(No Model.) 3 Sheets—Sheet 1.

W. H. DRIGGS & S. SCHROEDER.

BREECH LOADING ORDNANCE.

No. 378,828. Patented Feb. 28, 1888.

Fig. 2.

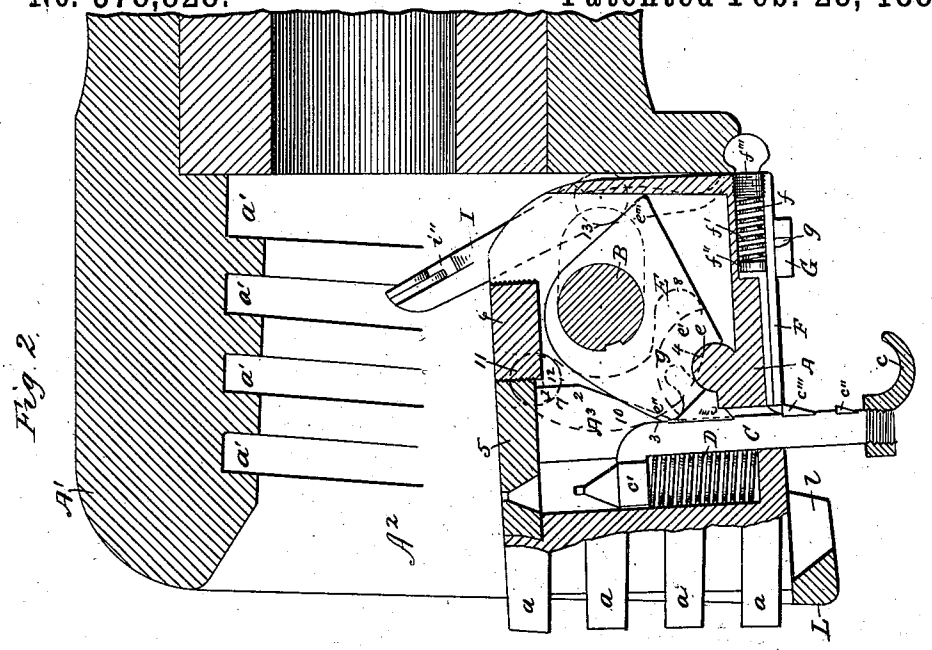


Fig. 12.

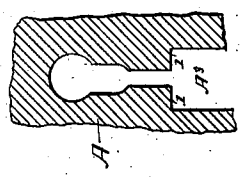
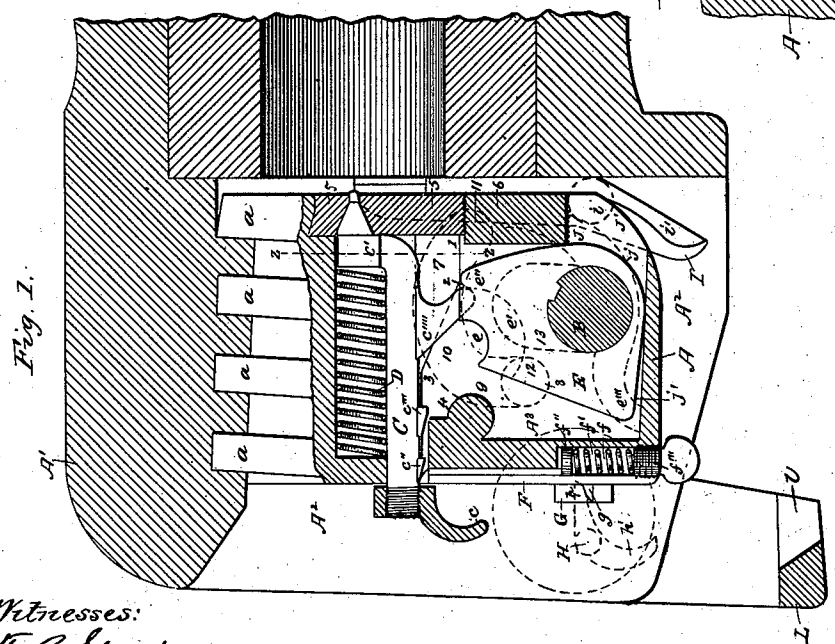


Fig. 1.



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Fig. 3.

