P. Keefer.

Stretching Hat-Body.

No. 75684 Patented Mar. 17, 1868.

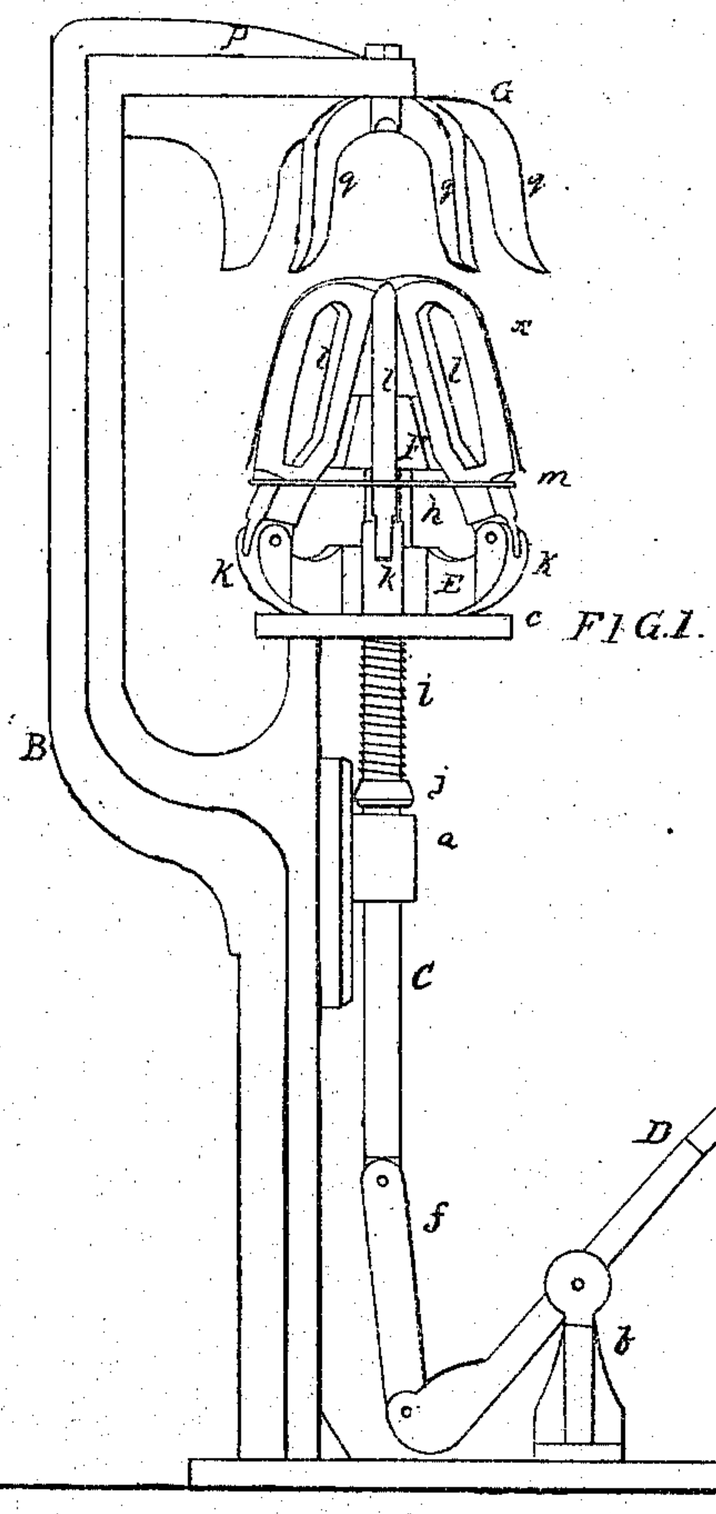


FIG. 1.

