

2 Sheets-Sheet 1.

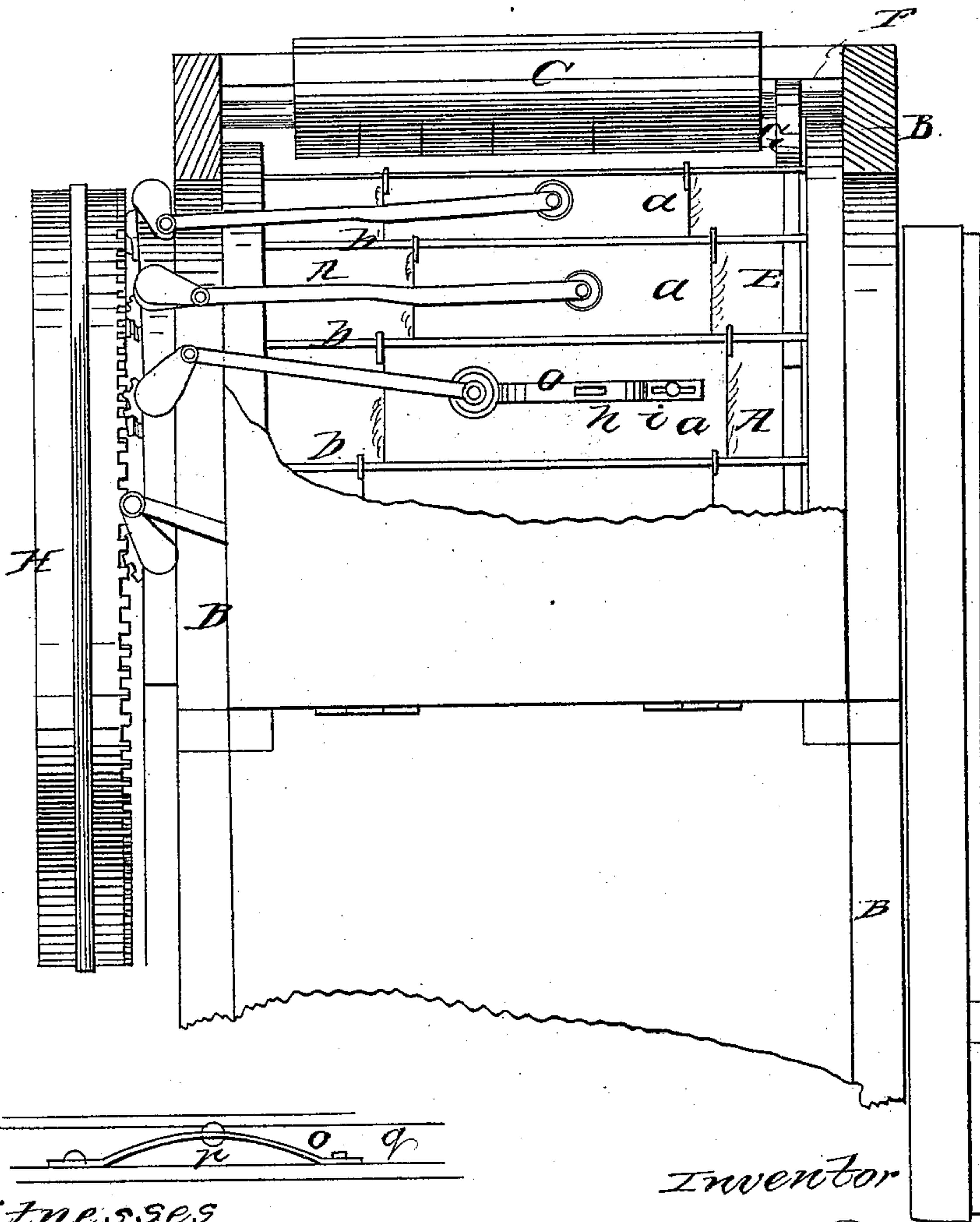
J. F. Tapley,

Bronzing Machine.

N^o 71,085.

Patented Nov. 19, 1867.

