J. A. DAINTY.

TOY CANNON.

APPLICATION FILED OCT. 8, 1909.

956,043.

Patented Apr. 26, 1910.

2 SHEETS—SHEET 1.

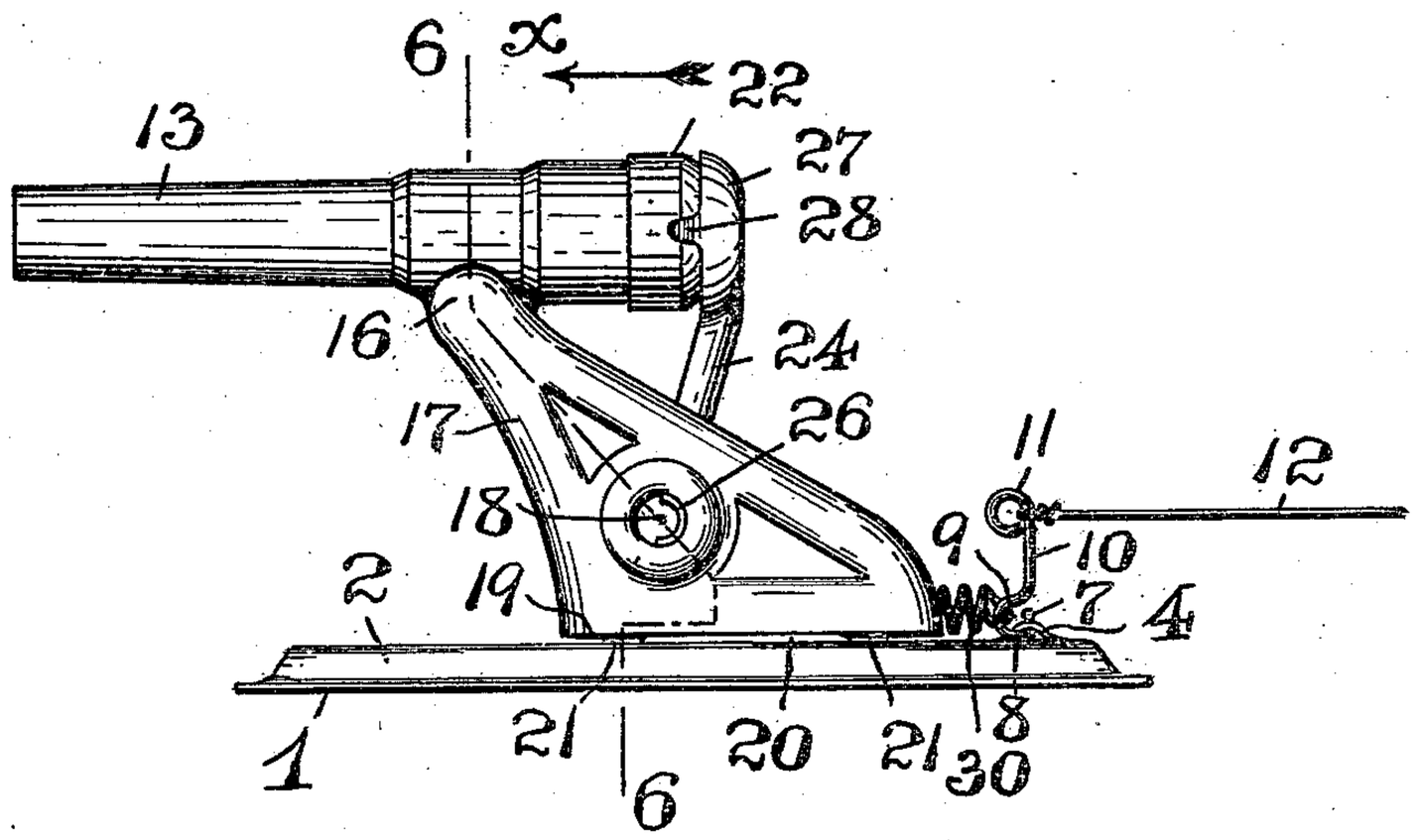

Fig. 1