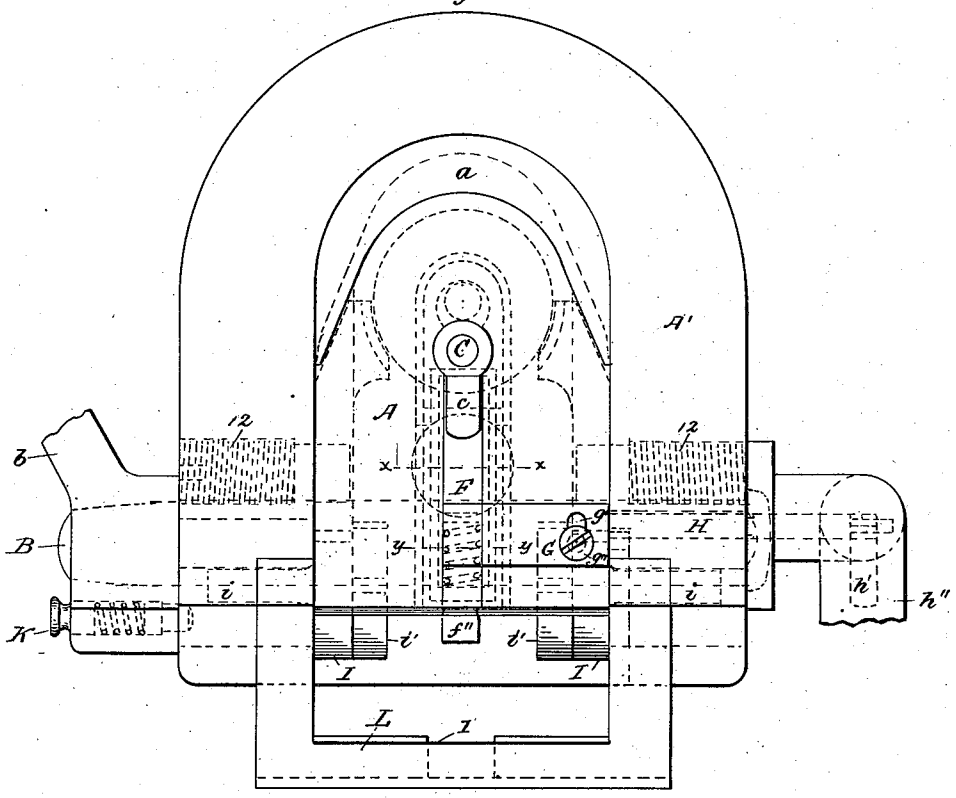
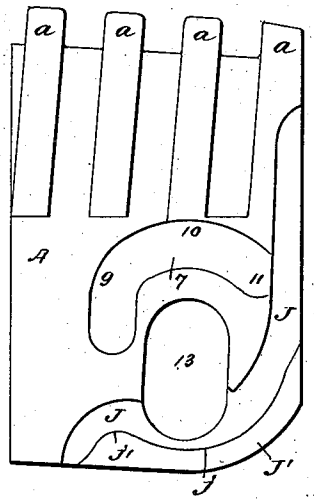


Fig. 4.



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BREECH LOADING ORDNANCE.

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Fig. 5.

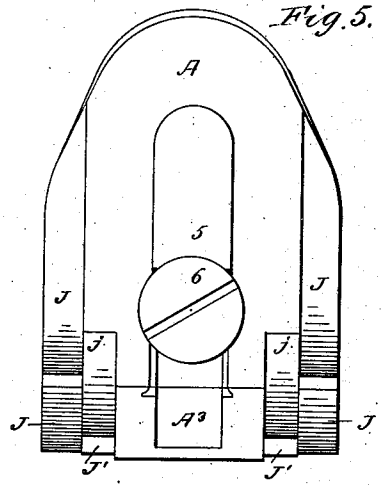


Fig. 6.

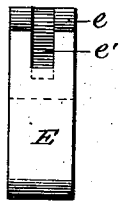


Fig. 9.

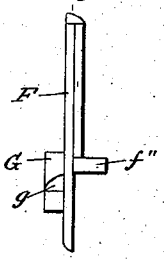


Fig. 7.

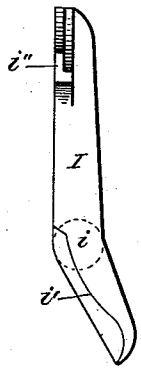


Fig. 13.

