(No Model.)

J. BLACK.

DELIVERY ATTACHMENT FOR CAN MACHINES.

No. 417,856. Patented Dec. 24, 1889.

Fig. 1.

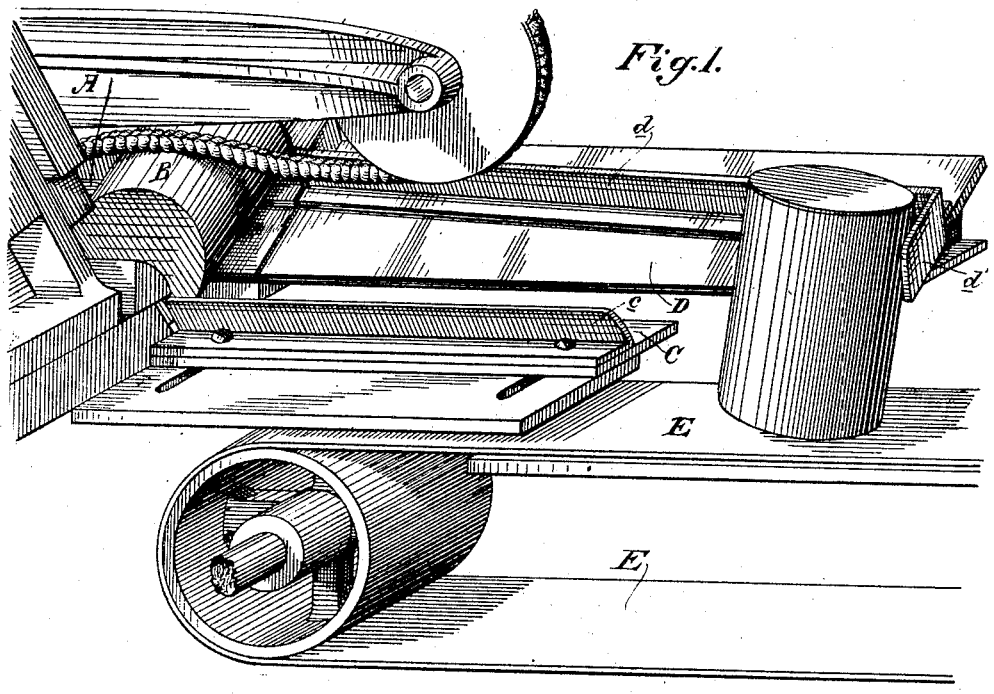


Fig. 2.

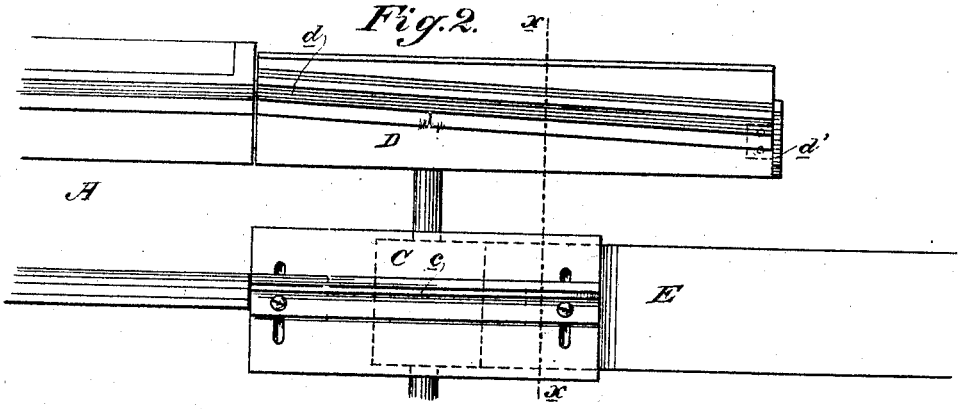
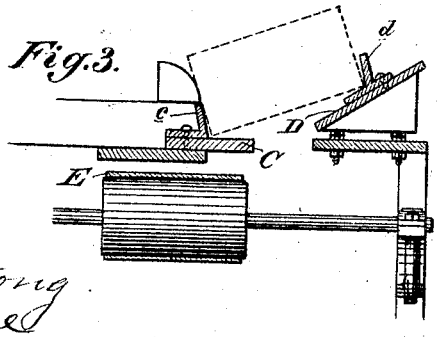


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH BLACK, OF SAN FRANCISCO, CALIFORNIA.

DELIVERY ATTACHMENT FOR CAN-MACHINES.

