

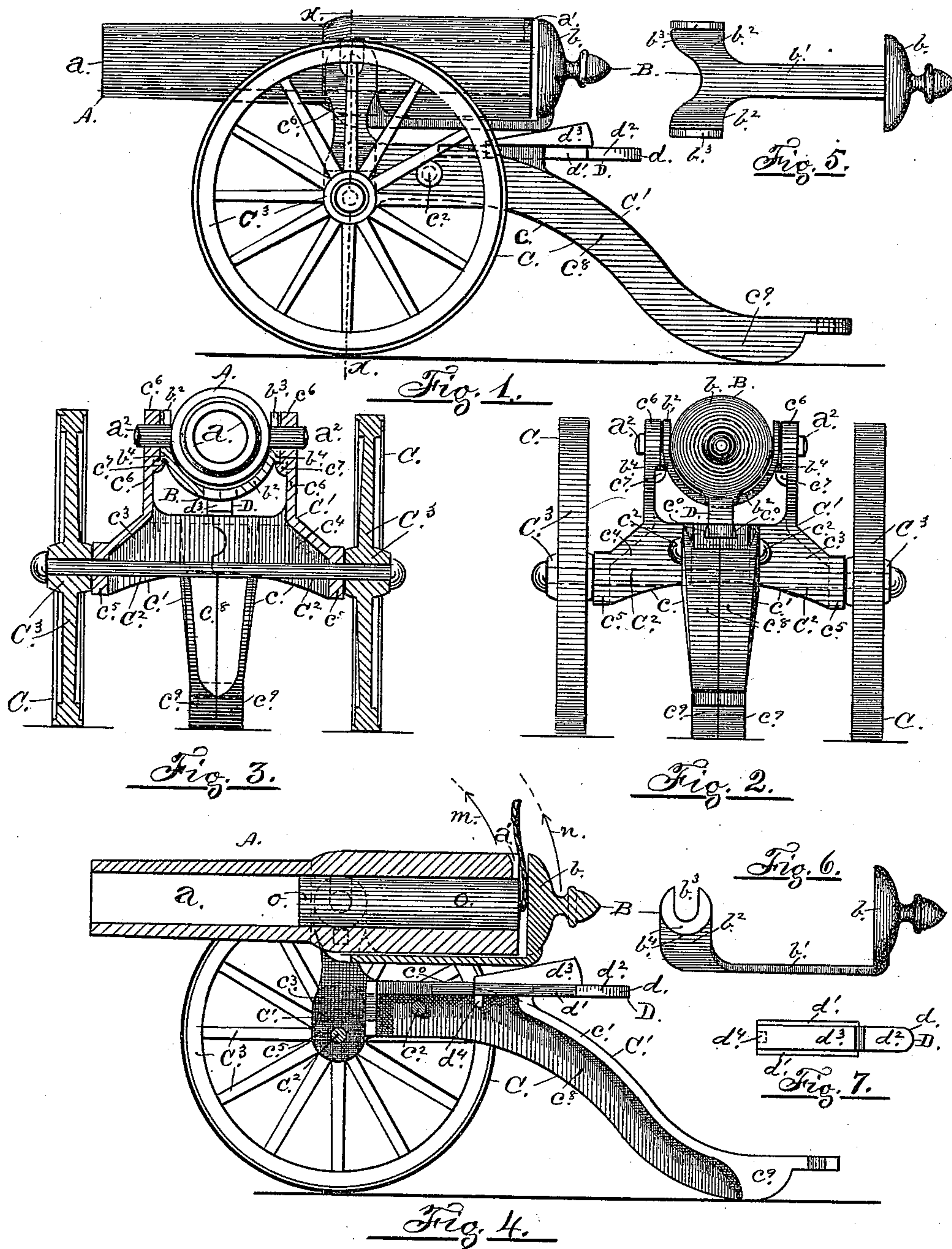
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B. F. BRENNER.
TOY CANNON.

(Application filed Mar. 14, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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TOY CANNON.

SPECIFICATION forming part of Letters Patent No. 636,483, dated November 7, 1899.

Application filed March 14, 1899. Serial No. 708,992. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. BRENNER, a citizen of the United States, residing at Columbia, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Toy Cannon; 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.

This invention relates to improvements in a toy cannon of that class in which the gun or barrel is mounted on a carriage in the manner of field-guns, flying or light artillery.

