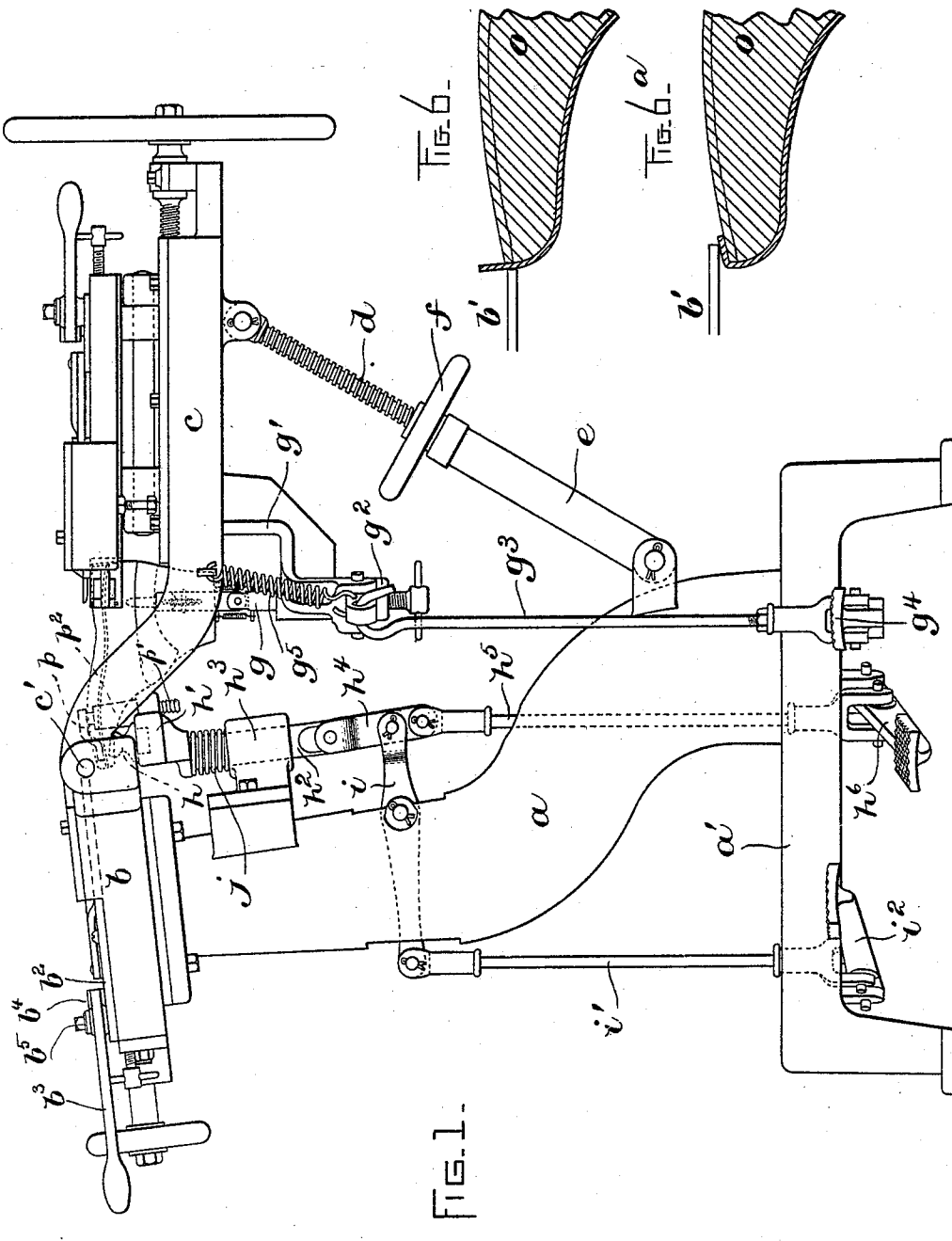


2 Sheets—Sheet 1.

Patented Oct. 27, 1896.



