

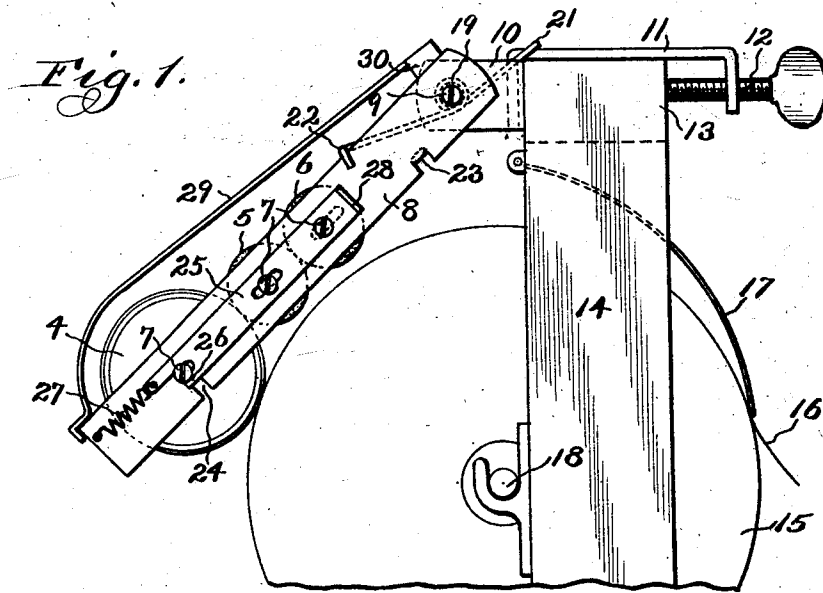
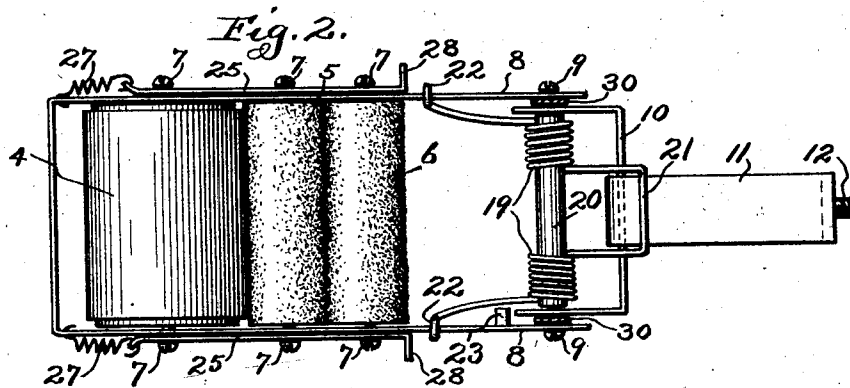
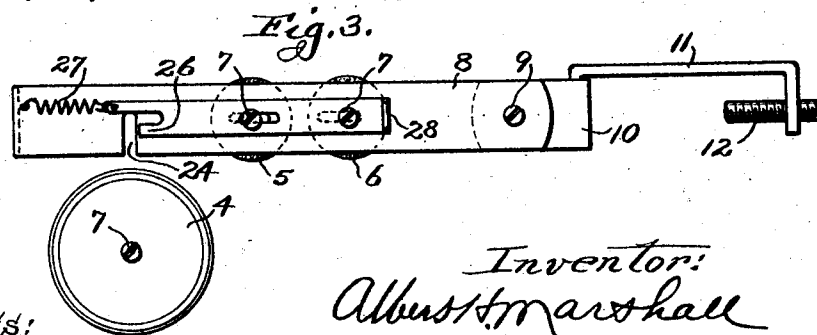
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ROLL WRAPPING PAPER PRINTING MACHINE

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UNITED STATES PATENT OFFICE.

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ROLL-WRAPPING-PAPER-PRINTING MACHINE.

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My invention relates to improvements in a printing machine in which a type wheel in contact with an ink roll is mounted in a frame so as to contact with a roll of paper in such manner that as the paper is pulled from the roll the type wheel will automatically print on the paper being unrolled; and the objects of my improvement are, first, to provide a simple removable feature for the type wheel; second, to provide an improved bearing for the type wheel; third, to provide a novel yielding pressure with a stop for the type wheel; fourth, to make a simple, durable and cheap construction, and other features to become apparent from the description to follow.

