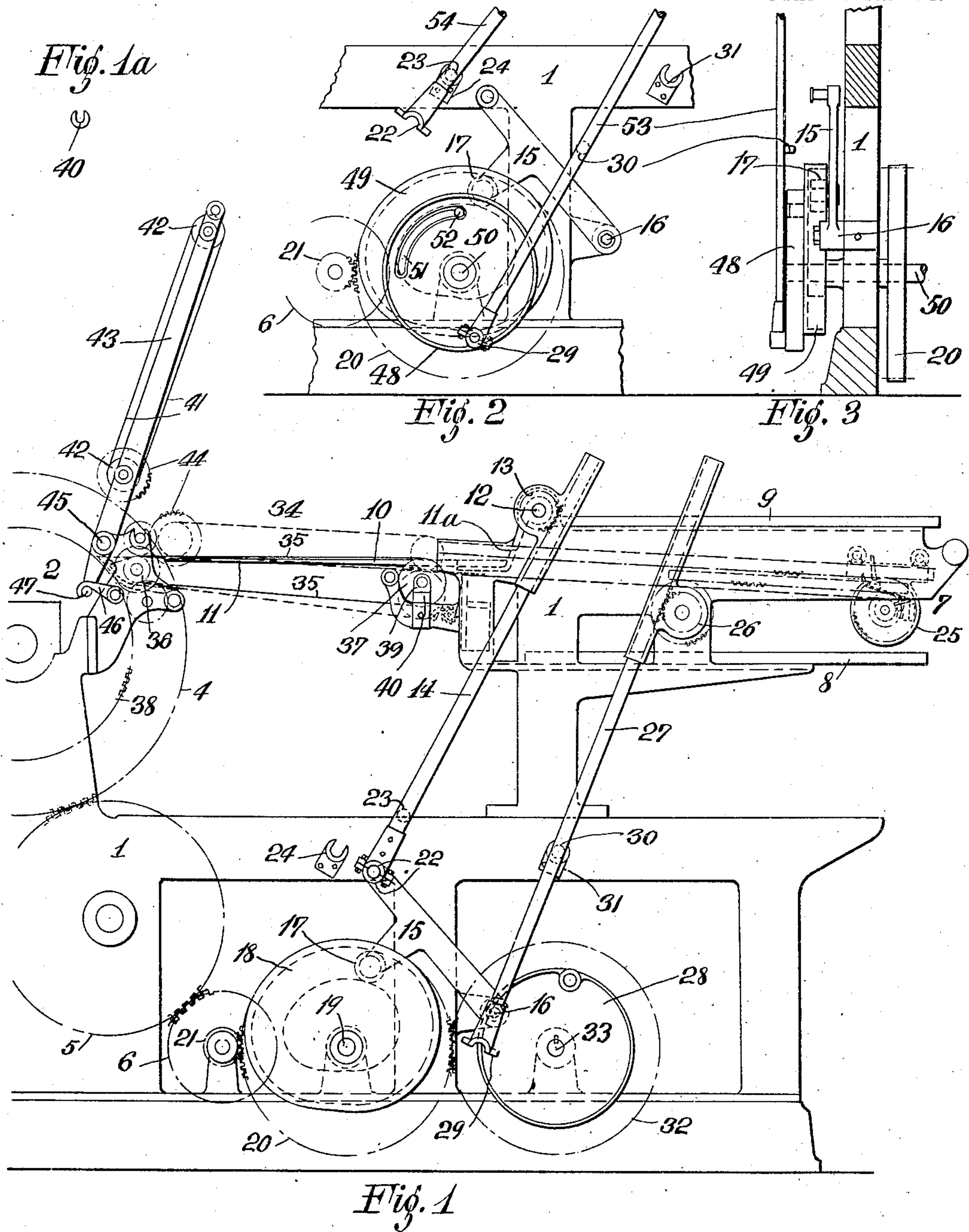


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I. & D. J. SCOTT, EXECUTORS.  
DELIVERY MECHANISM.  
APPLICATION FILED JAN. 14, 1905.

