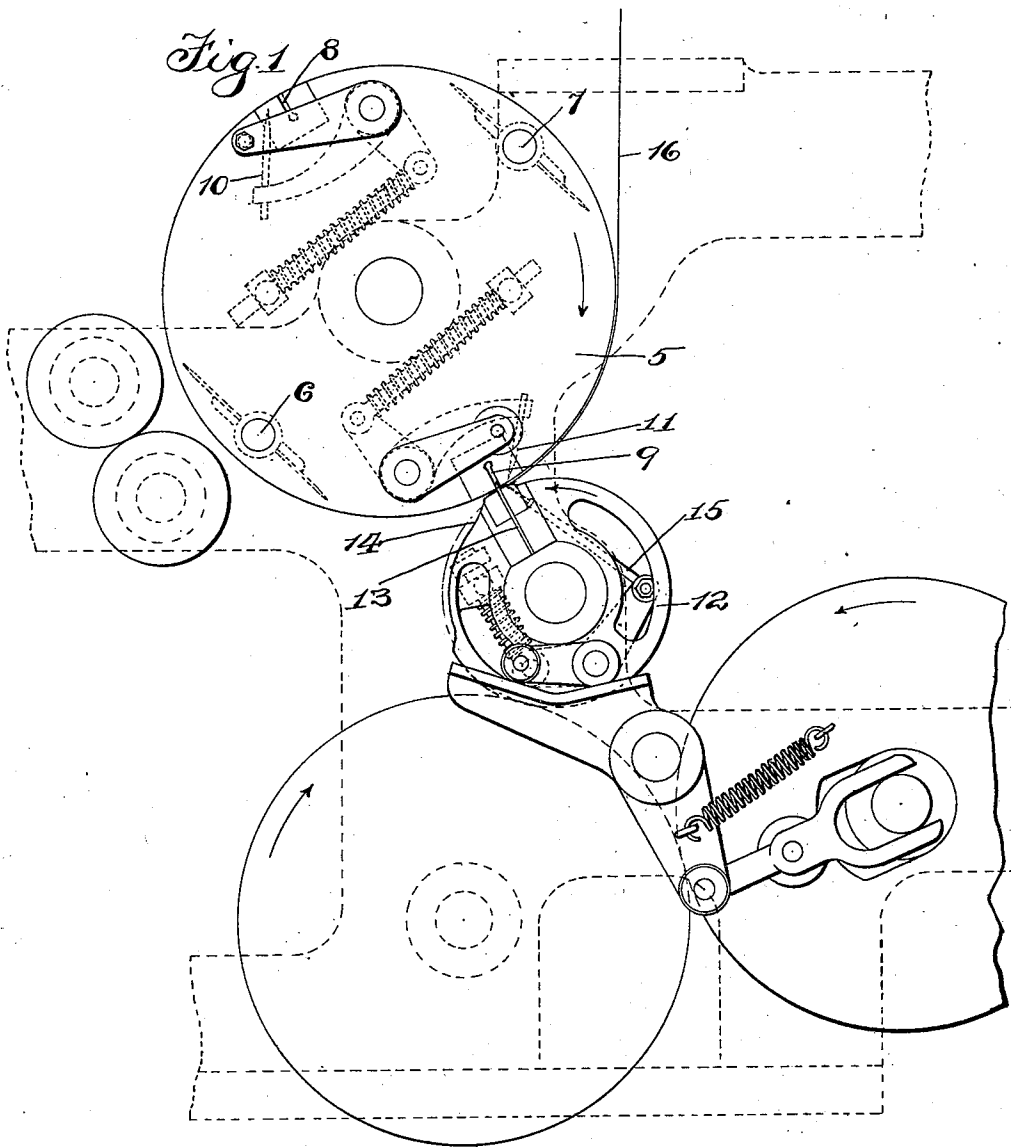


W. EVENSEN.
DELIVERY APPARATUS FOR PRINTING PRESSES.

APPLICATION FILED MAR. 26, 1902.

NO MODEL

2 SHEETS—SHEET 1.



WITNESSES-
Ara D. Perry
J. B. Weir

INVENTORS-
William Evensen,
by Bond Adams Kirkland Johnson,
 his ATTY.

