J. MORRIS.

Machine for Finishing Printed Sheets of Paper.

No. 196,692. Patented Oct. 30, 1877.

Fig. 3

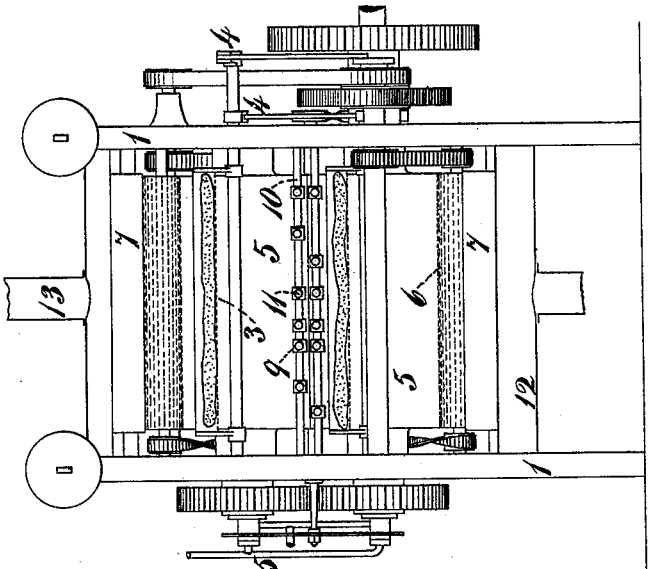


Fig. 2

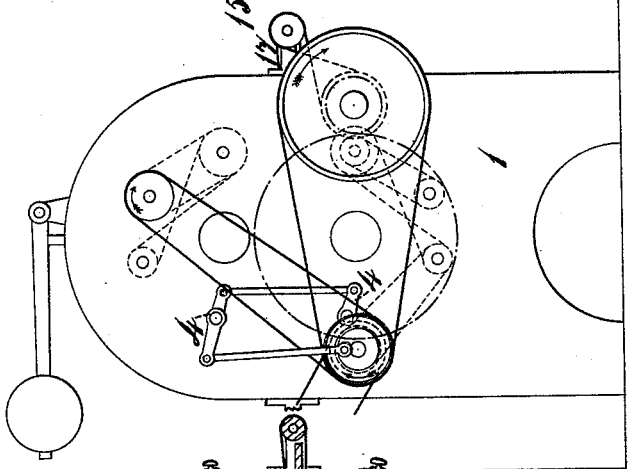
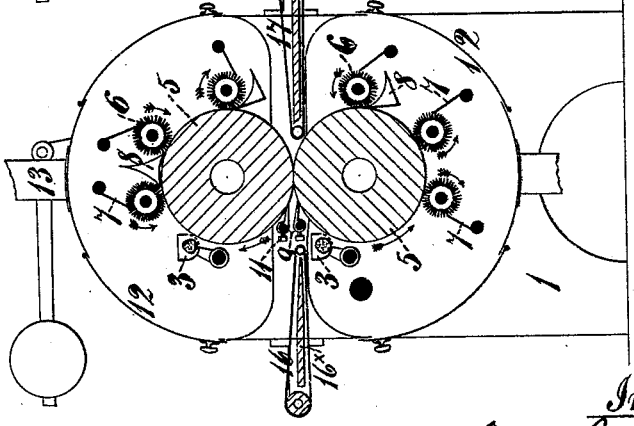


Fig. 1



Witnesses

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JAMES MORRIS, OF LIVERPOOL, ENGLAND.

IMPROVEMENT IN MACHINES FOR FINISHING PRINTED SHEETS OF PAPER.

Specification forming part of Letters Patent No. **196,692**, dated October 30, 1877; application filed August 2, 1877.

To all whom it may concern:

Be it known that I, JAMES MORRIS, of Liverpool, in the county of Lancaster, England, have invented a new and useful Improvement in Machines for Finishing Printed Sheets of Paper, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to simplify and render more efficient machines for finishing printed sheets of paper, similar to the machine for which I obtained United States Letters Patent No. 146,605, dated January 20, 1874.

