

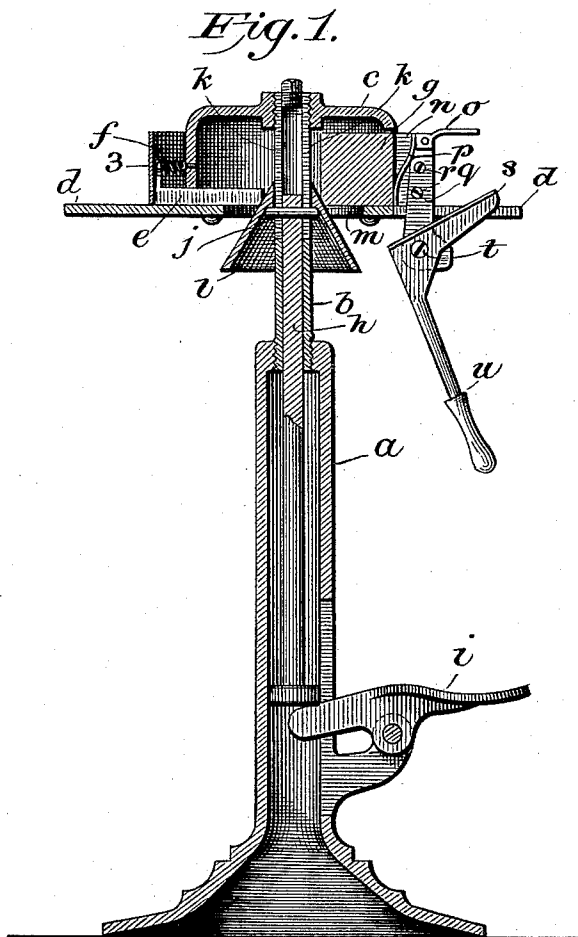
(No Model.)

2 Sheets—Sheet 1.

K. L. COMES.
MACHINE FOR FITTING HAT SWEATS.

No. 487,252.

Patented Dec. 6, 1892.



WITNESSES:

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2

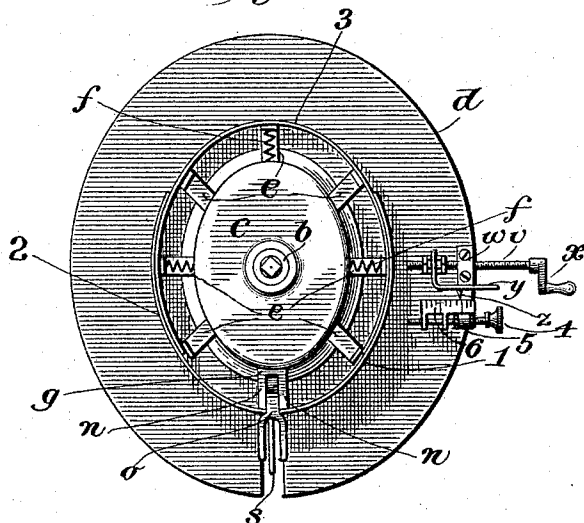


Fig. 3.

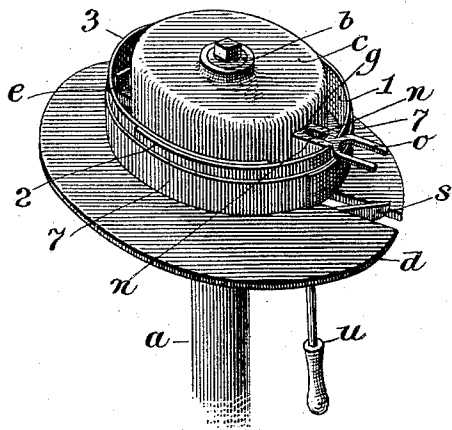
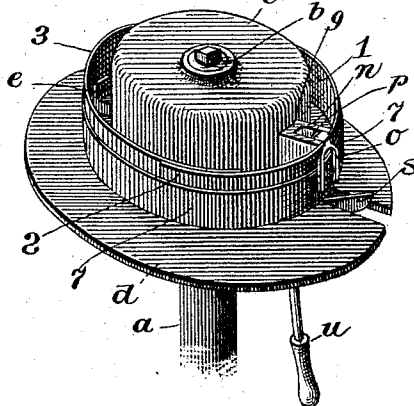


Fig. 4.



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UNITED STATES PATENT OFFICE.

KEROS L. COMES, OF DANBURY, CONNECTICUT, ASSIGNOR TO MEEKER BROS., OF SAME PLACE.

MACHINE FOR FITTING HAT-SWEATS.

SPECIFICATION forming part of Letters Patent No. 487,252, dated December 6, 1892.

Application filed March 1, 1892. Serial No. 423,388. (No model.)

To all whom it may concern:

Be it known that I, KEROS L. COMES, a citizen of the United States, residing at Danbury, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Machines for Fitting Sweat-Bands for Hats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in machines for fitting sweat-bands prior to their insertion within hats, and has for its object to adapt such bands to the hats by means entirely independent of the latter, and, furthermore, to fit the bands more accurately than can be effected by fitting them by hand directly to the hats.

In the accompanying drawings, Figure 1 is a sectional elevation of my improved machine; Fig. 2, a plan view; and Figs. 3 and 4 are detail perspectives showing the sweat-band in position around the expander before and after clamping, respectively.

Similar letters and figures denote like parts in the several figures of the drawings.

