

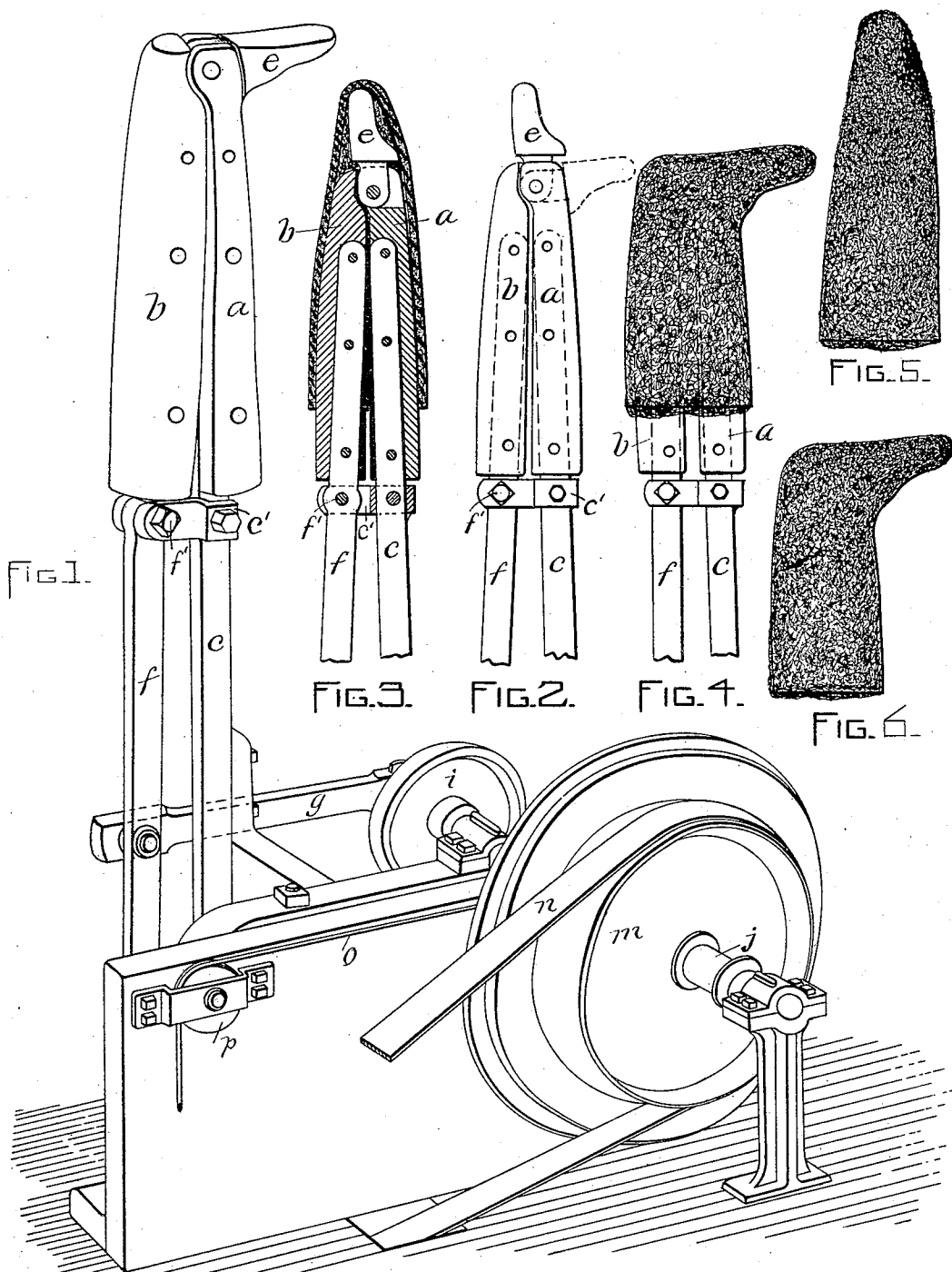
(No Model.)

2 Sheets—Sheet 1.

J. BRANDY.
MACHINE FOR FORMING FELT BOOTS.

No. 469,007.

Patented Feb. 16, 1892.



WITNESSES:

Swing W. Hamlen.
A. D. Harrison.

INVENTOR:

by Jas Brandy.
Night, Brown & Conesley
Attys.

(No Model.)

