Jan. 3, 1933. R. R. PAGE 1,893,148

ARTICULATED FOUNTAIN DIVIDER

Filed Feb. 16, 1931

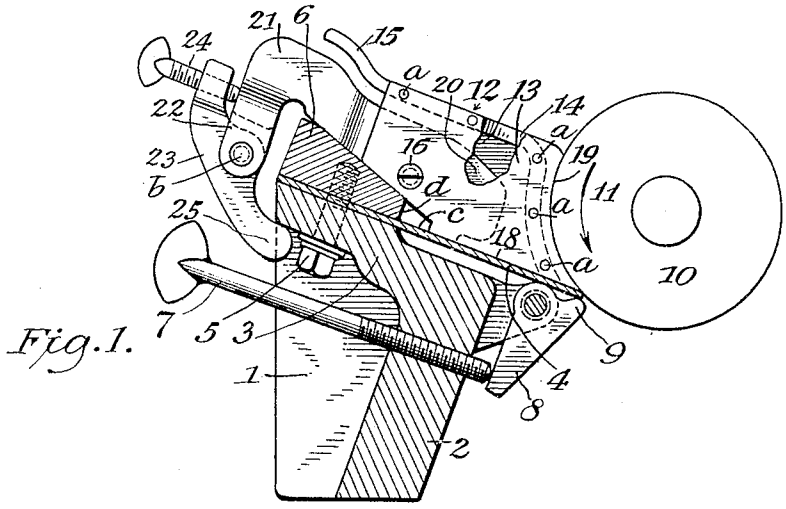


Fig. 1.

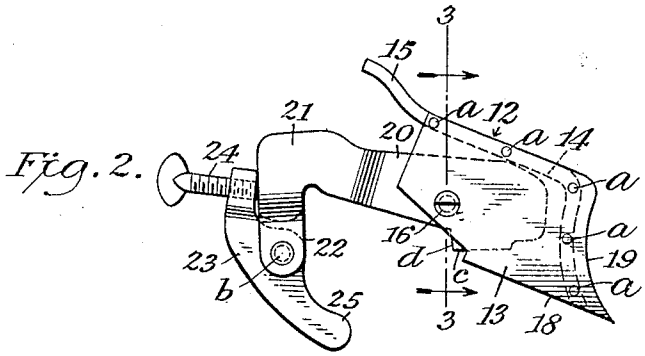


Fig. 2.

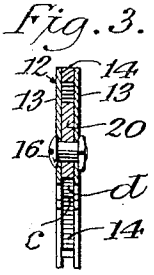


Fig. 3.

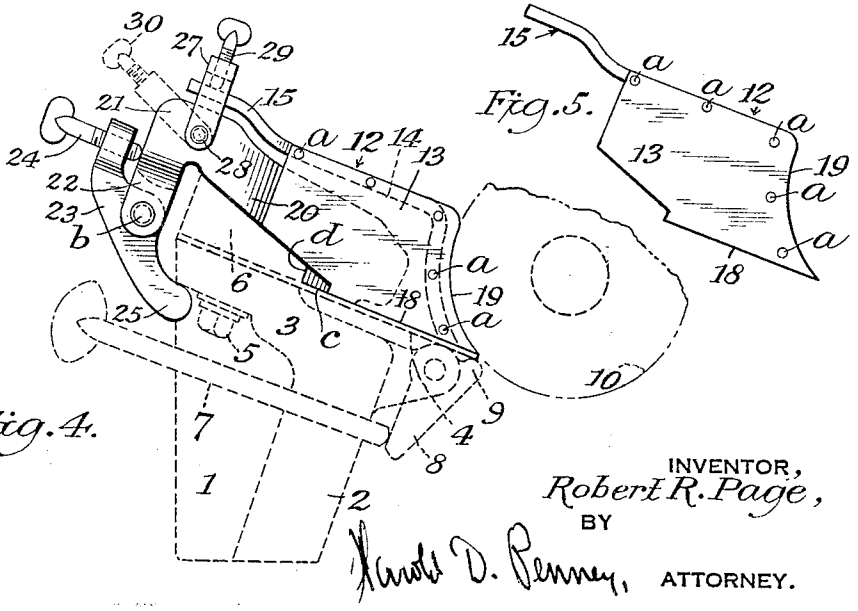


Fig. 4.

Fig. 5.

INVENTOR,
Robert R. Page,
BY
Harold D. Penney, ATTORNEY.

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UNITED STATES PATENT OFFICE

ROBERT R. PAGE, OF CRESTWOOD, NEW YORK

ARTICULATED FOUNTAIN DIVIDER

Application filed February 16, 1931. Serial No. 515,971.

