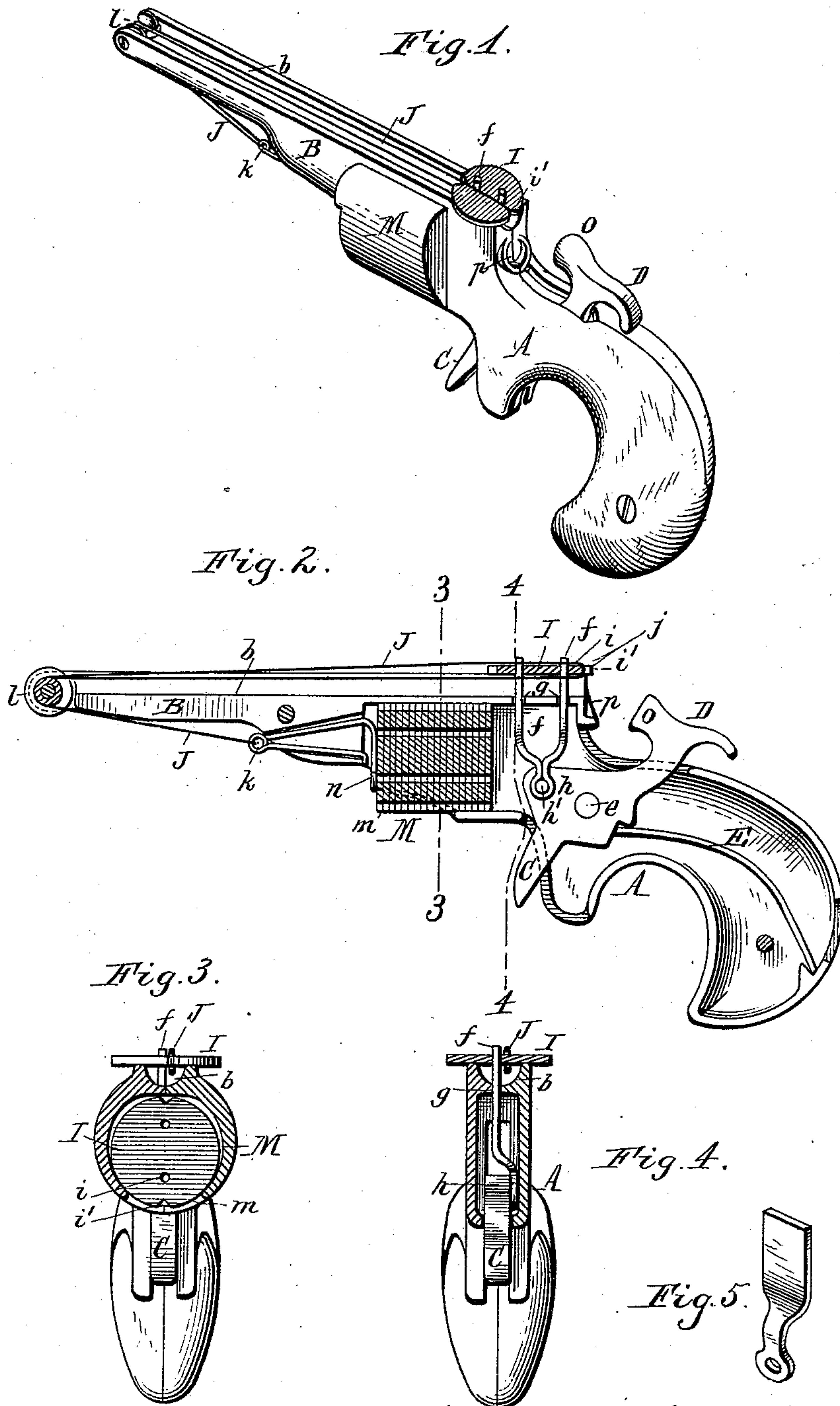


(No Model.)

J. MONAGHAN.
SPRING GUN.

No. 498,070.

Patented May 23, 1893.



Witnesses:

Emil Neuhart.
Chas. F. Burkhardt.

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UNITED STATES PATENT OFFICE.

JAMES MONAGHAN, OF BATAVIA, NEW YORK, ASSIGNOR OF ONE-HALF TO
THOMAS C. MONAGHAN, OF ASPEN, COLORADO.

SPRING-GUN.

SPECIFICATION forming part of Letters Patent No. 498,070, dated May 23, 1893.

Application filed November 19, 1892. Serial No. 452,487. (No model.)

To all whom it may concern:

Be it known that I, JAMES MONAGHAN, a citizen of the United States, residing at Batavia, in the county of Genesee and State of New York, have invented new and useful Improvements in Toy Pistols, of which the following is a specification.

This invention relates to toy pistols or guns which are provided with means for projecting a disk of cardboard or paste-board, and it has for its objects to project the disk in a horizontal position from the barrel and to impart to the disk a whirling motion whereby it is projected edgewise from the pistol in a straight line and carried to a considerable distance.

In the accompanying drawings:—Figure 1 is a perspective view of a toy pistol containing my improvements. Fig. 2 is a side view of the pistol with one of the sections of its body removed to expose the interior parts, the projectile mounted on the supporting pins of the pistol and the projectiles in the receptacle of the pistol being shown in section. Figs. 3 and 4 are cross sections of the pistol in lines 3—3 and 4—4, Fig. 2, respectively. Fig. 5 is a perspective view showing a modified form of the supporting pin.

Like letters of reference refer to like parts in the several figures.

A represents the hollow body of the pistol which is preferably divided centrally into two similar sections, which are secured together at their front and rear portions by screws or other fastenings, as shown.

The barrel B of the pistol is formed in its upper side with a longitudinal groove or depression *b* extending from end to end of the barrel, and the upper edges of the barrel on opposite sides of this groove are flat, to form a smooth surface over which the projectile slides. The groove may, however, be omitted.

