F. A. WALSH.

Machine for Crimping and Bending Sheet-Metal Can.

No. 206 844. Patented Aug. 6, 1878.

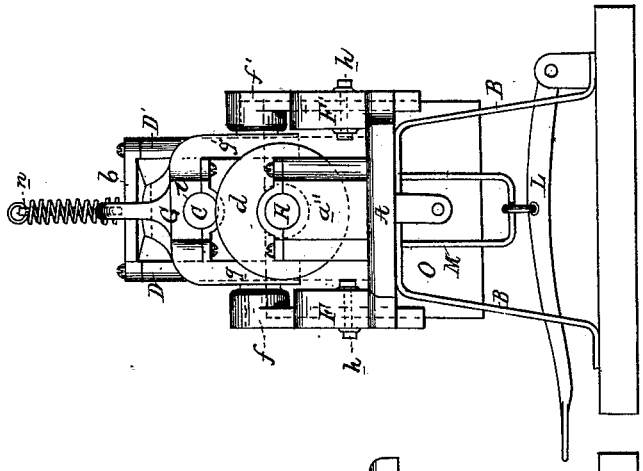

Fig. 2

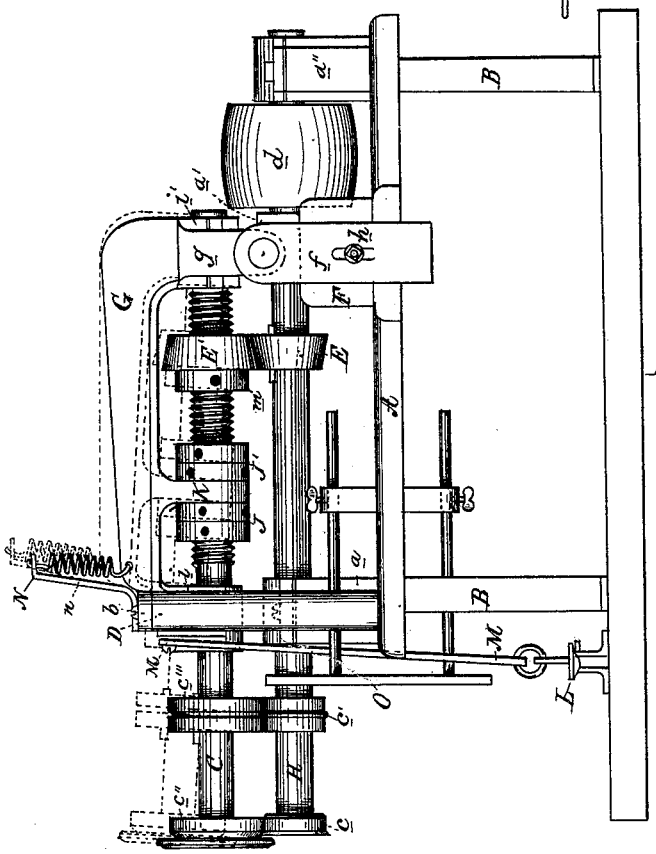

Fig. 1

Witnesses

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IMPROVEMENT IN MACHINES FOR CRIMPING AND BEADING SHEET-METAL CANS.

Specification forming part of Letters Patent No. **206,844**, dated August 6, 1878; application filed June 10, 1878.

To all whom it may concern:

Be it known that I, FRANCIS A. WALSH, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Crimping and Beading Sheet-Metal Cans; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a side elevation of a machine for crimping and beading sheet metal embodying my invention, and Fig. 2 represents an end view of the same.

Like letters of reference indicate like parts.

My invention relates to that class of machines used for attaching or crimping the bottoms to the bodies and for beading the bodies of sheet-metal cans; and my invention consists in the construction and arrangement of the several parts, as hereinafter described and claimed.

In the machines now in common use for crimping the bottoms to the bodies of sheet-metal cans, the shafts carrying the crimping and beading rollers are journaled in fixed or stationary boxes, and without means of moving either of the shafts longitudinally, and consequently the rollers, which are of different diameters, on becoming worn from use, get out of parallel to each other and work imperfectly, and must then be removed from the shafts and new rollers fitted thereto, so that they shall be parallel to each other when in working operation.

The object of my invention is to improve the construction and operation of said machines, and so that rollers of varying diameters may be used and readily adjusted parallel to each other, and so as to operate upon cans of different dimensions.

In the drawing, A represents the frame proper, which is supported upon suitable standards or legs B. The said frame may be made in any form and of any material that will receive and support the operating parts of the machine.

a a' a'' represent journal-boxes mounted upon and firmly secured to the frame A in any suitable manner. H is a shaft secured within, and so as to freely rotate in, bearings in the boxes *a a' a''*.