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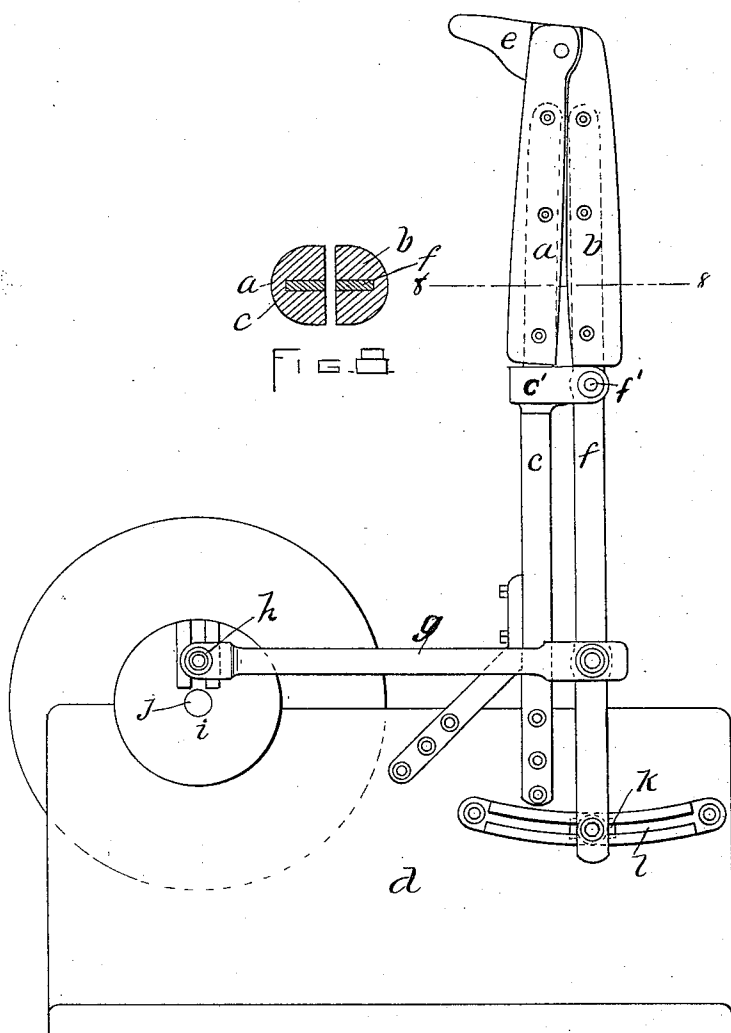


FIG-7.

WITNESSES:

Ewing W. Hamlen.
A. S. Harrison.

INVENTOR:

Joe Brandy,
By
Wm. Brown & Co.,
ATTYS.

UNITED STATES PATENT OFFICE.

JAMES BRANDY, OF LAWRENCE, ASSIGNOR TO WARREN STETSON, OF BOSTON, MASSACHUSETTS.

MACHINE FOR FORMING FELT BOOTS.

SPECIFICATION forming part of Letters Patent No. 469,007, dated February 16, 1892.

Application filed July 27, 1891. Serial No. 400,830. (No model.)

To all whom it may concern:

Be it known that I, JAMES BRANDY, of Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Forming Felt Boots, of which the following is a specification.

The invention has relation to means for manufacturing felt boots, and particularly to contrivances for forming or shaping the felted cone-blank.

Previous to my invention it was common to take a felted steamed cone-blank and force it upon a boot tree or last of proper size and form by placing the cone upon the tree and then (holding onto the blank) by repeated blows of the top of the tree or last upon a block driving the blank upon the last, after which the two parts comprising the leg portion of the tree were forced apart by means of a wedge, and the boot was in this condition "baked." This mode of procedure is exceedingly laborious and expensive, the latter objectionable feature of the process arising from the great amount of time consumed in the proceeding.

It is the object of the invention to overcome these objections and to provide a machine whereby the boot may be readily and quickly shaped or formed with the expenditure of very little manual labor.

To these ends the invention consists in a machine for "forming" or shaping felt boots, embracing in its construction a boot-tree having the leg portion formed in two parts, one of which is pivotally supported at its inner or upper end, a foot portion pivotally connected with the leg portion, and means connected with the pivotal part of the leg portion for vibrating or moving the latter to spread or shape the leg of the boot.

