

No. 637,418.

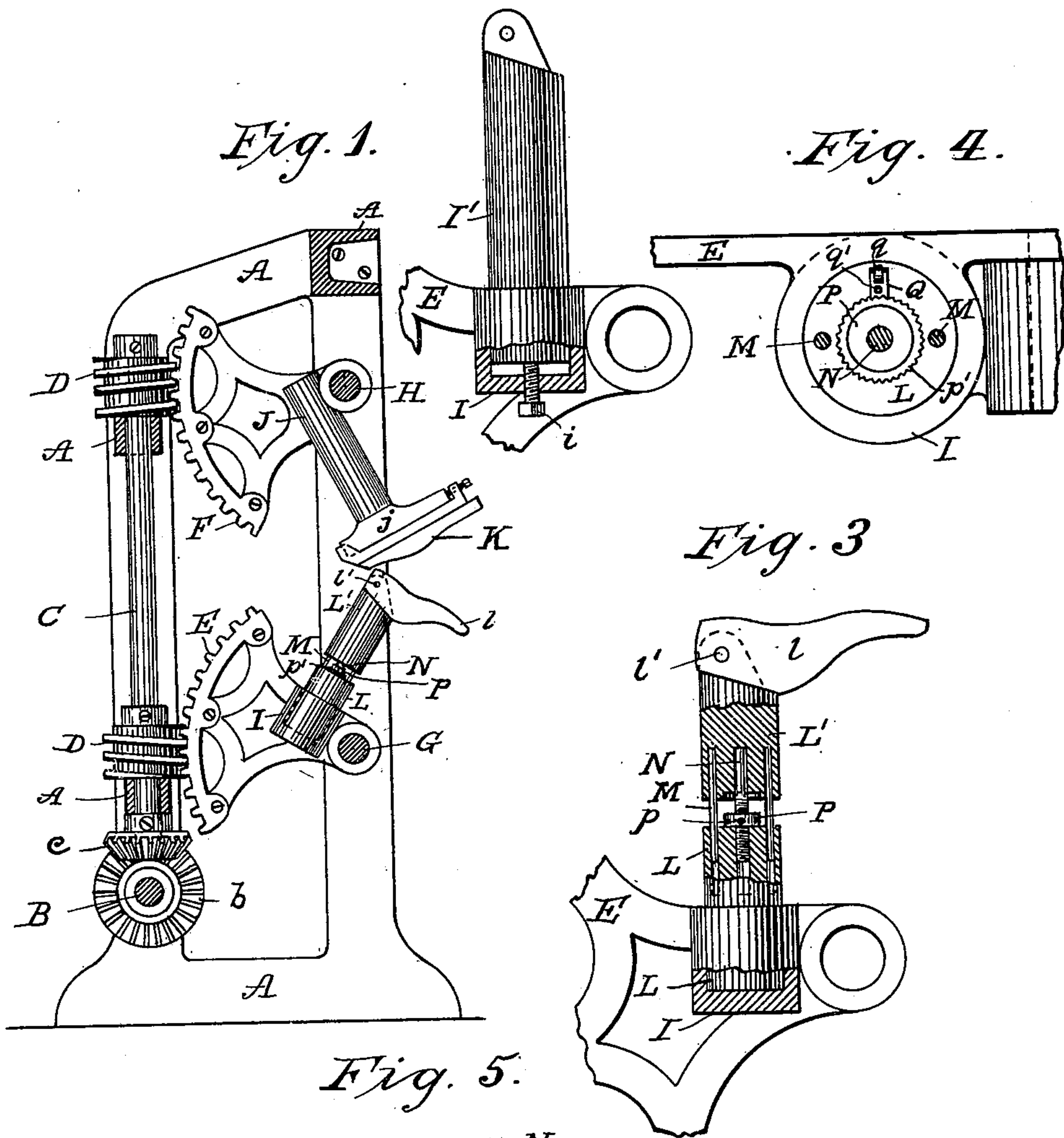
Patented Nov. 21, 1899.

W. L. RHODES.
SHOE LEVELING MACHINE.

(Application filed Mar. 16, 1899.)

(No Model.)

Fig. 2.



Witnesses

Raymond C. Ryder,
A. A. Sauton.

Inventor

Will L. Rhodes.

By his Attorney

J. B. Thurston

UNITED STATES PATENT OFFICE.

WILL L. RHODES, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF TO OSSIAN D. KNOX, OF SAME PLACE.

SHOE-LEVELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 637,418, dated November 21, 1899.

Application filed March 16, 1899. Serial No. 709,292. (No model.)