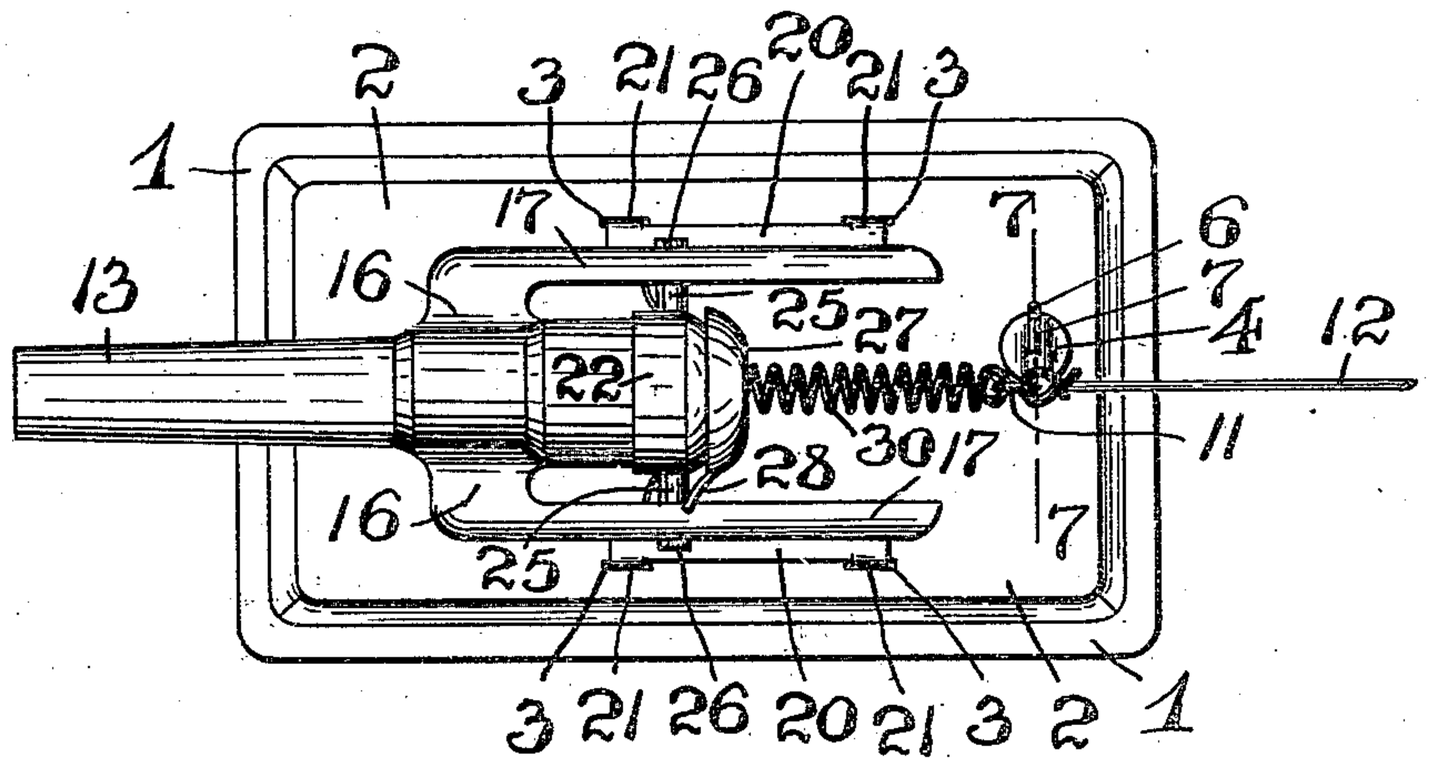

Fig. 2

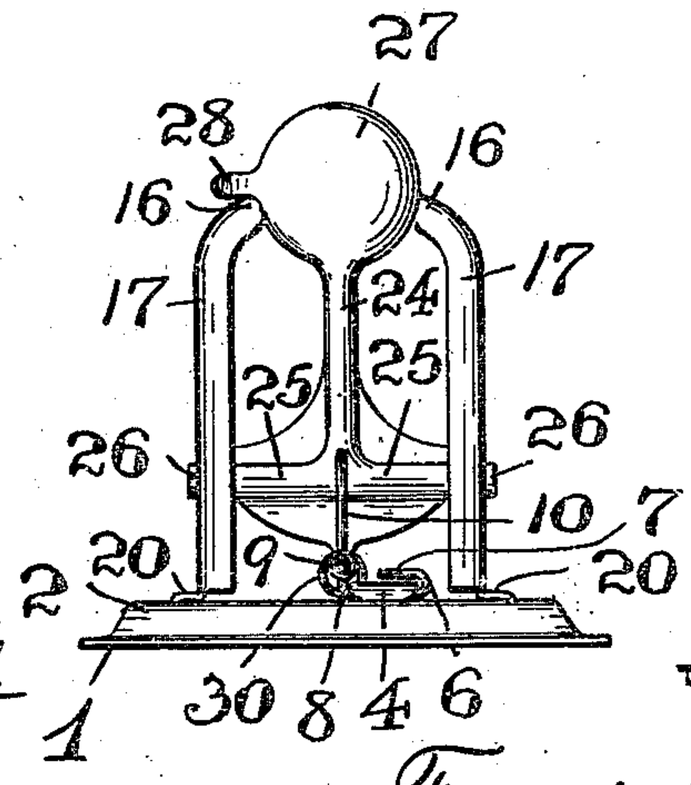

Fig. 3

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2 SHEETS—SHEET 2.

