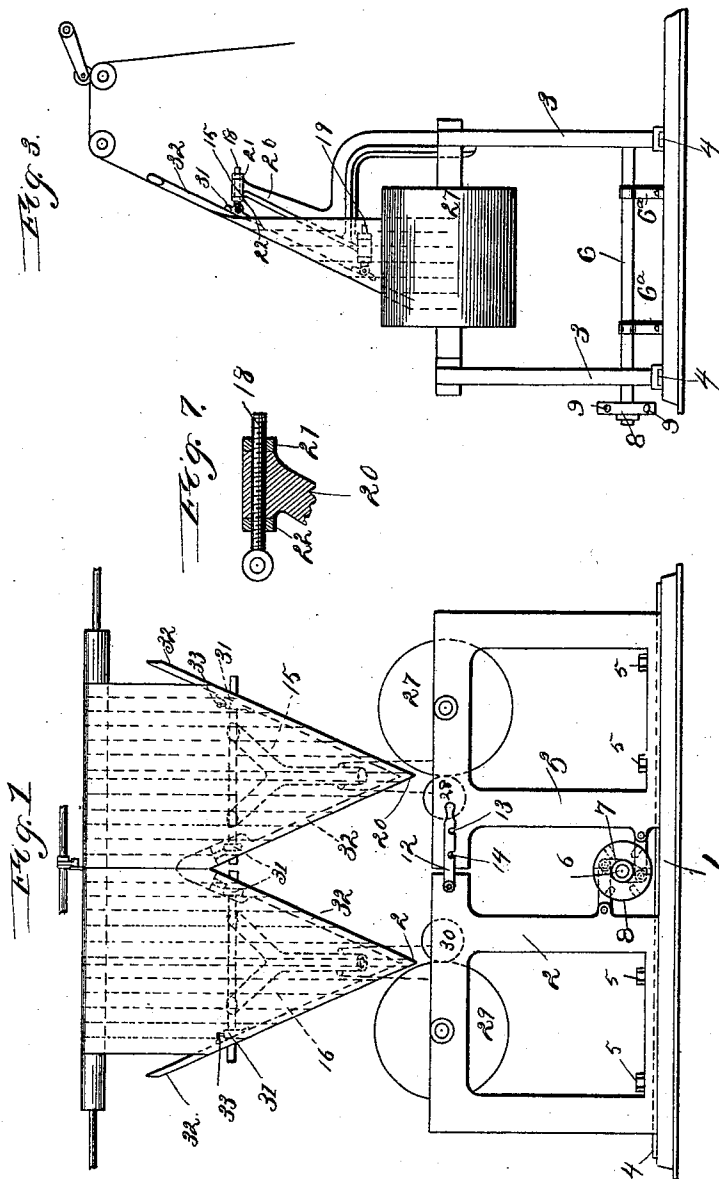


S. G. GOSS.

DELIVERY APPARATUS FOR PRINTING PRESSES.

No. 518,242.

Patented Apr. 17, 1894.



Witnesses:

Wm. M. Rheem
Wm. J. Hanning

Inventor:
Samuel Goss

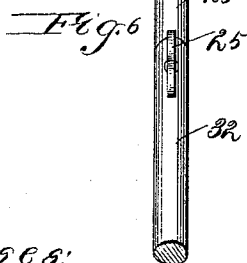
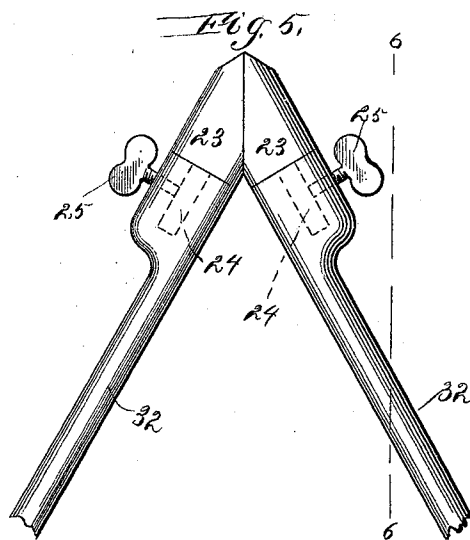
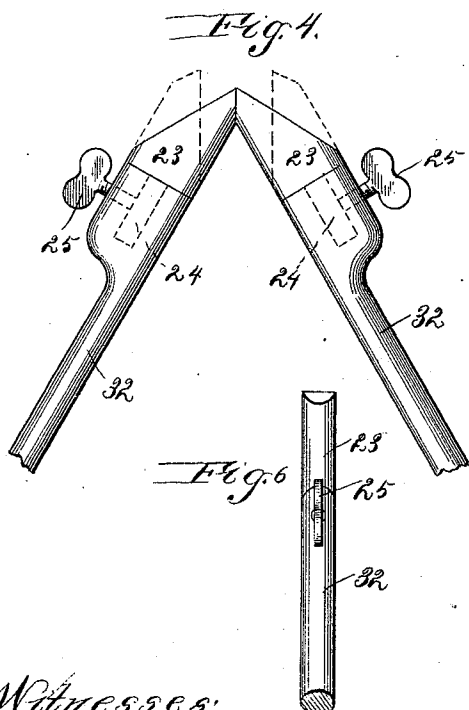
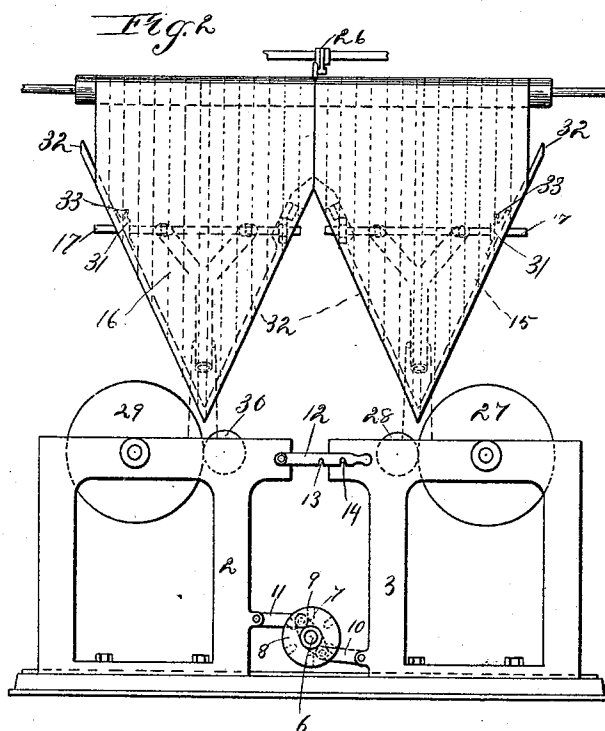
By Bond, Adams & Pickard,
Attys.

S. G. GOSS.

DELIVERY APPARATUS FOR PRINTING PRESSES.

No. 518,242.

Patented Apr. 17, 1894.



Witnesses:
 J. M. P. Green
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UNITED STATES PATENT OFFICE.

SAMUEL G. GOSS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE GOSS PRINTING PRESS COMPANY, OF SAME PLACE.

DELIVERY APPARATUS FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 518,242, dated April 17, 1894.

Application filed August 30, 1892. Serial No. 444,551. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL G. GOSS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Delivery Apparatus for Printing-Presses, of which the following is a specification, reference being had to the accompanying drawings, in which—

10 Figure 1 is an end elevation of my improved delivery apparatus showing it arranged for delivering sheets of six columns wide. Fig. 2 is a similar view showing it arranged for delivering sheets of seven columns wide. Fig. 15 3 is a side elevation. Figs. 4 and 5 are enlarged details, being front elevations of adjacent portions of two formers showing the extension pieces in their different positions. Fig. 6 is a side elevation of a portion of one 20 of the formers taken on line 6—6 of Fig. 5; and Fig. 7 is an enlarged detail, being a sectional view of one of the bolts by means of which the formers are held in position.

My invention relates to delivery apparatus 25 for printing presses, and particularly to that form of delivery apparatus which is adapted to fold a web longitudinally as it is delivered from a perfecting press.

30 The objects of my invention are to provide new and improved delivery apparatus by means of which webs of different widths may be delivered, to provide new and improved means for adjusting the delivery apparatus, and to provide new and improved means for 35 supporting the different parts of the apparatus. I accomplish these objects as hereinafter specified and as illustrated in the drawings.

40 That which I regard as new will be pointed out in the claims.

In the drawings,—1 indicates a bed plate, upon which is mounted the main frame of the delivery apparatus, which main frame is composed of two frame-sections 2, 3, movable toward and from each other on the bed plate 45 and adapted to support the different parts of the delivery apparatus. Suitable guides 4 are provided for the lower parts of the frame-sections 2 and 3, as best shown in Figs. 1 50 and 3.

5 indicates bolts which pass through the

lower portion of the frame-sections 2 and 3, and are secured in the bed plate 1.

6 indicates a shaft which extends horizontally between the two frame-sections 2 and 3 55 at a short distance above the bed plate 1, which shaft is mounted in suitable bearings 6^a, Fig. 3.

7 indicates a cross head which is mounted upon the shaft 6, and is rigidly secured thereto. 60

8 indicates a disk which is mounted upon the shaft 6, which disk is in such a position that access to it may readily be had. The disk 8 is provided with holes or recesses 9 at 65 suitable points in its periphery, adapted to receive the end of a bar or other tool by means of which the disk may be rotated, thereby rotating the shaft 6.

10, 11 indicate connecting rods; the rod 10 is connected at one end to one end of the 70 cross head 7, and at the other end to a suitable portion of the frame section 3; the rod 11 is connected at one end to the opposite end of the cross head 7, and at the other end to a suitable portion of the frame section 2. 75 By this construction when the shaft 6 is rotated the frame-sections 2 and 3 will either be drawn toward each other or moved away from each other, as the case may be.