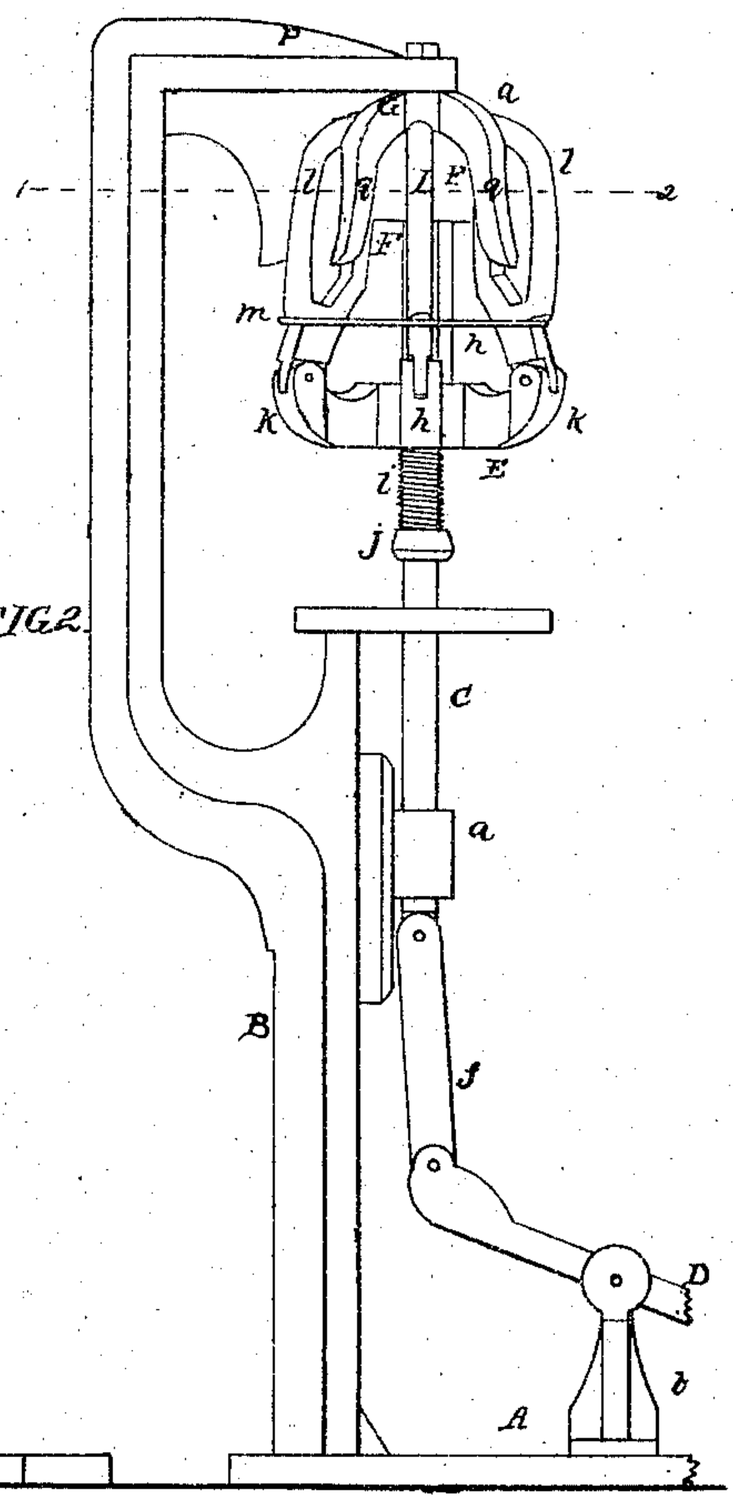


FIG 2.

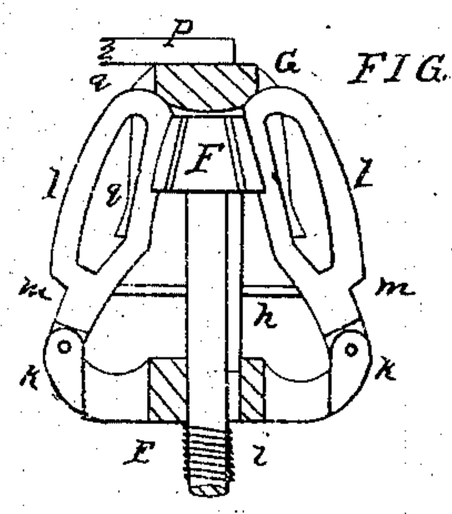
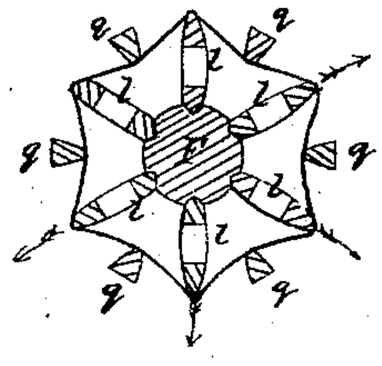


FIG. 3.

FIG. 4.



Witnesses.

Wm. Albert Steel.
Rowbotham.

