(No Model.) 3 Sheets—Sheet 1.

F. TRULLENDER.

CAN SOLDERING MACHINE.

No. 421,331. Patented Feb. 11, 1890.

Fig. 1.

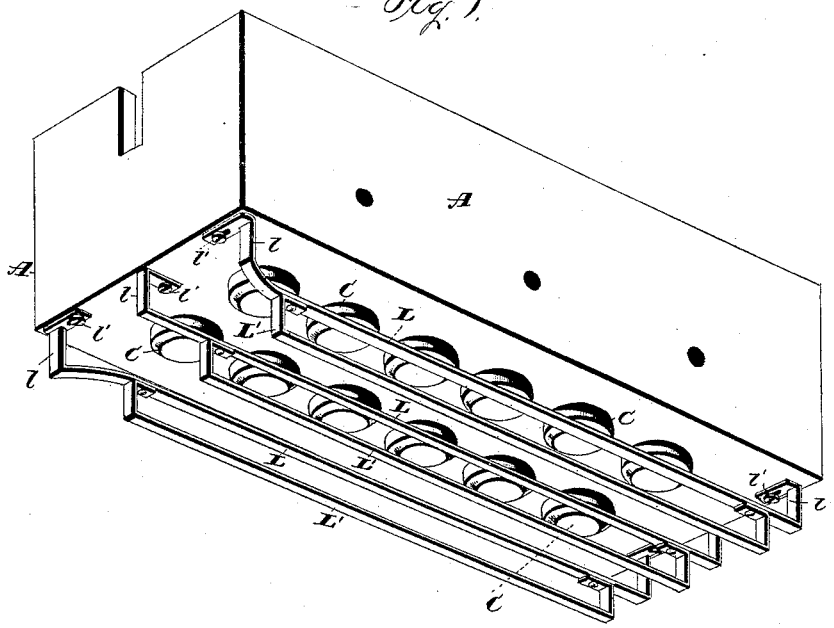
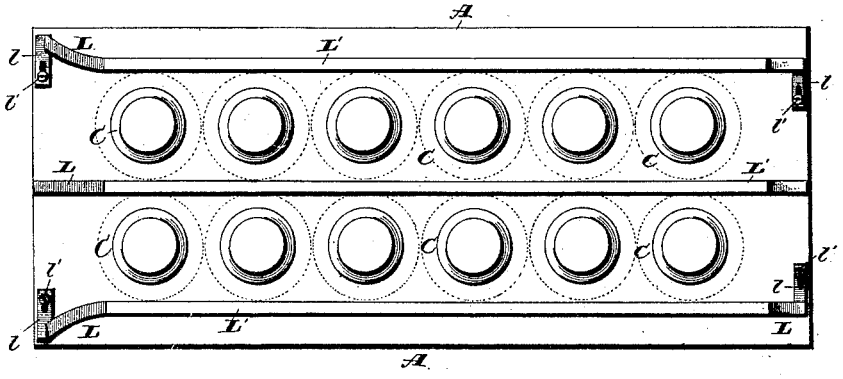


Fig. 2.



Witnesses
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(No Model.) 3 Sheets—Sheet 2.

F. TRULLENDER.

CAN SOLDERING MACHINE.

No. 421,331. Patented Feb. 11, 1890.

