J. L. OBERLY.

PRINTING PRESS.

APPLICATION FILED JAN. 3, 1920.

1,396,872.

Patented Nov. 15, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

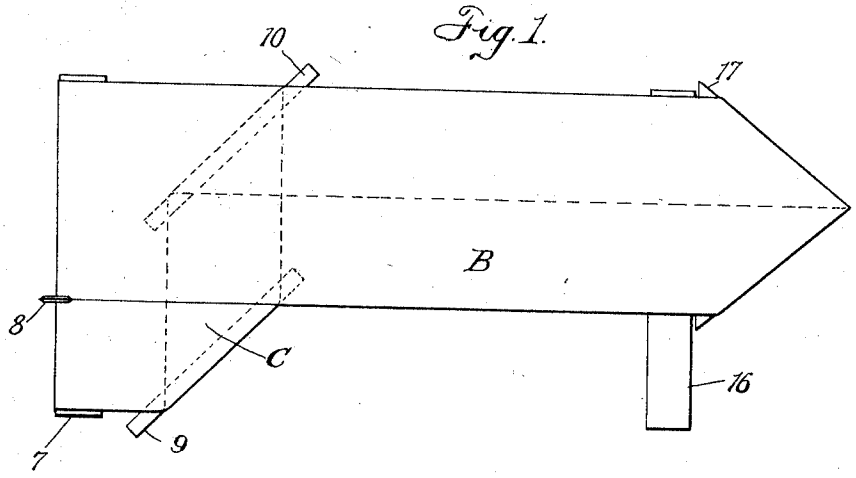
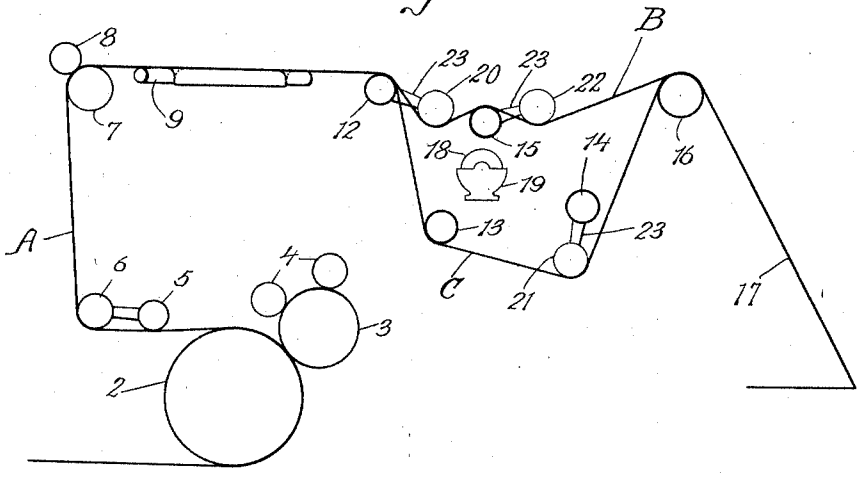


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

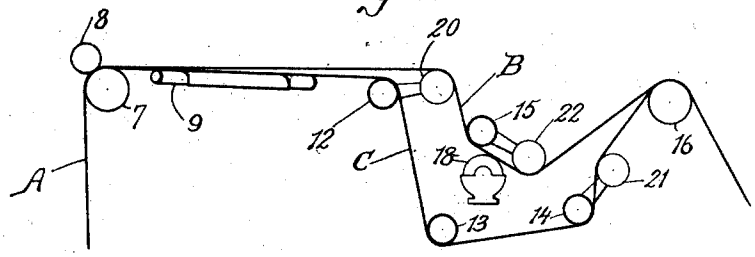


Fig. 4.

