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J. W. HOAG.

APPARATUS FOR FEEDING SEPARATE SHEETS OF PAPER TO PRINTING PRESSES.

APPLICATION FILED JAN. 3, 1905.

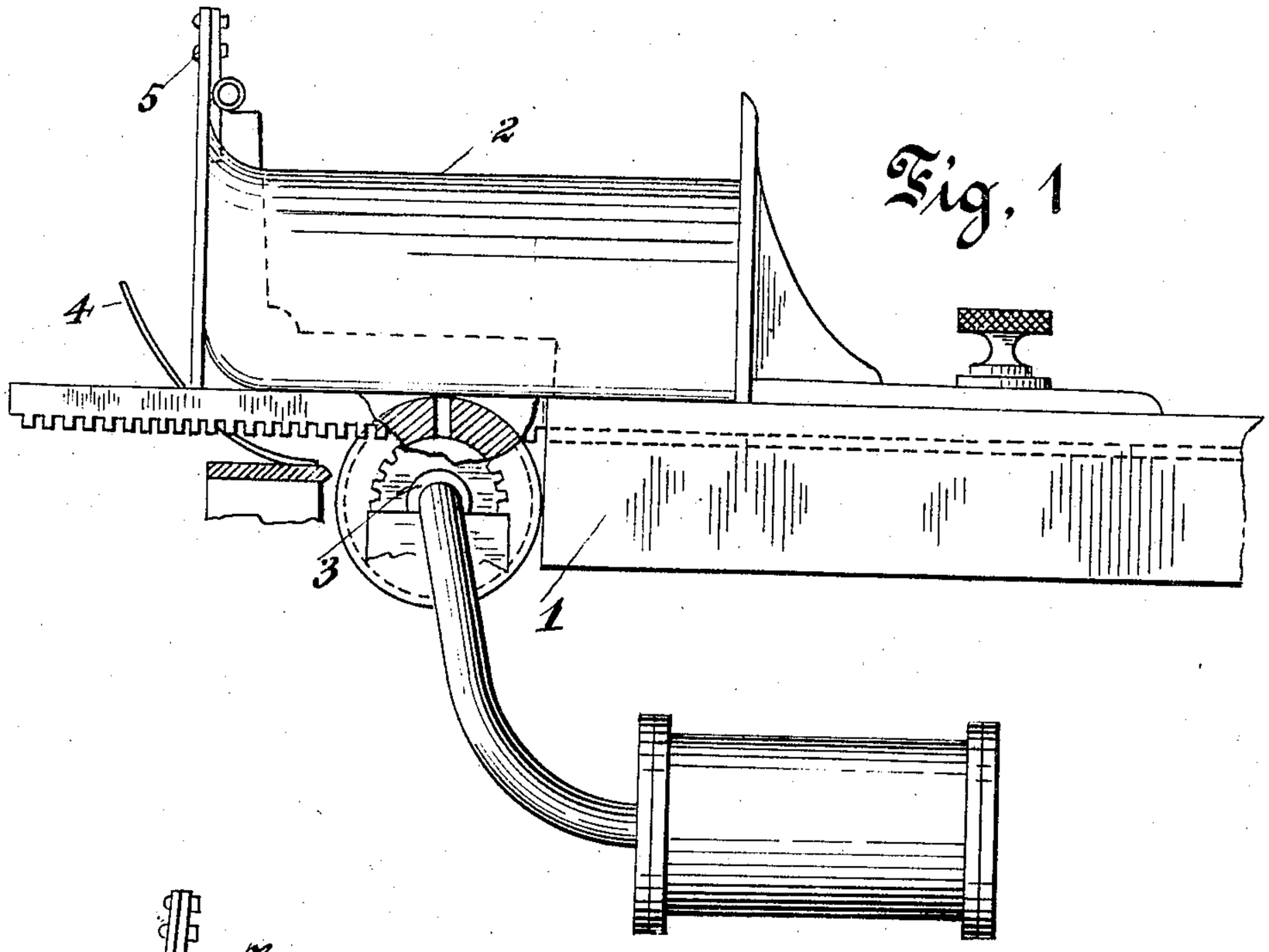

Fig. 1

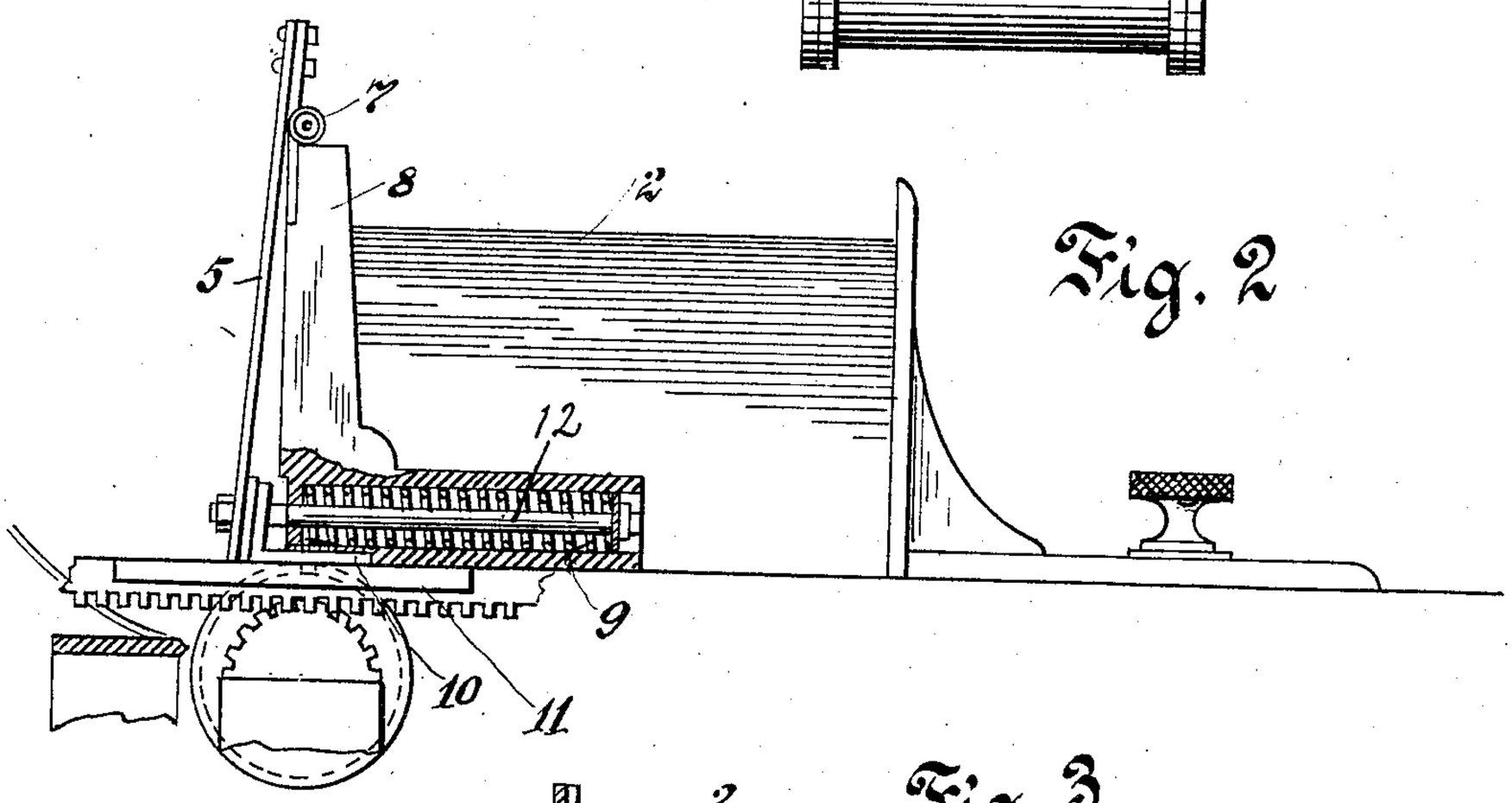

Fig. 2

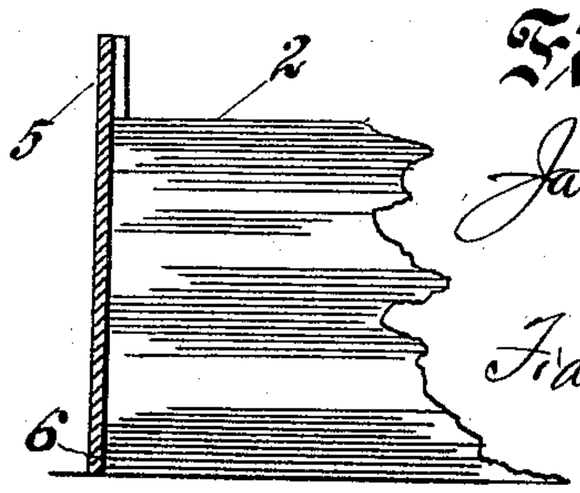

Fig. 3

Witnesses
C. M. Billig.
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UNITED STATES PATENT OFFICE.

JAMES W. HOAG, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE HOAG RAPID PRESS COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

APPARATUS FOR FEEDING SEPARATE SHEETS OF PAPER TO PRINTING-PRESSES.

No. 846,850. Specification of Letters Patent. Patented March 12, 1907.

Application filed January 3, 1905. Serial No. 239,476.

To all whom it may concern:

Be it known that I, JAMES W. HOAG, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Apparatus for Feeding Separate Sheets of Paper to a Printing-Press, of which the following is a specification.

My invention relates to improvements in apparatus for feeding separate sheets of paper to a printing-press, and especially to devices of the class described in Patent No. 769,747, issued to me September, 1904; and the objects of my improvement are to provide a means of overcoming an obstacle to continuous feeding, the nature of which will more fully appear herein.

