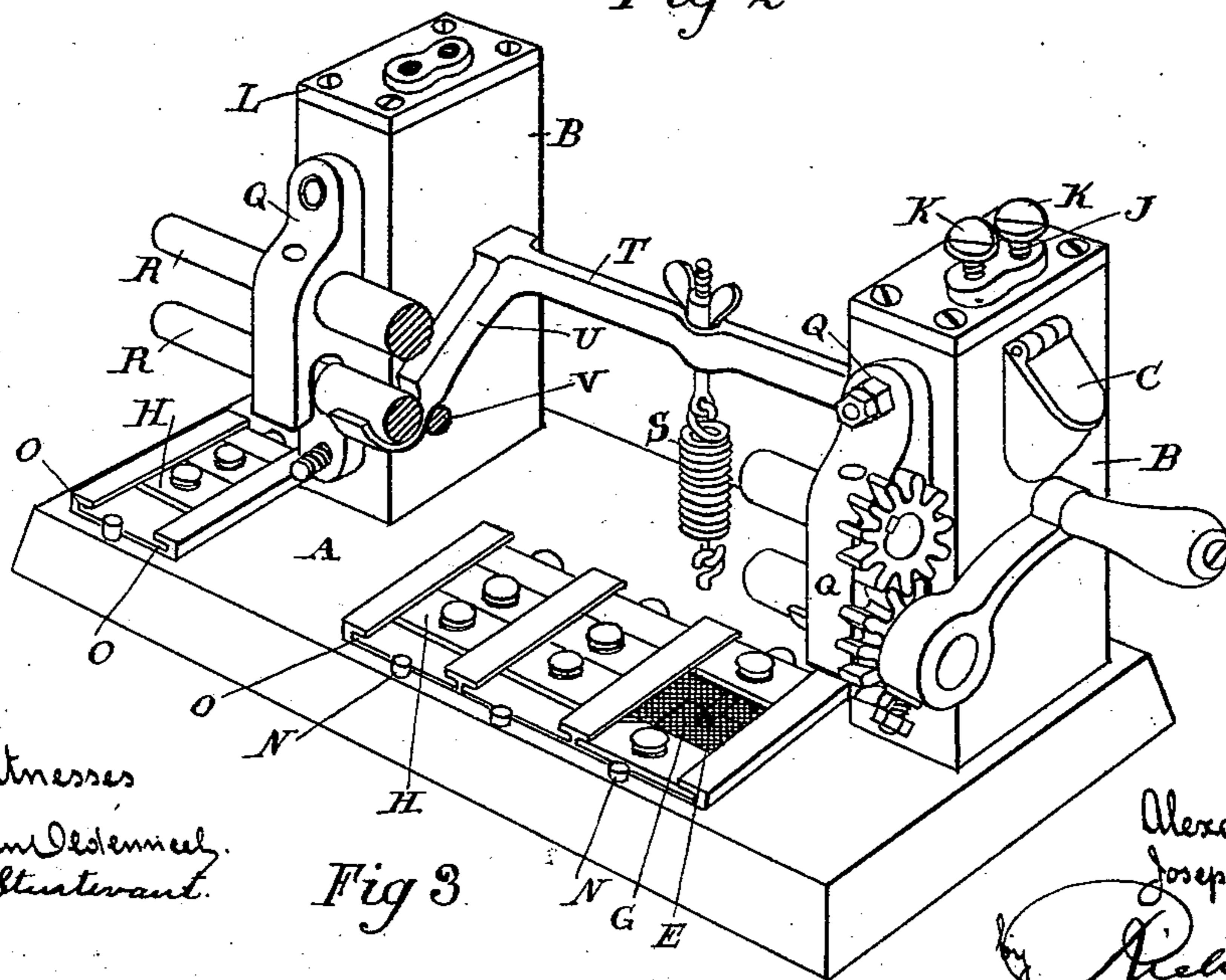