Fig. 4

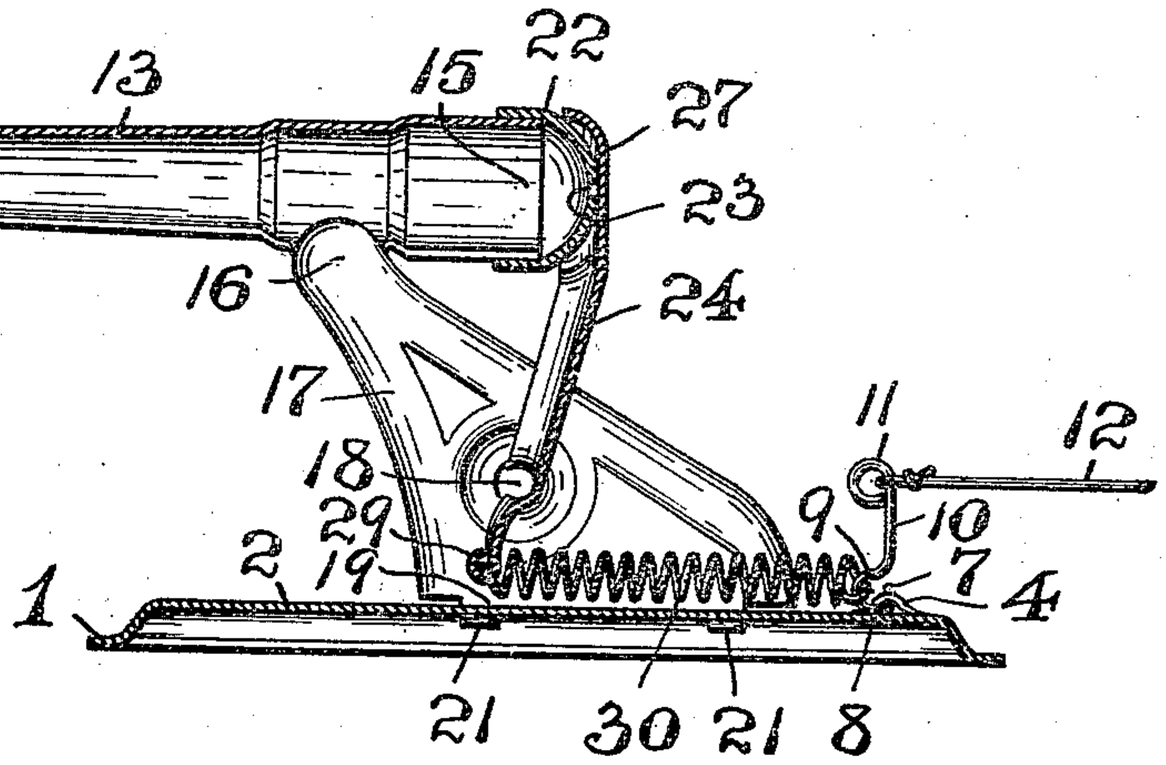
