April 4, 1967 F. GENTILE 3,312,166

ADJUSTABLE WIPER BLADE ASSEMBLY
FOR A ROLLER FOUNTAIN DAMPENER
Filed June 23, 1966

FIG. 1

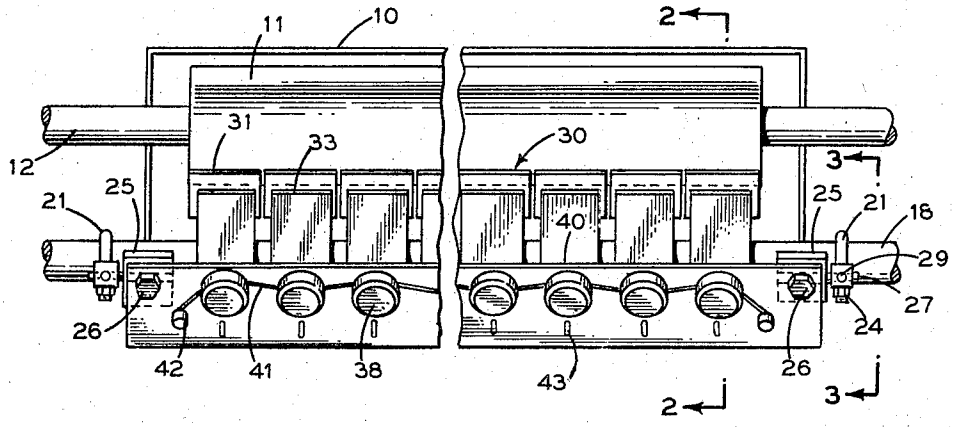
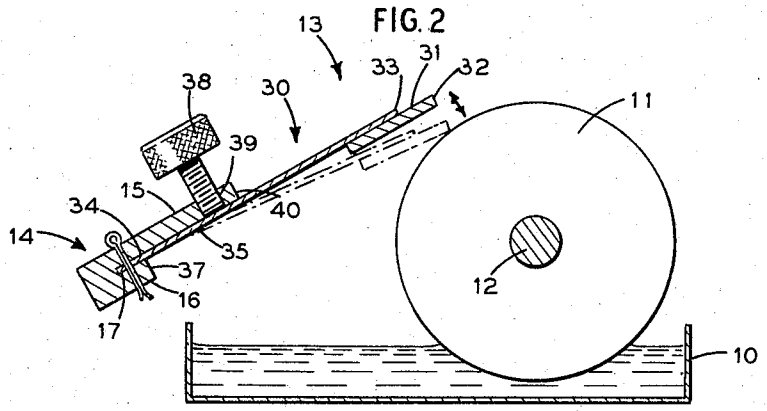


FIG. 2



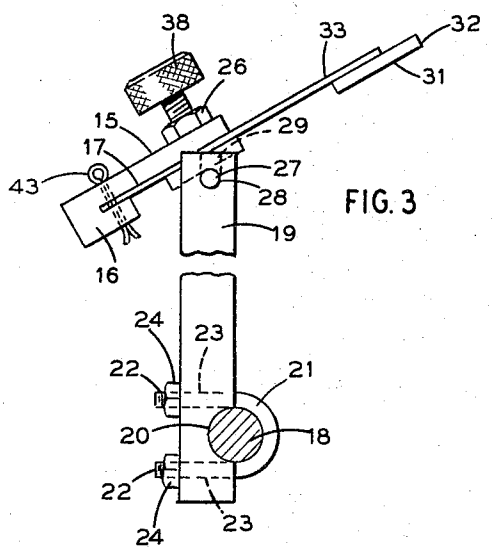


FIG. 3

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ADJUSTABLE WIPER BLADE ASSEMBLY FOR A ROLLER FOUNTAIN DAMPENER

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1 Claim. (Cl. 101—148)

This invention relates to a dampening device for printing presses, and more particularly concerns precision controlled dampening means for offset, lithographic and planographic printing presses.

An object of this invention is to provide for use with printing presses in which moistening liquid is applied to the printing surface, improved means for precisely controlling the amount of moistening liquid transferred to the printing surface by a fountain roller of the press.

Another object of this invention is to provide a dampening device attachable to printing presses having a fountain roller, and including stop means for precisely controlling the amount of moistening liquid transferred at various zones along the length of the fountain roller.

Still another object of this invention is to provide a device of the character described adapted to precisely control the amount of moistening liquid applied to various portions of a given printing surface so as to substantially improve the quality of the ink imprints produced by such printing surface.

A further object of this invention is to provide a device of the character described, which is of simple construction, economical to manufacture, is readily attached to various forms of offset, lithographic or planographic printing presses, and lends itself to simple operation and control by the pressman.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

In the drawing, FIG. 1 is a top plan view showing the dampening device embodying the invention;

FIG. 2 is a transverse sectional view taken on the line 2—2 of FIG. 1; and

FIG. 3 is an end elevational view thereof.

As shown in the drawing **10** designates the usual water fountain as the same is found in offset or lithographic presses, with a fountain roller **11** rotatably mounted in fountain **10** by a shaft **12**. It is understood that moistening fluid is transferred to the usual printing cylinder, not shown, from the fountain roller **11**, by way of intermediately disposed dampening rollers, vibration roller, and ductor roller, not shown, all in a manner well known in the art.

It is highly desirable that the amount of moistening liquid transferred to the printing cylinder by way of fountain roller **11** be regulated throughout the length of roller **11**, and further, that such regulation be applicable independently to various laterally related zones along the length of roller **11**, to thereby increase the effectiveness of the printing operation in accordance with the variations in ink transfer dictated by the particular printing cylinder.