Reference is to be had to the annexed drawings and the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

In the drawings, Figure 1 is a perspective view of the improved machine. Fig. 2 is a side view of the boot-tree and its immediate connections, showing the foot or toe part turned up so as to extend in the same line or

plane with the leg portion, dotted lines representing the position of the foot portion when turned down. Fig. 3 is a vertical sectional view of the parts shown in Fig. 1, a cone-blank having been placed upon the tree. Fig. 4 is a side view of the tree with a shaped or "formed" boot thereon. Fig. 5 is a side view of a cone-blank. Fig. 6 is a side view of a completed boot. Fig. 7 is a side view of the machine, showing the side opposite to that seen in Fig. 1. Fig. 8 is a sectional detail view taken on the line 8 8 of Fig. 7.

In the construction of the boot-tree I make the leg portion of two blocks *a* *b*, the former constituting the front part and the latter the rear part, and together provide for the shaping of the leg of the boot. The front part *a* is herein shown as connected with a bar *c*, secured at its lower end to the base or frame *d*, and the rear part *b* is connected with a bar *f*, which is pivoted at *f'* to a link *c'*, rigidly connected to the bar *c*.

e designates the foot portion of the tree, which is also pivotally connected with the upper end of the part *a*, so as that the said foot portion may be turned up to extend in the same line or plane with the leg portion, as shown in Figs. 2 and 3, or be turned down so as to extend at a right angle to the leg portion, as is represented in Figs. 1 and 7 and by dotted lines in Fig. 2.

f designates a bar which is connected at its upper end to the part *b*, and at or near its lower end is pivotally connected with one end of a pitman *g*, the opposite end of the latter device being connected with one end of a pitman *g*, the opposite end of the latter device connected with a wrist-pin *h*, adjustably attached to a disk *i* on a shaft *j*, supported in suitable bearings in the base *d*. The bar *f* may at its lower end be provided with a block *k*, pivoted to the said bar and maintained in position to be guided in a suitable way *l*; or other means may be provided if need be for guiding and steadying the movements of the lower end of the said bar.

m is a pulley loose upon the shaft *j* and driven by a belt *n*. The said pulley may be made to operate the shaft *j* by connecting the same therewith through the medium of any suitable known clutch mechanism, which may

be actuated by means of a cord *o*, connected therewith and passed over a pulley *p* on the frame *d*, or by other convenient means. The pulley *m*, shaft *j*, and clutch mechanism are not, however, a part of the present invention, and as they may be of any suitable form or construction need not be particularly described nor shown.

In the use of my invention I take a felted cone-blank like that shown in Fig. 5, and with the toe part *e* of the tree turned up to vertical position, or so that it shall extend in the same line with the leg portion, draw the said blank down over the tree, as shown in Fig. 3. I then turn down the foot portion to a position at a right angle to the leg portion, bending the blank on the tree into the form shown in Fig. 4, when the machine may be started, so as to rotate the disk *i*, reciprocate the pitman *j*, and vibrate the bar *f* and attached part *b* of the boot-tree to shape or form the boot.

After the boot is properly formed and crimped it may be removed from the tree and placed upon a separate tree or last to be baked.

By the invention, which is exceedingly simple in construction, felt boots may be shaped or formed in a small fraction of the time required to do the work by hand and with inconsiderable manual labor as compared with the commonly practiced method.

It is obvious that changes may be made in the form and arrangement of parts of the machine without departing from the nature or spirit of the invention.

Having thus described the improvement and explained a way of constructing and

using the same, I declare that what I claim is—

1. In a machine for forming felt boots, the combination, with the frame, of a bar rigidly supported thereby, a boot-tree having the leg portion formed in two longitudinal parts, one of which is secured to said bar, a second bar pivotally connected to the fixed bar and carrying the other part of the boot-tree, means for vibrating the pivoted bar, and a toe-piece at the end of one of the parts of the boot-tree, substantially as described.

2. A machine for forming felt boots, embracing in its construction a boot-tree having the leg portion formed in two parts *a b*, one pivoted upon the other, a foot portion pivoted upon the leg portion, a bar *f*, connected with the pivoted leg part, and mechanism, substantially as described, for vibrating the said bar, as set forth.

3. A machine for forming felt boots, embracing in its construction a boot-tree having the leg portion formed in two parts *a b*, one pivoted upon the other, a foot portion pivoted upon the leg portion, a bar *f*, connected with the pivoted leg part, a pitman pivotally connected at one end with the said bar, and a rotating disk with which the other end of the pitman is connected, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 18th day of July, A. D. 1891.

JAMES BRANDY.

Witnesses:

ARTHUR W. CROSSLEY,
A. D. HARRISON.