Inventor.

P. Keefer
By his Atty.
H. Howson.

United States Patent Office.

PETER KEFFER, OF READING, PENNSYLVANIA, ASSIGNOR TO HIMSELF, WILLIAM LEVAN, AND ISAAC W. LEVAN, OF SAME PLACE.

Letters Patent No. 75,684, *dated March* 17, 1868.

IMPROVEMENT IN MACHINES FOR STRETCHING HAT-BODIES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, PETER KEFFER, of Reading, Berks county, Pennsylvania, have invented an Improved Machine for Stretching Hat-Bodies; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a machine, fully described hereafter, for stretching the conical caps of felted material of which hat-bodies are made, previous to forming them upon the proper blocks.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a side elevation of my improved machine for stretching hat-bodies.

Figure 2, the same, showing the working parts in a different position.

Figure 3, a detached view, partly in section, and

Figure 4 a sectional plan view on the line 1–2, fig. 2.

A is the base-plate of the machine, to which is secured a frame, B. A vertical rod, C, slides in and is guided by a bracket, *a*, secured to this frame, and is operated by a lever or treadle, D, hung to a standard, *b*, on the base-plate, and connected to the said rod by a link, *f*. A sleeve, E, is arranged to slide on the rod C, but is prevented from turning by a feather, *h*, and a spiral spring, *i*, which rests upon a collar, *j*, of the rod, bears against the under side of the sleeve, and has a constant tendency to elevate the latter. The sleeve E has any convenient number of radiating arms, *k*, (there being six in the present instance,) to the outer end of each of which is jointed an arm, *l*, rounded at the top, and otherwise shaped in the peculiar manner shown in the drawing. When the parts are in the position shown in fig. 1, the sleeve rests upon a stationary disk, *c*, which forms a part of the frame, and through which the rod C passes. The arms *l* are bound together by a gum-elastic or other equivalent spring, *m*, which causes them to bear against the cone-shaped head, F, of the rod C, the said head being recessed for their reception, as shown in fig. 4, and the upper ends of the arms, when thus bound together, are nearly in contact with each other, as shown in fig. 1.

On the upper end of the frame of the machine is formed a bracket, *p*, to the under side of which, directly above the rod C, is bolted, or otherwise secured, a pendent frame, G, composed of curved arms, *q*, equal in number to the arms *l* of the sleeve E, and so placed in respect to the latter, that each of the said arms shall pass between two of the arms *l* of the sleeve, when the latter is elevated, as shown in fig. 4.

The usual plan of stretching felted hat-bodies upon the forming-blocks by hand, is an operation requiring tedious manipulation on the part of the workman, but by the employment of the above-described machine, the operation of which I will now proceed to describe, the hat-bodies may be quickly and thoroughly stretched, previous to being formed upon the proper blocks.

The hat-body, consisting of a conical cap of felted material, is placed over the arms *l* of the sleeve E, as shown by red lines *x*, fig. 1, the arms, when drawn towards each other by their spring *m*, forming, together, a tapering frame, adapted to the shape of the hat-body. The attendant now operates the lever D with his foot, and thus raises the rod C and its sleeve, until the upward motion of the latter is arrested by its arms *l* coming in contact with the under side of the frame G, (fig. 3.) The rod C, however, still continues to rise, compressing the spring *i*, and the cone-shaped head F of the rod, in rising, forces each of the arms *l* of the sleeve outwards, and with them the hat-body, which is forced against the stationary arms *q* of the pendent frame, and thus thoroughly stretched, as shown by the red lines *x*, fig. 4. On lowering the rod C, the sleeve E will, by the action of the spring *i*, remain stationary until the conical head F has been sufficiently depressed to allow the spring *m* to draw the arms *l* of the sleeve together to their original position. The sleeve will then descend with the rod, until it again rests upon the disk *c*, when the stretched hat-body may be readily removed, to be replaced by a second, which is, in turn, stretched in a similar manner, and this operation may be repeated and continued with rapidity and regularity.

I claim as my invention, and desire to secure by Letters Patent—

The pivoted arms *l*, to which a vertical reciprocating motion can be imparted, and which can be moved outwards by the action of the conical block F, or its equivalent, in combination with the stationary pendent arms *q*, the said movable and stationary arms being arranged for joint action on a hat-body, as and for the purpose herein set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

PETER KEFFER.

Witnesses:
J. N. H. FISHER,
GEORGE PRINTZ.