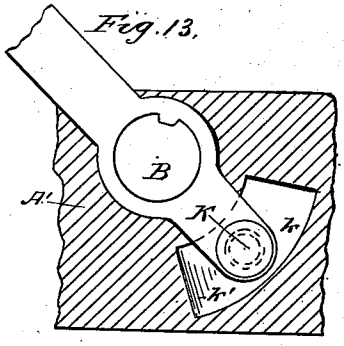


Fig. 8.

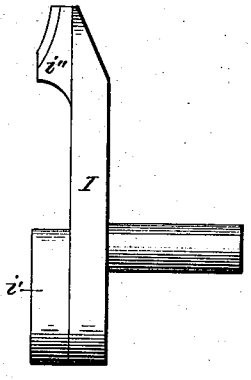


Fig. 10.

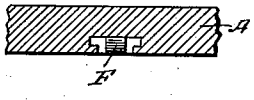
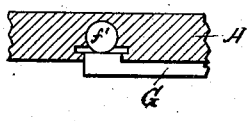


Fig. 11.



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UNITED STATES PATENT OFFICE.

WILLIAM HALE DRIGGS AND SEATON SCHROEDER, OF WASHINGTON, DISTRICT OF COLUMBIA.

BREECH-LOADING ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 378,828, dated February 28, 1888.

Application filed January 3, 1888. Serial No. 259,608. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM HALE DRIGGS and SEATON SCHROEDER, citizens of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Breech-Loading Ordnance; and we 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.

Our invention has for its object certain improvements in breech-loading ordnance, and more particularly in rapid-firing single-shot guns of the special construction disclosed in United States Letters Patent granted to us April 5, 1887, No. 360,798. This object we accomplish by the mechanism illustrated in the accompanying drawings, forming part of this specification, wherein the same reference letters and numerals indicate the same or corresponding parts; and our invention consists in the construction and arrangement or combination of parts hereinafter disclosed in the description, drawings, and claims.

Referring to the drawings, Figure 1 represents a longitudinal section of the breech end of the gun and the breech-block, the cam and firing-pin being shown in side elevation and other parts and features in dotted lines. Fig. 2 shows the same with the breech-block moved back into position for opening the chamber for the introduction of a cartridge. Fig. 3 is a rear elevation of the breech of the gun, with the breech-block closing the chamber and a number of other parts and features shown in full and dotted lines. Fig. 4 shows a detail side view of the breech-block. Fig. 5 shows a front view of the same. Fig. 6 is a rear view of the cam in detail. Figs. 7 and 8 are respectively side and rear views in detail of the extractor-arm for the right side of the breech-block. Fig. 9 is a detail side or edge view of the sliding leaf for holding and releasing the firing-pin. Figs. 10 and 11 are broken horizontal sections of the breech-block and sliding leaf, said sections being respectively taken on the dotted lines *x x* and *y y*, Fig. 3. Fig. 12 is a vertical section of a part of the breech-block on the dotted line *z z* of Fig. 1, showing the form of the cavity at that point. Fig. 13 is a broken side view of the gun-breech and the operating-handle, showing the spring-catch in the latter and the recess therefor in the former.

In the drawings, A represents the breech-block, which is provided on its upper surface with bands *a a*, which fit into correspondingly-shaped grooves or recesses *a' a'* in the upper interior surface of the gun-breech A', and extend downward a suitable distance within the walls of the chamber A^2. These bands and their grooves firmly hold the breech-block in position and prevent backward movement of the same during firing. They are substantially the same as those disclosed in our above-named patent.

The breech-block A is formed with a cavity, A^3, extending from the front toward the rear, the general contour thereof being represented in longitudinal and transverse section in Figs. 1 and 12. Formed in the front part of the cavity is a horizontal wall, 1 2, of suitable length, which merges into an upwardly-inclined wall, 2 3, and in the rear upper part of the rectangular portion of said cavity is a round shoulder, 4, which may be an integral part of the breech-block, as shown, or a round pin immovably secured therein, the use of the latter permitting more ready slotting or cutting out of the block.

The central front face of the breech-block containing the cavity is left open until the latter is finished and ready for use and the cam is introduced, after which said cavity is covered by a strong face-plate, 5, which is held in place by a locking-plug, 6, screwed into the same and the cheeks of the cavity. This construction of breech-block we have discovered to be convenient and advantageous in forming the features or parts interiorly of the cavity and in introducing the cam.

