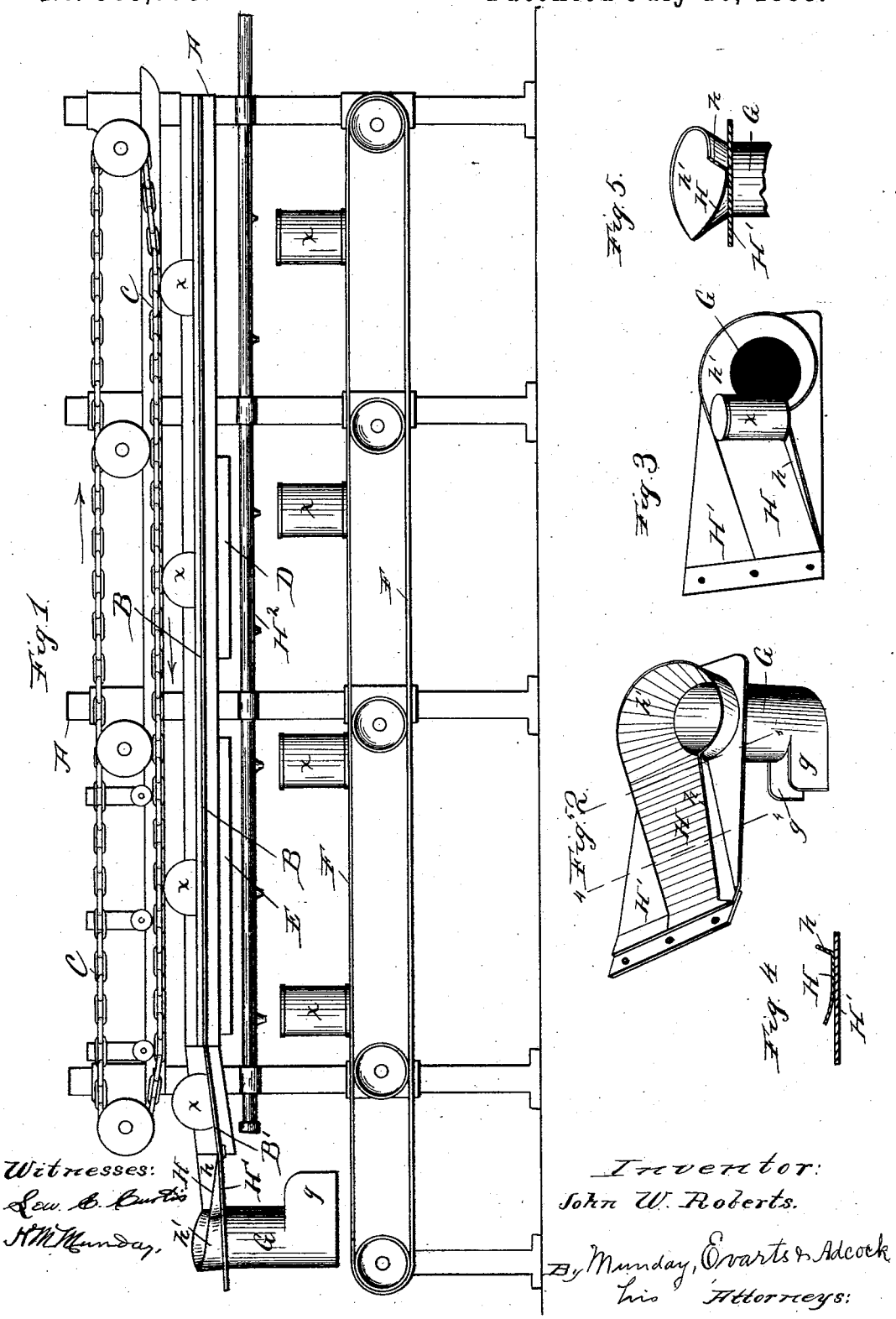
(No Model.)

J. W. ROBERTS.

CAN DELIVERY DEVICE FOR SOLDERING MACHINES.

No. 385,775. Patented July 10, 1888.



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CAN-DELIVERY DEVICE FOR SOLDERING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 385,775, dated July 10, 1888.

Application filed April 9, 1888. Serial No. 270,099. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. ROBERTS, a citizen of the United States, residing in Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Can-Delivery Devices for Soldering-Machines, of which the following is a specification.

