(No Model.) 2 Sheets—Sheet 1.

J. KING.

SHEET DELIVERER FOR PRINTING PRESSES.

No. 463,839. Patented Nov. 24, 1891.

Fig. 1.

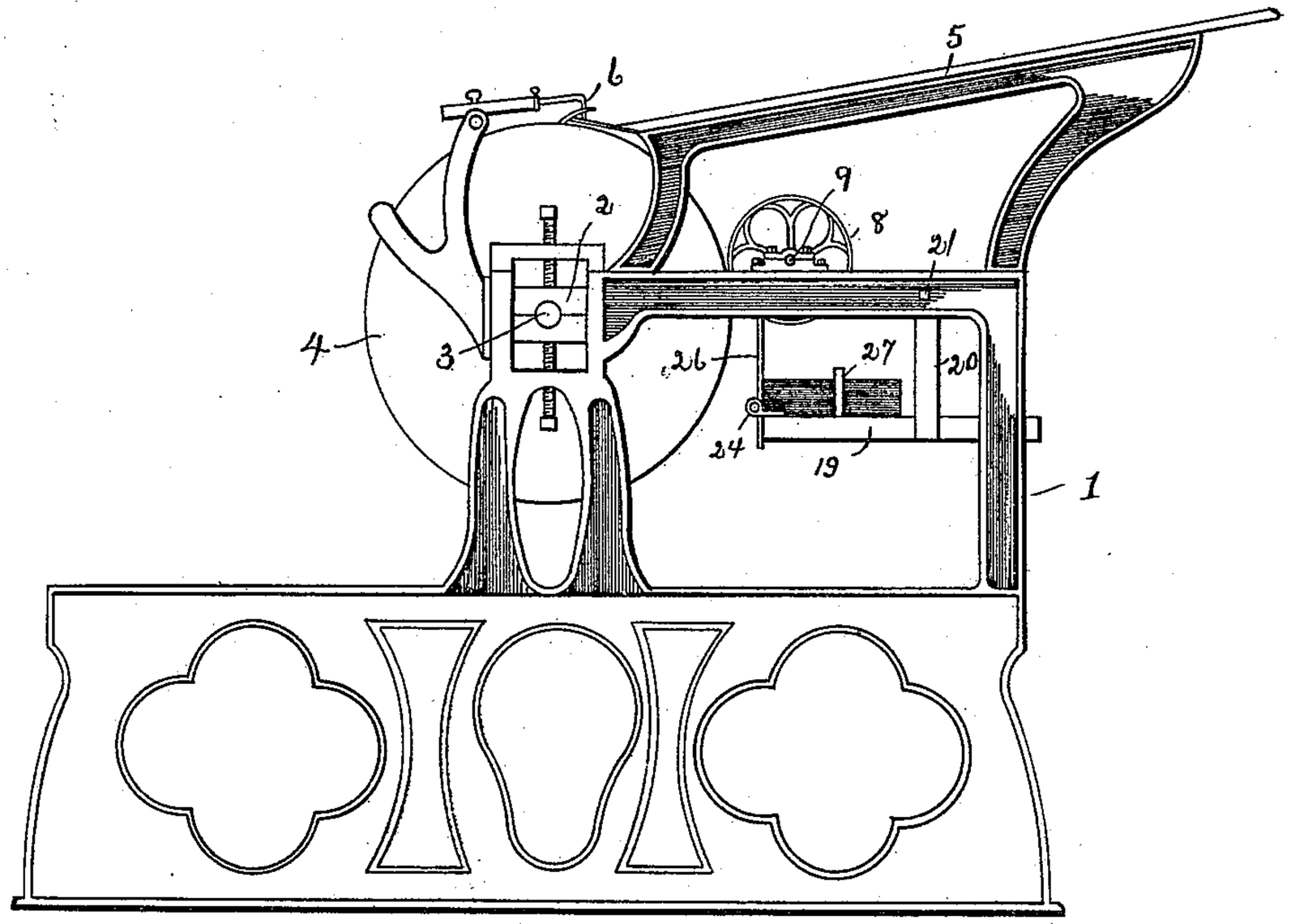


Fig. 2.