My present invention relates to an improvement in fountain dividers for ink fountains for printing presses, and is an improvement over that shown in my United States Patent #907,638 issued on December 22, 1908.

Owing to certain changes and improvements in ink fountains of some standard printing presses, now in use, having been made since the issue of the foregoing noted patent, it has been found necessary to alter the structure of the prior noted divider so that it is articulated, and made into certain co-ordinating, plural, parts in order to enable the device to be applied to those printing presses to which the older single structure device is not adapted.

Thus, one of the important features of the present improvement relates to the provision of a fountain divider made up of several parts so designed as to permit "breaking" of the structure at one or more points, in order to enable the device to be applied to an undercut ink-roll and fountain structure of altered design.

Owing to other altered features of present ink fountains for printing presses, a different clamping structure has been devised, to meet varying conditions and dimensions of the later ink fountain structures.

These and other capabilities will be apprehended as the herein description proceeds, and it is obvious that modifications may be made without departing from the spirit hereof nor the scope of the appended claims.

In the drawing,

Fig. 1 discloses my improved divider, in situ, in side elevation on an ink fountain structure, which is shown in section, with an ink roll in operative position, my device being locked in operative position;

Fig. 2 is a side view of my divider "broken" or contracted, showing the position of the coordinate parts when in the act of removal or replacement in an ink fountain, as in Fig. 1;

Fig. 3 is a transverse sectional view of the device taken on line 3—3 Fig. 2 looking in the direction of the arrows;

Fig. 4 is a side view of a modified form of my device; and

Fig. 5 is a side view of one member of the modified form removed from operative position.

In Fig. 1 the ink fountain structure of the press is shown in section and comprises the fountain casting 1 of inverted L shaped formation, having the strut portion 2 joined to the fountain platform support 3, this in turn supporting the fountain blade 4 which forms the bottom of the ink fountain proper, said blade 4 being in turn clamped to the support 3 by a stiffener 6 by screws 5, only one of which is indicated. As thus described, the blade 4, extends at its outer end to contact with the under face of ink roll 10, which is journalled and driven in the customary manner in the direction of the arrow 11.

The outer end of the blade is firmly pressed in ink scraping contact with the fountain roll 10 by means of threaded thumb screw 7 mounted in strut 2, one end of said thumb screw pressing against the lower arm of a pivoted cam lever 8, the other end 9 of said cam lever being thereby forced into pressure creating contact with the outer end of the said blade and this in turn is thus pressed against the fountain roll 10. As this is all a known structure I make no claim thereto.

As in Fig. 2, my improved divider comprises a narrow pivoted blade 12 made up of two side plates 13—13, spaced apart as in Fig. 3, and mounted to a spacer bar 14, by rivets *a*, the outer upper end of which bar, which is preferably of square cross section, is extended upwardly in an overhanging curved extension arm 15.

The plates 13—13 are of duplicate outline and as shown in Figs. 1 and 2, have a fountain roll fitting contour 19 at their front faces the position of which contour is developed so as to enable these front faces to accurately fit the roll 10 when the device is in operative position, as in Fig. 1. The plates 13—13 further have accurately located bottom faces 18, which when in operative position, accurately fit the top face of the blade 4.

As the plates 13—13 are spaced apart at their central interior assembly, this provides a space for the entry therein of the narrow flat supporting tongue 20 of the fulcrum bracket 21, to which the plates 13—13 are

pivotally attached by means of a pivot pin 16 of suitable construction.

The fulcrum bracket has an angled down standing arm 22 which is yoked at its bottom end, to receive therebetween a pivoted clamping lever arm 23, mounted by means of a pivot *b*. The upper end of the lever arm 23 is provided with a threaded thumb screw 24 which presses against a face of the fulcrum arm 21 and thereby causes lever arm 23 to move to firmly clamp, or unclamp by end 25 the divider assembly into operative position with the fountain structure, this being fully shown in Fig. 1.

The flat narrow divider supporting tongue 20, is so contoured that a portion of its lower edge, as at *c*, Figs. 1 and 2, also fits the upper face of the blade 4, when the divider is in operative location, and this edge *c* is in alinement with, and forms substantially a continuation of the lower edge 18 of the plates 13—13. Further, this edge *c* of the supporting tongue 20, has a backing edge *d* (see Fig. 2), which when the divider is in operative position, coacts with the front vertical face of clamp piece 6 of the fountain, as shown in Fig. 1, to cause a forward thrust of the divider plates 13—13, when in the act of inserting the device, thus forcing the curved contoured faces 19 of the divider plates into compressive operation with the ink roll 10.

