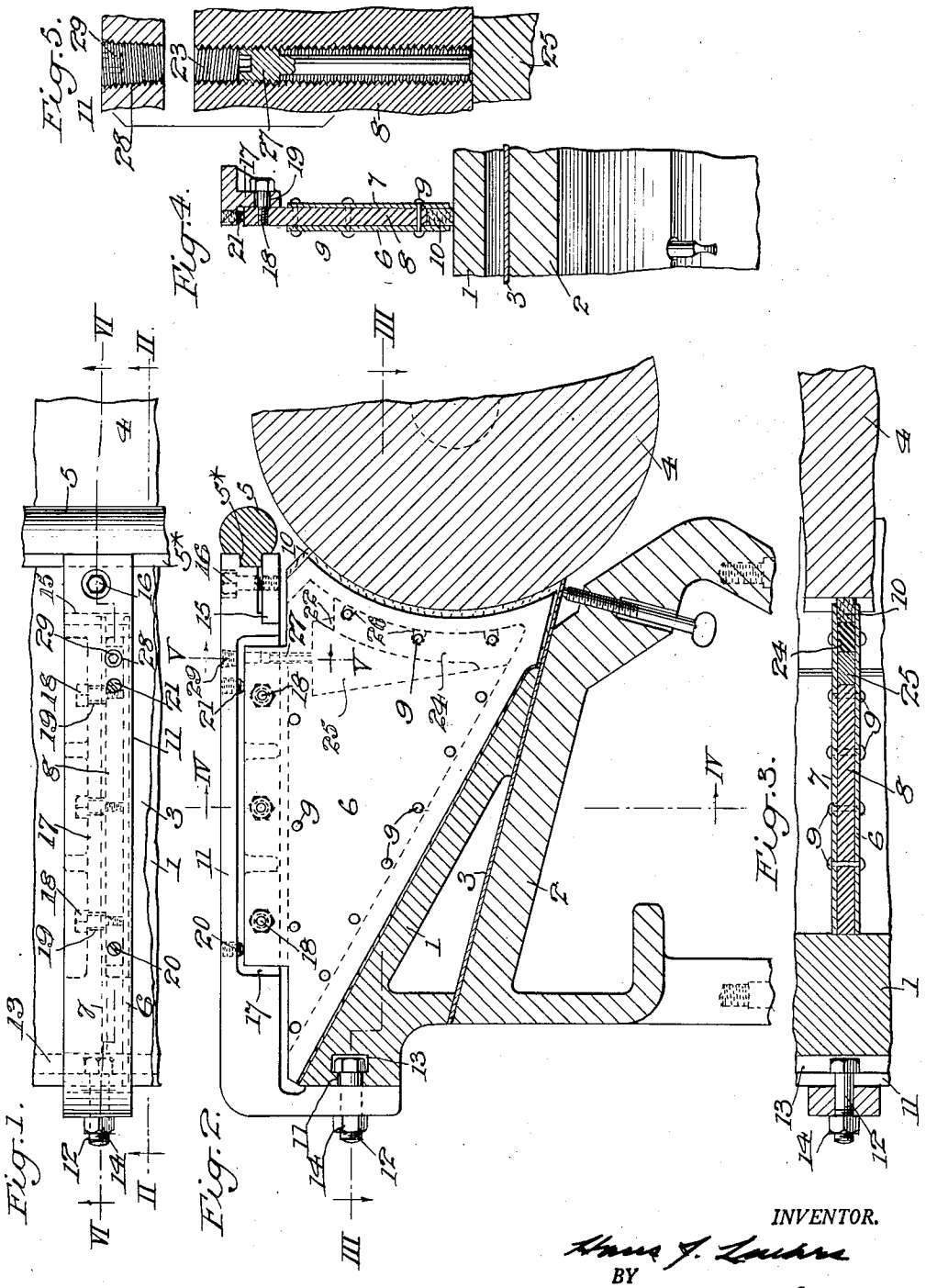
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INK FOUNTAIN FOR ROTARY PRINTING PRESSES

