

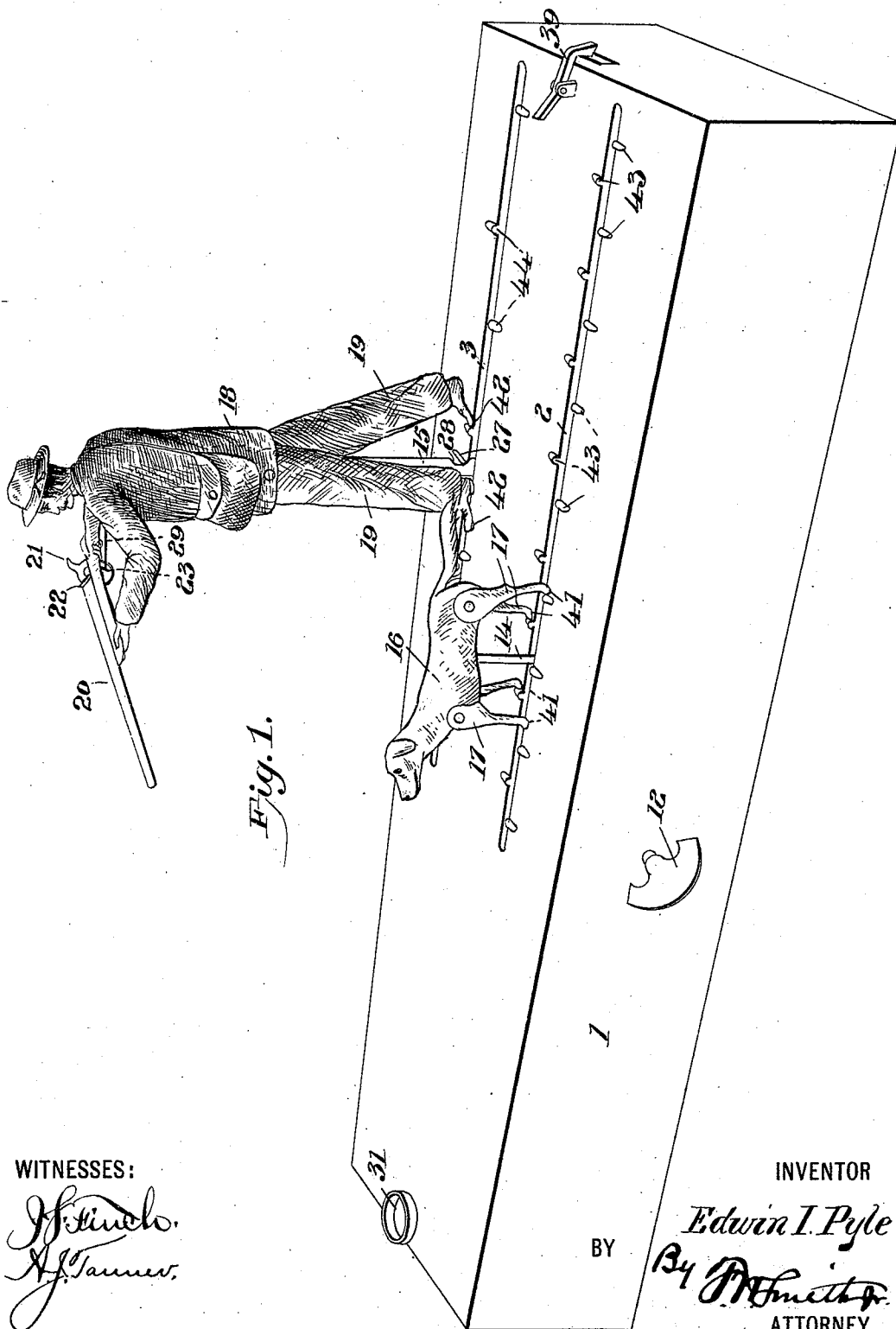
(No Model.)

2 Sheets—Sheet 1.

E. I. PYLE.
MECHANICAL TOY.

No. 510,444.

Patented Dec. 12, 1893.



WITNESSES:

J. H. Lincoln
A. J. Tanner

INVENTOR

Edwin I. Pyle

BY

B. J. Smith
ATTORNEY

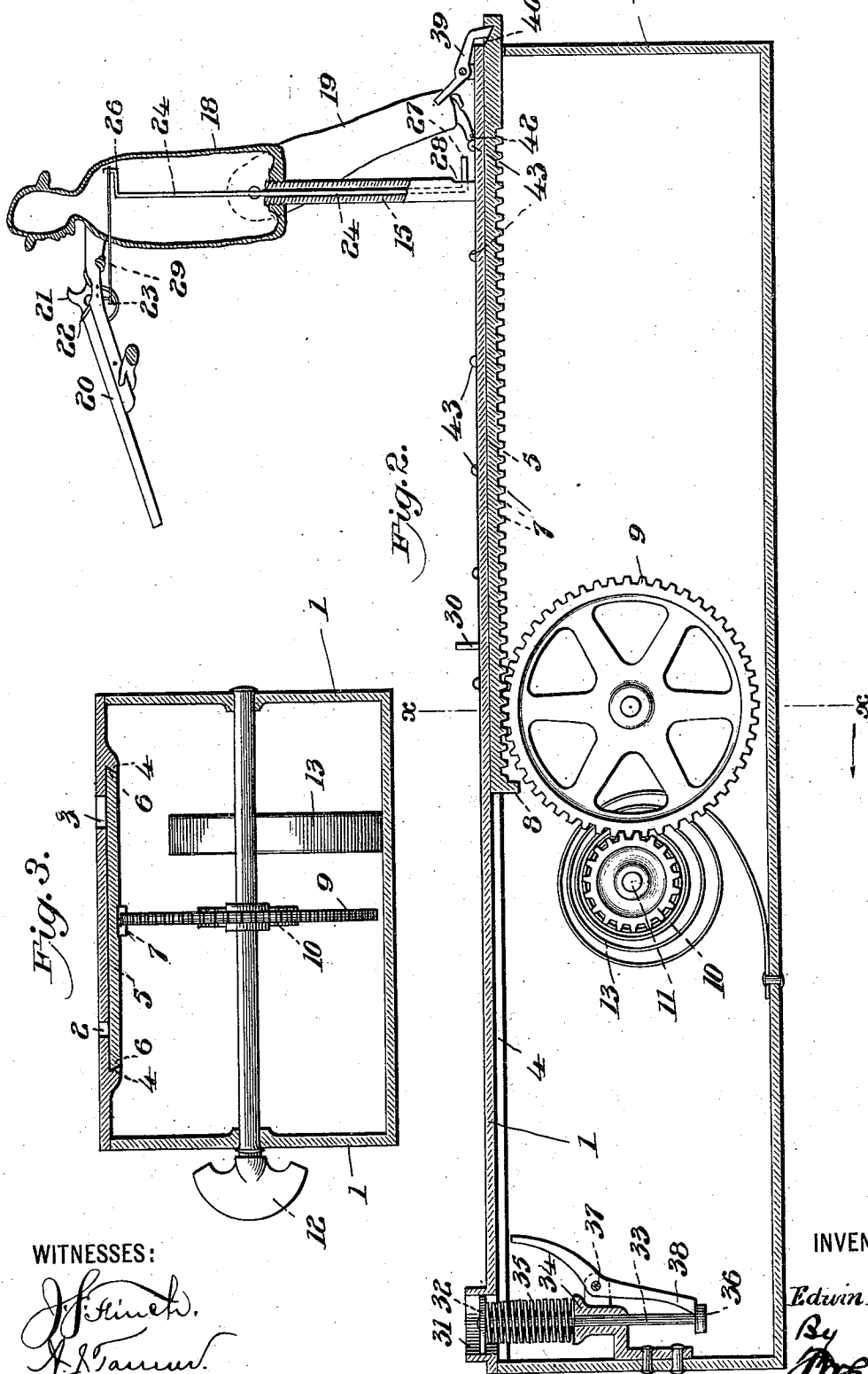
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J. H. Smith.
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INVENTOR

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ATTORNEY

UNITED STATES PATENT OFFICE.

EDWIN I. PYLE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-HALF
TO WILLIAM H. GARDNER, OF SAME PLACE.

MECHANICAL TOY.

SPECIFICATION forming part of Letters Patent No. 510,444, dated December 12, 1893.

Application filed September 19, 1893. Serial No. 485,856. (No model.)

To all whom it may concern:

Be it known that I, EDWIN I. PYLE, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Mechanical Toys; 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.

My invention relates to certain improvements in toys, but has particular reference to mechanical toys, and has for its object to produce a very simple and effective device of this description.

In the accompanying drawings—Figure 1 is a perspective of my improvement; Fig. 2 a longitudinal section thereof, and Fig. 3 a section at the line $x-x$ of Fig. 2.

Similar numbers of reference denote like parts in the several figures of the drawings.

1 is a base or standard having in its face elongated slots 2, 3, and provided on its under side with a dove-tailed way 4 within which slides a bar 5 which has a part 6 cut away to be adapted to said way. Within the bottom of this bar is a rack 7, and projecting from the forward end of the bar is a finger 8, the purpose of which will presently be explained.

9 is a spur gear wheel journaled between the sides of the standard and meshing with said rack, and 10 is a pinion mounted on a shaft 11 also journaled between the sides of the standard, said pinion meshing with the gear 9, the shaft having on one extremity an ordinary thumb-key 12 which extends from the outside wall of the standard.