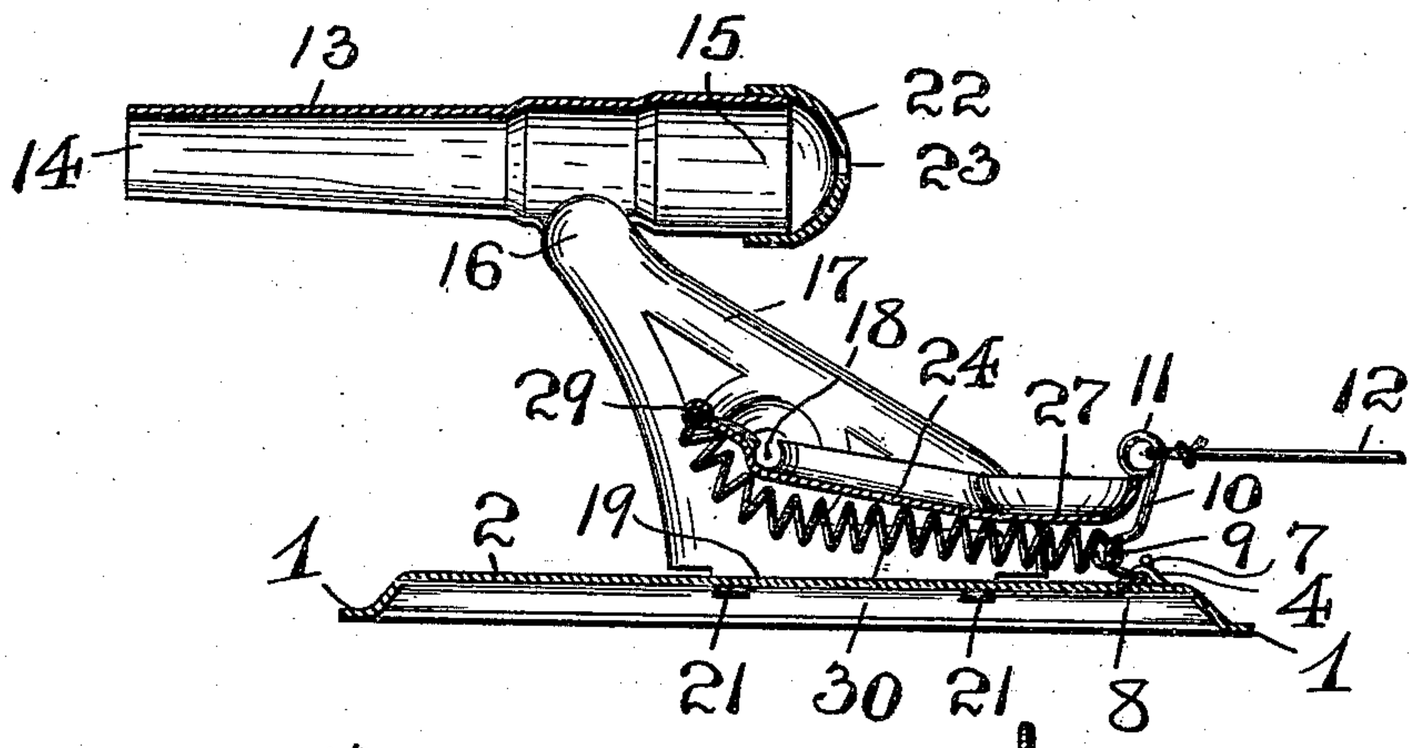


