

No. 684,175.

Patented Oct. 8, 1901.

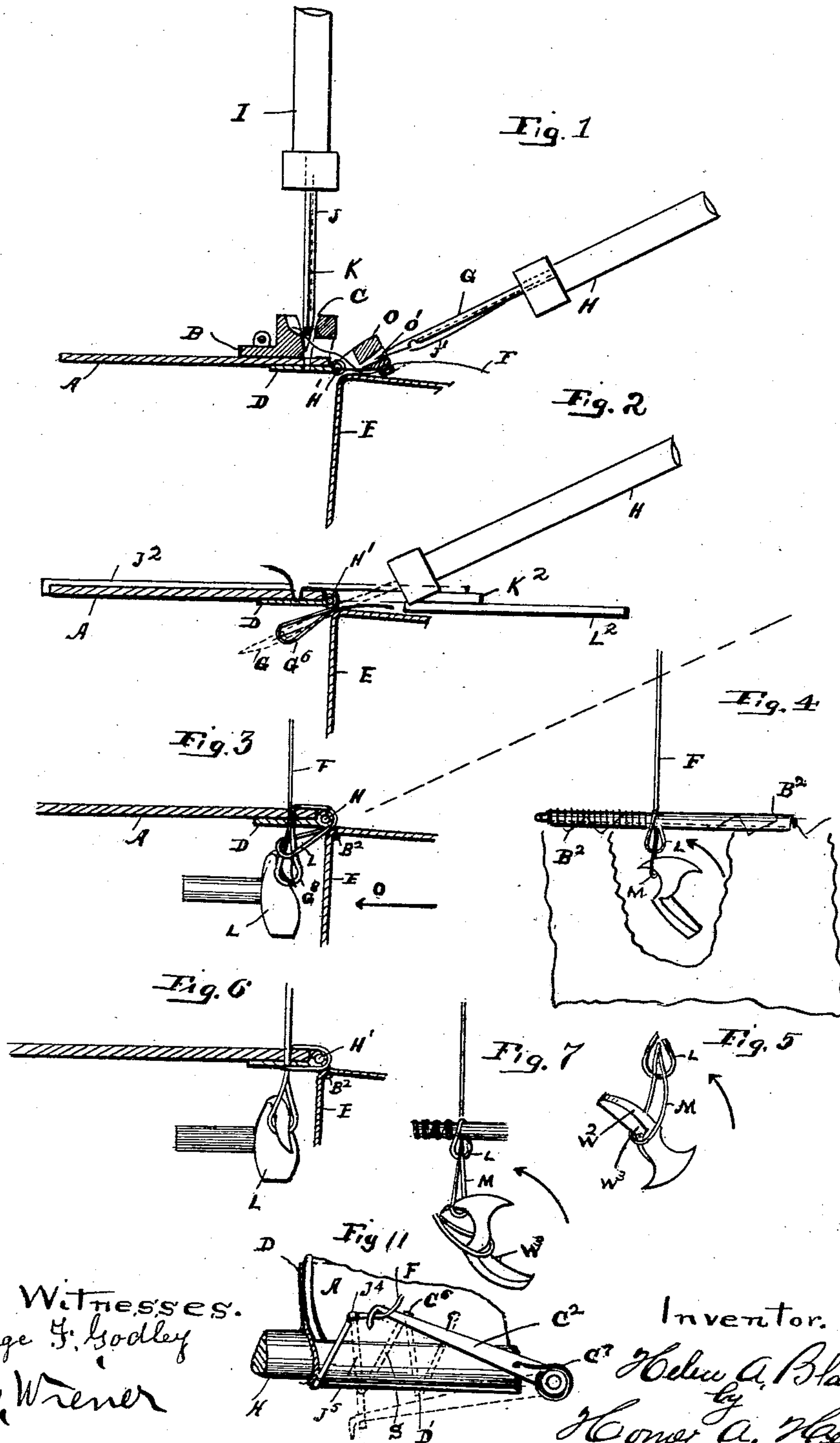
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HAT AND METHOD OF APPLYING SWEAT BANDS THERETO.

