W. HANDY.

Can-Seaming Machine.

No. 198,106. Patented Dec. 11, 1877.

Fig. 1.

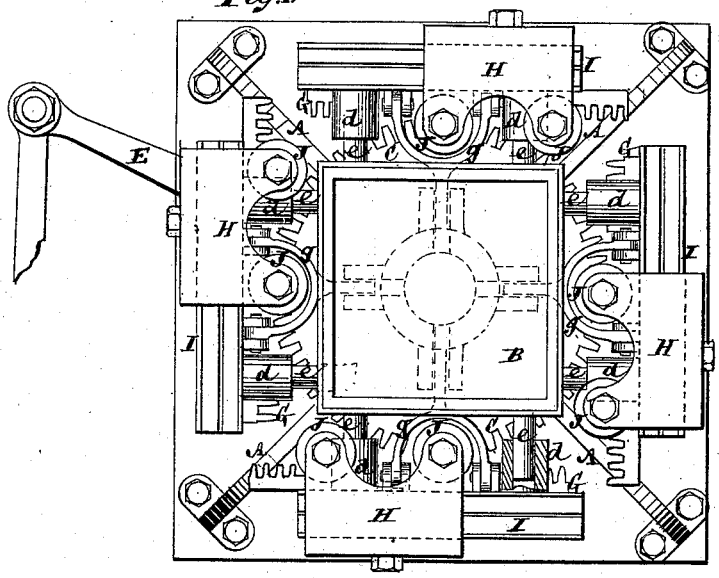
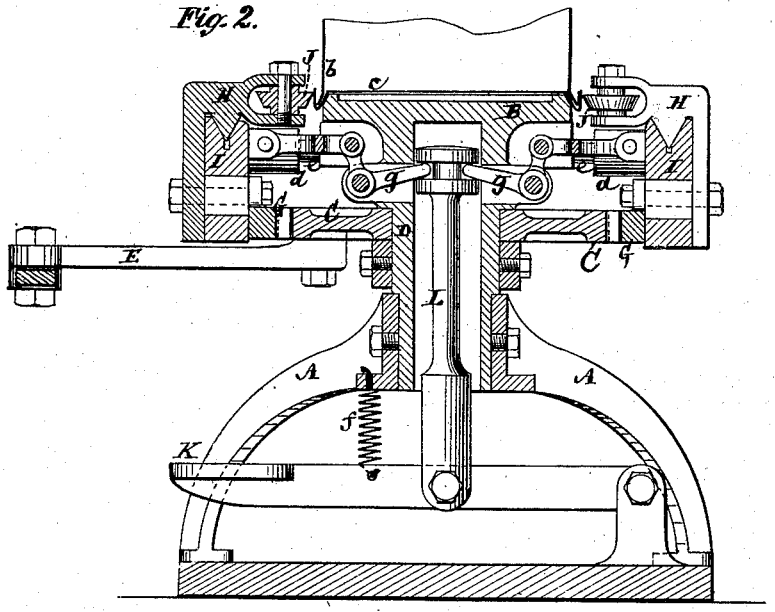


Fig. 2.



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WILLIAM HANDY, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CAN-SEAMING MACHINES.

Specification forming part of Letters Patent No. **198,106**, dated December 11, 1877; application filed November 15, 1877.

To all whom it may concern:

Be it known that I, WILLIAM HANDY, of Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Can-Seaming Machines, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to machines for closing the bottom and top seams or joints of sheet-metal cans of square form, or more especially that description of said cans in which the ends of the body of the can are flared outward for reception within the turned-over edges of the top or bottom of the can, which turned-over edges are closed on the flaring ends of the body of the can by roller-pressure.

The invention consists in certain combinations of devices, whereby increased facility is afforded for entering the can within the machine, for keeping the body of the can and its top or end plate in proper contact while the latter is being closed over the body, for seaming or closing simultaneously and by a restricted movement, which economizes time, all of the joints around the several sides of the can at the end of the latter, and for enabling the machine to be kept running by steam or other power during a continuance of the work on any number of cans in succession.

Figure 1 represents a plan of a machine constructed in accordance with my invention, and Fig. 2 a vertical section of the same.