Patented Dec. 29, 1908.

908,152.

2 SHEETS—SHEET 1.



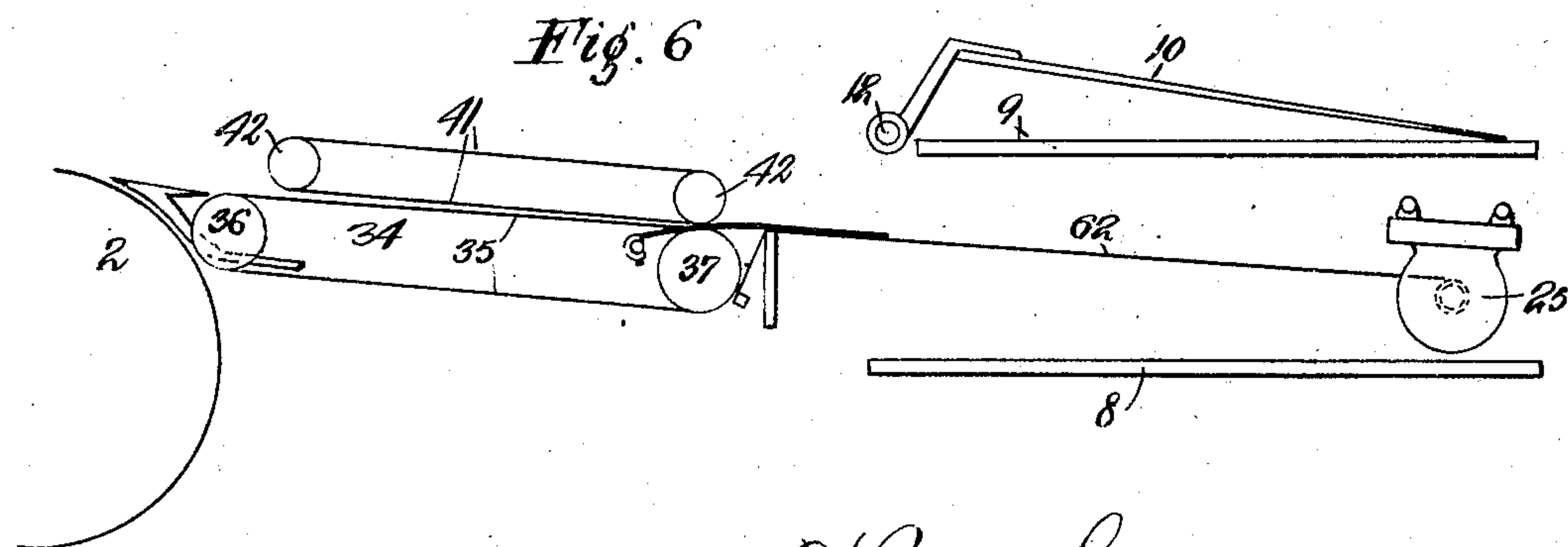
