

W. J. GORDON.
Seaming-Machine.

No. 160,265.

Patented March 2, 1875.

Fig. 2.

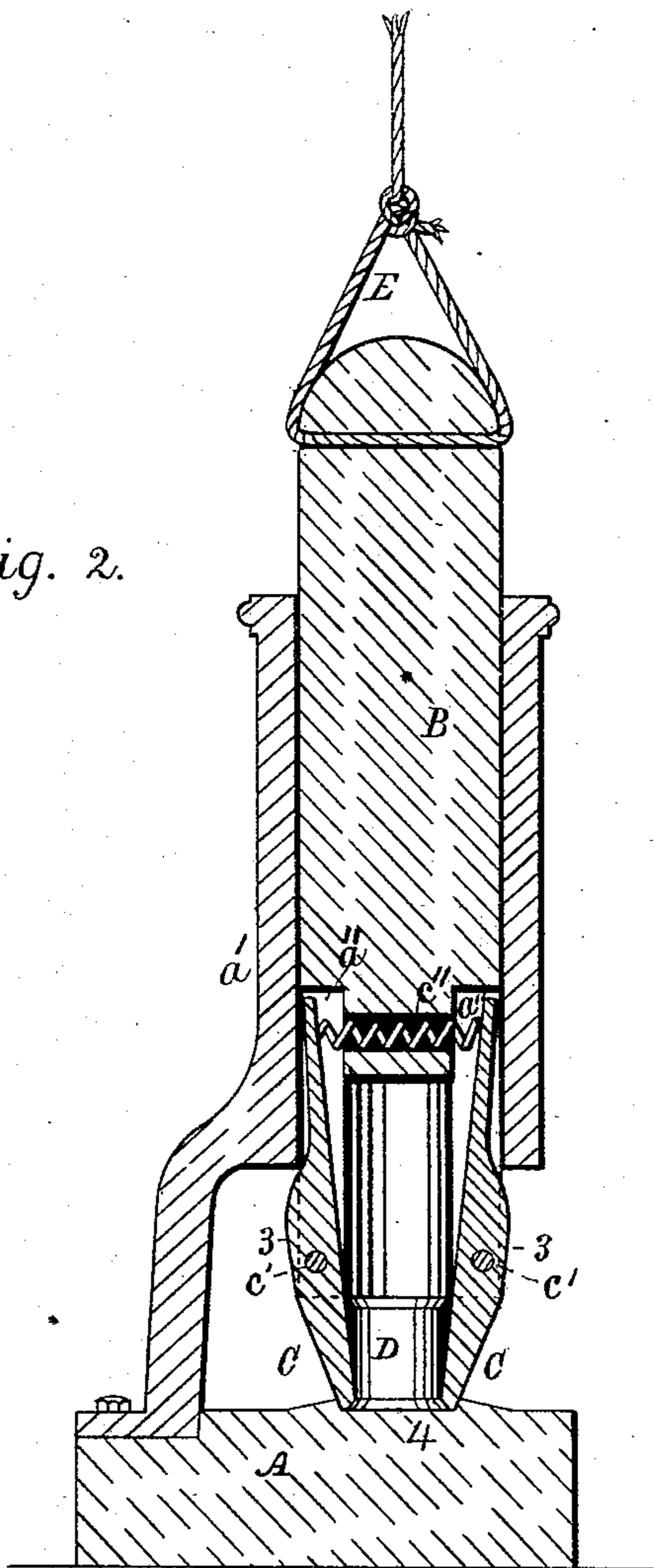
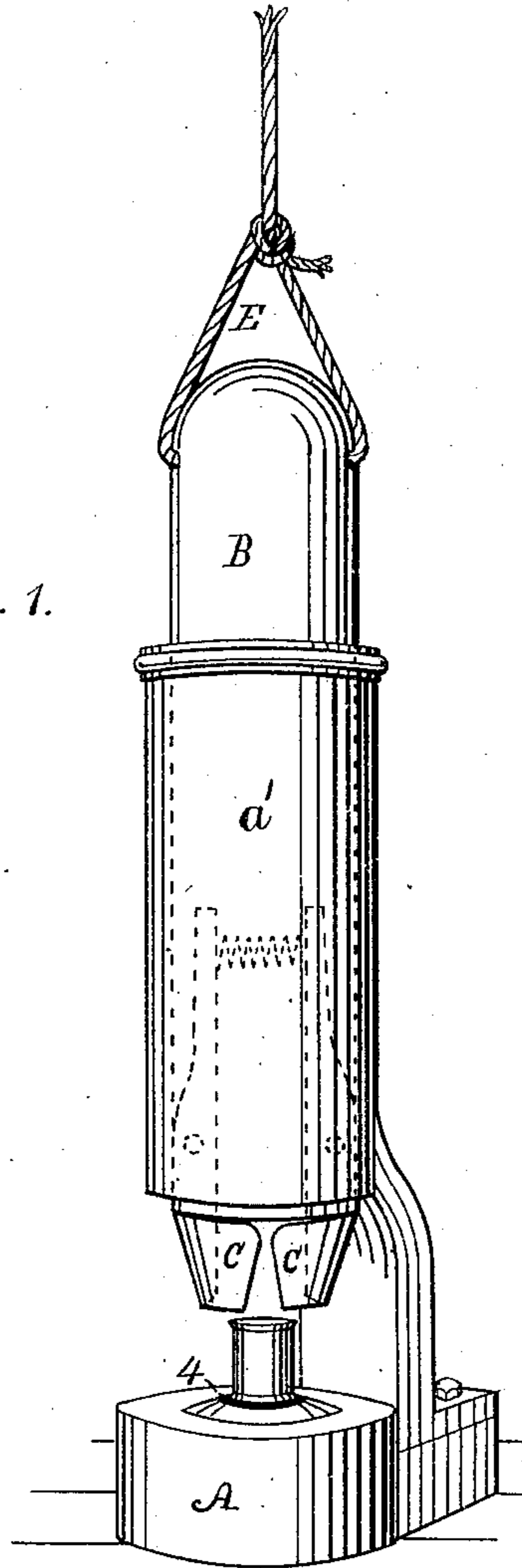


Fig. 1.