A represents the frame of the machine, which frame may be of any suitable construction, and carries a four or many sided table, B, that, in its marginal configuration, corresponds with the flaring end of the body *b* of the can, and on or by which the bottom *c*, or it might be the top of the can, rests, and is held in position to receive within its turned-up edges the flaring end of the body of the can, as represented in Fig. 2.

C is a horizontally-oscillating spur-wheel, having its bearing on a fixed concentric socket, D, beneath the table B. This wheel may be either oscillated by hand, or automatically by steam or other power through a lever, E. Said wheel is arranged to gear with a series of racks, G, corresponding to the number of the sides of the can, and arranged to correspond with the sides of the table B beyond and below the latter. These racks are attached to outside slides H, also corresponding in number and arrangement to the sides of the can, and fitted to reciprocate along guides I, which latter are provided with face sockets *d*, and are capable of being slid by said sockets on pins *e*, projecting from the sides of the table B, to provide for the adjustment in or out of the slides H relatively to the sides of the table B.

The slides H carry the rollers J, which bend the turned-up edges of the bottom *c* of the can over the flaring end of its body *b*, when the guides I are forced inward toward the sides of the table B, and the slides H are moved longitudinally along the guides.

To facilitate the placing of the body of the can and its entry within the bottom thereof, prior to closing the joint by bending the turned-up edges of the bottom of the can over the flaring end of its body, the several guides I, carrying the slides H, with their attached joint-closing rollers J, are simultaneously adjusted away from the sides of the table B—as, for instance, by a spring, *f*, acting on a treadle, K, which is connected by a stem, L, with bell-cranks *g*, attached to the several guides I. This provides for the seating of the end or bottom *c* of the can on the table B, and for holding it in position with its turned-up edges ready for reception within them of the flaring end of the body *b*, after which the operator applies his foot to the treadle K, to work the several guides I inward relatively to the sides of the table B, and to bring the rollers J up against the turned-up edges of the bottom *c*. The slides H, with their attached rollers J, are then reciprocated to and fro by means of the wheel C in reverse directions simultaneously on opposite sides, respectively, of the table B, or, in other words, in a like course around the can, one slide following the other during each reciprocating action of the wheel C. This closes the seams or joints on the ends of the can on all sides of the latter simultaneously, and all the requisite pressure on the seam is obtained by or through the treadle K, increased force applied to said treadle giving increased pressure on the seam.

The horizontally-oscillating wheel C may have a constant motion imparted to it, in

which case the several racks G should be in such deep gear with the wheel C that when the guides I, carrying the slides H, are adjusted outward relatively to the sides of the table B, said racks will remain in gear with the wheel C.

The stroke of the slides H may be adjusted by changing a tooth of the gearing, that is, of the wheel C with the several racks G, respectively—to cause the rollers J to run over and beyond the corners of the can, or only to run up to said corners, as desired. Again, each slide H may be made to carry duplicate rollers J J, arranged one in advance of the other a distance equal to one-half of the width or diameter of the can, or thereabout, as shown in the drawings, whereby each of said rollers will close the seam or joint of one-half of the width of the can on each side of the latter, thus reducing the reciprocating stroke of the slides H one-half, and economizing time proportionately in closing the seam or joint. If necessary each of said slides may carry more than two rollers, arranged one in advance of the other, to still further economize time and wear of the parts.

I claim—

1. The combination, with a many-sided table constructed to receive the top or bottom of the can over it, of a series of slides corresponding in number and arrangement with the sides of the table, and provided with seam-closing rollers, said slides being adjustable in or out relatively to the sides of the table, and being made to reciprocate in like courses simultaneously around the table, substantially as specified.

2. The combination, with a many-sided table constructed to receive the top or bottom of the can over it, of a series of reciprocating slides, each provided with two or more seam-closing rollers, arranged one in advance of the other, relatively to the sides of the table, essentially as described.

3. The combination of the oscillating spur-wheel C, the many-sided table B, the guides I, adjustable in or out relatively to the sides of said table, the slides H, carried by said guides, the racks G, attached to the slides H, and one or more closing-rollers, J, carried by each of said slides, substantially as specified.

4. The combination, with the table B and the guides I, carrying the slides H, with their attached seam-closing rollers, of the treadle K and mechanism connecting said treadle with said guides, for adjusting the latter in or out relatively to the sides of the table, and for regulating the roller-pressure on the seam, essentially as described.

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