In fitting sweat-bands after the manner at present practiced the hat is utilized as a form, the band being first expanded within the hat and then cut so that the edges will meet. This is essentially a tedious and expensive operation, and, moreover, necessitates the handling of the hats, which should be avoided, if possible.

My invention contemplates a machine equipped with means for fitting the sweat-band to any predetermined size of hat, and will be best understood from the following description.

a is a standard, which rests on the floor, and *b* a hollow spindle secured to the top of said standard. *c* is a head secured to the upper end of said spindle, and *d* a table bolted to said head. *e* are fingers supported on said table and guided within said head and extending radially around the spindle. These fingers are capable of a free movement inwardly and outwardly, the outward movement being effected by means presently to be

described, while the inward movement is insured by the action of coil-springs *f*, whose ends are secured, respectively, to said fingers and the head *c*, as shown at Figs. 1 and 2. Extending around the outer ends of these fingers are the spring-bands 1 2 3, the bands 1 2 being secured at their adjacent ends to a block *g*, while the band 3 is inclosed by the free ends of the bands 1 2. These bands, by their resiliency, assume a normal position against the fingers when the latter are contracted, and when said fingers are distended the bands will be expanded.

h is a rod capable of a free vertical play within the standard *a* and spindle *b*, the lower end of said rod resting upon a treadle *i*, whereby said rod may be raised for the purpose presently set forth.

j is a cross-pin in the top of the rod *h* and extending through elongated slots *k* in opposite sides of the spindle. *l* is a cone, which rests upon said pin and projects through an opening *m* in the table. The inner ends of the fingers abut normally against the cone, so that it will be readily understood that when the treadle is depressed the cone will be elevated and the fingers will be distended to expand the bands 1 2 3. The block *g* abuts against the cone and is operated precisely like the fingers. The outer end of this block has ears *n*, between which is pivoted a forked clamp *o*, against the heel of which latter bears a spring *p*, secured to the block, so that said clamp may be thrown from the position shown at Fig. 3 to the position shown at Fig. 4 with a spring action.

q is a hanger secured, as by screws *r*, to one of the ears *n*, and *s* is a knife pivoted at *t* between the ears and having an operating-handle *u*, the cutting-field of said knife being between the forks of the clamp.

v is a screw operating within any suitable nut *w*, secured on the table and provided with an ordinary crank *x*, whereby the inner end of said screw may be adjusted toward or away from the expanding mechanism.

y is an index-finger having a pointer *z* and mounted in any well-known manner on the screw *v*, so as to be carried bodily by the latter in its to-and-fro adjustments.

4 is a thumb-screw extending through a collar 5 on the table, and 6 is a gage-plate, which is operatively engaged by said screw, so that when the screw is turned said plate will be adjusted toward or away from the expanding mechanism.

The pointer *c* registers with the graduations on the gage-plate in order to determine the size of the sweat-band, as will now be explained.

In operating my improvement a sweat-band 7 is placed around the bands 1 2 3 with the ends overlapping, as shown at Fig. 3. The clamp *o* is now thrown down against the overlapping parts of the sweat-band and the bands 1 2 3 are expanded to spread the sweat-band, as shown at Fig. 4. The distance between the inner end of the screw *v* and the neighboring expanding-band determines the expansion of the latter, and this distance is predetermined and its relation with respect to the size of the sweat-band required accurately ascertained by the relative positions of the pointer *z* and gage 6—that is to say, the expander element is limited by a stop—the position of which latter with respect to the expander may be varied according to the size of sweat-band required. When the expansion of the sweat-band is arrested by the stop *v*, the knife *s* is operated to cut through the overlapping parts of the sweat-band and the latter is then removed prior to the securing of its ends together.

I lay no claim to the mechanism herein shown and described for expanding the sweat-band, since I am aware that the same is very old and well-known in connection with hat-rounding machines. I therefore do not wish to be limited to any particular means for expanding the sweat-band, the gist of my invention resting in the broad idea of expanding the sweat-band to a degree limited by a stop whose location is predetermined by the size of a sweat-band required and then cut-

ting through the overlapping portions of said band.

Of course my suitable clamping and cutting mechanisms may be employed, and the predetermined adjustability of the screw *v* may be effected in any ordinary and well-known manner without departing from the spirit of my invention, or the adjustable stop shown and herein described may be omitted, and in lieu thereof the expansion of the fingers may be limited by a positive vertical adjustment of the cone, or the throw of the latter may be limited with the same result, or the fingers may have a vertical adjustment.

I claim—

1. In a machine for fitting sweat-bands, the combination of expanding devices around which the bands are placed with their ends overlapping, means for operating said devices, a stop which limits the expansion of the latter, and a knife whereby the band is cut to the expanded size, substantially as set forth.

2. In a machine for fitting sweat-bands, the combination of mechanism for expanding the bands, a clamp for holding them during expansion, a stop for controlling the expansion, and a knife for cutting them when expanded, substantially as shown and set forth.

3. The combination of the expanding mechanism around which the sweat-bands are placed with their ends overlapping, the forked clamp whereby said ends are held during expansion, the adjustable stop by which said mechanism is arrested, and the knife adapted to be operated between the forks of said clamp, substantially as shown and set forth.

In testimony whereof I affix my signature in presence of two witnesses.

KEROS L. COMES.

Witnesses:

GRANVILLE WHITTLESEY,
SAMUEL TWEEDY.