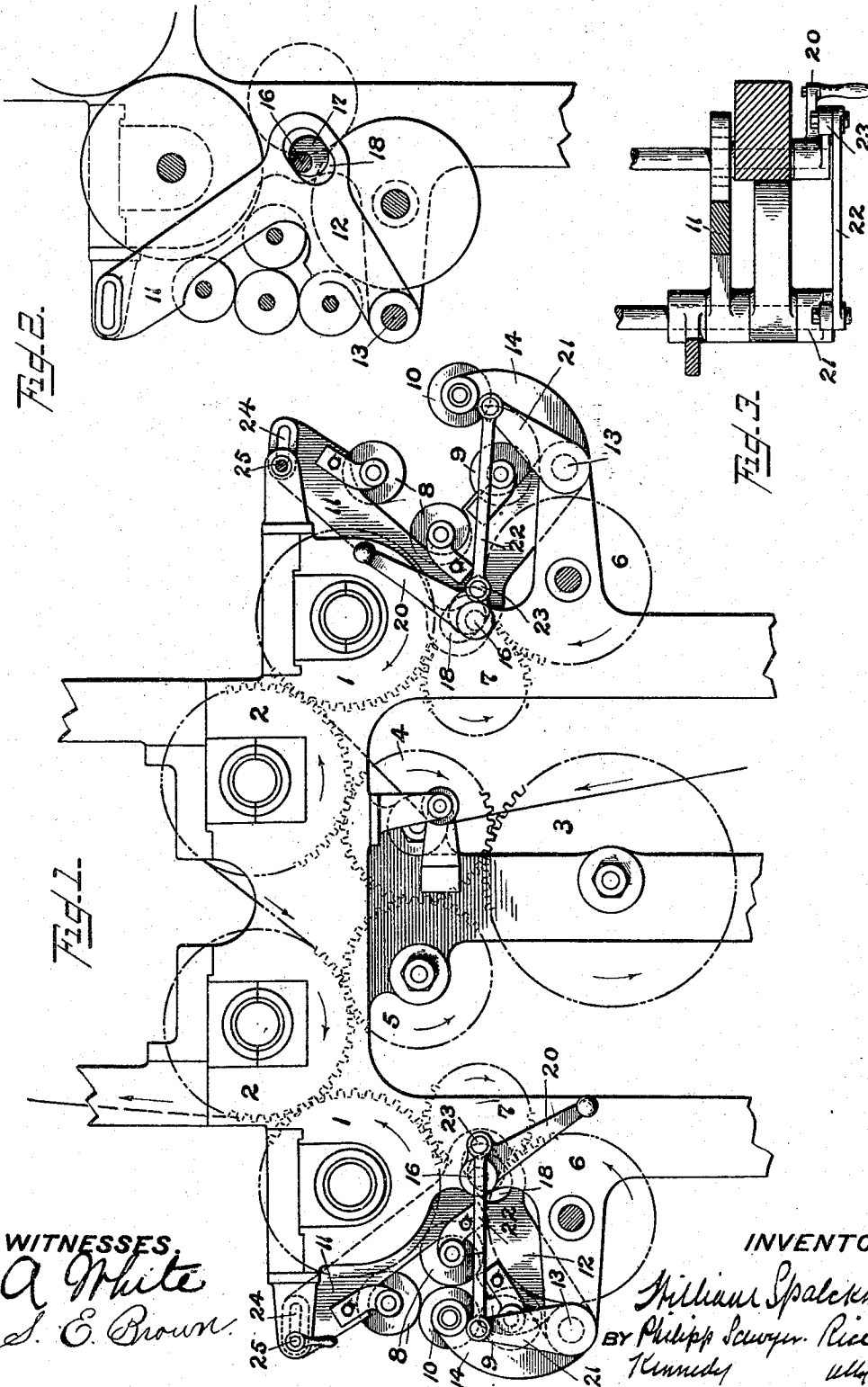


W. SPALCKHAVER.
INKING MECHANISM.
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937,267.

Patented Oct. 19, 1909.



WITNESSES.
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INKING MECHANISM.

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To all whom it may concern:

Be it known that I, WILLIAM SPALCKHAVER, a citizen of the United States, residing at New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Inking Mechanism, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to certain improvements in inking mechanism for printing machines.

The invention has for its object to produce an inking mechanism the form and distributing rolls of which may be readily moved out of position so that access to the cylinder with which they cooperate may be had and in which the form and distributing rolls shall be so separated as to permit ready access to them.

With this and other objects not specifically referred to in view, the invention consists in certain constructions and in certain parts, improvements and combinations as will be hereinafter fully described and then specifically pointed out in the claims.

In the accompanying drawings—Figure 1 is a diagrammatic side elevation of so much of a printing machine as is necessary to an understanding of the invention. Figs. 2 and 3 are detail views.

