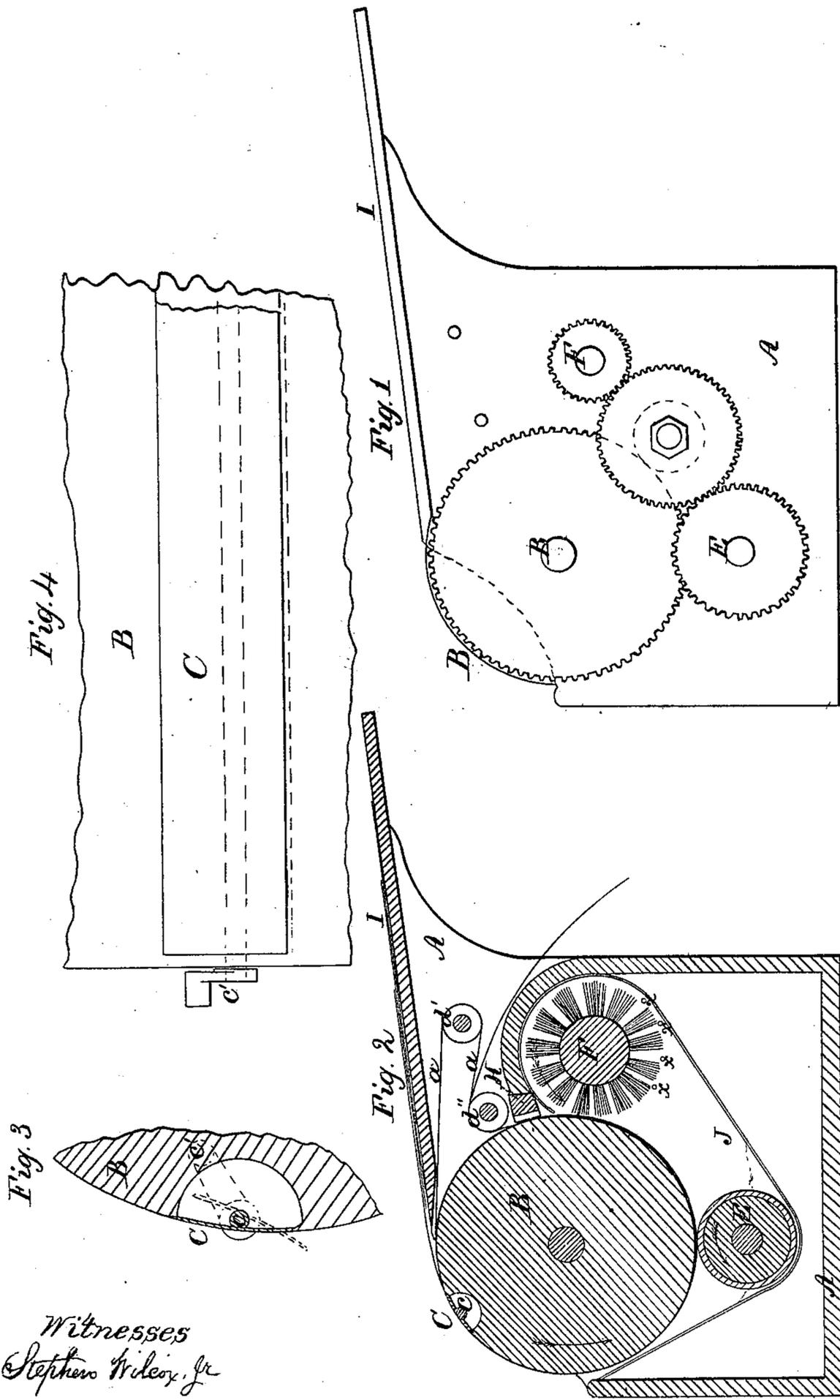


G.H. Babcock,
Bronzing Machine,

No 25,874,

Patented Oct. 25, 1859.



Witnesses
Stephen Wiley, Jr.
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Inventor
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G. H. BABCOCK, OF WESTERLY, RHODE ISLAND.

BRONZING-MACHINE.

Specification of Letters Patent No. 25,874, dated October 25, 1859.

To all whom it may concern:

Be it known that I, G. H. BABCOCK, of Westerly, county of Washington, and State of Rhode Island, have invented a certain
5 new and useful Bronzing-Machine; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

10 Figure 1 is a side elevation, Fig. 2, a vertical section, and Figs. 3 and 4, detached views of the gripper, similar parts being designated by the same letters in all of the figures.

