

(No Model.)

2 Sheets—Sheet 2.

F. W. WHITE, Jr.
COCKING MECHANISM FOR BREAKDOWN GUNS.

No. 532,931.

Patented Jan. 22, 1895.

FIG-5-

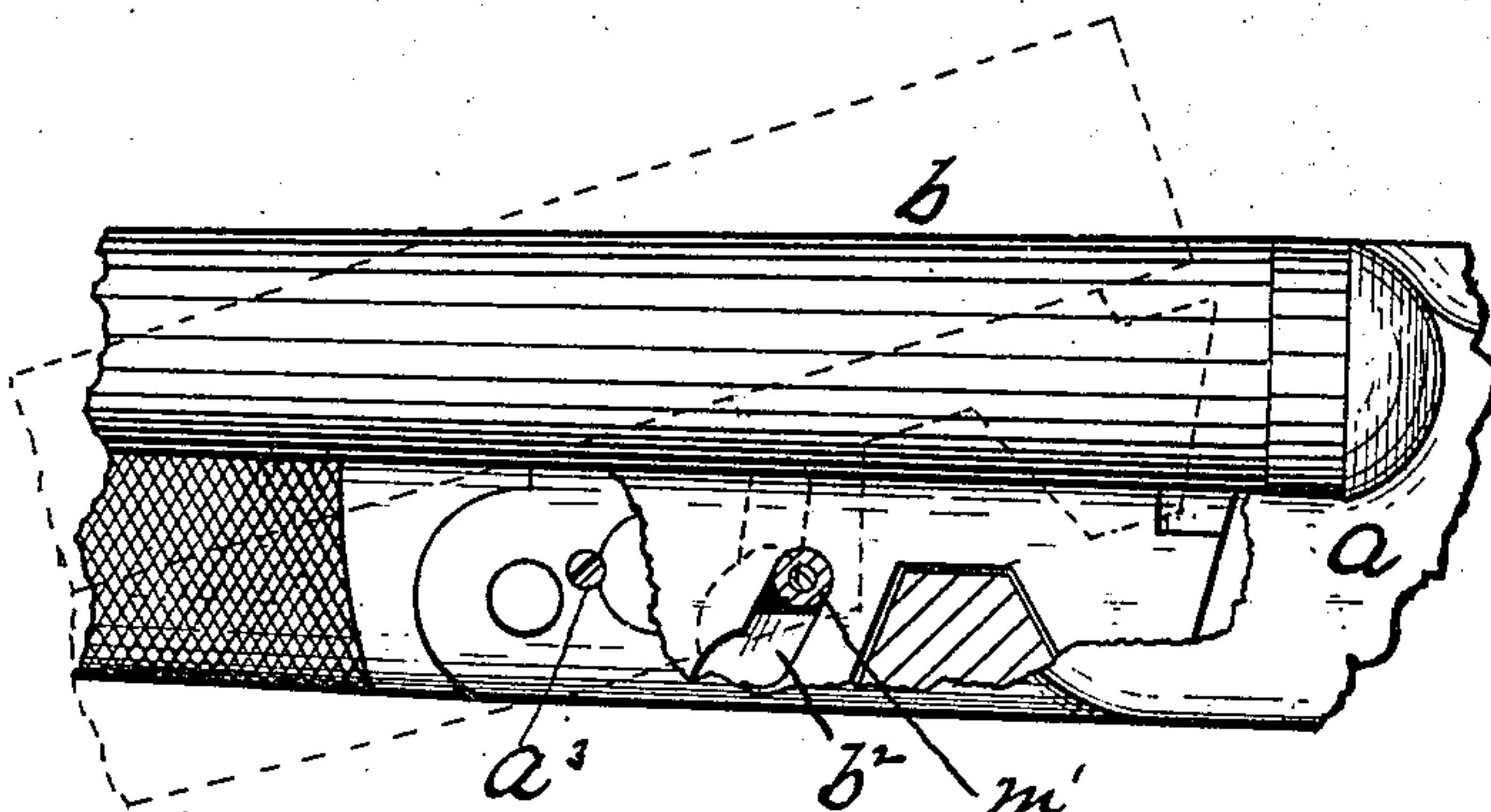


FIG-6-

