P. ZIEGEL.

Shot-Charger.

No. 162,734. Patented April 27, 1875.

FIG. 1.

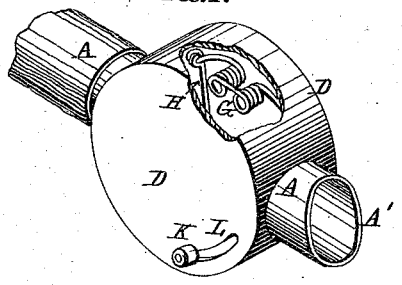


FIG. 2.

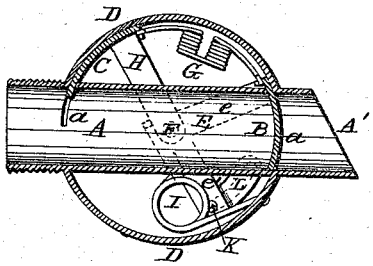
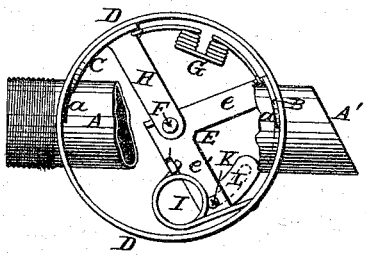


FIG. 3.



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UNITED STATES PATENT OFFICE.

PETER ZIEGEL, OF NASHVILLE, ILLINOIS.

IMPROVEMENT IN SHOT-CHARGERS.

Specification forming part of Letters Patent No. **162,734**, dated April 27, 1875; application filed April 6, 1875.

To all whom it may concern:

Be it known that I, PETER ZIEGEL, of Nashville, Washington county, State of Illinois, have invented a certain new and useful Improvement in Shot-Chargers, of which the following is a specification:

My improvement consists in a tube with two cut-offs connected to two arms having a certain independence of movement on a common center, and having spring-connection with each other.

The construction is such that the outer cut-off can be opened to its full extent at any time, leaving the inner cut-off to be closed by the connecting-spring as soon as the shot becomes loose in the tube by the opening of the outer cut-off. A separate spring ordinarily holds the inner cut-off open and the outer cut-off closed, as in ordinary shot-chargers. The cut-off arms and springs are inclosed in a cylindrical case, through which the tube passes diametrically.

In the drawings, Figure 1 is a perspective view of the charger with part of the case broken away. Fig. 2 is a section axial to the tube. Fig. 3 is a side view with one side removed and the central part of the tube broken away.

A is a shot-tube, similar, in the main, to that of an ordinary shot-charger, and having two slots, *a a*, for the cut-offs B and C. The tube A passes diametrically through a cylindrical case, D, which incloses the arms to which the cut-offs are attached and the springs actuating their movements. The cut-off B is attached to the end of an arm, *e*, of a bell-crank lever, E, pivoted on a pin, F, and this arm is connected by a spring, G, to an arm, H, also pivoted upon the pin F, and to the outer end of the arm H is attached the cut-off C. The arm *e'* of the lever E is connected to the case D by a spring, I, whose tendency is to close the cut-off B, and, through the medium of the arms and their connecting-spring G, to open the cut-off C. K is a thumb-knob fixed to the arm *e'* and extending through a curved slot, L, in the case.

The operation of the charger is as follows: The spring I ordinarily holds the cut-off B closed, and through the medium of the spring G the cut-off C is at the same time held open, so that the shot fills the whole of the tube inside the cut-off B. When the cut-off B is opened by pressure on the knob K, the spring G acts to close the cut-off C, and as soon as the shot commences to run out of the mouth A', and thus becomes loose in the tube, the cut-off C is closed by the spring, and prevents the escape of any more shot.

It will be seen that if the two cut-offs were rigidly connected together that the cut-off B could not be opened without simultaneously closing that C, and as this last cannot be easily closed until the shot commences to flow out of the mouth and become loose in the tube, the operation is slow and uncertain, the inner cut-off checking the opening of the outer one, and thus the free outflow of the shot is prevented, and this in turn checks the closing of the inner cut-off.

With my construction the outer cut-off can be opened immediately, and the shot becoming loose in the tube the inner cut-off closes directly afterward.

As a modification, the spring I and knob K may be attached to the arm *e*, and the arm *e'* dispensed with.

I claim as my invention—

1. The combination of tube A, cut-offs B and C, arms *e* and H, and springs G and I, substantially as and for the purpose set forth.

2. The combination of tube A, case D, cut-offs B and C, arms *e* and H, springs G and I, and knob K, substantially as set forth.

PETER ZIEGEL.

Witnesses:

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FRED. HASSLER.