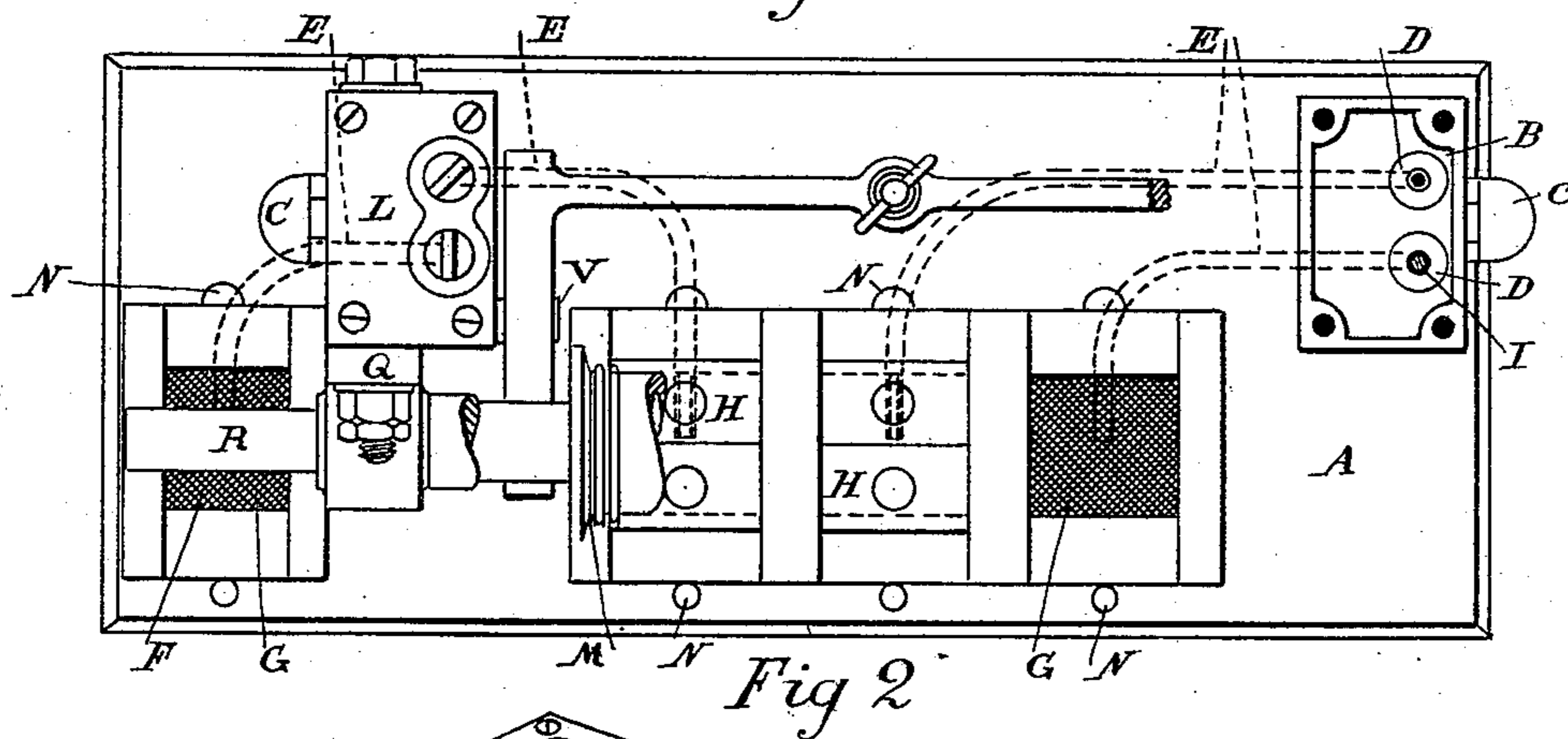
