

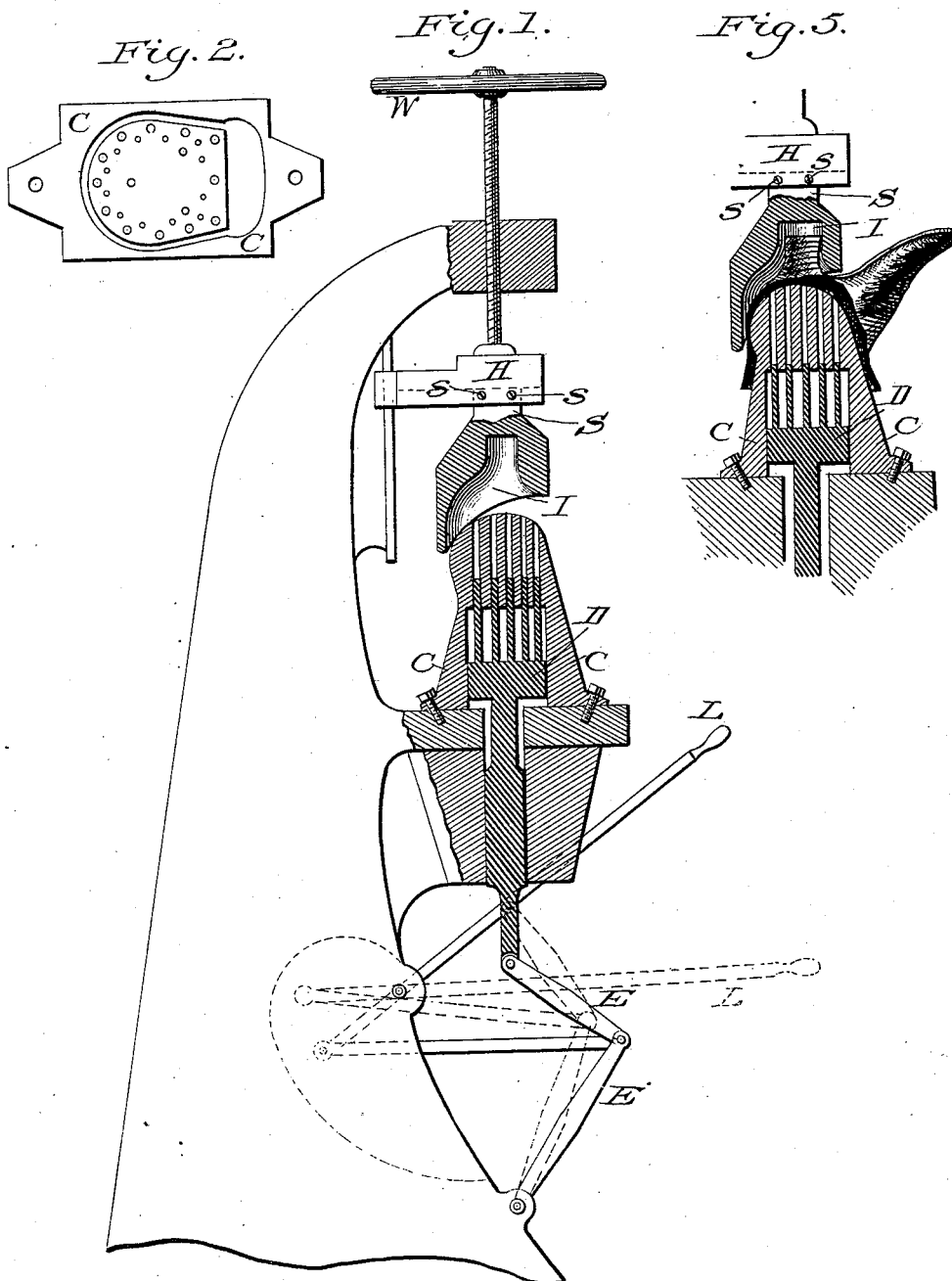
(No Model.)

