

June 20, 1939.

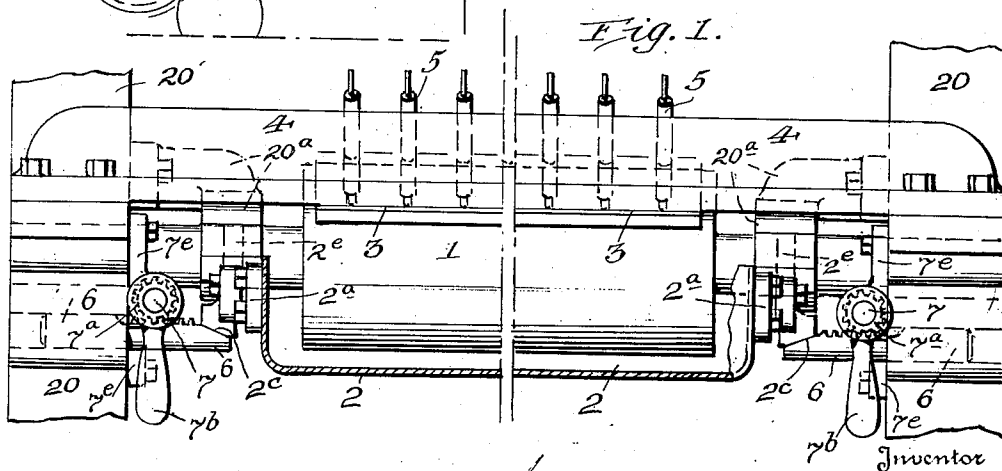
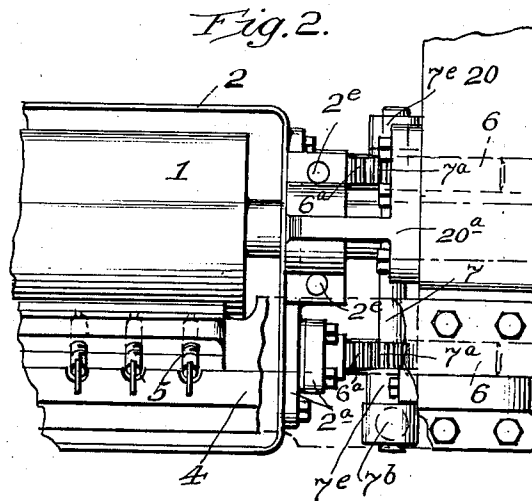
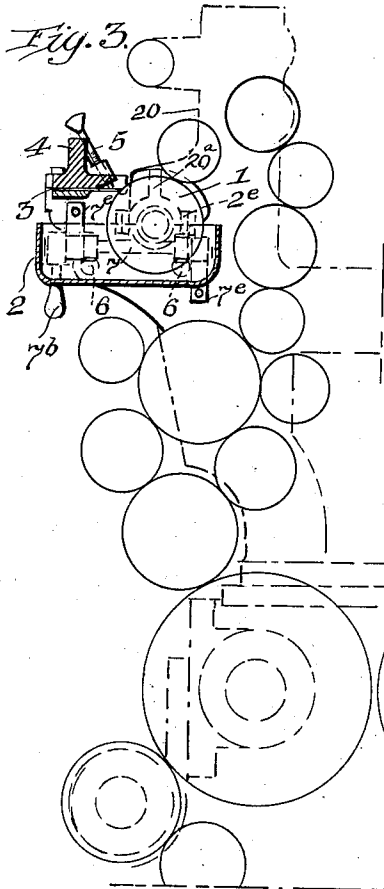
J. L. BLACKLEY

