Jan. 5, 1926. 1,568,299

B. D. STEVENS

INKING FOUNTAIN

Filed August 15, 1923 2 Sheets-Sheet 1

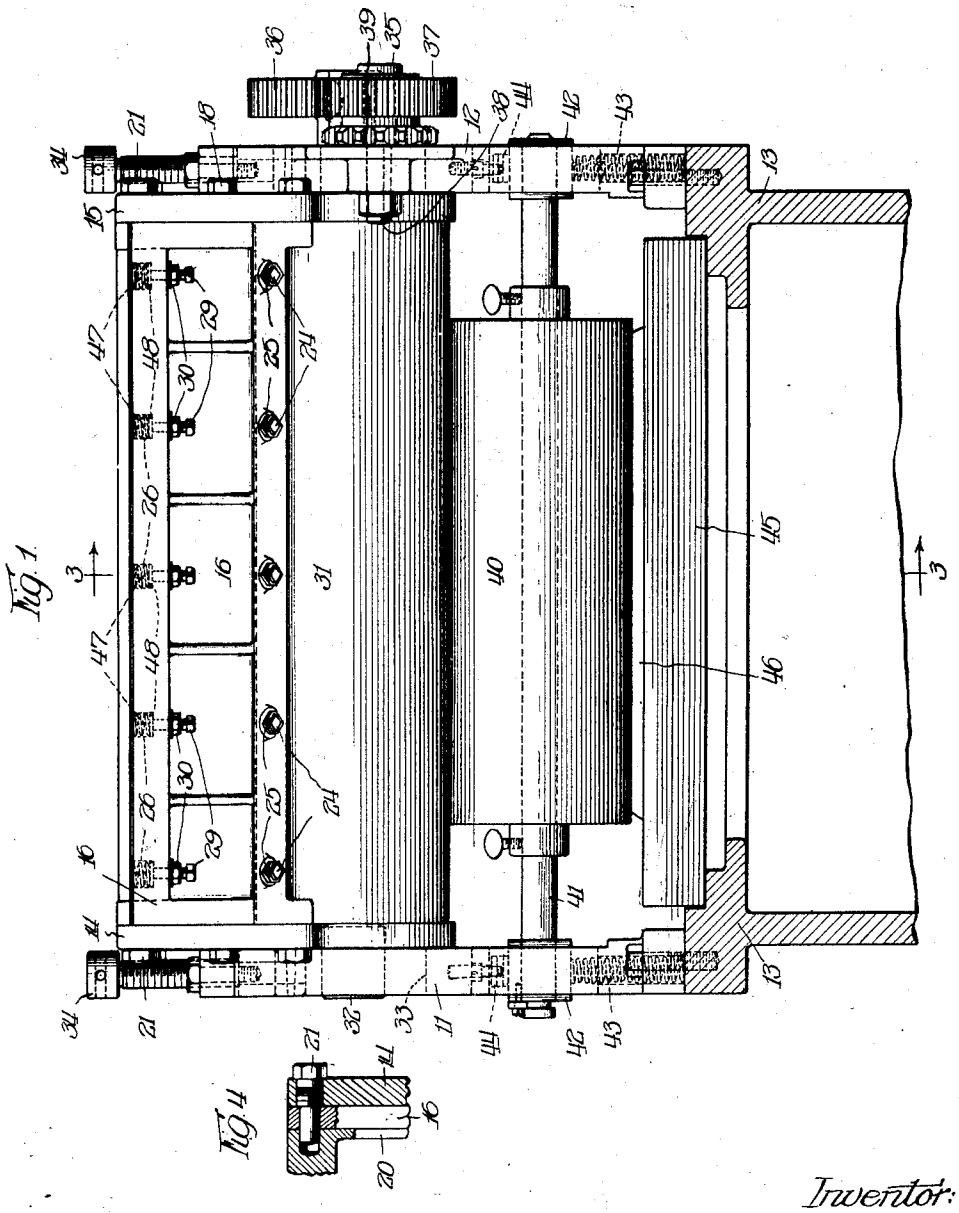


Fig. 1

Fig. 4

Witness:
R. Burkhardt

Inventor:
Burt D. Stevens:
By Wilkinson, Huxley, Byron & Knight

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Fig. 3

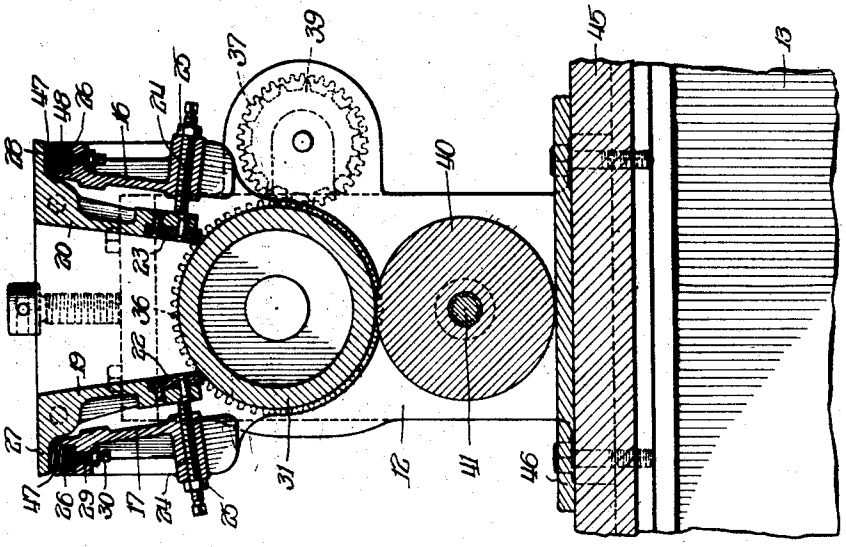
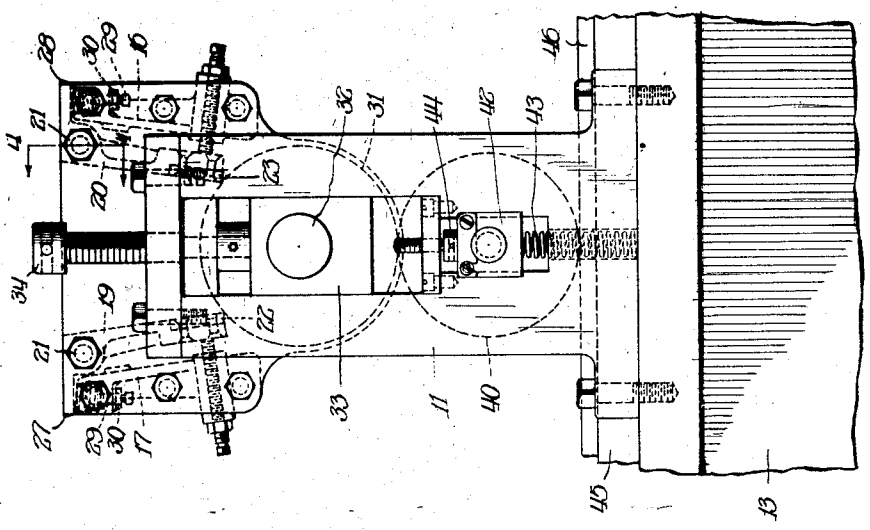


Fig. 2



Witness:
R. Burkhardt

Inventor:
Burt D. Stevens,
By Wilkinson Huxley Byron & Knight
attys.

Patented Jan. 5, 1926. 1,568,299

UNITED STATES PATENT OFFICE.

BURT D. STEVENS, OF EVANSTON, ILLINOIS, ASSIGNOR TO MIEHLE PRINTING PRESS & MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

INKING FOUNTAIN.

Application filed August 15, 1923. Serial No. 657,471.

To all whom it may concern:

Be it known that I, BURT D. STEVENS, a citizen of the United States, residing at Evanston, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Inking Fountains, of which the following is a specification.

This invention relates to a new and improved ink fountain and more particularly to an apparatus for controlling the flow of ink from the fountain chamber upon the fountain roll.

The invention has been shown as applied to the type of fountains which consist in an ink holding box or chamber, the bottom of which is closed by the upper portion of the fountain roll. This roll has a slight clearance from the box sides and carries upon its surface a film of ink which is passed on to a distributor roll or rolls by means of which the ink is applied to the printing surface. With fountains of this character it is necessary to provide means for accurately adjusting the clearance between the lower edge of the fountain wall or the knife carried by such wall and the roller. This clearance determines the amount of ink applied to the roller and thus directly controls the amount of ink applied to the printing surface.

It is an object of the present invention to provide a new and improved ink fountain having means for accurately controlling the ink discharge clearance.

It is a further object to provide means of this character in which a portion of the ink chamber wall is pivotally supported and may be moved about its supporting pivot to vary the ink discharge clearance.