(Application filed July 3, 1896.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.  
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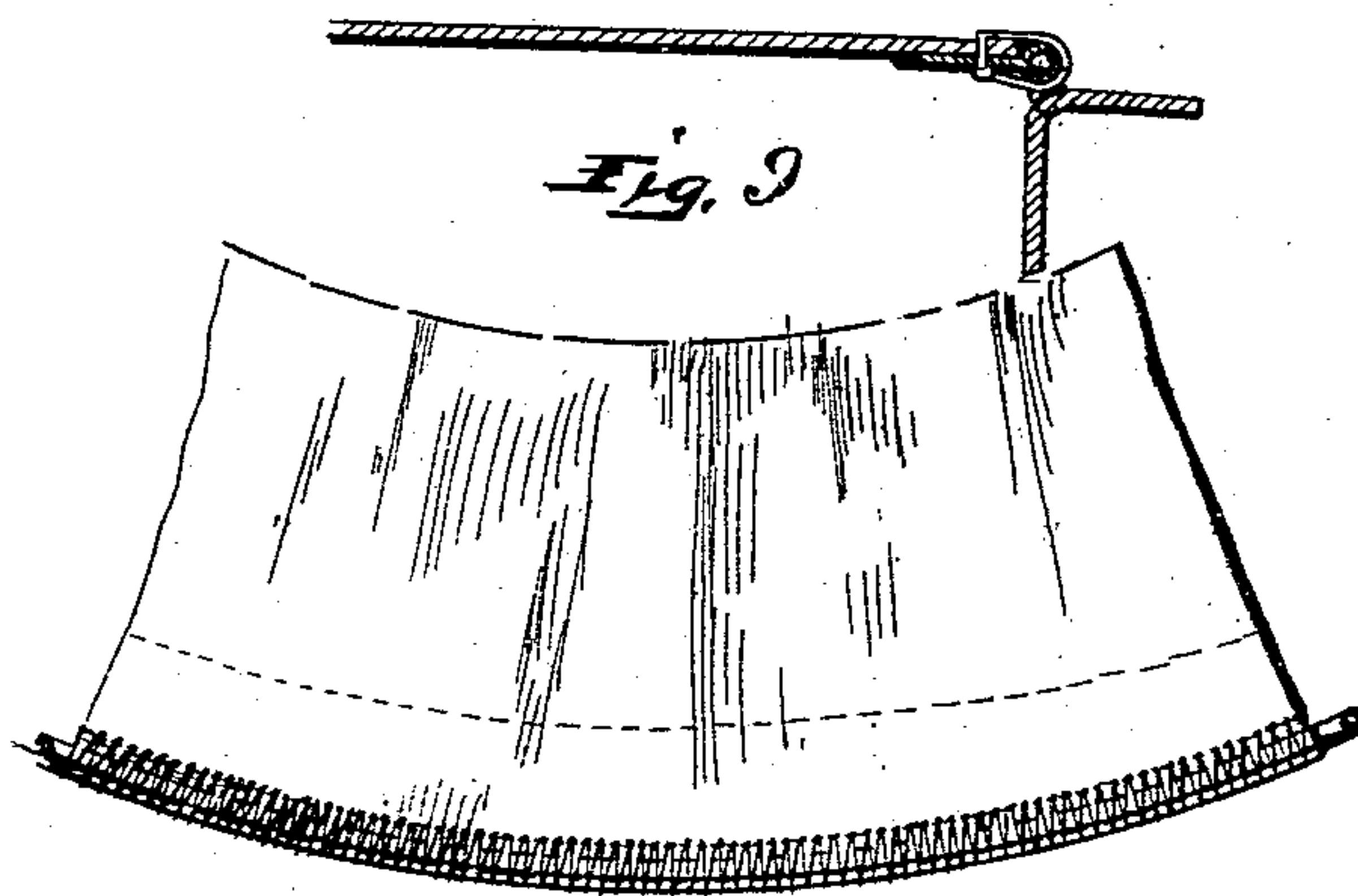
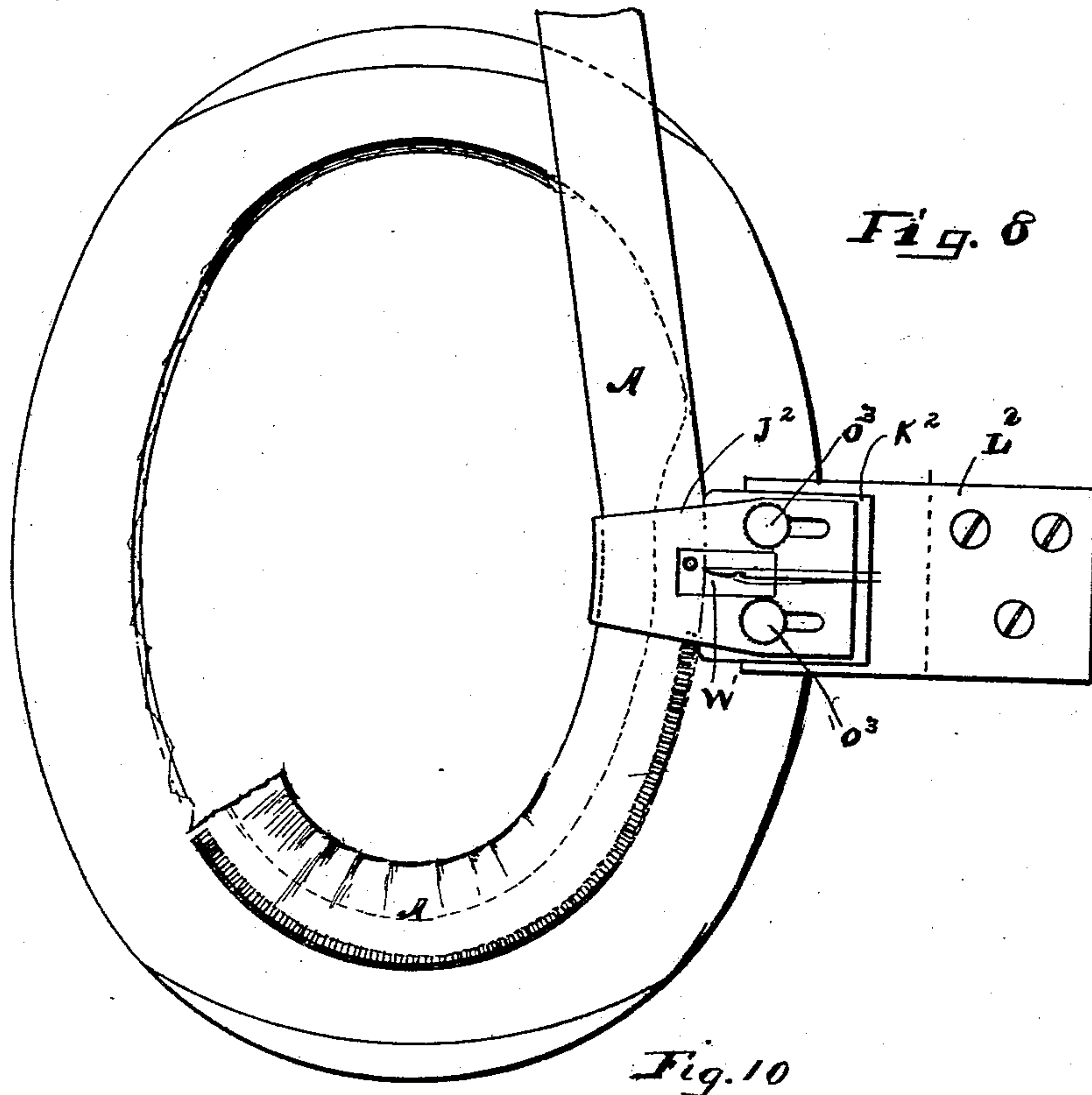
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# UNITED STATES PATENT OFFICE.

