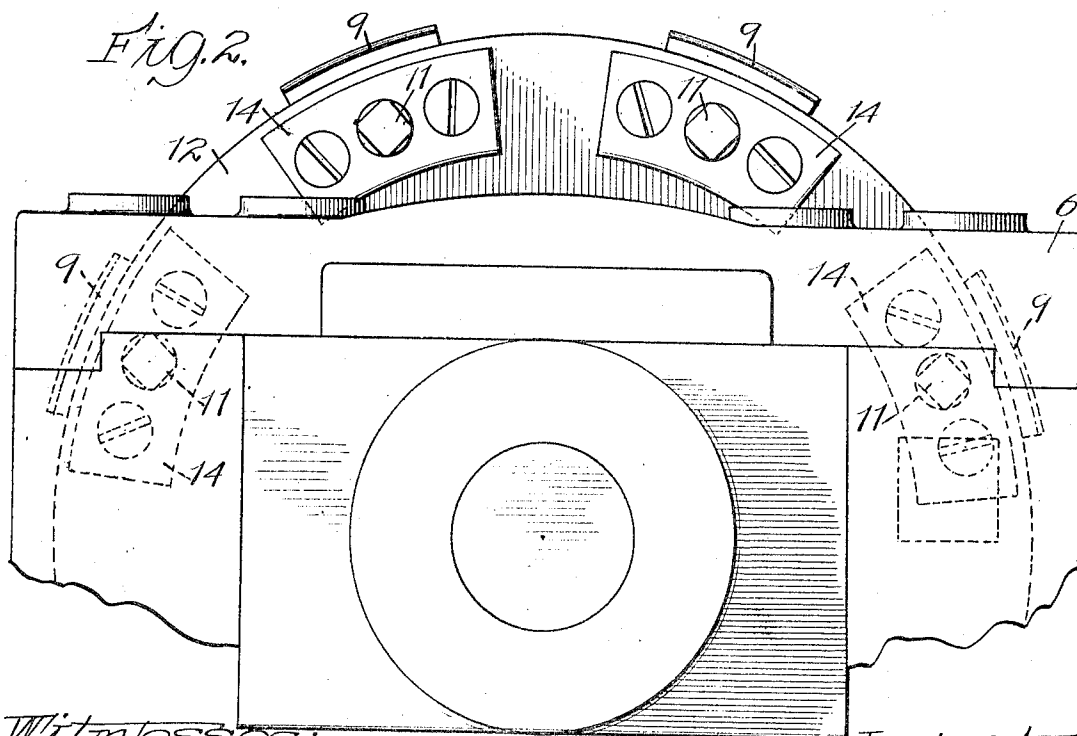


1,057,134.

Patented Mar. 25, 1913.

2 SHEETS—SHEET 1.



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1,057,134.

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APPLICATION FILED AUG. 2, 1912.

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2 SHEETS—SHEET 2.

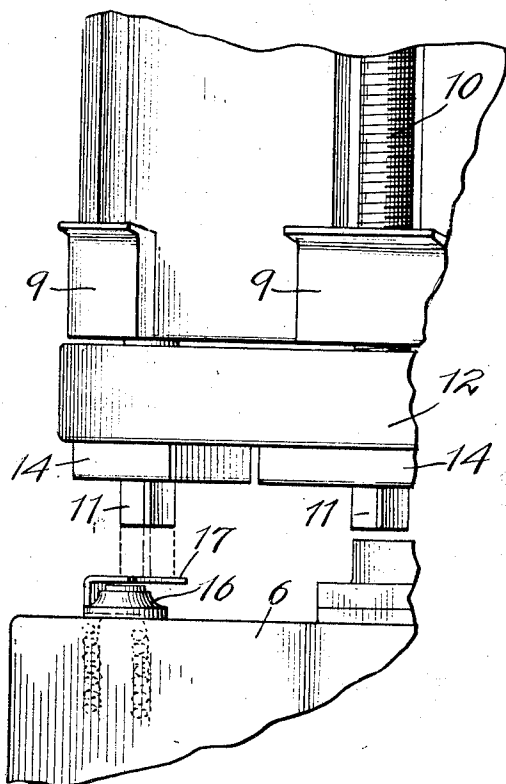


Fig. 3.

