

(No Model.)

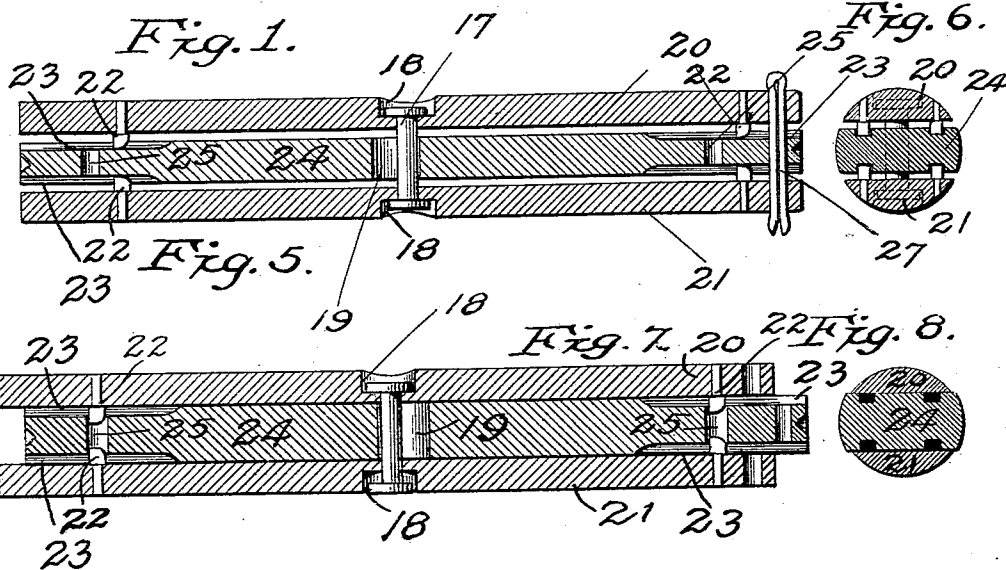
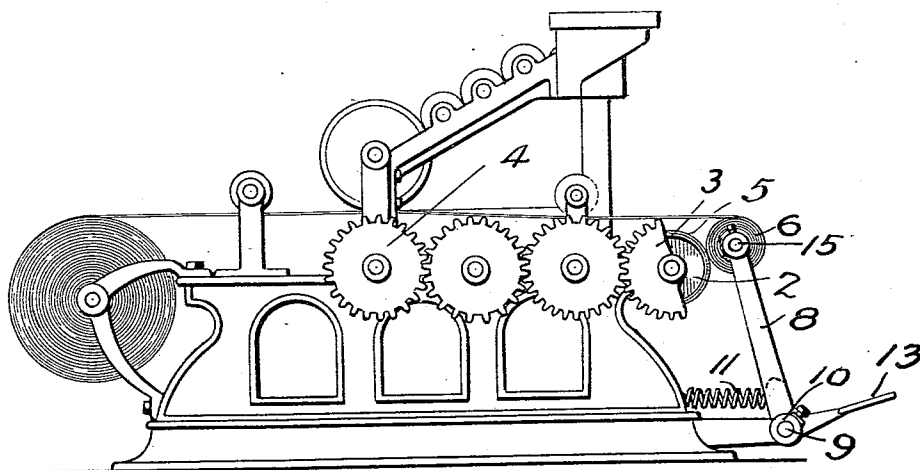
2 Sheets—Sheet 1.

C. J. BUCKLEY.

REWINDING ATTACHMENT FOR PRINTING MACHINES.

No. 557,649.

Patented Apr. 7, 1896.



Witnesses;
C. E. Van Dorn.
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Inventor;
Clarence J. Buckley.
By Paul H. Hawley
his Attorneys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 9.

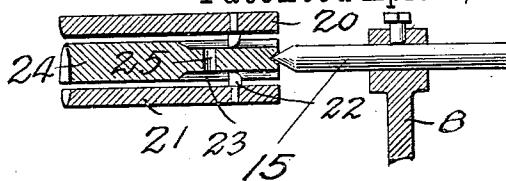
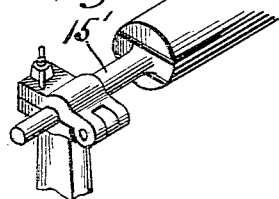


Fig. 4.

