

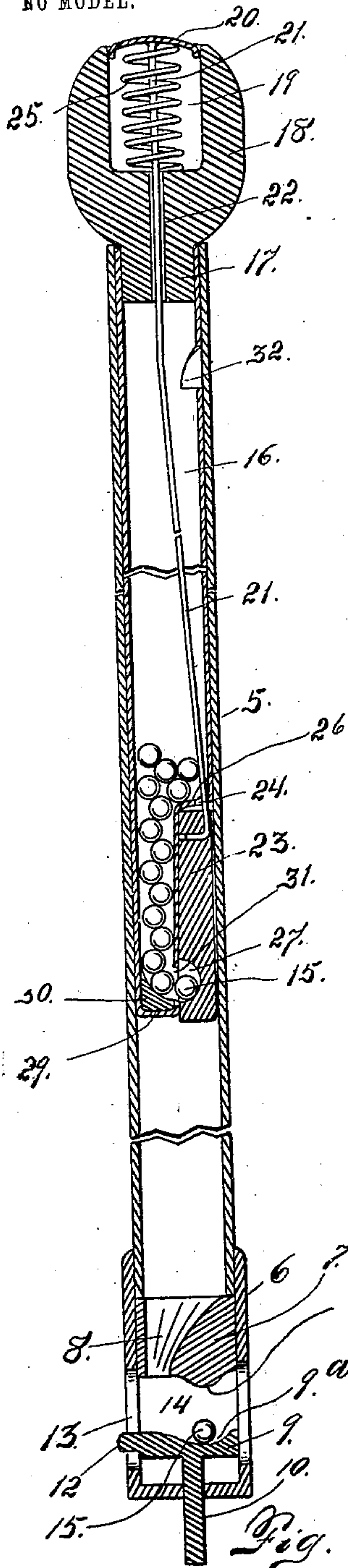
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J. R. STANLEY & F. S. HOWARD.  
MAGAZINE CAP EXPLODING CANE.

APPLICATION FILED SEPT. 6, 1902.

NO MODEL.



WITNESSES:

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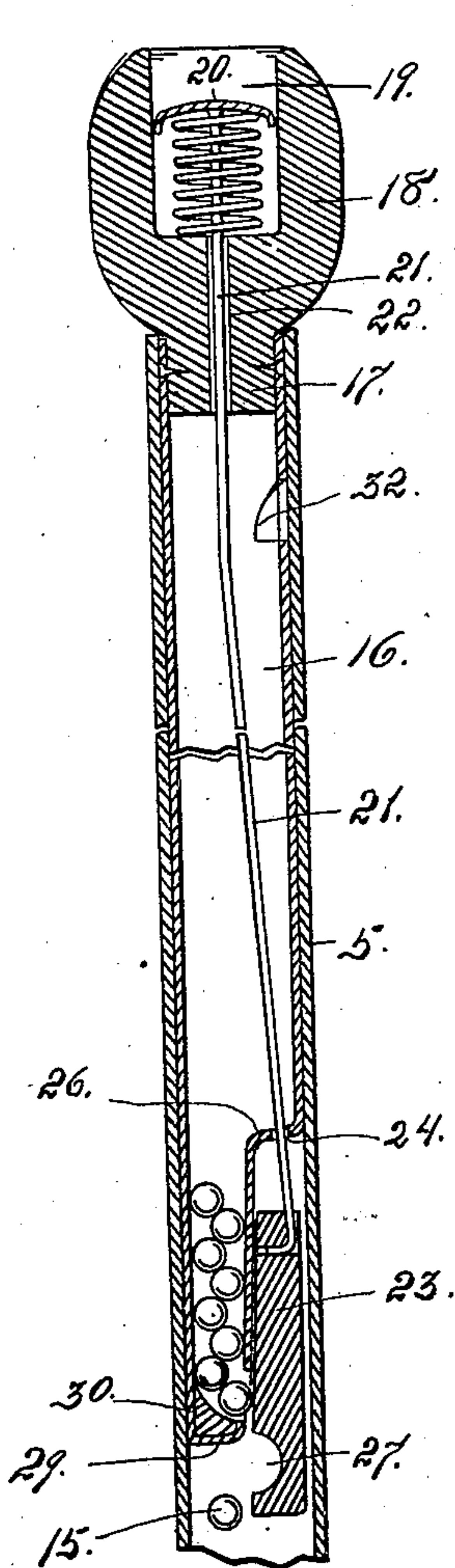


Fig. 3.

