

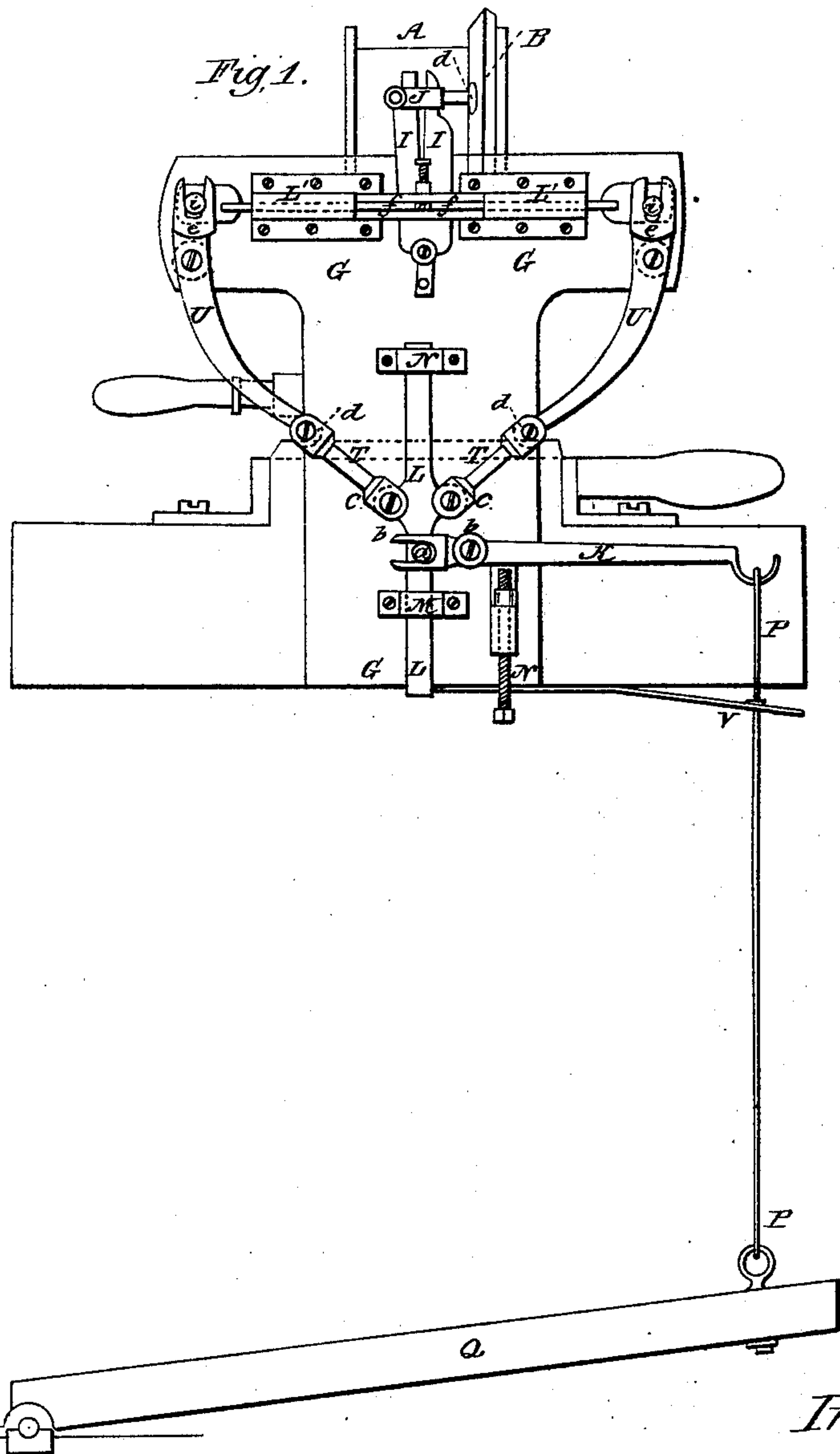
Sheet 1-3 Sheets.

T. Cabourg,

Boot-Soling Machine,

N^o 80,273,

Patented July 28, 1868.



Witnesses.

E. H. H. H.
W. H. H. H.

Inventor.