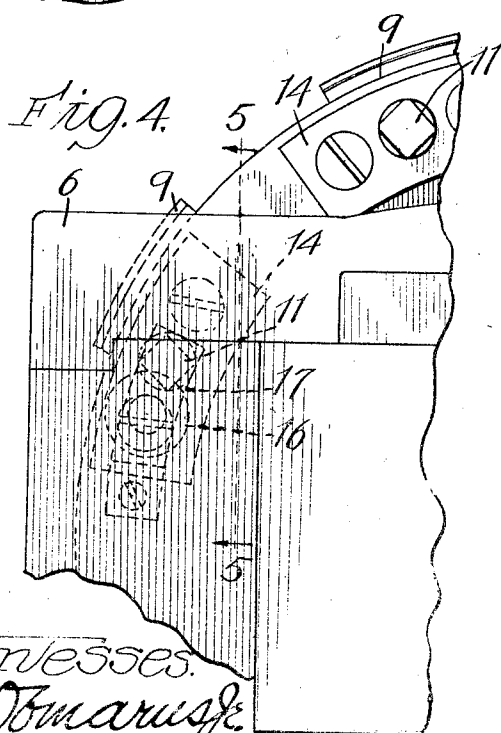


Fig. 4.

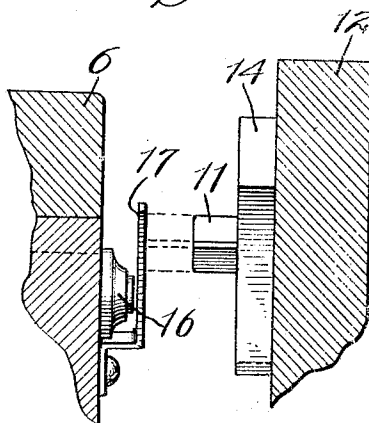


Fig. 5.

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UNITED STATES PATENT OFFICE.

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PRINTING-PRESS.

1,057,134.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed August 2, 1912. Serial No. 712,865.

To all whom it may concern:

Be it known that I, WILLIAM EVENSEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Printing-Presses, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to rotary printing presses employing form cylinders equipped with clamping devices movable longitudinally of the cylinder for securing the forms thereon. Such securing or clamping devices are usually held adjustably in place by bolts, which are arranged longitudinally of the cylinder and pass through the clamping devices, their heads projecting beyond the end of the cylinder, as illustrated in Letters Patent No. 988,559, granted to me April 4, 1911, for plate clamping mechanism for printing presses, and in the accompanying drawings I have illustrated the embodiment of my present invention in a cylinder having the same construction as that shown in said patent.

The object of my invention is to insure the proper clamping of the forms in place before the press can be driven. In practice it occurs more or less frequently that the clamping devices are not properly tightened before the press is started, so that the form is not held securely and more or less damage is apt to ensue.

To this end my invention consists in providing means whereby the press will be locked against rotation, or in the case of electrically driven presses, the current will be automatically cut off from the motor, as soon as attempt is made to start it if the clamping devices have not been properly secured. This may be effected, as hereinafter described, by providing a lug on a convenient part of the press frame, so located as to be adapted to intercept and be engaged by the head of any bolt projecting beyond its clamping position, so that if an attempt is made to start the press under such conditions, the lug will act to lock the cylinder against rotation until the projecting bolt has been properly tightened. Or, in the case of electrically actuated presses, a stop push-button may be provided, arranged

to be engaged by any such projecting bolt head when the cylinder starts to rotate, thereby pressing such push-button and stopping the press in that way.