Fig. 1



Witnesses

R. F. Hyde

O. G. Webster

Inventor

J. F. Tapley

by his attorney

Gardner & Hyde

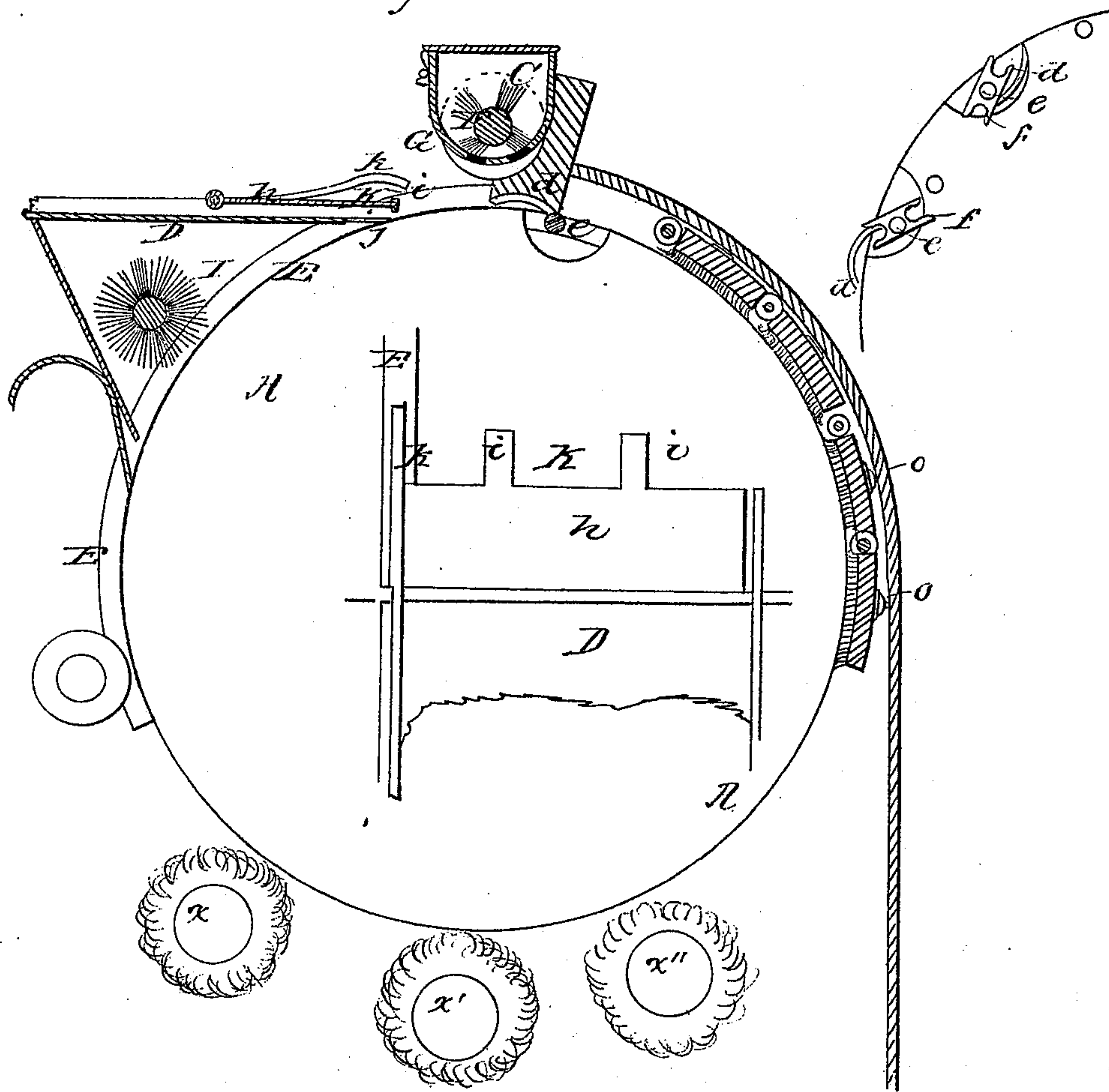
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N^o 71,085.

Patented Nov. 19, 1867.

Fig. 2.



Witnesses
R. F. Hyde
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United States Patent Office.

J. F. TAPLEY, OF SPRINGFIELD, MASSACHUSETTS.

Letters Patent No. 71,085, dated November 19, 1867.

BRONZING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. F. TAPLEY, of Springfield, Hampden county, Commonwealth of Massachusetts, have invented certain new and useful Improvements in "Bronzing Machines;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure I is a rear view, with diagram.