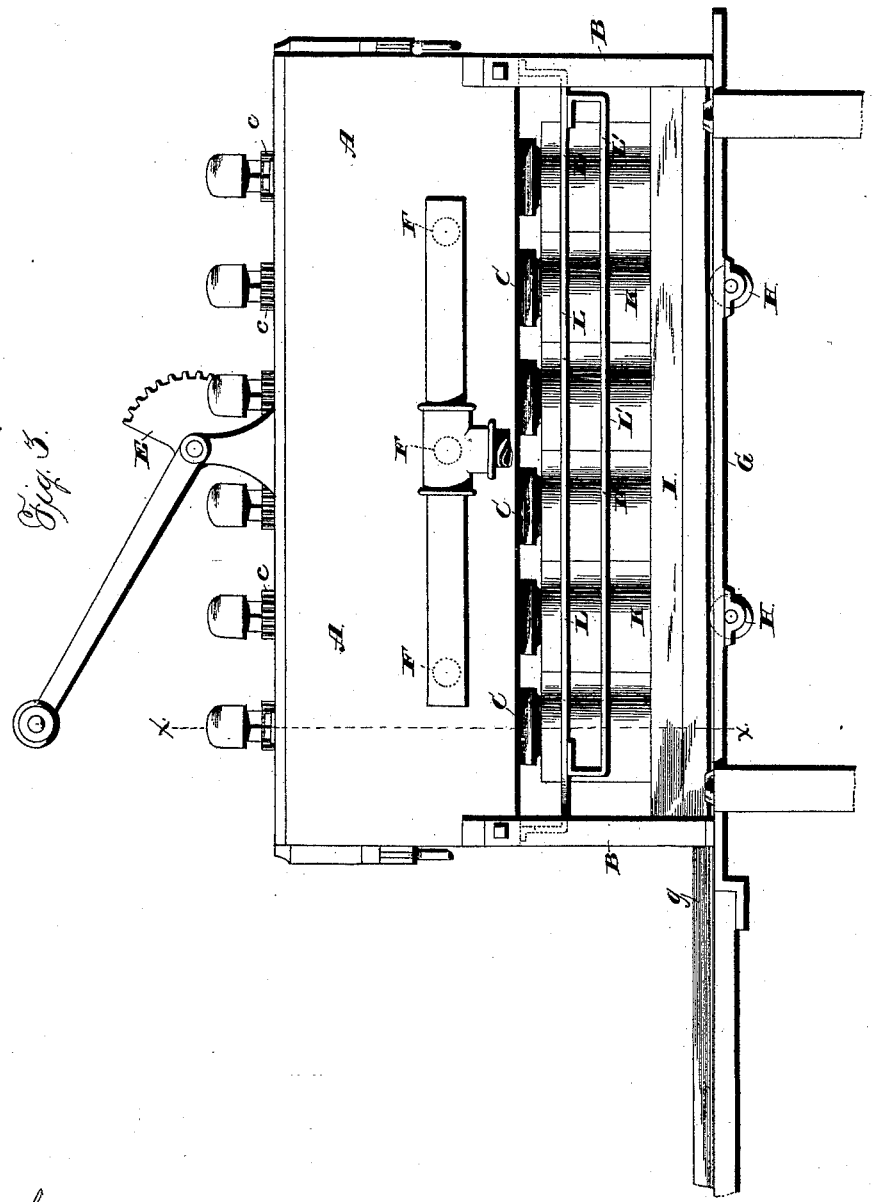

Fig. 5.

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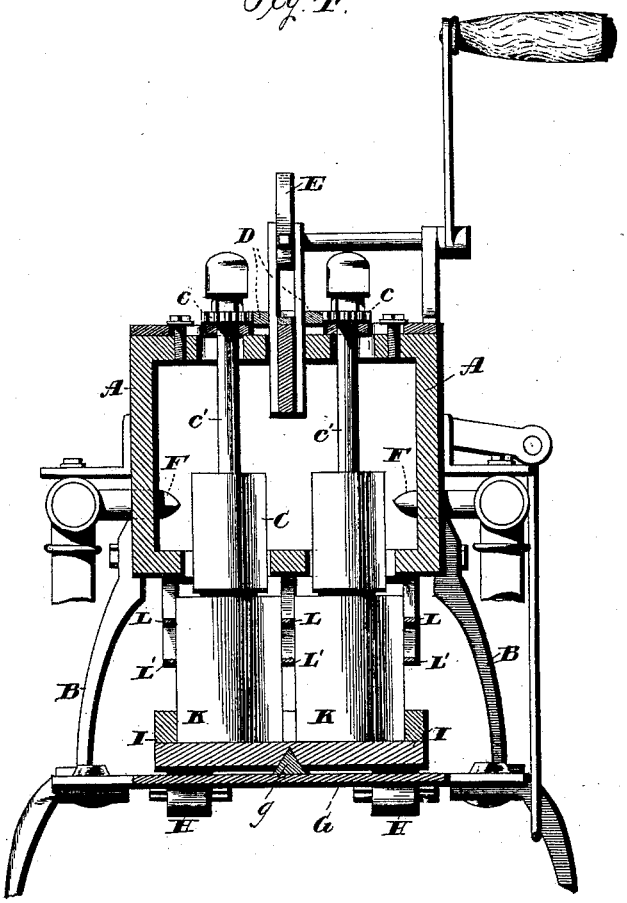
(No Model.) 3 Sheets—Sheet 3.

F. TRULLENDER.

CAN SOLDERING MACHINE.

No. 421,331. Patented Feb. 11, 1890.

Fig. 4.



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UNITED STATES PATENT OFFICE.

FREDERICK TRULLENDER, OF SALEM, ASSIGNOR TO I. H. COX & CO., OF BRIDGETON, NEW JERSEY.

CAN-SOLDERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 421,331, dated February 11, 1890.

Application filed June 13, 1889. Serial No. 314,113. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK TRULLENDER, of Salem, in the county of Salem, and in the State of New Jersey, have invented certain new and useful Improvements in Mechanism for Soldering Cans; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view from the lower side of the soldering-iron frame, having attached thereto my can-guides. Fig. 2 is a plan view of the same. Fig. 3 is a side elevation of the entire machine, showing said guides in position for use; and Fig. 4 is a section of the same upon line *x x* of Fig. 3.

