

No. 745,385.

PATENTED DEC. 1, 1903.

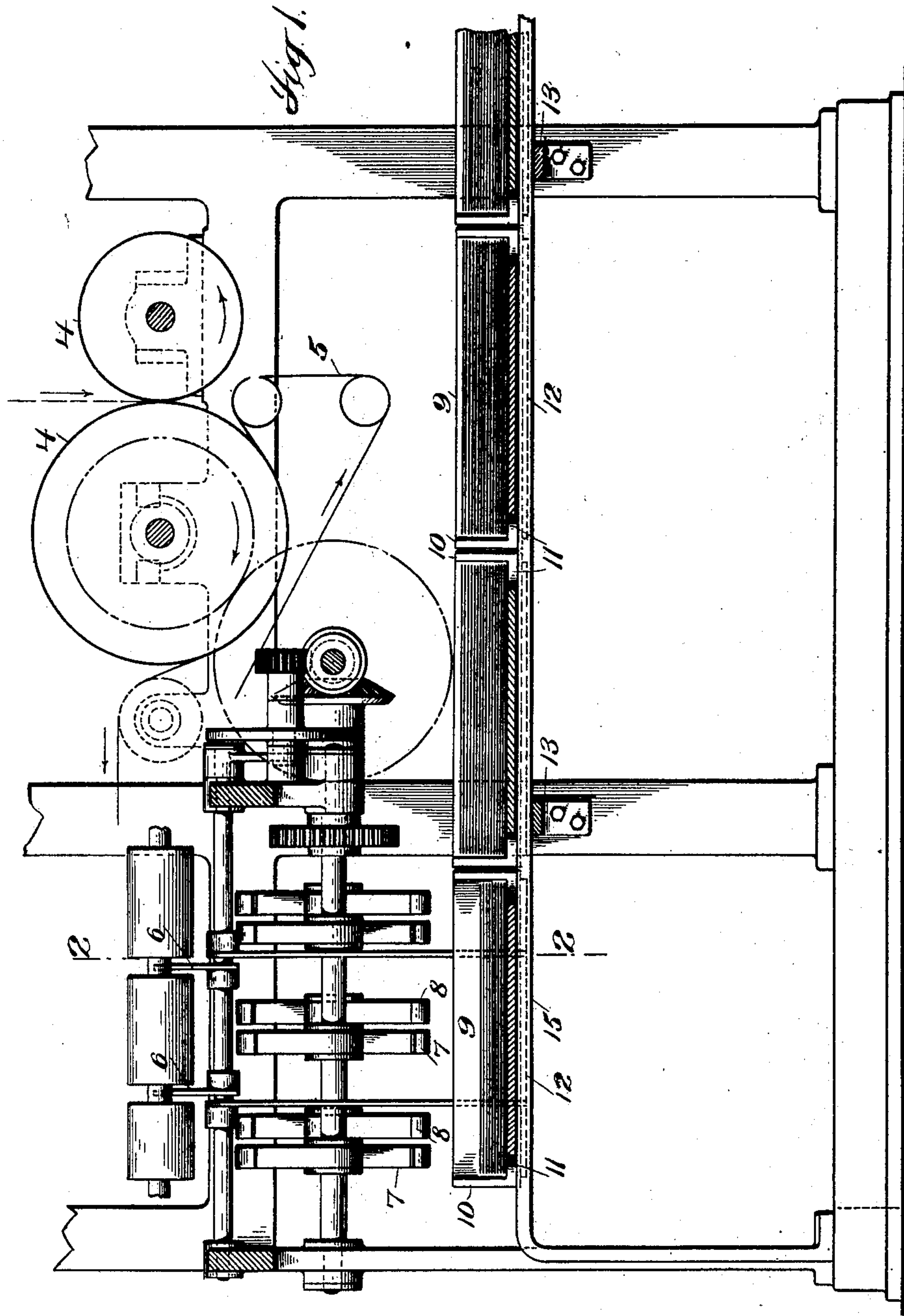
G. F. READ.

DELIVERY MECHANISM FOR PRINTING MACHINES.

