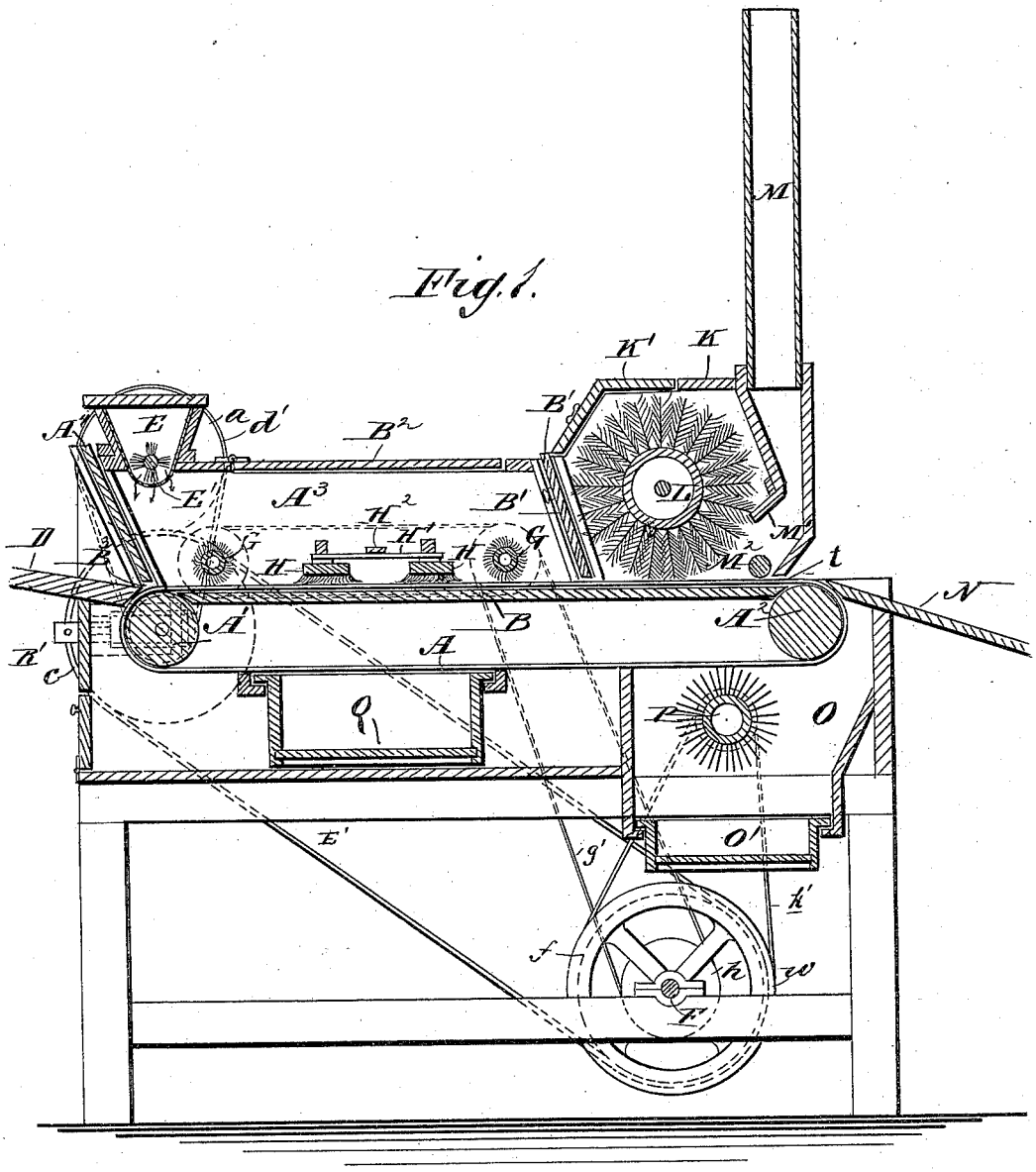
(No Model.) 3 Sheets—Sheet 1.