2 Sheets—Sheet 1.

A. DAVIS.
HEEL NAILING MACHINE.

No. 342,786.

Patented June 1, 1886.



Witnesses.

Francis Higgins
David R. Garrison

Inventor:

Abraham Davis
by
Henry F. McCloskey
his attorney

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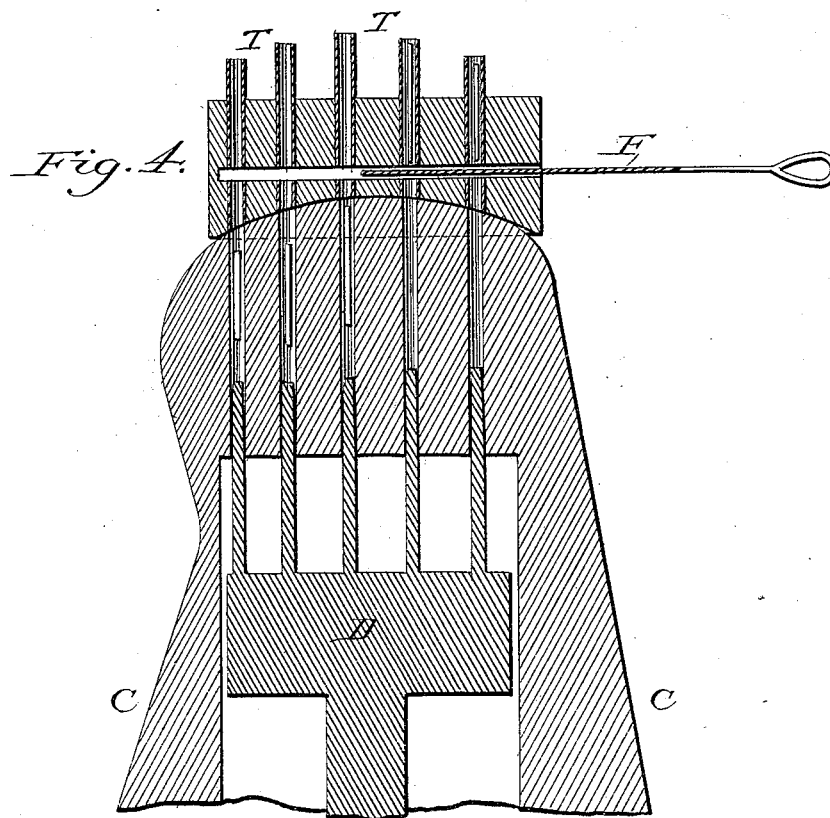
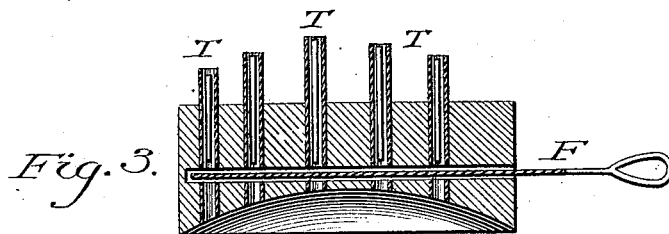
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Inventor:

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his attorney

UNITED STATES PATENT OFFICE.

ABRAHAM DAVIS, OF NEW YORK, N. Y.

HEEL-NAILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 342,786, dated June 1, 1886.

Application filed October 2, 1885. Serial No 178,836. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM DAVIS, a citizen of the United States, residing at the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Heel-Nailing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification and explaining its nature.

My invention relates to centering and nailing French heels to the soles of shoes. These French heels are usually made of wood and covered with leather, and are sold to the trade ready to be nailed to the shoe; hence, if they were nailed to the sole from the outside the outer covering of leather would be injured, and the shoe rendered unsightly. I am aware that it has been heretofore attempted to attach these heels to shoes by nailing the main portion of the heel from the outside, or by pricking said portion with awls before drawing the nails. Neither of these operations are necessary in my machine. Moreover, in all former machines the heel-support, the pressure-plate, and the heel-centering device are distinct and independent pieces of mechanism, while in my machine the support S performs all these functions in a very simple way. I attain the desired object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of the entire machine in vertical section. Fig. 2 is a plan view of the perforated jack C. Fig. 3 is a view in vertical section of a separate feeder. In Fig. 1, D is the series of drivers operated by the lever L and the elbows E E. Fig. 4 shows the tubular feeder F in connection with the perforated jack C, and Fig. 5 shows the jack C and heel-support S as they appear when operating upon a shoe.