Figure 1 is a side elevation, partly in section, Fig. 2 a side elevation, and Fig. 3 a front view, of my improved machine for finishing printed sheets of paper.

Like letters denote the same parts in all the views, and the arrows show the direction of motion of the parts.

1, frame-work; 5, smooth heated set-off rolls, between which the paper to be finished passes; 3, perforated or open-work container, caused to vibrate by the levers 4, so as to deposit whiting or other powdery matter in a shower directly on the smooth set-off rolls 5.

The object of depositing the whiting or powdery matter in a shower directly on the set-off rolls is to insure that the ink set-off shall be evenly coated with the said whiting or powdery matter. 6 are rotating brushes to wipe or clean the ink set-off and whiting or powdery matter from off the surface of the rolls 5.

The bristles on the brushes 6 may be placed spirally or otherwise, and the said brushes may be caused to rotate in either direction or at any rate of speed, and they may be made to have a longitudinal reciprocating motion. Wires or the like may be used instead of bristles on the brushes.

In some cases two brushes may be sufficient to clean each set-off roll; but I prefer to employ three brushes for each, two rotating in the same direction as the set-off roll, and one in the opposite direction.

7 are straight edges or pieces, against which the bristles of the brushes strike, so as to knock the ink and whiting or powdery matter from off such brushes into the troughs, receptacles, or containers 8, whence the refuse matter may be removed, as desired. 9 are fingers or needles, so arranged as to be adjustable longitudinally and radially along the bars 10, and secured in position by means of the set-screws 11.

The object of the said fingers or needles is to insure that the paper shall not be carried round with the rolls, but shall be delivered onto the receiving traveling tapes, cords, or apron 16.

16× is a carrying-board. 17 represent traveling tapes, cords, or apron for conveying the printed sheets or webs to the rolls; 12, casing; 13, exhaust-pipe through which any floating dust is drawn off; 15, pipes through which steam passes to heat the rolls 5.

I claim—

1. The vibrating perforated or open-work containers, arranged to deposit whiting or powdery matter directly onto the set-off rolls, and in combination with said roll, for the purpose set forth.

2. The rotating brushes, in combination with the set-off rolls, and arranged to act directly thereon, for removing the whiting or like material and ink from the surface of the rolls, substantially as specified.

3. The straight edges or pieces 7, against which the bristles, or their equivalents, of the brushes 6 strike, for the purpose set forth.

4. The troughs, receptacles, or containers 8, for collecting the refuse matter thrown off from the brushes 6, substantially as set forth.

5. The adjustable fingers 9, arranged substantially as and for the purposes set forth.

6. The tapes, cords, or apron 16, and also 17, made to travel, for the purposes set forth.

7. In a machine for finishing printed sheets, the combination of the brushes 6 and straight edges or pieces 7, arranged and operating substantially as and for the purposes set forth.

8. In a machine for finishing printed sheets, the combination of the brushes 6, straight edges or pieces 7, and troughs 8, arranged and operating substantially as and for the purposes set forth.

9. In a machine for finishing printed sheets, the combination of the heated rolls 5 and ad-

justable fingers or needles 9, arranged and operating substantially as and for the purposes set forth.

10. In a machine for finishing printed sheets, the combination of set-off rolls, adapted to be heated, a series of traveling aprons or tapes to feed the printed sheets regularly and evenly to the set-off rolls, and devices, substantially as herein described, for removing the ink from the set-off rolls, whereby a printed sheet or web may be continuously treated, in the manner and for the purpose specified.

11. In a machine for finishing printed sheets, the combination of the heated rolls 5, brushes 6, straight edges or pieces 7, and troughs 8, arranged and operating substantially as and for the purposes set forth.

12. In a machine for finishing printed sheets, the combination of the heated rolls 5, brushes 6, straight edges or pieces 7, troughs 8, and adjustable fingers 9, arranged and operating substantially as and for the purposes set forth.

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Witnesses:
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