W. E. SOOY.

PRINTING PRESS.

APPLICATION FILED APR. 10, 1917.

1,235,391.

Patented July 31, 1917.

3 SHEETS—SHEET 1.

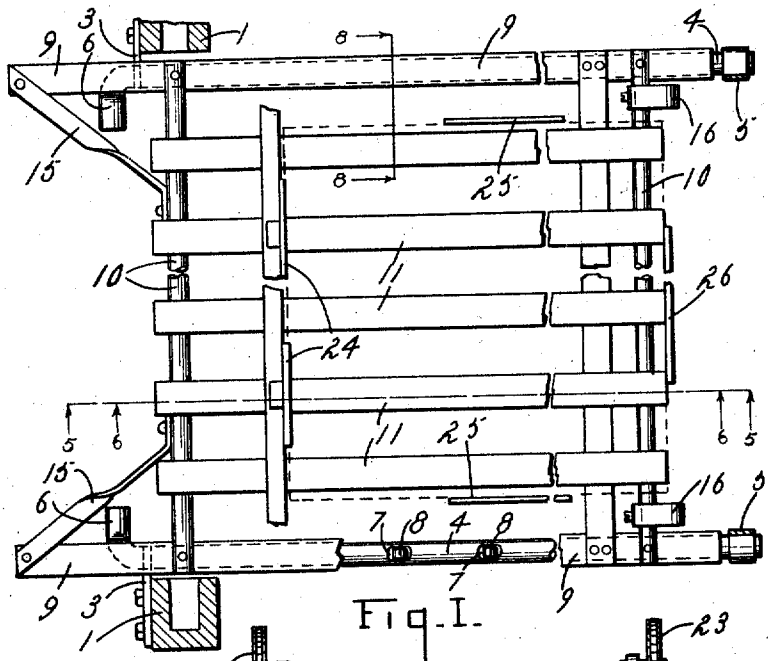


Fig. I.

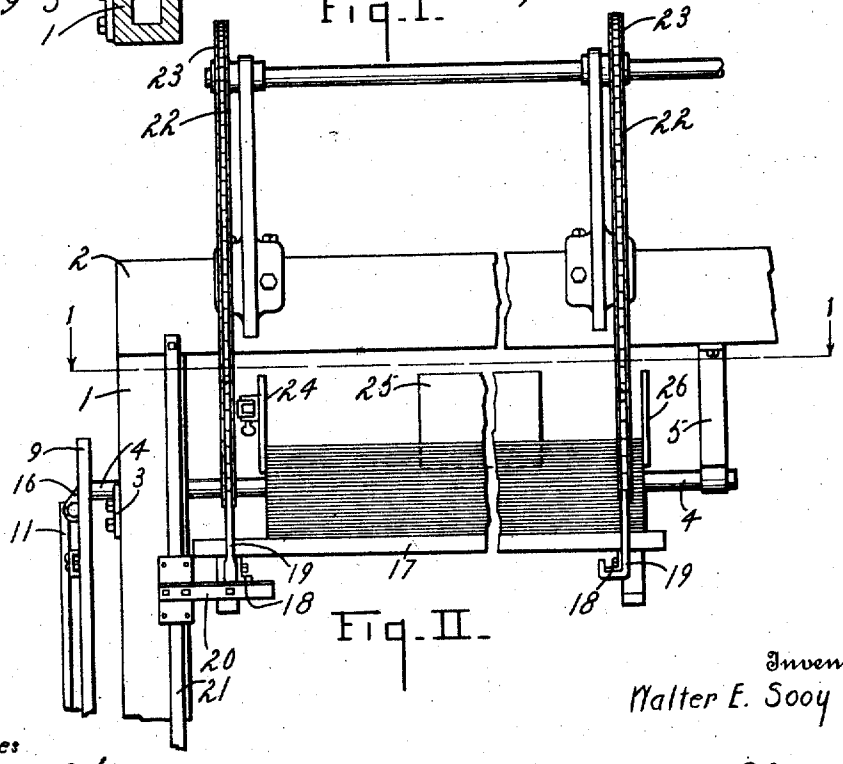


Fig. II.