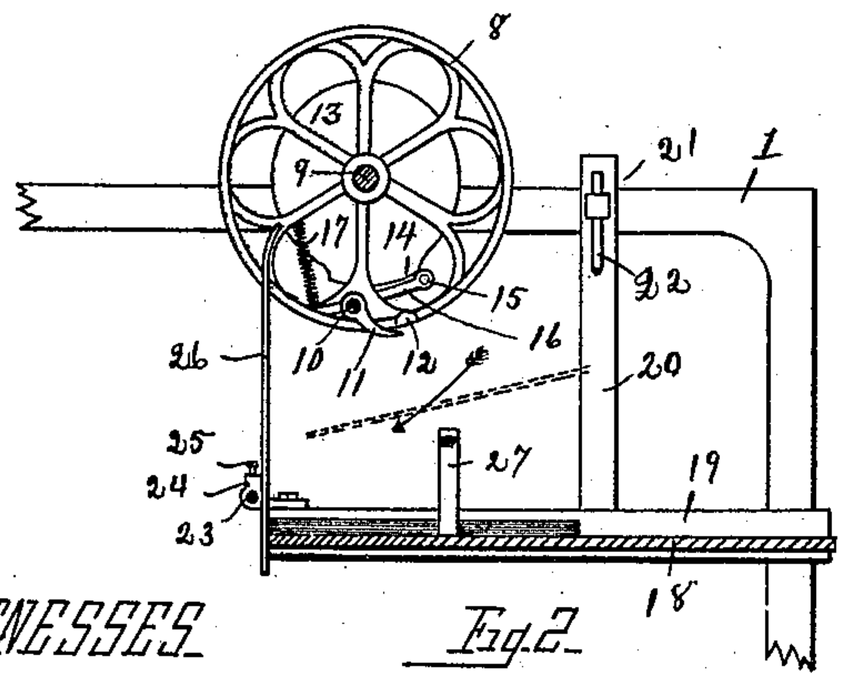


Fig. 3.

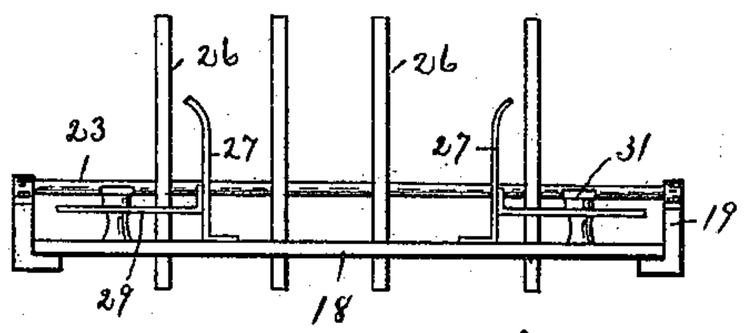
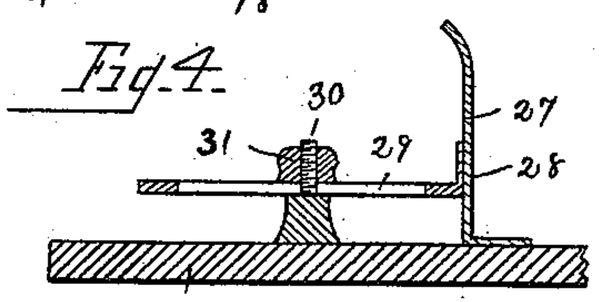


Fig. 4.



WITNESSES

Carroll J. Webster

G. G. Southard

INVENTOR

John King

By William Webster

Atty

(No Model.) 2 Sheets—Sheet 2.

J. KING.

SHEET DELIVERER FOR PRINTING PRESSES.

No. 463,839. Patented Nov. 24, 1891.

