

T. C. JOHNSON.
 REPEATING FIREARM.
 APPLICATION FILED JAN. 16, 1910.

958,407.

Patented May 17, 1910.

2 SHEETS—SHEET 1.

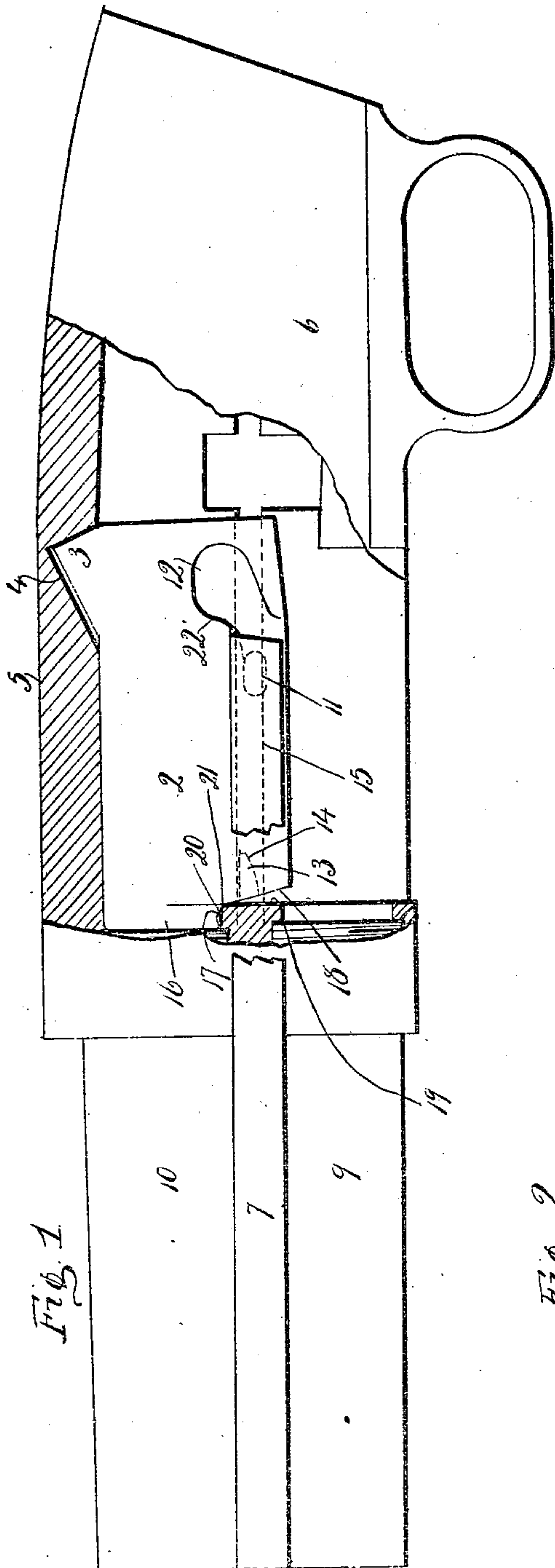


Fig. 1

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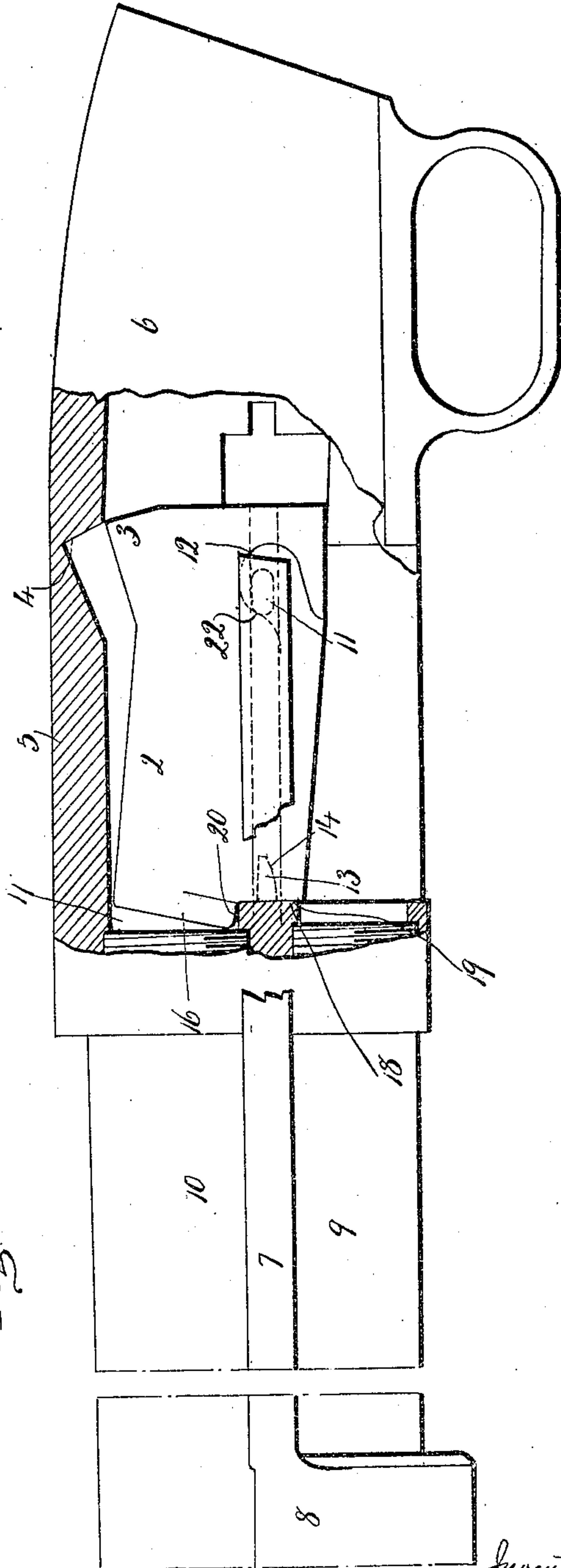


