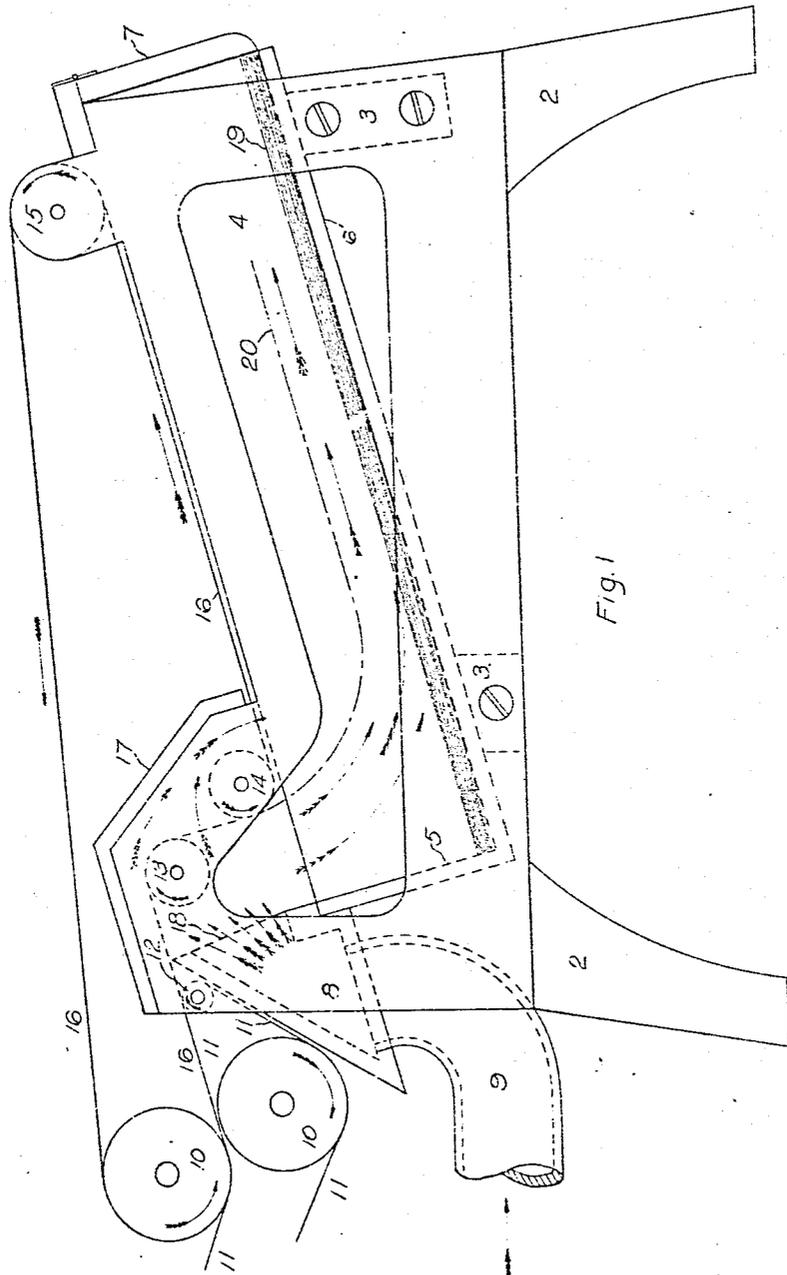


C. B. MAXSON.
SHEET DELIVERY.
APPLICATION FILED MAR. 24, 1909.

949,935.

Patented Feb. 22, 1910.
4 SHEETS—SHEET 1.



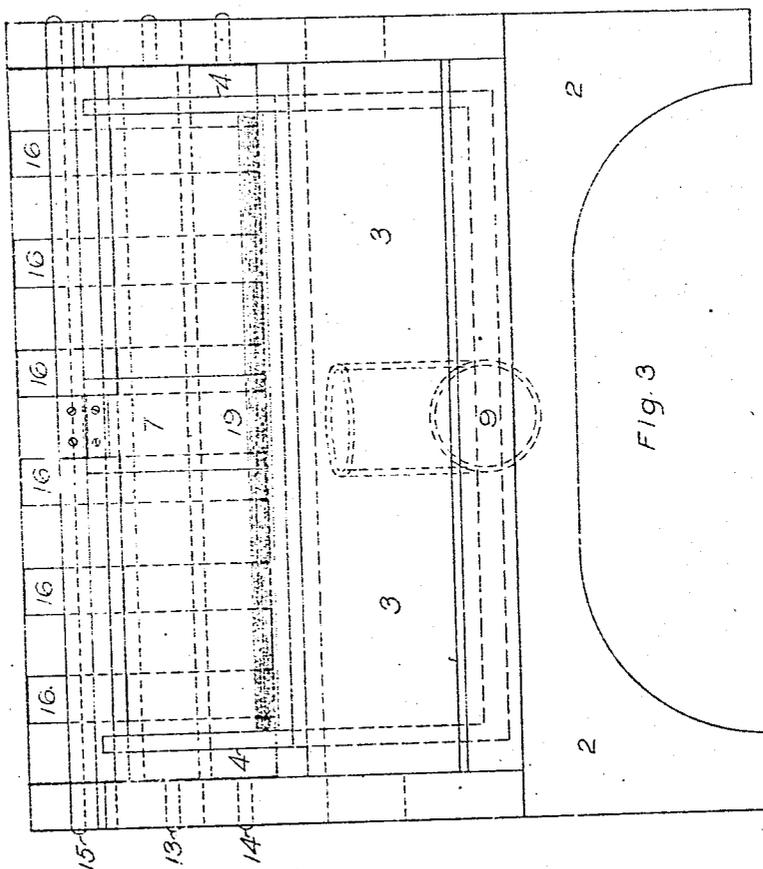
Witnesses:
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Julian H. Maxson