13 is a volute spring around the shaft 11, the ends of said spring being secured respectively to said shaft and to the standard.

Extending upward from the bar 5 through the slots 2, 3 are posts 14, 15, to the former of which is secured the body 16 of a toy dog, to which body are pivoted legs 17 which depend into close proximity to the standard. The post 15 is hollow and is secured to the body 18 of a toy man, from which body pivoted legs 19 depend likewise into close proximity to the standard. The man is represented as holding a gun 20 in position for shooting, which is provided with any ordinary spring

actuated hammer 21 and a nipple 22 on which latter may be placed any suitable fulminate or explosive cap. 23 is the trigger operatively connected in any ordinary manner with the hammer.

Extending upward through the post 15 is a stiff wire 24 from the upper and lower ends of which extend cranks 26, 27, the lower portion of the post 15 being cut away at 28 for the passage of the crank 27. 29 is a short wire whose ends are loosely connected to the trigger 23 and crank 26, so that the gun being cocked, it will readily be understood that any axial movement of the wire 24 will effect the pulling of the trigger and the consequent release of the hammer.

Projecting from the surface of the bed 1 is a shoulder 30 located at the forward end of the slot 3 and against which the crank 27 abuts when the bar 5 has reached the end of its forward movement.

In the extreme forward end of the bed 1 is an opening 31 within and through which is assembled a disk 32 having depending therefrom a spindle 33 which latter extends through a bracket 34 projecting laterally from the inner wall of the standard. Around the spindle and between the disk and bracket is a coil spring 35, and on the lower end of the spindle is a head 36. Pivoted at 37 to the bracket is a dog 38 whose nose is normally thrown toward the head 36 by reason of the gravity of the upper end of said dog. When the disk is depressed against the resiliency of the spring, the head 36 will thereby be carried below the nose of the dog, thus permitting the latter to swing above said head and hold it as against upward movement. This effectually locks the disk in depressed position, but when the rack moves forward the finger 8 will strike against the top of the dog, thereby retracting the nose and releasing the spindle and disk. The timing of the striking of the crank 27 against the shoulder 30 and the releasing of the disk is such that the latter occurs slightly in advance of the former, so that if an inanimate object, such as an imitation pigeon or bird, were placed on the disk, such object would be thrown into the air immediately before the explosion of the cap or fulminate. By turning the thumb-key

12 toward the left the spring 13 is wound up and at the same time the rack bar and parts carried thereby are retracted to normal position. A bevel nosed gravity pawl 39 pivoted
 5 to the rear end of the bed and overhanging the same and engaging with a notch 40 in the rear end of the rack bar, may be employed to automatically lock the latter in its normal position. By depressing the tail of this pawl
 10 the rack bar may be released and permitted to advance by reason of the action of the spring 13.

41, 42, are nibs which project respectively from the bottoms of the legs of the dog and
 15 man, and 43, 44, are ridges rising from the face of the bed in the path traveled respectively by said legs, the function of which ridges is to engage the nibs and retard the swinging of the legs from time to time as the rack bar
 20 advances, thus giving to the figures of the dog and man the appearance of walking.

I do not wish to be limited to the use of any specific devices for the purpose of releasing the disk and exploding the cap or fulminate,
 25 since these results may be accomplished in many ways all of which are within the range of ordinary mechanical skill, the gist of my invention resting in the broad idea of advancing the figures of a man and dog and in effecting
 30 the flight of the inanimate target and the explosion of the cap or fulminate at predetermined times.

Having thus described my invention, what I claim as new, and desire to secure by Letters
 35 Patent, is—

1. In a toy of the character described, the

combination of the figures of the dog and man carried by a traveling spring actuated element, suitable fulminate exploding mechanism carried by the figure of a man, a spring
 40 actuated target throwing device, and means controlled by said element for operating said mechanism and device at predetermined times, substantially as set forth.

2. The combination of the base having
 45 therein elongated slots, the rack bar adapted to travel in ways in said base and provided with posts which project upwardly through said slots, the figures of the dog and man secured to said posts, the fulminate exploding
 50 device carried by the figure of the man and having a spring actuated hammer, the trigger operatively connected to the latter, the wire having cranks at its extremities, the connecting wire between the upper crank and trig-
 55 ger, the shoulder projecting from the bed at the front end of the slot within the path of the lower crank, the spring actuated disk in the forward end of the bed and provided with a locking head, the pivoted dog adapted to
 60 engage with the latter to hold the disk in depressed condition, and the finger extending forward from the rack bar and adapted to abut against the upper end of said dog, substantially as set forth.

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

EDWIN I. PYLE.

Witnesses:

WILLIAM H. GARDNER,
 A. J. TANNER.