

915,632.

Fig. 1

Fig. 1^a

Fig. 2

Technical drawing of a mechanical device, likely a textile machine component, showing three figures:

- Fig. 1**: A side view of the machine. It features a frame (1) with rollers (2, 12, 13, 14, 21, 22) and a pulley system (8, 9, 10, 11, 15, 25). A spring (3) is attached to the frame. A handle (4) is shown at the bottom right.
- Fig. 1^a**: A detail view of the pulley system, showing rollers (21, 22) and a belt (16) passing over them.
- Fig. 2**: A cross-sectional view of the rollers and frame, showing the internal structure of the rollers (16, 17) and the frame (14).

Witnesses
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UNITED STATES PATENT OFFICE.

FRANK C. STOCKHOLM, OF PHILADELPHIA, PENNSYLVANIA.

SHEET-CONVEYING MECHANISM FOR PRINTING-PRESSES.

No. 915,632.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed November 27, 1907. Serial No. 404,084.

To all whom it may concern:

Be it known that I, FRANK C. STOCKHOLM, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Sheet-Conveying Mechanism for Printing-Presses, of which the following is a specification.

My invention consists of a certain improvement in the sheet-conveying mechanism for printing presses forming the subject of my Letters Patent No. 667,604, dated February 5, 1901, the object of my present invention being to prevent smearing of the freshly printed sheets by reason of movement of a conveyer belt over the surface of the same at a time when said sheets are confined under pressure between the two belts. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawing, in which—

Figure 1 is a view of sufficient of a printing press and of the lower portion of the sheet conveying mechanism operating in conjunction therewith to illustrate my present invention; Fig. 1^a is a view of the upper portion of said sheet conveying mechanism, and Fig. 2 is an enlarged view of one of the belt guiding rollers illustrating the relation in respect to one another of the conveyer belts at the time of their passage around said roller.

In the drawing, 1 represents part of the frame of an ordinary high-speed press, 2 the delivery fan or flier of the same, and 3 a shaft constituting, or driven from, one of the shafts of the press and having a sprocket wheel 4, for the reception of a chain belt 7, which drives a larger sprocket wheel 8 and passes around idler pulleys 9, 10, and 11.

The delivery mechanism of the press is usually provided with a series of delivery belts 14 disposed side by side, but hereinafter, for convenience, but one of these belts will be referred to as the action of all of them is the same. The belt passes around a drum or pulley 13, loosely mounted on a shaft 12 of the press, and driven at a proper rate of speed by any suitable mechanism. The belt 14 passes around a drum 25 and also around suitable guide pulleys 17, disposed in the course which the belt is designed to travel, preferably in such manner that said belt is compelled to follow a zigzag course, as shown in the drawing, the return run of the belt passing over guide pulleys 21.

In connection with the main delivery belt

is employed a supplementary belt 16, which is driven by a drum 15 on the shaft of the sprocket wheel 8, and also passes around the drum 25 and the guide rollers 17, the return run of said belt being properly directed by guide rollers 22, and the two belts being so disposed that the printed sheets are gripped between them and carried forward thereby to the delivery point.

So far as described, the mechanism is the same as before, but in the mechanism as patented, the two belts were always in contact with the printed sheets during their conveyance from the drum 25 to the point of delivery, and as it is extremely difficult, if not impossible, to drive the two belts always at precisely the same surface speed creeping or crawling of one belt in respect to the other had a tendency to smear the freshly printed sheets, especially at the points where the belts passed around the pulleys, and said sheets were therefore subjected to relatively heavy pressure. I find that this objection can be overcome by making one of the belts narrower than the other, and recessing those of the guide rollers or drums which are so located that the narrower belt is innermost when the belts are passing around the same, whereby, during the time that said narrower belt is thus passing around such drums or rollers, it will be free from contact with the printed sheets, or will not be pressed into forcible contact with the same, the sheet being confined between the outer belt and those portions of the drum or roller which are of full diameter, as shown in Fig. 2, and those portions of the drum or roller being usually smooth and polished and traveling at the same surface speed as the belt which holds the printed sheets in contact with them. In the present instance I have shown the belt 16 as the narrower belt, since the belt 14 is the main carrying or driving belt, the function of the belt 16 being to maintain the printed sheets in contact with said driving belt and prevent backward slipping of the same during their upward travel. As the printed sheets are not subjected to such heavy pressure when passing those of the guide rollers at which the supplementary belt 16 is the outermost of the pair as they are when passing those rollers at which the main or driving belt 14 is outermost, I find that the freeing of the freshly printed sheets from contact with the supplementary belt, where said sheets pass around the latter rollers, is sufficient to

prevent the smearing of said sheets which has heretofore been experienced.

I claim:—

1. The combination, in sheet conveying
5 mechanism for printing presses, of a pair of conveyer belts, one narrower than the other, and guide rollers or drums recessed for the reception of the narrower belt, whereby the sheets are clamped between the wider belt
10 and the drum.

2. The combination, in sheet conveying mechanism for printing presses, of a main driving or carrying belt, a supplementary belt cooperating therewith and of lesser

width than the same, and guide drums or
15 rollers for said belts, those of said drums or rollers at which the narrower belt is innermost being recessed for the reception of the same, whereby the sheets are clamped between the wider belt and the drum. 20

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

FRANK C. STOCKHOLM.

Witnesses:

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