In automatic printing machines for roll wrapping paper it is desirable to have a convenient means for removing the type wheel, to have the type wheel so mounted that a greater or less pressure exerted by the rotating paper roll will not affect the printing qualities of the type wheel, to have all springs as short and as concealed as possible and to have the entire construction as simple and cheap as possible, and all these desirable features are attained by the use of my invention.

To describe my invention so that others versed in the art to which it pertains can make and use the same I have illustrated it on the accompanying sheet of drawing forming a part of this specification and in which:

Figure 1, is a side elevation of a printing machine embodying my invention in connection with a mounted roll of paper; Fig. 2, is a plan view of the machine detached and with the upper cover removed, and Fig. 3, is a side elevation of the same showing the parts moved to remove the type wheel.

Similar reference characters refer to similar parts throughout the several views.

The type wheel 4, and the ink rolls 5 and 6 are mounted to freely rotate on the screws 7 secured in their ends, by means of the screws extending through suitable perforations in the opposed legs of the U shaped frame 8 mounted to swing about the pivot 9 on the bracket 10. The bracket 10 is provided with the clamping extension 11 having the thumb screw 12 by means of which it is tightly secured to the upper bar 13 of the paper roll bracket 14. The roll of paper 15 is mounted in the usual manner having its free end 16 yieldingly pressed against the roll by the spring pressed tearing bar 17.

It being understood that as the end 16 is grasped by the hand and pulled the paper will be unwound from the roll and consequently the roll will rotate on its axis 18.

To have the type wheel 4 forced into contact with the paper roll 15 with sufficient pressure, a spring 19 is coiled about the pivotal rod 20 with its central extended portion 21 resting against the central portion of the bracket 10 and its two free ends 22 hooked over the edges of the U shaped frame 8, and to limit the movement of the frames 8 and 10 toward each other under the tension of the spring 19 when the bracket 10 is detached from the roll bracket 14, a suitable stop 23 is provided. Thus it is unnecessary to disturb the spring 19 when the machine is detached from the paper roll bracket 14 for purposes of reinking or changing the type wheel.

The type is preferably made on a thin sheet of rubber which is secured on the type wheel 4 in any desirable manner and it is desirable to change the wording on the type wheel with ease, and with this purpose in view the type wheel 4 has the screws 7 secured centrally in its ends and these are arranged to slide loosely in a pair of open end slots 24 provided in the legs of the U shaped frame 8 and to prevent said pivotal screws 7 from leaving the slots 24 a sliding bar 25 is provided on each leg of the U shaped frame 8 with an extension 26 arranged to lie adjacent the screw 7 and prevent the same from moving out of the slot 24. The bar 25 is yieldingly held in its normal position by a spring 27 attached between the end of the bar and a suitable point on the frame 8. At the opposite end of the bar 25 from the spring 27 a suitable finger piece 28 is bent up from the bar so that it can be moved in a direction against the tension of spring 27 and to withdraw the extension 26 from adjacent the pivotal screw 7 to permit the removal of the type wheel 4.

The screws 7 in either end of the ink roll 5 extend through suitable slots provided in both legs of frame 8 and in both bars 25 so that said roll 5 is free to move either way at all times and its position is determined by it bearing against the type wheel 4. The screws 7 in either end of the ink roll 6 extend through suitable slots in both legs of frame 8 and through round holes provided in both bars 25 so that its position is determined by the position of the bars 25. Ob-

viciously the springs 27 pulling on the bars 25 will yieldingly push the ink roll 6 against the ink roll 5, so that there is a constant pressure of the ink roll 5 against the type wheel 4 to supply sufficient ink thereto whenever it is rotated by pulling the paper from the roll 15 and the imprint of the type is successively made on the paper.

The heads on the screws 7 serve to retain the bars 25 in position. The screws 9 are secured centrally in the ends of the pivotal rod 20, and a suitable cover 29 is preferably provided to serve as a guard for the operating mechanism. The cover 29 has a pair of integral ears 30 which are pivoted on the screws 9 so that the cover 29 can be lifted about said pivots to give access to the operating mechanism if necessary. The free end of the cover 29 is provided with an angular bend 31 arranged to fit snugly over the edge of the middle portion of the frame 8.