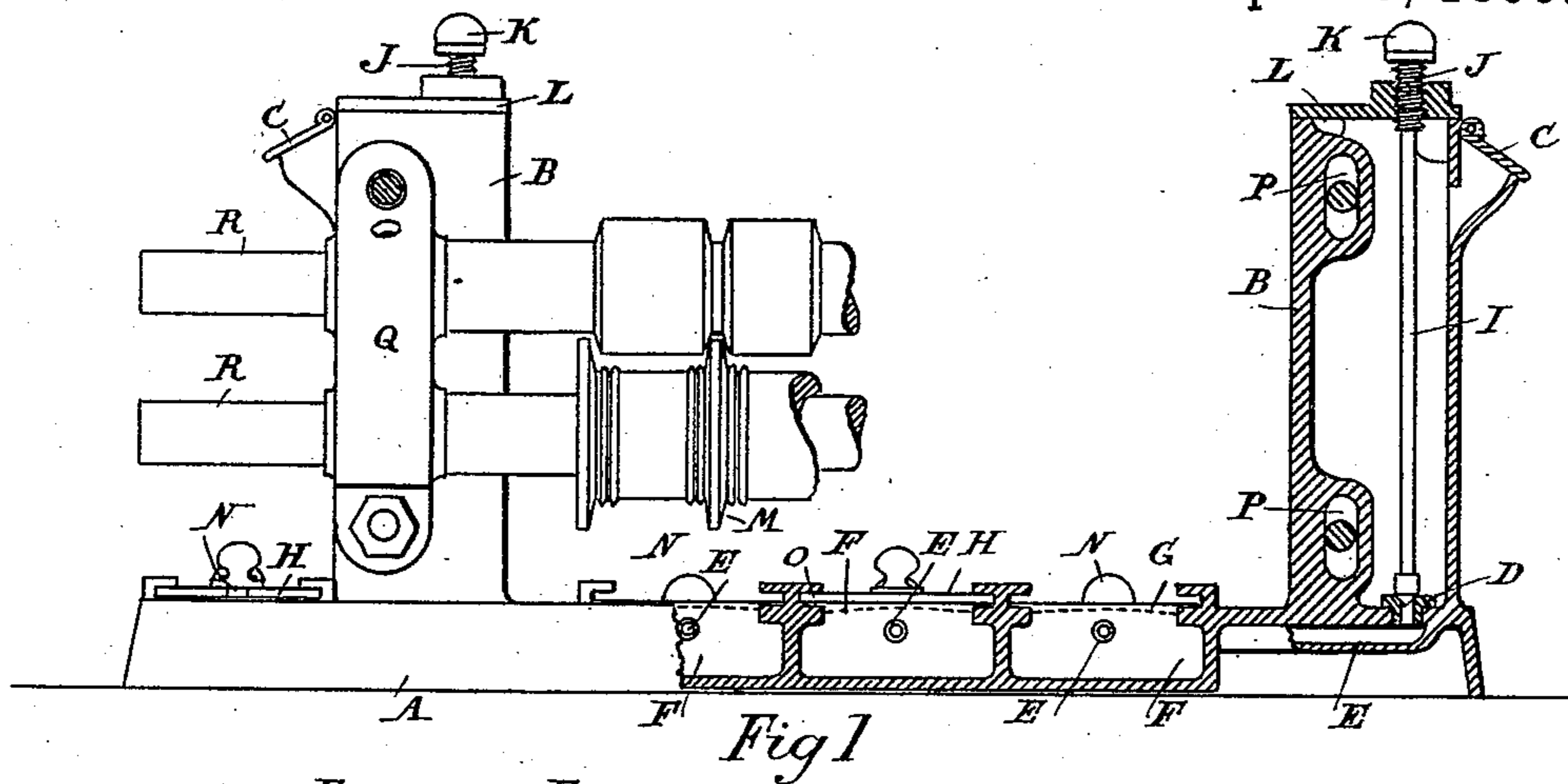