In the sides of the breech-block are formed cam or guide grooves 7 7, which are of the shape shown in dotted lines in Fig. 1 and full lines in Fig. 4, their lower or rear walls from 8 to 9 being nearly vertical, but slightly inclined forwardly. From the point 9 said guide-grooves continue on in curved lines from point 10 to point 11, the two latter points of said grooves being concentric with the axial bolt when in the upper part of the elongated opening in the breech-block, the purposes and

functions of these parts and features being hereinafter fully described. Projecting into said cam or guide grooves 7 7 are guide-studs 12 12, which are secured in the walls of the breech. The elongated opening 13, just referred to, is also formed in the breech-block—in its lower portion—and is inclined upward and forward two or three degrees from the vertical, so as to allow of a down-and-up movement of said block at a slight inclination. A strong axial bolt, B, passes through said elongated opening, fits in openings in the walls or cheeks of the breech, and extends out beyond the same on the left side, where it is provided with an operating-handle, *b*.

In the upper part of the cavity in the breech-block, or above the rectangularly-shaped part of said cavity, is arranged the firing-pin C, which is provided at its rear end with a finger-loop, *c*, and at its front end with an upturned head, *c'*. On the under side of this firing-pin, toward its rear end, are respectively formed half and full cock studs, *c''* and *c'''*, and a downwardly and forwardly extending cocking-lug, *c''''*, is arranged near its middle. In the top portion of the cavity, above the firing-pin, is arranged a spiral spring, D, which has its front and rear ends abutting, respectively, against the upturned head of the firing-pin and the rear wall of the cavity.

Before applying the face-plate 5 the cam E, firing-pin C, and spiral spring D are introduced through the front of the cavity A^3. The breech-block is then placed in the breech, and the axial bolt B inserted and securely keyed or fastened to the cam, said bolt having one end suitably shaped to easily pass through the opening in said cam and the holes in the walls or cheeks of the breech.

In the left upper end of the cam E, and extending its full width, is formed a circular recess, *e*, which is struck with the same radius as the rounded shoulder 4 in the cavity of the block. Beneath said recess *e*, and in the middle of the upper rear part of the cam, is formed a larger curved and walled recess, *e'*, as shown in dotted lines in Fig. 1 and in rear view in Fig. 6, which terminates in front at the point *e''* of the cam. This point, when the breech-block is closed, rests beneath the horizontal wall 1 2 of the cavity, and supports said block in raised position. At the rear lower end of the cam is a toe, *e'''*, which, when said cam is turned backward, exerts a downward pressure upon the lower wall of the cavity in the breech-block.

In the rear of the breech-block is located the sliding leaf F, which holds and releases the firing-pin, and which fits in a mortise cut in the rear face of said block and extending downwardly from the hole for the firing-pin. Side views of this sliding leaf are shown in Figs. 1 and 9, and transverse sections of the same and its mortise in Figs. 10 and 11, which are respectively views on the dotted lines *x x* and *y y* of Fig. 3. This sliding leaf is inserted in the mortise from the bottom, and corresponds therewith in cross-section, as shown; but they may be of any other suitable shape which will hold the leaf firmly and prevent it from rearward movement. The upper end of the leaf is beveled on the front side, so that the inclined studs *c'' c'''* on the firing-pin will press it downward when said pin is retracted; and the rear side of the upper end of said leaf is straight, so as to catch the straight front sides of said studs of the firing-pin and hold the latter half or full cocked. A coiled spring, *f*, is located in a vertical cylindrical recess, *f'*, in the rear wall of the breech-block and presses the sliding leaf up against the firing-pin. The top of this spring bears against a flat circular lug, *f''*, on the front side of the leaf, said lug being arranged and adapted to move in said cylindrical recess. The spring is introduced at the bottom of said recess and held in place by a plug, *f'''*, which is fitted in said recess and screwed or otherwise firmly and removably held in position. From the rear face of the leaf projects a laterally-extending arm, G, which terminates in a lip, *g*, having a rounded rear face, as shown in Figs. 1 and 9. A vertical slot, *g'*, is formed in said arm, and a screw-stud, *g''*, passes through the same and into the wall of the breech, whereby the vertically-sliding leaf is kept in proper alignment in its mortise.

