March 29, 1932. A. POTDEVIN 1,851,291

PRINTING ROLLER

Filed May 8, 1930

Fig. 1.

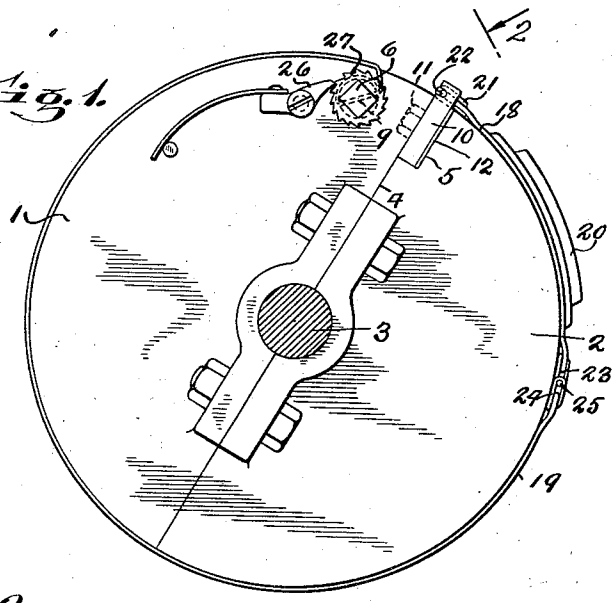


Fig. 2.

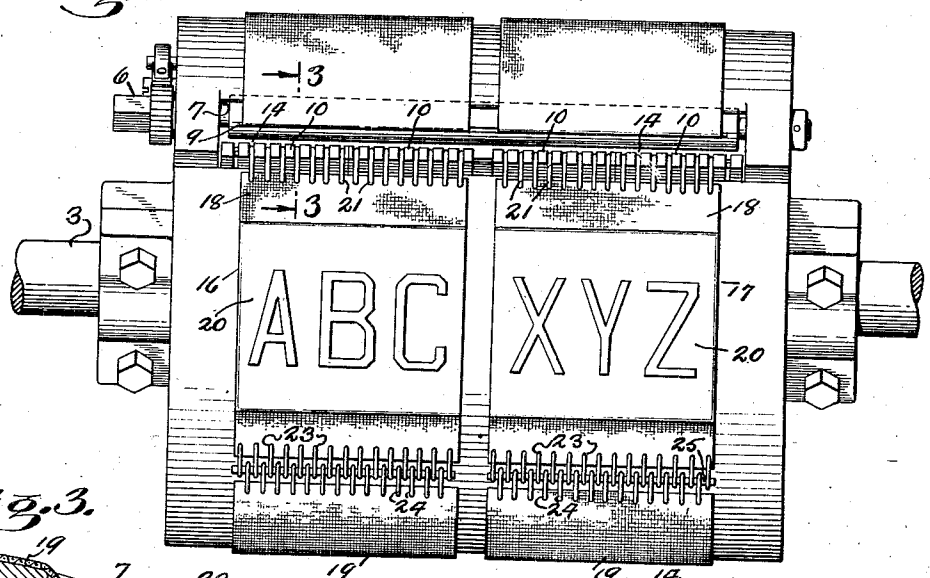


Fig. 3.

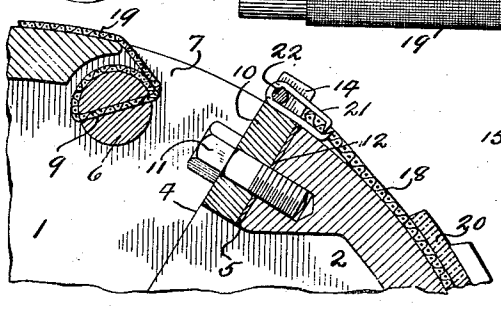
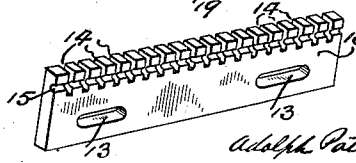


Fig. 4.



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1,851,291

UNITED STATES PATENT OFFICE

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PRINTING ROLLER

Application filed May 8, 1930. Serial No. 450,674.

This invention relates broadly to printing rollers and more specifically to the mode of attaching the type plate and blanket to the roller.

Prior to this invention it has been customary to attach a length of strong canvas to each end of the type plate, the whole structure being applied to the outside of the roller, the ends of the canvas being attached to two rotatable shafts extending lengthwise of the roller. Both of these shafts are provided with pawl and ratchet mechanism, so that when the shafts are turned to tighten the canvas strips the shafts will be held in position.

The present invention has for one of its objects the provision of a construction wherein this operation is simplified and improved, and whereby one of the shafts together with its pawl and ratchet mechanism is eliminated.

In many cases, take for instance in the bag making art, it is necessary to employ a plurality of sets of type plates, lying side by side, and with the construction just outlined it is difficult to properly align the type, that is to align the type carried by one plate with the type carried by the other plate or plates.

My invention has for another one of its objects the provision of a construction whereby this operation is performed in a simple and practicable manner.

A still further object of my invention is the provision of a construction in which adjustment of the type laterally is facilitated.

A further object of my invention is the provision of a construction wherein a type plate may be quickly removed and substituted by another plate.

In the drawings accompanying this application wherein I have shown an embodiment of my invention:

Fig. 1 is an end elevation of a printing roller embodying my improved construction;

Fig. 2 is a view taken substantially along the line 2—2 of Fig. 1;

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

Fig. 4 is a perspective of a detail.

Referring to the drawings in detail, the printing roller as illustrated best in Fig. 1 is conveniently made in two sections or halves designated 1 and 2, respectively, these two sections being clamped to a drive shaft 3.

