

**L. COTE.**  
**Machines for Bending and Forming Stiffeners for**  
**Boots and Shoes.**

No. 155,071.

Patented Sept. 15, 1874.

FIG. 1.

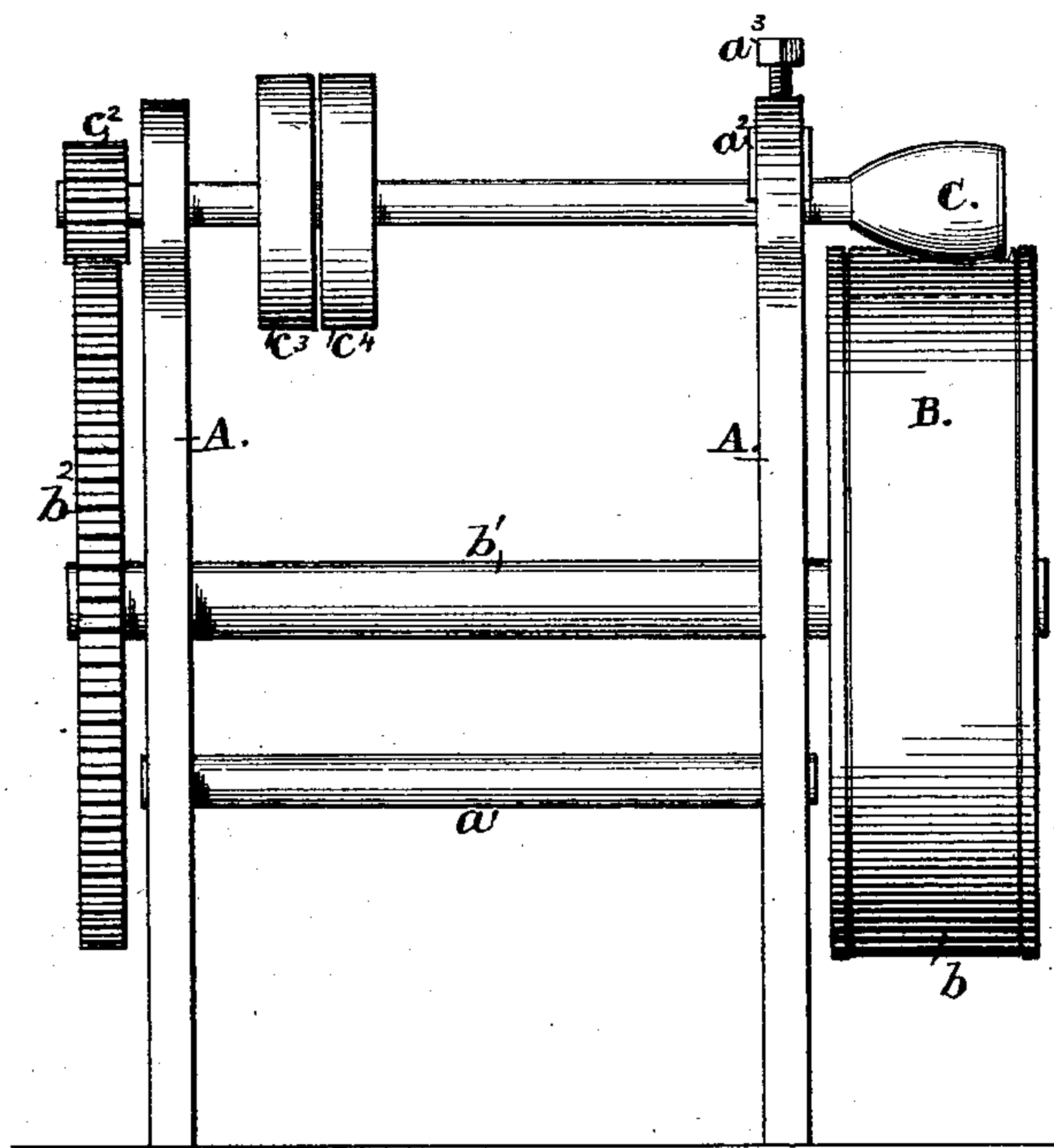
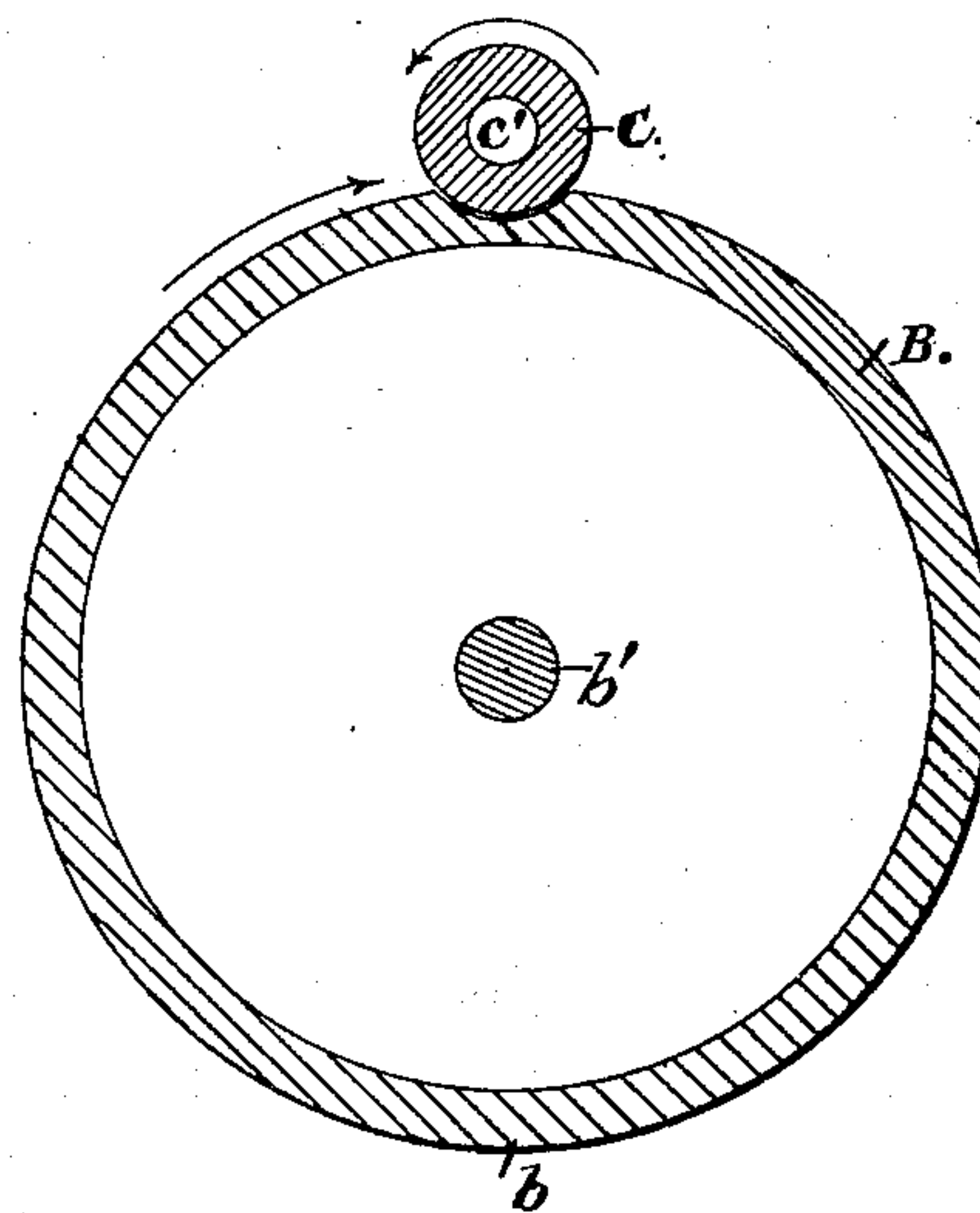