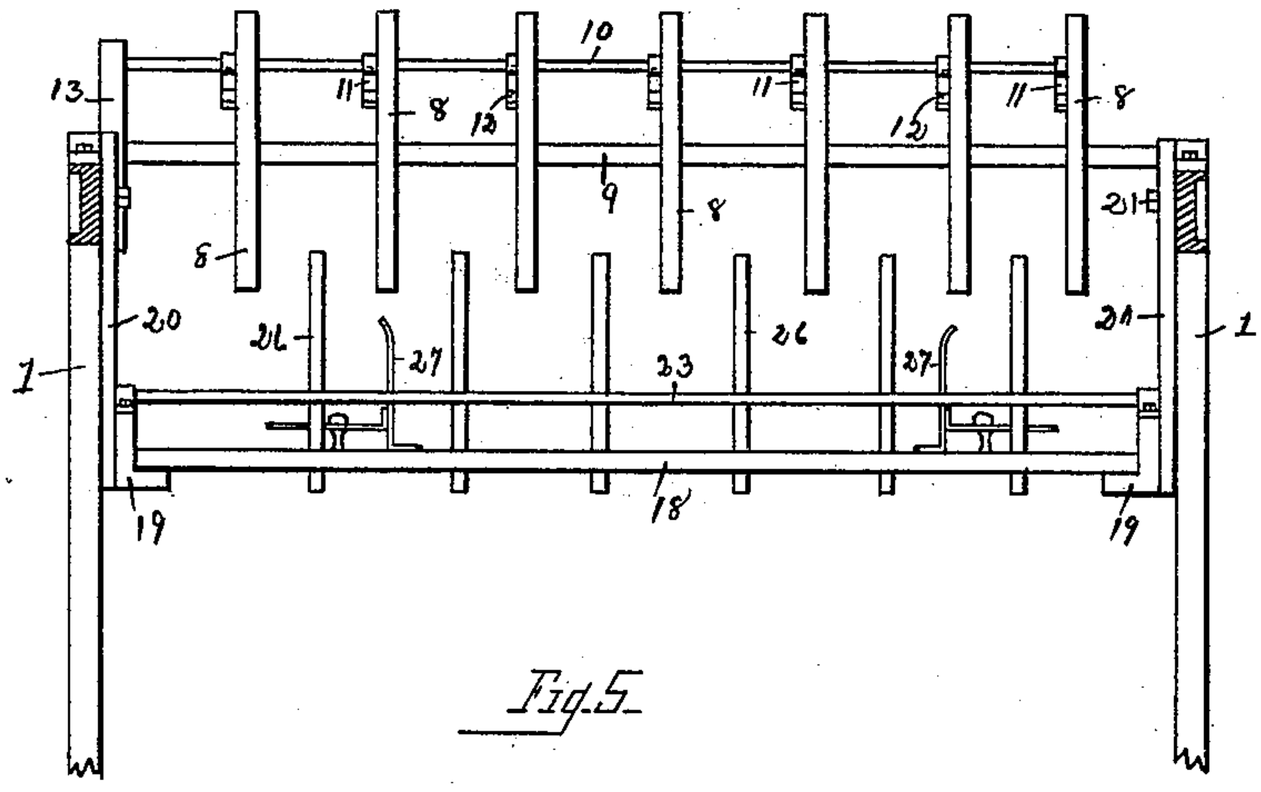


Fig. 5.