APPLICATION FILED NOV. 8, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Attest:
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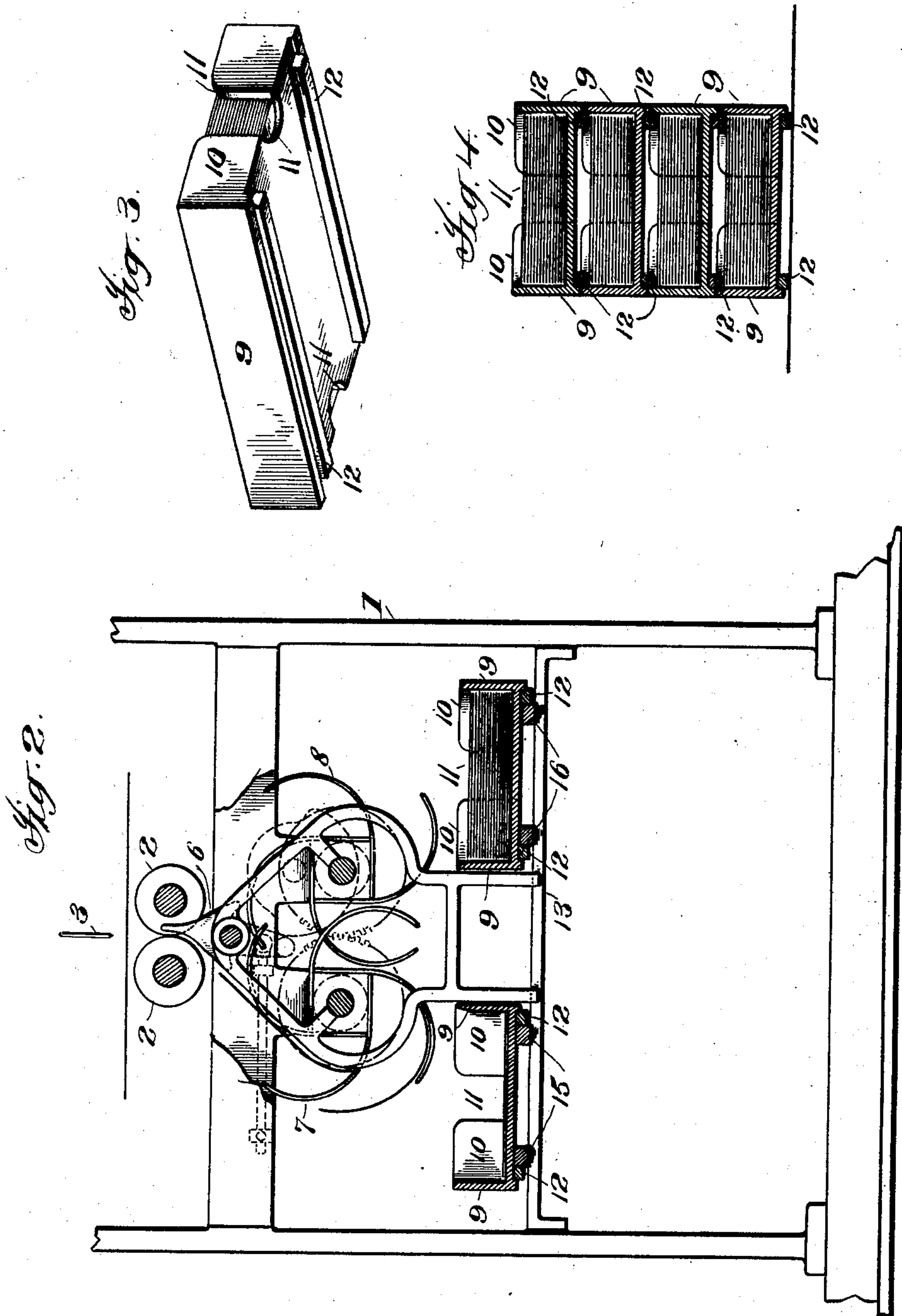
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UNITED STATES PATENT OFFICE.

GEORGE F. READ, OF NEW YORK, N. Y., ASSIGNOR TO ROBERT HOE, OF
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DELIVERY MECHANISM FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 745,385, dated December 1, 1903.

Application filed November 8, 1902. Serial No. 130,530. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. READ, a citizen of the United States, residing at New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Delivery Mechanisms for Printing-Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to certain improvements in deliveries, and is more especially intended for use in connection with the delivery of printing-machines.

In Patent No. 700,238, granted May 20, 1902, to Robert Hoe as my assignee, there is disclosed a delivery for printing-machines in which the printed matter or sheets are delivered into boxes or trays, the purpose of the construction being to prevent the product from becoming smutted or rubbed in the delivery or from being finger-marked and to give the separate products an opportunity to dry without superposing large bunches of them directly upon each other, by which off-setting, due to the weight of the superposed products, is prevented.

The present invention has for one of its objects to improve the trays used for receiving the products or sheets.

A further object of the invention is to improve the devices for guiding and supporting the trays in order to enable them to be positioned so as to receive the product and to be delivered from the machine.

With these and other objects in view the invention consists in certain constructions and in certain parts, improvements, and combinations, as will be hereinafter fully described and then specifically pointed out in the claims hereunto appended.

Referring to the drawings, Figure 1 is a side elevation, partly in section, of so much of a sheet-delivery adapted to be used with printing-machines as is necessary for an understanding of the invention. Fig. 2 is a section on the line 2-2 of Fig. 1. Fig. 3 is a perspective view of the improved form of tray, and Fig. 4 illustrates a pack of superposed trays.