My invention relates to means for automatically delivering the cans from the track upon which they roll while being soldered onto the cooling-belt, the cans rolling on the former in a nearly horizontal position and resting on the latter in a vertical position. This can-delivery device thus operates to turn the cans from a horizontal to a vertical position.

My invention is an improvement upon the device for this purpose shown and described in Patent No. 232,409, granted to Edwin Norton, September 21, 1880.

My improvement consists, in connection with the can-rolling track, the cooling-belt, and the vertical discharge-tube, of a laterally-inclined curved track, uniting the nearly horizontal can-rolling track and the vertical discharge-tube, whereby the can is gradually turned into a vertical position as it rolls into the vertical discharge-tube.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a detail perspective view of the discharge-tube and can-turning device. Fig. 3 is a plan view of the same; and Fig. 4 and 5 are cross-sections on lines, 4 4 and 5 5, respectively.

In said drawings, A represents the frame of the machine; and B, the can-rolling track, along which the cans *x* are rolled by the chain C through acid-bath D and solder-bath E.

F is the horizontal cooling-belt upon which the cans rest in a vertical position, in which position the solder cools or sets while the cans are being conveyed out of the machine.

G is the vertical discharge-tube, having side wings, *g g*, parallel with the cooling-belt, and through which the cans are discharged from the track B to the belt F; and H^2 is the air-blast pipe extending along the cooling-belt to facilitate the cooling of the cans. All these parts are, or may be, of substantially the same construction as shown and described in Patent No. 274,362, of March 20, 1883, to Edwin Norton.

H is the twisted or spiral end portion of the can-rolling track B, which unites said track with the vertical discharge-tube G. The track H at its lower or inner edge is provided with an upright flange or guard, *h*, for the end of the can to abut against. This guard *h* extends at an angle to the direction of the track B and leads radially or toward the center of the delivery-tube G. The lateral inclination of the track H gradually increases as it approaches the tube G until it is almost vertical at that portion of the same which is curved around the discharge-tube so that it gradually tips or turns the can upon its end as the can rolls into the discharge-tube. The curved portion *h'* of the track H forms a slightly-flaring mouth or rim for the discharge-tube G. The guard-flange *h* should be slightly twisted to correspond to the twist in the track H—that is to say, the flange *h* should be about at right angles to the track H at the different portions thereof. The guard *h* at its inner end is soldered or otherwise secured to the extremity of the curved track H. The curved laterally inclined or twisted track H is preferably made of sheet metal, though it of course may be made of other material—as, for example, two or more wire rods. The track H^2 is preferably secured upon a plate, H', to which the tube G is also secured by solder or otherwise, and this plate H' is bolted to the machine so that the track H will form an extension of the track B, along which the cans are rolled. The track B extends in a horizontal line, except at its end section, B', where it is downwardly inclined to give the necessary impetus to the cans to cause them to roll along the spirally-curved track H into the delivery-tube G. By this means the cans may be delivered from their rolling track into the cooling-belt without jarring them or injuring the seams before the solder becomes set.

I hereby disclaim the devices shown and described in Patents Nos. 274,362, of March 20, 1883, to Norton; 301,578, of July 8, 1884, to

Edwards, and 331,909, of December 8, 1885, to Price; nor do I claim, broadly, a spirally-curved laterally-inclined track twisted from the horizontal to the vertical.

My invention consists in the combination of such spirally-curved laterally-inclined twisted track with the soldering-track, cooling-belt, and vertical delivery-tube of a soldering-machine, whereby I am enabled to deliver the freshly-soldered cans upon the cooling-belt without jarring the cans and thereby injuring them or causing leaks before the solder becomes set. The spirally curved laterally-inclined twisted track around the vertical discharge-tube G serves not only to gradually tilt the can but to gradually stop its forward motion or momentum, so that the can receives no jar.

I claim—

1. The combination, in a soldering-machine, of the soldering-track along which the cans are rolled, a cooling-belt below the same, a delivery-tube, and a laterally-inclined curved track, said laterally-inclined track being twisted from the plane of said soldering-track to nearly vertical, substantially as specified.

2. The combination, with track B, of curved track H and delivery-tube G, substantially as specified.

3. The combination, with track B, of curved track H, having guard *h* and delivery-tube G, the curved portion of said track H extending around said tube, substantially as specified.

4. The combination, with twisted curved track H, of tube G, substantially as specified.

5. The combination, with laterally-inclined spiral track H, of tube G, substantially as specified.

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