

T. ROBERTSON.
Portable Tray Receiver and Elevator for Lozenge-
Machines.

No. 201,049.

Patented March 5, 1878.

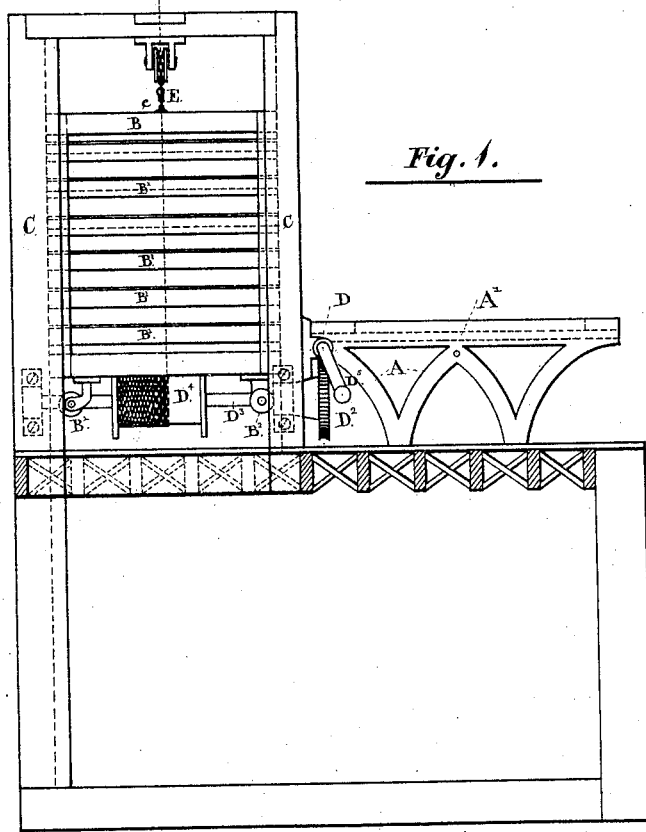


Fig. 1.

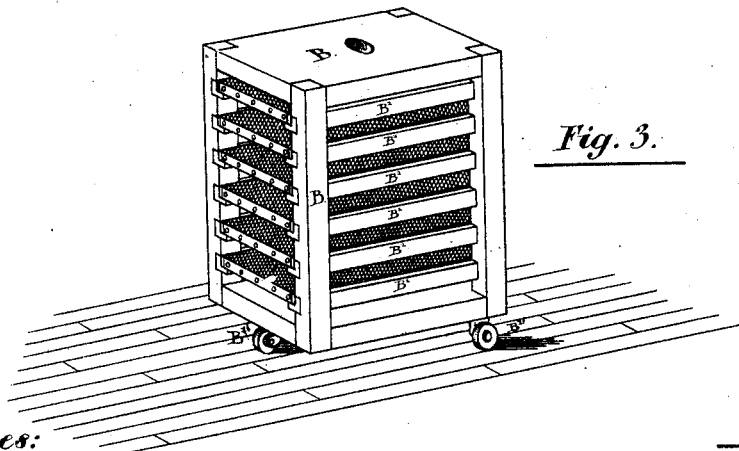


Fig. 3.

Witnesses:

L. Whitehead-----

A. E. Curran-----

Inventor:

