

M. G. CRANE.
Gun Cleaner.

No. 45,027.

Patented Nov. 15, 1864.

Fig. 3.

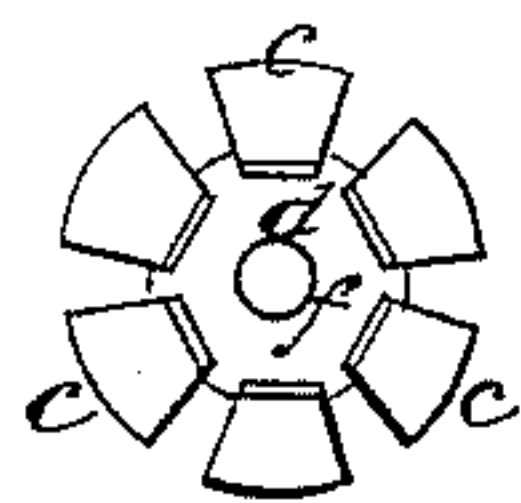


Fig. 1.

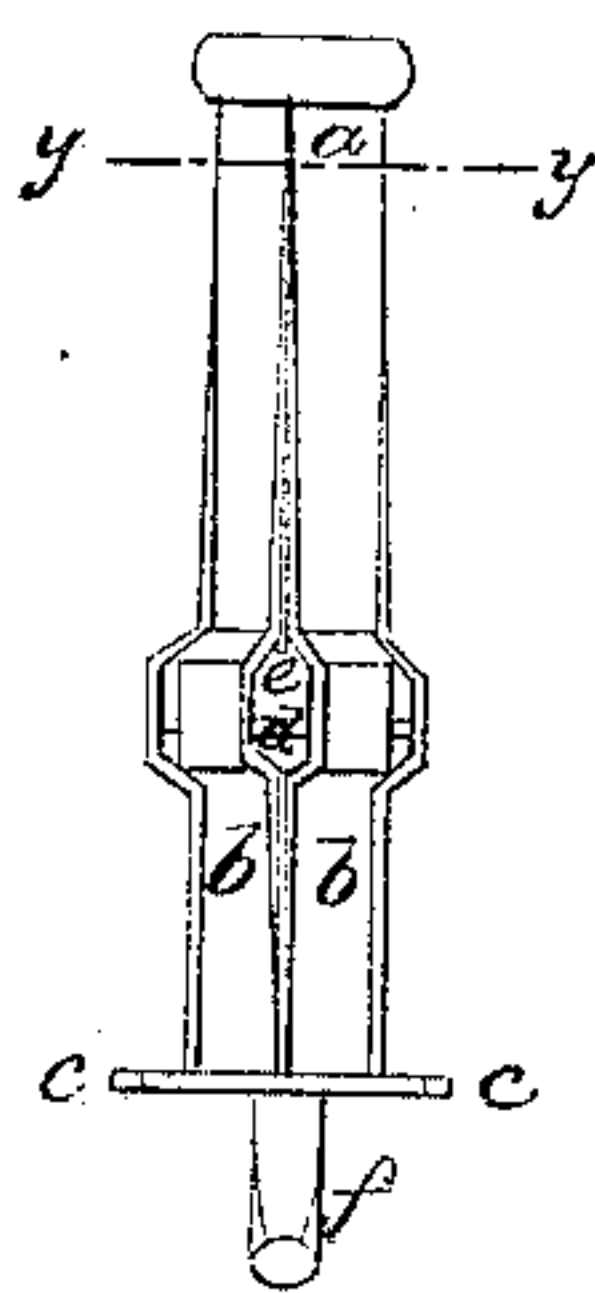


Fig. 2.