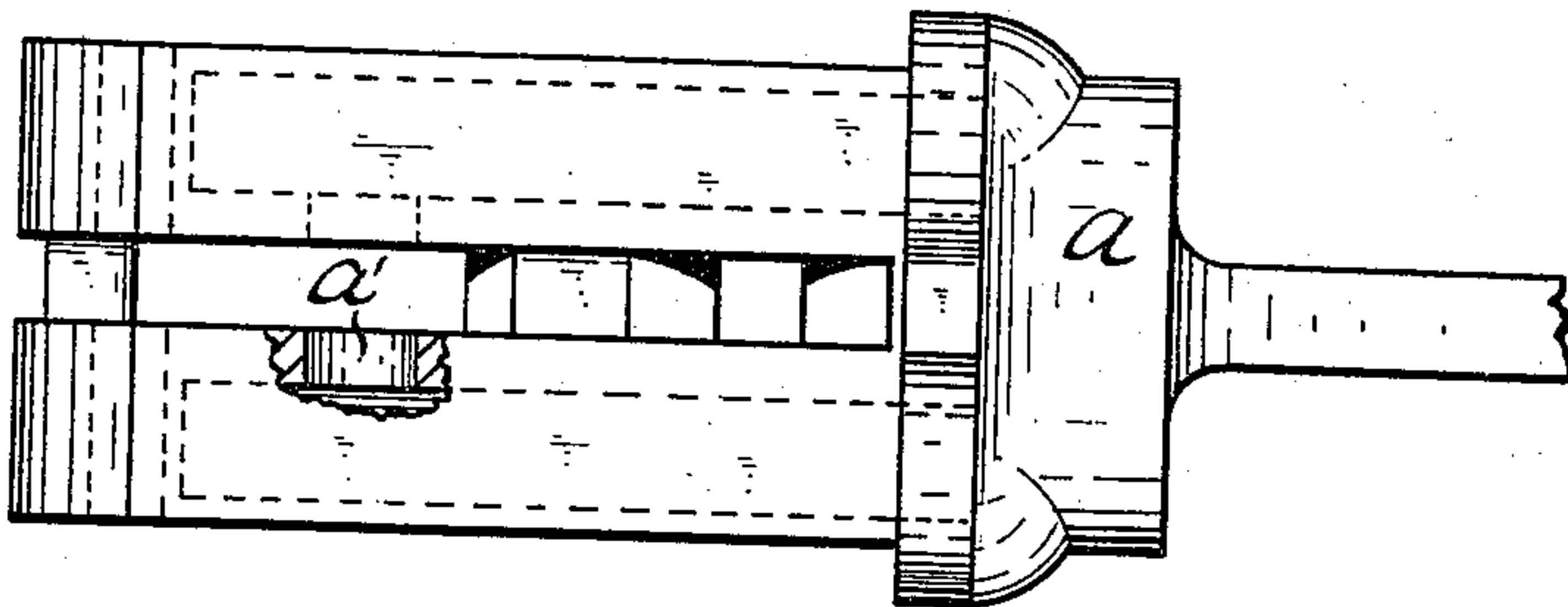


FIG-7-

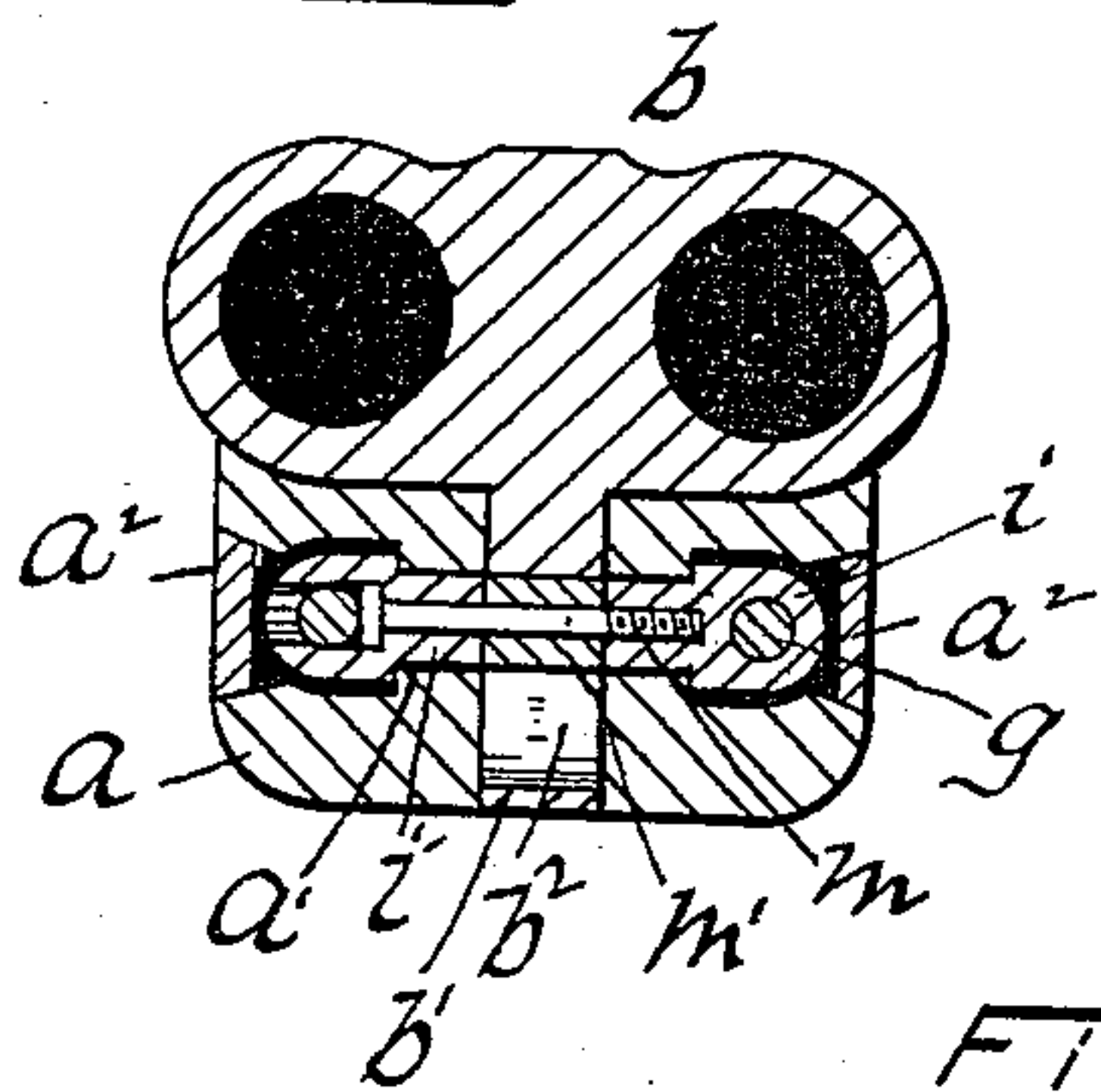