To all whom it may concern:

Be it known that I, WILL L. RHODES, a citizen of the United States, residing at Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Shoe-Leveling Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a machine known to the trade as "The Giant Leveler," for leveling the soles of boots and shoes, and in which machine the last and presser foot or form rock backward and forward while in contact; and my invention consists in the improved and more convenient means for adjusting the pressure upon the sole of a boot or shoe while being leveled, as fully set forth in the following specification and claim and clearly illustrated in the drawings accompanying and forming a part of the same, of which—

Figure 1 is a sectional elevation showing some of the essential parts of a leveling-machine and to which my improvements are applied, Fig. 2 representing a detached broken elevation, on an enlarged scale, of the present method of adjusting the leg carrying the last. Fig. 3 is a similar view representing my improved method for adjusting said leg. Fig. 4 is an enlarged plan view showing details of my improvements. Fig. 5 is a vertical sectional elevation showing practical details of my improvements.

Similar reference-letters designate corresponding parts in all the views.

In consequence of the variation in the temper of soles, easily detected by an operator, it is sometimes desirable to lessen the pressure for a single shoe in order to avoid the danger of overstraining the machine, possibly breaking the last or some other portions which might cause injury to an operator. The last and form are necessarily changed with each style of shoe an operator is running. For example, if an operator has been leveling a style known as the "Bull-dog" and wishes to level that style known as "Coin" shoes, the form and last must be substituted with those conforming to that particular style, and the form

and last must also be changed for various sizes of shoes to be leveled. In the "Giant" leveling-machines for which my improvements are adapted the adjustment is invariably made by means of screws so placed, either in the form or in the plate to which said form is attached, as to separate the one from the other for increasing the pressure, or vice versa, which consumes considerable of the operator's time and is, furthermore, unreliable for the reason that more than one screw must be turned to accomplish the desired result, and much difficulty is experienced in determining the exact change in the relative position of said form and last, and hence in the change of pressure upon a shoe-sole. All necessary adjustment of the pressure upon a sole can be provided within the leg which carries the last, Fig. 2 representing the simple method now employed in the machine mentioned, consisting of a screw passed through and threaded to the bottom of the socket carrying the support or leg of the last and bearing against the bottom of said leg. This method as in present use besides being impracticable on account of the threads becoming stripped is also very unhandy for the operator to manipulate, it being out of sight. In either case the operator must guess at the variation he makes in the pressure by adjusting the screw at the bottom of the socket of the present machine or the screws of the form, and all these difficulties are overcome by the use of my improvements, which may be applied to machines now in use or to new ones, as desired.

In the drawings, A represents portions of the frame of the machine above described, B is a shaft running longitudinally between the upright portions of the frame A, and C is an upright shaft driven by the bevel-gears *b c*, mounted, respectively, on the shafts B C, and D are worm-gears mounted upon the shaft C at the proper points to engage the gear-segments E F, mounted on the shafts G H, as seen in Fig. 1. The segment E is provided with a socket I, and the segment F with an arm J, the socket I being adapted to receive and support an arm or leg, to which is secured a last, and the arm J has at its outer end a presser-foot *j*, to which is suitably attached

the form K. The leg carrying the last in the machine as at present constructed is formed whole or in one piece, as at I' in Fig. 2, and may be raised or lowered in its socket I by means of an ordinary set-screw *i*, while my improved leg is formed of two parts L L', the lower portion L being rigidly secured within the socket I and adjustably connected to the upper portion L', to which is detachably connected the last *l* at *l'* or in the same manner as the last is attached to the whole leg I' at present used in the machine to which my improvements apply. The adjacent ends of the sections L L' are bored for the reception of one or more guide-rods M, which are fixed rigidly in the upper section L', and the sections are also bored centrally for the adjusting-screw N, one end of which is rigidly secured to the upper section L', as seen in Figs. 3 and 5. The perforation *l*² of the lower section L is preferably made larger than the diameter of the screw, the threads *n* of which are preferably square, as in Fig. 5, and fitted to a threaded sleeve or nut P, which may be made circular and provided in its sides with several perforations *p* for the insertion of a suitable tool, by which the said nut may be rotated. In Fig. 3 the nut P is represented as a plain cylindrical collar resting upon the top of the section L; but in order to make the nut longer, so as to cover more of the threads of the screw N, said nut may be provided with an extension P', passing down within the central open-

ing of the section L, as seen in Fig. 5, and in order to prevent any accidental movement of the nut I may provide the serrated flange *p'*, as shown best in Fig. 4, and an arm Q, pivotally connected at *q* to said section L, and having at its free end serrations corresponding with those of said nut and provided with a knob *q'*, by which said arm Q may be raised from contact with the nut when it is desired to adjust the same.

By the use of my improved adjustable last-supporting leg in a shoe-leveling machine an operator knowing the given number of threads which the screw N contains to the inch may readily determine how far to turn the nut P (either in fractions or whole revolutions) in order to adjust a last toward or away from the form K to increase or decrease the pressure.

Having described my improvements, what I claim is—

An adjustable last-supporting leg for shoe-leveling machines comprising two sections, one or more guide-rods and a centrally-located threaded rod connecting the same, a nut located between the sections and fitting the threaded portion of said central rod, and means for locking said nut wherever adjusted.

In testimony whereof I affix my signature in presence of two witnesses.

WILL L. RHODES.

Witnesses:

J. B. THURSTON,

WILLIAM W. FORBES.