The foregoing action, in conjunction with the clamping action of the clamp lever 23, when applied to the fountain, as in Fig. 1 causes the entire assembly to be rigidly affixed to the fountain and roll 10, and thus insures accurate and firm contact of the faces 19 and edges 18 and with the blade and roll faces. In order to insure compressive contact of the critical ink damming faces 18, 19, and *c* with their respective coacting roll and blade faces, a strip of blotting paper, not shown, may be introduced between the members, to thus insure a tightly caulked jointure. The top part of the spacer 14 is disposed flush with the top edges of the plates 13, and its front end which is curved downwardly to conform with the curve of the edges 19, provides a pocket at the roll 10, as clearly shown in the drawing, the front face of the curved end being spaced from the roll.

In the form above described, the device is shown as being articulated, and thus connected together in a single unitary construction. It is intended in its described form, to be completely attached or detached from a fountain as and when conditions so require.

In the modified form as shown in Figs. 4 and 5, the structure is substantially exactly like that disclosed in Figs. 1 to 3, inclusive, with the exception that the pivot 16 of the previously outlined divider is left out, thus leaving the divider plates 13—13 and the spacer bar 14—15, as a separately removable unit. As thus constructed, it is intended that the portion of the divider which acts as a support and fountain clamping means and which is comprised of parts 20 and 23 and their appurtenant fittings may be affixed to the ink fountain more os less permanently, thereby forming an attachment to the ink fountain to which, when required, the actual ink divider head 13—13—14—15 may be attached and removably detached, readily.

As a substitute means for holding the divider head 13—13—14—15 to the more or less permanently attached clamping support, and to permit its ready removal, without removal of the entire divider structure, the arm 21 is provided with a U-shaped, yoke-like swinging clamp member 27, Fig. 4, which is pivoted to arm 21 at 28, and which is provided with a clamping thumb screw 29.

When not in use the clamp 27 is swung to the dotted position 30, and while in this clearing position, the divider head 13—13—14—15 as in Fig. 5, is set into operative position, as in Fig. 4, and the yoke 27 brought up from dotted position to full position of Fig. 4, at which time the yoke 27 is directly over the curved extension arm 15, thereupon the thumb screw 29 is tightened and the divider head forced into intimate ink damming contact with roll 10 and the face of the blade 4.

In substance both of these devices are similar in principle, as both are alike in function and structural detail, but are so constructed as to permit "breaking" between the clamping support and the divider head portions, in order to permit withdrawal or insertion into and with the altered fountain construction for which they are designed to cooperate.

Having thus described my invention what I claim is:

1. A fountain divider having a three part articulated construction comprising a fulcrum member, and a pivoted fountain clamp and ink divider head thereon.

2. A fountain divider having a three part articulated construction comprising a fulcrum member said member including at one of its ends pivot means, a fountain clamp pivoted on said means, and a pivoted ink divider head, and means carried by the opposite end of said member and whereon said divider is pivoted.

3. A fountain divider having a three part articulated construction comprising a fulcrum member, a pivoted fountain clamp on one end thereof and an ink divider head mounted on the opposite end.

4. A fountain divider comprising a fulcrum member, fountain clamping means on said member, an ink dividing head operatively connected to said fulcrum member, said head including spaced portions which movably embrace said member, and means

carried by said fulcrum member to lock the fountain divider to a fountain.

5. A fountain divider comprising a fulcrum member, fountain clamping means and a removable ink dividing head operatively connected to said fulcrum member, and means carried by said fulcrum member to lock said dividing head to the fulcrum member, and means carried by said clamping member to lock the same to said fulcrum member and to a fountain.

6. A fountain divider comprising a fulcrum member having a fountain clamp and an ink dividing head thereon, said clamp and head being pivotally mounted upon said fulcrum member thereby to form a three part articulated divider and means for adjustably locking said clamp and divider in operative position upon an ink fountain.

7. A fountain divider comprising a fulcrum member having a fountain clamp and an ink dividing head thereon, said clamp being pivotally mounted upon said fulcrum member, said dividing head being removably mounted to said fulcrum member, thereby to form a three part, removable, articulated divider and means for adjustably locking said clamp, fulcrum member and divider in operative position upon an ink fountain.

8. A fountain divider comprising a fulcrum member having at one of its ends pivot means, a fountain clamp pivoted on said means, an ink divider head having spaced plates movably embracing the opposite end of said member, and means rigid with said plates and providing therebetween a front pocket.

9. A fountain divider comprising a fulcrum member having at one of its ends pivot means, a fountain clamp pivoted on said means, an ink divider head including spaced plates which movably embrace said member, means rigid with said plates and spaced from the front edges of said plates to provide a pocket thereat, and means movably attaching said head to said member.

Signed at New York in the county of New York and State of New York this 10 day of February, A. D. 1931.

ROBERT R. PAGE.