Thomas Robertson-----

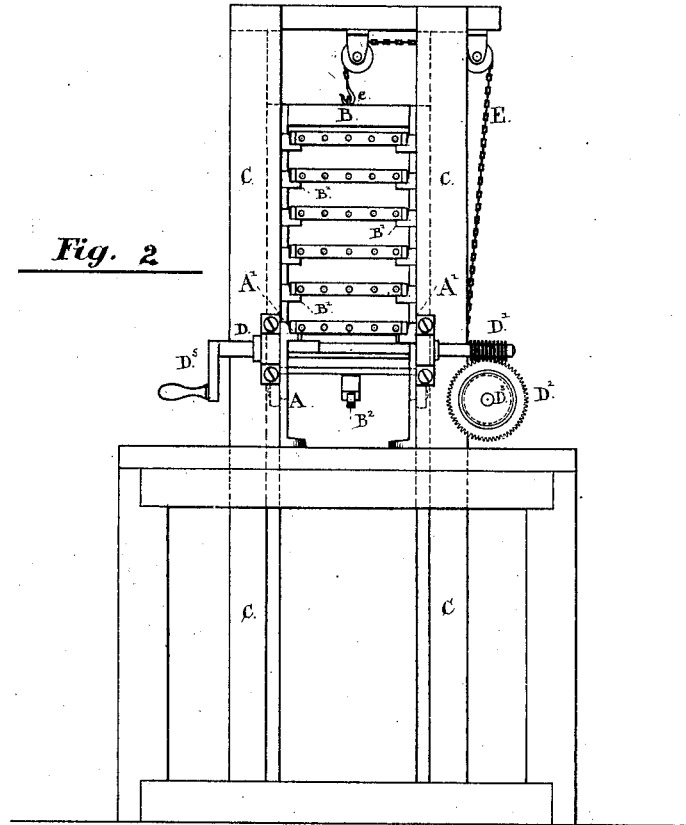
by *Ridout Bird*-----

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UNITED STATES PATENT OFFICE.

THOMAS ROBERTSON, OF TORONTO, ONTARIO, CANADA.

IMPROVEMENT IN PORTABLE TRAY RECEIVER AND ELEVATOR FOR LOZENGE-MACHINES.

Specification forming part of Letters Patent No. **201,049**, dated March 5, 1878; application filed November 27, 1877.

To all whom it may concern:

Be it known that I, THOMAS ROBERTSON, of the city of Toronto, in the county of York, and Province of Ontario, Canada, have invented a Portable Lozenge-Tray Receiver and Elevator for Lozenge-Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention has relation to a machine which is designed to be used in connection with that class of lozenge-machines in which the lozenges are delivered automatically upon trays.

My invention consists of a portable frame, fitted as an elevator-cage, and operated to move up and down within guide-posts at the delivery end of lozenge-machines by suitable gearing.

The portable frame is provided with any required number of tray-bearings, on which the lozenge-trays can be placed one above the other. The frame is also provided with casters, on which it can be rolled in and out of the drying-room without any handling of the lozenges or lozenge-trays.

In the accompanying drawings, Figure 1 is a side view, and Fig. 2 an end view of a machine embodying my invention. Fig. 3 is a perspective view of a loaded frame detached from the elevating mechanism.

A is the delivery end of a lozenge-machine, on which the tray slide-bearings A^1 are continued to a working connection with the elevator-frame. B is a portable elevator-frame fitted within guide-posts C in such manner that it can be hoisted up and let down from different floor-levels, as required.

The hoisting and lowering mechanism illustrated consists of a shaft, D, worm D^1 affixed thereon, worm-wheel D^2 , shaft D^3 , and winding-drum D^4 .

E is the chain or rope connecting the elevator-frame with the winding-drum. The connection of the chain or rope to the elevator is made by a hook, e, in order that the frame may be readily attached. The frame is operated to move up or down by the handle D^4 .

Although the hoisting mechanism shown

is convenient for the purpose required, it is obvious that this part of the machine could be very much varied in construction and arrangement.

The frames B, of which there may be a number, are fitted with tray-bearings B^1 , corresponding in gage and section with the slide-bearings of the lozenge-machine, and placed at suitable intervals apart, up the whole height of frame. The intervals of space between each set of bearings are made sufficiently wide to allow a loaded lozenge-tray to be slipped in without any disturbance of its contents.

On the bottom frame B casters B'' are attached, on which casters the frame may be moved on the different floors when detached from the elevating mechanism.

At the floor-level on which the drying-room is situated two of the guide-posts are removed, to allow the frame B to be rolled out.

In operation, an empty frame is hoisted up or let down until the lower or upper set of tray-bearings is level with the slide-bars of the lozenge-machine, a loaded lozenge-tray is then slipped in, and the frame B raised or lowered until the next set of tray-bearings corresponds with the lozenge-machine slide-bars, as before, and so on, the intervals being filled successively as the trays come out of machine.

When the frame is filled it is hoisted up or let down to the floor upon which the drying-room is situated, and removed directly thereto, without any handling of the lozenge-frames or their contents.

In addition to convenience and cheapness in handling the goods by this system, a further advantage is obtained in the fact that the goods are not damaged by being handled when in a soft condition.

I claim as my invention—

1. A portable tray-elevator frame, B, provided with a series of tray-bearings, B^1 , corresponding with the slide-bars of a lozenge-machine, and arranged to receive the lozenge-trays one above the other, as they are passed out of the lozenge-machine, substantially as shown and described.

2. The portable tray-elevator frame B, in combination with the guide-posts C, lozenge-machine slide-bearings A', and suitable elevating and lowering mechanism for moving said frame up and down, as required.

3. In combination with a lozenge-machine which delivers the finished lozenges on trays,

the portable elevator-frame B, arranged and operating substantially in the manner shown and described.

THOMAS ROBERTSON.

Witnesses:

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