A small rock-shaft, H, passes transversely through the right wall of the gun-breech, and its inner end terminates in a recess in said wall in rear of but out of line with the side of the breech-block. On the inner end of said rock-shaft is a trip or finger, *h*, which is normally just in contact with the rounded lip *g* of the laterally-extending arm G of the sliding leaf F, while on the outer end of said rock-shaft is secured a finger-piece or trigger, *h'*, which projects downward beneath the usual hand-rest or pistol-grip, *h''*, and which, on being pressed by the finger, causes the trip *h* to bear down upon the lip *g* of arm G, and thus slide the leaf F downwardly against the resistance of the coiled spring *f* and liberate the firing-pin C, which then flies forward against the primer and explodes the cartridge.

The cartridge-shell extractor consists of two upwardly-extending arms, I I, provided with lateral pins or pivots *i i*, which project into openings in the inner surfaces of the walls of the gun-breech forward of the axial bolt B. As the breech-block A is flush with or takes up the whole width of the breech-chamber, the sides of said block, along its bottom and front surfaces, have formed therein recesses J J, which are of a depth inward from the sides of said block equal to the width of the long or main portions of the extractor-arms I I, sufficient room being provided at the upper ends of said recesses to permit the block to descend slightly along the extractor-arms previous to the commencement of its rotary movement. On the inner sides of the extractor-arms, along their lower rearwardly-projecting ends, are

formed curved projections *i' i'*, which extend into recesses or steps J' J', formed along the lower front and bottom parts of the breech-block, and which are still deeper or cut farther in from the sides of said block than the recesses J J. These deeper recesses or steps, when the breech-block descends to its revolving position, will bring their upper curved walls, *j j*, in contact with the curved projections *i' i'* on the inner sides of the extractor-arms. These upper walls, *j j*, of the deeper recesses or steps J' J' are circular in form for a certain distance, as shown in Fig. 4, and are slightly eccentric with respect to the center of rotation of the block, so that during its rotation, as hereinafter described, said walls will press slightly and slowly against the curved projections *i' i'* on the inner sides of the lower ends of the extractor-arms, and thus cause the heads *i'' i''* of said arms (said heads being suitably fashioned to grasp the rims of cartridge-shells) to move slowly to the rear and pull the shell along with them. At the rear ends, *j' j'*, of the deeper recesses or steps J' J' the upper walls, *j j*, change in curve abruptly downward; hence these abrupt curves, coming in contact with the curved projections on the extractor-arms, when the block has rotated sufficiently to the rear to fully expose the bore of the gun, will cause the extractor-heads *i'' i''* to suddenly pull or jerk the cartridge-shell and throw the same quickly to the rear.

In an opening formed in the operating-handle *b*, attached to the projecting end of the axial bolt B, is secured a spring-catch, K, which, as the cam is completing its forward movement and the bore is being closed by the breech-block, takes into a recess, *k*, formed in the exterior surface of the wall of the breech. The rear end of this recess is so sloped as to not too much retard the rearward movement of the spring-catch when opening the breech, and yet there is sufficient frictional resistance between said spring-catch and the sloping part of the recess to prevent backward movement of the breech-block by jar or concussion arising from the firing of neighboring guns. The front end of the recess *k* terminates against a vertical wall, *k'*, which, in connection with the spring-catch abutting against the same, prevents more rotation of the handle *b* and cam E than is necessary to close the breech; also, when said catch strikes against said vertical wall a clicking sound is produced, indicating that the breech is completely closed and secure.

Secured within the interior surfaces of the breech-walls, and suspended therefrom at the extreme rear of the gun-breech, is a strong tray or support, L, which receives and sustains the weight of the breech-block when it is turned back and the bore is open for loading. In the center of the horizontal limb of this tray or support is formed a recess, *l*, through which passes the finger loop *c* on the projecting rear end of the firing-pin.