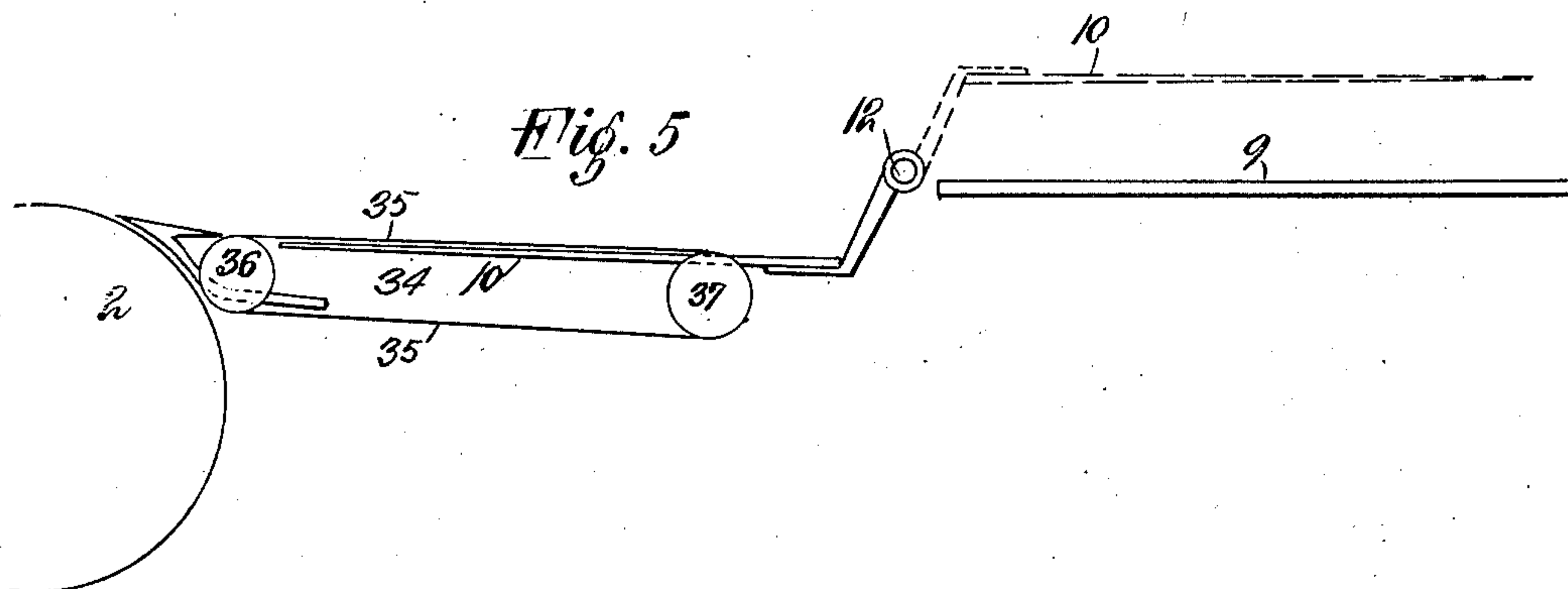
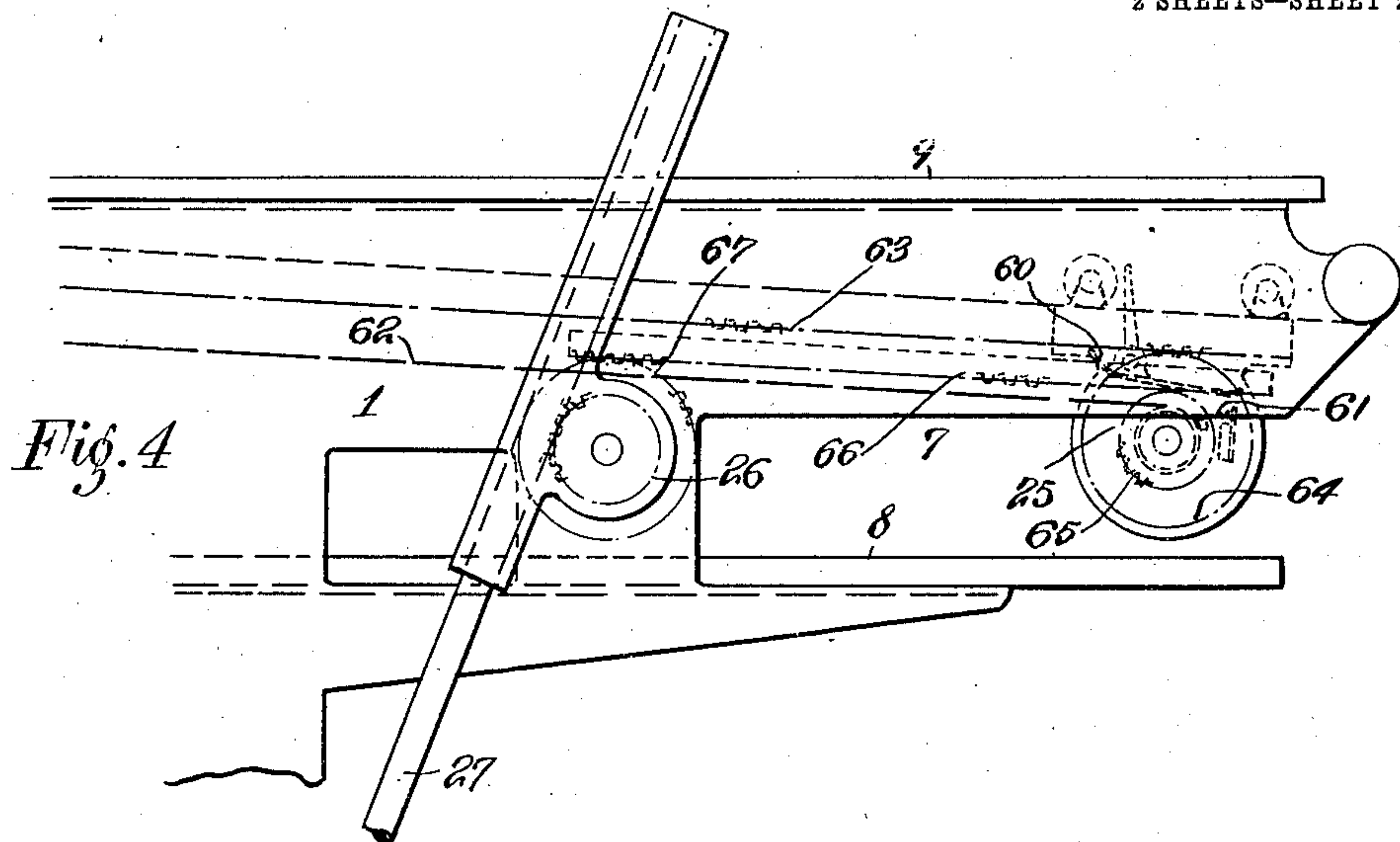
Witnesses  
Joan Korrigsberg  
Annie Wissemann