T. Cabourg

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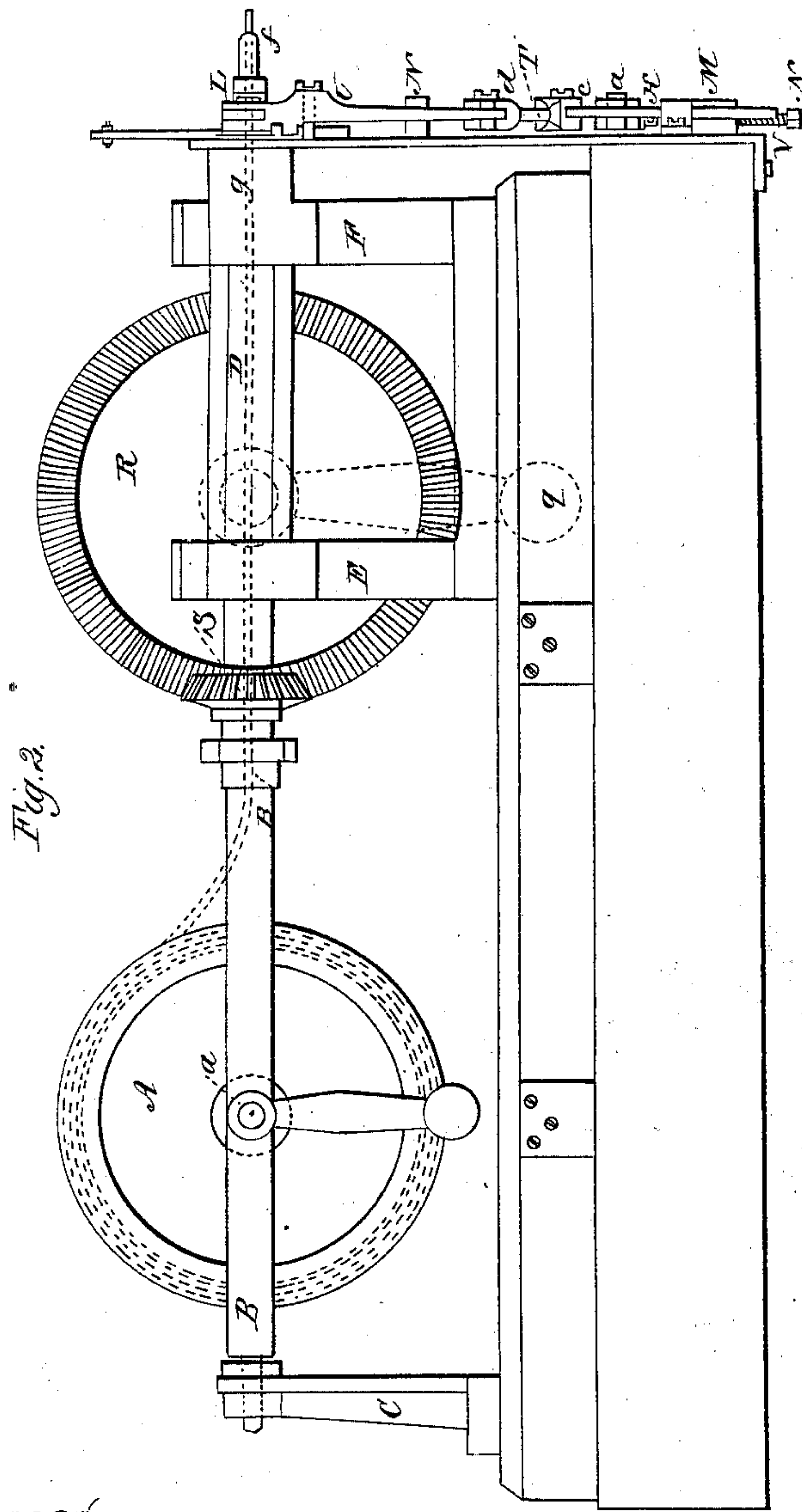


Fig. 2.