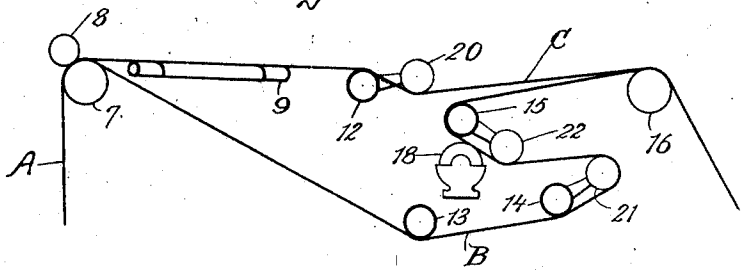


Fig. 5.

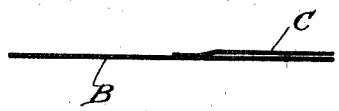
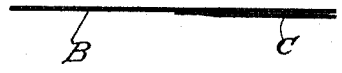


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN L. OBERLY, OF BROOKLYN, NEW YORK.

PRINTING-PRESS.

1,396,872. Specification of Letters Patent. Patented Nov. 15, 1921.

Application filed January 3, 1920. Serial No. 349,156.

To all whom it may concern:

Be it known that I, JOHN L. OBERLY, a citizen of the United States, and resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Printing-Presses, of which the following is a specification.

This invention relates to printing presses of the type in which a pair of webs are first printed and then pasted together along a desired line, the invention being here shown as embodied in a press in which a main web is slit longitudinally to form a relatively wide and a relatively narrow web, the narrow web being then directed by means of turning-bars to a position either under or above the wide web and the two pasted together, this particular type of press being adapted more particularly for the manufacture of counter sales books.

The invention has for an object to provide means whereby one of the webs, as here shown the narrow web, may be collected as desired on either side or face of the other web and loosely folded therewith, and if desired pasted thereto along a selected line.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

Figure 1 of the drawings is a diagrammatic plan view showing the arrangement of the web slitting, collecting and folding devices, with the webs in engagement therewith.

Fig. 2 is a diagrammatic side view showing the manner of passing the two web sections over the feed and compensation rollers and folder when they are simply collected upon one another without pasting.

Fig. 3 is a similar view showing the feed and compensation rollers arranged to paste the narrow web on the under side of the wide web.

Fig. 4 is a similar view showing the feed and compensation rollers arranged to paste the narrow web on the upper side of the wide web.

Fig. 5 is a transverse sectional view of the webs as collected and pasted together by the arrangement shown in Fig. 4.

Fig. 6 is a transverse sectional view of the webs as collected and pasted together by the arrangement shown in Fig. 3.

In the embodiment of the invention as here set forth a main web A is fed forward from a suitable roll of paper to and around an impression cylinder 2, and is printed by a type cylinder 3, inked by the form rollers 4, these parts operating in the usual manner. From the printing devices the web passes rearwardly over a pair of rollers 5 and 6, and upwardly over a roller 7, coöperating with which is a rotary slitter 8, which slits the main web A into a relatively wide web B and a relatively narrow web C.

After leaving the roller 7 the narrow web C may be collected either below or above the wide web, the manner of collection being accomplished by means of a collecting device consisting of a pair of round bars 9 and 10 extending at an angle of 45° to the general line of travel of the webs, the bar 10 extending under that portion of the wide web B on which the narrow web is to be collected, and the bar 9 extending in position to receive the forwardly moving narrow web C. By passing the narrow web first around the bar 9 it is caused to move transversely, its ensuing passage around the bar 10 causing it to resume its longitudinal movement.

The collected webs are then fed over a series of rollers comprising rollers on fixed axis and rollers on movable axis which are so arranged in connection with a paste wheel so as to permit of the webs being run, over the one series of rollers, in a manner to have the narrow web pasted upon either the upper or lower side of the wide web as may be desired.

The fixed axis rollers comprise an initial roller 12 located in front of the collecting or turning bars 9 and 10, a second roller 13 located at a distance below and slightly in front of the roller 12; a roller 14 located slightly above and a distance in front of the roller 13; and a roller 15 located a distance in front of and slightly below the first roller 12. A final roller 16 is positioned to receive the collected and pasted webs and direct them to an ordinary former or folder 17, extending downwardly therefrom. Located a short distance below the roller 15 is a paste wheel 18, running in a suitable

reservoir 19, this paste wheel being of usual construction and supplied with a conventional scraper not shown.

