Oct. 6, 1931. C. L. POST 1,826,020

FEEDING DEVICE

Original Filed Aug. 29, 1928

Fig. 1

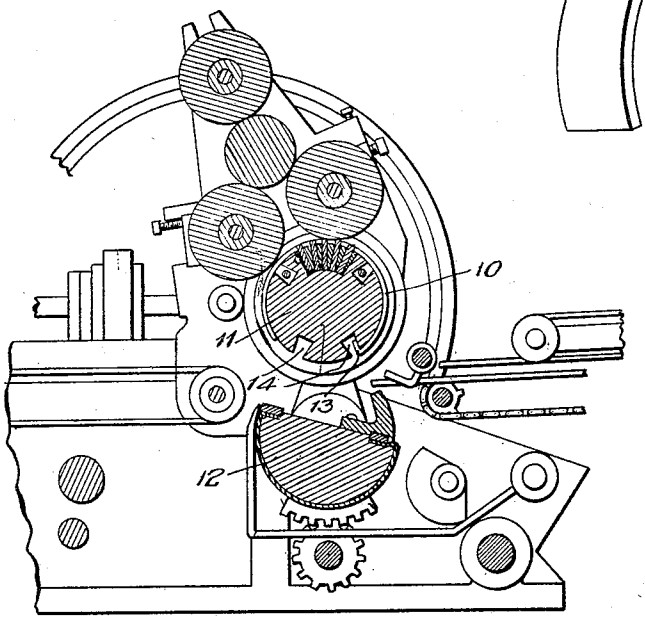


Fig. 4

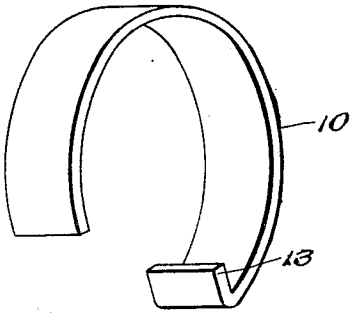


Fig 2.

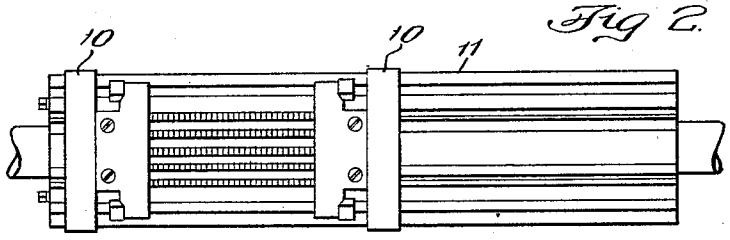
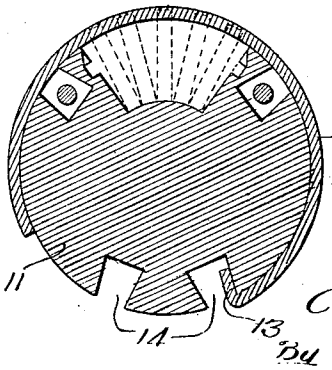


Fig. 3.



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1,826,020

UNITED STATES PATENT OFFICE

CLAUDE L. POST, OF CHICAGO, ILLINOIS

FEEDING DEVICE

Original application filed October 3, 1924, Serial No. 741,428, and August 29, 1928, Serial No. 302,831. Divided and this application filed May 23, 1929. Serial No. 365,369.

The invention relates to feeding devices for feeding paper or other stock through a machine to accomplish work upon the stock. The invention is herein shown and described as applied to printing presses as disclosed in my copending applications respectively designated Serial No. 741,428, filed October 3, 1924 and Serial No. 302,831, filed August 29, 1928 of which this application is a division.

The invention has as one of its principal objects the provision of a construction capable of association with one of a pair of cooperating rollers, to which the stock is fed and the provision of means providing for angular and longitudinal adjustments of an element of the structure to thereby accomplish proper holding and feeding of stock of various dimensions.

Another object of the invention is the provision of an arcuate resilient element capable of association with a roller, to thereby provide means to assist in frictionally holding said element against displacement relatively to said idler.

A further object of the invention is the provision of an element such as just described having means which, when applied to the roller, assists to hold said element against relative rotation with respect to the roller.

The invention has as another object the provision of a roller having means with which the holding means of the resilient element may cooperate to prevent relative rotation, said means of the roller permitting longitudinal adjustment of said element with respect to the roller.

The invention has these and other objects, all of which will be explained and more readily understood when read in conjunction with the accompanying drawings which illustrate one embodiment of which the invention is susceptible, it being obvious that changes and modifications may be resorted to without departing from the spirit of the appended claims forming a part hereof.

