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C. L. POST

2,267,134

FEEDING DEVICE

Filed April 4, 1940

Fig. 1

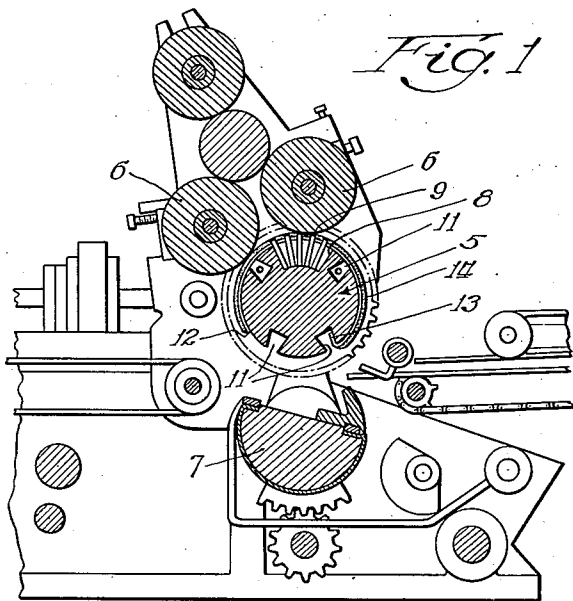


Fig. 2

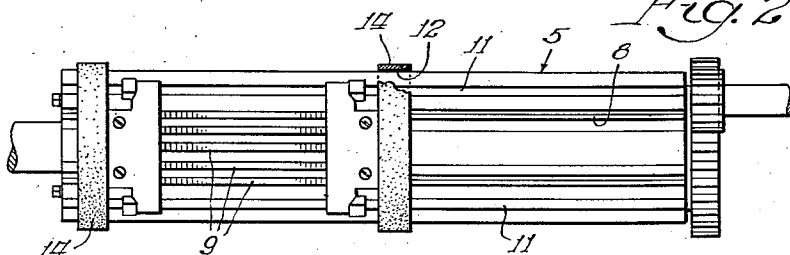


Fig. 3

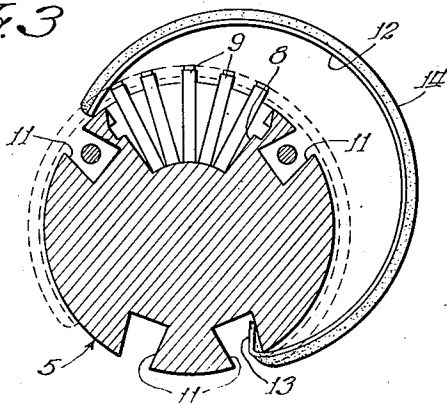
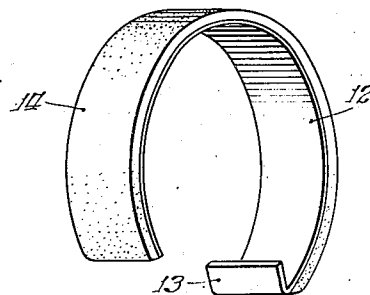


Fig. 4



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UNITED STATES PATENT OFFICE

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FEEDING DEVICE

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3 Claims. (Cl. 271-51)

This invention relates to feeding devices, and particularly to a device for feeding flat stock, such as paper and the like, through a machine for performing work on the stock.

The present invention is an improvement on the feeding device disclosed in Letters Patent No. 1,826,020, issued to me October 6, 1931, and the improved structure of the present application is shown and will be described in relation to a printing machine of the character disclosed therein.

Among other objects, the present invention is intended to provide a novel construction and arrangement whereby proper feeding of stock to the machine and holding of the work in relation thereto is assured.

Another object of the invention is to provide a novel construction whereby various kinds of stock having various degrees of thickness may be fed to the machine, and whereby the make-ready on the impression roll of a printing machine may be changed or altered without change or adjustment of the feeding device.

Another object of the invention is to provide a feeding device of novel construction which is economical to manufacture, easily applied to a supporting roll, durable in its construction, efficient in its operation, and satisfactory for use wherever found applicable.

Another object of the invention is to provide a feeding ring of novel construction, which is particularly applicable to relatively small high speed cylinders, and which is particularly efficient when used thereon.

A further object of the invention is to provide a feeding ring having a pliable resilient feeding surface engageable with the stock, and which may be conveniently and quickly applied to a roller and readily adjusted with respect thereto.

A still further object of the invention is to improve devices of the character described in sundry details hereinafter referred to and particularly pointed out in the appended claims.