Inventor:
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SHEET DELIVERY.
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4 SHEETS—SHEET 3.



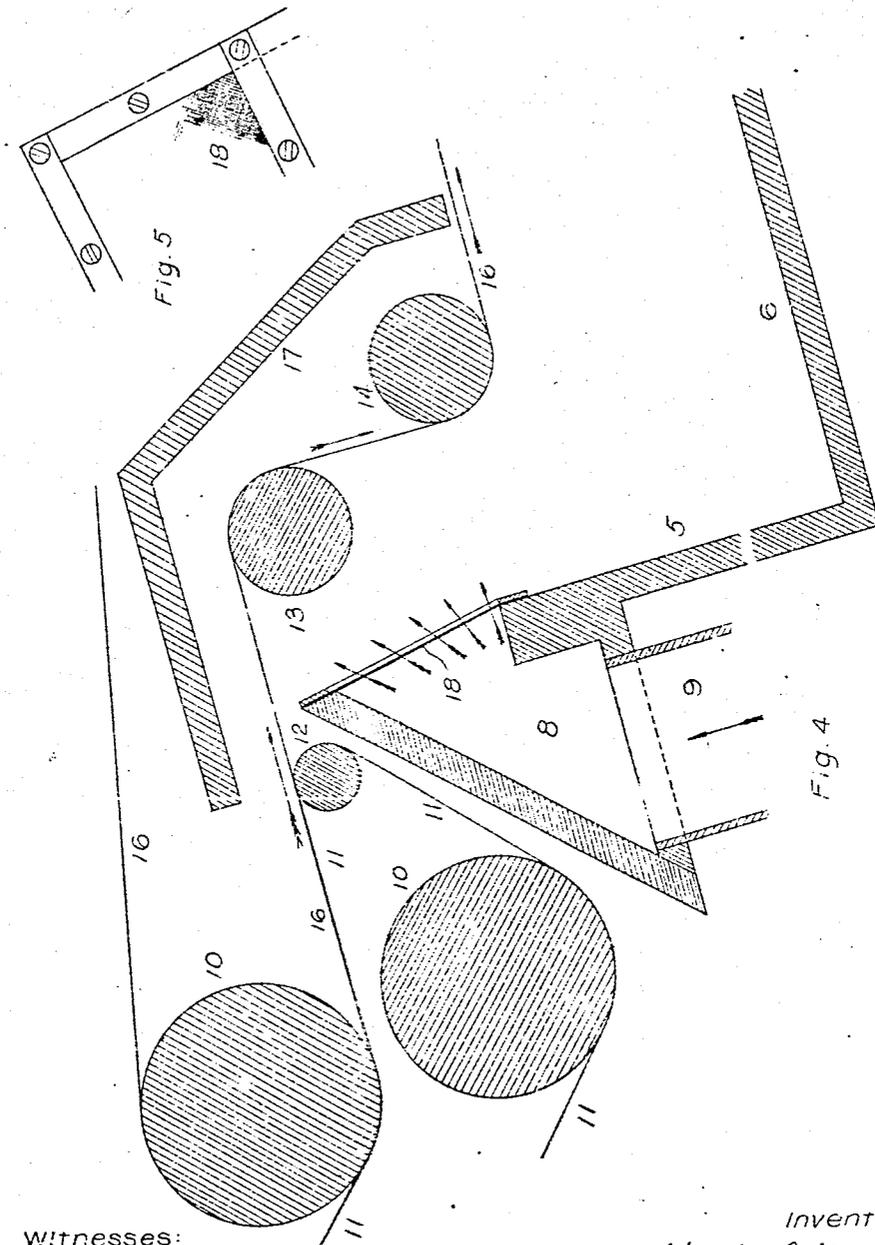
Witnesses:
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949,935.

Patented Feb. 22, 1910.

4 SHEETS—SHEET 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES B. MAXSON, OF WESTERLY, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO WILLIAM CONRADT KRAEMER AND PHILIP WILLIAM DIETLY, BOTH OF ERIE, PENNSYLVANIA.