Inventor

Walter E. Sooy

Witnesses

Glenn Harris

Lenn Gilman

By Chappell & Earl

Attorneys

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3 SHEETS—SHEET 2.

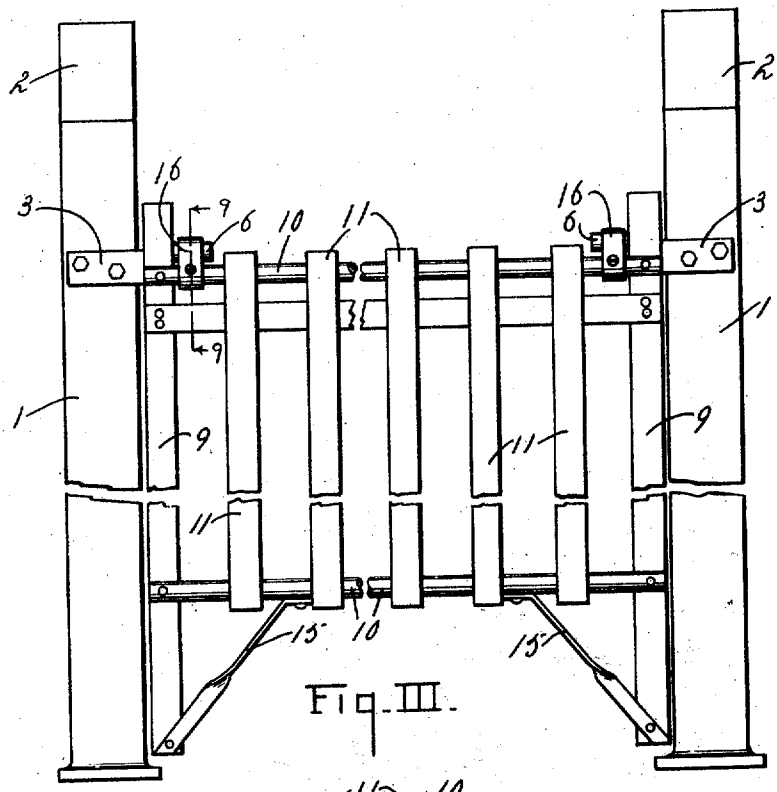


Fig. III.

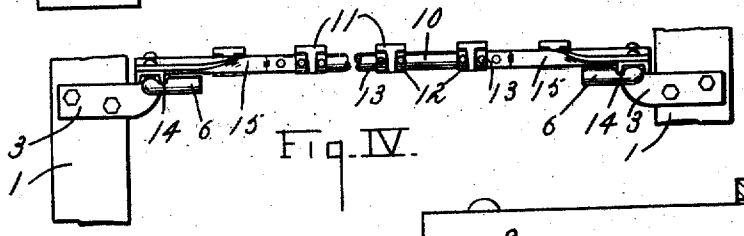


Fig. IV.

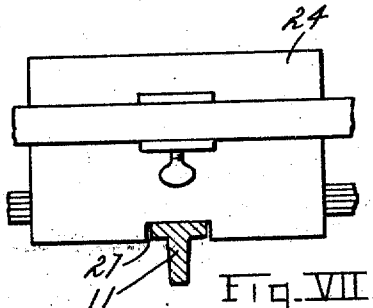


Fig. VII.

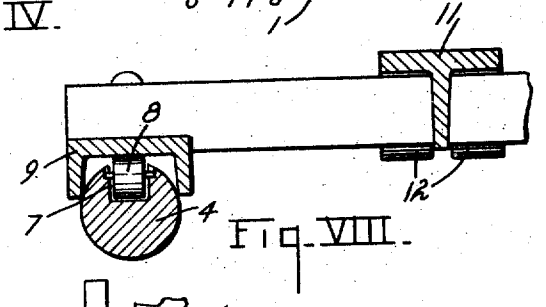


Fig. VIII.

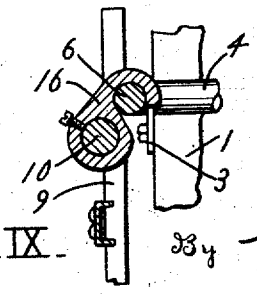


Fig. IX.