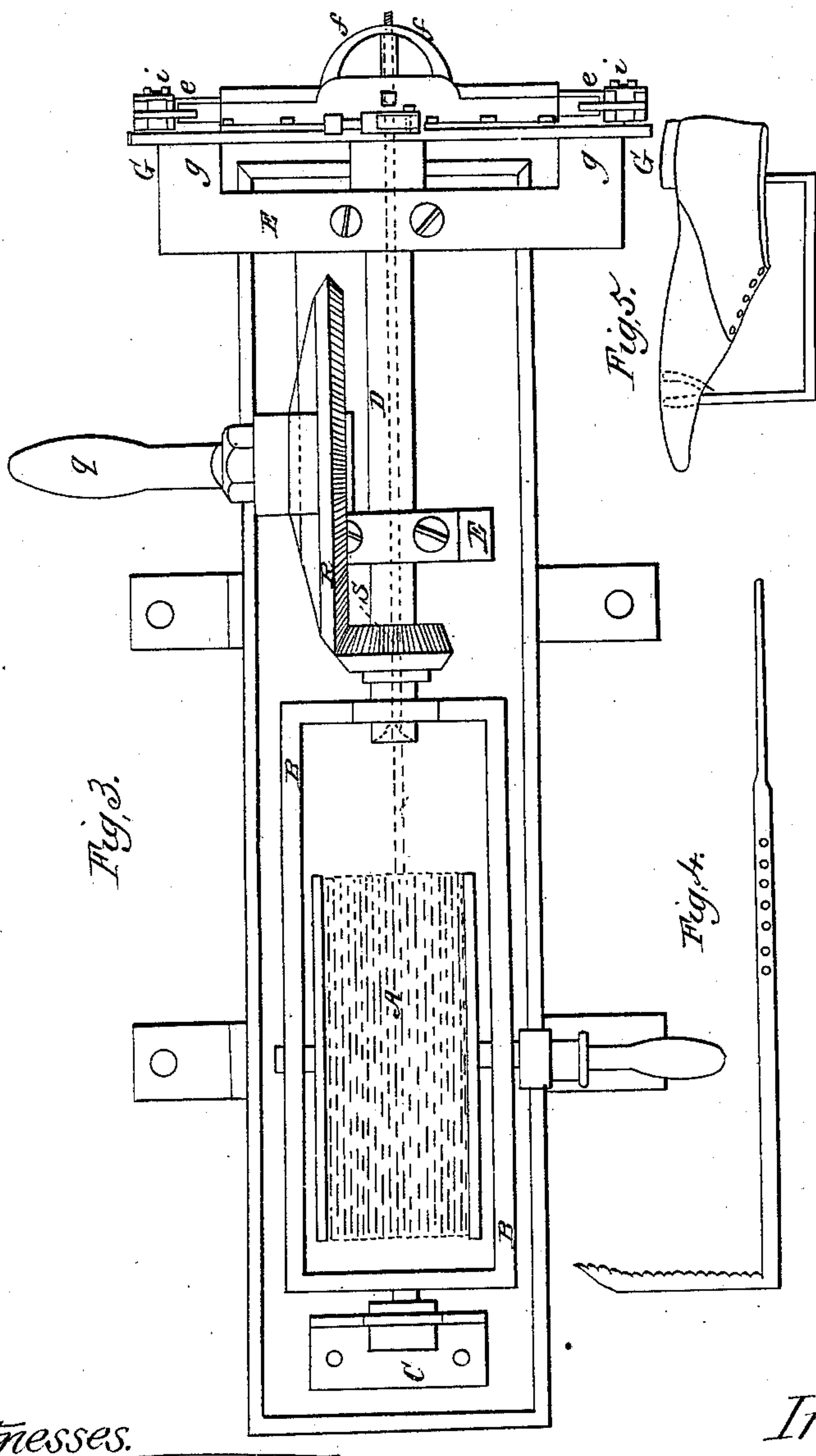
Witnesses.

R. G. Hebré
Witness

Inventor.

T. Cabourg

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Witnesses.

E. Hebré

A. Henderson.

Inventor.

T. Cabourg

United States Patent Office.

THOMAS CABOURG, OF PARIS, FRANCE.

Letters Patent No. 80,273, dated July 28, 1868.

IMPROVED BOOT-SOLING MACHINE.

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

TO ALL TO WHOM IT MAY CONCERN:

Be it known that I, THOMAS CABOURG, of Paris, in the Empire of France, have invented a new and improved Boot-Soling Machine; and I do hereby declare that the following is a full and exact description thereof, reference being made to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention consists in the construction of a machine which will form a thread upon a continuous length of brass wire, and at the same time cause it to penetrate by screwing in any portion of leather or such like material, so as to unite them in one. For instance, if it be applied to unite the upper leather or vamp of a boot or shoe with the sole or soles, it is only requisite to present the materials to be united to the tapped end of the wire, and the rotation caused by the machine will enable it to penetrate, without the necessity of having any hole made in the leather to be joined.