The operation of the parts of our invention, excepting that which is obvious and before described, is as follows: Fig. 1 represents the breech of the gun as closed, or as it would appear after a discharge. To open the bore, the handle *b* is pulled to the rear, which turns the axial bolt B and the cam E. When the latter has been turned back a sufficient distance to cause its front point, *e''*, to pass out from beneath the horizontal wall 1 2 of the cavity A^3 in the breech-block, the toe *e'''* of said cam will press down upon the bottom wall of the cavity and force said block downward, this movement being permitted by the point *e''* of the cam moving along the inclined wall 2 3 of the cavity. After further turning the cam, accompanied by the downward movement of the block, its circular recess *e* embraces the rounded shoulder 4 in the cavity, and after this the further rotation of the cam is necessarily accompanied by the rotation of the block, which by this time has descended far enough for its axial bolt B to move to the upper part of the elongated opening 13, and for the bands *a a* to clear their grooves *a' a'* in the gun-breech. After this the movement of the block is rotary and to the rear around the axial bolt, it being guided by the cam-grooves 7 7 in its sides, in which engage the guide pins or studs 12 12, fixed in the walls of the breech. During the first part of the downward movement of the block its cam or guide grooves descend over the pins or studs 12 12 until the latter occupy the points 9 9 in said grooves, and during the further rotary movement of said block said pins or studs successively occupy the positions 10 and 11 in said guide-grooves, the grooves at the points last named being concentric with the axial bolt B when in the upper part of the elongated opening 13. To return the breech-block and close the bore of the gun, the handle *b*, axial bolt B, and cam E are moved forward. At first the rounded shoulder 4 remains engaged in the circular recess *e* of the cam and causes the block to swing upward with said cam. In the meantime the guide-grooves 7 7 in the sides of said block move over the pins or studs 12 12 and change position from point 11 to point 10. On reaching point 10, in consequence of the change of the curves of the grooves, the upper surfaces or walls of said grooves take against the pins or studs 12 12 and are moved upward, thus forcing upward the breech-block and disengaging the rounded shoulder 4 from the circular recess *e* of the cam. When this is effected, the front point, *e''*, of the cam commences to impinge at the point 3 in the cavity, and, the rotary motion of the cam continuing, moves along beneath the inclined wall 2 3 in said cavity and forces the breech-block upward. In the meantime the guide pins or studs change position in the grooves 7 7, moving from points 9 to points 8; also, the axial bolt B changes position from the top to the bottom of the elongated opening 13. When the point *e''* of the cam reaches the lower or front end of the inclined wall 2 3, it moves a short distance beyond the same and beneath the horizontal wall 1 2 in the

cavity and firmly supports the breech-block in its raised and closed position. Further forward motion of the cam is prevented by coming against the face-plate 5, which may be provided on its rear face with a rounded or other suitably-shaped anti-friction bearing-surface for contacting with said cam; also, the before-described spring-catch K on the operating-handle and the recess *k* in the outer surface of the breech-wall assist in arresting the forward movement of the cam. As the cam E rotates rearward and the block A descends, the cocking-lug *c''''* of the firing-pin C takes against the bottom of the curved and walled recess *e'*, formed in the middle of the upper rear part of said cam, and is moved rearward, the portion of the cam in front of said recess passing up into the curved front part of said cocking-lug. This pushing or retracting movement imparted to the firing-pin is effected against the resistance of the spiral spring D, which is contracted thereby, and said movement is continued until the circular recess *e* in the cam embraces the round shoulder 4 in the cavity, when the relative motions of the cam and firing-pin cease. When the recess *e* of the cam comes in contact with the round shoulder 4, the full-cock stud *c'''* of the firing-pin has passed the rear of the block and is caught by the sliding leaf F, before described.

As in our former patent, the construction and arrangement of the parts of the breech-block relative to the breech as constructed are such as to resist backward and downward pressure upon the face of said block from the force of the exploded charge. While the general exterior shape of the present breech-block and its movements are the same as in our former patent, the cam in the present instance is placed in the center of the block, instead of on its side, as formerly, whereby greater ease and power of movement of said cam are obtained, and whereby liability to the derangement of the same and the parts operated thereby is lessened; also, instead of forming the cam with a rearwardly-extending arm at the side of the block with a right-angled extension for retracting the firing-pin, as formerly, we now have a short stout cocking lug on the firing-pin, which is pressed back by the main body of the cam, thus doing away with said side arm and its extension, which is difficult to manufacture and liable to injury, and permitting the breech-block to be made larger in the direction of the axis of the gun; also, we now have two cam or guide grooves formed in the sides of the breech-block and two stationary guide pins or studs fitted in the walls of the breech, instead of a single cam-groove in one of the breech-walls and a single pin or stud on the side of the block, as formerly, whereby more positiveness and steadiness of movement of the block are secured, and greater strength of the parts and less liability of their getting out of order are obtained; also, in case of failure of the cartridge-cap to obturate or confine the gases in the bore, in which event the firing-pin would be violently projected to the rear—due to the gases rushing through the hole in the face-plate—the thickness of the metal of the cocking-lug and of the upturned head of our firing-pin would prevent the latter being shot out through the firing-pin hole in the rear face of the breech-block.