Letters of like name refer to like parts in each of the figures.

In the use of can-soldering machines in which the cans are placed in rows upon a tray and moved beneath a corresponding number of rotatable soldering-irons much difficulty has been experienced in keeping the cans in an upright position, as from various causes either or all are liable to become tilted, so as to prevent their upper ends from coinciding with the operative ends of the soldering-irons.

The object of my invention is to insure the vertical position of cans upon a soldering-tray; and to this end said invention consists of guides composed of parallel bars operating in conjunction with a can-soldering machine, which are adapted to engage with and hold the cans in position, substantially as and for the purpose hereinafter specified.

My improvement is applicable to any form of machine in which the cans are placed in rows upon a tray and moved with the same beneath soldering-irons; but its operation will be sufficiently illustrated in connection with one form of such machine in which, as seen in the drawings, there is a frame A, that is rectangular in cross-section and is supported by and upon legs B and B, that are placed at its corners. Within the frame A are journaled two rows of vertically-arranged soldering-irons C and C, which are adapted to be moved up and down and to be rotated in opposite directions by means of pinions *c* and *c*, that are connected with the upper portions of the shafts *c'* and *c'* of said soldering-irons and engage with a double rack-bar D, which is placed between the rows of pinions and is capable of being reciprocated longitudinally by means of a toothed segment E, that is pivoted above and adapted to engage with a toothed section which is formed upon the upper side of said bar. Said soldering-irons are heated by gas-jets F and F, which project inward through each of the sides of the frame A.

The legs B and B rest upon and are secured to a suitable base G, which extends between and beneath the same and is provided with a centrally-arranged guide *g*, that in cross-section has a $\wedge$ shape. Upon said guide or way and upon rollers H and H, which are journaled at suitable intervals upon opposite sides of the same within said base, is placed a tray I, that has such dimensions as will adapt it to receive and contain two rows of cans K and K, that have the size for which the soldering-irons C and C are intended, the arrangement of parts being such as to enable said tray, with its contents, to be easily moved, so as to cause each can to be in line axially with one of said soldering-irons, after which, by rotating and depressing the latter until their ends are in contact with said cans, the desired soldering action may be had.

Secured upon the lower side of the frame A midway between the rows of soldering-irons C and C, and upon the outside of each row, is a guide L, which is preferably constructed from metal, and consists of a horizontal bar that has each of its ends *l* turned upward and adapted to receive a screw *l'*, by which it is secured in place upon said frame. A second similar but shorter supplemental guide L' is secured upon the lower side of the guide L, but may, if desired, be omitted. If now a tray of cans is moved beneath the soldering-irons, the guides L and L will engage with the sides near the upper ends of the cans K and K, and will compel said ends to maintain their proper positions, while the supplemental guides L' and L' will engage with the sides of said cans at lower points and will aid in maintaining the vertical positions of the same. In order that the rows of cans may readily enter between said guides,

the front part of each outer guide is bent outward, as shown, while by arranging the ends of said outer bars transversely and providing each with an elongated screw-opening said bars may be adjusted toward or from the center bar to adapt the machine for cans having different diameters.

The addition of the guides to the soldering-machine renders far more easy and certain the operation of soldering cans, as each row is compelled to maintain a vertical position in a line with the soldering-irons and cannot readily get out of place. Where the cans have such sizes as to cause their inner sides to meet, the central guide is not required and must be omitted.

Having thus described my invention, what I claim is—

1. In a soldering-machine, in combination with vertically-arranged soldering-irons, parallel guide-bars that are adapted to engage with the upper side portions of cans and to cause them to be moved into and held in position with relation to said soldering-irons, substantially as and for the purpose specified.

2. In a soldering-machine which is provided with vertically-arranged soldering-irons and with means for holding cans and moving the same beneath the soldering-irons into position to be operated on, guides consisting of horizontally-arranged parallel bars adapted to engage with the can-bodies, so as to cause them to be moved into such position and held vertically therein, substantially as and for the purpose shown.

3. In a soldering-machine which is provided with parallel rows of vertically-arranged soldering-irons and has means for moving parallel rows of cans beneath such irons, guide-bars that are adapted to engage with said cans, so as to cause them to be moved into and maintained in position with relation to the soldering-irons, substantially as and for the purpose set forth.

4. As an improvement in soldering-machines and in combination therewith, guides consisting of parallel bars which are arranged below and at each side of the rows of soldering-irons and are adapted to engage with and insure the relative positions of the cans, substantially as and for the purpose shown and described.

5. In combination with the frame of the machine and with the parallel rows of vertically-arranged soldering-irons, the guide-bars described, which are made adjustable toward or from said soldering-irons, in the manner and for the purpose substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of May, 1889.

FREDERICK TRULLENDER.

Witnesses:
B. FRANK WOOD,
BENJ. F. WOOD.