The heel-support S is so shaped in its interior I as to fit neatly on the back of the heel and counter of the shoe, and is brought down upon the heel by the wheel and screw W, or by any other suitable power. As it comes down, it centers the heel on the sole, and at the same time moves the shoe to the proper place on the perforated jack C. The part of the heel-support S which rests upon the top-lift of the heel is made level, so that if a separate top-

lift is placed on the heel the nails will be driven through the top-lift and will be clinched by being forced against the iron heel-support. The support S may be made to place the heel farther forward or back on the sole by sliding the support backward or forward in the groove in which it rests in the head H. It is held in any position in the groove by the screws s' s'. The driver D is operated by the lever L and the elbows E E, or by any power which will give it a vertical reciprocal movement.

The perforated jack C is slightly convex, to fit the concavity of the sole at the heel, and thus to make the shoe slip more readily into place when pressed by the heel-support S. The perforations in the jack C are so made that the same jack will answer for any-sized shoe within ordinary limits, by feeding nails to all the perforations for a large shoe, and for a smaller shoe by omitting to feed nails to the outer rim of perforations.

The driver D may be fed through the jack C by means of a feeder separate from the machine in the following manner: I use the feeder F with perforations coincident with those of the jack and its lower side concaved to fit the convexity of the jack. On its upper side are tubes T T, placed over the perforations, the height of the tubes being regulated by the length of the nails to be used on the heel, for each French heel requires at least two different sizes of nails. These tubes show at once when long nails have been fed where short ones should go, and thus render less likely the chance of driving nails through the leather on the outside of the heel. Through the center of this feeder is a perforated iron slide, b, adapted to move in and out about half an inch. When feeding nails to the feeder the slide is pushed in, and it holds the nails in the tubes. When the feeder is placed on the jack, the slide is drawn out and its perforations become coincident with those of the feeder, and the nails drop into the perforated jack. This feeder is not essential to my machine, as the nails may be fed directly to the jack. By its use, however, a boy can fill the feeder while the machine is in operation.

In operating my machine after having fed nails to the perforated jack C, I place the shoe

upon the jack and the heel upon the sole of the shoe. I then turn the wheel W, which brings down the heel-support S. As this support fits over the heel and the counter of the shoe, it moves the heel into its proper place upon the jack, and draws the shoe to its proper place upon the jack, and holds the heel and shoe firmly in position. I then press down the lever L, which forces the driver to push the nails through the sole and into the heel. I use nails with a point and head, and the drivers are long enough to emerge from the jack, so as to drive the heads of the nails well into the sole. I then turn the wheel in the opposite direction, and the shoe can be taken from the jack. If the heel-support and driver were worked against springs, they would separate automatically.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a heel-nailing machine, the heel-support S, with its interior I shaped to fit the heel and counter of a shoe, substantially as and for the purpose described.

2. In a heel-nailing machine, the combination of the stationary convex perforated jack C and the heel-support S, with its interior I shaped to fit the heel and counter of a shoe, substantially as and for the purpose described.

3. In a heel-nailing machine, the combination of the heel-support S with its interior I shaped to fit the heel and counter of a shoe, the convex perforated jack C, and the driver D, all substantially as and for the purpose described.

4. In a heel-nailing machine, the combination of the heel-support S with its interior I shaped to fit the heel and counter of a shoe, the convex perforated jack C, and the tubular feeder F, all substantially as and for the purpose described.

ABRAHAM DAVIS.

Witnesses:

DAVID R. GARNISS,
JOHN PENN CURRY.