Accordingly, there is provided stop means engageable with the fountain roller **11**, which lends itself to precise regulation. Such stop means comprises a plurality o similar wiper assemblies generally indicated at **13** arranged in side by side relation to contact successive zones of roller **11** along the length thereof. The wiper assemblies **13** are mounted in a rigid bar generally indicated at **14**, which extends parallel to roller **11**.

Mounting bar **14** is of a J shaped cross section, comprising an uppermost wide bar portion **15** and a lowermost narrow bar portion **16** in parallel relation to bar portion **15** and forming a narrow groove **17** therebetween, which groove extends the length of bar **14**.

Bar **14** is mounted in proper relation to roller **11** by way of a shaft **18** forming a part of the printing press with which the roller **11** is associated. A pair of arms **19** having part circular cutouts **20** on the side edges thereof adjacent one end thereof, are attached to shaft **18** by U shaped bolts **21**; the parallel arm portions **22** of bolts **21** passing through bores **23** in arms **19** and nuts **24** thereon locking arms **19** to shaft **18** at opposite ends thereof.

Mounting brackets are secured to the opposite ends of bar **14**, in the form of small plates **25** secured to the underside of bar portion **15** by screws **26**. Each of the plates **25** is provided with a pin **27** projecting from the side thereof; said pins **27** being receivable in openings **28** at the upper ends of arms **19**. Set screws **29** engageable with pins **27** lock the mounting bar **14** in a selected angular position relative to roller **11**.

Each of the wiper assemblies **13** comprises a stop member in the form of a flat spring steel member **30** with a stop element in the form of a rubber wiper element **31** secured to the underside thereof, the wiper element **31** having a forward edge **32** projecting beyond the forward edge **33** of member **30**, for engagement with roller **11**.

Spring member **30** has a rear edge portion **34** receivable in groove **17** of mounting bar **14** and held between bar portions **15**, **16**. An intermediate portion **35** of member **30** underlies the undersurface portion **36** of bar portion **15**. Means is provided for deflecting the intermediate portion **35** of member **30** downwardly about the forward edge **37** of bar portion **16**. To this end, a series of knurl headed tension screws **38** are threaded into threaded openings **39** in bar portion **15** adjacent the outer edge **40** of said bar portion **15**. Each of screws **38** is adapted to bear against a corresponding spring member **30**, whereby deflection of said member **30** downwardly brings edge **32** of wiper element **31** into contact with circumferential portions of roller **11**. Since the contact pressure of wiper element edge **32** with respect to roller **11** may be precisely regulated by way of screws **38**; the quantity of moistening fluid transferred by roller **11** to the printing cylinder, not shown, is precisely determined, with variations along the length of roller **11** being attained by appropriate adjustment of the selected screws **38**.

A fine wire **41** tautly stretched and engaging the threaded portions of screws **38**, retains said screws in their set positions; wire **41** being anchored at the opposite ends thereof in posts **42** fixed at the opposite ends of bar portion **15**.

It will be apparent that mounting bar **14** being of a rigid character, the wiper assemblies **13** will at all times maintain their precisely regulated set positions so as to accurately control the transfer of moistening fluid by way of roller **11**. Further, the groove **17** in bar **14** allows for quick and easy mounting of the wiper assemblies **13** thereon and removal therefrom for replacement. Assemblies **13** are retained against inadvertent separation from bar **14**, by cotter pins **43** disposed in registering openings in bar portions **15**, **16** as well as in spring member portion **34**.

The mounting of bar **14** on arms **19** not only facilitates adjustment of the position of bar **14**, but also permits swinging movement to positions allowing easy removal of water fountain **10** and roller **11**.

As various changes might be made in the disclosed embodiment of the invention without departing from the spirit thereof, it is understood that all matter herein shown or described, shall be deemed illustrative and not by way of limitation, except as set forth in the appended claim.

What is claimed is:

In a printing press having an elongated water fountain roller for transferring dampening fluid to a printing surface, stop means for selectively regulating the amount of dampening fluid retained on said roller in various laterally

related zones along the length of said roller, said stop means comprising an elongated rigid mounting bar extending parallel to said roller, and a plurality of stop members mounted on said bar in laterally adjacent relation and extending toward said roller, each stop member comprising a thin flat spring member and a stop element on one end portion of said spring member for making contact with a circumferential portion of said roller of limited axial extent, said mounting bar being formed with longitudinally extending groove means on one edge thereof for receiving therein the other end portions of said spring members, said mounting bar including a first bar portion at said groove means having a longitudinally extending fulcrum edge and a second bar portion at said groove means having a longitudinally extending marginal edge portion projecting beyond the fulcurm edge of said first bar portion, each of said spring members including an inner portion received and anchored within the groove means of said mounting bar, an intermediate portion extending beyond the fulcrum edge of said first bar portion and disposed in opposed relation to the underside of the marginal edge portion of said second bar portion, and an outer portion extending beyond the outer edge of the marginal edge portion of said second bar portion, said stop element being secured to said outer portion of said spring member; and adjustable means on said second bar portion for engaging the intermediate portion of the respective spring members for adjustably varying the deflection of said intermediate portions of said spring members about the fulcrum edge of the first

ber portion to vary the contact pressure of the respective stop elements relative to said roller, wherein said spring members are slidably mounted in the groove means of said mounting bar, and means on said mounting bar for retaining each of said spring members against removal from the groove means of said mounting bar, said retaining means comprising a plurality of longitudinally spaced pairs of aligned openings in said first and second bar portions, an opening in the inner portion of each spring member for registration with a pair of said aligned openings when said spring member is received in the groove means of said mounting bar, and a locking pin for each pair of aligned openings in said first and second bar portions and the opening in the spring member in registry with a pair of said aligned openings.

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