2,163,335

INK FOUNTAIN

Filed March 21, 1936

2 Sheets-Sheet 1



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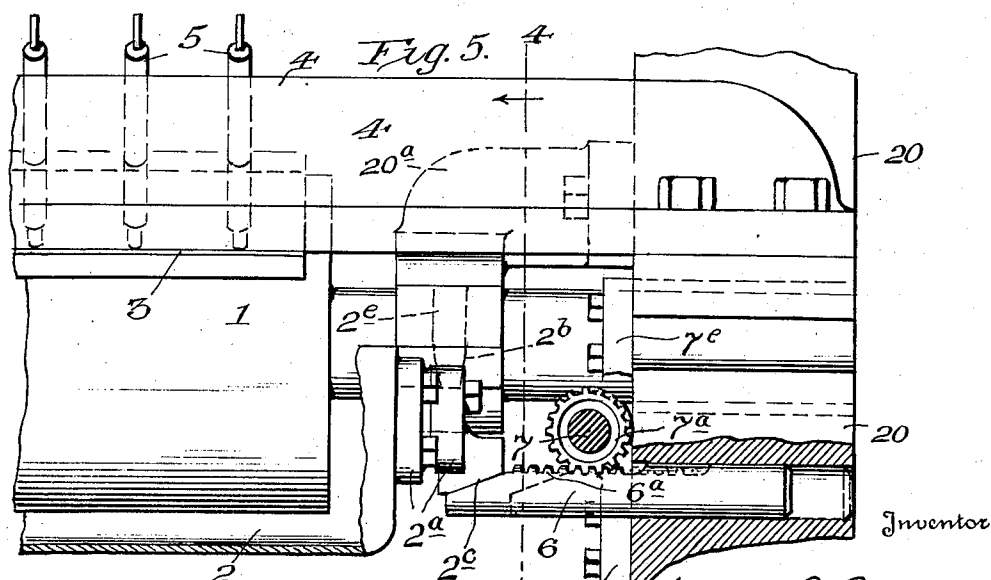
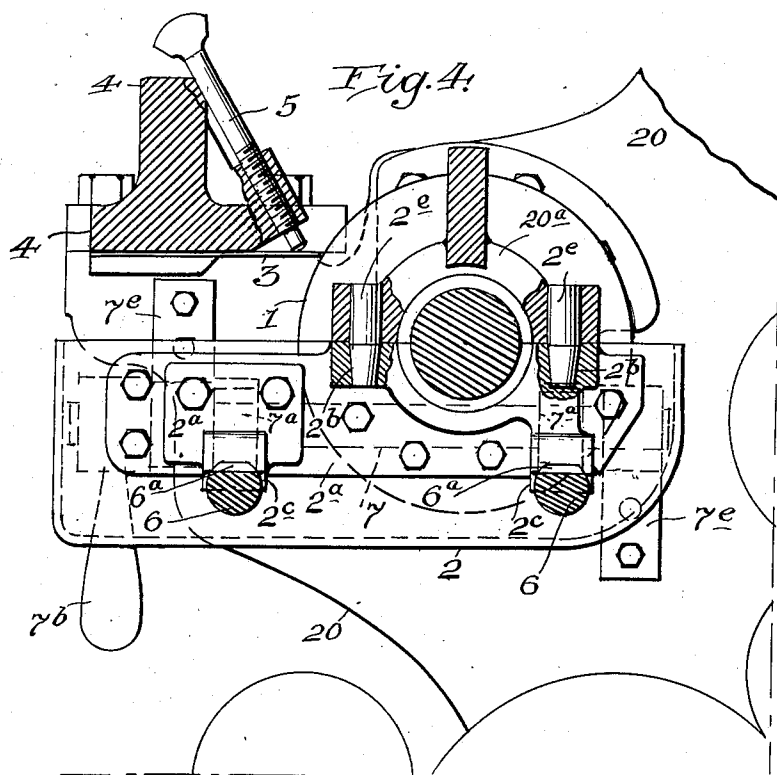
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UNITED STATES PATENT OFFICE

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INK FOUNTAIN

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Application March 21, 1936, Serial No. 70,133

8 Claims. (Cl. 101—350)

This invention is a novel improvement in ink fountains used in the inking apparatus of rotary printing presses, and has special reference to means for removably supporting the fountain ink pan or bowl in operative position.

In accordance with my invention the pan or ink holding portion of the fountain is made as a separate and easily removable part of the complete fountain, to enable the color of the ink used on the printed product to be easily and quickly changed when desired. In the usual construction of inking mechanism, if for example black ink is used on one job, and the next job requires red ink, the black ink must be removed from the fountain pan, and the pan washed thoroughly before refilling it with red ink. In the ordinary inking apparatus the fountain pan is fastened firmly in place in the press, and cleaning the pan or changing ink therein is a troublesome task.

With a fountain embodying my invention, if it is desired to change the ink the pan can be readily removed and a duplicate pan containing another color ink put in place. The fountain roll must also be cleaned in either case; but it can be much more easily cleaned when the fountain is constructed in accordance with my invention, than in the usual construction. By making the ink pan easily removable, and using interchangeable pans for different colored inks, much time is saved in making changes in color, or consistency of ink, and much waste of ink, heretofore caused by the necessity for thoroughly cleaning the pan each time the color of ink is changed, is avoided.

The accompanying drawings illustrate one practical embodiment of the invention, and I will explain the invention with reference thereto, and thereafter summarize in the claims the novel features of construction and novel combinations of parts for which protection is desired.

In said drawings:—

Fig. 1 is a front elevation of an inking mechanism embodying the invention.

Fig. 2 is a detail plan view of one end of Fig. 1.

Fig. 3 is a diagrammatic sectional view of an inking apparatus equipped with my invention.

Fig. 4 is a sectional view on line 4—4, Fig. 5.

Fig. 5 is an enlarged end elevation partly in section.

The usual ink fountain comprises a pan to hold the ink, a roll journaled in the pan, and a scraper blade to vary the thickness of the film of ink carried on the roll; which film is taken from the roll and transmitted through distributing and form rollers to the printing surface.

In my invention the ink pan 2 is made sepa-

rate from the rest of the fountain parts, and the fountain roll is journaled in bearings which are not carried by the pan. As shown in the drawings, the fountain roll 1 is journaled in bearings in or attached to the side frames 20 of the machine, and the pan 2 is removably supported below the roll 1 as hereinafter explained. A scraper blade 3 is attached to a bar 4 which is fastened at its ends to the frames 20; said bar lying just above the pan 2 when the latter is in operative position. The inner edge of blade 3 lies close to the periphery of the roll 1 and can be adjusted as usual by a series of screws 5 threaded into the bar 4.