It is an additional object to provide means of this character in which the chamber wall is provided with adjusting mechanism at a plurality of points, and in which the wall is yieldingly held against the adjustment control means.

Other and further objects will appear as the description proceeds.

I have illustrated a preferred embodiment of my invention in the accompanying drawings, in which—

Figure 1 is a side elevation of the improved ink fountain with a fragmentary portion of the press to which it is applied;

Figure 2 is an end view as seen from the left end of Figure 1;

Figure 3 is a section taken on line 3—3 of Figure 1; and

Figure 4 is a fragmentary section taken on line 4—4 of Figure 2.

The standards 11 and 12 are secured to the opposite sides of the press bed 13. The end walls 14 and 15 of the ink chamber are secured to the upper portions of the standards 11 and 12. The fixed sides 16 and 17 are secured to the ends 14 and 15 by means of bolts 18. The adjustable inner sides or blade carrying frames 19 and 20 are pivoted to the ends 14 and 15 by studs 21 as shown in detail in Figure 4. The ink control blades 22 and 23 are secured to the lower edges of the side members 19 and 20.

The fixed side members 16 and 17 are provided with the adjusting screws 24 having lock nuts 25, the inner end of these screws bearing against the swinging blade holding members 19 and 20. The side members 16 and 17 are also provided with the recesses 26 which face towards the overhanging flanges 27 and 28 of the members 19 and 20. These recesses 26 contain springs 47 which bear against the adjacent flanges. The compressive strength of these springs 26 is controlled by moving the bearing plates 48 by means of screws 29 provided with lock nuts 30.

The fountain roll 31 closes the lower side of the fountain chamber and is provided with the journal 32 adjustably fitting in the bearing member 33 in the standard 11. This journal block 33 may be adjusted vertically by means of the capstan headed screw 34. The opposite end of the inking roll is similarly supported, the end 35 of the roll shaft being provided with the gear 36 which is here shown as meshing with the driven gear 37. This gear 37 is shown upon stub shaft 38 which also carries the drive sprocket 39.

The inking roll 40 is carried upon shaft 41, the ends of which fit into the blocks 42 as shown in Figure 2. These blocks 42 are supported upon springs 43 and may be adjusted downwardly by capstan screws 44. It will be understood that the fountain roll and inking roll are so adjusted that their surfaces are in contact. As shown in Fig-

ure 1, the member 45, carrying the plate 46, is movable upon the bed of the press in such manner as to carry the plate 46 into and out of engagement with the roll 40.

In the adjustment of the ink chamber side members 19 and 20, carrying the blades 22 and 23, the screws 24 are moved inwardly or outwardly such an amount as is desired and then locked in place by means of the lock nuts 25 associated with the screws. This movement of the screws causes the members 19 and 20 to pivot about their supporting studs 21 if swung inwardly to compress the springs 47. If the adjustment consists in the loosening or withdrawal of the screws 24, the springs 47 cause the members 19 or 20 to follow up closely and contact with the ends of the screws 24.

The compressive force of the springs 47 may be controlled by adjusting the screws 29. By means of a plurality of screws 24 spaced along the length of the blade carrying members, as shown in Figure 1, the location of the blade in relation to the fountain roll may be accurately controlled at a plurality of points throughout its length.

While the fountain mechanism has been shown associated with an ink distributing means consisting of a single inking roll, it is obviously adapted for use with fountains using a plurality of rolls for ink distribution and with other types of fountains. I contemplate such modifications and changes to adapt it for use with other constructions as come within the scope of the appended claims.

I claim:

1. An ink fountain comprising a fountain roll, an ink controlling blade, pivoted supporting means for the blade, said blade and supporting means comprising a wall of the fountain, an outwardly extending flange on the blade supporting means, a frame holding the pivots of the blade supporting means, compression springs carried by said frame and engaging the flanges of the blade supporting means to urge the blade away from the roll and adjustable means engaging the body of the blade support to move it toward the roll.

2. An ink fountain comprising a fountain roll, a pair of oppositely faced ink controlling blades, pivoted supporting means for the blades, said blades and supporting means comprising opposite walls of the fountain, outwardly extending flanges on the blade supporting means, a fountain frame, compression springs carried by said frame and engaging the under sides of the flanges of the blade supporting means to urge the blades away from the roll, and adjustable means engaging the body of the blade supports to move the blades toward the roll.

Signed at Chicago, Illinois, this 8th day of August, 1923.

BURT D. STEVENS.