Witnesses

Glenn Harris.

Lem Gilman

Inventor

Walter E. Sooy

By Chappell & Kerr

Attorneys

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3 SHEETS—SHEET 3.

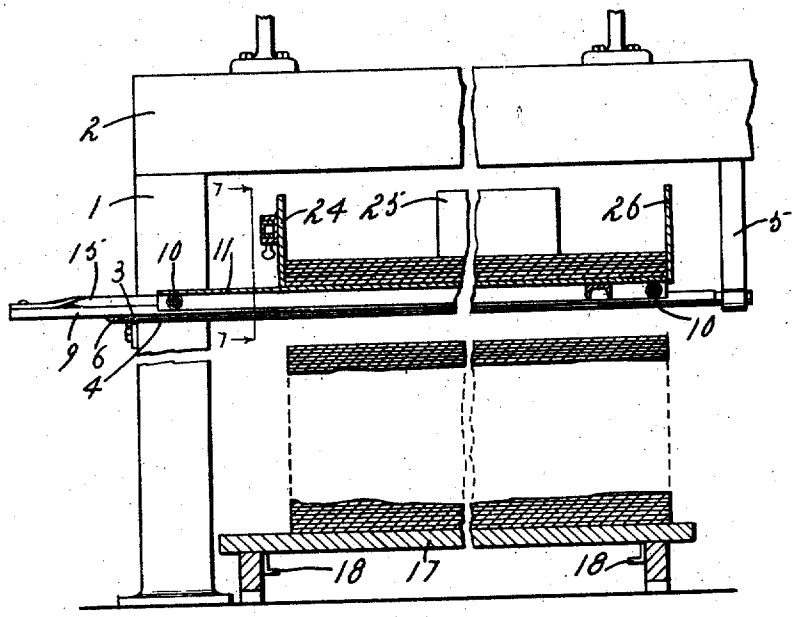


Fig. V.

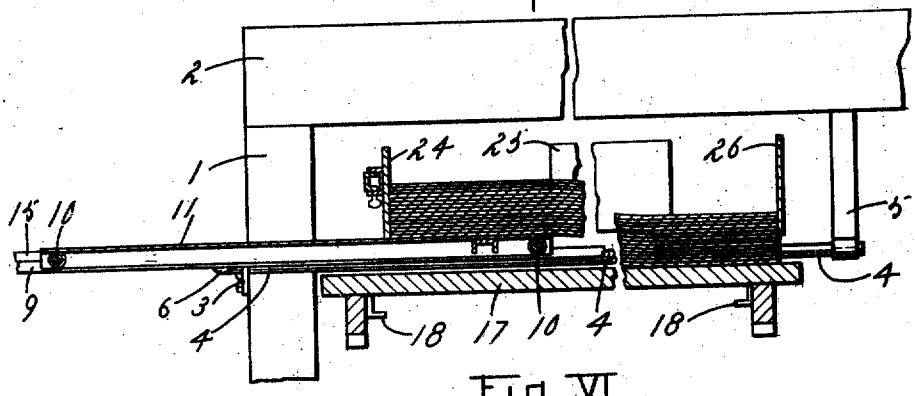


Fig. VI.

Inventor

Walter E. Sooy

Witnesses

Glenn Harris

Lenn Gilman

By Chappell Hart

Attorneys

UNITED STATES PATENT OFFICE.

WALTER E. SOOY, OF BATTLE CREEK, MICHIGAN.

PRINTING-PRESS.

1,235,391. Specification of Letters Patent. Patented July 31, 1917.

Application filed April 10, 1917. Serial No. 160,936.

To all whom it may concern:

Be it known that I, WALTER E. SOOY, a citizen of the United States, residing at Battle Creek, county of Calhoun, State of Michigan, have invented certain new and useful Improvements in Printing-Presses, of which the following is a specification.

This invention relates to improvements in printing presses.

The objects of the invention are:

First, to provide an auxiliary receiving table or tray to receive the printed sheets while the previously printed sheets are being removed from the main or regular receiving table or tray, whereby it becomes unnecessary to stop the printing press during the time required to remove the printed sheets.