One embodiment of the present invention is shown for illustrative purposes in the accompanying drawing in which:

Fig. 1 is a sectional elevational view through a portion of a printing press illustrating the application of my improved feeding ring thereto;

Fig. 2 is a face view of the type roll illustrated in Fig. 1 showing a pair of my improved feeding rings applied thereto;

Fig. 3 is an enlarged transverse sectional view of a type roll illustrating the manner of applying the improved feeding ring thereto; and

Fig. 4 is a perspective view of my improved feeding ring illustrated in Figs. 1, 2 and 3.

As illustrated in Fig. 1, the present invention is shown applied to a printing press having a type roll indicated, as a whole, by the numeral 5, inking rolls 6, and an impression roll 7 adapted to cooperate with the type roll in a manner to receive a sheet of stock such, for example, as paper, envelopes, or the like to be operated upon by the printing machine.

In the illustrative structure, the type roll is provided with a type groove 8 adapted to receive a plurality of type bars 9 such, for example, as Linotype slugs or the like, and formed in the periphery of the type roll are a plurality of radially disposed elongated recesses or grooves 11 suitably spaced and positioned around the periphery of the type roll.

For feeding stock between the type roll 5 and impression roll 7, and for holding the stock against shifting while the type on the bars 9 is in engagement therewith, a resilient split ring 12, having an annular dimension in excess of 180° of a circle and extending around more than half of the circumference of the type roll 5 when in position thereon, is provided with an inwardly extending portion 13 adapted to engage one of the recesses or grooves 11 to secure the ring against annular displacement on the roller, and for providing a high degree of frictional engagement with the stock in its passage between the type roll 5 and impression roll 7, a pliable resilient pad or strip 14 formed preferably of rubber is secured to the outer surface of the ring 12 by vulcanizing or other suitable means and is intended to extend throughout a substantial portion of the ring 12, preferably the entire length thereof.

It will be apparent that by such an arrangement, the portion 13 of the ring 12 may be positioned in one of the grooves 11 and the ring expanded and snapped over the type roll 5 in the manner illustrated in Fig. 3, and that by reason of the rubber pad on the outer surface of the ring, a very desirable degree of friction is available for contact with the stock during the printing operation.

It will be apparent also that by reason of the pliability and resilient character of the rubber pad 14, the feeding device of the present structure will handle stock of various degrees of thickness in its passage through the printing machine, and will permit of changes in the make-ready on the impression roll of a printing machine without change or adjustment of the

feeding device, and that the resilient character of the pad also contributes materially to the wearing qualities of the device and provides a structure, which is durable and can be effectually used for a long period of time without replacement of the pad.

It will be apparent from the foregoing description that the present invention provides a novel construction and arrangement of a feeding device for feeding stock, such as paper or the like, through a machine for performing work on the stock, and wherein the stock is securely held against shifting, and wherein the feeding device may be readily applied to a roll and secured against annular displacement with respect thereto, but at the same time being movable longitudinally thereof.

Obviously, the present invention is not limited to the precise construction and arrangement shown and described as the same may be variously modified without departing from the spirit and scope of the invention as set forth in the appended claims.

What I claim as new and desire to secure by Letters Patent is:

1. In a feeding device of the character described and in combination, a roller having a radially disposed recess formed therein, a resilient split ring mounted on said roller, said ring having means associated therewith and engageable with said recess for securing the ring against annular displacement with respect to said roller, and a resilient friction pad secured

to the outer side of said ring, said ring being sufficiently expansible to permit spreading of the ends thereof a distance greater than the diameter of said roller, whereby said ring may be transversely applied to and engaged with said roller.

2. A feeding device of the character described and in combination, a roller having a recess formed therein, a resilient split ring slidably mounted on said roller, said ring having an inwardly extending portion formed integrally therewith and engageable with said groove for securing the ring against annular displacement on said roller while permitting longitudinal movement of the ring thereon, and a strip of rubber secured to the outer face of said ring, said ring being sufficiently expansible to permit spreading of the ends thereof a distance greater than the diameter of said roller, whereby said ring may be transversely applied to and engaged with said roller.

3. A feeding device comprising a resilient split ring having an annular dimension in excess of 180° of a circle when in feeding position, an inwardly extending portion formed integrally with said ring adjacent one end thereof, and a flexible filler strip of suitable material secured to the outer face of said ring, said ring being sufficiently expansible to permit spreading of the ends thereof a distance greater than the diameter of said circle.

CLAUDE L. POST.