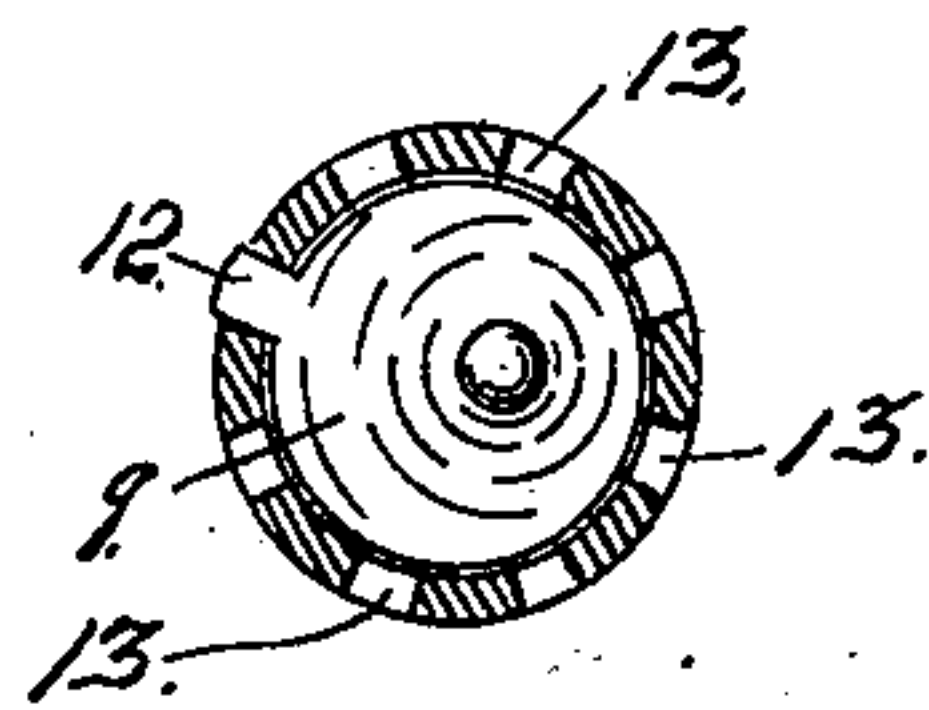


Fig. 4.

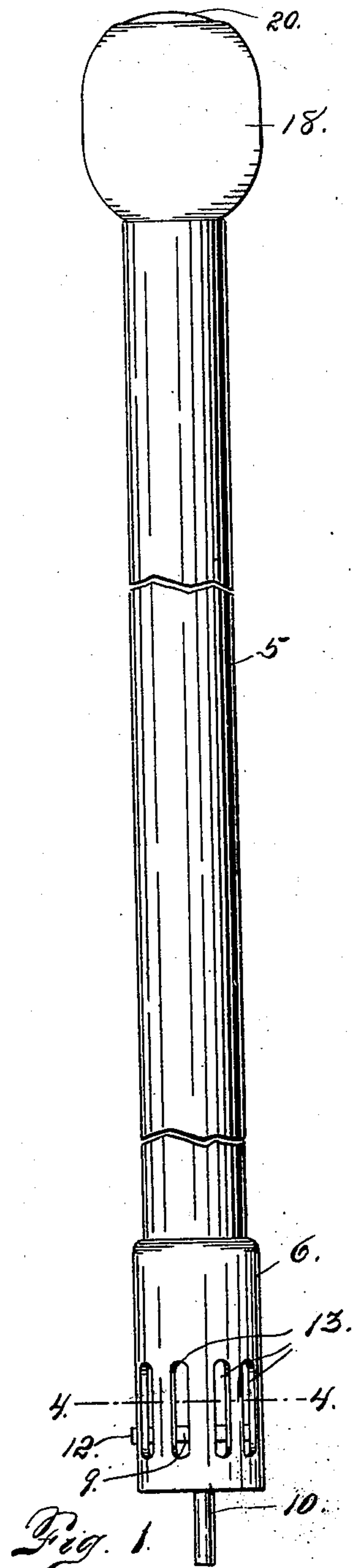


Fig. 1.