WITNESSES:
A. D. Harrison.
J. W. Pizzatti

INVENTOR:
W. S. Hamm
by Night Born Limley
attor.

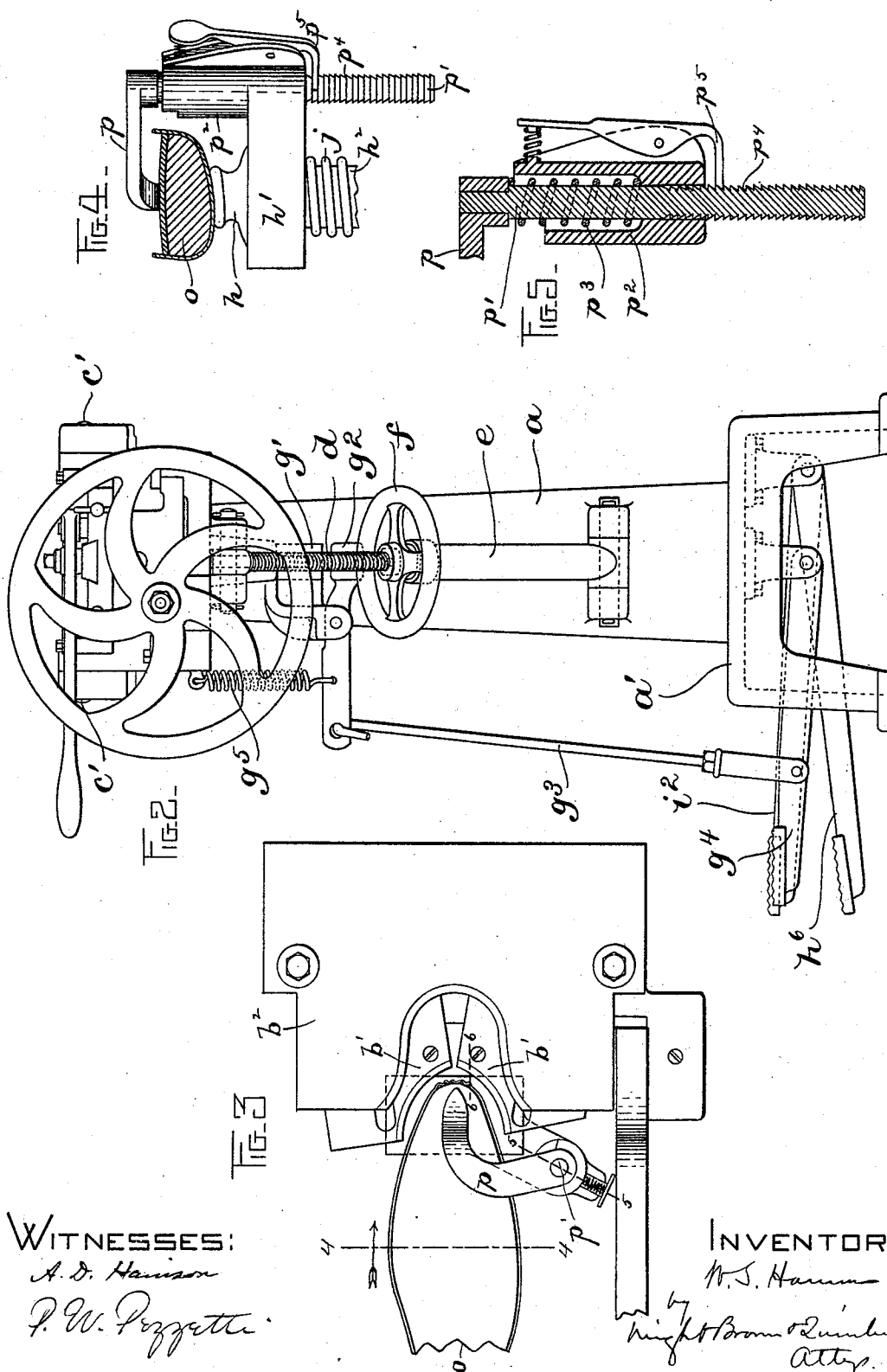
(No Model.)