Having thus fully described the construction, arrangement, and operation of the various parts of our invention, we claim the following as new:

1. In a breech-loading gun, the combination of a breech-block, which first moves downward in opening, then rotates backward and downward, and which is provided with cam or guide grooves in its sides, the breech-walls provided with guide pins or studs fitting in said grooves, and a cam mounted on an operating shaft or bolt and engaging with and imparting the directions of movement named to said block, substantially as described.

2. In a breech-loading gun in which the breech-block first moves downward in opening, then rotates backward and downward, the combination of a chambered breech formed with openings in its walls, an axial bolt fitted in said openings, a breech-block formed in its interior with a central cavity, a cam secured to said axial bolt and arranged within said central cavity, cam-grooves and pins or studs, respectively, in the block and breech-walls, and means for rotating said bolt and cam and for moving and guiding said breech-block downward, then backward and downward, and for returning the same to its original position, substantially as described.

3. In a breech-loading gun in which the breech-block first moves downward in opening, then rotates backward and downward, the combination of the chambered gun-breech A', provided with grooves in its upper interior surface, the breech-block A, provided on its upper surface with bands *a a*, adapted to fit said grooves and hold said breech-block firmly in place, provided with the elongated opening 13, and with a central cavity, A^3, in its interior, the axial bolt B, fitted in openings in the breech-walls and passing through said elongated opening, the cam E, secured to said axial bolt and located in said central cavity, and means for rotating said cam and, in connection with the cam-groove and pins or studs, respectively, in the block and breech-walls, guiding said breech-block downward, backward, and then downward, and for returning the same to its original position, substantially as described.

4. In a breech-loading gun in which the breech-block first moves downward in opening, then rotates backward and downward, the combination of the chambered breech formed with openings in its walls, an axial bolt fitted in said openings, a breech-block formed with cam or guide grooves in its sides, with an elongated opening, and with an interior central cavity having a horizontal wall, an inclined wall and a rounded shoulder, stationary pins or studs secured in the walls of the breech and

fitting in said cam or guide grooves, a cam secured to said axial bolt and arranged within said cavity and formed with an upper front point, a toe, and a circular recess, substantially as and for the purpose described.

5. In a breech-loading gun, a breech-block formed with a central cavity, with a circular cavity in its upper portion, and with firing-pin holes in its front and rear walls, in combination with a firing-pin arranged in said circular cavity and projecting through the hole in the rear wall of said block and provided with an upturned head and a downwardly-extending cocking-lug, a spiral actuating-spring arranged above said firing-pin, and having its front and rear ends, respectively, bearing against the head of said pin and the rear wall of said block, and a rotary cam for retracting said firing-pin, substantially as described.

6. In a breech-loading gun, the combination of a breech-block having a downward movement in opening, then a rotary backward and downward movement, and which is formed with an interior central cavity, with a firing-pin arranged in the upper part of said cavity and provided with studs for holding it full or half cocked, and with a downwardly-projecting cocking-lug, an actuating-spring for said firing-pin seated between an upturned head on the latter and the rear wall of the cavity, and a rotary cam arranged within said cavity and adapted to come in contact with and retract said firing-pin, substantially as described.

7. In a breech-loading gun, the combination of a breech-block formed with a central cavity, with firing-pin holes in its front and rear walls, and also with a vertical mortise in said rear wall, a firing-pin arranged in the upper part of said cavity and provided at its front end with an upturned head, on its lower side with a cocking-lug and full and half cock lugs, a vertically-sliding leaf arranged in said mortise and adapted to hold said studs when the pin is retracted, a spring arranged above and in contact with said firing-pin, a spring arranged beneath said vertically-sliding leaf and a rotary cam for retracting the firing-pin, substantially as described.