The objects of the invention are the production of a toy cannon that may be readily loaded by having a fire-cracker or similar charge inserted into its bore through the breech, in which a block moving with the gun is adapted to open and close said breech, in which provision is made to elevate or depress the same to different angles from the horizontal position, and which may be produced at the minimum cost of construction and placed upon the market at a small price.

The elements of the invention will severally and at large appear in the following description, and they will be separately and collectively set forth in the claims.

The purposes of the invention are attained by the mechanism, devices, and means illustrated in the accompanying drawings, with similar reference characters to designate like parts throughout the several views, in which—

Figure 1 is a side elevation of a cannon embodying the elements of the invention. Fig. 2 is a view from the right of Fig. 1. Fig. 3 is a vertical section taken on the line $x x$ in Fig. 1 and viewed from the left, the gun showing full. Fig. 4 is a vertical longitudinal section through the center of the cannon in Fig. 1, showing a fire-cracker in place, the adjusting slide-block appearing in full side elevation. Fig. 5 is a direct plan of the breech opening and closing device detached from Fig. 1. Fig. 6 is a side elevation of Fig. 5, and Fig. 7 is a direct plan of the adjusting slide-block detached from Fig. 4.

As shown in the drawings, the cannon of the invention consists of a gun or barrel A,

a breech opening and closing device B, a carriage C, and an adjusting-block D.

The barrel A may have any approved external shape, having an axial bore a of the required size and extending the whole way through from muzzle to breech to receive the cracker or other charge, with the stem or fuse at its rearward end. In the top of the breech is formed a groove or recess a' for the passage of the fuse or stem when the breech is closed, and at the sides thereof the gun or barrel is provided with trunnions a^2 for pivoting the gun to the carriage, yet to be described.

The breech opening and closing device B comprises a block b of approved form and equal diameter to the gun adapted to cover the butt or breech thereof, closing the same. At the bottom of the block, with one end rigidly secured to or integral with its lower edge, is a bar or strip b' , extending forwardly underneath the gun to about a point below the trunnions, where it is provided with side arms or branches $b^2 b^2$, curving upwardly about the body of the gun to points above the trunnions, where said branches are provided, through their upper edges, with U-shaped recesses or slots b^3 to receive or engage said trunnions, pivoting the device thereto, and on the outer faces of the branches, below said recesses or slots, are formed shoulders $b^4 b^4$, rounded off below (best shown Fig. 6) and adapted to engage or ride on top of brackets projecting inwardly from pivot-ears of the carriage, yet to be described, completing said engagement or pivoting.

The carriage C consists of a framework C' , having two members $c c'$ similar in form, but oppositely disposed, fitting closely together, as is best shown in Figs. 2 and 3, and secured in rigid position by a screw or rivet c^2 . (Best shown in Fig. 3.) At the forward ends of said members are right and left hand projecting arms $c^3 c^4$, with outer end blocks c^5 , constituting the axle portion of the framework. On top of the axle portion are upwardly-projecting lugs or ears c^6 , constituting the cheeks of the carriage, through the upper ends of which are pivoted the trunnions of the gun (best shown in Fig. 3) and having the brackets c^7 , before mentioned, supporting the pivoted end

of the breech opening and closing device, also before mentioned and best shown in Fig.

3. Integral with the forward face of the axle portion are the upper ends of the downwardly and forwardly curving portions of the members $c\ c'$, constituting the stock c^8 of the carriage and having their lower ends rounded, as shown, constituting the trail c^9 of the stock. Through the forward edge of the level cheek portion of the stock and in the adjacent faces of the members $c\ c'$ are formed dovetailed side recesses $c^0\ c^0$, constituting a guideway in said cheek portion for the seating of the gun-adjusting block, yet to be described, and through the end blocks c^5 is passed a shaft C^2 , on the outer ends of which are journaled the hubs of wheels C^3 , and the extremities of the shaft are riveted, as shown, securing the wheels in place. Seated in said guideway, movable back and forth therein, is the gun-adjusting block D, before mentioned, said block comprising a level base portion d , provided with sloping side edges d' to engage in the recesses c^0 and a finger-grip d^2 to move it in and out in said recesses, said base-plate having on its upper face an upwardly-projecting portion d^3 , with a downwardly and forwardly sloping upper edge to engage with the under edge of the breech end of the gun, whereby said end may be raised or lowered, as may be desired, and on its under face, at the rearward end thereof, is a downwardly-projecting finger or lug d^4 to engage against the rearward end wall, (see Fig. 4,) preventing said block from being withdrawn from its guideway.