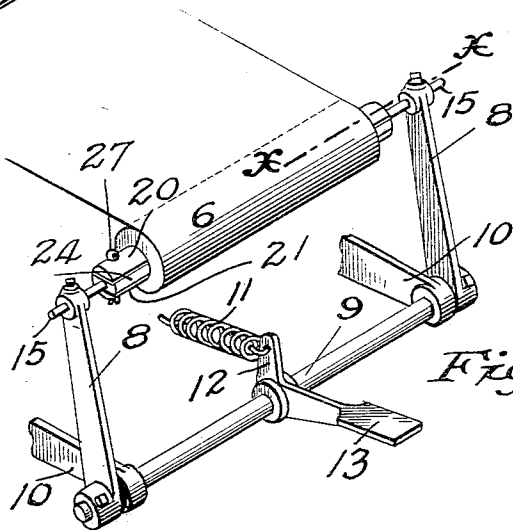


Fig. 2.

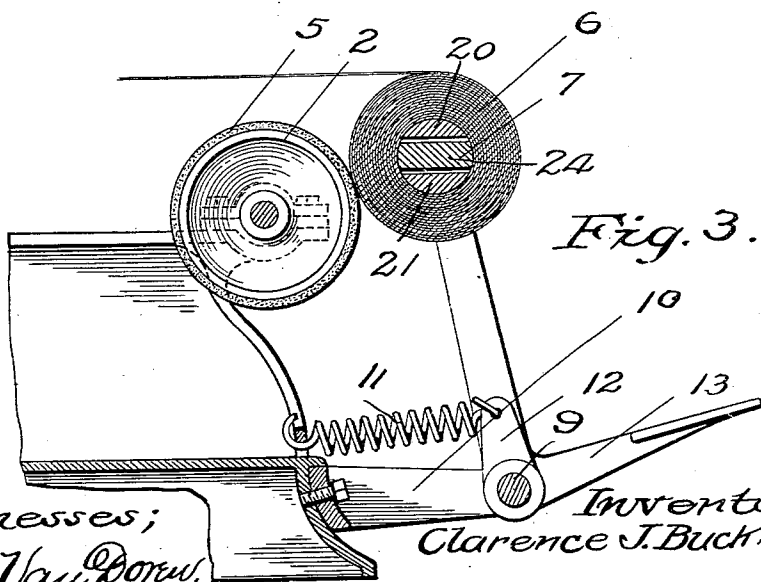


Fig. 3.

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UNITED STATES PATENT OFFICE.

CLARENCE J. BUCKLEY, OF DELANO, MINNESOTA.

REWINDING ATTACHMENT FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 557,649, dated April 7, 1896.

Application filed May 14, 1895. Serial No. 549,258. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE J. BUCKLEY, of Delano, Wright county, State of Minnesota, have invented certain new and useful
5 Improvements in Rewinding Attachments for Printing-Presses, of which the following is a specification.

My invention relates to means for rewinding the paper as it passes through the printing-rolls of a printing-press, and in devising
10 this attachment for printing-presses I have in mind particularly the rewinding of printed wrapping-paper, which is sold and used in rolls of greater or less size.

15 The object which I have in view is to provide a collapsible arbor for a rewinding mechanism of the class above described.

To this end my invention consists in a rewinding attachment comprising a combination of parts or attachments substantially as
20 herein shown and described, and particularly pointed out in the claims.

The invention will be more readily understood by reference to the accompanying drawings, in which—
25

Figure 1 is a side elevation of a printing-press provided with a rewinding attachment embodying my invention. Fig. 2 is an enlarged perspective view of the movable parts
30 of the rewinding attachment. Fig. 3 is a still further enlarged sectional detail thereof. Fig. 4 is a longitudinal sectional detail on the line *x x* of Fig. 2. Figs. 5 and 6 are enlarged longitudinal and transverse sections of the
35 collapsible winding-arbor distended. Figs. 7 and 8 are similar views of the arbor collapsed. Fig. 9 is a perspective view showing a solid stud-shaft on the arbor and a bearing from which the same may be easily removed.

