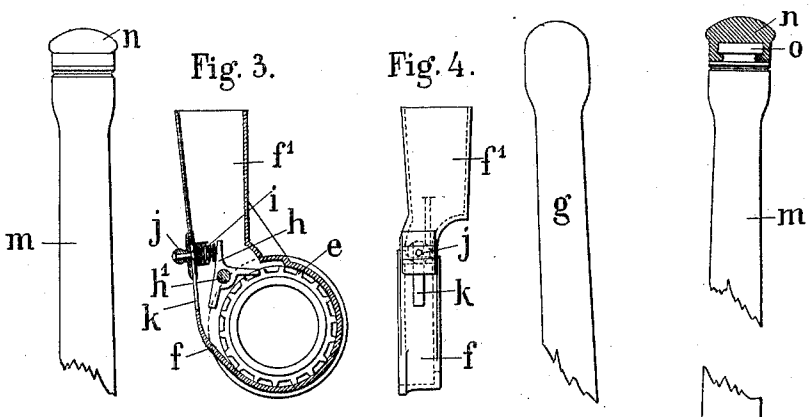
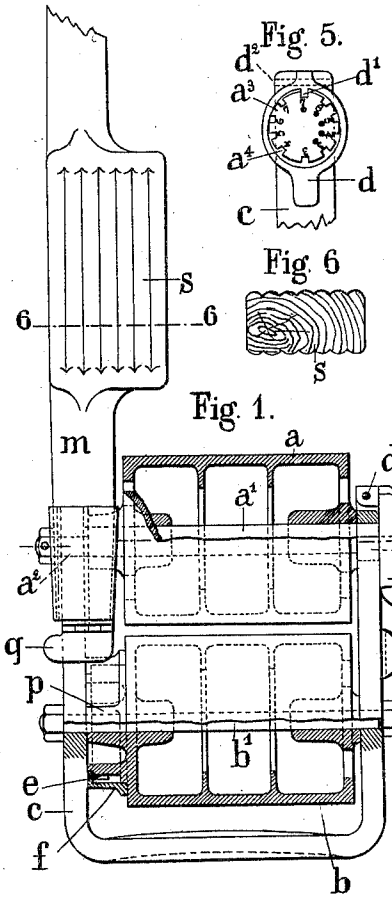
F. T. MILLET.

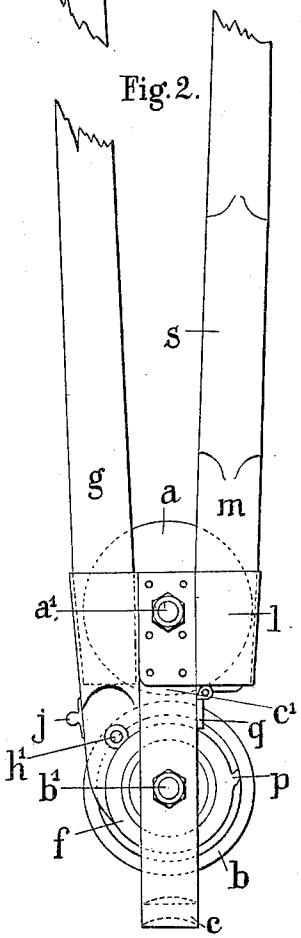
APPARATUS FOR COMPRESSING LEATHER SOLES.

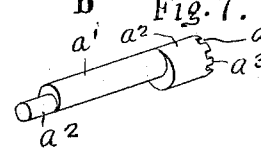
APPLICATION FILED MAR. 23, 1912.

1,068,262. Patented July 22, 1913.









WITNESSES

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APPARATUS FOR COMPRESSING LEATHER SOLES.

1,068,262. Specification of Letters Patent. Patented July 22, 1913.

Application filed March 23, 1912. Serial No. 685,821.

To all whom it may concern:

Be it known that I, FÉLIX THÈODORE MILLET, a citizen of the Republic of France, and a resident of 18 Rue Gambetta, at Persan, Seine and Oise, France, have invented a new and useful Apparatus for Compressing Leather Soles, of which the following is a specification.

Usually shoemakers, with a view to improving the quality of the leather soles of footwear, increase the density of the leather by an energetic tapping, which is performed by the aid of a heavy hammer. This long and troublesome work is particularly objectionable because it is very noisy.

The present invention has reference to a very simple apparatus which allows of carrying out by a laminating or rolling action, without noise and without appreciable fatigue, a compression of the leather which is also more energetic and more rapid.

The annexed drawing shows a form of machine for carrying out the object of the invention.

Figure 1 is an elevation, partly in section, of the apparatus. Fig. 2 is a profile view. Figs. 3 and 4 show in section and in exterior side view details of the pawl mechanism. Fig. 5 is an end view of the axis of the upper cylinder. Fig. 6 is a horizontal section on line 6—6 of Fig. 1. Fig. 7 is a perspective view of the eccentric axle or shaft of one of the cylinders.