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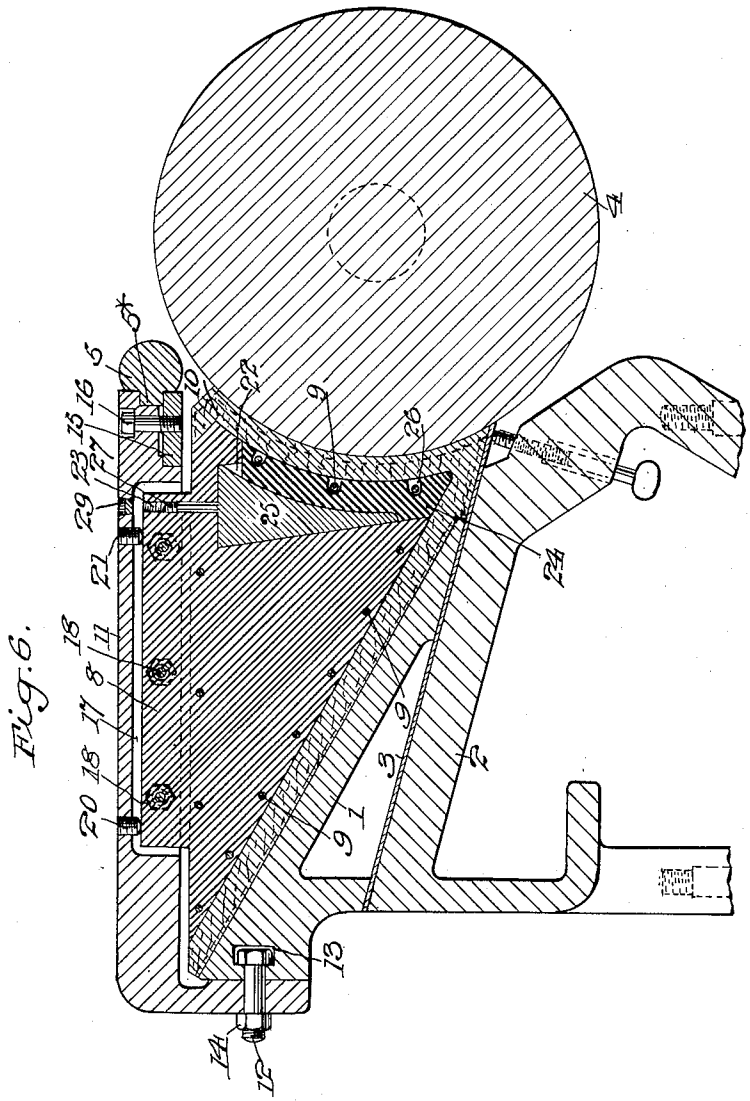


Fig. 6.

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INK FOUNTAIN FOR ROTARY PRINTING PRESSES

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My invention relates to ink fountains for rotary printing presses.

The object of my invention is to provide an ink fountain divider which may be easily adjusted to different positions along the fountain and in which a liquid tight joint is ensured between the divider and the surfaces contacted thereby.

My invention consists in an ink fountain divider which includes a sealing strip, a displaceable body in contact therewith and means for exerting pressure on the displaceable body and thereby the sealing strip for ensuring a liquid tight joint with the surfaces contacted thereby.

My invention more particularly consists in an ink fountain divider including a sealing strip, a chamber opening to the sealing strip opposite the fountain roll and the doctor-blade, a wedge slidable in said chamber and a soft rubber body located in the chamber between the wedge and sealing strip, means being provided for forcing the wedge in a direction to displace the body and thereby the sealing strip to ensure a liquid tight joint along the fountain roll and the doctor blade.

A practical embodiment of my invention is represented in the accompanying drawings, in which

Fig. 1 represents a detail plan view of an ink fountain including my improved fountain divider;

Fig. 2 represents a detail vertical section through the ink fountain in the plane of the line II—II of Fig. 1, showing the fountain divider in side elevation;

Fig. 3 represents a detail horizontal section taken in the plane of the line III—III of Fig. 2;

Fig. 4 represents a detail vertical section taken in the plane of the line IV—IV of Fig. 2;

Fig. 5 represents a detail section taken in the plane of the line V—V of Fig. 2 on an enlarged scale of the screw for adjusting the wedge; and

Fig. 6 represents a detail vertical section taken in the plane of the line VI—VI of Fig. 1.

The ink fountain is denoted by 1, its support by 2, the interposed doctor blade by 3, the fountain roll by 4 and the fountain bar adjacent the fountain roll by 5. The doctor blade 3 is shown as extended beyond the inner edge of the inclined bottom of the fountain to the fountain roll 4.

The fountain divider is shown as including two side plates 6, 7 and an intermediate plate 8, the plates being secured together at various points by rivets 9.

The edges of the side plates 6, 7 are shaped to

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conform to and spaced a short distance from the bottom of the fountain bowl, the exposed portion of the doctor blade 3 and the surface of the fountain roll 4. The edges of the intermediate plate 8 are shaped to conform to and spaced a greater distance from the bottom of the fountain bowl, the exposed portion of the doctor blade and the fountain roll.