The straight face 4 of one of these rollers is cut back as shown at 5 to provide a rectangularly shaped slot extending lengthwise of the roller section 2. The section 1 of the printing roller is provided with a shaft 6 extending lengthwise of the same, the face of this roller being cut away as shown at 7 to permit of the edge of a blanket to be passed into a slot 9 provided in the shaft 6.

In the slot 5 above mentioned I mount a series of attaching blocks 10 to be described hereinafter in detail, four of these blocks having been shown on the drawings. These blocks are held in place by bolts 11 in the slot provided by the cutback 5 in the roller section 2, the heads of these bolts being accommodated by the cutback 7 in the roller section 1.

When necessary shims 12 are placed behind the blocks 10 as will be hereinafter explained.

From Fig. 4 it will be seen that each of the attaching blocks 10 is provided with slots 13 for receiving the bolts 11, these slots extending lengthwise of the block and permitting of lengthwise adjustment of the blocks 10 in the recess in the roller section.

The upper edge of each of the attaching blocks is provided with regularly spaced vertical slots 14 cut across the block edge, while the back face of each block is provided with a groove 15 extending lengthwise of the block throughout its entire length and intercepting the slots 14.

I have shown two blankets numbered 16 and 17 in Fig. 2, but inasmuch as these blankets are duplicates of each other the description of one will suffice for both. Each blanket comprises two strips of canvas or other suitable material 18 and 19, the strip 18 carrying type plate 20.

One end of the strip 18 is provided with a plurality of wire loops 21, these wire loops or attaching means being spaced from each other to conform to the spacing of the slots 14 in the attaching blocks 10. Accordingly to attach this end to the blocks 10 it is merely necessary to place the wire loops 21 in the

slots 14 and then to pass a rod shown at 22 through the loops, the rod as will be understood lying in the groove 15 on the back of each of the attaching blocks 10.

The opposite end of the strip 18 is provided with a series of wire loops 23 and the end of the section 19 which is to be attached to the section 18 is provided with a series of wire loops 24 staggered with respect to the loops 23. These loops may be similar to the construction used in belt lacing. With the adjacent ends of the two sections 18 and 19 in the position shown in Fig. 2, for instance, it is merely necessary to pass a pin 25 through the loops 23 and 24 in order that the two blanket sections 18 and 19 may be detachably attached to each other.

The other end of the canvas section 19 is then passed into the cutout in the roller section 1 and into the slot 9 in the shaft 6 as plainly indicated on Fig. 3.

The shaft 6 may then be rotated sufficiently to place the blanket under the desired tension and will be held in this position by the spring pressed pawl 26 and ratchet 27.

The construction and mode of attaching the blanket 17 to the printing roller is identical with that just described in connection with the blanket 16.

The provision of the slots 13 in the attaching blocks 10 as above explained permits of longitudinal adjustment of these blocks with respect to the roller section 2 so as to adjust the blanket or blankets on the face of the roller as desired under all conditions. It will be obvious also that the number of attaching blocks may be varied as desired, and that the two or more blankets may be adjusted laterally with respect to each other additionally by employing some of the blocks 10 as filler blocks, placing the same intermediate the blocks to which the blankets are directly attached.

Reference has been made to the shims 12 which, as will be seen from Fig. 3 and also from Fig. 1, may be placed behind the attaching blocks 10. These shims will, as will be appreciated, alter the position of the blankets lengthwise and will permit of the type plates being properly aligned with respect to each other.

It will be appreciated from the foregoing also that changing of type plates is greatly facilitated by the construction above described in that it is not necessary at any time to disconnect the end of the blanket from the shaft 6, the type plates or type blocks being removable independently of this connection simply by removing the rods 22 and 25.

It is to be understood that changes may be made in the details of construction above described within the purview of my invention.

What I claim is:—

1. In combination a printing roller, attaching blocks set into said roller and adjustable independently of each other lengthwise of the roller, said blocks having a slotted edge, blankets on the periphery of said roller, one end of each of said blankets being attached to the slotted edge of separate blocks, a shaft rotatably carried by said roller and lying parallel to said blocks, to which the other end of each of said blankets is attached, and means for rotating said shaft to effect adjustment of the tension in said blankets.

2. In combination a printing roller provided with a slotted face, slotted attaching blocks in said slot, a blanket having one end detachably attached to the slotted edges of said blocks, and a shaft adjustably mounted in said roller for attachment to the opposite end of said blanket, adjustment of said shaft effecting adjustment of the tension in said blanket.

3. In combination a printing roller, attaching blocks carried thereby, each of said blocks being provided with a slotted edge, a blanket, one end of said blanket being provided with loops adapted to lie in said slots, and a pin extending along said blocks and intercepting said slots for entry through said loops whereby the end of the blanket is detachably attached to the blocks.

4. In combination a printing roller, a sectional blanket therefor, slotted attaching blocks adjustably carried by the roller, one end of one of said blanket sections being provided with loops received by the slots in the attaching blocks, a pin extending across said blocks and intercepting said slots for entry through said loops to attach the end of the blanket to the block, a detachable connection between the several sections of the blanket, and adjustable means for adjustably securing that end of the blanket remote from the said attaching means to the roller.

5. In combination a printing roller, a slotted attaching block carried thereby, means for securing said attaching block to the roller whereby the block may be adjusted lengthwise of the roller, and a blanket detachably secured to said block.

6. In combination a printing roller, a blanket carried thereby, said blanket being made in sections, one of said sections carrying a type plate, means for detachably connecting said plate carrying section to the adjacent section, and means for attaching the other end of said adjacent section to the roller adjustably, whereby the section carrying the type plate may be removed from the roller independently of the other section.

This specification signed this 6th day of May, 1930.

ADOLPH POTDEVIN.