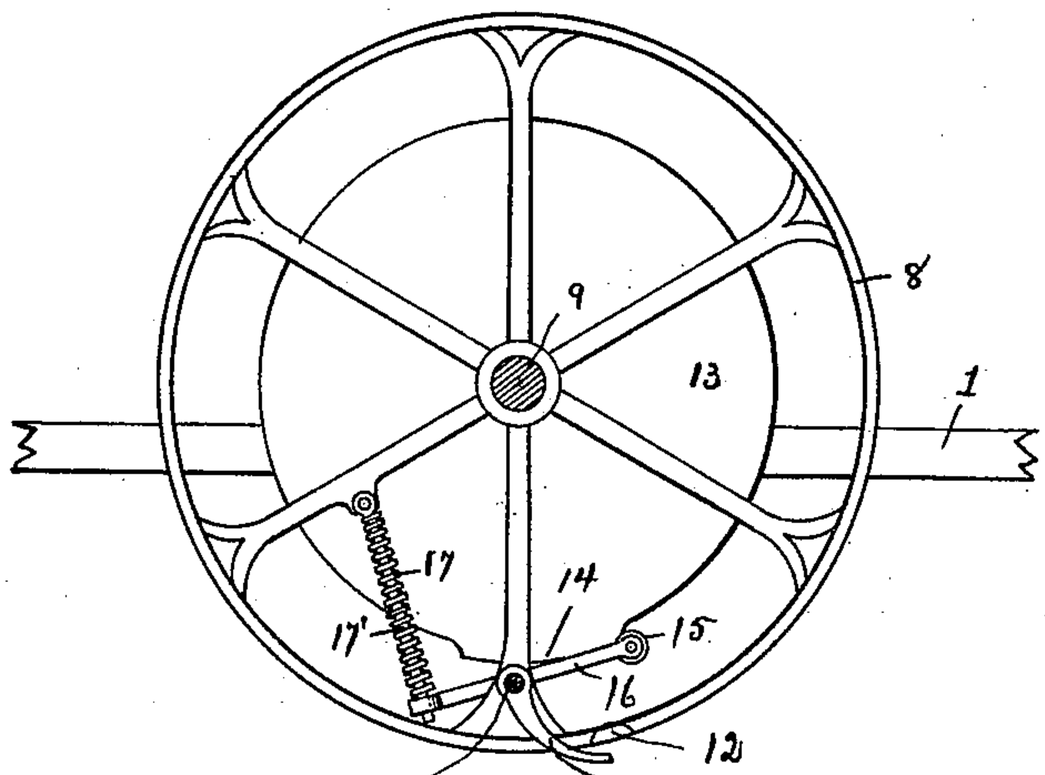


Fig. 6.

WITNESSES.

Carroll J. Webster.

G. G. Southard

INVENTOR.

John King

By Williams Webster

Atty

UNITED STATES PATENT OFFICE.

JOHN KING, OF TOLEDO, OHIO, ASSIGNOR OF ONE-HALF TO HARRY R. WADE, OF SAME PLACE.

SHEET-DELIVERER FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 463,839, dated November 24, 1891.

Application filed May 20, 1891. Serial No. 393,386. (No model.)

To all whom it may concern:

Be it known that I, JOHN KING, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Sheet-Deliverers for Printing-Presses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to a sheet deliverer and receiver for printing-presses, the object being to simplify this part of the construction of printing-presses.

Heretofore in the branch of the art to which my invention belongs it has been usual to employ a fly or arms to receive the sheet from the delivery-wheel and throw it on a supplemental table back of the printing-press. Thus it will be seen that as the flies or arms extend back of the machine some distance they take up more room than is necessary, and also are in the way of the pressman in repairing or tightening any part of the rear of the machine.

It is the object of my invention to overcome these difficulties by providing a receiving-table beneath the delivery-wheel and so timing the grippers on the delivery-wheel that they will release the sheet, so that it will fall in a regular and compact pile on the receiving-table.

In the drawings, Figure 1 illustrates a side elevation of the frame of a complete printing-press and enough of the mechanism of the same to illustrate my invention. Fig. 2 is a vertical section of a portion of the frame, delivery-wheel, and receiving-table. Fig. 3 is a front elevation of the receiving-table, illustrating the side and back guides for the sheets. Fig. 4 is a sectional detail view of the receiving-table and side guides. Fig. 5 is an end view of the parts comprising the delivery mechanism. Fig. 6 is a sectional detail view of the delivery-wheel, grippers, and mechanism for operating the same.