Walter Scott Inventor  
By his Attorneys  
Decker & Spaulding

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Witnesses  
Evan Kongsberg  
M. A. Hoffman

Walter Scott Inventor  
By his Attorneys  
Belken & Spaulding



# UNITED STATES PATENT OFFICE.

WALTER SCOTT, OF PLAINFIELD, NEW JERSEY; ISABELLA SCOTT AND DAVID JOHN SCOTT  
EXECUTORS OF SAID WALTER SCOTT, DECEASED.

## DELIVERY MECHANISM.

No. 908,152.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed January 14, 1905. Serial No. 241,106.

*to all whom it may concern:*

Be it known that I, WALTER SCOTT, a citizen of the United States of America, and a resident of Plainfield, Union county, New Jersey, have invented certain new and useful Improvements in Delivery Mechanisms, of which the following is a specification.

The present invention relates generally to delivery mechanism for sheets of paper or other flexible material, and has more particular reference to sheet delivery mechanism used in printing presses.

In the class of printing machines known as "two revolution", "stop cylinder" and similar machines, the printed sheets are generally delivered with the printed side up. Sometimes, however, it is desirable to deliver the sheets with the printed side down. Furthermore, it is frequently desired to change from one style of delivery apparatus to another in the same machine, when doing different classes of work.

The object of my invention is to produce an improved structure of the character described, capable of delivering the sheets with the printed side down, and also to provide interchangeable means whereby sheets can be delivered either with the printed side up or down at will in the same machine.

In carrying out the above objects, my invention is characterized by two delivery boards located in different planes in combination with a reciprocating carriage for delivering the sheets with the printed side up to one of said boards and a fly for delivering the sheets with the printed side down to the other of the said boards, together with driving means and connections for both, disconnectible from either one at will.

In the drawings I have embodied my invention in a suitable form, but changes may of course be made without departing from the spirit of the invention.

