

(No Model.)

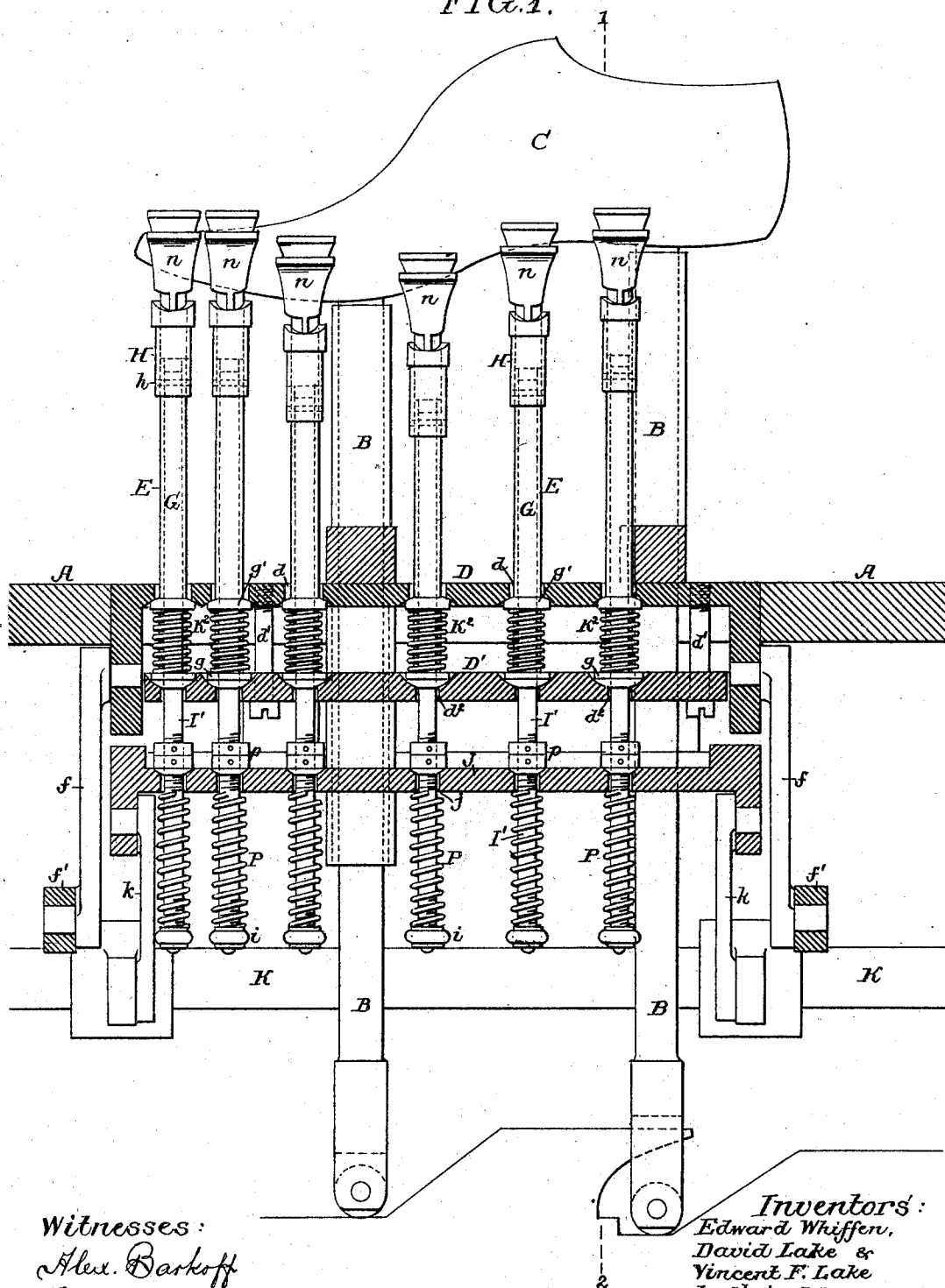
2 Sheets—Sheet 1.

E. WHIFFEN & D. & V. F. LAKE.
LASTING NIPPERS.

No. 502,507.

Patented Aug. 1, 1893.

FIG. 1.