12 indicates a lever, one end of which is 80 pivoted to one of the frame-sections, as 2; near the other end the lever 12 is provided with notches 13 adapted to fit upon a pin 14 carried by the other frame section, as 3. By this arrangement the sections composing the 85 main frame of the delivery apparatus may be locked in position.

15, 16 indicate two V shaped formers; each of the formers, 15 and 16, is provided with a 90 rod 17, which carries two bolts 18 pivotally mounted thereupon.

19 indicates bolts similar to the bolts 18, one of which is pivotally connected to the lower portion of each former 15 and 16, as 95 best shown in Fig. 3.

20 indicates brackets, one of which is carried by each frame section, and projects upward therefrom terminating a short distance above the frames. The brackets 20 are adapted to receive the bolts 18 and 19, which bolts 100 pass through suitable sockets in said brackets, and are secured in place by means of

nuts 21 and 22 secured upon said bolts at opposite sides of the brackets, as best shown in Figs. 3 and 7. By this construction either the upper or lower portion of each former may be adjusted forward or backward, or both parts of the former may be adjusted equally. The brackets 20 are similarly arranged, so that the two formers 15 and 16 will be side by side as shown.

23 indicates extension pieces which are adapted to fit upon the upper ends of the inner portion of each former to form an angle between the two formers. Each extension piece 23 is provided with a tongue 24 adapted to fit into a suitable socket in the upper end of the inner portion of one of the formers, in which it is secured by a set screw 25. The portion of the formers in which is formed the socket to receive the tongue 24 is preferably enlarged, as shown. Each extension 23 is formed with two faces, the planes of which intersect the axis of said extension piece at different points, but at the same angle. By this arrangement, by reversing or turning the extensions 23 into the position shown in full lines in Fig. 2, the two corresponding faces of the extensions 23 will be in contact with each other, forming an angle; by turning the opposite faces of the extensions 23 so as to lie opposite each other, the parts will then be in the position shown in dotted lines in Fig. 4; it will then be necessary to move the formers toward each other in order to bring the faces of the extensions 23 in contact with each other, as shown in Fig. 5; this will throw the angle lower down, and will consequently narrow the formers, when they will be ready for delivering narrower webs. A slit 26, of any desired construction, may be used to slit the web before it passes to the formers 15 and 16.

27, 28, 29, 30 indicate rollers to which the webs pass after they are longitudinally folded by the formers 15 and 16.

The rods 17 pass through bosses 31 carried at the rear of the rods 32 which compose the formers, and are secured in place by set screws 33, as shown. By loosening one of the set screws, the corresponding former rod 32 may be slightly moved laterally on the rod 17, as may be necessary if the former should be a little out of adjustment; or if necessary both former rods 32 may be moved laterally upon the rod 17. The rods 32 are connected loosely at the apex of the former to permit of slight independent adjustment of said rods 32.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination, a plurality of formers adjustable toward and from each other, each of said formers having an adjustable extension piece, the extension pieces of adjacent

formers being adapted to engage each other to form the angle between such formers, substantially as described.

2. A delivery apparatus for a printing press, consisting of a bed plate, a main frame composed of a plurality of frame sections slidable toward and from each other on the bed plate, former devices carried by and movable with each main frame-section, and means for adjusting the said frame sections on the bed plate, substantially as described.

3. A delivery apparatus for a printing press, consisting of a horizontal bed plate, a main frame composed of a plurality of frame sections slidable toward and from each other on the bed plate, former devices carried by and movable with each frame section, a rotary shaft having a cross head provided with jointed rods pivoted respectively to the main frame sections, and means for turning the shaft to move the said frame sections on the bed plate, substantially as described.

4. The combination with a plurality of formers adjustable toward and from each other, of reversible extension pieces carried by the formers for varying the position of the angle between said formers, substantially as described.

5. The combination with a plurality of formers adjustable toward and from each other, of reversible extension pieces 23 carried by the formers and having a plurality of faces intersecting the axes of the extension pieces at different points, so that by reversing the said extension pieces the position of the angle between the formers is changed, substantially as described.

6. The combination with a suitable support, of a V-shaped former provided at its upper and lower end portions with independent adjusting devices for the purpose of adjusting the base of the former forward and backward independently of adjustment of the apex of said former, substantially as described.

7. The combination with a V-shaped former, and a supporting bracket 20, of upper and lower bolts 18 and 19 connected with the upper and lower portions of the bracket and engaging the said former, nuts 21 and 22 applied to said bolts, and means for supporting the bracket, substantially as described.

8. The combination with a V-shaped former composed of two rods 32 provided with a horizontal rod 17, and a bracket or support 20, of adjustable bolts 18 carried by the bracket or support and pivotally connected with the rod on the former, substantially as described.

SAMUEL G. GOSS.

Witnesses:

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RALPH VAN DYKE.