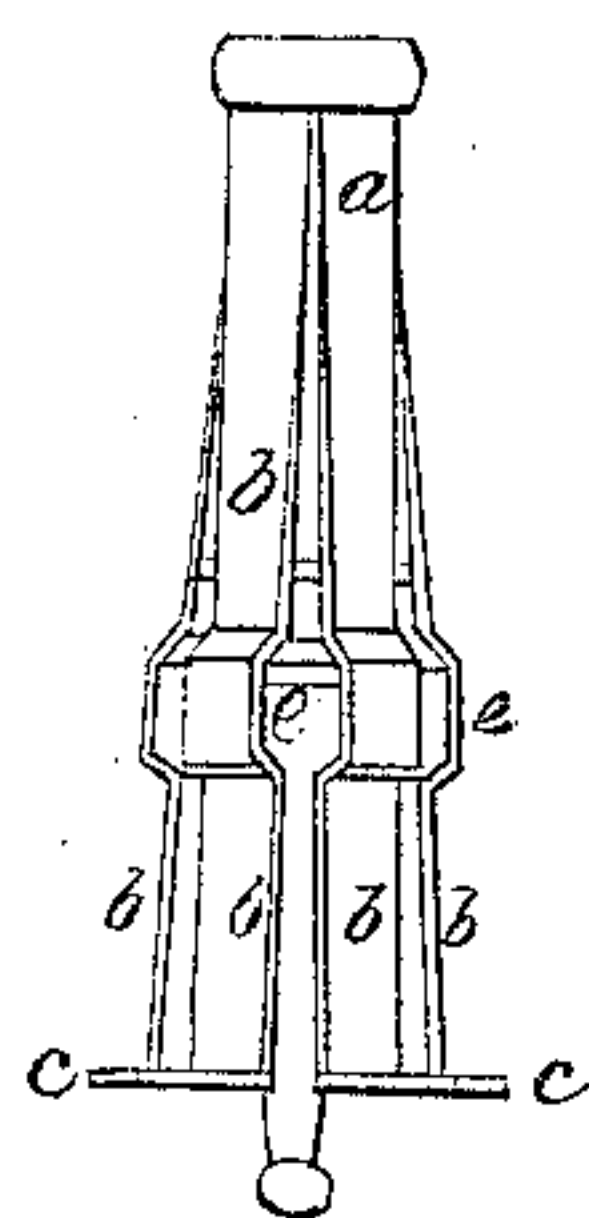


Fig. 4.

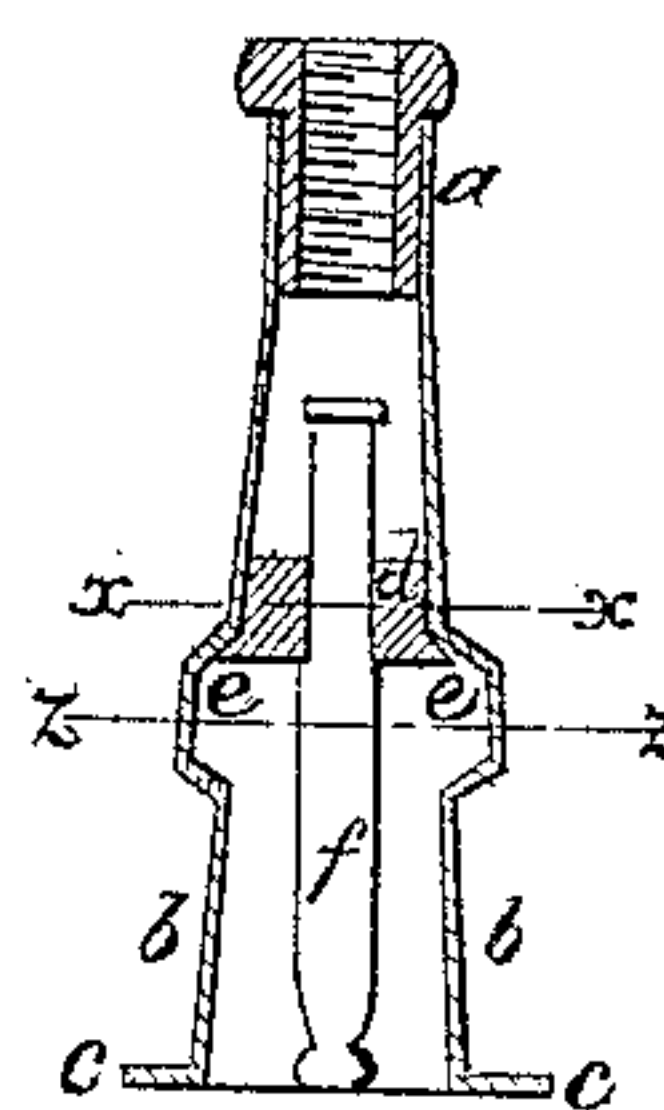


Fig. 7.

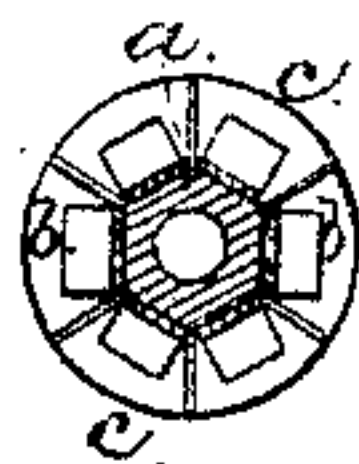


Fig. 5.