J. SCHNEIDER.

BRONZING MACHINE.

No. 311,612. Patented Feb. 3, 1885.

Fig. 1.



WITNESSES:

F. McArdle.

C. Sedgwick

INVENTOR:

J. Schneider

BY Munn & Co

ATTORNEYS.

N. PETERS. Photo-Lithographer. Washington, D. C.

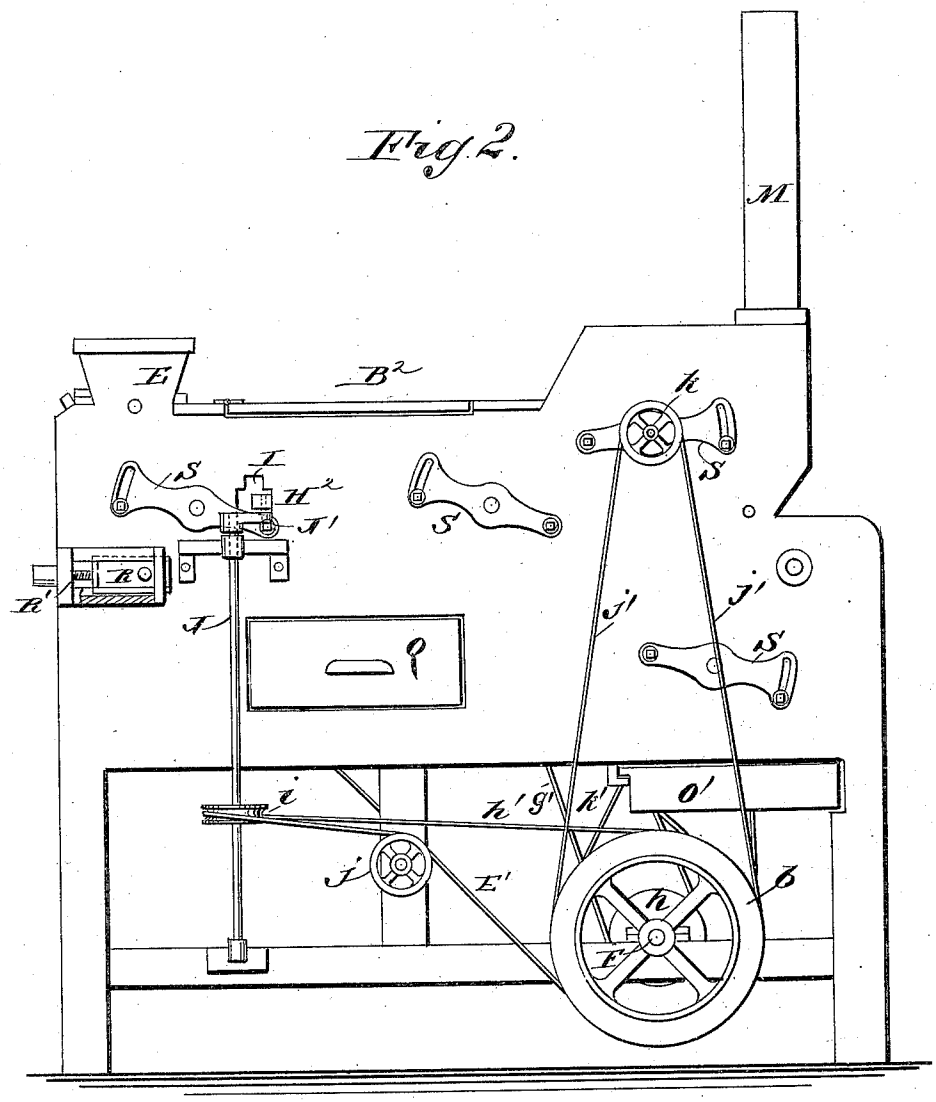
(No Model.) 3 Sheets—Sheet 2.