A flexible sealing strip 10, which may be composed of felt, extends along the bottom and rear edges of the intermediate plate 8 in a peripheral groove formed by the projecting edges of the side plates 6, 7. The exposed straight edges of the sealing strip extend beyond the edges of the said side plates into contact with the bottom of the fountain bowl and the exposed portion of the doctor blade. The exposed concave edge of the sealing strip is in contact with the peripheral surface of the fountain roll. The fountain roll contacting edge of the sealing strip is shown as impregnated with wax.

The fountain divider may be adjustably positioned along the fountain by providing a divider supporting bar 11 which spans the fountain. The outer end of this divider bar has a depending arm which receives a bolt 12, the head of which is slidable in an undercut groove 13 in the fountain, a nut 14 on the bolt 12 exterior to said arm serving to clamp the outer end of the divider bar in its adjusted position.

The inner end of the divider bar 11 is slidable along the fountain bar 5 and it may be secured in its adjusted position by providing the bar 5 with a tongue 5* which may be clamped between the divider bar 11 and a nut 15 by a screw 16.

The intermediate divider plate 8 is suspended from the depending flange 17 of the divider bar 11 by bolts 18 which pass through enlarged holes 19 in said flange into threaded engagement with the intermediate divider plate.

Two vertically disposed adjusting screws 20, 21 are threaded in the divider bar 11 and bear against the top edge of the intermediate divider plate 8 for initially adjusting the position of the divider with respect to the bottom of the fountain bowl, the fountain roll and the doctor blade, when the bolts 18 are loosened. The bolts 18 may then be tightened to secure the divider in such position.

The means which I have shown for exerting additional pressure on the sealing strip 10 to ensure a liquid tight joint between the sealing strip and the fountain, fountain roll and doctor blade, comprises the following elements.

A suitably shaped pressure chamber 22 is

formed in the intermediate divider plate 8 between the side plates 6, 7, which chamber opens to the sealing strip 10 opposite the fountain roll and the exposed portion of the doctor blade. The inner or back wall of this chamber 22 is inclined downwardly toward the inner edge of the divider and the outer or front wall at the upper end of the chamber is parallel to the opposite portion of the inner wall. A screw threaded vertical passage 23 extends downwardly from the top edge of the intermediate divider plate 8 to the top of the pressure chamber 22.

A displaceable body 24, preferably an elastic body, as soft rubber, is located in the pressure chamber 22 with its concave edge in contact with the convex edge of the sealing strip 10 opposite the fountain roll. The inclined bottom edge of this soft rubber body 24 is in contact with the sealing strip opposite the exposed portion of the doctor blade.

A suitably shaped slidable wedge 25 is located in the pressure chamber 22 with its outer edge in sliding contact with the inclined inner or back wall of the pressure chamber 22 and the inner edge portion in sliding contact with the inclined outer or front wall at the upper end of the chamber 22. The concave portion of the inner edge of the wedge 25 is in contact with the convex outer edge of the soft rubber body 24. The soft rubber body and the wedge serve to substantially fill the pressure chamber 22. This soft rubber body is shown as recessed as by providing spaced cross channels 26 in the concave face of the said soft rubber body which is in contact with the sealing strip. These cross channels permit the free insertion of the cross rivets 9 to maintain the proper spacing of the side plates 6 and 7 at these points.

The means which I have shown for sliding the wedge along the pressure chamber 22 in a direction to exert pressure on the soft rubber body 24 and thereby on the sealing strip 10 includes a screw 27 which is threaded in the passage 23 with the inner end of the reduced shank of the screw contacting the top of the wedge 25. The outer end of this screw 27 may be manipulated by a suitable tool, not shown, inserted through a hole 28 in the divider bar 11 in alinement with the said passage 23 which hole 28 is normally closed by a suitable screw plug 29. It will be noted that the curved contacting edges of the sealing strip 10, displaceable body 24 and wedge 25 are all concentric with the fountain roll 4.

In operation—after the divider bar, with the divider carried thereby, is adjusted along the fountain to the desired position, the bolt 12, nut 15 and screw 16 may be used to secure the divider bar in its adjusted position. The bolts 18 which connect the divider to the divider bar may be loosened and the adjusting screws 20, 21 manipulated to initially position the divider in the fountain bowl. The screws 20, 21 may then be tightened to secure the divider in such position. Thereafter the screw 27 may be manipulated to move the wedge diagonally downward along the straight inner and outer walls of the pressure chamber 22 to exert the required pressure on the soft rubber body 24, displace it and thereby cause the sealing strip 10 to ensure a liquid tight joint between it and the surfaces contacted thereby. It will be noted that when the movement of the screw 27 is reversed the return of the soft rubber body to its original position will move the wedge upwardly to its original position.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention, and hence I do not intend to be limited to the particular embodiment herein shown and described.