Fig. 5



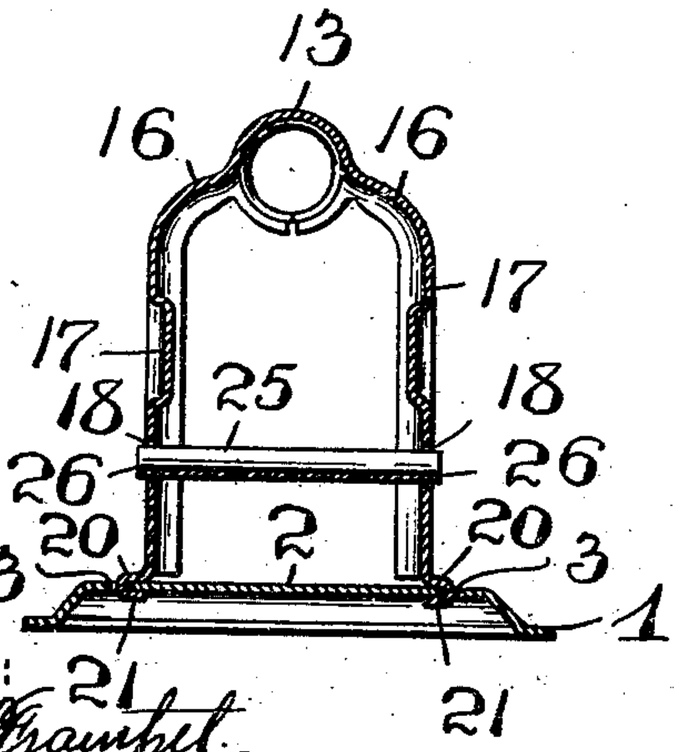


Fig. 6

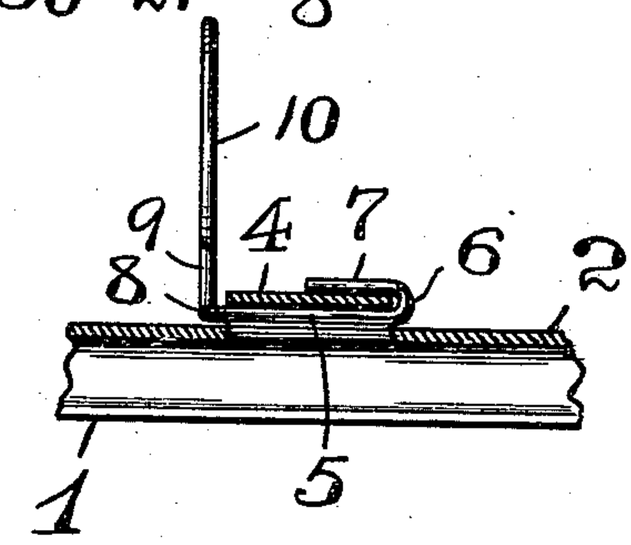


Fig. 7

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UNITED STATES PATENT OFFICE.

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TOY CANNON.

956,043. Specification of Letters Patent. **Patented Apr. 26, 1910.**

Application filed October 8, 1909. Serial No. 521,757.

To all whom it may concern:

Be it known that I, JOSEPH A. DAINTY, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Toy Cannons; 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, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

My present invention relates, generally, to improvements in toy-cannons; and, the invention relates, more particularly, to a novel cannon of the general construction hereinafter set forth which is used for the firing of percussion or paper-caps.

The invention has for its principal object to provide a toy-cannon comprising a bed or base-plate, a pair of supports and a barrel, said supports and the barrel being made in one integral piece, and a spring-controlled and actuated firing arm, all of said parts being made or stamped out of sheet-metal, with a view of providing a neatly and simply constructed cannon which is cheaply made and is greatly reduced in weight, so as to provide a light device which can be readily handled.

