to be pointed from the shoulder of the gunner, the combination with a trunnioned rocking slide, of a pointing-arm journaled on an axis coincident with that of the trunnions of the rocking slide, a gun-sight carried by said arm, worm-gearing for adjusting the vertical angle between the longitudinal axes of the pointing-arm and rocking slide, and a spring and ball-bearings for the worm, substantially as described.

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

WILLIAM HALE DRIGGS.

Witnesses:

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FRANK D. BLACKISTONE.