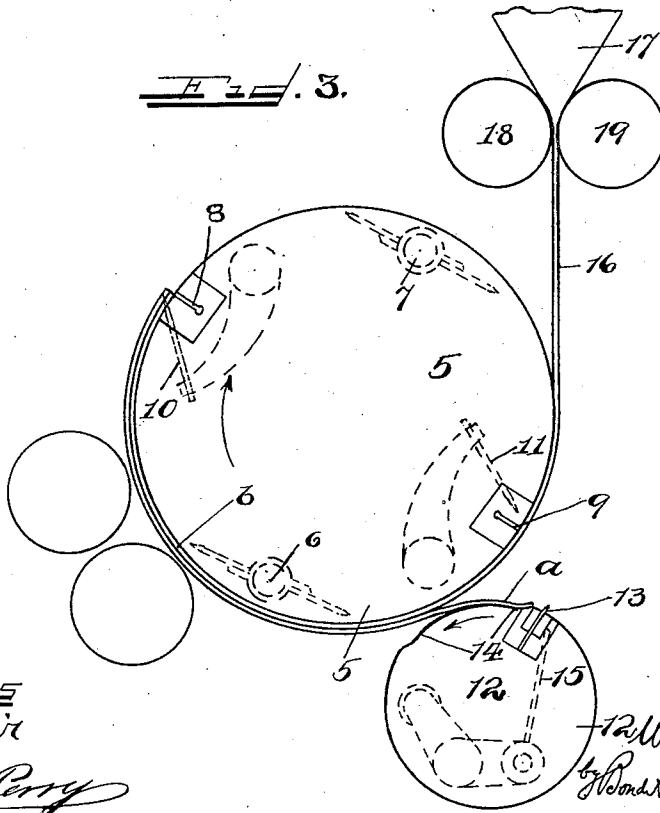
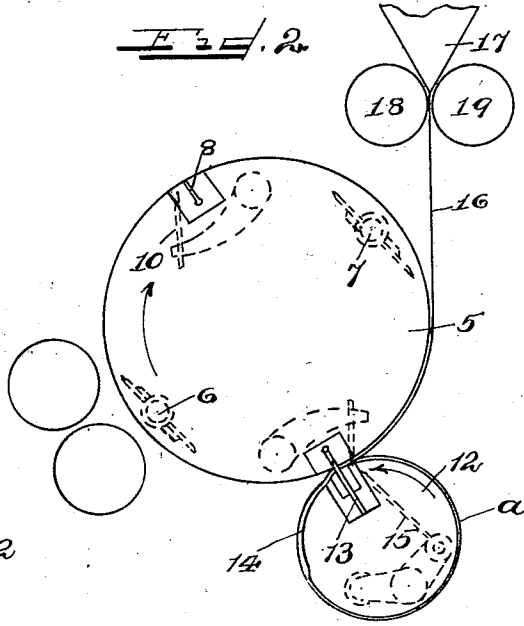
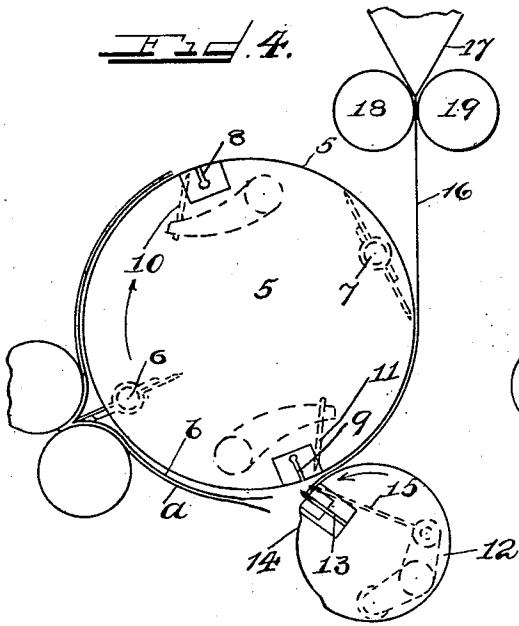
W. EVENSEN.

DELIVERY APPARATUS FOR PRINTING PRESSES.

APPLICATION FILED MAR. 26, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



WITNESSES
J. B. Weir
A. D. Perry

INVENTOR
 W. Evensen,
 by *Rod. Stone* *Richard Jackson*
 his Attys.

UNITED STATES PATENT OFFICE.

WILLIAM EVENSEN, OF CHICAGO, ILLINOIS, ASSIGNOR TO GOSS PRINTING PRESS COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

DELIVERY APPARATUS FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 730,892, dated June 16, 1903.

Application filed March 26, 1902. Serial No. 100,102. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EVENSEN, 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.

My invention relates to web perfecting-presses, and has for its object to provide improved delivery mechanism therefor. Heretofore in perfecting-presses provided with collecting mechanism arranged to assemble a severed sheet with the leading end of the web before severing the second sheet from the web the construction has been such that a narrow sliver or shaving has been severed from the rear end of the sheet when severing the second sheet from the web. In other words, after the first sheet has been superposed upon or brought into juxtaposition with the leading end of the web the rear end of said first sheet has projected far enough back so that it lay in position to be cut by the knife when severing the second sheet from the web, consequently cutting off a narrow shaving from the first sheet. To avoid this objection is the object of my present invention, and I accomplish it by providing means by which the rear end of the first sheet is permitted to drop away from the cutting-blade prior to the cut. This is best accomplished by providing the auxiliary collecting-cylinder with a depression adjacent to and in advance of the cutting-blade, so that the rear end of the sheet on the cutting-cylinder may drop into such depression, and consequently its rear edge will move away from the cutting-blade. This depression is formed by flattening or cutting down the surface of the collecting-cylinder adjacent to and in advance of the cutting-blade or by providing it with what may be termed a "concavity" at that point on its surface; but my invention is not restricted to this construction. It includes other means for causing the rear end of the first sheet to move away from the cutting-blade before the second sheet is cut.