D D' are vertical standards arranged on either side of the journal-box *a*, and permanently secured thereto and to the frame A, and to the upper ends of which is removably attached a cross-bar, *b*, as shown. Upon the front or working end of shaft H is mounted a male crimping-roller, *c*, and beading-roller *c'*, of the usual form and construction, and upon and near the rear end of said shaft H is firmly mounted a pulley, *d*.

E is a beveled friction-roller, securely keyed to and upon the shaft H. F F' are vertical slide-boxes, permanently secured to the sides of the frame A, and so constructed as to receive and admit of a free and easy up-and-down movement of the sliding supports *f f'* therein.

G is a horizontal lever-frame, provided at its rear end and on either side with depending arms *g g'*, which are pivoted to the upper ends of the sliding supports *f f'*, and so as to admit of a free and easy rocking movement of said lever-frame within said supports. Each of the said sliding supports is slotted, so as to receive a cap-screw, *h*, by which the said sliding supports are held firmly in position at any adjusted point in the boxes F F'.

In the front and rear ends of the lever-frame G are formed journal-boxes and bearings *i i'*, so arranged as to receive and support the shaft C, and admit of a rotary movement of said shaft therein. The shaft C is partly screw-threaded, as shown, and mounted upon the screw-threaded portion thereof is an adjustable screw-threaded and beveled friction-roller, E', corresponding with the friction-roller E. J J' are screw-threaded jam-nuts, which are longitudinally adjustable upon the screw-threaded portion of the shaft C, and have a bearing against the sides of the pendant or lug K. Upon the front or working end of the shaft C is mounted a female crimping-roller, *c''*, and beading-roller *c'''*, also of the usual form and construction, except that their diameters are greater than that of the rollers *c c'*, respectively. K is a pendant or hanging lug, permanently attached to and as a part of the lever-frame G, as shown, and is provided with a circular opening to admit of the passage of the shaft C through the same and allow a

free rotary and longitudinal movement of said shaft therein. L is a treadle, pivoted at its rear end, as shown, and is permanently attached to the front end of the frame G, carrying the shaft C, by means of the frame M striding the shafts C and H. N is a spiral spring, the lower end of which is attached to the frame G, and the upper end to a post, *n*, which is rigidly secured to the cross-bar *h*, by means of which said spring, the shaft C, carrying the rollers *c'' c'''*, when not in use, is lifted out of parallel with shaft H and above the rollers *c c'*, as shown by dotted lines, and so as to allow of a sufficient space between said rollers to insert the cans to be crimped and beaded. O is a gage, longitudinally adjustable, as shown, and for the purpose of adjusting the bodies of cans of different lengths to the action of the crimping and beading rollers.

In operating my said improved machine, the friction-rollers E and E' are disengaged, the jam-nuts J J' are loosened from bearing against the sides of the lug K, and the rear end of the frame G, carrying the shaft C, is raised or lowered, as may be desired, by means of the sliding supports *f f'*, so as to admit of a longitudinal adjustment of the shaft C in its bearings, and so that the crimping and beading rollers on shaft C can be brought in working contact and perfectly parallel with the rollers on the shaft H. The jam-nuts are then turned upon the screw-shaft C until brought in contact with the sides of the lug K, which holds the shaft C firmly in its adjustable position, and the adjustable friction-roller E' is brought in contact with the friction-roller E on shaft H, and is secured in position by means of the jam-nut *m*. A rotary motion is then imparted to the shaft H and to the rollers *c c'* by means of a belt (not shown) applied to the pulley *d*, and by a downward movement of the treadle the friction-rollers E and E' are engaged, and thereby impart a rotary motion to shaft C and to the rollers *c'' c'''*, and bring the said rollers in contact with the can or material to be crimped and beaded in the usual manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the lever-frame G, provided with the journal-boxes *i i* and pendent lug K, jam-nuts J J', and screw-threaded shaft C, of the boxes F F', sliding support *f f'*, and cap-screw *h*, substantially as and for the purpose specified.

2. The combination, with the pivoted lever-frame G, provided with the journal-boxes *i i* and pendent lug K, of the screw-threaded shaft C, carrying the rollers *c'' c'''*, jam-nuts J J' and *m*, and friction-roller E, and shaft H, carrying the rollers *c c'*, and friction-roller E', substantially as and for the purpose specified.

FRANCIS A. WALSH.

Witnesses:
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