Referring to the drawings, 1 indicates the

frame of a delivery mechanism, which may be of any suitable construction and configuration. Mounted in this frame are two rollers 2, between which sheets may be tucked by a blade 3, the sheets either singly or in a collected pack being presented to said blade by means of a pair of sheet-advancing rolls 4 and a set of tapes 5. In the preferred form of the construction the machine which embodies the invention will employ a plurality of deliveries to receive the product from the folding-rolls. While the number of these deliveries may be varied, in the machine shown two deliveries are employed and devices are provided by which a number of sheets in succession will be directed to one delivery and a number of sheets in succession to the other delivery. The sheets are directed first to one delivery and then to the other by means of a triangular switch 6, which may be set by hand or automatically, so as to deliver a number of sheets in succession down a suitable pathway to a fly 7, after which a number of sheets in succession is delivered to a corresponding fly 8. The construction for operating the switch, the delivery-rolls, and the fly is shown as the same as that disclosed in the patent above referred to, and reference is made to this patent for a full description of said construction, it being unnecessary to describe the said construction here because, specifically considered, it has no relation to the present invention, it being possible to substitute for it any other suitable form of delivery.

The sheets are delivered to receiving-trays, the details of construction of which may be varied. As shown, these trays are provided with sides 9 and ends 10, one or both of said ends being cut away, as shown at 11, to form a handhold, so that the sheets which have been deposited therein may be readily seized and removed from the tray. Each tray is furthermore provided with a pair of projections 12, which may be formed in any suitable manner, as by securing strips to the bottoms of the trays. These projections are preferably slightly shorter than the length of the trays and are preferably located inside the side edges of the trays a sufficient distance so that when the trays are superposed the pro-

jections on any given tray will lie inside the side walls of the tray below it. With this construction when a series of trays are piled upon each other the trays are prevented from slipping sidewise, so that it is possible to superpose a large number of them without any danger of the stack falling over. The strips forming the projections may, however, be secured to the sides of the trays so as to project below the bottom, in which case they would not need to be shorter than the length of the trays. When constructed in this manner, the lower trays of the stacks would have their tops in engagement with the inside edges of the strips of the upper trays instead of the outside, as shown.

The trays may be supported in the machine in any suitable manner. Preferably, however, there will be provided a track for each delivery employed. In the present construction the frame of the machine is provided with a series of cross-pieces 13, and inasmuch as the machine has two deliveries two tracks 15 and 16 are provided, each track comprising a pair of rails. These tracks will be arranged so that when the trays are supported thereon the projections 12 on the bottoms of the trays will engage the sides of the tracks. In the preferred form of the construction the tracks will be of such a width that the inner sides of the projections will engage the outer sides of the tracks, the bottom of the trays resting on the tracks, as clearly shown in Fig. 3. The tracks will preferably be of a sufficient length to support a plurality of trays arranged end to end.

With the construction as described an attendant at one end of the machine can position the empty trays under the deliveries, each of the trays as it is placed in position serving to push ahead the filled trays in front of it and the filled trays being removed by another attendant at the other end of the machine. With the delivery arranged to deposit a number of sheets in succession in each tray it will be easily possible to position a tray under one delivery while the machine is operating to fill the tray under the other delivery.

The details of the construction by which the invention is carried into effect may be varied within wide limits. The invention is

not, therefore, to be limited to the specific details of construction hereinbefore set forth.

What is claimed is—

1. A receiving-tray having a cut-away side, said tray being provided with projections which extend below the bottom thereof, the projections being positioned so that when the trays are superposed the bottom of each tray will rest on the top of the tray beneath it and the sides of the lower tray will be in engagement with the sides of the projection on the upper tray, substantially as described.

2. A receiving-tray having a cut-away side and projections on its bottom, said projections being slightly shorter than the length of the tray and being located inside the side edges of the tray, whereby a plurality of trays may be superposed, the projections on one tray engaging the interior of the top of the sides of the tray below it, substantially as described.

3. The combination with a sheet-delivery, of a plurality of receiving-trays, each tray having a cut-away side and having projections on its bottom, said projections being slightly shorter than the length of the tray and being located inside of the side edges of the tray, and a track for supporting the trays arranged beneath the delivery, said track being arranged to engage the sides of the projections whereby the projections act as guides, substantially as described.

4. The combination with a plurality of sheet-deliveries arranged to operate successively, of a plurality of receiving-trays each tray having a cut-away side and having projections on its bottom, said projections being slightly shorter than the length of the tray and being located inside of the side edges of the tray, and a plurality of tracks each track being arranged to engage projections on the bottoms of the trays, whereby the trays are adapted for use with each track and the projections serve to guide the trays, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE F. READ.

Witnesses:

F. W. H. CRANE,
GEO. M. BROWN.