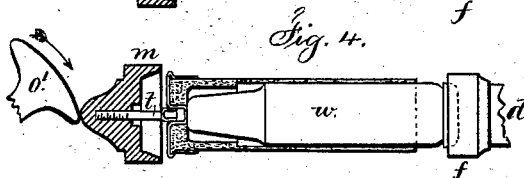
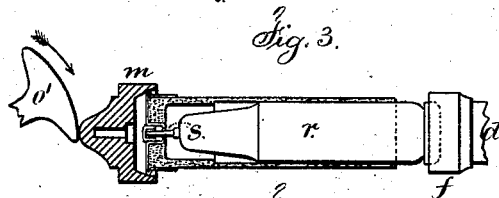
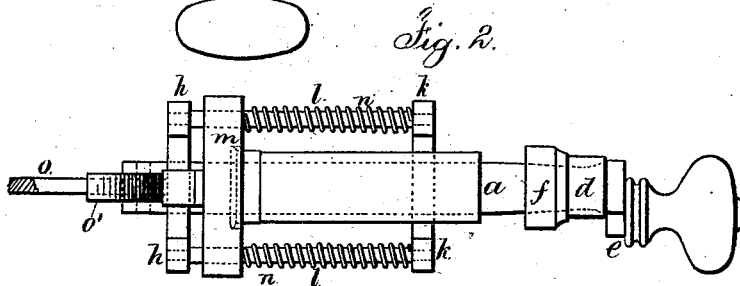
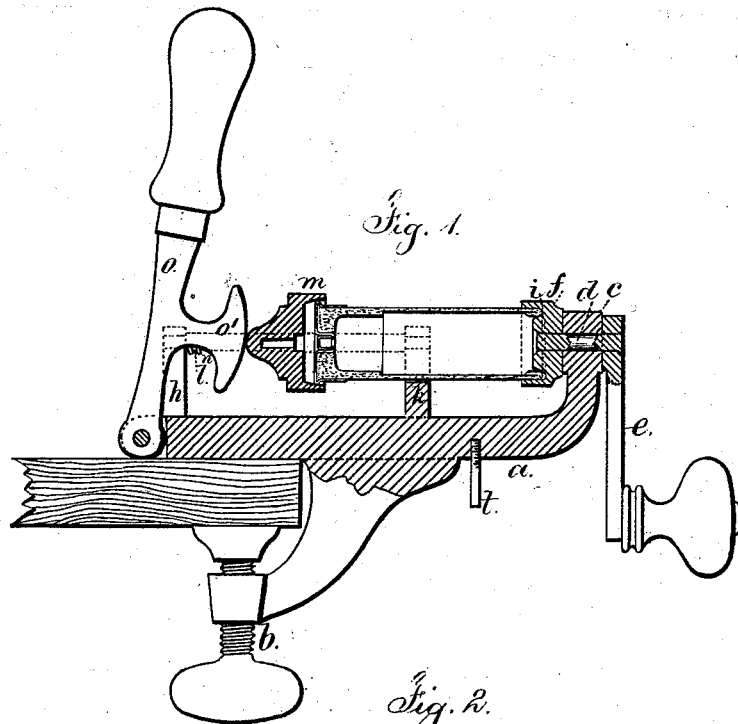


W. G. RAWBONE.  
Cartridge-Closing Machine.

No. 215,295.

Patented May 13, 1879.



Witnesses

Chas. H. Smith  
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per Lemuel W. Perrell  
Atty

# UNITED STATES PATENT OFFICE.

WILLIAM G. RAWBONE, OF NEWARK, NEW JERSEY.

## IMPROVEMENT IN CARTRIDGE-CLOSING MACHINES.

Specification forming part of Letters Patent No. **215,295**, dated May 13, 1879; application filed September 25, 1878.

*To all whom it may concern:*

Be it known that I, WILLIAM G. RAWBONE, of Newark, in the State of New Jersey, have invented an Improvement in Cartridge-Closing Machines, of which the following is a specification.

Cartridges have been made with a base of metal and a cylinder of paper, and with sporting-cartridges it is usual to introduce the powder, then a wad and the shot, and hold in the shot by a second wad that is inserted at the end; but in order to hold the charge the paper of the case has to be turned inwardly. This is usually known as "closing," and a machine has been made for closing the case, consisting of a socket revolved by a handle, the socket having internal projections to act upon the paper, and there is a lever moving horizontally that acts directly against the rear end of the cartridge to press the same into the revolving closing-socket. In this machine there is difficulty in operating upon cartridge-cases of different lengths, and the end is not likely to be true, because the lever acting against the base of the case itself is liable to move the case laterally and throw it out of position.

I make use of a revolving closing-socket of the usual construction; but I combine therewith a sliding cup that receives the base of the cartridge, and a vertically-acting lever that moves the cup along upon its slides, and forces the case into the revolving closing-socket, and holds the cartridge true as the closing operation is proceeded with. I am also enabled to obtain greater range of motion, so as to operate upon cases of all the different lengths that are made, and I also provide means for discharging the spent cap from the base of the cartridge-case, and for reinserting another cap.

In the drawings, Figure 1 is a section of the machine as in use. Fig. 2 is a plan. Fig. 3 represents the parts as in position for removing a spent cap; and Fig. 4 shows the mode of inserting another cap.

The frame *a* is provided with a screw, *b*, for clamping it to a bench or table. The head *c* carries the short shaft *d*, with a crank, *e*, at one end and the closing-socket *f* at the other end, which socket has ribs or projections *i* to

operate upon the edge of the paper case and turn the same inwardly, as has before been done.

The arms or yoke-pieces *h k* extend upwardly from the frame *a*, and carry the slide-bars *l*, that support the sliding cup *m*, that is of a size to receive the base of the cartridge-case. There are springs *n* around the bars *l* that force the cup back for allowing the cartridge to be inserted, but these yield as the lever *o* is brought into action to slide the cup *m* and force the case into the revolving closer *f*. This lever *o* has a cam-projection, *o'*, that serves to slide the cup *m* along.

By this means the cartridge-case is easily closed, and the machine is adapted to different lengths; and in order to allow for the removal of a spent cap, I provide a recess in the bottom of the cup *m*, and insert the plug or pillar *r*, having a pusher, *s*, at the end, into the cartridge, as in Fig. 3, and press the same by the lever *o*; and after a fresh cap has been put into its place the driver *t*, that usually is retained in a hole in the frame *a*, is inserted into the bottom of the cup, and a pillar or support *w*, inserted in the cartridge, and the parts replaced in the machine, and the cap forced into the sole or base of the cartridge-case by the driver *t*, the parts being in the position shown in Fig. 4.

If the bottom of the cup rested upon and was supported by the top of the frame *a*, the second rod *l* might be dispensed with.

I claim as my invention—

1. In combination with the revolving closing-socket *f*, the sliding cup *m*, for the base of the cartridge-case, the rod *l*, for supporting the same, and the lever *o*, substantially as set forth.

2. In a cartridge-closing machine, the cup *m*, having a central cavity for the reception of the spent cap when driven out by the pusher *s*, or for the reception of the movable driver *t*, to force in the primer, substantially as set forth.

Signed by me this 20th day of September, A. D. 1878.

W. G. RAWBONE.

Witnesses:

WILLIAM G. MOTT,  
CHAS. H. SMITH.