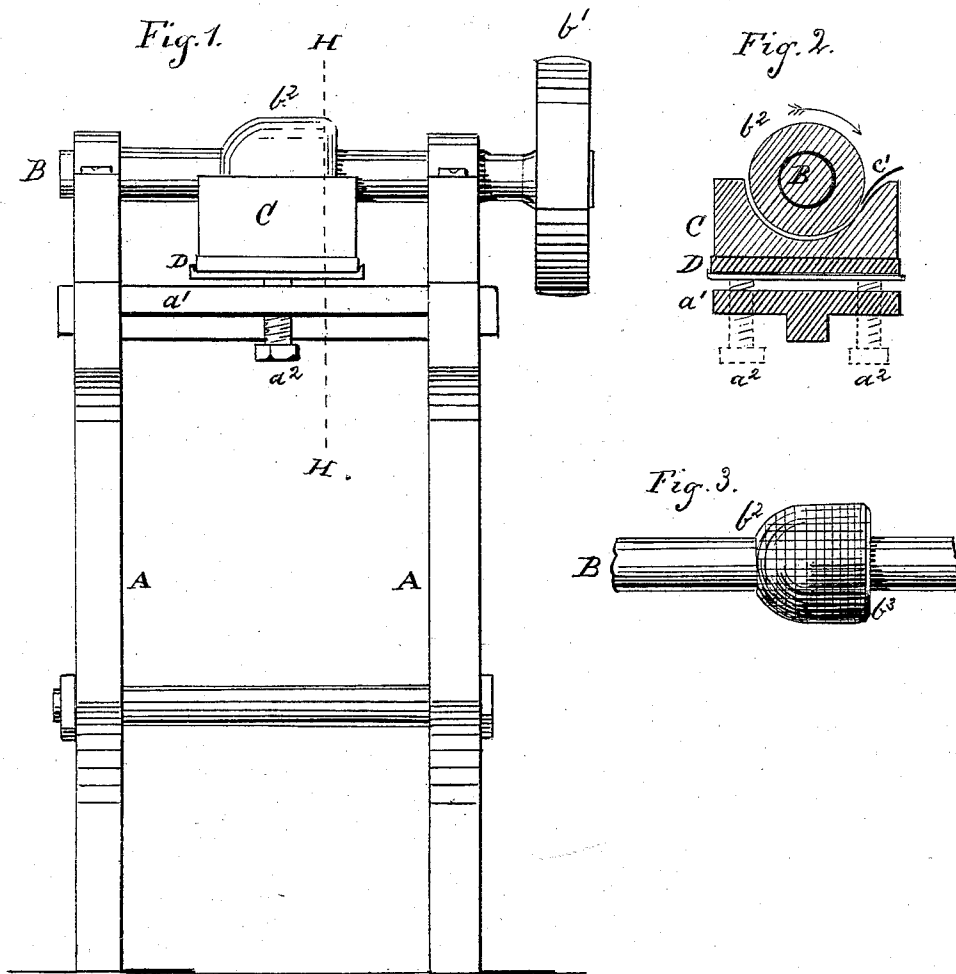


L. COTE.

Machines for Forming Boot and Shoe-Stiffeners.

No. 147,906.

Patented Feb. 24, 1874.



Witnesses :

Euc de Roy -
J. Aubin

INVENTOR :

Louis Cote
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UNITED STATES PATENT OFFICE.

LOUIS COTÉ, OF ST. HYACINTHE, CANADA.

IMPROVEMENT IN MACHINES FOR FORMING BOOT AND SHOE STIFFENERS.

Specification forming part of Letters Patent No. **147,906**, dated February 24, 1874; application filed January 8, 1874.

To all whom it may concern:

Be it known that I, LOUIS COTÉ, of the city of St. Hyacinthe, in the Province of Quebec, in the Dominion of Canada, have invented a Machine for Forming Boot and Shoe Stiffeners, of which the following is a specification:

The nature of my invention consists in placing upon a rotating shaft a mandrel of a spheric, spheroidal, or spherocylindrical shape, and below it a matrix of a corresponding form, but stationary, so that by the revolution of the mandrel any band of leather, composition, or other stuff, introduced between them, is drawn in and carried through the concavity of the matrix, and, by being strongly pressed during its passage through the machine, it receives a curved form both in its length and breadth, and is thereby adapted to be used as stiffening for boots or shoes. It also consists in placing under the matrix-block an elastic cushion or spring, so that the pressure exerted between the mandrel and matrix may adapt itself to the different thicknesses or inequalities of the stuff submitted to their combined action.

Several devices have been contrived to form stiffness, but they operate slowly and are very troublesome. The machine of my invention effectually removes all objections, operates faster, more regularly, and does not tend to disintegrate or twist the goods by uneven or too hard pressure.

Figure 1 is an elevation of the machine. Fig. 2 is a cross-section of the essential parts through H, and shows the shaft, mandrel, matrix, cushion, and bearing-plate. Fig. 3 is a view of the mandrel.

A is a frame bearing the working parts; a^1 , cross-plate, upon which rests the cushion bearing the matrix; a^2 , screws to adjust the pressure, by raising or lowering the cushion bearing the matrix-block; B, a rotating shaft bearing the mandrel. It receives its motion

from the drum b^1 , or from a crank, or from a combination of geared wheels; b^2 , mandrel. It is a spherical, a spheroidal, or spherocylindrical piece of metal, or other hard substance, of a size and shape adapted to the kind of work required. Its surface may be roughened, or may have grooves cut into it, as seen at b^3 , Fig. 3, so as to prevent its slipping upon the stuff exposed to its action. C is a matrix. It is a block of metal with a concave recess corresponding to the size and shape of the mandrel, but with a smooth surface. At the point c' , Fig. 2, it is enlarged so as to allow space to introduce the stuff between the mandrel and matrix, without separating them. If it be found desirable to expose the stuff to be formed to a more continued action of the mandrel, the matrix may be continued so as to cover a larger surface of the mandrel. D is a cushion of india-rubber, or of any other elastic substance, upon which the matrix rests, so as to enable it to adjust itself to the inequalities in the thickness of the stuff passed through the machine.

The action of this machine is simple, and its operation may be easily understood by any one acquainted with the art, upon inspecting the drawings. Several modifications of my device might be indicated, but I consider the plan described as the simplest and most effectual.

What I claim as my invention, and desire to secure by Letters Patent, is—

A rotating mandrel, b^2 , in combination with the stationary matrix C and cushion D, the whole constructed and operating substantially as and for the purpose hereinbefore set forth.

Signed and witnessed at St. Hyacinthe this 3d day of January, A. D. 1874.

LOUIS COTÉ.

Witnesses:

Co. L. COTÉ,
JAS. A. LAFERNIERE.