SPECIFICATION forming part of Letters Patent No. 417,856, dated December 24, 1889.

Application filed July 8, 1889. Serial No. 316,855. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BLACK, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Delivery Attachments for Can-Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates, generally, to the class of can-machines, and it relates especially to the delivering devices therefor, by which the cans are taken from the machines proper and delivered at any given point.

Though my invention is applicable to any can-machine from which it is required to receive the cans in a horizontal or inclined position and to deliver them in an upright position, it is especially applicable as an attachment for a soldering-machine, in which the cans are rolled in a suitable way or trough through a bath of molten solder therein.

My invention consists in the novel combination of the guides or tracks and the traveling carrier, hereinafter fully described, and specifically pointed out in the claims.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my delivering attachment, looking down upon it from one side and showing it in connection with the end of a soldering-machine, and showing also one can about to be delivered upon the guides or tracks and one can delivered upon the underlying carrier in an upright position. Fig. 2 is a plan of my attachment. Fig. 3 is a cross-section on line $x\,x$ of Fig. 2.

A is the end of the trough or way of a common form of can-soldering machine, and B is the usual driver or chain, which bears upon the top of the series of cans and rolls them along at an inclination in the trough or way, with their lower ends moving in the solder-bath. At the end of this trough or way, and in communication with its lower side, is a track or guide C, having a back flange *c*. Opposite to this track or guide is a track or guide D, which is in communication with the upper side of the way or trough A, said track or guide D being set at an inclination laterally, or in the direction of its width, as shown in Figs. 1 and 3, and said track or guide D is sufficiently higher, as shown in Fig. 3, than the track or guide C to give an inclination to the cans, which rest between and roll upon said guides, as seen in Fig. 3 by the dotted lines representing the can. The track or guide D has also a back flange *d*, which may or may not be set at an inclination with respect to the length of the track or guide. The track or guide C is shorter than the track or guide D, as shown in Figs. 1 and 2.

E is a carrier upon which the cans are to be deposited. The receiving end of this carrier passes under the short track or guide C, and is located in a plane lower than said track or guide. I have here shown the carrier as a belt, though a turn-table or other form of moving carrier might be employed. At the end of the longer track or guide D is a stop *d'*.

The operation of the device is as follows: The cans, being rolled along, as usual, in the soldering-trough A, reach its end and then roll upon the opposing tracks or guides C D, which, on account of their position, preserve the inclination of the cans. Between the flanges *c* and *d* of these tracks or guides the cans roll along until reaching the end of the short track or guide C, and still rolling on the longer track or guide D, their lower ends drop off the end of the short track or guide onto the carrier E below, and this drop, assisted by the previous inclination of the cans and their continuance at their upper ends on the longer track or guide, causes them to assume an upright position upon the traveling carrier, and this position is assured positively by their contact with the end stop *d'* of the longer track or guide, from which they can release themselves only by turning to a perfectly-upright position, in which position they clear the stop, the can in Fig. 1 being shown about to reach a perfect position on end. The object of turning the cans on end is to enable the solder to set better while the can is in an upright position than if it were continued in an inclined position, as it will set more evenly around the flange on the end of the can, and as the cans are carried along on the belt the solder has time to cool.

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

1. A delivery attachment for can-machines,

consisting of the combination of the shorter track or guide C, the laterally-inclined longer track or guide D, opposite to the track or guide C and extending beyond its end, said longer track or guide D having a stop at its end, and the traveling carrier in communication with and below the end of the shorter track or guide, said carrier extending opposite to but in a lower plane than the guide or track D, whereby the lower end of the can drops from the track or guide C onto the carrier, while its upper end continues upon the track or guide D, and, meeting with the stop of said track or guide D, is caused to assume an upright position on said carrier, substantially as herein described.

2. In combination with the trough or way of a soldering-machine in which cans are advanced, the shorter track or guide C, in communication with one side of the trough or way, the laterally-inclined longer track or guide D, in communication with the other side of the trough or way and having a stop at its end, and the traveling carrier E below the end of the shorter track or guide, and extending opposite to but in a lower plane than the longer track or guide D, whereby the lower end of the can drops off the end of the shorter track or guide onto the carrier while its upper end is still on the track or guide D, and, meeting with the stop of said track or guide D, is caused to assume an upright position on said carrier, substantially as herein described.

In witness whereof I have hereunto set my hand.

JOSEPH BLACK.

Witnesses:
JNO. F. LYONS,
J. H. MORSE.