HELEN A. BLANCHARD, OF PORTLAND, MAINE.

## HAT AND METHOD OF APPLYING SWEAT-BANDS THERETO.

SPECIFICATION forming part of Letters Patent No. 684,175, dated October 8, 1901.

Application filed July 3, 1896. Serial No. 597,972. (No model.)

*To all whom it may concern:*

Be it known that I, HELEN A. BLANCHARD, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Hats and Methods of Applying Sweat-Bands Thereto; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improved hat and a method for applying the sweat-band to the hat-body, as set forth in the following specification and accompanying drawings, forming part thereof.

It consists of the improved hat and the method of applying the sweat-band thereto, substantially as I will hereinafter describe and claim.

Referring now to the drawings, Figure 1 is a vertical section through the presser-foot eyes of both the vertical and twenty-degree needle, with the notch in the vertical needle just about gripping the thread. The means for swinging the thread are omitted from this view. Fig. 2 shows the twenty-degree needle as having moved down to its full limit and thereafter slightly returned, thereby forming a loop G<sup>6</sup>, through which the vertical needle J then passes. Fig. 3 shows the succeeding position of the thread carried down through the band and reed holder and the loop thereafter formed on the needle's slight return. This I term the "secondary loop" and the former loop made by the twenty-degree needle the "primary," pursuant to the order of their formation. It is seen the vertical needle in this movement passes through the primary loop and of course carries the secondary loop with it. Fig. 4 is an end view of Fig. 3 looking in the direction of the arrow O. Fig. 5 shows one position of the thread on the looper while chaining the thread, or rather previous to the consummation of that function. Fig. 6 shows the looper advanced over Figs. 3 and 4 and the overseam-thread as drawn taut by the take-up. Fig. 7 shows

