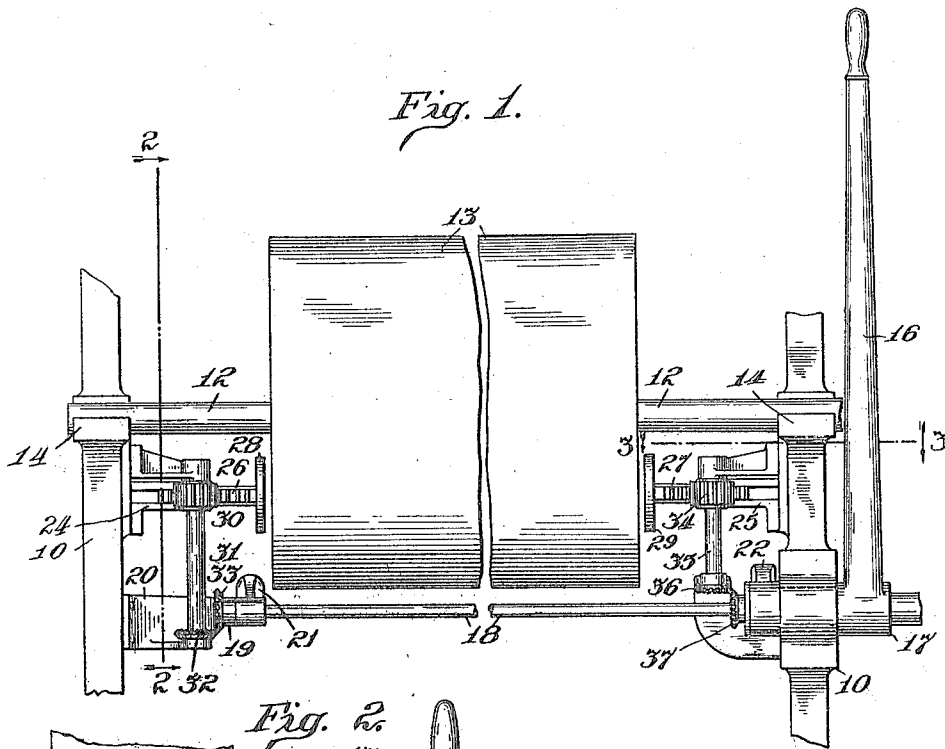
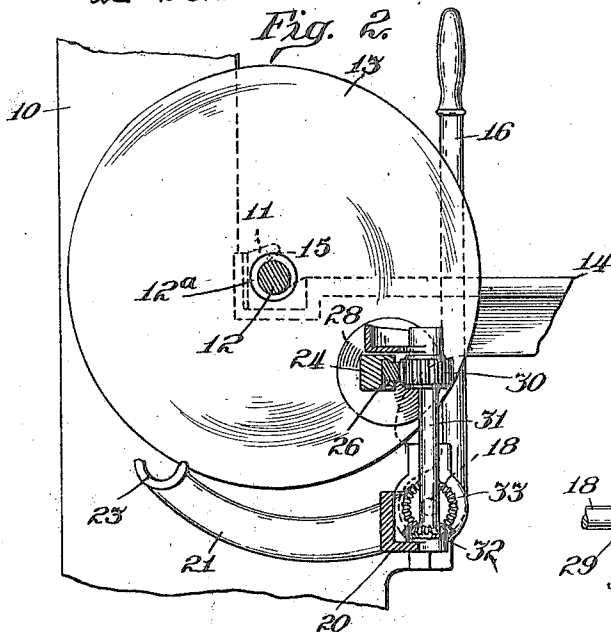
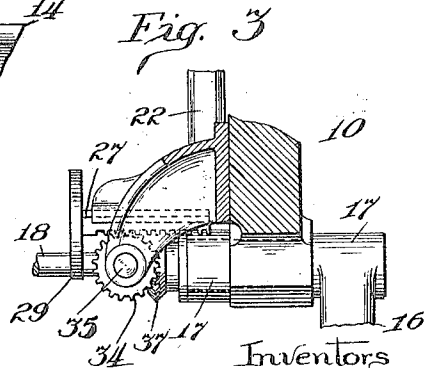


J. J. WALSER & C. A. DRESSER.
PAPER ROLL MECHANISM FOR PRINTING PRESSES.
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Witness
Milton Lenoir

Inventors
Joseph J. Walser,
Charles A. Dresser,
Adams & Larson
Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH J. WALSER, OF CHICAGO, AND CHARLES A. DRESSER, OF GLENCOE, ILLINOIS,
ASSIGNORS TO THE GOSS PRINTING PRESS COMPANY, OF CHICAGO, ILLINOIS, A
CORPORATION OF ILLINOIS.

PAPER-ROLL MECHANISM FOR PRINTING-PRESSES.

1,208,419.

Specification of Letters Patent.

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Original application filed March 27, 1912, Serial No. 686,476. Divided and this application filed January 24, 1916. Serial No. 73,877.