Second, to provide an auxiliary receiving table or tray of the type referred to, which may be easily and quickly placed in position above the main receiving table or tray and which coöperates with other elements of the printing press in such a manner that when it is withdrawn from its receiving position the printed sheets already delivered thereon are discharged therefrom and onto the main receiving table or tray.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure I is a plan view of the delivery end of a printing press, showing my auxiliary receiving table or tray in position to receive the printed sheet, portions being broken away on a line corresponding to line 1—1 of Fig. II for the purpose of better illustration.

Fig. II is a side elevation, showing the main receiving table or tray in position to receive the printed sheets, and my auxiliary tray or table in its withdrawn or inoperative position.

Fig. III is an elevation, showing my auxiliary receiving table or tray in its withdrawn or inoperative position.

Fig. IV is a view similar to Fig. III, but showing my auxiliary receiving table in its operative position, portions of the frame being broken away.

Fig. V is a detail section on line 5—5 of Fig. I, showing the main receiving table loaded with printed sheets and the auxiliary receiving table in operative position.

Fig. VI is a detail view similar to Fig. V, showing my auxiliary receiving table in a partially withdrawn position.

Fig. VII is an enlarged detail section taken on a line corresponding to line 7—7 of Fig. V.

Fig. VIII is an enlarged detail section taken on a line corresponding to line 8—8 of Fig. I.

Fig. IX is an enlarged detail section taken on a line corresponding to line 9—9 of Fig. III.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawings, the reference characters 1 indicate the posts or uprights of the delivery end of the frame of a printing press. Upon the uprights 1 rest the longitudinal side members 2 of the frame. Inwardly extending brackets 3 are secured to each of the uprights 1 and support the outer ends of the auxiliary table supporting ways or bars 4. The inner ends of these bars or ways 4 are supported upon the side members 2 by means of the hangers 5. The outer ends of the bars 4 are turned inwardly to provide supporting pins 6 for supporting the auxiliary receiving table in inoperative position. The bars 4 are provided at spaced intervals with recesses 7 in which are rotatably mounted the supporting rollers 8, so that the periphery of the rollers extend above the top of the bars.

The auxiliary receiving table comprises the channel-iron side bars 9, which ride upon the rollers 8, the cross bars 10, which are secured to the side bars 9, and the bed bars 11 mounted on the cross bars. The bed bars 11 are preferably T-shaped in cross section, as shown in Figs. IV, VII and VIII. The cross bars 10 pass through holes in the webs of the T-shaped supporting bars 11, and the bars 11 are prevented from shifting upon

the cross bars by means of collars 12, which are secured to the cross bars by means of set screws 13.

The supporting pins 6 are notched at 14, as shown in Fig. IV, to accommodate the inner flanges of the channel-bars 9. Angle braces 15 attached to the channel-bars and the front cross bar prevent racking of the auxiliary receiving table. Secured to the rear cross bar are the supporting hooks 16, which engage with the supporting pins 6 to support the auxiliary receiving table in its inoperative position, as shown in Fig. III. These pins and hooks also constitute pivot means about which the auxiliary receiving table is rotated to bring it to and from a horizontal position.

The main receiving table comprises a platform or bed 17 having brackets 18 extending from each end thereof. The rear brackets are detachably supported by hooks 19 and the front brackets are detachably supported by brackets 20 sliding upon the guide bars or ways 21. The hooks 19 and the brackets 20 are supported by the sprocket chain 22, which pass over the sprocket wheels 23. These sprocket wheels 23 are actuated in such a manner, by means not shown, that the main receiving table 17 is lowered at such a rate that the top of the pile of printed sheets thereon remains constantly in substantially the same plane.

The structure of the main receiving table, just described, is well-known to those skilled in this art, and, since it and other similar arrangements for maintaining the top of the pile of printed sheets in substantially the same plane are well-known, further detailed description thereof is thought to be unnecessary.

The reference characters 24, 25, and 26 indicate front, side and rear joggers, respectively, which are also well-known in this art, and they will, therefore, not be described in detail. It should be noted, however, that the lower side of the front joggers are notched, as indicated at 27, to receive the supporting bars 11.