The invention has for its further object to provide a simply constructed and efficiently operating spring-controlled holding catch and a novel means for operatively securing said catch in its position upon said base or bed-plate, to hold the firing arm in its lowered relation away from the anvil of the cannon for the reception of the cap; and, furthermore, to release the said firing-arm and cause it to explode the cap when the holding catch is actuated by a pull from a cord, string, or the like, which is attached to the said catch.

The invention has for its further object to provide a novel means for securing the two sheet-metal supports and the barrel of the cannon to the sheet-metal base or bed-plate, substantially in the manner hereinafter more fully set forth.

Other objects of this invention not at this time more particularly enumerated will be clearly understood from the following detailed description of the same.

With the various objects of my present invention in view, the said invention consists, primarily, in the novel toy-cannon hereinafter set forth; and, the invention consists, furthermore in the novel arrangements and combinations of the various parts, as well as in the details of the construction of the same, all of which will be more fully described in the following specification, and then finally embodied in the clauses of the claim which are appended to and which form an essential part of the said specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of a toy-cannon showing one embodiment of the principles of my present invention; Fig. 2 is a top or plan view of the same; and Fig. 3 is a rear end view of the cannon. Fig. 4 is a central longitudinal vertical section of the cannon, showing the firing-arm or element in its released and actuated relation with respect to the anvil of the cannon, at the time of the explosion of the cap; Fig. 5 is a similar view of the parts represented in said Fig. 4, but showing the firing-arm retained by the holding catch in its lowered position ready to receive the cap which is to be exploded; and Fig. 6 is a transverse section, taken on line 6—6 in said Fig. 1, looking in the direction of the arrow *x*. Fig. 7 is a detail sectional representation taken on line 7—7 in said Fig. 2, said section being made on an enlarged scale.

Similar characters of reference are employed in all of the above-described views, to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference-character 1 indicates a suitable base or bed-plate which is made of sheet-metal and is of a rectangular configuration, although the same may be of any other marginal configuration. The said base, as is shown in the several figures of the drawings, is preferably made with a forced up portion, as 2, which is provided with a number of lug-receiving holes or openings 3. The said base or bed-plate is also made with a pressed-out member or portion, as 4, which provides a suitable retaining loop in which is pivotally disposed the wire-shank 5 of the firing-arm holding catch. The said shank 5 is made at one end with a suitably bent portion 6 and a finger or extension 7, said bent portion extending around the edge of the pressed-out member

4 and the said finger projecting over a portion of the upper surface of said pressed-out member 4, substantially as shown. Connected with the other end of said shank 5 is a forwardly extending portion 8 which is provided with a suitably bent or loop-shaped part 9 from which extends, in an upward direction, an arm 10. This arm is provided at its upper end-portion with a catch or retaining element, as 11, which is preferably made in the form of an eye or ring for the attachment thereto of a pull-cord or string 12, or other suitable means for pulling the said catch from its normal holding or retaining position to its releasing position, as will be clearly evident.

The reference-character 13 indicates a suitably shaped barrel, which is also made from sheet-metal and is made to provide a tubular member formed with the open end-portions 14 and 15. Extending from the opposite sides of the said barrel and being made or struck up out of the same piece of sheet-metal, so as to be integrally connected with the said barrel 13, are slightly outwardly extending portions 16 of suitably shaped and ornamental supports or standards 17. Each support or standard is formed with an opening 18, said openings providing bearings for the purposes to be presently more fully set forth. The lower marginal edge-portions 19 of said supports 17 are provided with outwardly extending flanges 20 which rest upon the upper face of the forced-up portion 2 of the base or bed-plate 1, each flange 20 being formed with fastening lugs or ears 21, which extend at right angles from said flanges, or approximately so, and enter the lug-receiving holes or openings 3, to be bent under and against the lower face of said portion 2 of the base-plate, as clearly represented in the several figures of the drawings. Thus it will be seen, that a very simple, cheap and efficient means is provided for permanently securing the said supports or standards 17 and the barrel 13 upon the upper face of the base or bed-plate 1. The open end-portion 15 of the barrel has arranged thereon a thimble or cup-shaped element 22, said element being formed with a hole or perforation 23, as shown in Figs 4 and 5 of the drawings, the said element 22 being also struck up from sheet-metal and being suitably fastened over the said open end-portion 15, so as to provide the striking anvil of the toy-cannon against which the paper-cap is forced and exploded, as will presently appear. The previously mentioned firing-arm is also made from sheet-metal, and the same comprises an arm 24 formed with the laterally extending members 25, the extreme end-portions 26 of which are arranged in the openings or bearings 18 of the respective supports or standards 17, so as to oscillate therein, and whereby the said striking arm is arranged in its operative position between the said supports and with relation to the barrel of the cannon. Upon its upper end-portion, the said striking-arm 24 is formed with a cup-shaped end-member 27 for the reception of the paper-cap, when the arm is in the position shown in Fig. 5 of the drawings, the said member 27 being preferably provided with a marginal fingerpiece 28. Back of the said laterally extending members 25 and the journals 26, the said firing-arm is made with a hook or other suitably shaped fastening member, as 29, for the attachment thereto of a coiled spring 30, said spring, as will be seen from the drawings, having its opposite end attached to the previously mentioned bent or loop-shaped part 9 of the firing-arm retaining or holding catch.