Referring to the drawings, the printing machine which has been selected to illustrate the invention, is a rotary perfecting machine of an ordinary type, the printing cylinders of the couples being marked 1 and the impression cylinders being marked 2. The printing and impression cylinders may be intergeared as usual and may be driven in any desired manner. As shown, each of the impression cylinders is driven from a gear 3 through an intermediate 4 and the other cylinder is driven from the intermediate by means of a gear 5. Each of the printing cylinders has in cooperation with it a distributing cylinder 6, this cylinder being supported in suitable bearings in the frame and being driven in any suitable manner, as, for instance, by an intermediate 7 from the printing cylinder. The ink may be supplied to this distributing cylinder in any suitable way, as, for instance, by a fountain and rolls, not shown. The ink from this distributing cylinder will be transferred to the printing cylinder by form and distributing

rolls. While the number and arrangement of these rolls may be varied, in the construction illustrated, each printing cylinder has cooperating with it two form rolls 8 and each distributing cylinder a distributing roll 9, the ink being transferred from this distributing roll to the form rolls by a distributing roll 10, these rolls being arranged close together, so that they form a group.

The means by which these several form and distributing rolls are mounted may be varied but they will be so mounted as to permit them to be moved to afford ready access to the cylinders and to be widely separated so that the rolls themselves may be easily gotten at for the purposes of cleaning and removal and replacement. In the particular construction illustrated, the rolls 8 and 9 are supported in bearings secured to a pair of angular frames 11, 12. These frames may be mounted in any suitable manner, but, as shown, are pivoted on a rod 13 extending across the machine. In the particular construction illustrated, the roll 10 is mounted on a support which is independent of the frame, this support comprising a pair of arms 14 pivoted on the rod 13 which extends across the machine.

While the means for giving the rolls the movements which have been referred to may be varied, in the construction illustrated, they include a prime mover in the form of a shaft suitably supported in the machine frame and extending across the machine. The connections between this shaft, when the same is employed, and the supporting means for the rolls may be varied. In the particular construction illustrated, the shaft is provided with a pair of cams 17, one for each of the frames 11, 12, these cams working in slots 18 in these frames. The shaft is or may be provided with an operating handle, as 20, and connections may be established between the shaft and the support for the roll 10, so that the operation of the shaft operates the support also. In the particular construction illustrated, the rod 13 which carries the arms 14, is provided with an operating arm 21, this arm being connected by a link 22 to a short crank or ear 23 on the hub of the handle 20. The construction being as described, it will be readily understood that by rocking the shaft by means of its handle, the frames 11, 12 will be rocked on their pivots, thus throwing

the various rolls carried by the frames away from the cylinders, the roll 10 being moved at the same time by the crank connection with the shaft before described. The crank connection will, however, throw the roll 10 away from the other rolls, so that the rolls are moved by rocking the shaft from the position shown on the left hand side of Fig. 1 to the position shown on the right hand side, in which position all parts of the inking mechanism and printing cylinder may be readily gotten at.

The frames may be locked in their operative or inoperative position in any suitable manner, as, for instance, by providing each of them with a slot 24 which is engaged by a locking bolt 25 mounted in the frame. This mechanism not only forms a reliable lock but also acts as a stop for the frames, so that the rolls after being moved away from the printing cylinder may be brought back into the exact position they occupied before being moved, thus avoiding any re-setting to bring the form rollers into the proper relation with the printing cylinder.

Changes and variations may be made in the construction by which the invention is carried into effect. The invention is not, therefore, to be limited to the exact construction herein shown and described.

What is claimed is:—

1. The combination with a printing cylinder, of a distributing cylinder, a group of distributing and form rolls between the cylinders, means for moving the rolls away from the cylinders, and means for widely separating the rolls thus moved away, to permit ready access to the various rolls.

2. The combination with a printing cylinder, of a distributing cylinder, distributing and form rolls between the cylinders, means for moving the rolls away from the cylinders, and means for moving the distributing roll out of contact with the other rolls.

3. The combination with a printing cylinder, of a distributing cylinder, a group of distributing and form rolls between the cylinders, a frame in which certain of the rolls including the form rolls are mounted, an independent support for one of the distributing rolls, means for moving the frame

to place the rolls carried thereby in inoperative position, and means for moving the support to widely separate the roll carried by it from the remaining rolls of the group.

4. The combination with a printing cylinder, of a distributing cylinder, distributing and form rolls between the cylinders, a prime mover, and connections between the prime mover and the rolls, whereby the rolls may be moved out of contact with the cylinders, the connections of one of the rolls operating to separate it from the remainder of the rolls.

5. The combination with a printing cylinder, of a distributing cylinder, a group of distributing and form rolls between the cylinders, a frame on which certain of the rolls including the form rolls are carried, an independent support for one of the rolls, a shaft, connections between the shaft and the frame and between the independent support and the shaft whereby a movement of the shaft moves the rolls out of contact with the cylinders and one of the rolls out of contact with the others.

6. The combination with a printing cylinder, of a distributing cylinder, a group of distributing and form rolls between the cylinders, a frame in which certain of the rolls are mounted, an operating shaft, cams on the shaft operating to move the frame, an independent support for one of the rolls, and connections from the shaft to said support, whereby it may be moved to widely separate the roll carried by it from the group.

7. The combination with a printing cylinder, of a distributing cylinder, a group of distributing and form rolls between the cylinders, a frame on which certain of the rolls including the form rolls are mounted, a pivoted support for one of the rolls, an operating shaft, cams on the operating shaft for moving the frame, and a crank connection between the shaft and the pivoted support.

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

WILLIAM SPALCKHAVER.

Witnesses:

F. W. N. CRANE,
GEO. V. WILLIAMSON.