FIG-8-

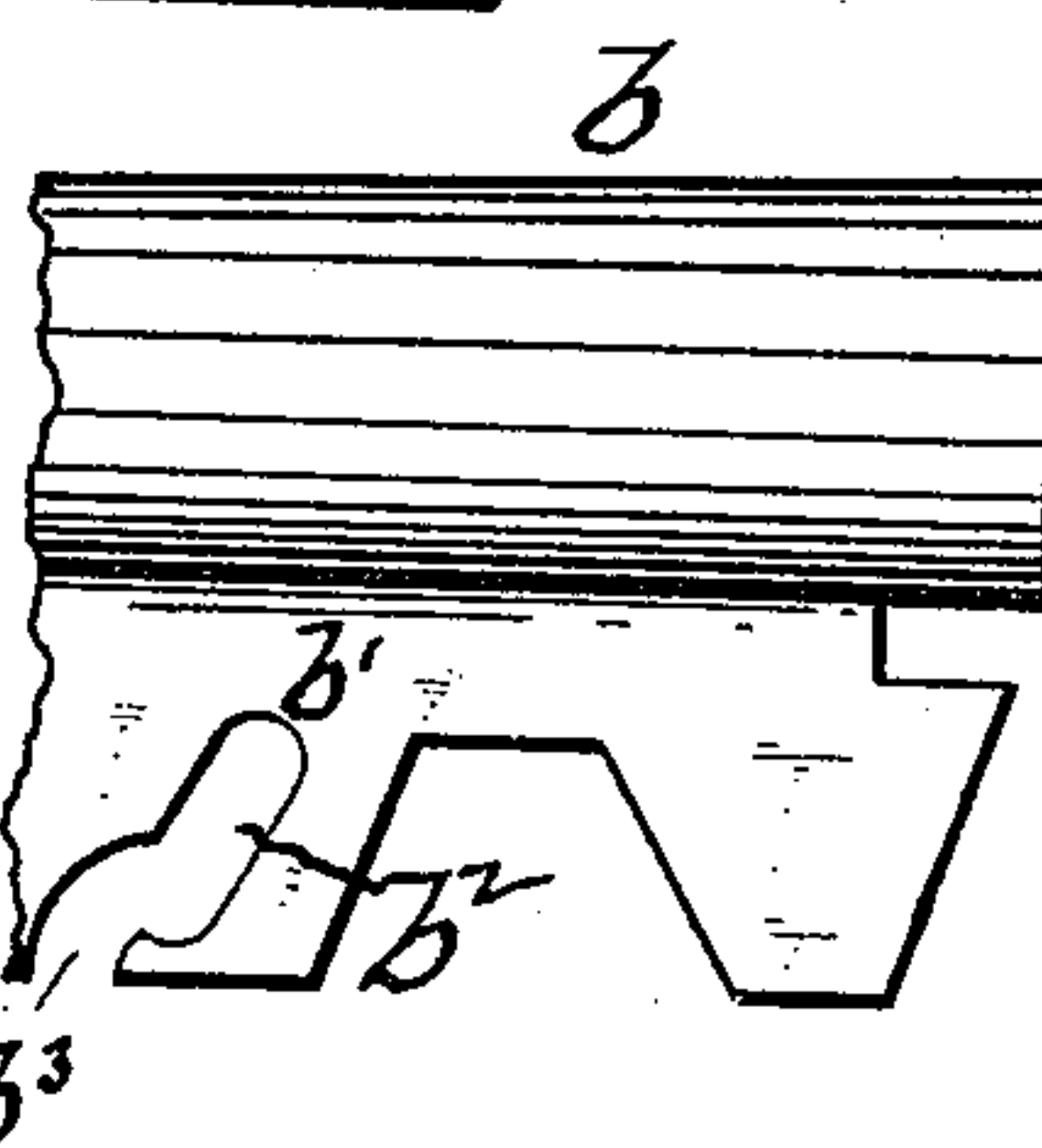
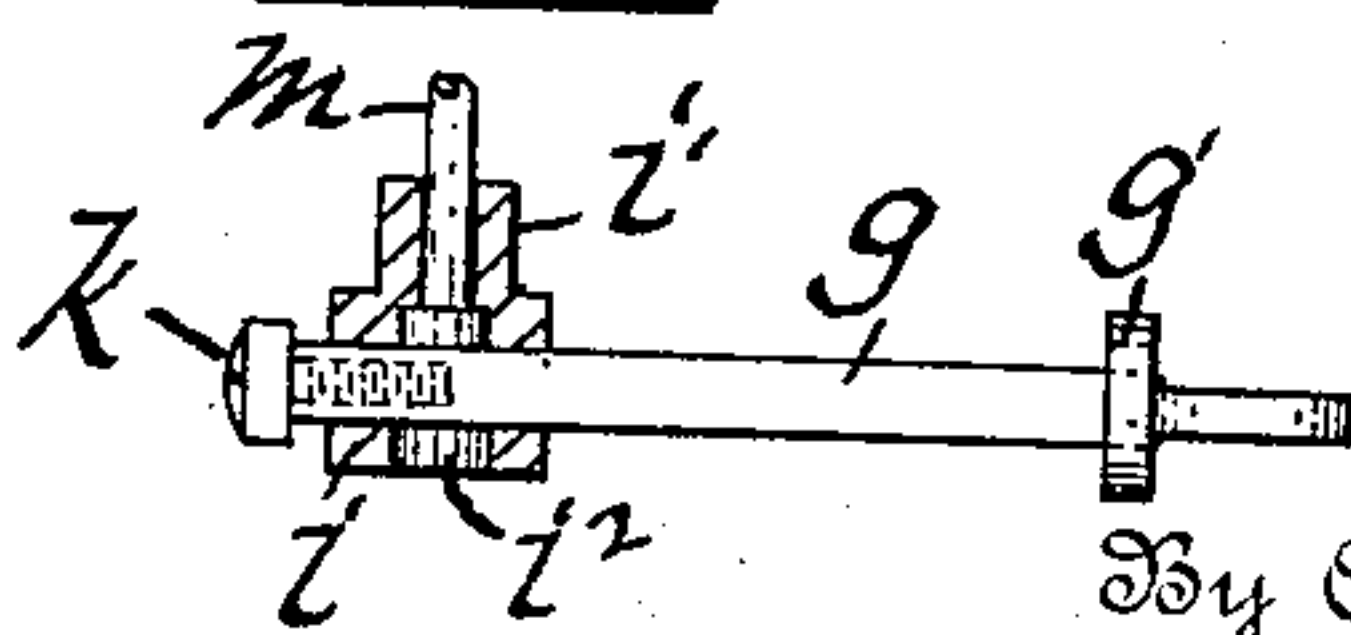