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Fred D. Goodwin

Inventors:
Edward Whiffen,
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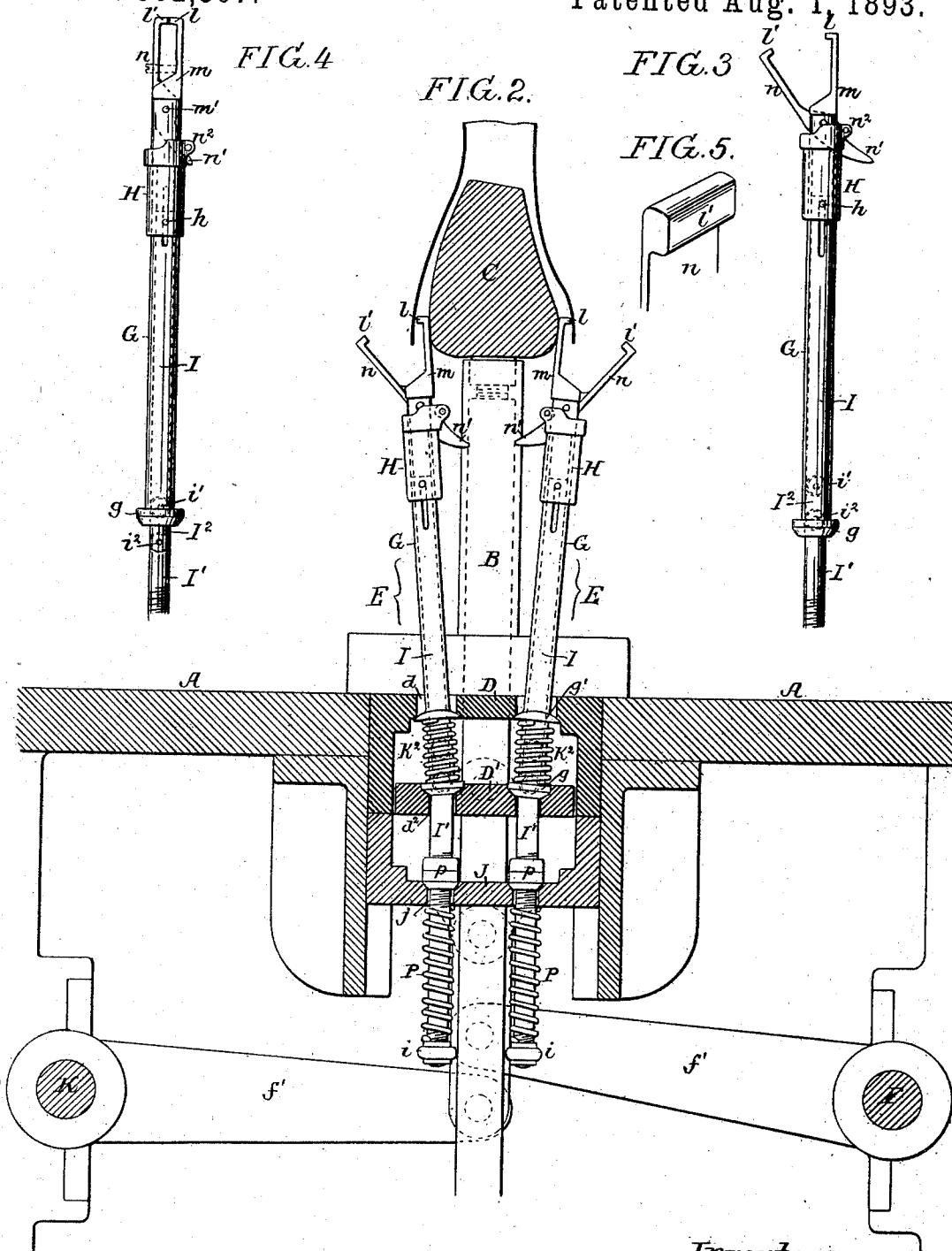
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UNITED STATES PATENT OFFICE.

EDWARD WHIFFEN, OF HAMMONTON, AND DAVID LAKE AND VINCENT F. LAKE, OF PLEASANTVILLE, NEW JERSEY.

LASTING-NIPPERS.

SPECIFICATION forming part of Letters Patent No. 502,507, dated August 1, 1893.

Application filed June 23, 1892. Serial No. 437,719. (No model.)

To all whom it may concern:

Be it known that we, EDWARD WHIFFEN, a subject of the Queen of Great Britain and Ireland, residing at Hammonton, and DAVID LAKE and VINCENT F. LAKE, citizens of the United States, and residents of Pleasantville, Atlantic county, New Jersey, have invented certain Improvements in Lasting-Nippers, of which the following is a specification.

The object of our invention is to construct suitable devices for gripping the upper while the last is being forced into the same, or to pull the upper down upon the last. This object we attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1, is a longitudinal section of sufficient of a lasting machine to illustrate our invention. Fig. 2, is a transverse section on the line 1—2, Fig. 1. Fig. 3, is a detached view of one of the jaws showing it in an open position. Fig. 4, is a view of one of the jaws, showing it in the closed position; and Fig. 5, is a detached perspective view, showing one of the features of our invention.

The lasting machine to which our invention is applied, is clearly shown in the application filed October 14, 1889, Serial No. 326,932, and we will therefore not describe the details of construction, further than to say, that A is the bed plate of the lasting machine, B, B are vertical rods passing through bearings in the bed, and supporting at their upper ends the last C. Suitable operating mechanism drive these rods B, B, up so as to lift the last and force it into the upper, which is held by the gripping jaws, which we will now proceed to describe.

D is a frame having a series of orifices d , through which the series of gripping rods E pass, as shown clearly in Figs. 1 and 2. This frame D is connected by links f, f , at each end to the arms f' of a rock shaft F, having bearings in the frame of the machine.