The apparatus consists of two laminating cylinders a and b which can turn freely around axes a' and b' mounted parallel in a frame or carrier c. The laminating cylinders are hollow and have interior ribs or webs so as to afford considerable strength for a minimum weight; their surfaces are straight lengthwise, as in the drawing, or may present inverse curves; their surfaces are tinned, plated, coated with zinc, lacquered, or hard-varnished to avoid chemical action of the metal on the damp leather. The journals a^2 by the intermediary of which the axis a' of the upper cylinder rests upon the carrier c, are eccentric relatively to the axis a' as shown in Fig. 7 so that it is sufficient to make them turn in their bearings by means of the head a^3 to vary the amount of separation of the two laminating cylinders. The head a^3 is provided with graduated notches a^4 in which can engage the tooth d' of a locking device d movable around an axis d^2 which permits of the axis a' being held stationary in the desired position. The graduation of the notches can either indicate merely the amount of increase of the space between the cylinders or may show, as in the drawing, the size of this interval in millimeters (plain figures) and millimeters and a half (figures above a dot).

The lower cylinder b is furnished with fine longitudinal grooves intended to insure the feed forward of the leather between the cylinders; it is fast to a ratchet wheel e placed at one of its extremities and concentric with the axis b'.

A pawl casing f ending in a conical socket f' in which enters a controlling lever g, turns around the ratchet e; the casing f is provided with a double pawl h movable around an axis h' and capable of effecting the rotation of the wheel e in the two directions according to whether it is engaged with this wheel by one or the other of its extremities. For this purpose a trip-device consisting of a coiled spring i (Fig. 3) is adapted to bear upon the pawl in the required direction; the spring i is located in a cylindrical support provided with a knob j (Figs. 3 and 4) and movable in a slot k in the pawl casing. Upon one of the extremities c' of the carrier c there is riveted a metal socket l in which the resistance lever m engages. The free end of this lever is provided with a rubber buffer n secured to a flange o fixed upon the lever.

The length of the levers g and m is such that when the carrier or frame rests upon the ground, their upper ends are at the level of the hands of the operator seated at work.

In further explanation of the construction of the apparatus, it may be stated that the cylinder a is mounted idle on shaft a' so that it may rotate freely around the latter. The shaft a' terminates at each end in an eccentric journal a^2. The two journals a^2 have not the same diameter but they have the same axis; furthermore, the journal a^2 on the right in Fig. 7 is terminated by a head a^3 which is provided with notches a^4. The journals a^2 do not turn in the frame c except when adjusted manually.

The working of the apparatus is as fol-

lows:—The distance between the cylinders having been set and the apparatus placed upright on the ground in the position of the drawing and near the feet of the seated operator, the latter holds the resistance lever *m* in his left hand while with his right hand he moves away the operating lever *g*. In its movement the lever *g* actuates the pawl casing, and the separation of the two levers proceeds until the moment when the projection *p* of the pawl casing comes into contact with the stop *q*. The operator then introduces the leather or sole between the two cylinders and brings the two levers together; the pawl casing operates the wheel *e* and thereby the lower cylinder in such a way that the leather becomes engaged between the cylinders. It is only necessary to repeat the action of separating and bringing together the two levers a suitable number of times in order to effect the complete passage of the leather to be treated. It may happen for example in case of faulty engagement that the operator may wish to bring the leather back again. In that case he need only press the knob *j* so as to move the trip-device to the other end of the slot *k*, when upon further movement of the levers the cylinders rotate in the opposite direction and the leather is released.

The apparatus need not necessarily be employed in the upright position with the carrier against the ground. On the other hand it may be used in any other position according to the convenience of the operator. To facilitate these several methods of use, there is provided a considerable space between the cylinder *b* and the carrier *c* and a round-edged projection *r* is arranged on each side of the carrier *c* to afford a grip for the hands.

When the apparatus is turned on its side, the rubber buffer *n* rests on the ground and the apparatus is supported between the legs of the operator by means of the corrugated swelling or boss *s*. In order to work in this position, the stop *q* is raised so as to allow the projection *p* to pass and to allow the lever *g* to make an angle of more than 90° with the lever *m*.

What I claim and desire to secure by Letters Patent of the United States is:—

1. An apparatus for the purpose specified, comprising a U-shaped carrier, or frame, a "resistance" lever fixed to and projecting from one side of said frame substantially longitudinally parallel therewith, two cylinders arranged parallel and journaled contiguously in said frame, means for adjusting one cylinder toward or from the other, a second lever hinged to the same arm of the frame as the resistance lever is attached to, the hinged lever extending alongside and being movable toward the other, and means on which the movable lever is adapted to act to rotate one of the cylinders, as described.

2. An apparatus for the purpose specified, comprising two opposed cylinders adapted for adjustment toward and from each other, the axis of one of the cylinders having for this purpose eccentric pivots, one of which terminates in a head having notches, and a locking device adapted to engage such notched head in order to fix the axis of the cylinder in the desired position, as described.

3. In an apparatus of the character described, a supporting framework, a pair of rollers arranged in said framework, a ratchet wheel connected with one of said rollers, a housing surrounding said ratchet wheel but adapted to move independently thereof, a double-ended pawl for engaging said ratchet wheel, a spring pressing against said pawl for holding one end thereof continuously in engagement with said ratchet wheel, and means for supporting said spring and holding the same in position, said housing surrounding said ratchet wheel being formed with a slot for accommodating said means and permitting said means to be moved from near one end of said pawl to the other for causing the respective ends of said pawl to engage said ratchet wheel at different times.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

FÉLIX THÈODORE MILLET.

Witnesses:
CHARLES DONY,
LÉON PEILLET.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."