SHEET-DELIVERY.

949,935.

Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed March 24, 1909. Serial No. 435,490.

To all whom it may concern:

Be it known that I, CHARLES B. MAXSON, a citizen of the United States, residing in Westerly, in the county of Washington and State of Rhode Island, have invented a new and useful Sheet-Delivery, of which the following is a specification.

My invention relates to the delivery of sheets that come singly from any machine, but more especially to any class of machines where the sheets follow each other in close succession; and the object of my improvement is to provide a delivery that will work in connection with that class of machines in which the delivery of the sheet is not timed to correspond to the movement of any part of the machine, such as ruling machines, calendars, coating machines, &c. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view; Fig. 2 a top view; Fig. 3 an end view; Fig. 4 a vertical section of a part of the machine on the line A B, Fig. 2; and Fig. 5 a detailed view of the partial obstruction of the air passage.

Similar figures refer to similar parts throughout the several views.

The sides 1, standards 2, and girts 3 constitute the frame of the machine. The sides 4, end 5, and bottom 6, together with the swinging stop 7, constitute the box for receiving and holding the sheets. The passage 8 receives and distributes the air from the pipe 9. The rolls 10 and tapes 11 constitute a part of the delivery of the machine to which my mechanism is attached. The rolls 12, 13, 14, and 15, tapes 16, deflector 17, air passage 8, and partial obstruction 18 constitute the mechanism for controlling the action of the sheet.

The working of the machine is as follows: A sheet is brought by the tapes 11, and delivered between the rolls 10, into contact with the tapes 16, the tapes 16 receiving their motion from contact with the tapes 11. When the front edge of the sheet passes the roll 12, the air blast holds it against the tapes 16 until it reaches the roll 13, when the tapes carry it over and down, the air blast then holding it against the tapes 16 until it passes the roll 14, when the air blast turns the end around the roll 14, keeping it off the pile 19 and carrying it forward as shown at 20. When the back edge of the

sheet passes the roll 12, a part of the air blast passes by the edge of the sheet and strikes the deflector 17, by which it is turned downward and strikes upon the top of the sheet and, as the sheet advances, more of the air blast is deflected until the back end of the sheet is released by passing out of contact with the roll 13 and the tapes 16. The sheet then floats forward and strikes the stop 7, which swings forward and on its return swing strikes the edge of the sheet, putting it back into position. At the same time the air blast, which is now blowing on top of the sheet, has turned the back end of the sheet down and laid it on the pile 19. This air blast may be made by a blower attached to the machine or it may be obtained from any suitable source, as from the general air pressure supply of the building, as the source of supply does not constitute a part of my invention, but the device for using it does constitute a part of my invention.

An air blast supplied from a pipe of any ordinary form and delivered from an opening of the necessary form to produce the effect described, without any controlling device, will not produce satisfactory results, as the blast will be full of "whirls" and irregularities which will defeat the desired end. To overcome this I place across the air passage a partial obstruction 18. When air under pressure is forced through an opening it expands and flies off from its line of travel in a series of "explosions"; the sheet as shown at 20, Fig. 1, floating on this air current, conforms to this motion with the result that it flaps in an unsteady manner, and this prevents its proper delivery on the pile 19. The action of the partial obstruction is this:—When the air is forced through a number of small holes, located near each other and covering a relatively large area, the air expands in the same manner, but the expansion is from one stream of air toward another, and as the intermediate space has no source of supply, except these streams of air, this expansion is provided for without disturbing the sheet; and while I do not avoid the action of this natural law, I accomplish the purpose of carrying the sheet steadily forward, by so minimizing its action that the effect on the sheet is not perceptible. I prefer to use for this purpose a wire screen, but I do not limit myself to

the use of this, as cloth or a piece of perforated wood or metal could be used to produce the result.

5 What I claim as my invention and desire to secure by Letters Patent, is—

1. The combination of an air blast, a line of tapes, the roll 14, a table for receiving the sheets and a stop for arresting the forward motion of the sheet, located in such relation to each other that the tapes will carry the sheet in a line of travel toward the table as far as the roll 14 and the air blast will then turn the sheet into a line of travel corresponding to the surface of the table.

2. The combination of an air blast and a line of tapes, substantially as described; and a deflector, located in such relation to the line of travel of the sheet that it will change the air blast to the opposite side of the sheet when the back end of the sheet passes beyond the direct line of the air blast.

3. The combination of an air blast, a line of tapes, and a deflector, located in such relation to each other that the sheet being delivered, is at first held against the tapes and off the pile, by the air blast, and later is blown away from the tapes and onto the pile, by the air blast.

4. The combination of an air blast, a line of tapes, and a deflector located in such relation to each other that the passing of the back end of the sheet beyond the direct line of the air blast, permits the air blast to go beyond the line of travel of the sheet and strike upon the deflector.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES B. MAXSON.

Witnesses:

ALEX. C. THOMSON,
AGNES F. BRODIE.