Now with the several elements hereinbefore described occupying the respective positions indicated in the drawings, the following observations will be noted: first, that the cannon of the invention is in the semblance of the modern field-gun; second, that by reason of the trunnions being journaled in the lugs or ears c^6 the breech of the gun may be raised in the direction of the arrow m , the breech opening and closing device remaining stationary, opening the breech, when a cracker o or similar charge may be inserted into the bore of the gun; third, that when the gun is returned in the direction opposite to said arrow the breech will be closed by the block b and the stem or fuse of the cracker will be upwardly extending between the block and breech, lying in the vent or groove a' ; fourth, that by reason of the pivot-points of the device B being on the trunnions of the gun said gun and device may be turned together, raised in the direction of the arrows $m\ n$, or lowered in the direction opposite thereto; fifth, that by reason of the shoulders b^4 riding on the brackets c^7 the pivots of the device B will be confined to the trunnions of the gun; sixth, that the several parts being in the positions indicated in Fig. 1, pushing the block D forwardly in its guideway, the breech or butt of the gun will be raised accordingly and its muzzle depressed; seventh, that by pulling the block

D in the opposite direction said breech or butt may be depressed accordingly and the muzzle will be raised; eighth, that when the parts are in the several positions above mentioned and the screw or rivet c^2 secured as shown they will all be held securely in place.

Having now described the invention and fully ascertained and shown the manner in which it is performed, what is considered new, and desired to be secured by Letters Patent, is—

1. In a toy-cannon carriage, a framework comprising two oppositely-disposed members fitting longitudinally together, and a rivet passing through their bodies securing them in position, having at their upper ends right and left hand projecting arms with outer end perpendicular blocks, and upwardly-projecting ears or lugs, with trunnion-pivoting orifices through their upper portions, and inwardly-projecting brackets below said orifices, said members constituting the stock portion, the trail portion, the axle portion, and the cheek portion of the framework, and the cheek portion having undercut inner-face side recesses opening through the forward end thereof, constituting a guideway for the gun-adjusting block, substantially as described and for the purpose hereinbefore set forth.

2. In a toy cannon, a carriage comprising: a framework consisting of two members having, at their upper ends, right and left hand extending arms with shaft-supporting blocks at their outer ends, and on top upwardly-projecting gun-supporting ears having trunnion-pivot bearings through their upper portions and inwardly-projecting brackets from their inner faces below said bearings, said members rigidly secured together by a screw or rivet, constituting the trail portion, the stock portion, the axle portion, and the cheek portion, and having in their adjacent inner faces, along the upper edges thereof, undercut recesses constituting a guideway through the front end wall of the cheek; a slide-block movable back and forth in said guideway, said block comprising a level base portion with beveled side edges engaging said recesses, a finger-grip for moving the block, an upwardly-projecting portion with a downwardly and forwardly sloping top to engage under the breech of the gun, and a downwardly-projecting finger from the under face at the forward end thereof; a shaft passing through the end blocks of the axle portion, with its ends projecting beyond the outer faces of said blocks; and wheels having their hubs journaled on the outer ends of said shaft, with rivet-heads at the extremities thereof, securing said wheels in place; all substantially as described and for the purpose hereinbefore set forth.

3. In a toy cannon having a carriage comprising a framework consisting of two members rigidly secured together, constituting the stock with trail, cheek, and axle portion,

mounted on wheels, said axle portion having upwardly-projecting ears with trunnion-pivoting bearings through their upper portions, and breech-pivot-supporting brackets
5 projecting from their inner faces below said bearings, and the cheek having a breech-adjusting block movable in and out through the forward end thereof, a gun comprising a barrel having an axial bore from muzzle to
10 breech, a fuse-vent in the upper portion of the breech opening into said bore, and central side trunnions journaled in the bearings of said upwardly-projecting ears, and a breech opening and closing device consisting of a
15 breech-block covering the butt-end of said barrel, a strip extending forwardly under the

body of the barrel and having its rearward end rigidly affixed to the lower edge of said block, and at its forward end upwardly-curving side arms embracing the sides of the barrel, with U-shaped slots in their upper ends
20 engaging its trunnions, and rounded shoulders underneath said slots to ride or engage on top of said supporting-brackets, all substantially as described and for the purpose
25 hereinbefore set forth.

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

BENJAMIN F. BRENNER.

Witnesses:

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