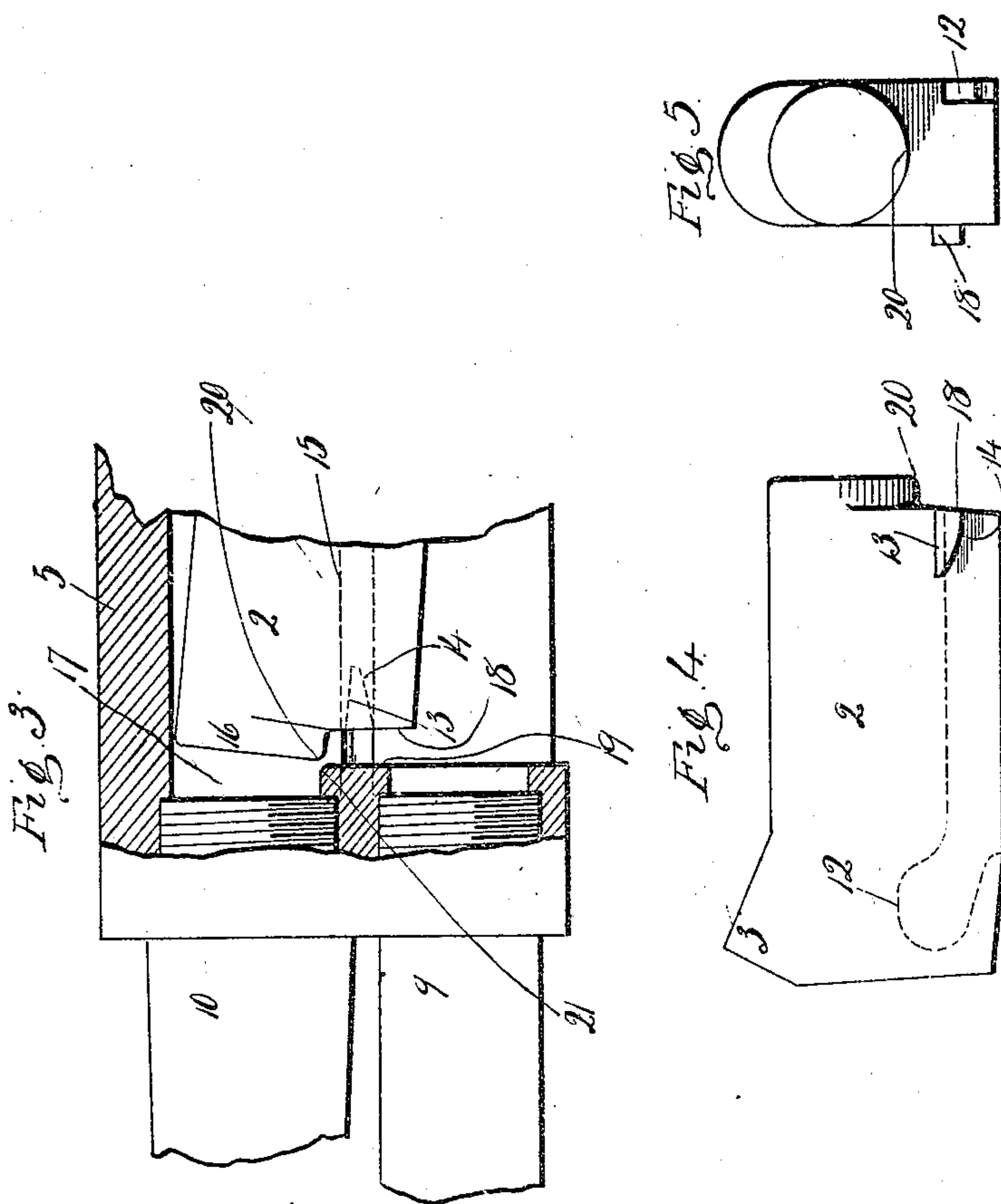
Fig. 2

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UNITED STATES PATENT OFFICE.

THOMAS C. JOHNSON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO WINCHESTER REPEATING ARMS CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

REPEATING FIREARM.

958,407.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed January 15, 1910. Serial No. 538,241.

To all whom it may concern:

Be it known that I, THOMAS C. JOHNSON, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Repeating Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the figures of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a broken view partly in left hand side elevation and partly in vertical section of a gun constructed in accordance with my invention, with the compound movement breech-block in its closed and locked position. Fig. 2 a corresponding view with the breech-block in its unlocked position with the stop-face at its forward end engaged with the stop-face at the forward end of the gun-frame. Fig. 3 a broken view partly in side elevation and partly in vertical section, with the breech-block near the limit of its forward excursion and showing the support of its forward end by the riding of the lug on its right hand side upon the lower wall of a groove or guideway in the inner face of the right hand wall of the gun-frame. Fig. 4 a detached view in right hand side elevation of the breech-block. Fig. 5 a view thereof in front elevation.

My invention relates to an improvement in that class of repeating firearms provided with compound movement breech-blocks which have their rear ends raised and lowered at the limit of their forward excursion, for being locked in and unlocked from their recoil-taking positions, the object of my present invention being to provide a superior closure for the cartridge-chamber in the gun barrel, to safeguard against the premature explosion of the cartridges, and to provide an effective stop for limiting the forward movement of the breech-block as well as a fulcrum for it to swing upon in that position.

With these ends in view my invention consists in a repeating firearm having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claim.

In carrying out my invention, I employ a so-called compound movement breech-lock

