

F. E. JAMES.
Printing-Rolls.

No. 154,396.

Patented Aug. 25, 1874.

Fig. 1.

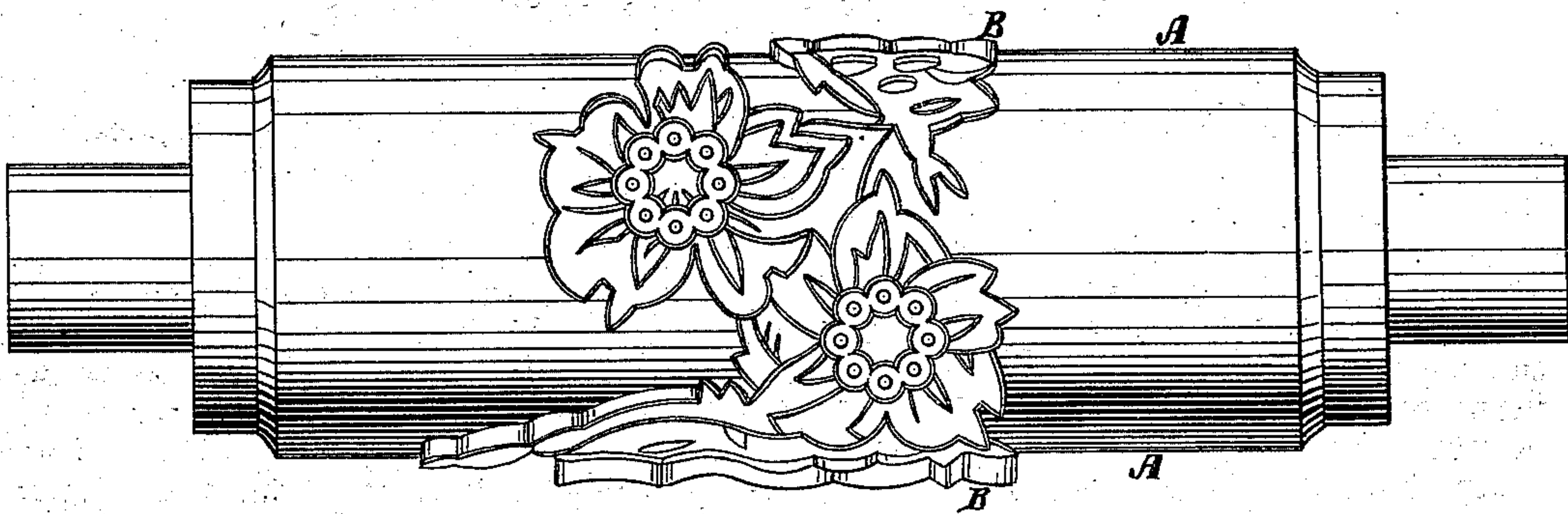


Fig. 2.