When sufficient length is introduced, it is, by means of mechanism, cut close to the edge of the material.

The machine by which this is effected consists of a pulley, with a large groove, upon which the wire to be tapped is wound.

This wire, when uncoiled from the pulley, passes through a hollow axle, which gives it a motion of rotation, in a plane perpendicular to the direction of its course when unwound from the pulley.

Hence, it has imparted to it a progressive spiral motion, and in this way enters the tapping-plate, and has the thread cut upon it.

From this plate it passes through a guide, and then enters into the leather or materials to be united, and, after penetrating them to a sufficient depth, it is cut by a pair of knives, which, by means of the motion of the wire, and the disposition of the knives, give it an oblique cut, so as to form a sharp point upon the succeeding part of the wire, which enables it to enter more easily the material, when, in its turn, it is brought into position.

The knives are brought into action by means of a series of levers and treadle, or by any other well-known means.

The machine is placed upon a frame, and may be worked by hand or other motive-power.

In using my machine, it is only requisite to apply lightly the leather, or other material to be united, to the end of the tapped wire, it not being necessary to first pierce a hole, as is generally done.

Figure 1 represents an end view of my machine.

Figure 2 being a side elevation, and

Figure 3 a plan.

My machine is composed of a pulley, A, on which the wire to be tapped is wound, and is indicated by the dotted lines in fig. 2. The axle of this pulley is supported in bearings in the rectangular frame B, which is supported at one end by the upright, C, and at the other by the hollow axle D, which turns in the upright, E, which is itself fixed on a stand, firmly bolted to the main foundation-plate.

All the mechanism connected with the knives is fixed to the plate G, and is composed of a lever, K, one extremity of which terminates in a hook, in connection with the rod P, the end of which is connected with the treadle Q. The other extremity of the lever K is formed with a sort of hook or fork, which embraces a stud, *a*, fixed in the vertical shaft L, which slides in the guides M N.

On this shaft are two lugs or ears *b b*, to which are attached the extremities of the rods T T. The other ends of these rods are connected with the curved levers U, whose upper extremities are terminated in a fork, *c*, for the purpose of actuating the studs *i i*, which are fixed in the shanks of the knives *f f*.

The whole of the series of levers is fixed to the plate G; which is firmly bolted to the two pieces *g g*, which are cast with the support E.

The wire, on leaving the pulley A, traverses the length of the hollow axle D, and at its exit has the thread cut on it by the tapping-plate I, which is regulated by the screw *d*.

After the tapped wire has left the plate I, it passes through a guide, *e*, and between the two edges of the knives *f f*, then, when wished, by acting on the end of the lever K with the foot by means of the treadle Q, the

knives are actuated simultaneously, and the edges having the form of an inverted V, they perform a double cut, one to the right against the left to cut off the tapped wire, and the other oblique, for the purpose of making a point to the end of the wire.

These knives have their shanks formed square in section within the guides L' L', to prevent them from turning round when acted on by the levers U U. The distance or movement of the knives is regulated by means of the screw N, fixed to the plate G.

The levers are coupled, so as to act simultaneously, by the rods T T, connected with the vertical shaft L.

The machine is put in motion by means of the handle q, fixed on the axle of the toothed wheel R, which gears into the pinion S, which gives motion to the hollow axle D, and consequently the frame B, and the pulley A, on which is wound the wire.

During this rotation, the wire passing through the tapping-plate I, has a thread on it, then, when it has penetrated a sufficient depth into the leather or other material to be united, it is cut, as has been already shown, by the application of force to the treadle Q.

The pressure is communicated to the rod P, to the lever K, and consequently to the rods T T, which acting on the curved arms U U, which communicate the motion to the knives, the latter are brought back to their normal condition by means of the spring V, fixed on the frame of the machine.

The action of these levers will be fully seen, reference being had to fig. 1 of the drawings.

This machine can be constructed of any size, and actuated by steam, manual, or any convenient power.

Figure 4 is a toothed lever, which I connect to the frame, for the purpose of resting the support A, Figure 5, to the boot or shoe during the operation of screwing on the soles.

Having now described my invention, and how the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. The construction and use of the pulley A, on which is wound the wire to be tapped, substantially as herein described.

2. The construction of the tapping-plate, substantially as described.

3. The construction, disposition, and simultaneous action of the knives, substantially as described, and more fully shown in the drawings.

T. CABOURG.

Witnesses:

E. HEBRE,

A. C. HENDERSON.