

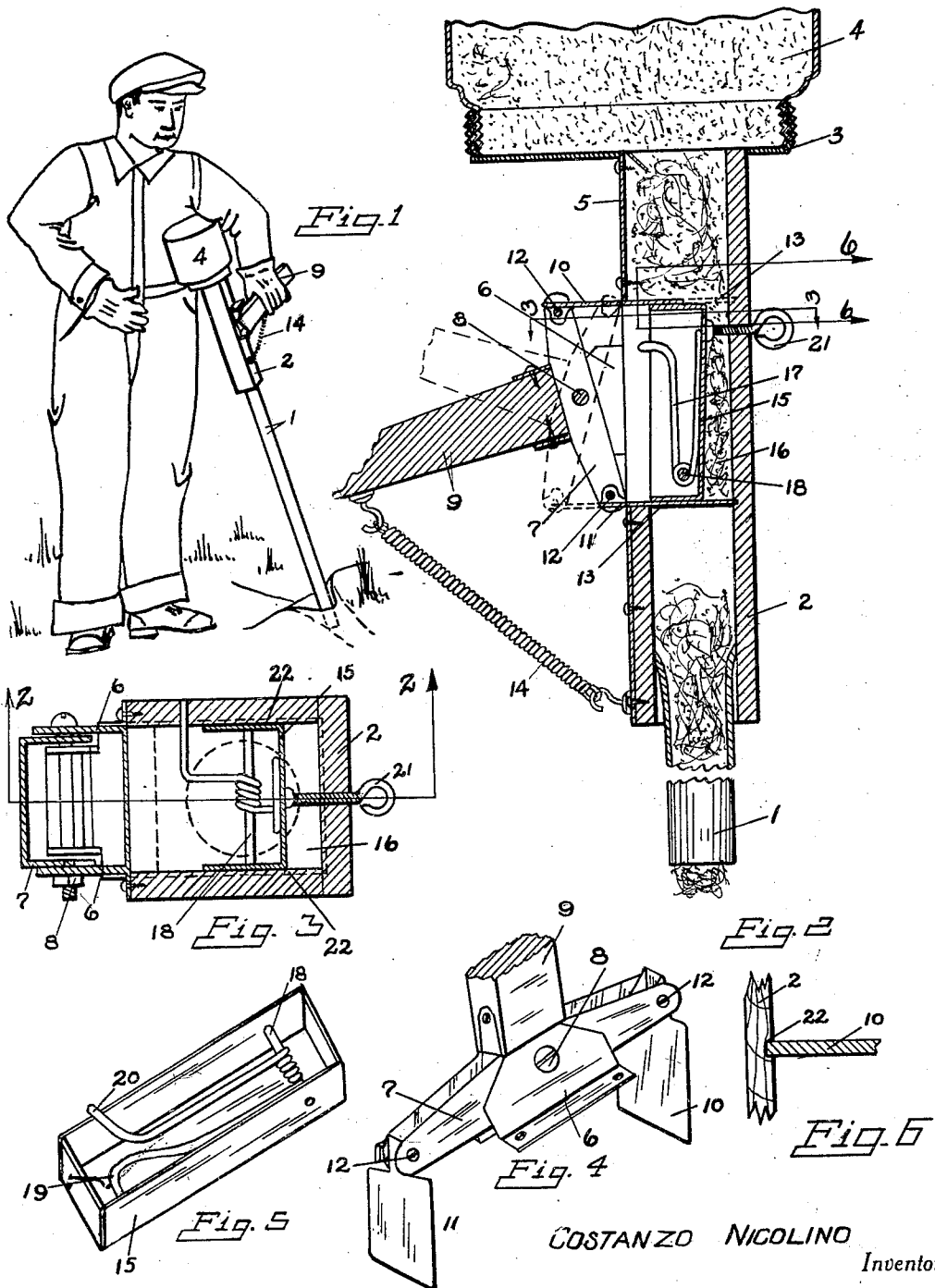
Feb. 9, 1932.

C. NICOLINO

1,844,260

DEVICE FOR DISPENSING MEASURED QUANTITIES OF POWDERED MATERIAL

Filed Sept. 21, 1929



COSTANZO NICOLINO

Inventor

By *Herbert C. Smith*

Attorney

# UNITED STATES PATENT OFFICE

COSTANZO NICOLINO, OF CHEWELAH, WASHINGTON, ASSIGNOR OF ONE-FOURTH TO  
MARY BRICE, OF SPOKANE, WASHINGTON

## DEVICE FOR DISPENSING MEASURED QUANTITIES OF POWDERED MATERIAL

Application filed September 21, 1929. Serial No. 394,361.

My present invention relates to an improved rodent exterminator or manually operated, charge forming device, in the nature of a "poison gun" for distributing or depositing charges of poisonous materials, insecticides, germicides, and other materials in powder or dust form. While the device is adapted for various purposes it is particularly designed to deposit charges of poison powder in openings in the ground leading to, or forming the nests of gophers, ground squirrels and other rodents.

The primary object of my invention is the provision of a device or apparatus of this type which is adapted to receive a standard powder can as the supply agency for the material, and in addition, the device is constructed and operated in such manner as to avoid direct contact or handling of the poison powder or dust, by the person manipulating the exterminator.

In carrying out my invention I utilize means for regulating the quantity of material forming a charge, and means are provided for depositing the predetermined charges, singly, or successively as desired, in the ground-holes.