C represents the trigger pivoted to the pistol by a transverse pin *e* and projecting through the usual slot formed in the under side of the hollow pistol body.

D is the thumb piece connected with the trigger for cocking the pistol, and which passes through a longitudinal slot in the upper side of the pistol.

E is the trigger-spring of any ordinary or suitable construction.

f f represent a pair of vertically movable pins or projections arranged near the rear end of the barrel, preferably one in advance of the other, and upon which the card-board projectile is placed. These pins are guided with their upper portions in openings *g* formed in the adjacent rear portion of the barrel and are attached at their lower ends to a forward extension *h* of the trigger hub by a pin *h'*, so that the forward movement of the trigger causes the pins to slide upward and project with their upper ends above the pistol barrel, while the backward movement of the trigger causes the pins to be lowered or retracted. The pins are made of such a length that when they are retracted their upper ends are flush with or below the upper surface of the barrel. They are preferably bent from a single piece of wire formed at its middle with an eye which encircles the pin *h'*, as shown in Fig. 2.

The projectile consists of a small piece of card-board or paste-board I, having the shape of a disk or wafer, as shown, and provided with two apertures *i i* arranged on opposite sides of its center which are designed to pass over the pins *f* when the same are raised, so as to hold the disk against turning as well as retain it in place. The disk rests upon the flat upper surface of the barrel.

J is an elastic band or cord whereby the wafer-like projectile is shot from the pistol when its retaining pins are retracted by pulling the trigger. This band, preferably, consists of an endless rubber band attached to an eye *k* arranged on the under side of the barrel and adapted to extend from this eye forwardly and upwardly over a transverse anti-friction roller *l* journaled at the front end of the barrel and thence rearwardly to the projectile. The latter is formed in diametrically opposite portions of its edge with notches *i'* arranged substantially in line with its pin apertures *i*. The free loop or bight of the rubber band is engaged with the rear notch, or that nearest the thumb piece of the trigger, when the disk is on the supporting pins *f*. A single notch in each of the disks

would be sufficient, but they are preferably provided with two, as shown, as this permits the disks to be placed on the supporting pins without giving any attention to the position of the notches, which would be necessary if they had but one notch.

M is a magazine or receptacle for holding a number of the disks or wafers, which is arranged below the rear portion of the barrel in the place occupied by the rotary cartridge chamber of a real pistol. This receptacle is open at its front end and is provided in its underside with an opening or recess *m* through which the finger may be passed for pushing the disks toward the delivery end of the receptacle. This aperture is made large enough to admit the finger, but not so large as to allow the disks to drop through it.

n is a retaining spring secured at its front end to the under side of the barrel and bearing with its angular rear portion against the front end of the package of disks in the receptacle. This spring, while confining the disks in the receptacle, permits one to be readily withdrawn from the front end of the package, when desired.

In using the pistol, the same is first cocked by pulling back the thumb-piece of the trigger in the usual manner, which causes the supporting pins *f* to be projected above the upper surface of the barrel. The card-board disk is then placed upon the projecting pins and the elastic projecting band is stretched forwardly and upwardly around the anti-friction roller *l* and its bight or loop *j* is passed over the card-board disk and engaged in the rear notch thereof. The strands of the projecting band lie in the groove of the barrel, on one side of the retractible pins, out of the centerline of the disk. Upon pulling the trigger, the supporting pins are retracted from the openings in the disk, and the latter, being released, is projected from the pistol by the reaction of the stretched band. The disk rests in a horizontal position upon the barrel and is projected in this position, whereby it is supported by the air in its flight and carried to a considerable distance. The supporting pins hold the disk against turning under the tension of the band, but the moment it is released, it receives not only a forward impulse, but also a rotary impulse, owing to the fact that the band exerts its force upon the disk out of the center thereof. The whirling motion so imparted to the disk causes it to retain its horizontal position and to sail edge-

wise through the air whereby it is carried a much greater distance, than it would be by simply projecting it without giving it a whirling motion.

Instead of two pins, a single pin, elongated in the longitudinal direction of the barrel, as shown in Fig. 5, or any other flat sided pin which will hold the disk against rotation may be employed.

The thumb piece of the trigger may be formed with a hammer *O* and the barrel may be provided in its rear end opposite said hammer with a cap-socket or cavity *p*, so that the pistol may be used for shooting fulminating caps, if desired.

I claim as my invention—

1. The combination in a toy pistol or gun having a horizontal support for a perforated disk-projectile, of a vertically movable pin arranged to pass through the perforated projectile, a trigger device for retracting said pin, and a projecting band attached to the pistol or gun and adapted to be engaged against said projectile on one side of the vertically movable pin, substantially as set forth.

2. In a toy pistol or gun, the combination with the barrel having a horizontal support for the projectile, of a retractible pin arranged on one side of the barrel, a trigger mechanism by which said pin is operated, and a projecting band secured to the barrel and adapted to be engaged against the projectile on one side of said pin, substantially as set forth.

3. In a toy pistol or gun, the combination with the barrel having a horizontal support for the projectile, of a pair of retractible pins arranged one behind the other on one side of the barrel, and a projecting band secured to the barrel and adapted to be engaged against the projectile on one side of said pins, substantially as set forth.

4. In a toy pistol or gun, the combination with the barrel having a longitudinal groove in its upper side, of a pair of retractible supporting pins guided in vertical openings arranged in the rear portion of the barrel, trigger mechanism for operating said pins, and an elastic projecting band adapted to lie in the groove of the barrel, substantially as set forth.

Witness my hand this 12th day of November, 1892.

JAMES MONAGHAN.

Witnesses:

JOHN W. PRATT,
W. W. CALLEN.