Arranged adjacent the rollers 12, 14 and 15 are movable rollers 20, 21 and 22 of the type commonly known as compensating rollers, being here arranged to move in lines concentric to the respective rollers 12, 14, and 15, and indicated as mounted on arms 23 hinged co-axially with these rollers.

Referring first to the arrangement shown in Fig. 3 which is adapted to collect and paste the narrow web upon the lower side of the wide web, the latter passes over the movable roller 20 which is shown slightly elevated above its adjacent fixed axis roller 12, then downwardly under the fixed axis roller 15, then forwardly and downwardly under the adjacent movable roller 22, which is adjusted so as to cause the paste wheel 18 to contact with the web B as it passes from the roller 15 to the roller 22. From the roller 22 the web passes upwardly over the final roller 16 where it unites with the narrow web. The narrow web C, after leaving the collecting-bars passes over the fixed axis roller 12, then downwardly under the fixed axis rollers 13 and 14, being carried underneath the paste wheel and its support. From the roller 14 the web passes upwardly around the movable roller 21 and then up around the roller 16 passing around the latter under, and in contact with the, wide web B. The two webs will thus be pasted together, the underside of the wide web having had the line of paste applied thereto.

In the arrangement shown in Fig. 4, which is adapted to collect and paste the narrow web upon the upper side of the wide web B, the latter is carried first forwardly under the paste wheel and then backwardly thereover so as to present its upper side, which faces downwardly during this backward movement, thereto. To this end the web B, upon leaving the roller 7 passes diagonally downwardly under, and clear of, the turning bars 9 and 10, under the fixed axis rollers 13 and 14, then around the movable roller 21, then rearwardly under the movable roller 22, and around the fixed axis roller 15, contacting with the paste wheel 18 in its passage from one roller to the other, passing forwardly again from the roller 15 to the final roller 16. The narrow web C passes as usual over the turning-bars and from the latter over the fixed axis roller 12, under the movable roller 20 and finally over the roller 16, passing over the latter above the wide web, and being pasted thereto, it being apparent that the top side of the wide web has received the line of paste.

In the arrangement shown in Fig. 2 the two webs are simply collected and folded together without pasting, the wide web B passing over the upper fixed axis roller 12 and 15, under the movable rollers 20 and 22, and over the final roller 16. The narrow web passes over the fixed axis roller 12, then downwardly under the fixed axis roller 13, then forwardly under the paste wheel and around the movable roller 21, which has been swung downwardly to cause the web to clear the paste wheel support, the web finally passing upward over the roller 16 between the latter and the wide web. It will be obvious of course that the paths of travel of the two webs could be reversed if the narrow web is to be collected on the opposite side of the wide web.

While I have shown and described an arrangement of parts adapted to slit a wide web lengthwise into two sections and to collect and paste said sections together, it is to be understood that the mechanism is equally adapted for operation upon two similar web sections fed from separate rolls of paper, as are required in the manufacture of various kinds of counter sales books in which one of the webs at times is transparent or of different color than the opposite web. Also, while Figs. 5 and 6 show the wide web as having the paste applied to make a central joint with the narrow web, it is equally obvious that the pasting device may be laterally positioned to apply the line of paste to an edge of the wide sheet, as it is frequently required in certain lines of books to have the joint with the narrow sheet made at such point.

What I claim is as follows:

In a machine of the class described, a paste applying device, leading means for a pair of webs, said leading means being adapted to permit of either face of one web being first carried into contact with said paste applying device and then into contact with the other web, said means including a series of rollers whereby the web to receive the paste may be carried forwardly over the pasting device, or first forwardly under the pasting device and then backwardly thereover, and finally forwardly into contact with the other web.

Signed at New York in the county of New York and State of New York this 31st day of December A. D. 1919.

JOHN L. OBERLY.