

J. C. PADGETT.
INKING DEVICE FOR PRINTING PRESSES.

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2 SHEETS—SHEET 2.

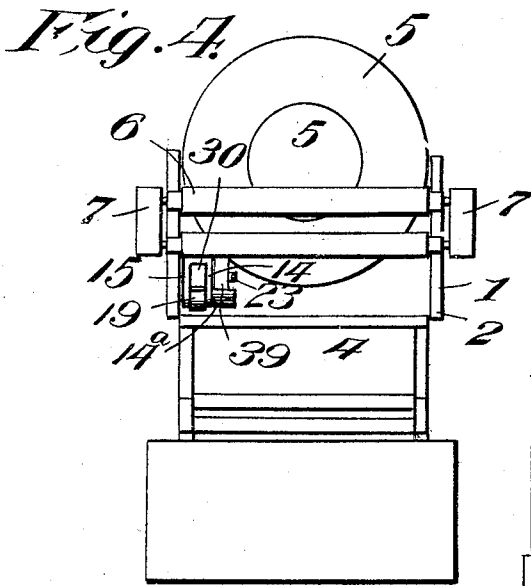
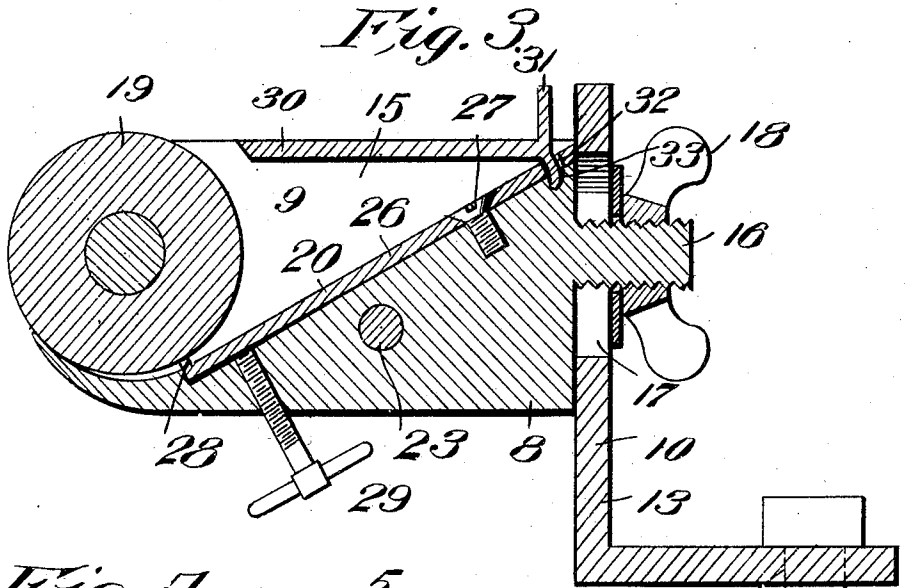
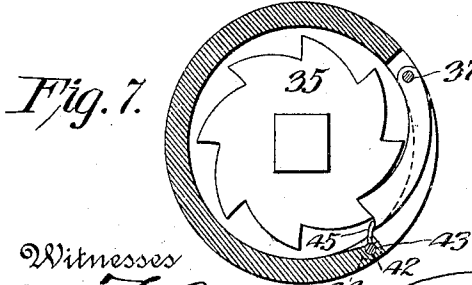
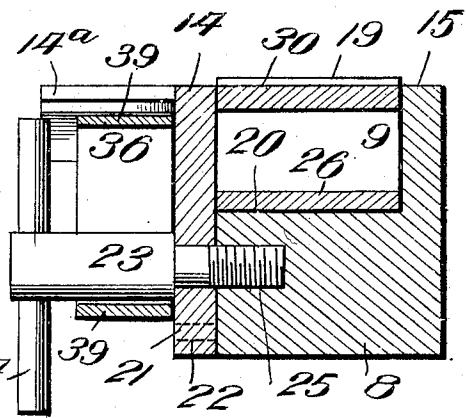


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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INKING DEVICE FOR PRINTING-PRESSES.

No. 836,528.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN C. PADGETT, a citizen of the United States, residing at Junction City, in the county of Geary and State of Kansas, have invented certain new and useful Improvements in Inking Devices for Printing-Presses; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in inking devices for printing-presses, and more particularly to a fountain inking attachment for use on revolving-disk platen job-printing presses.

One object of the invention is to provide a simple and efficient inking device which may be mounted between the inking surface or disk and the bed of the press at a point to one side of the form upon said bed, as indicated by the drawings, so that as the inking-rollers pass back and forth over the form and the inking surface or disk they will take up ink from the device and carry it to the inking surface or disk, which latter as it rotates will cause the rollers to distribute it evenly over the disk and form.