J. SCHNEIDER.

BRONZING MACHINE.

No. 311,612. Patented Feb. 3, 1885.

Fig. 2.



WITNESSES:
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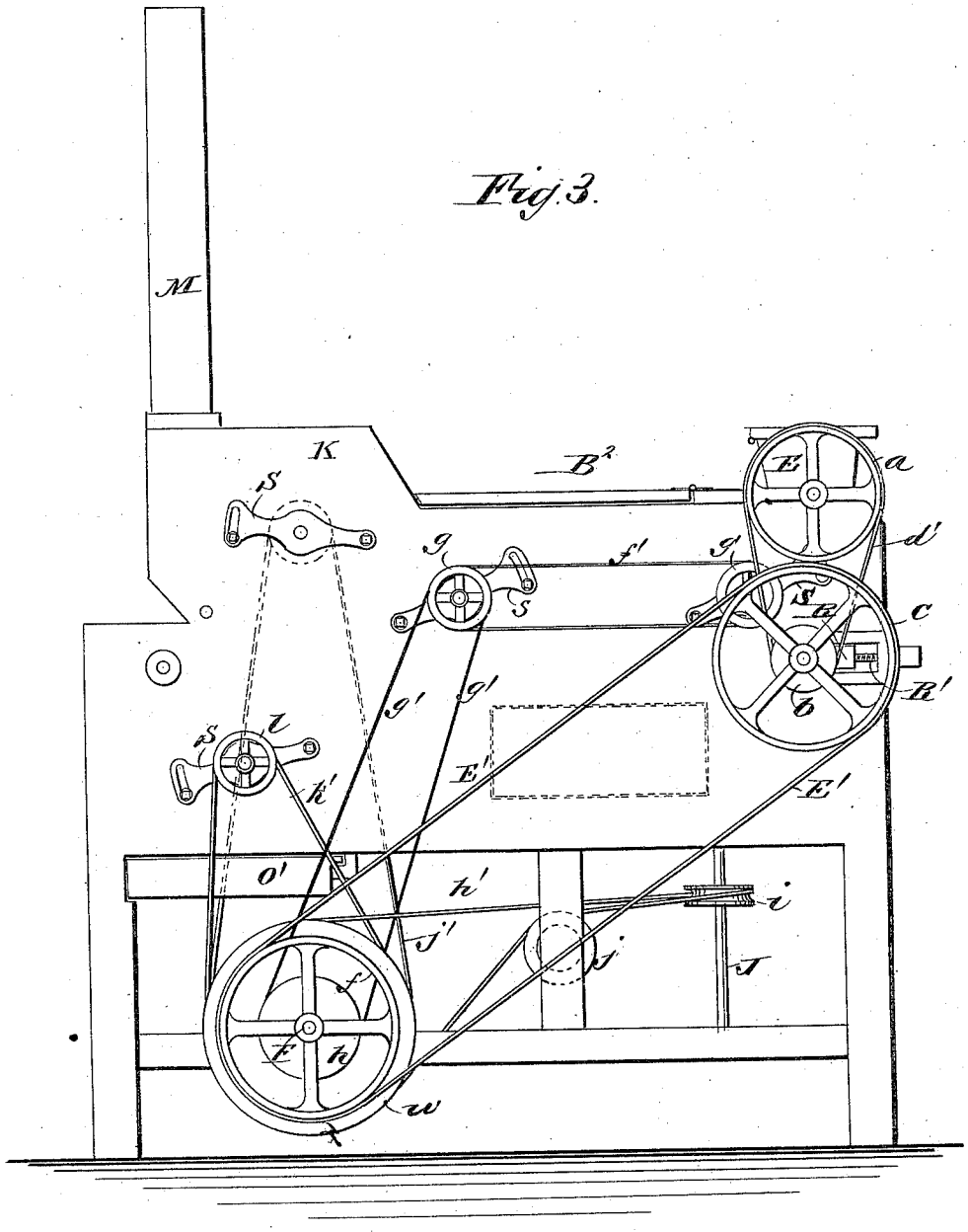
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J. SCHNEIDER.