2 provided at its rear upper corner with a recoil-taking shoulder 3 which enters a suitable notch 4 in the solid top 5 of the gun-frame 6. The said block 2 is moved back and forth and raised and lowered by means of an action-bar 7 connected at its forward end with a sliding operating-handle or movable forearm 8 mounted upon a tubular magazine 9 located directly below the gun-barrel 10. At its rear end the action-bar 7 is provided with an inwardly projecting operating-lug 11 entering a cam-path 12 in the left hand side wall of the block 2, the said cam-path being shaped as required to raise and lower the block at its rear end for lifting its lug 3 into the said notch 4 and lowering it therefrom, for locking and unlocking the block. The said block is supported at its forward end during its longitudinal movement back and forth, by a supporting-lug 13 located on the right hand side of its forward end. This lug 13 travels in a narrow horizontal groove or guideway 15 formed in the inner face of the right hand wall of the gun-frame 6 and made a trifle wider than the lug 13 the curved lower face 14 of which rides on the bottom wall of the said groove. At its extreme forward end the block is formed with a solid, circular tenon-like supporting-nose 16 adapted in diameter to fit snugly within a circular mortise-like recess 17 formed in the front end of the receiver 6 and concentric with the cartridge-chamber, not shown, in the gun-barrel 10. Directly below its supporting-nose 16, the block is formed with a rearwardly inclined stop-face 18 coacting with a vertical stop-face 19 formed in the gun-frame 6 at a point directly below the said recess 17 therein. I may now mention that the lug 13 is so spaced with reference to the supporting-nose 16 that it will be lifted away from the bottom wall of the groove 15 in the gun-frame 6 just as soon as the rounded lower corner face 20 of the supporting-nose 16 engages with the slightly rounded lower edge 21 of the recess 17 in the frame 6, whereby the said lug 13 is lifted above the lower wall of the groove 15 and the support of the forward end of the breech-block entirely transferred to the supporting-nose 16, this lifting of the forward end of the block being provided for by making the groove 15 a trifle wider than the lug 13.