In the accompanying drawings I have illustrated my invention as applied to a delivery

apparatus comprising an auxiliary combined cutting and collecting cylinder operating in connection with a combined cutting and folding cylinder; but my invention may be applied to other forms of apparatus.

Referring to the drawings, Figure 1 is a partially diagrammatic view, and Figs. 2, 3, and 4 are diagrammatic views illustrating the different stages of the operation of the apparatus.

In the drawings, 5 indicates a combined cutting and folding cylinder which is provided with one or more folding-blades 6 7 and with slots 8 9 to receive the cutting-blade. It is also provided with impaling-pins 10 11 to take up the leading ends of the web and sheets in the well-known way. The folding-blades and impaling-pins are operated by the usual mechanism, and as the devices by which they are operated form no part of my present invention they are not shown or described in detail.

12 indicates an auxiliary combined cutting and collecting cylinder which is provided with a cutting-blade 13, adapted to register with the slots 8 9 as the cylinders rotate. The cylinders 5 and 12 coact to sever the web into sheets in the manner well understood. As best shown in Fig. 3, the cutting-cylinder 12 is not truly circular in cross-section, but is provided with a depressed or cut-down portion 14, adjacent to and in advance of the cutting-blade 13. The cutting and folding cylinders rotate in the directions indicated by the arrows in the drawings.

15 indicates impaling-pins carried by the cutting-cylinder 12 in the usual way, which impaling-pins are operated by any approved mechanism. The cylinders 5 and 12 are geared together in the usual way, so that the cylinder 12 makes two revolutions for each revolution of the cylinder 5. The outline of the gear which drives the cylinder 12 is indicated by dotted lines in Fig. 1.

16 indicates the unsevered web, which passes over a former 17 and between folding-rollers 18 19 to the cutting and folding cylinders in the usual way. *a* indicates the first sheet—that is to say, the sheet which is first severed from the web and is to be associated with the second sheet, which is indicated by *b*.

55

60

65

70

75

80

85

90

95

100

The operation is as follows: The web passes from the former between the cylinders 5 and 12, the first sheet being taken by the impaling-pins 15 of the cutting-cylinder 12 and being carried around said cylinder, as shown in Fig. 2.

2. Upon the completion of a single rotation of the cylinder 12 the parts will occupy the position shown in Fig. 2 and the first sheet *a* will then be severed from the web. At the same time one of the sets of impaling-pins carried by the cylinder 5 will take up the leading end of the web 16, together with the leading end of the sheet *a*, and carry them partly around the cylinder 5, as shown in Fig. 3.

15 Immediately after its being severed from the web 16, as above described, the rear end of the sheet *a*, being freed, will sink into the depression in the cylinder 12, and consequently fall away from the cutting-blade 13, so that when the cylinder 12 makes another complete rotation and the blade 13 acts to again sever the web to separate from it the second sheet *b* the rear end of the first sheet *a* will not be near enough to the cutting-blade to be engaged thereby, and consequently no shaving can be cut from it. It should be explained that owing to the fact that the periphery of the cutting and collecting cylinder is cut down or made non-circular in cross-section, as described, the rear end of the web when carried around it is not drawn tightly in contact therewith, but, rather, lies loosely thereon, and the depression being adjacent to the cutting-blade promotes the slipping away of the web from the cutting-blade, as above described. The depression is best formed by cutting down a portion of the periphery of the cutting-cylinder adjacent to the cutting-blade, so that its surface lies slightly lower than the remainder of the surface of the cylinder, but is concentric therewith, as shown in Fig. 2. My invention is not, however, restricted to such specific construction or to the other specific details of the construction shown and described except in so far as they are particularly claimed.

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

1. An auxiliary cutting and collecting cylinder having a cutting-blade, a portion of the periphery of said cylinder being depressed, the depressed portion being arranged to receive the rear end of the sheet, substantially as described. 50

2. An auxiliary cutting and collecting cylinder having a cutting-blade, a portion of the periphery of said cylinder adjacent to and in advance of the cutting-blade being depressed to receive the rear end of the sheet, substantially as described. 60

3. An auxiliary cutting and collecting cylinder having a cutting-blade, a portion of the periphery of said cylinder being depressed, the depressed portion being arranged to receive the rear end of the sheet, in combination with a folding-cylinder, substantially as described. 65

4. A cylinder having a portion of its periphery depressed so that the surface of the depressed portion lies slightly lower than the remainder of the surface of the cylinder, but is substantially concentric therewith, in combination with means for conducting a web thereto, and means for severing the web adjacent to said depressed portion, said depressed portion being arranged to receive the rear portion of the severed sheet, substantially as described. 75

5. A cylinder having a portion of its periphery depressed so that the surface of the depressed portion lies slightly lower than the remainder of the surface of the cylinder, but is substantially concentric therewith, and a cutting-blade carried by said cylinder adjacent to said depressed portion, in combination with means for conducting a web thereto, substantially as described. 80

WILLIAM EVENSEN.

Witnesses:

JOHN L. JACKSON,
ALBERT H. ADAMS.