To all whom it may concern:

Be it known that we, JOSEPH J. WALSER and CHARLES A. DRESSER, citizens of the United States, and residents of Chicago and Glencoe, respectively, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Paper-Roll Mechanism for Printing-Presses, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to paper roll mechanism for printing presses and it has for one of its objects the provision of new and improved means for centering the roll of paper in proper position relative to the press when it is being inserted in the press.

It is another object of our invention to provide for moving the paper roll shaft at the same time into proper operative position by the roll-centering operation.

It is another object of our invention to provide new and improved means for removing the reel from the press after the web has been exhausted from the reel.

It is another object of our invention to provide suitable connections between the reel-removing device and the roll-centering devices whereby the weight of a fresh roll of paper being inserted in the machine may be utilized for centering the roll in the press.

It is another object of our invention to improve devices of this type in sundry details hereinafter pointed out.

The preferred means by which we have accomplished our several objects are illustrated in the drawings and are hereinafter specifically described.

That which we believe to be new and desirable to cover by this application is set forth in the claims.

In the drawings:—Figure 1 is a front view of a roll of paper in position in the framework of a press, only fragmentary portions of the framework being shown, the view illustrating our improved devices; Fig. 2 is a vertical cross-section taken substantially on line 2—2 of Fig. 1, but slightly enlarged; and Fig. 3 is a horizontal section taken substantially on line 3—3 of Fig. 1, but with the parts in changed position.

Referring to the several figures of the drawings in which corresponding parts are

indicated by the same reference characters, 10 indicates the framework of a press provided with socket members 11 adapted to support a shaft 12 having a reel 12^a provided with a roll 13 of paper or any other suitable web material fixedly mounted on the shaft in proper adjusted position longitudinally of the shaft. The framework 10 comprises horizontally-extending arms 14 along which the shaft 12 is adapted to be rolled for the insertion of a fresh roll of paper fixedly mounted on the shaft. The socket members 11 are provided with diagonally-disposed slots 15 open at their upper ends, into which slots the shaft 12 is adapted to pass from the arms 14.

16 indicates a lever provided with a hub 17 which is journaled in the framework 10. Fixed in the hub 17 is a rock-shaft 18 supported at its outer end by a sleeve 19 supported by a bracket 20 mounted on the framework 10. Fixed upon the outer end of the shaft 18 is an arm 21. An arm 22 of corresponding effective length is mounted upon the hub 17. Each of the arms 21—22 is provided at its outer end with an upwardly-opening socket 23, the sockets 23 being located in such a position that when the lever 16 is moved in clockwise direction in Fig. 2 the sockets 23 are brought into engagement with the shaft 12, serving to lift the shaft 12 evenly out of the diagonally-disposed sockets 15 into position upon the arms 14 whence the shaft 12 and the reel 12^a are adapted to be readily removed from the press, together with whatever paper is left upon the reel.

24—25 indicate brackets mounted upon the framework 10 at the opposite ends of the roll 13 having rack-bars 26—27 slidably mounted therein, said rack-bars 26—27 being provided respectively with plates 28—29. The rack-bar 26 meshes with a pinion 30 fixedly mounted upon a shaft 31 suitably supported from the framework 10 and adapted to be rotated by the shaft 18 through the medium of intermeshing bevel gears 32—33. The rack-bar 27 meshes with a pinion 34 fixed upon a shaft 35 suitably supported from the framework 10, the shaft 35 being rotated by the rock-shaft 18 through the medium of intermeshing bevel gears 36—37.

When the lever 16 is given a stroke in clockwise direction in Fig. 2, the shafts 31—35 are rotated in opposite directions for moving the plates 28—29 outward away from the ends of the roll 13. At the end of this stroke the shaft 12 is lifted out of the sockets 15 as above described into position upon the arms 14. The shaft 12 and the reel 12^a are then removed from the machine and another shaft 12 having fixedly mounted thereon in adjusted position another reel 12^a bearing a fresh roll 13 is placed in position upon the arms 14, the lever 16 being held in its lowered position during this change. When the shaft 12 is rolled into the sockets 15, it comes into contact with the sockets 23 of the arms 21—22 whereby the weight of the roll and its connected parts serves to give the lever 16 an upward impulse serving to bring one of the plates 28—29 into contact with one end of the roll 13. When the lever 16 is moved to the limit of its motion in counterclockwise direction in Fig. 2 the plates 28—29 are both brought into firm engagement with the ends of the roll 13, serving thus to center the roll in the desired position. Inasmuch as the roll 13 has previously been fixed in the predetermined desired position upon the shaft 12, the shaft 12 also is moved by this operation into the desired adjusted position longitudinally of itself. After the operation of centering the roll and the shaft has been completed, the lever 16 is to be moved back into approximately the position shown in Fig. 2, in which position the plates 28—29 are held slightly out of contact with the roll 13 as shown in Fig. 1.

In the structure illustrated in our application, Serial No. 686,476, filed Mar. 27, 1912, of which the present application is a division, means is shown in connection with the shaft 12 for controlling the rotation of or braking the roll 13, but it is not believed to be necessary to illustrate such controlling means in this application, as it is not claimed herein.