BRONZING MACHINE.

No. 311,612. Patented Feb. 3, 1885.

Fig. 3.



WITNESSES:

F. McArdle.

C. Sedgwick

INVENTOR:

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ATTORNEYS.

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UNITED STATES PATENT OFFICE.

JACOB SCHNEIDER, OF NEW YORK, N. Y.

BRONZING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 311,612, dated February 3, 1885.

Application filed May 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, JACOB SCHNEIDER, of the city, county, and State of New York, have invented a new and Improved Bronzing-Machine, of which the following is a full, clear, and exact description.

The object of this invention is to provide a new and improved machine for bronzing single and separate sheets, such as lithographs, cards, show-cards, bill-heads, &c.

The invention consists in a bronzing-machine constructed with an endless belt, with brushes for rubbing the bronze-powder on the printed matter on sheets on the belt, and with a brush for sweeping off the surplus bronze from the sheets, which surplus bronze is carried off through a flue. A brush is provided for cleaning the outer surface of the belt, and drawers are provided for catching the waste powder.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of my improved bronzing-machine. Fig. 2 is a longitudinal elevation of one side. Fig. 3 is a longitudinal elevation of the other side.

An endless belt, A, passes over two transverse rollers, A' A^2, journaled in a box, A^3, and over a platform, B, between the rollers A' A^2. The sheets to be bronzed are fed on the endless belt A at the roller A' from an inclined apron, D, which leads to an opening or slot, B^3, in the bottom of the end A^4 of the box, which end is removable and is arranged as a sliding or swinging door. A slide, B′, is arranged on the box A^3, above the top of the belt A, about one-third of the distance between the rollers A' A^2 from the roller A^2. A hinged or sliding door, B^2, is formed in the top of the box A^3. A transverse hopper, E, is formed in the top of the box A^3, above the roller A', and in the said hopper a brush E′ revolves, on one end of the shaft of which brush is mounted a belt-pulley, *a*, over which a belt, *d'*, passes, which also passes over a small belt-pulley, *b*, on one end of the shaft of the roller A', on which shaft is also mounted a pulley, *c*, over which a belt passes, which also passes around a pulley on the main driving-shaft F.

In the upper part of the box A^3 two transverse fur-covered rollers, G, are journaled, on the ends of the shafts of which are mounted the pulleys *g g*, over which the belt *f'* passes, and over one pulley *g* a belt, *g'*, passes, which also passes over a pulley, *h*, on the main shaft F.

Between the rollers G two fur-covered brushes, H, rest on the top of the belt A, and are united by a bar, H′, which is connected with one end of a bar, H^2, which passes through a slot, I, in the side of the box A^3, and has its outer end pivoted to a crank-arm, J′, mounted on the upper end of a vertical shaft, J, journaled on the side of the box and provided with a grooved pulley, *i*, over which a belt, *h'*, passes, which also passes over a pulley, *j*, on the side of the box and over the pulley *b* on the shaft F. The brushes H are thus reciprocated transversely to the belt A.