INVENTORS

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# UNITED STATES PATENT OFFICE.

JAMES R. STANLEY AND FRANK S. HOWARD, OF BOULDER, COLORADO.

## MAGAZINE CAP-EXPLODING CANE.

SPECIFICATION forming part of Letters Patent No. 723,218, dated March 17, 1903.

Application filed September 6, 1902. Serial No. 122,430. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES R. STANLEY and FRANK S. HOWARD, citizens of the United States of America, residing at Boulder, in the county of Boulder and State of Colorado, have invented certain new and useful Improvements in Magazine Cap-Exploding Canes; and we do 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 the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in magazine cap-exploding canes, our object being to provide a device of this class in which the caps or exploding devices are arranged to be released from the magazine at the will of the operator, the magazine being adapted to hold an indefinite number of caps, whereby the necessity of loading the device after each explosion is obviated.

Briefly stated the device consists of a tubular casing or barrel, in one extremity of which is inserted the magazine for holding the caps or devices to be exploded, the magazine being provided with a spring-held cap-releasing part adapted when actuated to allow the caps to drop from the magazine one at a time, the opposite extremity of the casing being provided with a piston forming a lodgment for the cap or explosive device, and having a stem normally protruding from the lower extremity of the device, whereby the piston may be moved upwardly by striking the stem against an object offering the desired resistance, the upward movement of the piston bringing the cap or explosive device against an abutment for the purpose of exploding the cap.

Our object is to provide a device possessing the foregoing characteristic features which shall at the same time be simple in construction, economical in cost, reliable, durable, and efficient in use; and to these ends the invention consists of the features, arrangements, and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a side eleva-

tion of our improved device. Fig. 2 is a longitudinal section of the same. Fig. 3 is a fragmentary view of the same, showing the parts in position to release a cap which is in the act of falling to the piston below. Fig. 4 is a cross-section taken on the line 4-4, Fig. 1.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a tubular casing or barrel, to the lower extremity of which is attached a part 6, provided with an abutment 7, in which is formed an opening 8, located at one side of the abutment. Located in the part 6 and occupying a position below the abutment is a movable piston 9, having a stem 10 protruding beyond the lower extremity of the device and provided with a projection 12, which passes through a slot 13, formed in the part 6, whereby the piston is prevented from turning for reasons hereinafter set forth. The part 6 is provided with a number of slots 13, arranged around the explosive-chamber 14. The upper surface of the piston is provided with a recess 9<sup>a</sup>, forming a seat for the explosive cap 15, the said seat being located directly below the abutment, which is provided with a boss 7<sup>a</sup>, the latter being the counterpart of the recess 9<sup>a</sup>. The opening 8 is formed at one side of the center of the abutment, as aforesaid, and the seat 9<sup>a</sup> is formed on the opposite side of the piston, so that the explosive 15 is in a position directly beneath the boss 7<sup>a</sup> and out of line with the opening 8. In the upper portion of the barrel 5 is located a tube 16, which we term the "magazine." In the upper extremity of this tube is tightly fitted a plug 17, whose protruding upper portion is enlarged to form a knob-shaped part 18, adapted to be grasped by the hand of the user. In the central part of the knob 18 is formed a recess 19, in which is fitted a push-button or piston-plate 20, to which is attached a rod 21, the latter passing downwardly through an opening 22, formed in the plug, its lower extremity being connected with a slidable part 23, which is inclosed by the barrel on one side and the adjacent wall of the magazine on the opposite side, the lower portion of the magazine being reduced to make room for the part 23. The shoulder or offset part above the reduced lower portion of the magazine-tube



is provided with an opening 24, through which the rod 21 passes and in which it moves freely. In the recess 19 of the knob 18 is located a coil-spring 25, which surrounds the upper extremity of the rod and bears against the button-20 at one extremity and the bottom of the recess at the opposite extremity. This spring normally holds the sliding part 23 at its upward limit of movement—that is to say, against the shoulder or offset 26, which limits the upward movement of the part 23, the latter being actuated by the spring 25.

The lower portion of the part 23 is provided with a recess 27, adapted to receive the explosive 15. These explosives, as shown in the drawings, are small globe-shaped or spherical devices, this shape being best adapted for use in an instrument of this kind. The lower portion of the magazine-tube is closed, as shown at 29, and provided with a curved bottom piece 30, adapted to direct the caps 28 from the magazine through an opening 21 in the magazine-tube into the recess 27 of the part 23.