With the parts thus arranged, it will be clear that when the auxiliary table is withdrawn from its operative position above the main table the sheets which have collected upon the auxiliary table will be held by the front jogger 24 and when the auxiliary table is withdrawn the sheets will drop onto the main receiving table 17, as shown at the right hand side of Fig. VI. When the auxiliary receiving table is fully withdrawn the sheets drop upon the main receiving table and the hooks 16 engage the supporting pins 6, whereupon the auxiliary receiving table may be lowered to the position shown in Figs. II, III and IX.

It is thought that the operation of a press equipped with my auxiliary receiving table will be apparent from the above description. When the main receiving table is filled, as shown in Fig. V, it is lowered and my auxiliary receiving table is placed in position to receive the printed sheets and the main table is removed and emptied or replaced by another, and then raised to the position shown in Fig. VI. My auxiliary receiving table is then removed and the printed sheets thereon will be scraped from the auxiliary receiving table by the front jogger and will fall upon the main table, as shown in the right hand portion of Fig. VI.

My improvements are especially designed by me for use on printing presses using loading deliveries and is adapted for paper or cardboard.

I have not attempted to illustrate or describe certain modifications in structural details or adaptations which might be necessary in other applications of my improvements, as I believe the disclosure made will enable those skilled in the art to which my invention relates to embody or adapt the same as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. The combination with a printing press comprising a main receiving table mounted for vertical adjustment, of horizontally disposed rod-like ways, the outer ends of said ways being turned inwardly to constitute pivots, said ways having recesses in their upper sides and rollers journaled in said recesses, an auxiliary receiving table comprising inverted channeled side bars adapted to travel on said rollers, the flanges of said bars being in engagement with said ways whereby the table is guided, cross bars secured to said side bars, bed bars secured to said cross bars, and hooks mounted on the inner cross bars to coöperate with said pivots when said auxiliary table is retracted.

2. The combination with a printing press comprising a main receiving table mounted for vertical adjustment, of horizontally disposed ways, the outer ends of said ways being turned inwardly to constitute pivots, an auxiliary receiving table comprising inverted side bars adapted to travel on said ways, cross bars secured to said side bars, bed bars secured to said cross bars, and hooks mounted on the inner cross bars to coöperate with said pivots when said auxiliary table is retracted.

3. The combination with a printing press comprising a main receiving table mounted for vertical adjustment, of horizontally disposed rod-like ways, said ways having recesses in their upper sides and rollers journaled in said recesses, an auxiliary receiving table comprising inverted channeled side bars adapted to travel on said rollers, the flanges of said bars being in engagement

with said ways whereby the table is guided, cross bars secured to said side bars, and bed bars secured to said cross bars.

4. The combination with a printing press comprising a main receiving table mounted for vertical adjustment, of horizontally disposed ways, an auxiliary receiving table comprising inverted channeled side bars adapted to travel on said ways, cross bars secured to said side bars, and bed bars secured to said cross bars.

5. In a structure of the class described, the combination with a main receiving table provided with means for vertical adjustment, and front, rear and side joggers, of an auxiliary receiving table comprising bed bars adapted to slide in notches in the lower edges of said front joggers, means for slidably supporting said auxiliary receiving table in a horizontal plane above said main receiving table.

6. In a structure of the class described, the combination with a main receiving table provided with means for adjustment, and front, rear and side joggers, of an auxiliary receiving table comprising bed bars, means for slidably supporting said auxiliary receiving table in a horizontal plane above said main receiving table, and means for pivotally supporting said auxiliary receiving table in its retracted or inoperative position.

7. In a structure of the class described, the combination with a main receiving table mounted for vertical adjustment, an auxiliary receiving table slidably mounted in a plane above said main table when in its operative position, and means for removing the sheets from said auxiliary table when it is retracted to discharge them upon the main table.

8. In a printing press, the combination of a main receiving table and an auxiliary receiving table removably mounted above the main receiving table and adapted when in operative position to receive and support the sheets delivered from the press, and means for discharging the printed sheets from said auxiliary table upon said main table when the auxiliary table is retracted to inoperative position.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

WALTER E. SOOY. [L. S.]

Witnesses:
LEWIS B. FLANDERS,
HARRY S. BIDWELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."