Behind the slide B′ a box, K, is formed, in which is journaled a feather-wheel, L, on one end of the shaft of which is mounted a pulley, *k*, over which a belt, *j'*, passes, which also passes over the pulley *b* on the shaft F. The box K is provided with a hinged cover, K′, and with a flue, M, which extends down to near the bottom of the box, and at the lower end of the inner side of which a deflector, M′, is formed. A roller, M^2, in the box K presses down the top of the belt A. An apron, N, for receiving the sheets, is arranged adjacent to the roller A^2. Below the box K a box, O, is arranged, which is provided in its bottom with a drawer, O′. A revolving brush, P, is journaled in the box O, and on one end of the shaft of the same a pulley, *l*, is rigidly mounted, over which a belt, *k'*, passes, which also passes over a pulley, *w*, on the shaft F. A drawer, Q, is arranged in the box A^3, below the brushes H. The journals of the roller A' are held in slides R, provided with screws R′, by means of which screws the belt A can be drawn as taut as may be desired. The shafts of the brush-rollers G and the revolving brushes L and P are all journaled in plates S, pivoted to the sides of the box A^3, and provided with segmental slots, through which bolts pass for locking the said plates in position, and the rollers and brushes can thus be adjusted higher or lower.

The operation is as follows: The printed

sheets pass from the apron D upon the belt A, bronze-powder is powdered on the same from the hopper E, the bronze-powder is rubbed upon the printed matter on the sheets by the brushes G and H. Then the sheets are carried by the belt A into the box K, in which the surplus bronze-powder is brushed off, which is then carried off through the flue M, which is connected with a powerful suction-fan or like device. The wing or deflector M′ guides the powder up the flue, and as the ends of the feathers strike against the edge of the wing or deflector the powder remaining on the feathers is shaken off and carried up the flue. The roller M^2 presses down the belt A, so that it can carry the sheets through the slot *t*, upon the apron N. The brush P cleans the outer surface of the belt A, so that no bronze-powder will be on the same when it receives the sheets. The bronze-powder swept off by the brush P is collected in the drawer O′, and the bronze-powder swept off by the brushes G and H collects in the drawer Q, and thus none of the bronze-powder is lost, and there is no waste whatever.

I am aware that a machine for bronzing wall-paper has been constructed with a sifter over the entrance, presser-rolls below the same, a horizontal endless belt, polishing-brushes operating above said belt for the paper to pass under, other guide-rollers, and a beater and revolving dust-brush in advance of the polishing-brushes, and an exhaust-pipe above the exit for the paper to draw off the dust from the machine; and I do not desire to claim, broadly, such construction in this application.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A bronzing-machine constructed with an endless belt for carrying the sheets through the machine, brushes for rubbing the bronze-powder on the printed matter on the sheets, and a brush for sweeping off the surplus powder, and a ventilating-flue for carrying off the powder swept off by the brush, the said cleaning-brush being arranged directly over the belt, substantially as herein shown and described.

2. In a bronzing-machine, the combination, with the box A^3, of the endless belt A, the brushes G and H above the belt, the feather brush L, contained in the box K above the belt, and the ventilating-flue M, extending upward from the box K, substantially as herein shown and described.

3. In a bronzing-machine, the combination, with an endless belt, of brushes for rubbing bronze-powder on the printed matter on sheets on the said belt, a brush for sweeping off the surplus bronze-powder, a flue for carrying off the said surplus powder, and a brush for cleaning the outer surface of the endless belt, substantially as herein shown and described.

4. In a bronzing-machine, the combination, with the box A^3, of the endless belt A, the brushes G H, the brush L in the box K, the flue M, the brush P, for cleaning the outer surface of the belt, and the drawer O′ below the brush P, substantially as herein shown and described.

5. In a bronzing-machine, the combination, with the box A^3, of the endless belt A, the brushes G H, the brush L in the box K, the flue M on the box K, the brush P, for cleaning the outer surface of the belt, the drawer O′ below the brush P, and the drawer Q below the brushes G H, substantially as herein shown and described.

6. In a bronzing-machine, the combination, with a box, of an endless belt in the said box, brushes for rubbing the bronze-powder on the printed matter, of sheets on the belt, a brush for sweeping off the surplus bronze-powder, and a brush for cleaning the outer surface of the belt, and of means for adjusting the brushes a greater or less distance from the belt, substantially as herein shown and described.

JACOB SCHNEIDER.

Witnesses:
OSCAR F. GUNZ,
C. SEDGWICK.