The ink in the pan is taken up by the roll 1, as it rotates; and the thickness of the film of ink on the roll is regulated by the blade. The film can be made thinner by manually operating the screws to press the blade closer to the roll; or by retracting the screws the film can be increased by relieving the pressure on the blade. The ink may be carried from the fountain roll to the printing surface by a series of inking rollers as usual.

The pan 2 is provided at its ends with brackets 2a, which may be either formed integral with or separate from the pan. These brackets 2a are preferably beveled at 2c on their undersides for engagement of supporting bolts 6, and have sockets 2b in their upper sides adapted to engage pins 2e, attached to brackets 20a secured to the adjacent frames 20, to properly position the pan beneath roll 1.

The pan can be held in position beneath the roll 1 by suitable means; in the construction shown I use slidable bolts 6, which are longitudinally movably mounted in bores in the adjacent frames 20. Said bolts preferably have their inner ends beveled to engage the beveled parts 2c of the brackets 2a and when the bolts are projected the pan is forced upward and held securely in operative position. The bolts may be projected by any suitable means. In the construction shown pinions 7a are fixed on shafts 7 journaled in brackets 7e attached to the side frames 20 (see Fig. 5), and engage teeth 6a on bolts 6. The shafts 7 can be manually operated by handles 7b to project or retract the bolts. Similar pan supporting devices are provided on each side frame, to engage opposite ends of the pan and hold it in position.

To remove the pan, the bolts 6 are retracted until their inner ends are clear of the brackets on the ends of the pan, as indicated in dotted lines in Fig. 5. At this period of operation, the pan

should be supported by the operator and lowered until the pins 2e disengage the sockets 2b; then the pan can be withdrawn. When it is desired to replace the pan the bolts are retracted and the pan is positioned beneath the brackets and above the bolts, and then the bolts are projected beneath the pan at each end of the fountain as above described.

The diagram Figure 3 shows one practical arrangement of my invention as applied to the inking mechanism of a plate cylinder of the so-called "Unitubular" rotary printing press; but the arrangement of the ink distributing and form rollers is no part of the present invention, and it is unnecessary to describe the same, as my invention is adaptable to many different arrangements of inking mechanism.

I claim:

1. Inking apparatus comprising, frames, a fountain roll journaled in said frames, a removable pan adapted to be placed beneath the roll, brackets on the ends of said pan, interengaging devices on the frames and brackets for locating the pan beneath the roll, wedges mounted in the frames adjacent the ends of the pan adapted to engage the brackets and support the pan in operative location, and means for operating the wedges.

2. Inking apparatus comprising frames, a fountain roll journaled in said frames, a bar mounted on said frames adjacent the fountain roll, a scraper blade mounted on said bar, a removable pan adapted to be placed beneath the roll, brackets on the ends of said pan, bolts mounted in the frames adjacent the ends of the pan adapted to engage the brackets to hold the pan in operative position, and means for operating the bolts.

3. Inking apparatus comprising, frames, a fountain roll journaled in said frames, a bar mounted on said frames adjacent the fountain roll, a scraper blade mounted on said bar, a removable pan adapted to be placed beneath the roll, brackets on the ends of said pan, interengaging sockets and pins on the frame and brackets for positioning the pan beneath the roll, longitudinally movable bolts mounted in the frames adjacent the ends of the pan adapted to engage

the brackets to hold the pan in operative position, and rock shafts and pinions for operating the bolts.

4. An ink fountain comprising, frames, a fixed fountain roll supported by the frames; a removable pan, and means fixed to the frames adjacent the ends of the roll adapted to be engaged with the ends of the pan to definitely locate it laterally and longitudinally with respect to the roll, surfaces on the frames above the pan adapted to limit the vertical position of the pan, and retractible cam means on the frame adapted to be projected into engagement with and support the pan when the latter is in engagement with the locating means and said surfaces.

5. Inking apparatus comprising, frames, a fountain roll journaled in said frames, a removable pan beneath the roll, and retractible wedge means on the frames adapted when projected to support and hold the pan in operative location.

6. Inking apparatus comprising, side frames, a fountain roll journaled in said frames, a removable pan beneath the roll, and longitudinally movable wedge means mounted in the side frames adjacent the ends of the pan adapted when projected to support the pan after it is placed in operative location.

7. Inking apparatus comprising, side frames, a fountain roll journaled in said frames, a removable pan, interengaging devices on the frames and pan for properly locating the pan beneath the roll, and manually operable wedge members slidably mounted on the frames and adapted to be moved into engagement with the ends of the pan and support it in operative location.

8. Inking apparatus comprising, side frames, a fountain roll journaled in said frames, a removable pan adapted to be placed beneath the roll, brackets on the ends of said pan, interengaging devices on the frames and brackets to definitely locate the pan laterally and longitudinally with respect to the roll; and reciprocable bolts having inclined bracket engaging surfaces mounted in the frames adjacent the ends of the pan adapted to engage the pan brackets and support the pan in such location.

JAMES L. BLACKLEY.