(No Model.)

A. MAXWELL & J. C. DAY.  
LEATHER CREASING AND POLISHING MACHINE.

No. 537,987.

Patented Apr. 23, 1895.



Witnesses  
H. van Dusen  
E. H. Sturtevant

Fig 3

Inventors  
Alexander Maxwell  
Joseph Charles Day  
Richard A. [Signature]  
their Attorneys

# UNITED STATES PATENT OFFICE.

ALEXANDER MAXWELL, OF ABBOTSFORD, AND JOSEPH CHARLES DAY, OF  
MELBOURNE, VICTORIA.

## LEATHER CREASING AND POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 537,987, dated April 23, 1895.

Application filed December 18, 1894. Serial No. 532,218. (No model.)

*To all whom it may concern:*

Be it known that we, ALEXANDER MAXWELL, saddler, residing at 280 Johnston Street, Abbotsford, and JOSEPH CHARLES DAY, saddler's ironmonger, residing at Rankin's Lane, off 361 Little Bourke Street, Melbourne, in the Colony of Victoria, subjects of the Queen of Great Britain, have invented certain new and useful Improvements in Hot-Creasing and Edge-Polishing Machines for Leather, of which the following is a specification.

The objects of the invention are to provide a machine which will not only more expeditiously and effectively apply the creases to a strip of leather but will also in the one operation by the application of heat impart to its edges an improved texture and surface finish.

Our invention consists in making a machine on the bottom spindle of which (and not the top) is mounted the series of revolving creasing rollers. These rollers which are removable and adjustable have inclined sides and are heated by one or more flames obtained from the combustion of methyllated spirits or a similar smokeless burning agent liberated into one or more receptacles beneath said rollers. The side angles of the grooves in the top rollers agree with the side angles of the corresponding creasing rollers and the compression between the two spindles is obtained by means of an adjustable spring governed tension bar and levers the latter being swung upon fulcrum pins secured in or to the frame. At the end of each lever is a fork in the bottom of which the ends of the lower spindle repose and work loosely. The two spindle bearing blocks on the side of the machine are separate castings to the side towers and bed plate and are attached to the former by bolts in elongated holes. In the bottom of the bed plate are two or more chambers filled with absorbent spongy material and covered with a wire gauze and adjusting shutters. From the bottom of the side towers which are hollow and act as fuel tanks there descends to the wick wells through one or more pipes a regulated supply of methyllated spirits or other inflammable liquid. This latter to prevent any deposit on the face of the creasing rollers must when burning be smokeless.

Referring to the drawings, which form a

part of this specification, similar letters of reference indicate similar or corresponding parts where they occur in the several views.

Figure 1 is a side view of the frame partly in elevation and partly in section. Fig. 2 is a plan view partly broken away. Fig. 3 is a perspective view partly broken away.

A is the bed plate and B the fuel towers. These which may be bolted or otherwise attached to the bed plate form liquid fuel reservoirs which receive their supplies through covered charging holes C.

At the bottom of the fuel tanks are placed removable valve seatings D from which the pipes E discharge the fuel either through their ends or through perforations into two or more wick wells F. These wick wells which are charged with an absorbent cotton wick and covered by a wire gauze G are each provided with a pair of adjustable shutters H working in grooves O and locked by stops N one of which is removable. By these covers the flames may be regulated to any desired height or width while they permit of some of the wells being entirely closed if necessary. The supply of fuel to the pipes E is controlled from the top of the towers by the extended valve spindles I which are turned by wing nuts K and at their screwed head J pass through the removable cover plate L.

At M is seen the shape of the creasing roller which we employ the sides of which as they become hot transfer their heat to the correspondingly inclined recesses in the rollers on the top spindle. The entering leather which is generally slightly wider than the bottom of the recess is thus subjected to three influences, a compressing action, a rubbing motion, and also to heat. By the application of these three agents a smooth polished face is imparted to the edge of the leather as it leaves the machine. The right hand tower B is a section and in it are seen the oblong holes P through which the bearing blocks Q are bolted, and adjusted vertically. Beneath the overhung spindles R the frame A is extended in which a wick well F with its regulating shutters H is situated.