The magazine-tube, while fitting tightly within the barrel of the device, is removable for reloading purposes, and to this end it is provided with an opening 32, through which the caps or explosive devices may be fed to the magazine at will. After the magazine is loaded it is reinserted in the tubular casing or barrel 5, after which the device is ready for use. Whenever it is desired to explode a cap, the push-button 20 is first pressed by the user until the sliding part 23 is moved downwardly in the tube 5 sufficiently to allow the cap or explosive 15 to drop downwardly through the opening 8 to the seat 9<sup>a</sup> of the piston. The piston is then forced upwardly by striking its stem 10 against the ground or other resisting object, whereby the cap is brought against the boss 7<sup>a</sup> of the abutment 7 and exploded with a loud report, which is distinctly heard by reason of the fact that the part 6 is provided with slots extending entirely around the explosive-chamber. As soon as the pressure on the button 20 ceases to act the spring 25 will return the button to its normal position, after which another cap will roll into the recess 27 of the part 23. The operation may then be repeated until all the caps in the magazine have been exploded.

Having thus described our invention, what we claim is—

1. A magazine cap-exploding device comprising a tubular casing or barrel, a magazine for holding the caps or devices to be exploded, said magazine being inserted in the upper extremity of the barrel and provided with a protruding plug in the central part of which is formed a recess, a push-plate slidable in said recess, a rod connected with the push-plate and extending downwardly from the plug, means connected with said rod whereby by actuating the push-plate, the explosive devices may be released from the magazine, and suitable means located below the maga-

zine for exploding the said devices, substantially as described.

2. A magazine cap-exploding device comprising a tubular casing or barrel, a magazine, for holding the caps or devices to be exploded, said magazine being inserted in the upper extremity of the barrel and provided with an enlarged plug projecting beyond the upper extremity of the barrel and provided with a recess open at the upper extremity of the plug, a push-plate slidable in said recess, a rod connected with the push-plate and extending downwardly through the plug, a slidable part with which the lower extremity of said rod is connected, said part being arranged adjacent the lower extremity of the magazine the latter being provided with an opening controlled by the slidable part whereby as the push-plate is forced downwardly, the sliding part is actuated to release an exploding device from the magazine, substantially as described.

3. A magazine cap-exploding device comprising a tubular casing or barrel, a magazine for holding the caps or devices to be exploded, said magazine being inserted in one end of the barrel and provided with a protruding plug, the magazine being held in the barrel by frictional contact, and adapted to be removed therefrom at will for refilling or recharging purposes, the magazine having an opening adapted to receive the exploding devices after removal from the barrel, the said plug being provided with a recess, a spring-supported push-plate located in said recess, a rod connected with said push-plate and extending down through the plug, a slidable part with which the lower extremity of said rod is connected, said part being inclosed by the barrel on one side and the adjacent wall of the magazine on the opposite side, the lower portion of the magazine being reduced to make room for the sliding part which is provided with a recess adapted to receive the explosive devices from the magazine, the lower portion of the magazine being closed and constructed to direct the caps from the magazine into the sliding part, and suitable cap-exploding means connected with the barrel below the magazine, substantially as described.

4. A magazine cap-exploding device comprising a tubular casing or barrel, a magazine for holding the caps or devices to be exploded, said magazine being inserted in one end of the barrel and provided with a protruding plug in the central part of which is formed a recess, a push-plate slidable in said recess, a rod connected with the push-plate and extending down through the plug, a slidable part with which the lower extremity of said rod is connected, said part being inclosed by the barrel on one side and the adjacent wall of the magazine on the opposite side, the lower portion of the magazine being reduced to make room for the sliding part which is provided with a recess adapted to receive an explosive device from the magazine, the lower portion



of the magazine being closed and constructed to direct the caps from the magazine into the sliding part, and an abutment located in the barrel below the magazine and having an opening to allow a released explosive device to pass through, and a piston located below the abutment and cooperating therewith to explode the cap, substantially as described.

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

JAMES R. STANLEY.  
FRANK S. HOWARD.

Witnesses:

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S. B. AUSTIN.