

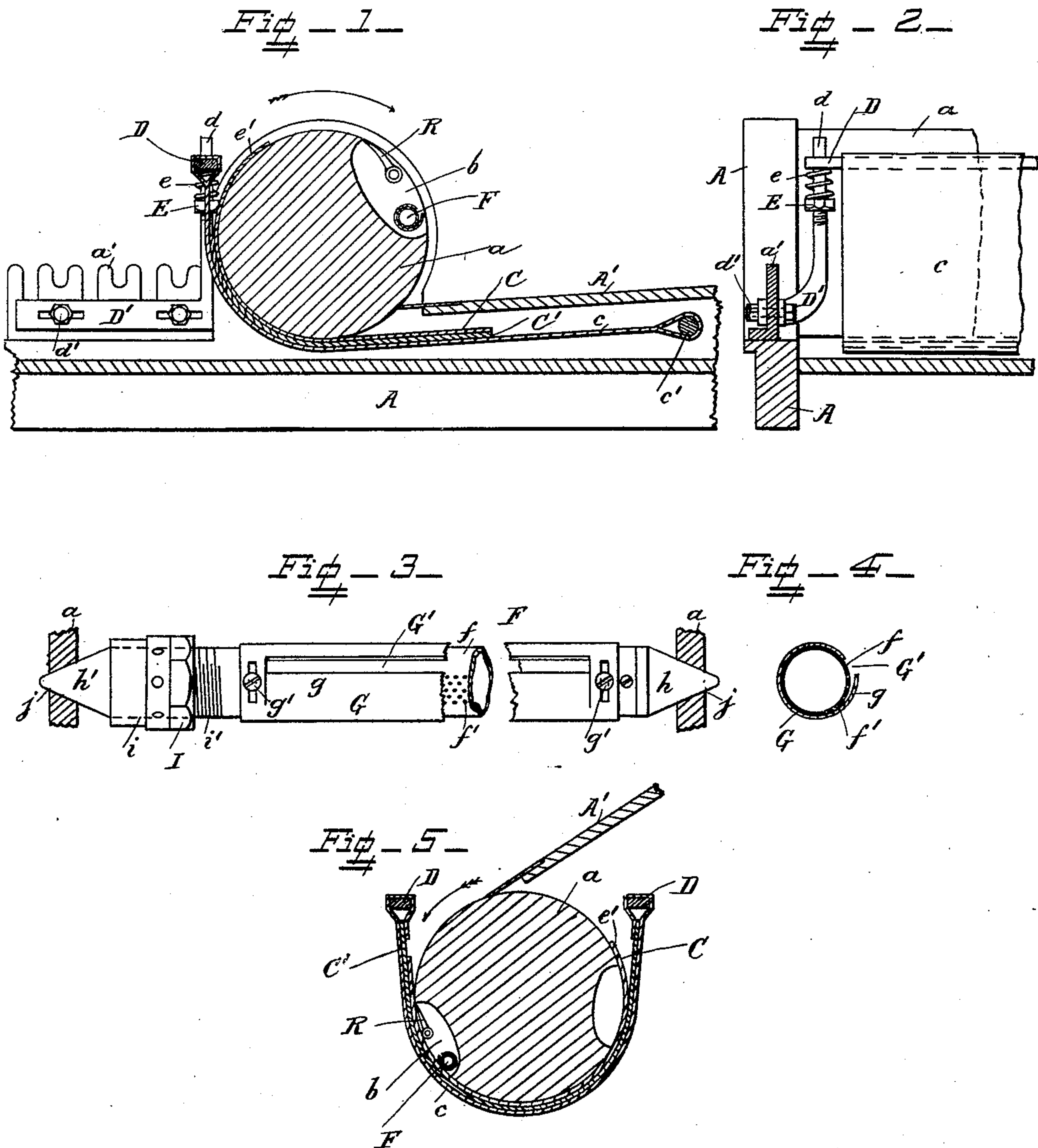
(No Model.)

F. M. MOLE.

BRONZING ATTACHMENT FOR PRINTING MACHINES.

No. 434,719.

Patented Aug. 19, 1890.



WITNESSES

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FREDERICK MADELEY MOLE, OF BIRMINGHAM, ENGLAND.

BRONZING ATTACHMENT FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 434,719, dated August 19, 1890.

Application filed May 6, 1890. Serial No. 350,744. (No model.) Patented in England April 12, 1888, No. 5,443; in Germany June 16, 1888, No. 46,632; in France October 5, 1888, No. 193,365, and in Belgium October 31, 1888, No. 83,526.

To all whom it may concern:

Be it known that I, FREDERICK MADELEY MOLE, a British subject, residing at Birmingham, in the county of Warwick, England, have
5 invented certain new and useful Improvements in Bronzing Attachments for Printing-Machines, (for which I have obtained patents in England, No. 5,443, April 12, 1888; in Germany, No. 46,632, June 16, 1888; in France,
10 No. 193,365, October 5, 1888, and Belgium, No. 83,526, October 31, 1888;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it
15 appertains to make and use the same.