2 Sheets—Sheet 2.

W. S. HAMM.
LASTING MACHINE.

No. 570,220.

Patented Oct. 27, 1896.



WITNESSES:

A. D. Hanson

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INVENTOR:

W. S. Hamm

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Attys.

UNITED STATES PATENT OFFICE.

WILLIAM S. HAMM, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO
AUGUSTUS SEAVER, OF BOSTON, MASSACHUSETTS.

LASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 570,220, dated October 27, 1896.

Application filed June 1, 1896. Serial No. 593,744. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. HAMM, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Lasting-Machines, of which the following is a specification.

The present invention relates to machines for lasting over the heel and toe portions of boot and shoe uppers, and has in view, for one thing, a more convenient manner of adjusting the machine to different styles of lasts, so as to bring the bottom of the last at the toe end parallel with the plane of movement of the wipers.

A further object is to provide improved means whereby the operator can raise and lower the heel and toe rests at will.

To the above ends the invention consists in a number of novel combinations of parts, which are recited in the appended claims.

The drawings which accompany and form part of this specification illustrate an embodiment of the invention.

Figure 1 shows a front elevation of the machine. Fig. 2 shows an end elevation of the same. Fig. 3 shows a top view of a portion of the machine. Figs. 4 and 5 represent, respectively, sections on the lines 4 4 and 5 5 of Fig. 3. Figs. 6 and 6^a represent sections on line 6 6, Fig. 3.

The construction of the wipers and the means for operating the same form no part of the present invention, and will not, therefore, be described.

The letter *a* designates the main supporting-column of the machine, which rises from a suitable base *a'* and has mounted on its upper end the toe-lasting mechanism, comprising a fixed frame or support *b* and toe-wipers *b'*, affixed to a slide *b²*, which is movable in guides on the support *b*, a lever *b³*, pivoted at *b⁴* to the support *b* and at *b⁵* to the slide *b²*, serving to enable the operator to move the wipers forward and back, the wipers being thus alternately projected over the last and retracted therefrom at the will of the operator.

The frame *c*, which supports the last *o* and heel-wipers, which are movable thereon by means similar to those employed for operat-

ing the toe-wipers, is pivoted at its inner end to the frame *b*, as shown at *c'*, and is adjustably supported at its outer part by the following-described means: A screw *d* is pivotally connected at one end to the said frame *c*, and a sleeve *e* receives its opposite end loosely, said sleeve being pivoted to the column *a*. A wheel *f* engages the thread of the screw, and its hub bears against the upper end of the sleeve. Now by turning said wheel the frame *c* can be raised or lowered, and it is by this means that I secure the proper relation between the toe-lasting wipers *b'* and the top portion of the last by making the forward portion of the bottom of the last substantially parallel with the path of movement of the toe-wipers. The frame *c* requires to have a greater inclination when the bottom of the last has a considerable curvature than when it is approximately flat. It will be seen that movement of the frame *c* on its pivot changes the relation of the plane of the bottom of the toe part of the last to the general plane of the frame *b*, and in this way the traverse of the toe-wipers in a plane parallel with the toe-bottom is insured.

The heel part of the last *o* is supported by a heel-pin *g*, which is secured to a bracket *g'*, depending from the frame *c*, and is jointed as usual to permit the last to have a universal tipping motion. The heel-pin *g* is fitted to slide in the bracket *g'*, and rests on a lever *g²*, pivoted to the bracket and connected by a rod *g³* with a treadle *g⁴*. A spring *g⁵* is attached at one end to said lever on the outer side of its pivot and at the other end to the frame *c*, and said spring exerts itself to depress the end of the lever on which the heel-pin rests. The operator, by working the treadle *g⁴*, can raise and lower the heel of the last at will.