Having in the foregoing specification in a general way described the general arrangement and construction of the several parts comprising my novel toy-cannon, I will briefly set forth the manipulation of the firing-arm for the explosion of a percussion or paper-cap.

The firing-arm 24 is lowered from its previously operated position, represented in Figs. 1, 2, 3 and 4 of the drawings, to the position shown in Fig. 5 of the drawings, the marginal edge of the cap-receiving cup or member 27 of said arm being forced directly beneath and held by the catch or retaining element 11 of the arm 10, the coils of the spring 30, in consequence thereof becoming distended, as shown, and said spring thereby causing the various parts to retain the positions illustrated in said Fig. 5. A fulminate or paper-cap is now placed in the said receiving cup or member 27 of the arm 24. A slight pull upon the string or cord 12 withdraws the catch or retaining element 11 from its holding engagement with the edge of the receiving cup or member 27, whereby the spring in tending to resume its normal position at rest, will forcibly bring the firing-arm 24 into the position represented in said Fig. 4 of the drawings, thereby bringing the fulminate or paper-cap within said cup or member 27 with sufficient force against the striking anvil 22 to produce a loud explosion. In order that the smoke and fire from the exploding cap may enter the barrel 13 and be forced from the mouth or open end 14 thereof, the said anvil 22 is provided with the said hole or perforation 23 herein-above mentioned. To reload the toy-cannon, the striking-arm 24 is again moved into its holding engagement with the retaining catch from which it can again be readily released by a slight pull upon the string or cord 12.

From the foregoing description of my present invention it will be evident that I have provided a novel, simple and cheaply

made toy-cannon which is greatly reduced in weight, and can be readily operated to explode the fulminates or paper-caps without the least exertion.

I claim:—

1. A toy-cannon comprising a sheet-metal base formed with lug-receiving openings, a sheet-metal barrel formed with downwardly extending supports, and lugs connected with said supports, said lugs extending through said lug-receiving openings and being bent upon the back of said base, so as to secure said supports upon said base, substantially as and for the purposes set forth.

2. A toy-cannon comprising a sheet-metal base formed with lug-receiving openings, a sheet-metal barrel formed with downwardly extending supports, lugs connected with said supports, said lugs extending through said lug-receiving openings and being bent upon the back of said base, so as to secure said supports upon said base, a thimble-shaped and perforated anvil arranged over one end of said barrel, a spring-actuated firing-arm pivoted between said supports, and an oscillatory retaining catch upon said base-plate for holding said firing-arm in its lowered position, substantially as and for the purposes set forth.

3. A toy-cannon comprising a sheet-metal base formed with lug-receiving openings, a sheet-metal barrel formed with downwardly extending supports, lugs connected with said supports, said lugs extending through said lug-receiving openings and being bent upon the back of said base, so as to secure said supports upon said base, a thimble-shaped and perforated anvil arranged over one end of said barrel, a spring-actuated firing-arm pivoted between said supports, a cup-shaped cap-receiving member forming a part of said firing-arm, and an oscillatory retaining catch upon said base-plate adapted to be brought in engagement with the edge of said cap-receiving member for holding said firing-arm in its lowered position, substantially as and for the purposes set forth.