In the accompanying drawings,—Figure 1 is a partial plan view illustrating one end of the form cylinder and a part of the frame of the press. Fig. 2 is an end view thereof. Fig. 3 is a partial plan view showing the push-button arrangement. Fig. 4 is an end view of the construction shown in Fig. 3; and Fig. 5 is a sectional view on line 5—5 of Fig. 4.

Referring now to the drawings, 6 indicates the frame of the press and 7 a form cylinder. 8 indicates the shaft of said cylinder.

9 indicates a series of plate clamps which are mounted to move longitudinally of the cylinder upon securing devices such as bolts 10; said clamps being adjustable by the rotation of said bolts, as described in my patent hereinbefore referred to. The clamps 9 are adapted to engage the adjacent margin of the form so that when pressed closely thereagainst they will hold it firmly upon the cylinder.

11 indicates the squared heads of the bolts 10.

12 indicates a semi-circular clamping member which is fitted upon one end of the cylinder 7 and is movable longitudinally thereof. The bolts 10 are carried by said clamping member, the arrangement being such that by moving the clamping member toward or from the cylinder 7, all the bolts carried by it will be simultaneously moved in the same direction and consequently all the clamps 9 may be caused to engage or disengage the form. The bolts 10 provide for separate adjustment of the clamp toward or from the clamping member 12 to accommodate forms of different widths. The clamping member 12 is moved into or out of operative position by means of an eccentric block 13, which also serves to hold said clamping member 12 in operative or clamping position, as described in my said patent. Preferably I employ bearing blocks 14, secured to the clamping member 12, to carry the bolts 10. As indicated by dotted lines in Fig. 1, when the clamping member 12 is moved outward to release the clamps, the

bolts 10 are moved out with it so that their heads occupy the positions shown in dotted lines in said figure.

15 indicates a lug carried by the frame 6 and projecting toward the cylinder 7, said lug being placed so as to intercept the head 11 of any bolt that may project beyond its clamping position, as indicated at the right in Fig. 1. Said lug being carried by a stationary part of the press, it will be apparent that if an attempt is made to start the press while any bolt projects beyond its clamping position, such bolt head will engage the lug 15 and consequently prevent the further rotation of the cylinder.

In the construction shown in Figs. 3, 4 and 5, instead of employing lug 15, I provide a stop push-button 16, which is connected up with the press operating circuit and so arranged that when the said button is pressed, the press will be stopped. 17 indicates a spring plate which is secured to the frame of the press and extends over the push-button 16, being so arranged that any projecting bolt head will engage said plate and press it inwardly far enough to press the push-button 16, and thereby stop the press. This arrangement is intended particularly for presses operated by electric motors.

That which I claim as my invention, and desire to secure by Letters Patent, is,—

1. In a printing press, the combination of a form cylinder, clamps adapted to engage the form for holding it upon the cylinder, securing devices for said clamps, and means

for preventing rotation of the cylinder when one or more of such securing devices are in an inoperative position.

2. In a printing press, the combination of a form cylinder, clamps adapted to engage the form for holding it upon the cylinder, securing devices for said clamps, and means for automatically stopping the cylinder if it should be started when one or more of said securing devices are in an inoperative position.

3. In a printing press, the combination of a form cylinder, form clamps, a member movable longitudinally of the cylinder for actuating said clamps, bolts on which said clamps are mounted, said bolts being movable longitudinally of the cylinder with said clamp actuating member and being adapted to project beyond one end of the cylinder, and means carried by the frame of the press and cooperating with said bolts when they are moved out of clamping position, to prevent rotation of the cylinder.

4. In a printing press, the combination of a form cylinder, clamps adapted to engage the form for holding it upon the cylinder, a clamping member for simultaneously actuating said clamps and securing them in operative position, and means for preventing the rotation of the cylinder when said clamping member is out of operative position.

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