In the drawings, Fig. 1 is a sectional view of a portion of a printing press showing a type or printing roll and an impression roll the former having the invention applied thereto;

Fig. 2 is a front elevation of the type or printing roll shown in Fig. 1;

Fig. 3 is a section taken on line 3—3 of Fig. 2; and

Fig. 4 is a perspective view of the feeding ring.

The invention is herein shown and described as applied to the type or printing roll of a printing press, the latter of which is arranged to cooperate with an impression roll. One of the elements employed in the feeder is generally designated 10 and is mounted upon a roller such as 11 to provide means to assist in the feeding of paper between the printing roll 11 and the impression roll 12. The element 10 is preferably formed as clearly shown in Fig. 3 to provide an arcuate split resilient ring which is adapted to be associated with the printing roll 11. This arcuate or split resilient ring is in the present instance type high and cooperates with the impression roll 12 to feed the stock between the rolls 11 and 12, and extends throughout more than 180° of the circumference of the roll 11 so that it will clamp the roll and thereby frictionally hold the ring with relation to the roll. The ring has an inwardly extending lug or extension 13 provided to cooperate with means provided in the roll to prevent rotation of the ring with respect to the roll when said ring is associated with the roll. The means of the roll above referred to for preventing relative rotation of the ring contemplates the provision of a plurality of circumferentially arranged grooves 14 which extend longitudinally of the roll and provide means for the reception of the lug or extension 13 of the ring to thereby provide a means with which the lug may cooperate to prevent rotation of the ring with respect to the roll. By providing these longitudinal grooves 14, it is manifest that the split rings 10 may be adjusted longitudinally of the roll to thereby arrange said rings so that they will properly cooperate with sheets, envelopes, etc., of various widths. These grooves 14 are arranged circumferentially of the printing roll to permit the ring to be adjusted angularly with relation to the roll and thereby permit of adjustment to insure the feeding of stock

of different lengths through and between the printing and impression rolls. These grooves preferably extend from end to end of the roll and thus allow the rings to be associated with the rolls by passing said rings over the end of said rolls.

From the foregoing description, it is manifest that an extremely simple arrangement is provided for engaging and feeding stock between rolls to have work performed thereon and in which an element of the feeding means which engages the stock is adjustable both angularly and longitudinally of the printing and impression rolls which will thereby allow adjustments to be made to compensate for and insure the proper feeding of stock of various lengths and widths.

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

1. An element of a feeding device including a roller, said element consisting of a split ring having means formed thereon for engaging the roller to provide for holding said ring against rotation relatively to said roller.

2. An element of a feeding device consisting of a split resilient ring having an end thereof formed to provide an extension for engaging a roller and providing means for holding said ring against rotation relatively to said roller.

3. In a feeding device, the combination of a roller and an element consisting of a split resilient ring having means formed thereon for engaging the roller providing means for holding said ring and roller against relative rotation, said ring being movable longitudinally of said roller with said means in functional engagement with said roller.

4. In a feeding device, the combination of a roller and an arcuate element provided upon and frictionally engaging said roller, said element having inwardly extending means providing an element of means for holding said element and roller against relative rotation, and said element being movable longitudinally of said roller.

5. In a feeding device, the combination of a roller and an arcuate element provided upon said roller, said roller and element having means for permitting angular adjustment of the element relatively to the roller and providing means for preventing relative rotation of said element and roller and permitting relative longitudinal movement of said element and roller.

6. A feeding device including a roller and an arcuate member, said roller having a plurality of circumferentially arranged longitudinally extending means for engaging said member to prevent relative rotation of said roller and arcuate member.

7. A feeding device including a roller and an arcuate member, said roller having a plurality of circumferentially arranged and longitudinally extending means for engaging said member to prevent relative rotation of said member and roller and providing means permitting longitudinal adjustment of said member relatively to said roller.

8. In a feeding device, the combination of a roller and a split resilient ring, said roller and split ring having means which cooperate with each other providing means for preventing relative rotation of said ring and roller, said ring being contractible into frictional holding relation with said roller.

9. In a feeding device, the combination of a roller and a split spring ring adapted to be expanded to arrange said ring for association with the roller, said roller having a depression and said ring having means for engaging a wall of said depression to thereby provide means for preventing relative rotation of said ring and roller.

10. A feeding device including a roller and a split ring, said roller having a plurality of circumferentially disposed, longitudinally extending grooves, the split ring having a projection for engaging either of said grooves, said grooves and projection providing means preventing relative rotation of said ring and roller and providing means permitting longitudinal movement of said ring relatively to said roller.

In witness whereof, I hereunto subscribe my name this 9th day of May, A. D. 1929.

CLAUDE L. POST.