Witnesses:

Benj. Morrison
Wm. H. Morrison.

Inventor:

William J. Gordon

UNITED STATES PATENT OFFICE.

WILLIAM J. GORDON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SEAMING-MACHINES.

Specification forming part of Letters Patent No. **160,265**, dated March 2, 1875; application filed December 17, 1874.

To all whom it may concern:

Be it known that I, WILLIAM J. GORDON, of the city of Philadelphia, in the State of Pennsylvania, have invented an improved machine for closing or seaming the bottoms and tops onto sheet-metal cans, of which the following is a specification:

The object of my invention is to facilitate and expedite the operation of closing or seaming the tops and bottoms onto the bodies of sheet-metal cans or cases; and these results I produce by means of a plunger in a stand, which supports both the plunger and the can or case during the operation of closing or seaming, as will herein be fully and clearly described with reference to the accompanying drawing, in which—

Figure 1 is a perspective view of the machine, having the lower end of the plunger provided with spring-jaws, which will be automatically opened, sufficiently to pass freely downward around the closed or seamed upper end of a can, and showing, also, an annular recess in the base of the stand, in which the said can is placed. Fig. 2 is a vertical central section of the machine shown by Fig. 1, but with the difference that in Fig. 2 the spring-jaws of the plunger are closed down around upon the seam of the bottom of the can ultimately by the surrounding bevel-edge of the annular recess of the base of the stand in which the can rests.

The stand consists of a solid base, A, supporting a hollow upright, *a'*, in which a plunger, B, is arranged to drop by gravitation when elevated in the hollow upright *a'* for the purpose. The lower end of the plunger B is bored in its center to the depth of about twice the length of the can to be seamed, and of a diameter a little greater than the diameter of either end of the can after the said top or bottom has been seamed or closed upon the body thereof. The two opposite sides of the bored end of the plunger B are slotted longitudinally, (see *a'' a''*, Fig. 2,) and in these slots the lever-arms of the two respective parts of the spring-jaws C C turn on their respective fulcrums *c' c'*. The upper arms of the said spring-jaws are pressed outward against the inner side of the hollow upright *a'* of the stand A by means of a spiral spring, *c''*, thus holding the jaws

nearer together after they have passed downward around the body of the can D, and a swell or cam, 3, at the outer side of each lever of the jaw C C causes each jaw to separate from the other as the plunger B is lifted upward sufficiently to bring the swells or cams 3 3 within the hollow upright *a'*, and, consequently, opening the jaws C C sufficiently to allow them to pass freely down past the seamed or flanged upper end of the can as the plunger descends, and gradually permits the jaws to come into contact with the body of the can D, which rests concentrically in the annular depression or recess 4. The diameter of the recess 4 at its bottom is fully equal to the diameter of the lid or bottom of the can D, and its sides are flared or beveled outward at an angle of about forty-five degrees, for the purpose of powerfully forcing inward the lower ends of the jaws C C into contact with the body of the can, the said lower ends of the jaws being beveled to correspond with the beveled sides of the said recess, the two bevels co-operating as the plunger B forces down the seam in its contact therewith, as represented in Fig. 1. The plunger B is then raised to its former position, as shown in Fig. 1, the can fitted with a top cover, turned upside down, in the recess 4, and the plunger dropped, as before described, and thus completing the closing or seaming of both ends of the same.

In this instance the plunger is intended to be raised by means of a rope, E, suspended from a pulley above it. (Not shown.)

Three spring-jaws, C, may be used instead of two only, for the reason that three of them, arranged in the plunger B, will better clear or pass over the top end of the can D when the said jaws are opened for the purpose.

For closing or seaming quadrilateral cans by means of a plunger and automatically-operated jaws, substantially as described, it is intended to construct the machine with a quadrilateral plunger in a corresponding stand, and a plurality of lever-jaws to correspond with the sides of the can, and operated in the same manner as above described for cylindrical cans.

For cans on which a slip lid or cover is intended to be applied to each, the spring-jaws described may be detached and either a

cylindrical or quadrilateral hollow closer or seamer, with its bottom edges beveled upward at the inner side to suit the intended seam of the can-bottom, may be attached to the lower end of the plunger; but as the spring-jaws, constructed and applied as set forth and described, will produce the same result, the latter modification has its advantage only in its simplicity and cheapness of construction.

By the use of my said improved machine, as described, the seaming or closing the tops and bottoms of sheet-metal cans can be effected with the greatest facility and expedition in the most perfect manner.

I claim as my invention—

The combination, with a plunger, B, constructed and arranged to be moved up and down in a supporting-stand, A, substantially as set forth and described, of a plurality of jaws, C, or seam-closers, having their bottom edges beveled, as described, and the said jaws or seam-closers adapted to pass downward around the outside of the body of the can placed in the recess 4, substantially as and for the purpose set forth and described.

WILLIAM J. GORDON.

Witnesses:

BENJ. MORISON,

WM. H. MORISON.