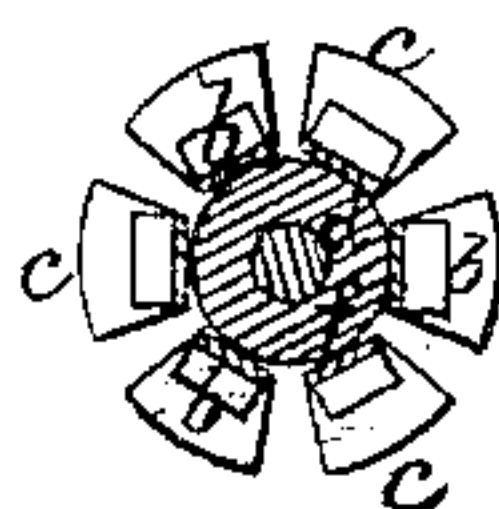
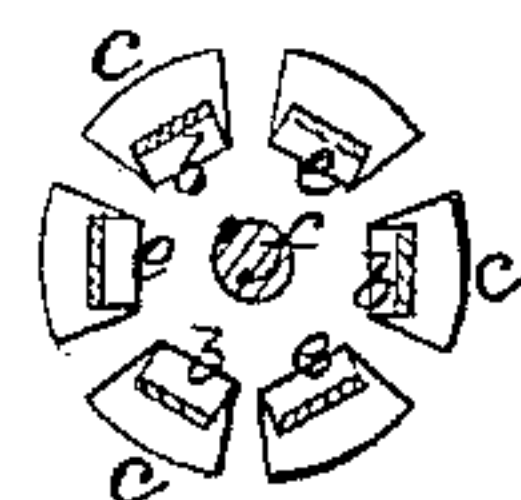


Fig. 6.



Witnesses.

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Inventor.

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UNITED STATES PATENT OFFICE.

MOSES G. CRANE, OF CHARLESTOWN, MASSACHUSETTS.

IMPROVEMENT IN GUN-CLEANERS.

Specification forming part of Letters Patent No. 45,027, dated November 15, 1864.

To all whom it may concern:

Be it known that I, MOSES G. CRANE, of Charlestown, county of Middlesex, and State of Massachusetts, have invented an Improved Gun-Cleaner; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

Letters Patent of the United States numbered 43,573 were granted to me on the 19th day of July, 1864, for an improved gun-cleaner.

The object of my present improvement is to obtain an instrument of a cheaper and more simple construction than the gun-cleaner so patented, the invention consisting in the peculiar method of bringing the scrapers into contact with the sides of the bore of the gun.

Figure 1 of the drawings is a side view of the cleaner with the springs closed together; Fig. 2, a similar view with the springs pressed open. Fig. 3 is an end view. Fig. 4 is a section through the center of the tool; Fig. 5, a section on the line *xx*, and Fig. 6 a section on the line *zz*, of Fig. 2; and Fig. 7, a section on the line *yy* of Fig. 4.

a denotes the screw-shank or tube by which the cleaner is attached to the ramrod of a gun; *b b b*, separate spring leaves or plates, having their contiguous edges soldered or fastened together at top and to the adjacent surface of the shank-piece *a*, the action of the springs keeping them normally closed together, as seen in Figs. 1 and 7. Each spring is provided at its lower end with a scraper or scraping-edge, *c*, and is also bent or made with a depression, *e*. The series of depressions form together an enlargement of the space within the springs, in which enlargement an expander, *d*, is placed, as seen in Fig. 1. This expander slides loosely within the depressions, and it has a pendulous tongue-piece, *f*, hanging from it, and so as to slide a certain distance through its center, as will be understood from Figs. 1 and 4, the tongue projecting normally beyond

the scraper *c*. When the tool is inserted in a gun-barrel, the springs are together, and the scrapers slide freely down the bore without acting on its surface. When the tip of the tongue-piece strikes the bottom of the bore, the tongue slides up through the expander until an enlargement thereon, striking the bottom of the expander, forces its top, which is inclined, against the upper ends of the depressions *e*, (which are also inclined,) and opens out the springs. The cylindrical part of the expander just below the inclination is carried into contact with the springs above the depressions, and holds the springs open, as seen in Figs. 2 and 3. When the tool is then drawn through the bore, the scrapers will be held in contact with the surface thereof, (the alternate scrapers slipping into the grooves, if the arm is a rifle,) stripping from the barrel the lead and powder in the same manner as with my other gun-cleaner. When the instrument is withdrawn and the tongue allowed to slide down in the expander, the tip will project, so that it can be taken hold of and the expander pulled back into the depressions, allowing the springs to close together.

It will be obvious that this instrument can be made much cheaper than the other cleaner, from the employment of the series of plates brazed together at top and held normally in a closed position without the aid of an encompassing-ring.

I claim—

1. Making the gun-cleaner of a series of leaves or springs which are held together normally, and spread open by the action of an expander, substantially as described.

2. The combination of the tongue, the expander, and the depressions in the spring, arranged and operating together substantially as set forth.

MOSES G. CRANE.

Witnesses:

J. B. CROSBY,
FRANCIS GOULD.