Between the heel-pin *g* and the wiper-support *b* is interposed an independently-movable toe-rest *h*, which is adapted to be raised and depressed by the operator, so that the toe portion of the last may be first raised to cause the wipers *b'* to first impinge on the upper below the bottom of the last, as shown in Fig. 6, and then lowered to permit the wipers to project over the bottom of the last, as shown in Fig. 7, it being desirable to re-

peat this movement several times in lasting each upper.

The toe-rest h is fitted to a block h' , having a stem h^2 , fitted to slide through a bracket h^3 , fastened to the column a , and said stem is connected by a link h^4 with a rod h^5 , jointed at its lower end to a treadle h^6 , the arrangement being such that depression of the treadle causes depression of the toe-rest. A lever i connects with the link h^4 at one end and is pivoted to the column, and at its outer end connects with a rod i' , which is jointed at its lower end to a treadle i^2 , the depression of this latter treadle, it will be observed, causing the toe-rest to rise. A spring j , surrounding the stem h^2 , exerts itself to keep the toe-rest elevated.

The operator, by placing his heel on the treadle h^6 and his toe on the treadle i^2 , can readily control the toe-rest and move it up and down at will.

I do not limit myself to the described means for raising and depressing the toe-rest, and may employ any other suitable means whereby the operator may quickly raise and depress the toe-rest at will.

To hold the toe portion of the last firmly upon the toe-rest h , I provide a clamp p , which is movable with the toe-rest and is arranged to bear upon the bottom of the last at a point near the toe, as shown in Fig. 3, said clamp being adjustable independently of the toe-rest, so that it may be pressed upon and raised from the bottom of the last.

It will be understood, of course, that the clamp p actually bears upon the inner sole, and not directly upon the last. The said clamp is an arm or finger formed upon a vertical shank p' , which is movable vertically in a socket p^2 , formed on or affixed to the block h' , which supports the toe-rest h . A spring p^3 in said socket normally raises the clamp p from contact with the last. The lower portion of the shank p' is provided with serrations p^4 , which are engaged by a spring-pressed detent p^5 , adapted to hold the clamp at any point to which it may be depressed against the pressure of the spring. When the clamp is pressed downwardly, the detent p^5 retains it at the point to which it is thus pressed, and when the detent is displaced the spring raises the clamp.

I claim—

1. In a lasting-machine, the combination with toe-lasting devices including movable

toe-wipers, of a last-support, a toe-rest interposed between the said last-support and lasting devices, and means for reciprocating the toe-rest in a direction substantially at right angles with the direction of movement of the said toe-wipers.

2. In a lasting-machine, the combination of toe-lasting devices, a last-support, a toe-rest interposed between the said last-support and lasting devices, means for raising and depressing the toe-rest, and an adjustable clamp movable with the toe-rest for holding the last upon the toe-rest.

3. In a lasting-machine, the combination of a fixed wiper-support, a pivoted last-supporting frame, and means for raising and lowering said frame, for the purpose described.

4. In a lasting-machine, the combination of a stationary support for toe-lasting devices, a frame pivoted to said support and having a bracket supporting a heel-pin, and means for raising and lowering the frame, for the purpose described.

5. In a lasting-machine, the combination of a stationary support for toe-lasting devices, a frame pivoted to said support and having a bracket supporting a heel-pin for the last, a toe-rest adjacent to the pivot of the frame, and means for raising and lowering the frame, substantially as and for the purpose described.

6. In a lasting-machine, the combination of a stationary support for toe-lasting devices, a frame pivotally connected with said support and holding the last, a screw jointed to said frame, a sleeve or socket jointed to the stationary support, and a hand wheel or nut engaging the screw and bearing against the end of the sleeve.

7. In a lasting-machine, the combination of a toe-rest vertically movable in a suitable support, and two treadles connected with said toe-rest through different means, whereby depression of one treadle lowers the toe-rest, and depression of the other treadle elevates the same.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of May, A. D. 1896.

WILLIAM S. HAMM.

Witnesses:

C. F. BROWN,
A. D. HARRISON.