FIG-9-



Witnesses

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COCKING MECHANISM FOR BREAKDOWN GUNS.

SPECIFICATION forming part of Letters Patent No. 532,931, dated January 22, 1895.

Application filed June 18, 1894. Serial No. 514,997. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. WHITE, Jr., a citizen of the United States, residing at Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Firearms, which improvements are fully set forth and described in the following specification, reference being had to the accompanying two sheets of drawings.

This invention is in "break-down, hammerless," guns and my immediate object is to provide simple, strong, and effective mechanism for controlling the concealed hammers, both for cocking and firing the same, which mechanism, by reason of its peculiar action, aids rather than hinders the breaking down of the barrels.

To explain my invention most clearly I have provided the annexed drawings, in which—

Figure 1 is a side view of the breech-frame of an arm embodying said invention, with a portion of the barrels hinged thereto, and Fig. 2 is a view of the same with the front wall of the frame partly broken away to expose the left hand hammer and its connected parts. Fig. 3 shows the same parts with the barrels swung open to reload and, by the same action, to cock the arm. In Fig. 4 I have shown, detached, one of the hammers, its sear, and mainspring. Fig. 5 is a side view of a portion of the breech-frame and barrels, the frame being broken away to expose the barrel lug and the slot therein which controls the mainsprings. Fig. 6 is a plan view of the breech-frame. Fig. 7 is a cross-sectional view on line $x-x$ of Fig. 5, and Fig. 8 is a detached view of the rear end portion of the barrels. In Fig. 9 is shown one of the mainspring rods and the thimble or collar that supports its free end, said collar being in section.

In the drawings the letter a indicates the breech-frame and b the barrels of a breakdown gun, said parts being formed, and hinged together, substantially as in guns of this class, as ordinarily constructed.

Within the frame a are pivoted hammers c , one only being illustrated in the drawings and for each hammer is provided a sear d that engages a notch in the lower, rear, part of the hammer, when the latter is brought to a full cock, as in Figs. 3 and 4. Triggers e engage

the said sears to throw the latter out of locking engagement with the hammer notches. The frame a is formed (by drilling or otherwise) with chambers f leading forward from the recesses in which the hammers are located to the end of the frame and in the chambers f are rods g whose rear ends are pivoted to the hammers at a point below the stud or screw on which the hammers are hung. Each rod g is formed with a fixed or integral flange g' that forms an abutment for the rear end of a stiff spiral spring h that is mounted upon said rod and serves as the mainspring of the arm. The front end of rod g is loosely supported in a thimble or collar i which forms the front abutment of spring h and a screw k is tapped into the end of said rod to prevent the collar i from being forced off the rod. This screw k may also be adjusted to vary the tension of the main spring, as explained hereinafter.

Collar i is provided with a hub or boss i' that lies in a slot a' in the frame a , as best seen in Figs. 6 and 7, the slot i' being sufficiently long to permit a considerable movement of the collar i . The two collars i , at opposite sides of the arm, are secured together by a screw m (see Fig. 7) and upon that portion of the screw that passes through the barrel lug b' is mounted a roll m' that lies in a diagonal slot b^2 cut in said lug, the roll m' serving to reduce friction when the barrels are swung to open the arm.