Another object of the invention is to improve and simplify the construction and operation of inking devices or attachments of this character, and thereby render the same more durable, convenient, and efficient.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation, with parts in section, of a revolving-disk platen job-printing press with my improved fountain inking attachment applied thereto. Fig. 2 is a perspective view of the attachment removed from the press. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a top plan view of the press with the attachment applied thereto. Figs. 5 and 6 are vertical transverse sectional views through the attachment; and Fig. 7 is a detail transverse sectional view through the pawl and ratchet on the inking-roller shaft, showing the device for disengaging the pawl from the ratchet-wheel.

Referring to the drawings by numeral, 1 denotes a job-printing press of well-known form which comprises a main frame 2; a bed

3, upon which the form is secured; a platen 4, which moves toward and from said bed; an inking surface or disk 5, which is revolved by a step-by-step movement, and the usual inking-rollers 6, which are mounted in a swinging frame 7, so that they are moved back and forth across the inking-disk 5 and the form upon the bed 3.

My improved fountain inking device or attachment 8 is adapted to be mounted between the inking-disk 5 and the bed 3 to one side of the form placed upon the bed 3 and in the path of the inking-rollers 6. This device or attachment comprises an ink receptacle or container 9, which is adjustably mounted upon a bracket 10, which in turn is detachably secured to the press by a bolt or the like 11 passed through an opening 12, formed in one arm of said bracket. The latter is of right-angular form, and upon its other or vertical arm 13 is mounted the receptacle 9. This adjustable connection between the bracket and receptacle is formed by seating said arm 13 between the projecting sides 14 15 of the receptacle at its rear end and by providing at said end a screw-threaded stud 16, which projects through a slot 17, formed in the arm 13. A washer and a winged nut 18 are provided upon the outer threaded end of the screw-stud 16 to clamp the receptacle firmly upon the arm of the bracket. The provision of the slot 17, the screw-stud 16, and the winged nut 18 also permits the receptacle to be adjusted so that its cylinder 19 may be adjusted to secure a proper contact with the inking-rollers of the press.

The receptacle 9 is of substantially rectangular form and has its forward end closed by an inking roll or cylinder 19, which is secured upon a shaft or trunnion which projects through openings formed in the sides 14 15 of the receptacle. The bottom 20 of this receptacle is inclined upwardly and rearwardly from its lower front end beneath the cylinder 19 to its upper rear end and is formed integral with the side 15 of the receptacle. The other side 14 of the latter is removable and is held in place by two studs 21, provided upon the adjacent side face of the body and adapted to enter openings 22, formed in the side 14, and by providing a clamping-screw 23, which has a cross-piece or handle 24 at its outer end and a reduced screw-threaded portion at its inner end, which portion is adapted to enter an opening

formed in the side 14, and a screw-threaded opening 25, formed in the bottom 20. In order to vary the amount of ink carried by the cylinder out of the curved forward end of the bottom 20, I provide an adjustable scraper or gage-plate 26 upon the bottom 20. The latter is in the form of a resilient metal plate secured between the sides 14 15 by a screw or the like 27 and having an upturned lower edge 28, adapted to engage the periphery of the cylinder 19. Said lower end of the plate 26 is adapted to be adjusted in and out of a recess or depression formed in the bottom 20 and toward and from the periphery of the roller by means of a set-screw 29, which passes through a threaded opening in the bottom 20 and has its inner end impinging against the under side of the plate 26, as clearly shown in the drawings. I also preferably force the feed of the ink by providing the receptacle with a swinging cover 30 of sufficient weight to accomplish this object. Said cover 30 is in the form of a metal plate adapted to fit between the two sides 14 15 and having at its upper or rear edge a finger-piece 31 and a pivot pin or stud 32, which is adapted to enter an opening 33, formed in the plate 26 and the bottom 20, as clearly shown in Fig. 3 of the drawings.

The cover-plate 30 rests upon the surface of the ink, the density of which is sufficient to sustain the weight of the cover-plate. Owing to the inclined bottom of the receptacle, the ink tends to pass down the same to the cylinder 19. This tendency is increased by the weight of the cover-plate, and the latter being pivoted at its inner end turns angularly as the ink is used and converges in one direction toward the bottom of the receptacle and exerts wedge-like action on the ink, the leverage of which tends to move the ink from the upper portion of the inclined bottom of the receptacle, so that all of the ink becomes forced to the cylinder. The length of the cover-plate is such that it can clear the inner side of the cylinder, and the free end thereof is beveled, as at 33.