15 The nature of my invention consists in the arrangement of certain devices for applying bronze powder, or any other dry powder, to the surface of paper or other material, after
20 such surface has been printed or otherwise prepared to receive it; which devices consist mainly in the use of rubbing and brushing cylinders and stationary rubbers, for applying the powder and removing the surplus, together with means for presenting the
25 sheet to their action and removing it when finished.

My machine may be described as follows: In a suitable frame A, made of wood or other proper material, a cylinder, B, is hung
30 in bearings, and is free to revolve in the direction of the arrow. Upon this cylinder is mounted a gripper C, of peculiar construction, for the purpose of carrying in the sheets to be bronzed. This gripper—shown
35 more plainly in Figs. 3 and 4—consists of a plate of steel or other suitable metal, curved to correspond with the circumference of the cylinder, and attached to a shaft, *c*, which has bearings in each end of the cy-
40 linder. When the gripper is closed, as shown in the drawing, it lies flush with the surface of the cylinder, the two sides forming tight joints, so as to prevent the bronze powder filling the cavity in which the gripper plays,
45 and thereby being wasted. When opened to receive the sheet (which is done by a cam, not shown, operating upon a lever, *c'*, similar to the grippers on a cylinder printing press,) the gripper is in the position shown
50 in dotted lines in Fig. 3. The gripper being whole and gripping the whole width of the sheet, prevents the edge of the sheet from being torn by the brush, and also keeps the powder from getting under the sheet and
55 thus being wasted. The sheet is removed from cylinder B, by means of tapes, *d*, and

rollers, *d'*, and *d''*, as any other convenient method. Underneath cylinder B, is placed a smaller one E, covered with some soft material such as velvet, fur, or a soft brush, 60 which is rotated by gearing, shown in Fig. 1. This cylinder runs in a trough or case, T, containing the bronze powder, which it continually carries up and rubs upon the surface of B or the sheet thereon. Farther 65 around, in the direction in which B turns, is a cylindrical brush, F, also driven by the gearing shown in Fig. 1. The case T, extends partially around F, nearly touching B. This is to save the bronze and prevent 70 the brush throwing it on that portion of the sheet which has passed beyond its reach. Brush F, which may also be made of fur or cloth having a long nap—is for the purpose of removing any superfluous bronze which 75 may adhere to the paper. Wires *x, x, x, x*, are placed across, underneath the brush to keep it clean and cause the bronze to drop into the bottom of the trough or case T. Still farther around the cylinder is placed 80 a "rubber" H covered with a soft cushion, for the purpose of removing any superfluous bronze which may escape the brush. There may be one or more of these rubbers, as may be required and they are so made as to 85 be easily removed for cleaning. Case T extends up in front of cylinders E and B, nearly touching B, where a packing of some soft material may be placed if desired. At the other side, the rubber, H, forms a close 90 packing to prevent any escape of bronze, and the ends of cylinder B run in close contact with the sides of the frame, thus forming a tight compartment in which to confine the powder and prevent any of it es- 95 caping.

The operation is as follows: The sheets to be bronzed—shown in red lines—are placed upon the feed board, I, and fed down one at a time, when they are taken by the gripper 100 C, and carried into the machine. As the sheet passes through it comes in contact first with the rubbing cylinder, E, which charges its surface with the powder, and then with the brush F, which removes all the powder 105 that does not adhere to the size with which its surface is prepared. It then passes under the rubber H, which still further cleans it, when it is discharged by the tapes, and the gripper takes another sheet. 110

It is not necessary for the success of my invention that the sheets should be carried

in upon cylinder B, as they may be conveyed on an endless apron or on tapes, or by any other convenient method. Neither do I wish to confine its use to the application of bronze as it will answer equally well for dry colors, flock, crystal, and other substances similarly applied.

Having thus fully described my machine for bronzing, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In combination with mechanism for conveying the sheet, the use of rubbing cylinder, E, and brush, F,—one or more of each,—for the purposes, and operating substantially in the manner herein described.

2. I claim the use of one or more station-

ary rubbers, H, or their equivalents, for the purposes specified.

3. I claim the wires *x, x, x, x*, or their equivalents, for freeing the brush from the powder.

4. I claim constructing the gripper in the manner described whereby I obtain the advantages above set forth.

5. I claim inclosing the rubbing and brushing cylinders in a case for the purpose of retaining the powder and preventing waste.

G. H. BABCOCK.

Witnesses:

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