In order to insert the screw m , when the parts are being assembled, one of the collars i is drilled as at i^2 and counterbored to provide a seat for the screw-head and the hub of the other collar is drilled and tapped to receive the threaded end of said screw. The collars are inserted through openings in the breech frame, which openings are finally closed by side-plates a^2 that are secured by the heads of screws a^3 . After the collars have been thus introduced into the breech frame and secured together, the ends of the rods are passed through their respective collars and screws k are inserted through the outer ends of the chambers f and screwed into the ends of the rods.

I have referred briefly to a diagonal barrel-lug slot b^2 through which the screw m passes. This slot is of such pitch that, when the barrels are closed, said screw and the connected

collars i , are forced toward the rear of the arm, thus compressing the springs, as seen in Fig. 4, the latter serving to force the hammers forward, to discharge the arm, whenever said hammers are released from the sears. When the arm has been thus discharged and it becomes necessary to reload it, the barrels are swung on their pivotal support, as in Fig. 3, during which movement the diagonal slot b^2 draws forward the screw m and the connected collars i , thus also drawing forward the rods g which, being connected with the lower portions of the hammers, throw said hammers back to full cock, where they are held by the sears. As the barrels return to their normal, closed, position the collars i are slid upon the rods g , compressing the mainsprings. The instant the barrels are unlocked the mainsprings, by their efforts to expand, cause the roll m' to crowd against the front wall of the diagonal slot and thus aid materially in swinging the barrels open. The same operation removes all strain from the hammers which latter simply follow the movement of the rods g and are brought to full cock without resistance. When the barrels are swung to their closed position the moderate pitch of the diagonal slot b^2 , aided by the anti-frictional roll m' , makes it an easy task to slide the collars i rearward on the rods g and thus compress the mainsprings.

To permit the barrels to be readily disengaged from the breech-frame I have cut through the lower end wall of the slot b^2 , as shown at b^3 in Fig. 8, the outlet thus provided being offset from the longitudinal center of said slot and being wide enough to release the anti-frictional roll m' when the barrel hinge is disengaged. The outlet b^3 being thus offset permits the barrels to swing a limited distance only and thus serves as a substantial and cheap barrel check.

By adjusting the screw k in the end of rod g the longitudinal movement of said rod may be correspondingly regulated and the tension of the mainspring varied. The head of said screw k is considerably larger than the bore of the collar i . When the arm is discharged and the hammers returned to their closed positions, as in Fig. 2, the screw-heads abut the front ends of the collars but the expansive tension of the springs is then nearly exhausted so that, when the barrels are unlocked and

swung open, the collars immediately start the screws k and connected rods forward to cock the hammers.

My described improvements are of such a character that they may be readily and cheaply made and assembled.

I claim as new and desire to secure by Letters Patent—

1. In a break-down gun, in combination, a breech-frame having a hammer recess and a chamber leading from the recess to the front end of the frame, and a slot and an opening communicating with the chamber, a hammer within the recess; a barrel hinged to the front end of the frame having a slotted lug to the rear of the hinge, a collar within the chamber and provided with a boss which projects into and is movable within the slot of the frame, a rod through the collar, the rear end of which is provided with an abutment and is pivotally secured to the hammer, a spring upon the rod, a screw in the end of the rod, a pin through the boss of the collar and projecting into the slot in the lug of the barrel, and a side plate for closing the opening in the side of the frame, substantially as set forth.

2. In a break-down gun, in combination, a breech-frame, a barrel hinged thereto having a diagonally slotted lug in the rear of its hinge as set forth, a hammer pivoted in said frame, a rod secured to the hammer below the pivotal point of the latter and having mounted thereon a spiral spring, a loosely fitting longitudinally movable collar on the free end of said rod, an adjustable tension screw in the end of said rod, and connections intermediate the said collar and diagonal lug-slot whereby the opening of the barrel will serve to slide the collar and rod forward and cock the hammer; all substantially as specified.

3. A barrel check for break-down guns, consisting of a diagonally slotted barrel lug, in the rear of the barrel hinge, the lower end wall of the slot in the lug being cut through and provided with an offset for limiting the movement of the barrel and a pin extending through the said lug-slot and movably located in a slot in the breech-frame, substantially as specified.

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Witnesses:

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