Connected to the frame D is a plate D' , which, in the present instance, is fastened to the plate by set screws d' . This plate also, has a series of perforations d^2 , through which the operating rod I' passes.

On the lower end of the hollow spindle G of the gripping device E, is a fixed collar g ,

rounded on its under side, and adapted to a counter sunk portion of the opening d^2 of the plate D' . Sliding on the spindle is a loose collar g' having its upper side rounded to coincide with the counter-sunk portion of the opening d in the frame D. Between these two collars is a friction spring K^2 , this friction spring being of sufficient tension to maintain the gripping devices in any position to which it is set.

Passing through the hollow spindle G is a rod I, connected at its lower end to the rod I' , previously mentioned. This rod carries at its upper end a head H, being connected to said head by means of a pin h , which passes through a longitudinal slot in the hollow spindle G, the slot being of sufficient length to allow for the vertical movement of the head. The spindle G carries at its upper end a fixed jaw m , and pivoted at m' is a movable jaw n , having an arm n' , which engages with a pin n^2 , on the head H, so that when the spindle is raised, the pin n^2 bears against the arm n' forcing it toward the stationary jaw until it assumes the position shown in Fig. 4, but on the reverse movement of the spindle, the jaw will be released to the position shown in Fig. 3, ready to receive the edge of the upper to be lasted.

On the end of the jaw m is a lip l , and on the jaw n is a lip l' . The face of each of the lips is practically smooth, and the movable jaw is so set that it comes in contact with the leather of the upper, but owing to the smooth surfaces of the jaws will slide upon the upper until they come in contact with the rib on the lower edge of the same, after which the upper is drawn tightly over the last, as the lips l, l' , will not allow the upper to free itself from the jaws. The jaws are not only smooth on the face, but the corners are preferably rounded, as shown in the enlarged view, Fig. 5. In some instances the jaws may be so set that the lips will not touch, being a distance apart about equal to the thickness of the upper, so that when the lower edge of the upper is placed within the jaws, they do not grip the leather of the upper, but slide until they come in contact with the rib, being of a thickness sufficient to prevent the jaws from slipping past the same. We have shown by dotted

lines in Fig. 4, a stop to set the jaws the proper distance apart. The rods I' pass through orifices j , in a frame J adapted to slide in ways similar to the frame D . This frame J is connected at each end by links k, k , to a rock shaft K , having its bearings in the frame of the machine, and driven by any suitable mechanism timed with the other parts of the machine.

Between the nut i on the lower end of the bar I' and the under side of the frame J , is a spring P . By adjusting the nut the tension of the spring can be regulated as circumstances require.

Resting upon the plate J and adapted to the rod I' is a nut p for limiting the downward movement of the rod. The rod I' is attached to the rod I by a pivot link I^2 . When the jaws are closed the pivot pin i' of the link and rod I is on the center of the arc of the collar g , and when the jaws are open the pin i^2 of the link and rod I' is on the center of the arc of the collar g , so that no matter what angle the spindle G assumes, the jaws can be operated freely. On the depression of the plate J , it will draw the rod I' down through the medium of the spring P and consequently the rod carrying the head H will close the jaw upon the upper to be lasted. When the jaw is closed, the mechanism for driving the machine is so timed that the rods B, B , carrying the last will then be moved up, carrying with them the last and upper thereon, until the nippers come in contact with the upper. The upward movement of the last is continued until the upper is drawn tight on the last, and the pads press upon the upper when the jaws are opened by the upward movement of the plate J , after which both plates D and J are depressed carrying the jaws down clear of the pressing mechanism.

We claim as our invention—

1. The combination in nippers for lasting boots and shoes, of the hollow spindle, mechanism for actuating said spindle, a jaw fixed upon the spindle, a movable jaw pivoted thereto, a sleeve or head adapted to slide on the spindle and act upon the movable jaw, with a rod contained within the hollow spindle, said rod being connected to the sleeve or sliding head, whereby, on the vertical movement of the rod the head will open or close the nippers, substantially as specified.

2. The combination in nippers for lasting boots and shoes, of the hollow spindle, a sliding plate engaging with a collar on the spindle, a jaw fixed on the spindle, a sleeve or head adapted to slide on the spindle and act upon said movable jaw, with a rod contained within the hollow spindle and attached to the sliding head, substantially as specified.

3. The combination of the hollow spindle G , carrying at its upper end a lipped jaw m , with a movable jaw n , pivoted thereto, also provided with a lip and having an arm n' , with a head H , adapted to slide on the spindle G , and having a bar n^2 adapted to engage with the arm on the movable jaw, with a bar I passing through the hollow spindle and secured to the head, and mechanism for driving said rod, substantially as described.

In witness whereof we have signed our names to this specification in the presence of two subscribing witnesses.

EDWARD WHIFFEN.

DAVID LAKE.

VINCENT F. LAKE.

Witnesses to the signatures of Edward Whiffen and Vincent F. Lake:

EMMA BARRETT,

JAS. J. McLAUGHLIN.

Witnesses to the signature of David Lake:

WILLIAM D. CONNER,

HARRY SMITH.