4. A toy-cannon comprising a base, a sheet-metal barrel formed with downwardly extending supports, means for securing said supports to said base, said supports being provided with bearing-portions, a sheet-metal firing-arm formed with oppositely extending journals adapted to oscillate in said bearings, a cup-shaped cap-receiving member formed upon one end of said arm, and a fastening hook upon the other end of said arm, an oscillatory retaining catch upon said base for holding said firing-arm in its lowered position, and a coiled spring attached at one end to said retaining catch and at its other end to the fastening hook of said firing arm, substantially as and for the purposes set forth.

5. A toy-cannon comprising a base, a sheet-metal barrel formed with downwardly extending supports, means for securing said supports to said base, said supports being provided with bearing-portions, a sheet-metal firing-arm formed with oppositely extending journals adapted to oscillate in said bearings, a cup-shaped cap-receiving member formed upon one end of said arm, and a fastening hook upon the other end of said arm, an oscillatory retaining catch upon said base, said catch being made from wire and comprising a shank, a loop-shaped portion connected with said shank, an arm extending from said loop-shaped portion, and a loop-shaped retaining member upon said arm with which the cap-receiving member of the firing-arm is adapted to be brought in retaining engagement for holding said firing arm in its lowered position, and a coiled spring attached at one end to said loop-shaped portion which is connected with said shank and at its other end, said spring being attached to the fastening hook of said firing arm, substantially as and for the purposes set forth.

6. In a toy-cannon, the combination, with a sheet-metal base provided with a loop-shaped portion forced out of said base, of a barrel and supports for said barrel, a firing-arm arranged between the said supports, and a firing-arm holding member comprising a shank arranged in said loop-shaped portion of the said base, said shank being formed with a curved end-portion and a finger extending therefrom, said finger projecting over the said forced-out portion, a post extending upwardly from the other end-portion of said shank, and a loop-shaped retaining catch upon the free end of said post, substantially as and for the purposes set forth.

7. In a toy-cannon, the combination, with a sheet-metal base provided with a loop-shaped portion forced out of said base, of a barrel and supports for said barrel, a firing-arm arranged between the said supports, and a firing-arm holding member comprising a shank arranged in said loop-shaped portion of the said base, said shank being formed with a curved end-portion and a finger extending therefrom, said finger projecting over the said forced-out portion, a curved and loop-shaped portion connected with the other end-portion of said shank, a post extending upwardly from said curved and loop-shaped portion, a loop-shaped retaining catch upon the free end of said post, and a coiled spring having one end secured to said curved and loop-shaped portion and said spring having its other end secured to said firing-arm, substantially as and for the purposes set forth.

8. In a toy-cannon, the combination with a barrel, of a pair of supports, said barrel

and supports being integrally connected and made from sheet-metal, and said supports being formed with oppositely located openings forming bearings, and a firing-arm also made from sheet-metal, said arm being provided with a cup-shaped cap-receiving member, and said arm being provided with oppositely extending members the extreme end-portions of which form journals arranged in the said openings of said supports, substantially as and for the purposes set forth.

9. In a toy-cannon, the combination with a barrel, of a pair of supports, said barrel and supports being integrally connected and made from sheet-metal, and said supports being formed with oppositely located openings forming bearings, a firing-arm also made from sheet-metal, said arm being provided with a cup-shaped cap-receiving member, and said arm being provided with oppositely extending members the extreme end-portions of which form journals arranged in the said openings of said supports, and a thimble-shaped anvil arranged over the rear end of said barrel, said anvil being provided with an opening, substantially as and for the purposes set forth.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 5th day of October 1909.

JOSEPH A. DAINTY.

Witnesses:
FREDK. C. FRAENTZEL,
FREDK. H. W. FRAENTZEL.