In the said drawings: Figure 1 is a side elevation of a machine, embodying my invention. Fig. 1<sup>a</sup> is a detail view of a removable washer for adjusting the level of the tapes over which the sheets pass. Fig. 2 is a view of part of Fig. 1 showing a modification. Fig. 3 is an end view, partly in section, of Fig. 2. Fig. 4 is a detail view of

the drop delivery. Fig. 5 is a diagrammatic view showing the parts in position to deliver the sheet with the printed side down. Fig. 6 is a diagrammatic view showing the parts in position to deliver the sheet with the printed side up.

Similar characters of reference indicate corresponding parts in the different views.

1 indicates a framework suitably mounting the various parts of the machine.

2 is the impression cylinder.

7 is the flat drop delivery, for delivering sheets with the printed side up to the delivery board 8.

9 is a second delivery board constituting a receiving means for the sheets located in a plane different from and higher than the plane of the board 7 to which sheets are delivered with the printed side down by means of the fly 10.

Any suitable means may of course be employed for driving the fly and drop delivery. In the present instance, the fly fingers 11 are mounted on a crank 11<sup>a</sup> on the shaft 12 carrying the pinion 13 operated by means of the rack 14 disconnectibly attached to the rocking lever 15 pivoted at 16 on the framework and provided with a friction roll 17 engaging with the cam 18 mounted on the shaft 19 to which motion is imparted by means of the gear 20 meshing with the pinion 21 and through the train of gears 4, 5 and 6 from the impression cylinder. It will be noticed that the fly fingers 11 by being mounted on the crank are so positioned as to be located at a point below the shaft 12, when the fly is in position to receive the sheets, and below the delivery board 9, thereby enabling the fly to deliver the sheets on a board in a plane different from that of the drop delivery board.

The rack 14 is connected to the rocking lever 15 by means of two split bushings so that it can be disconnected from the said rocking lever, and is provided with a stud 23 adapted to rest in the bracket 24 on the framework when the rack is disconnected from the rocking lever.

The drop delivery consists essentially of a reciprocating carriage 25 adapted to seize and release the sheet at the proper periods operated by means of racks in a well known



manner and by means of the pinion 26 with which engages the rack 27 disconnectibly attached to the crank disk 28 by means of a split bushing 29 in the same manner as the rack of the fly and is also provided with a stud 30 adapted to rest in the bracket 31 of the framework when not in use.

In the present instance, the reciprocating carriage 25 is provided with the grippers 60 and 61 which are adapted to seize the sheet when the carriage is adjacent to the tapes 35 and 41 and to release the same when at the end of the stroke of the reciprocating carriage in the opposite direction in a well known manner. The reciprocating carriage is further provided with the collapsible apron 62 for supporting the sheet. Mounted fast on the framework are the stationary racks 63 (only one of which is seen) and with which engages the gears 64 on the carriage. Moving with these gears is the pinion 65 which engages with the sliding rack 66 operated by the gear 67 mounted on the same shaft as the pinion 26.

The crank disk 28 is driven from the gear 20 by means of the gear 32 mounted on the same shaft 33 as the crank disk.

Interposed between the two deliveries and the impression cylinder is a sheet path as 34, constituting a means for conveying sheets consisting of the lower tapes 35 traveling over the rollers 36 and 37 and driven from the gear 38 on the impression cylinder. The rollers 37 are mounted in sliding boxes 39 provided with a removable washer 40 which admits of the tapes being raised, if desired, above the fly fingers when the fly is in use. The sheet path further consists of the upper tapes 41 traveling over the rollers 42 carried by the pivoted frame 43. The upper tapes are driven by means of the pinion 44 from the gear 38 on the impression cylinder. When the fly is used, the frame 43 carrying the upper tapes is swung upward around the pivot 45 and held in this position by means of the latch 46 engaging with the pin 47 of the frame 43.

In Figs. 2 and 3 I have shown a modification in which the crank disk 48 and cam 49 for operating respectively the drop delivery and fly are mounted on the same shaft 50 and adjustable one with relation to the other by means of the slot 51 and set screw 52 in a well known manner. The two racks 53 and 54 are made disconnectible as previously.