This invention relates to bronzing attachments to printing-machines; and it consists in the novel construction and combination of the parts, hereinafter fully described and
20 claimed, for applying bronze-powder to the sheets.

In the drawings, Figure 1 is a longitudinal section through a portion of a printing-press, showing the bronzing attachments. Fig. 2 is
25 an end view of a portion of the press, showing how the bronzing-blanket is supported. Fig. 3 is a front view of the bronzing-roller, and Fig. 4 is a cross-section through the same. Fig. 5 is a section through the bronzing-blanket
30 similar to that shown in Fig. 1, but shows a modification in its application and in the manner of supporting it.

A is part of the frame of an ordinary printing-press, and *a* is the printing-cylinder.

35 A' is the laying-on board, and *a'* is one of the ordinary roller-forks. The cylinder *a* is provided with a gap *b*, and with grippers R for seizing the sheet placed on the board A' and carrying it around the cylinder in the ordinary
40 manner.

C is the bronzing-blanket, of flannel, velvet, or other soft material. C' is a backing for the said blanket, formed of mill-board or other stiff material; and *c* is a band of canvas or
45 other flexible and strong material behind the backing C'. One end of the canvas band is secured to the fixed support *c'* and the other end is secured to the adjustable bar D. The bar D slides upon the upper ends *d* of the guide-
50 brackets D', which are adjustably secured to

the roller-forks, or to any other stationary part of the press by the bolts *d'*, which pass through horizontal slots in the said brackets.

E are adjusting-nuts screwed upon the ends *d* of the guide-brackets, and *e* are springs interposed between the said nuts and the ends
55 of the bar D. The rear end *e'* of the blanket C is carried up past the end of the backing and is allowed to rest upon the surface of the cylinder.
60

F is the bronzing-roller, consisting of an inner tube *f*, provided with a series of perforations *f'* upon one side.

G is an outer tube provided with the open slot G' and the spring-flap *g* upon one side of
65 the slot, and *g'* are screws, which secure the two tubes together after the outer tube has been turned to expose as many of the perforations of the inner tube as desired. The end
70 *h* may be formed integral with the inner tube, or it may be secured thereto. The other end *h'* is provided with a screw-threaded socket *i*, which engages with the screw-thread *i'* on the end of the tube, and I is a nut for securing the said socket. The inner tube is filled
75 with bronze-powder or with any similar ornamental powder by removing one of the ends, and the roller is placed in the gap of the cylinder. The end *h'* is screwed up, so that the
80 ends may be inserted in the holes *j* of the cylinder, and the end *h'* is then screwed out and secured by the nut I, so that the bronze-roller is supported, as shown in the drawings. The
85 sheet to be bronzed is placed upon the laying-on board with the wet or marked portions to be bronzed downward. The cylinder is turned in the direction of the arrow, causing a certain amount of bronze-powder to be evenly distributed upon the bronzing-blanket. As
90 the cylinder continues to revolve, the sheet is fed forward and is caught by the grippers and carried around the cylinder. The bronze-powder adheres to those parts of the sheet which have been wetted with adhesive material, and the loose rear end *e'* of the blanket
95 removes the superfluous bronze-powder.

Fig. 5 shows the application of the bronzing-blanket to a lithographic-press cylinder, the laying-on table being at the top, and the cylinder revolving in the reverse direction.
100

The blanket is here carried up upon both sides of the cylinder, and the canvas band has its ends secured to two similar bars D.

Fig. 1 shows the device applied to an ordinary letter-press printing-machine, and the device may be applied to other forms of printing-presses by modifying the connections in a suitable manner.

The bronzing devices may be built into new machines or applied to existing machines.

What I claim is—

1. The combination, with a revoluble printing-cylinder provided with a gap, of a stationary blanket of soft material partially encircling the cylinder, and a perforated distributing-roller for holding ornamental powder supported in the said gap, substantially as set forth.

2. The combination, with a revoluble printing-cylinder provided with a gap, of the band having one end secured to the machine, the backing of stiff material supported on the said band, the blanket of soft material resting on the said backing and partially encircling the cylinder with its free end resting thereupon, the adjustable guide-brackets, the bar se-

cured to the other end of the said band and sliding upon the ends of the guide-brackets, the adjusting-nuts, the springs interposed between the said nuts and the bar, and a perforated distributing-roller for holding ornamental powder supported in the said gap of the printing-cylinder, substantially as set forth.

3. The combination, with a revoluble printing-cylinder provided with a gap, of a stationary blanket of soft material partially encircling the cylinder, the removable perforated inner tube for ornamental powder, provided with an adjustable end and adapted to be supported in the said gap, the outer adjustable tube provided with a long slot and with a spring-flap, and screws for securing the two tubes together, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK MADELEY MOLE.

Witnesses:

GEO. CUYDON MARK,
B. J. JARRETT.