Having described my improvement in de-

tail, I will now set forth its operation. The breech-block is moved forward and back by the operating-handle 8 and action-bar 7 in the inclined position, in which it is shown in Fig. 2. Just before the block reaches the limit of its forward excursion, the rounded lower corner 20 of its solid, circular supporting-nose 16 engages with the rounded lower edge 21 of the circular recess 17 in the frame 6, whereby the block is a trifle elevated at its forward end and its nose 16 entered into the recess 17. As the forward end of the block is lifted, as described, the lower face 14 of the supporting-lug 13 will be raised from the lower wall of the groove 15, whereby the entire support of the forward end of the block will be transferred from the lug 13 to the relatively large tenon-like supporting nose 16. Under this construction the lug 13 which is a comparatively small part, is called upon to do nothing more than support the weight of the breech-block as the same is moved back and forth and is entirely relieved from all strain and shock at the time the gun is fired. As the block is moved into its fully closed position, its stop-face 18 abuts against the stop-face 19 in the gun-frame, both of these faces being relatively large, and the face 18 being at this time parallel with the face 19 on account of the inclined position of the block. When the block is at the limit of its forward excursion, as shown in Fig. 2, the operating-lug 11 of the action-bar 7 engages with the cam-path 12 at about the point 22 therein and lifts the rear end of the breech-block into its locked position in which its recoil-taking lug 3 enters the notch 4 in the gun-frame 6. In swinging into its locked position as described, the block turns upon the lower face of its supporting-nose 16 as upon a fulcrum, and its stop-face 18 swings away from the stop-face 19 of the gun-frame 6. When the block is in its fully closed and locked position, it is solely supported at its forward end by its solid, circular nose 16 which is substantially of the same size as the head of the cartridge which is not shown, and forms, as it were, a large and heavy plug for confining the cartridge in the cartridge-chamber of the gun-barrel 10. The

supporting-nose 16 being swung as it were into its final position, crowds the cartridge forward instead of striking it a full square blow and driving it forward, whereby the premature firing of the cartridge is safeguarded. When the block is in its closed and fully locked position, its rear end is supported by the bearing of the upper face of the operating-lug 11 upon the straight portion of the lower wall of the cam-path 12 in the block.

The subject matter of this application is in part shown and described, but not claimed, in my prior applications Serial Nos. 529,108, 530,081, 535,408 and 535,409, and other co-pending applications.

I claim:—

In a repeating firearm, the combination with a gun-frame or receiver having a solid top the under face of which is formed with a locking-notch, of a gun-barrel, a tubular magazine located below the gun-barrel, a sliding operating-handle mounted upon the said magazine, an action-bar carried by the said handle and extending rearwardly therefrom, and a longitudinally and vertically movable breech-block provided at its rear upper corner with a recoil-taking shoulder adapted to be entered into the said notch, connected directly with the rear end of the action-bar for being moved back and forth thereby and for being raised and lowered at its rear end thereby, formed at its forward end with a solid, circular tenon-like supporting-nose entering a corresponding circular recess in the said frame and acting as a fulcrum on which the block is swung into its locked and unlocked positions, and the said breech-block being also formed at its forward end with a rearwardly inclined stop-face located below the said nose and co-acting with a vertical stop-face formed in the frame at a point directly below the said circular recess.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

THOMAS C. JOHNSON.

Witnesses:

FREDERIC C. EARLE,
CLARA L. WEED.