40 The particular construction of the press is immaterial, as far as my invention is concerned, save to the extent that the driving rolls or pulleys 2 are driven by gears 3 or other means at the same speed that the platen
45 and printing-rolls 4 revolve, whereby the paper is taken up as rapidly as it is printed or passed between the rolls 4. These wheels or rolls 2 are provided with rubber tires 5, and the roll 6 of paper on the winding-arbor 7
50 bears against the surfaces of the driving-wheels 2 and is driven thereby in the same direction as the platen-roll. The arbor or

collapsible shaft 7 is carried between the upper ends of the arms 8 extending upward from the rocking shaft 9, carried in suitable
55 bearings 10 on the frame of the machine and the roll 6, or in the beginning the arbor 7 is pressed against the driving-wheels 2 by the action of a spring 11 connected with the arm
12, also on the shaft 9. By means of a foot-
60 lever 13, also fixed upon the shaft 9, the tension of this spring may be overcome and the roll removed from contact with the driving-wheels in order that the shaft 7 and the roll
65 of paper thereon may be easily taken from the arms 8.

The arbor or shaft 7 is preferably of but little greater length than the roll of paper to be wound thereon and may be secured between the arms 8 in any suitable manner, as
70 by means of the short spindles or centers 15 secured in the upper ends of the arms. In place of these the arbor may itself be provided with short stud-shafts 15', as shown in
75 Fig. 9, which may be readily placed in suitable bearings provided in the upper ends of the arms 8. The shaft itself is composed of three parts, made, if desired, by sawing a
80 round shaft into three parts, the saw cuts removing enough metal to permit the two outer parts to drop inwardly, so that the whole device will be contained in a much smaller area than the original circle of the shaft in cross-section. The three parts are held together
85 by a double-headed bolt 17, the heads of which are accommodated in recesses 18 in the outer portions, while the shank extends through a slot 19 in the middle part. From the inner surface of each of the outer parts
90 20 21 small lugs 22 project inwardly into the longitudinal slots 23 provided in the middle portion 24, the slots and lugs serving as guides to hold the three parts in alignment. Further, these lugs, four in number upon each
95 piece, hold the outer parts in their distended positions, while when the inner part is drawn outwardly, as allowed by the slot 19, the lugs will drop into the holes 25 provided in the part 24, as shown in Fig. 7, thereby permitting the parts 20 21 to collapse on the middle
100 portion, whereupon the arbor may be easily withdrawn from a roll of paper.

Ordinarily no attempt is made to insert and expand the shaft within a roll, but this may

be done if a little care is exercised. After a roll has been removed from the arbor and the arbor is again placed in position between the arms 8 the outer parts of the arbor are raised 5 or extended, and then in order to hold them firmly in position a pin 27 is preferably inserted through holes which register in three parts.

Having thus described my invention, I 10 claim as new and desire to secure by Letters Patent—

1. A collapsible arbor, comprising three longitudinal parts forming in cross-section segments of a circle, means for holding said 15 parts together, and lugs provided upon the innersides of the outer parts to hold said parts distended, and said inner part provided with openings or recesses to receive said lugs to permit the outer part to collapse upon the 20 inner part, substantially as described.

2. A collapsible arbor, comprising three segmental parts of a shaft, a tie-bolt extending through the same, lugs and openings being provided upon and in said parts, whereby

when said parts occupy a certain longitudinal 25 position the outer portions will be distended, while in another position said lugs would drop into said openings or recesses to permit the outer part to collapse upon said inner portions, substantially as described. 30

3. A collapsible arbor, comprising three segmental parts of a shaft, a tie-bolt extending through the same, lugs and openings being provided upon and in said parts, whereby 35 when said parts occupy a certain longitudinal position the outer portions will be distended, while in another position said lugs would drop into said openings or recesses to permit the outer part to collapse upon said inner portions, and means for locking said outer parts 40 in their distended position, substantially as described.

In testimony whereof I have hereunto set my hand this 20th day of April, A. D. 1895.

CLARENCE J. BUCKLEY.

In presence of—

C. G. HAWLEY,

M. E. GOOLEY.