FIG. 2.



*Witnesses—*  
*Jno. D. Patten*  
*D. P. Cowl*

*Inventor*  
*Louis Cote*  
*by A. Aubin & C. M. Parks*  
*Attorneys.*

# UNITED STATES PATENT OFFICE.

LOUIS COTÉ, OF ST. HYACINTHE, CANADA.

IMPROVEMENT IN MACHINES FOR BENDING AND FORMING STIFFENERS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **155,071**, dated September 15, 1874; application filed July 1, 1874.

*To all whom it may concern:*

Be it known that I, LOUIS COTÉ, of the city of St. Hyacinthe, in the county of St. Hyacinthe, in the Dominion of Canada, have invented a Machine for Bending and Forming Stiffeners for Boots or Shoes, of which the following is a specification:

The nature of my invention consists in fixing upon a rotating shaft a mandrel of a spheroid or spherocylindrical shape, and under it an annular rotating and elastic matrix, so that by being strongly pressed together and turning in inverse directions they may, by their joint action, shape, bend, and permanently form pieces of leather or composition to be used as stiffeners for boots or shoes.

Figure 1 is a side elevation of the machine. Fig. 2 is a front perpendicular section of the mandrel and matrix through their periphery.

A, frame bearing the working parts;  $a^1$ , cross-pieces to join the end parts of the frame;  $a^2$ , adjustable cushion bearing upon the mandrel-shaft so as to press, as required, the mandrel against the rotating matrix;  $a^3$ , screw to regulate the pressure of the mandrel against the matrix; B, rotating matrix-wheel. It consists of a metal or wooden wheel, of a larger diameter than the mandrel, and with a periphery somewhat broader than the length of the mandrel. It has around its periphery an annular recess,  $b$ , filled with india-rubber or other elastic substance.  $b^1$  is a shaft upon which the matrix-wheel is fixed. It bears a

geared or toothed wheel,  $b^2$ , of the same diameter as the matrix-wheel, or nearly so. The shaft rotates in bearings fixed to the frame A. C, mandrel. It is a spheroidal or spherocylindrical piece of metal fixed upon the shaft  $c^1$ .  $c^2$  is a pinion fixed at the same shaft. It receives its motion from the fixed belt-pulley  $c^3$ , or in any other convenient way.  $c^4$  is a loose pulley to stop the machine when required. The pinion  $c^2$  gears into the wheel  $b^2$ , and gives it and through it to the matrix-wheel a rotary motion, so that the surface of the mandrel and that of the matrix move together at an equal velocity, or nearly so.

The operation of the machine is simple, and any one familiar with the art will understand how a piece of leather or other substance of like nature, of suitable size, when placed near the mandrel and matrix, will be drawn between them by their rotation, and during its passage will receive a double curve corresponding to that of the end of the mandrel.

What I claim as my invention is—

The matrix-wheel B, provided with an elastic periphery,  $b$ , in combination with the mandrel C, all constructed and operating substantially as and for the purpose as hereinbefore set forth.

LOUIS COTÉ.

Witnesses:

N. MOEGEDIS,  
J. O. GUERTIN.