It will be understood that the size, shape and arrangement of the parts may be changed without in the least departing from the scope of my invention.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a device of the class described, a type wheel and an inking roll rotatably mounted in a suitable frame, a pair of slidable bars mounted on said frame at the pivotal ends of said wheel and roll, the pivotal ends of the type wheel extending through suitable lateral slots in said frame, the pivotal ends of said inking roll extending through suitable longitudinal slots in said frame and through bearing holes in said sliding bars, suitable notches in said sliding bars to lock the type wheel pivots against removal from said lateral slots and suitable springs for yieldingly forcing the ink roll towards the type wheel whereby the type wheel is locked against removal from the frame and ink is supplied to the type wheel.

2. In a device of the class described, a suitable frame, a type wheel rotatably and removably mounted in said frame, means for locking the type wheel in the frame, an inking roll rotatably mounted in said frame, a second intermediate inking roll rotatably mounted in said frame, a spring for pressing the inking rolls against the type wheel, and means comprising a sliding bar for releasing the pressure of the inking rolls against the type wheel and for releasing the type wheel from the frame.

3. In a device of the class described, a suitable frame, a type wheel rotatably and removably mounted in said frame, means for locking the type wheel in the frame, an inking roll rotatably mounted in said frame, a spring for pressing the inking roll against the type wheel, and means comprising a sliding bar for releasing the pressure of the ink-

ing roll against the type wheel and for releasing the type wheel from the frame.

4. In a device of the class described, a suitable bracket comprising a clamping member, a suitable frame pivotally mounted on said bracket, a spring to yieldingly swing the frame on its pivot in one direction, a type wheel rotatably and removably mounted in said frame, means for locking the type wheel in said frame, an inking roller rotatably mounted in said frame, a spring for pressing the ink roll against the type wheel, and means comprising a sliding bar for releasing the pressure of the ink roll against the type wheel and for releasing the type wheel from the frame.

5. In a device of the class described, a suitable bracket comprising a clamping member, a suitable frame pivotally mounted on said bracket, a spring to yieldingly swing the frame on its pivot in one direction, a type wheel rotatably and removably mounted in said frame, means for locking the type wheel in said frame, an inking roll rotatably mounted in said frame, a second intermediate inking roll rotatably mounted in said frame, a spring for pressing the inking rolls towards the type wheel, and means comprising a sliding bar for releasing the pressure of the inking rolls towards the type wheel and for releasing the type wheel from the frame.

6. In a device of the class described, a suitable bracket comprising a clamping member, a suitable frame pivotally mounted on said bracket, a spring to yieldingly swing the frame on its pivot in one direction, a type wheel revolvably and removably mounted in said frame, means for locking the type wheel in the frame, an inking roller rotatably mounted in said frame and means comprising a spring pressed sliding bar for yieldingly pressing the ink roll against the type wheel and so arranged that when the bar is moved against the tension of the spring it will release the pressure of the ink roll against the type wheel and will release the type wheel from the frame.

7. In a device of the class described, a suitable frame, a type wheel mounted in said frame, means for locking the type wheel in the frame, an inking roll mounted in said frame and means comprising a spring pressed member for yieldingly pressing the inking roll against the type roll and so arranged that when the said member is moved against the tension of the spring it will release the pressure of the inking roll against the type wheel and will release the type wheel from the frame.

8. In a device of the class described, a suitable bracket comprising a clamping member, a suitable frame pivotally mounted on said bracket, a spring to yieldingly swing the frame on its pivot in one direction, a

type wheel and an inking roll mounted in said frame, a pair of sliding bars mounted on said frame at the pivotal ends of said wheel and roll, the pivotal ends of the type wheel extending through suitable lateral slots in said frame, the pivotal ends of said inking roll extending through suitable longitudinal slots in said frame and through bearing holes in said sliding bars, suitable notches in said sliding bars to lock the type wheel pivots against removal from said lateral slots in the frame and suitable springs for yieldingly forcing the ink roll towards the type wheel whereby the type wheel is locked against removal from the frame and ink is applied to the type wheel. 15

In testimony whereof I have signed my name to this specification this 11th day of July, 1924, at Chicago, Illinois.

ALBERT H. MARSHALL.