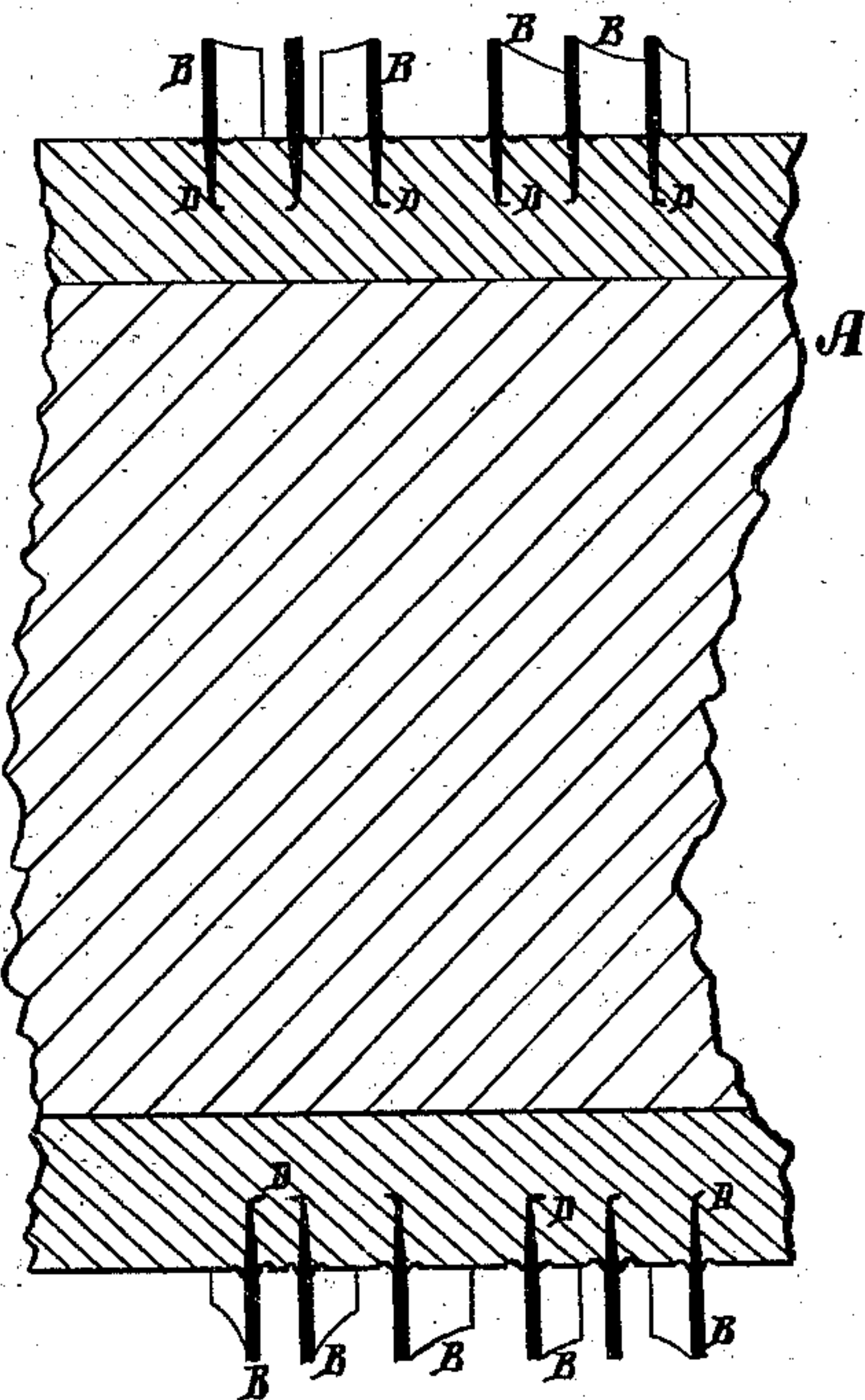
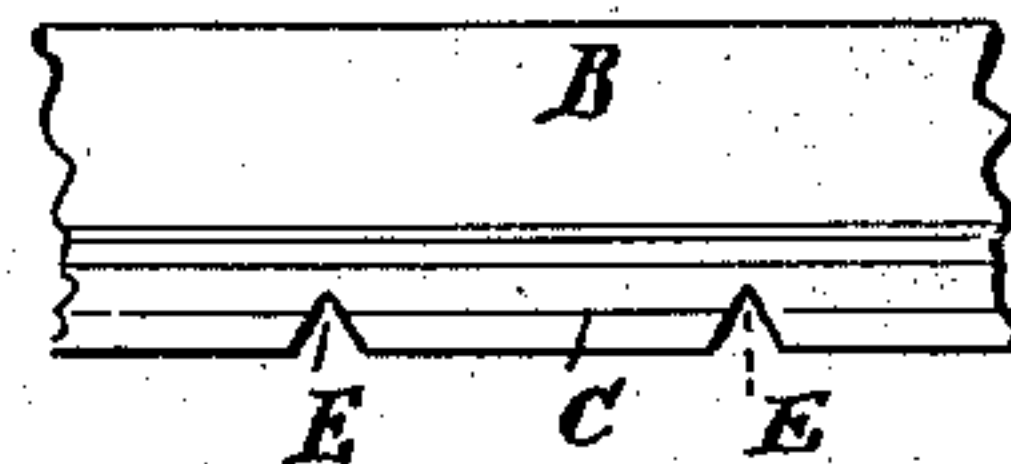


Fig. 3.



Fig. 4.



WITNESSES:

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IMPROVEMENT IN PRINTING-ROLLS.

Specification forming part of Letters Patent No. **154,396**, dated August 25, 1874; application filed June 20, 1874.

To all whom it may concern:

Be it known that I, FRANKLIN E. JAMES, of the city, county, and State of New York, have invented new and Improved Printing-Rolls, of which the following is a specification:

My invention relates to fastening the figures of paper-printing rolls upon them, the rolls being made of lead or other soft metal; and it consists of cutting or engraving the outlines of the figures upon the surface of the roll, and driving the brass plates, pins, or other pieces used to project said outlines above the surface sharply into the cuts, the said plates, pins, or other brass pieces being previously drawn down to a feather-edge, to be caused to burr out on one or both sides by being driven to the bottom of the cuts, so as to be forced into the walls of the cuts to secure them in the rolls without the expense of soldering, screwing, or pinning them, and so that in case it becomes necessary to take them out they will not be so permanently fastened but that they can be taken out by pulling them sufficiently to strip off the burrs.

Figure 1 is a side elevation of a roll having the brass pieces secured according to my invention. Fig. 2 is a longitudinal sectional elevation of a portion of the roll. Fig. 3 is an end elevation of one of the brass strips; and Fig. 4 is a side elevation of Fig. 3, showing little nicks which I make in the feather edges at short distances apart to allow them to turn out on opposite sides in different places without resistance of one part by the other.

Similar letters of reference indicate corresponding parts.

A represents the lead or other soft-metal roll; B, the brass plates, points, and other pieces by which said outlines are to be raised above the surface; C, the tapered edges, to which said plates, points, &c., are drawn preparatory to driving in the cuts prepared for them in the head-roll, said cuts being made by tapered chisel-shaped or other equivalent tool, corresponding in form and dimensions to the tapered edges of the brass pieces. D represents the burrs, formed at the bottom of the cuts by driving the feather edges against them so as to double the edges back and force them into the walls of the cuts in the lead roll. E represents the nicks made in the tapered edges to allow them to turn either way, in different parts, as they may happen to be inclined.

If desired, the surface metal of the roll may be calked against the plates to bind them thereat.

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

The combination, with a roll having a leaden or other soft-metal surface, of outline pins, plates, or other pieces of brass, or other suitable soft metal, to form a raised printing-surface, the same being driven into the roll and turned at the inner end, substantially as shown and described.

FRANKLIN E. JAMES.

Witnesses:

T. B. MOSHER,
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