My object is attained by the means illustrated in the accompanying drawing, of which—

Figure 1 is a view of my feeding apparatus, partly in longitudinal section and partly diagrammatic, the standard on the near side of of the machine being removed, showing the paper pile with its front edge raised from the floor and abutting against the front jogging-board. Fig. 2 is a similar view showing the front edge away from the front jogging-board and showing my improvement described herein. Fig. 3 is a diagram of the front end of the paper pile, showing said pile lying closely against the floor.

Similar numerals refer to similar parts throughout the drawings.

1 is a reciprocating feed-table carrying a paper pile 2 and having a vacuum-roller 3 adapted to engage the lowermost sheet of said pile at suitable times, as fully detailed in Patent No. 769,747, above referred to. 4 is a finger or series of fingers adapted to lift the paper pile after the lowermost sheet has been engaged by said vacuum-cylinder and to raise said pile to the position indicated in Fig. 1.

It has been found in the practical operation of the devices described that the lifting of the superposed sheets is attended with the liability of their remaining in their lifted position, abutting against the front jogging-board 5. From this cause the lowermost sheet is not in proper position to be engaged by vacuum-cylinder 3 at the desired time; and my improvement consists in providing means of dropping paper pile 2 to the floor of reciprocating table after it has been lifted by finger 4, as shown at 6 in Fig. 3. The means I adopt for accomplishing this result are shown in Fig. 2. The front jogging-board 5 is movable relatively to said paper pile in such manner as to disengage it from the front edge of said pile, whereupon said pile descends by gravity to the desired position. For this purpose I use the mechanism illustrated in Fig. 2, which shows the board 5 as being hinged at 7, said hinge being supported by an arm 8 on the table 1. A rod 12, attached to the jogging-board 5, extends through the spring 9 and is connected therewith, whereby the spring tends to hold the board 5 against the face of pile 2. A projection 10, stationary on main frame, as shown in cut-away part of track at 11, Fig. 2, and not movable with feed-table, engages board 5 and disengages it from contact with paper pile 2, as aforesaid, at a suitable period of its return reciprocation. This period is preferably near the end of its return movement, so that when table 1 begins its forward movement said engagement with projection 10 is released, and board 5 again abuts against the face of said pile. By this means the paper pile is dropped to the floor of said table at each reciprocation, and continuous feeding of the lowermost sheet of said pile is not interfered with by the tendency of said pile to remain in its elevated position.

Having described my invention, what I claim as new, and desire to protect by Letters Patent of the United States, is—

1. The combination with a reciprocating feed-table and a vacuum-cylinder, means mounted on said table for carrying a paper pile, of a stationary finger adapted to lift the paper pile after the lowermost sheet has been engaged by said vacuum-cylinder, a jogging-board hinged at its upper edge, a spring mounted on said table adjacent to the lower end of said jogging-board, a rod attached to said jogging-board and extending through said spring and movable thereby, and a stationary projection adapted to engage said board on the return movement of said table.

2. In a feed apparatus of the class described, the combination of a reciprocating table adapted to carry a paper pile, a finger

adapted to engage said pile and a vacuum-cylinder, with a spring-restrained jogging-board and a stationary projection adapted to engage said jogging-board on the return movement of said table.

3. In a feeding apparatus for a printing-press, the combination of a reciprocating floor on which is supported a pile of sheets of paper, a vacuum-roller for removing a sheet from the pile of paper, means for elevating one edge of the paper pile after the lowermost sheet has been engaged by said vacuum-roller, a hinged jogging-board arranged to engage with and hold elevated the edge of the paper pile, and means for operating said jogging-board, substantially as set forth.

4. In a feeding apparatus for a printing-press, the combination with the reciprocating floor arranged to carry a paper pile, and the vacuum-roller, of a jogging-board, means for holding said jogging-board in normal engagement with the edge of the pile of paper, a stationary member for moving the said board relative to said paper pile, and means for elevating one edge of the paper pile, substantially as set forth.

5. In a feeding apparatus for a printing-press, the combination with the reciprocating floor arranged to carry a paper pile, and the vacuum-roller, of a jogging-board carried by said floor, means for holding the said board in normal engagement with said floor, a stationary member arranged to operate said jogging member to move it out of engagement with the floor, and a finger for elevating one edge of the paper pile after the lowermost sheet has been engaged by the vacuum-roller, substantially as set forth.

6. In a paper-feeding mechanism for printing-presses, the combination of a reciprocating table on which is situated a pile of paper sheets, means for separating from the pile of paper the lowermost sheet, means for elevating one edge of the pile of paper sheets while the separation of the lowermost sheet is taking place, a front jogging-board arranged to hold the sheets with their front edges elevated, and means for moving the said jogging-board to allow the pile of paper sheets to assume its normal position at the moment the paper-sheet-separating means come into operation to take the lowermost sheet, substantially as set forth.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

JAMES W. HOAG.

Witnesses:
C. M. BILLIG,
MARTIN ARONSOHN.