Having described the figures in the drawings in detail, I will now proceed to describe the parts in detail, like numerals of reference indicating corresponding parts throughout the several views.

1 designates the frame of the printing-press, in the boxes 2 of which is mounted the shaft 3, carrying the impression-cylinder 4. 5 designates the feed-board, and 6 the adjustable check for the sheets as they are fed therefrom. As these parts are of the ordinary construction, a further detailed description is deemed unnecessary.

8 designates delivery-wheels, mounted on shaft 9 and carrying a shaft 10, journaled thereon, on which are secured grippers 11, bearing on lugs 12, secured to the delivery-wheels.

13 designates a cam secured to the frame and having a cam-face 14, over which rides the end 15 of a lever 16, secured to shaft 10, the opposite end of the lever bearing against spring 17, the spring on the opposite end bearing against the delivery-wheel and exerting at all times a pressure on lever 16 to throw the end 15 against the cam-rod 17′, serving to guide the spring. Thus it will be seen that as the delivery-wheel 8 revolves and assumes the position shown in Fig. 2 the end 15 of lever 16 will ride up the cam-surface 14 of cam 13, rocking shaft 10, and consequently releasing the sheet and throwing it on the receiving-table, as will be described.

18 designates the receiving-table, which slides on side ways 19, which are secured to straps 20, the opposite ends of the straps being secured to the frame at 21, the strap having therein a slot 22, which allows of vertical adjustment with the frame.

23 designates a rod secured to the back of the side guides for the receiving-tables, on which are secured hangers 24, having a side movement on the rod, being held in an adjusted position by means of screws 25. To the hangers are secured the back guides 26, against which the paper strikes in falling after grippers 10 have released the same.

In Fig. 2 I have shown the paper in dotted lines in the act of falling, the arrow illustrating the direction the paper takes when released by the grippers due to the momentum given to the paper by its passage around the delivery-wheel.

27 designates the side guides, formed with

a vertical standard 28 and a horizontal slotted portion 29, in the slot of which bolt 30 fits, and is held in an adjusted position by means of nut 31, screwed on bolt 30, and bearing against the horizontal portion 29.

In operation the paper being fed from the feed-board is grasped by grippers 7 on the impression-cylinder and is carried around until the grippers come opposite delivery-wheel 8, when grippers 11 grip the sheet and carry it around the wheel until shaft 10 is rocked, due to the cam-surface 14 of cam 13 striking and riding under the end of lever 16, when the sheet will be released and allowed to fall on the receiving-table, the side guides serving to guide the sheet and to make a neat and compact pile of the same.

It will be seen that by providing a receiving-table sliding in guides that the same can be easily and readily removed, thereby allowing free access to the forms. It will be further understood that by making the table vertically adjustable with regard to the delivery-wheel I compensate for the different thicknesses of cards, circulars, &c., as the nearer the board is to the delivery-wheel in delivering thin sheets the less liable they are to roll or wrinkle, thick sheets being more easy to pile. When setting the machine for them, the table is lowered, thereby requiring less attendance than if the board were immovable and only in place for thin sheets, as is now the case.

What I claim is—

1. In a sheet deliverer and receiver for printing-presses, a frame, delivery-wheels carried thereby, provided with grippers to grasp the sheet, vertically-adjustable ways secured on each side of the frame, in combination with a removable receiving-table movable horizontally in the said ways.

2. In a sheet deliverer and receiver for printing-presses, a shaft mounted in the frame, delivery-wheels secured thereon for delivering the sheet, a receiving-table located beneath the delivery-wheels, movable horizontally in the vertically-adjustable ways secured to the frame, a rod secured on the ways, carrying adjustable back guides, and adjustable side guides secured to the receiving-table, said back and side guides serving to guide and hold the sheet.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

JOHN KING.

Witnesses:

CARROLL J. WEBSTER,

G. G. SOUTHARD.