8. In a breech-loading gun in which the breech-block first moves downward in opening, then rotates backward and downward, the combination of the chambered breech formed with openings in its walls, an axial bolt fitted in said openings, a breech-block formed in its interior with a central cavity, a cam secured to said axial bolt and arranged within said central cavity, a firing-pin arranged in the upper part of said cavity and provided on its under side with studs for holding it full or half cocked, and with a downwardly and forwardly projecting cocking-lug arranged to come in contact with and be operated by said cam for retracting said firing-pin, and means for rotating said bolt and cam, and thereby, in connection with the pins or studs and cam-grooves, respectively, in the breech walls and block, moving and guiding said breech-block downward, then backward and downward, and for returning the same to its original position, substantially as described.

9. In a breech-loading gun, firing-pin holding and releasing mechanism, consisting of a breech-block formed with a vertical mortise and a cylindrical recess, in combination with a coiled spring placed within said recess, a removable plug for closing the lower end of said recess, a sliding leaf fitted in said mortise and having a circular lug extending over said coiled spring, and also having a laterally-extending arm, and means for moving said arm downward, substantially as described.

10. In a breech-loading gun, firing-pin holding and releasing mechanism, consisting of a breech-block formed with a vertical mortise and a cylindrical recess, in combination with a spring-controlled firing-pin, a coiled spring placed within said recess, a removable plug for closing the lower end of said recess, a sliding leaf fitted in said mortise and having a circular lug extending over said coiled spring, and also having a laterally-extending arm, and a rock-shaft provided at its inner and outer ends, respectively, with a trip and trigger, substantially as described.

11. In a breech-loading gun, the combination of a breech-block formed with a vertical mortise and a cylindrical recess in its rear face, a spring-controlled firing-pin arranged in the upper part of said block, a coiled spring placed in said cylindrical recess, a vertically-movable leaf arranged in said mortise and provided with a lug projecting over the coiled spring in said recess, and means for moving said leaf downward and releasing the firing-pin, substantially as described.

12. In a breech-loading gun in which the breech-block first moves downward in opening, then rotates backward and downward, the combination of the gun-breech A′, the breech-block A having formed in its sides, along its front and bottom, recesses J J and lower deeper recesses or steps, J′ J′, the latter having upper curved walls, *j j*, the cartridge-shell extractor, consisting of the upwardly-extending arms I I, formed to fit said recesses and provided with heads *i″ i″*, with lateral pivots *i i*, working in openings in the breech-walls, and with curved projections *i′ i′* on their lower rearwardly-projecting ends, said projections extending into and being operated by said deeper recesses or steps, and means for moving said breech-block downward, then backward and downward, substantially as described.

13. In a breech-loading gun in which the breech-block first moves downward in opening, then rotates backward and downward, the combination of the gun-breech A′, the breech-block A having formed in its sides, along its front and bottom, recesses J J and lower deeper recesses or steps, J′ J′, the latter having upper curved walls, *j j*, merging into abrupt curves *j′ j′* at their rear ends, the car-

tridge-shell extractor, consisting of the upwardly-extending arms I I, formed to fit said recesses and provided with heads *i'' i''*, with lateral pivots *i i*, working in openings in the breech-walls, and with curved projections *i' i'* on their lower rearwardly-projecting ends, said projections extending into and being operated by said deeper recesses or steps, and means for moving said breech-block downward, then backward and downward, substantially as described.

14. In a breech-loading gun, the combination of a breech-block which first moves downward in opening, then rotates backward and downward, and which is provided with rearwardly-projecting firing mechanism, with a tray or support arranged at the rear end of the breech and rigidly suspended from its walls and formed with a central recess for the passage of such firing mechanism, substantially as and for the purpose described.

15. In a breech-loading gun, the combination of a breech-block and mechanism for moving the same downward, backward and downward in opening, and for returning the same to its original or closed position, with the gun-breech provided on its exterior surface with a recess which is formed with a sloping or inclined rear surface and with a vertical wall at its front, and a handle for operating the breech mechanism, provided with a spring-catch adapted to move in said recess, substantially as and for the purpose described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM HALE DRIGGS.
SEATON SCHROEDER.

Witnesses for Driggs:
C. A. NEWTON,
E. MILTIER.
Witnesses for Schroeder:
SCHUYLER DURYEE,
TOM R. STUART.