The invention consists in certain novel combinations and arrangements of parts as will hereinafter be more fully set forth and claimed. In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention wherein the parts are combined and arranged according to the best mode I have thus far devised for the practical application of the principles of my invention.

Figure 1 is a view illustrating the use of the implement, the operating attendant being in the act of depositing a charge of the poison powder in a ground opening.

Figure 2 is an enlarged, vertical sectional view of the implement, partly broken away for convenience of illustration.

Figure 3 is a transverse sectional view at line 3—3 of Figure 2.

Figure 4 is a detail perspective view of the duplex gates or double acting, charge forming gates.

Figure 5 is a perspective view of the ad-

justable charge-forming hollow block which also acts as a guide for the duplex gates.

Figure 6 is a detail sectional view of part of the feed chute or charge forming box.

As shown in the drawings the implement includes a barrel 1 having a muzzle or nozzle end to be inserted in the ground opening and to guide the charge of material from the box or chute 2. At the top of the chute, which is preferably rectangular in cross section, a circular, threaded socket head or holder 3 is secured, and this holder is adapted to receive the screw threads of an inverted can or jar 4 in which the powder is contained. This can or jar is purchased in the open market, and after its original threaded closure has been removed, the can or jar is screwed into the holder, after which, when the can is inverted, the material will flow freely from the can to the box or chute 2.

One side of the charge forming box is provided with an attached plate 5, and this plate is fashioned with exterior brackets 6 in which the head 7 of a T-lever is pivoted at 8. The T-shaped lever also includes a handle 9 which projects laterally of the implement and is accessible for use by the operator as seen in Figure 1.

This operating lever is provided with a pair of gates 10 and 11, pivoted at the ends 12 of the lever head, and these gates, in the form of flat metal blades in normally horizontal position, slide in slots 13 in the metal plate forming a wall of the charge-box. As seen in Figure 2 the T-shaped lever is pivoted in the brackets, and the gates are pivoted in the lever head, in such manner that one gate is in open position while the other is in closed position with relation to the transverse area of the charge forming box. That is, when the lever-handle 9 is turned down as in full lines Figure 2, the upper gate 10 is open and the lower gate is closed, while the upper gate is closed and the lower gate opened when the lever handle is turned up to dotted position in Figure 2.

A spring 14 is anchored at one end to the handle 9 and at its other end is anchored to the box 2 for the purpose of holding the lower gate 11 in normally closed position across

the area of the charge forming box to retain the material therein.

In Figure 5, a spring pressed adjustable, hollow block 15 is illustrated, that is interposed between the two gates for the purpose of guiding the slide gates, and also for the purpose of varying the capacity of the charge forming chamber 16 that is formed between the block, the lower gate and the side wall of the box. A spring 17 is located in the block and coiled about a pin 18 of the box, with one end 20 anchored to the box and the other end 19 anchored to the block, for the purpose of urging the block to the right in Figure 2 to restrict the area of this charge forming chamber. By means of a screw 21 in Figures 2 and 3 the box may be adjusted as to its position. The screw is threaded in the wall of the charge forming box, and as the hollow block is interposed between the two blades or gates 10 and 11, the block is guided by the gates as it is moved either to the right by the spring or to the left by the screw in Figure 2.

As best seen in Figures 3 and 6, the two gates slide in complementary grooves 22 in the inner faces of the walls of the charge forming box and these grooves of course hold the gates against displacement regardless of the open or closed positions of the gates.

In Figure 2 the adjustable block is in position to restrict the capacity of the charge chamber and the powder or dust falls into the chamber, by gravity, from the powder can or jar, to provide a charge in the chamber. The spring 14 holds the outlet gate 11 closed, while the inlet gate 10 is open, and the charge is ready to be released. By turning the handle 9 upwardly to dotted line position in Figure 2, the positions of the inlet and outlet gates are reversed and the charge is free to flow from the charge forming chamber down to the ground through the barrel 1, as indicated in Figure 2. In the discharging position feed of the material into the charge forming chamber is prevented by the closed inlet gate 10. When the handle 9 is released the spring 14 pulls down the handle 9, closing the outlet gate and opening the inlet gate, whereupon a fresh charge of material is fed by gravity into the charge forming chamber, for subsequent use.

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

1. In a device for dispensing measured quantities of powdered material, the combination with a box having vertically spaced pairs of grooves in its side walls, and a discharge barrel, of a pair of gates slidable in the grooves and oppositely arranged to alternately open and close the box, a handle for operating the gates, means for normally holding the outlet gate closed, a laterally movable block inserted in an open side of

the box between the gates and co-operating therewith to form a measuring chamber in the box, and adjustable means for holding the block in fixed position.

2. In a device for dispensing measured quantities of powdered material, the combination with a box having vertically spaced pairs of grooves in its opposite side walls, and a discharge barrel, of a hollow block inserted in an open side of the box, a spring secured to the box and block for pressing the latter in one direction and an adjustable stop mounted in the box to hold the block in fixed position, an inlet gate slidable in the grooves at the upper end of the box and an outlet gate slidable in the grooves at the lower end of the box for alternately opening and closing the box, said gates and block providing a measuring chamber in the box, a T-shaped lever pivoted exterior of the box, pivotal connections between the lever and gates, and a spring between the lever and box for normally holding the outlet gate in closed position.

In testimony whereof I affix my signature.  
COSTANZO NICOLINO.