Figure II, a side section, with diagram.

This invention consists of a machine for the purpose of spreading the bronze, or other coloring powder used in printing, over the sheets of printed matter, so as to do the work rapidly, neatly, and economically. It is formed of a revolving drum, which carries the sheets of paper, one at a time, around it, they being subjected to the action of reciprocating brushes, which spread the bronze-powder fed from the top equally upon the sheets, which are also dusted, and then thrown out of the machine.

In the drawings, A is the drum, having its shaft through a frame. B B, which surrounds it. Upon the top of this frame is a feed-box, C, having the bronze-powder in it. At the top of the frame is a table, D, for feeding the paper from. This has a gate, which admits the paper to the action of the machine only when a clamp upon the drum has come around, and is ready to receive and hold fast the edge of the sheet, the gate remaining open until the whole sheet has passed on to the drum. This is effected by a cam, E, upon the circumference of the drum at one side, this cam being made adjustable to the length of the sheet to be bronzed. This raises up the front of the gate, and allows the sheet to pass through, shutting down as the last portion of it passes through. The cam E also regulates the supply of bronze fed upon the sheet, allowing it to flow from the feed-box only while the sheet is under it. This is done by means of a shaft, F, running lengthwise through the feed-box, and having outside, on one end, a roll, G, in contact, at its lower edge, with the cam E as the latter passes by. The shaft F has brushes radiating from it inside the feed-box, so that, as long as the cam E is passing under X, touching its roll, the brushes are revolved in the feed-box, and brush the bronze-powder through the openings in the bottom. As soon as the cam has passed by, the roll G remains inoperative, and the feed ceases. The reciprocating pads or brushes for spreading the bronze over the sheet as it passes around upon the drum are operated by means of a large gear-wheel, H, upon the drum-shaft, the teeth of which mesh with a number of small gear attached to small crank-shafts working in bearings set upon the frame of the machine, and having cranks upon their outer ends, which operate the brushes by means of crank-rods attached to them. In Fig. I it is seen that these brushes *a a a*, &c., consist of plates sliding back and forwards across the drum, guided by rods *b b b*, &c., which are set in the frame, and pass through ears upon the upper corners of the plates. These plates have fur or other suitable material attached to them underneath, which brushes upon the paper as it passes by them, they being arranged around the outer circumference of the drum.

The device for clamping the paper by its edge to the drum is shown in Fig. II, and consists of a plate, *d*, curved so as to form the longitudinal section of a cylinder, which is attached at its lower edge to a spindle, *e*, having bearings in the side of the drum upon its circumference. The drum has a depression or sink in its circumferential plane at this point to allow the curved plate *d* to work in. The spindle *e* is hung at the lower portion of this sink, (supposing this part of the drum to be turning upwards,) so that, when the clamp is open, as shown by the diagram, the plate *d* fits in the sink, and is inside of the circumference of the drum working, and the paper is not soiled when taken hold of by the clamp. In order to give the brushes *a a a*, &c., the proper pressure upon the paper, I place on top of some of them a spring, *o*, which is fastened at each end, and rises up in the middle, where a roller, *p*, is placed, which presses against the inside surface of the case surrounding this part, and keeps the pads down upon the paper. This spring *o* is fastened rigidly at one end, but the other end is slotted, and screwed down by a screw, *q*, so that it can be adjusted to fit the space between the pad and the case, and also to give the required amount of pressure to the pad upon the paper. A diagram of this spring is shown with Fig. I. The first one or two upper pads are left without this spring, as they are required to work lightly to distribute the bronze over the surface of the paper without rubbing off the sizing.

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

1. In combination with a drum for carrying the paper, one or more reciprocating pads or brushes for spreading the bronze or color.
2. Arranging a revolving brush within the feed-box, for the purpose of feeding the bronze on the sheet through openings in the bottom of the box.
3. The feed-box C, with revolving brush, having the roll G, operated by the cam E upon the cylinder or drum A, arranged as described.
4. The gate K, operated by the cam E upon the drum A, as and for the purpose described.
5. The springs o, in combination with the reciprocating pads a a, &c., as and for the purpose described.

J. F. TAPLEY.

Witnesses:

J. B. GARDINER,
R. F. HYDE.