What we claim as our invention and desire to secure by Letters Patent, is—

1. The combination of a frame, a shaft mounted on said frame adapted to have a roll fixedly mounted thereon, and means mounted on the frame adapted by action upon the roll to position said shaft relative to said frame.

2. The combination of a frame, a shaft mounted in said frame and movable longitudinally of itself relative to the frame, said shaft being adapted to have a roll fixedly mounted thereon in adjusted position relative thereto, and means mounted on the frame adapted by engagement with said roll to center the roll and the shaft relative to the frame.

3. The combination of a frame, a shaft

mounted in said frame adapted to have a roll mounted thereon, and means adapted to act upon the ends of said roll for centering the roll relative to said frame.

4. The combination of a frame, a shaft mounted in said frame adapted to have a roll mounted thereon, and gage-plates adapted to be moved toward each other at opposite ends of said roll for centering the roll relative to the frame.

5. The combination of a frame, a shaft mounted in said frame adapted to have a roll mounted thereon, gage-plates adapted to be moved toward each other at opposite ends of said roll for centering the roll relative to the frame, and a hand-lever for moving said gage-plates toward and from each other.

6. The combination of a frame, a shaft mounted in said frame adapted to have a roll fixedly mounted thereon in adjusted position relative thereto, and gage-plates adapted to be moved toward each other at opposite ends of said roll for centering the roll and the shaft relative to the frame.

7. The combination of a frame, a shaft mounted in said frame adapted to have a roll mounted thereon, a lever mounted on said frame, means actuated by a stroke of said lever in one direction for lifting said shaft out of operative position in said frame, and means actuated by a stroke of the lever in the opposite direction for centering the roll relative to the frame.

8. The combination of a frame, a shaft mounted in said frame adapted to have a roll fixedly mounted thereon in adjusted position relative thereto, a hand-lever mounted on said frame, means actuated by a stroke of said lever in one direction for lifting said shaft out of operative position in said frame, and means actuated by a stroke of said lever in the opposite direction for centering the roll and the shaft relative to the frame.

9. The combination of a frame, bearings on said frame adapted to support a shaft, a lever mounted on said frame adapted to be given an operative stroke in one direction by the movement of the shaft into said bearings, and means actuated by such a stroke of said lever for adjusting the shaft longitudinally of itself relative to said frame.

10. The combination of a frame, bearings on said frame adapted to support a shaft having a roll mounted thereon, a lever mounted on said frame adapted to be given an operative stroke in one direction by the movement of a roll-carrying shaft into said bearings, and means actuated by such a stroke of said lever for centering the roll carried by the shaft relative to the frame.

11. The combination of a frame, bearings on said frame adapted to support a shaft having a roll fixedly mounted on said shaft in adjusted position relative thereto, a lever mounted on said frame adapted to be given

an operative stroke in one direction by the movement of a roll-carrying shaft into said bearings, and means actuated by such a stroke of said lever for adjusting the shaft and the roll fixedly carried thereby relative to said frame.

12. The combination of a frame, a shaft mounted in said frame adapted to have a roll mounted thereon, slide-bars mounted on said frame at opposite ends of the roll, bearing-gages carried by said slide-bars adjacent to the roll, a lever, and connections between said lever and said slide-bars whereby said gages are actuated by a stroke of said lever for centering the roll relative to the frame.

13. The combination of a frame, a shaft mounted in said frame adapted to have a roll mounted thereon, rack-bars slidably mounted on said frame at opposite ends of said roll, bearing-gages carried by said rack-bars, pinions meshing with said rack-bars respectively, and means for rotating said pinions for moving said rack-bars and said bearing-gages toward each other for centering the roll relative to the frame.

14. The combination of a frame, a shaft mounted in the frame adapted to have a roll fixedly mounted thereon in adjusted position relative thereto, rack-bars slidably mounted upon said frame at opposite ends of the roll, bearing-gages carried by said rack-bars, pinions meshing with said rack-bars respec-

tively, and means for rotating said pinions for moving the rack-bars and the bearing-gages toward each other for centering the roll and the shaft relative to the frame.

15. The combination of a frame, a shaft mounted in said frame adapted to have a roll mounted thereon, rack-bars slidably mounted on said frame at opposite ends of said roll, bearing-gages carried by said rack-bars, pinions meshing with said rack-bars respectively, a hand-lever mounted on said frame, and means actuated by said hand-lever for rotating the said pinions for moving said rack-bars and said bearing-gages toward each other for centering the roll relative to the frame.

16. The combination of a frame, a shaft mounted in said frame adapted to have a roll mounted thereon, rack-bars slidably mounted on said frame at opposite ends of said roll, bearing-gages carried by said rack-bars, pinions meshing with said rack-bars respectively, a hand-lever, means actuated by a stroke of said hand-lever for rotating said pinions for moving the rack-bars and the bearing-gages toward each other for centering the roll relative to the frame, and means actuated by a stroke of said lever in the opposite direction for lifting the roll-shaft out of operative position in the frame.

JOSEPH J. WALSER.
CHARLES A. DRESSER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."