Fig. 2 represents a plan of the frame in which are to be seen the removable covers L on top of the fuel towers B and in which

are screw holes to receive the extended fuel valve spindles. The number of these is dependent upon the number of wick wells to which it is required to supply fuel. The two extreme wells have their shutters removed exposing the gauze G and pipes E which extend to the center beneath said gauze.

Fig. 3 is a perspective view of the machine in which the bolting of the bearing blocks Q to the towers B is clearly seen. The bottom spindle which is free to move in an elongated opening in the bottom of the bearing block Q is compressed against the top spindle by means of the spiral spring S actuating the solid tension beam T and the spindle supporting levers U one of which is not seen in this view. This combined tension beam with its levers (which are all formed in the one casting) is compressed upon pins V secured to the sides of the oil towers B. On both spindles the rollers which are mounted separately, in sections or disks, may have their width varied by the insertion of washers. By this means either plain or fancy creasing rollers may be inserted and locked against a shoulder by a nut which though not shown in the drawings is situated on the right hand side of the spindle and near the handle.

We find by the application of heat beneath the bottom roller as before described that a much better sample of creasing work is obtained and at an infinitesimally small increase in cost. No black deposit is discharged from the heating flame to accumulate on the face of the rollers and the heat imparted from the bottom to the top is quite sufficient to give to the edge of the material (in one passage through) a perfectly smooth glossy face. The amount of the inclination of the edges of the rollers depends materially upon, first, the thickness of the leather treated; secondly, its quality; thirdly, the amount of compression, and, fourthly, the quantity of heat imparted to the said rollers. This which is regulated by the adjustable shutters above the wick wells admits of any particular section or sections being either used or cut off.

Should the flames from the wick wells be insufficiently controlled by the sliding shutters the spindles may be elevated or depressed bodily by means within the elongated holes P.

Having now described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In combination in a creasing machine, the rollers, the end standards containing the

reservoirs, and the roller bearings, the heating means below the rollers and the fuel supply pipe leading thereto from the reservoir, substantially as described.

2. In combination in a creasing machine, the rollers, the hollow end standards containing the reservoirs, the series of heating means below the rollers, and the several valved fuel supply pipes leading from the standards to the heating means whereby the heat may be applied at various parts along the rollers, substantially as described.

3. In combination, the creasing rollers, the fuel standards and the wick well in the base of the machine connected to the fuel standards, substantially as described.

4. In combination, the creasing rollers, the fuel standards, the wick well in the bottom of the machine beneath the rollers, said wick well comprising the wire gauze and the adjustable shutters, the said gauze and shutters being at the top of the wick wells substantially as described.

5. In combination, the standards, the creasing rollers extending between the same and overhanging beyond one end of said standards, the heating means between the standards and beneath the rollers and the heating means below the ordinary portion of the rollers, substantially as described.

6. In combination, the standards, the creasing rollers, the blocks carrying the said rollers and adjustable as a whole on the standards and means for adjusting one roller toward and from the other, substantially as described.

7. In combination, the rollers, the standards, the blocks A adjustable in the standards, and receiving one roller adjustably and the frame T, U, with the spring S for adjusting one roller, substantially as described.

8. In combination, the hollow standards having the reservoirs, the heating means connected with the standards, the valves and shutters for regulating the heat, the blocks Q carried adjustably by the standards, the rollers carried by the blocks, one roller being adjustable toward and from the other, substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

ALEXANDER MAXWELL.  
JOSEPH CHARLES DAY.

Witnesses:

EDWIN PHILLIPS,  
CECIL WOODS LEPLASTRIER.