Any suitable means may be provided for oscillating or rotating the inking-cylinder 19, so that a fresh surface or portion of its periphery will be presented to the inking-rollers 6 of the press each time the latter are moved upwardly over the same; but I preferably provide upon one end of the shaft or journal 34 of said cylinder a ratchet-wheel 35, which is surrounded by a sleeve 36. The latter has pivoted, as at 37, in a recess formed in it a pawl or dog 38, which is adapted to coact with the teeth of the ratchet 35. In order to stop and start the fountain-cylinder 19, I preferably provide a device 42 for moving the dog or pawl 38 into and out of engagement with the ratchet-teeth 35. This device 42, as clearly shown in Figs. 2 and 7 of the drawings, is in the form of a bolt, which is mount-

ed in a recess or opening 43, bored in the sleeve 36. Upon the outer end of the bolt 42 is a knob or handle 44, by means of which the detent 45 upon its inner portion may be swung in a slot in the sleeve and moved into and out of engagement with the dog or pawl 38 in order to move the latter into and out of engagement with the teeth of the ratchet. By means of this attachment the inking-cylinder may be started and stopped by simply giving the knob 44 a slight turn, as will be readily understood. The sleeve 36 may be oscillated by any suitable operative connections between it and any of the moving parts of the press; but I preferably employ a flexible band or strap 39, which has its ends passed around in opposite directions and secured to the roller-frame 7, as shown at 40, and its central portion detachably secured to the sleeve by engaging an opening formed in it, with a stud 41 provided upon the periphery of said sleeve. It will be seen that by means of these connections the sleeve will be oscillated at each movement of the roller-frame and will impart a step-by-step movement to the inking-cylinder 19, so that the latter will be rotated intermittently in the same direction. Upon the side 14 of the ink-receptacle I preferably secure or form a curved guard 44^a, which is adapted to prevent the ink from getting upon the strap 39 and the ratchet-wheel 35. This guard, which is of semicircular form, is also adapted to hold the strap upon the stud 41 on the sleeve 36. In applying and removing the strap to and from said stud the sleeve 36 is turned so that the stud is exposed, and the slot or opening in the strap is then engaged with or disengaged from the stud, as will be readily understood.

The construction, operation, and advantages of the invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings. It will be seen that by constructing and mounting an inking device in this manner upon a press of the form shown in the drawings or upon a press of any similar form ink will be fed at each movement of the rollers from the inking-cylinder 19 to one edge of the inking-disk 5, and the latter, as it is gradually rotated, will distribute the ink evenly over the entire surface of the rollers, disk, and form. Since the inking attachment is mounted outside of the side line of the form upon the bed 3, no ink that has not been properly distributed upon the rollers 6 will be permitted to come in contact with said form. By reason of the various adjustments it will be seen that the device may be quickly and accurately adjusted upon any job-printing press and the feed of the ink may be varied as desired. By simply pressing with the finger upon the force-feed plate 30 the ink may be kept against the cylinder without the necessity of using

a paddle or soiling the hands in pressing the ink against the cylinder, as in the case with other fountain inking attachments for presses. Owing to the simplicity of the construction, the parts may be manufactured at a comparatively small cost and may be quickly detached and taken apart for cleaning or changing ink.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A fountain inking device of the character described, comprising an ink-receptacle having an inclined bottom, a cylinder mounted for rotation in said receptacle at the outer lower end of the inclined bottom thereof, an inclined gage-plate in the bottom of said receptacle, means to adjust said gage-plate toward and from the under side of the cylinder, and a gravity-acting cover for the receptacle, pivotally connected at one end to said receptacle at the upper end of the inclined bottom thereof and resting freely upon the ink in said receptacle so as to force the ink toward said cylinder.

2. A fountain inking device of the character described, comprising an ink-receptacle having an inclined bottom, a cylinder mounted for rotation therein at the lower end of the inclined bottom thereof, and a gravity-acting cover for said receptacle having the end farthest from the cylinder pivoted at the upper end of the inclined bottom of the receptacle, said cover resting freely upon the ink in said

receptacle, so as to force the ink toward said cylinder.

3. The combination with a printing-press having a bed, a revolving inking-disk, a swinging frame, and inking-rollers in said frame, of a fountain inking device mounted between said disk and bed at a point to one side of the same and in the path of said rollers, said device comprising an ink-receptacle and an inking-cylinder therein, a ratchet-wheel upon the shaft of said inking-cylinder, a sleeve surrounding said ratchet-wheel, a pivoted pawl carried by said sleeve and coacting with the teeth of said ratchet-wheel, and a flexible connection attached to said sleeve and to said swinging frame, substantially as described.

4. An inking device of the character described comprising a bracket adapted to be secured to a printing-press and formed with a slotted arm, an ink-receptacle consisting of two separable sides and a bottom formed integral with one of said sides, a set-screw for securing said sides together, a screw-stud projecting from one end of said bottom and through the slot in said bracket-arm, a nut upon the outer end of said stud, an inking-roller journaled in one end of said receptacle, an adjustable feed-plate in said receptacle, a force-feed cover-plate upon said receptacle, and means for rotating said inking-cylinder, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN C. PADGETT.

Witnesses:

C. H. MANLEY, Jr.,
H. F. PARSONS.