What I claim is:

1. In an ink fountain, a fountain roll, and a fountain divider including side plates and an intermediate plate, a flexible sealing strip contacting the bottom of the fountain and the fountain roll, an elastic body contacting the sealing strip and a manually operated slidable wedge located between the side plates and contacting both the intermediate plate and the said elastic body for exerting pressure thereon and thereby on the sealing strip along the fountain roll for ensuring a liquid tight joint therewith.

2. In an ink fountain, a fountain roll, and a fountain divider including side plates and an intermediate plate, a flexible sealing strip contacting the bottom of the fountain and the fountain roll, a soft rubber body contacting the sealing strip and a manually operated slidable wedge located between the side plates and contacting both the intermediate plate and the said soft rubber body for exerting pressure thereon and thereby on the sealing strip along the fountain roll for ensuring a liquid tight joint therewith.

3. In an ink fountain, a fountain roll, a doctor blade, and a fountain divider including side plates and an intermediate plate, a flexible sealing strip contacting the bottom of the fountain, the fountain roll and the doctor blade, an elastic body contacting the sealing strip and a manually operated slidable wedge located between the side plates and contacting both the intermediate plate and the said elastic body for exerting pressure thereon and thereby on the sealing strip along the fountain roll and doctor blade for ensuring a liquid tight joint therewith.

4. In an ink fountain, a fountain roll, a fountain divider including side plates and an intermediate plate, a flexible sealing strip extending along the bottom and rear edges of the intermediate plate and contacting the bottom of the fountain and the fountain roll, said intermediate plate having a pressure chamber open to the sealing strip opposite the fountain roll, a wedge slidable in said chamber, a soft rubber body located in the chamber between the wedge and the sealing strip, and means for moving said wedge to exert pressure on said body and thereby on the sealing strip for ensuring a liquid tight joint along the fountain roll.

5. In an ink fountain, a fountain roll, and a fountain divider including side plates and an intermediate plate, a flexible sealing strip extending along the bottom and rear edges of the intermediate plate and contacting the bottom of the fountain and fountain roll, said intermediate plate having a pressure chamber open to the sealing strip opposite the fountain roll, a wedge slidable in said chamber, an elastic body located in the chamber between the wedge and the sealing strip, and a manually operated screw threaded in said intermediate plate and contacting the top of the wedge for moving said wedge to exert pressure on said elastic body and thereby on the sealing strip for ensuring a liquid tight joint along the fountain roll.

6. In an ink fountain, a fountain roll and a fountain divider including side plates and an intermediate plate, a flexible sealing strip contacting the bottom of the fountain roll, said intermediate plate having a chamber opening to

the sealing strip, a wedge slidable along the outer wall of the chamber diagonally toward and away from the fountain roll, an elastic body located in the chamber between and contacting the sealing strip and the wedge, and means carried by said intermediate plate and contacting the top of the wedge for moving the wedge diagonally downward to cause the body to exert pressure on the sealing strip for ensuring a liquid tight joint with the fountain roll.

7. In an ink fountain, a fountain roll and a fountain divider including side plates and an intermediate plate, a flexible sealing strip contacting the bottom of the fountain roll, said intermediate plate having a chamber open to the sealing strip, said chamber having diagonally disposed parallel outer and inner walls, a wedge slidable in said chamber and guided by the said walls, an elastic body located in said chamber between and contacting the said wedge and body, the contacting surfaces between the wedge, body and strip being all concentric to the fountain roll, and means carried by said intermediate plate for moving the wedge diagonally downward to cause the body to exert pressure on the sealing strip for ensuring a liquid tight joint with the fountain roll.

8. In an ink fountain, a fountain roll and a fountain divider including side plates and an intermediate plate, a flexible sealing strip

contacting the bottom of the fountain roll, said intermediate plate having a chamber open to the sealing strip, said chamber having diagonally disposed parallel outer and inner walls, a wedge slidable in said chamber and guided by the said walls, an elastic body located in said chamber between and contacting the wedge and body, the contacting surfaces between the wedge, body and strip being all concentric to the fountain roll, and a manually operated screw carried by the intermediate plate for moving the wedge diagonally downward to cause the body to exert pressure on the sealing strip for ensuring a liquid tight joint with the fountain roll.

HANS J. LUEHRS.

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