When it is desired to deliver the sheets with the printed side down, the frame 43 carrying the upper tapes is swung upward and out of the way, as shown in the drawings, and the lower tapes are adjusted to a position above the fly fingers when in position to receive the sheet by inserting the washer 40. The rack 14 is connected to the rocking lever 15, and the rack driving the

drop delivery disconnected from the crank disk, and placed in the bracket 31; or if the crank disk is mounted on a separate shaft, the gear 32 can be slid sidewise upon the shaft 33 and out of mesh with the gear 20.

When it is desired to deliver the sheets with the printed side up, the rack 14 is disconnected from the rocking lever 15 and placed in the bracket 24. The fly is swung up on the delivery board 9, the washer 40 removed from the sliding box of the lower tapes, and the frame 43 swung downward so as to properly guide the sheets into the drop delivery. The rack driving the said drop delivery is connected with the crank disk, or if the gear 32 has been brought out of mesh with the gear 20, it is moved back again into mesh.

By the foregoing means it will be seen that I have devised an easily adjustable interchangeable means for delivering the sheets either with the printed side up or down.

Of course the same delivery board could be used with either delivery by having it removable and by shifting it from one position to another. The claims should be construed accordingly.

What I claim is:

1. In a printing or other machine, the combination with an impression or other cylinder, of a drop delivery for delivering the sheets with the printed side up, a delivery board for receiving the sheets from the said drop delivery, a delivery board located in a different plane from that of the first board, a fly for delivering the sheets with the printed side down to the said second delivery board, a sheet path interposed between the two deliveries and the impression cylinder, and driving means for the fly and drop delivery, either of which is adapted to be rendered inoperative.

2. In a printing or other machine, the combination with an impression or other cylinder, of a drop delivery for delivering the sheets with the printed side up, a delivery board for receiving the sheets from the said drop delivery, a delivery board located above the first delivery board, a fly for delivering the sheets with the printed side down to the said second delivery board, a sheet path interposed between the two deliveries and the impression cylinder, and driving means for the fly and drop delivery, either of which is adapted to be rendered inoperative.

3. In a printing or other machine, the combination with an impression or other cylinder, of a drop delivery and a fly, either of which is adapted to be rendered inoperative, a sheet path interposed between the two deliveries and the impression cylinder consisting of upper and lower tapes, and a pivoted framework supporting the upper



tapes adapted to be swung into an upright position and out of the way of the fly when the latter is used.

4. In a printing or other machine, the combination with an impression or other cylinder, of a drop delivery and a fly either of which is adapted to be rendered inoperative, a sheet path interposed between the two deliveries and the impression cylinder consisting of upper and lower tapes, a pivoted framework supporting the upper tapes adapted to be swung into an upright position and out of the way of the fly when the latter is used, and means for holding the frame in the said upright position.

5. In a printing or other machine, the combination with an impression or other cylinder, of a drop delivery and a fly either of which is adapted to be rendered inoperative, a sheet path interposed between the two deliveries and the impression cylinder consisting of upper and lower tapes, a pivoted framework supporting the upper tapes adapted to be swung into an upright position and out of the way of the fly when the latter is used, and means for raising the

lower tapes above the fingers of the fly when the latter is in the position to receive the sheets from the impression cylinder.

6. In a printing or other machine, the combination with an impression or other cylinder, of a drop delivery and a fly either of which is adapted to be rendered inoperative, a sheet path interposed between the two deliveries and the impression cylinder consisting of upper and lower tapes, a pivoted framework supporting the upper tapes adapted to be swung into an upright position and out of the way of the fly when the latter is used, means for holding the frame in the said upright position, and means for raising the lower tapes above the fingers of the fly when the latter is in the position to receive the sheets from the impression cylinder.

Signed at New York this 6th day of January 1905.

WALTER SCOTT

Witnesses:

AXEL V. BEEKEN,  
ANNIE WISSEMAN.