the looper just in the act of shedding the loop and chaining it to its successor. Fig. 8 is a plan view of a hat, showing the band-guide, section on vertical needle, plan view of twenty-degree needle, and the hat-band as partly sewed to the hat and partly detached. Fig. 9 is a somewhat enlarged view of the band and my completed stitch. Fig. 10 is a transverse section through the sweat, reed, reed-holder, and hat-crown at its base. Fig. 11 is a plan of the thread-carrying finger, which is designed to swing the thread from the path of one needle to that of the other. In a machine such as set out this finger is carried by the presser-foot and is controlled in its forward motion by the vertical needle-carrying bar. The overseam is indicated by dotted lines and greatly enlarged.

In the drawings like parts are referred to by marks or figures of a corresponding kind in the different views.

B is the presser-foot for the band-penetrating needle; C, the needle-contracting eye therein.

O is the presser-foot and reed-guide for the inclined needle, and O' its needle-contracting eye. These needles and presser-feet are shown only in Fig. 1.

J is the vertical needle, and K is the spring-finger carried thereby.

The thread I employ in my method is a single thread and normally disengaged from the needle. This thread is guided in and held by the presser-foot B, across the eye C thereof, this being in the path of the needle J in its downward movement. The respective needles J and G are fixed to and operated by their respective rods I and H, which in turn are operated by the actuating mechanism of the machine; but this mechanism is not material to my method and I do not illustrate it.

H' is the reed, D the reed-holder, and A the sweat-band fabric to which I wish to secure the said reed-holder and therethrough intermediately the band A to the hat-body E. The stitch B<sup>2</sup> holds the reed or reed and its cover to the hat-crown and, it will be remembered, has been previously applied by bast- ing it to the hat-body.

L is the looper, which can be of any type.

J<sup>2</sup>, K<sup>2</sup>, and L<sup>2</sup> are a series of plates which constitute my sweat-band guide. They are



provided with adjusting clamp-screws  $O^3 O^3$ , Fig. 8, to accommodate their guiding function to bands of different sizes.  $W'$  in said plates is a coinciding hole or a series of holes, one in each plate and coinciding when united, as shown in Fig. 8. The needles are thus permitted to have access to the fabric, &c.

My method is now as follows: The hat E, having the reed  $H'$  and reed-holder D basted to its crown at the base, as shown in Figs. 3, 4, 6, and 10, is placed in position to receive the operation of the needles and looper co-acting therewith. The band A is then placed in position in its guides and the reed-holder D is brought up on the under side of the said band. The needle J is now moved downward, taking the thread from the presser-foot B, Fig. 1. After this needle has taken the thread the needle is arrested.  $J^4$  in Fig. 11 shows the point in plan at which the needle takes the thread, as described. This view also shows the relative position where the needle penetrates the hat sweat, reed, &c. Just prior to the needle J being fully arrested after its initial thread-gripping function has been performed the arm  $C^2$ , Fig. 11, is oscillated from the position shown in the solid drawing to the position indicated by the dotted lines in the same figure. The thread F being held by the presser-foot B, to which the arm  $C^2$  is in practice pivoted, in the path of the arm  $C^2$ , it of course follows that the thread will be moved with and by the said arm, and in this movement the thread is brought in the path of the twenty-degree needle. The overseam-thread  $J^5$ , Fig. 11, is thus made or provided for. Immediately after the arm  $C^2$  has swung thread in the manner described the needle G passes down and grips or takes it, forces it between the reed and its incasing-holder and the hat-body, as shown in Fig. 2, and thus is formed the primary loop  $G^6$ , Fig. 2. Immediately thereafter the needle J again is moved, and thereby forces the thread it previously caught, as described, through the aforementioned primary loop  $G^6$ . The position of the secondary loop thus formed after penetrating the primary loop, as described, is shown in Fig. 3. Immediately following the formation of this secondary loop the looper L takes the said secondary loop from the needle J, the needle G having meanwhile returned to normal out of the path of the looper. Figs. 3 and 4 illustrate this stage of the operation. As the needle G ascends to its initial position the arm  $C^2$  is permitted to return to its normal position also and forced to do so by the action of the spring  $C^7$ , Fig. 11, immediately on its release against a return movement by the needle G. Immediately after the needles are withdrawn from the fabric the said fabric is moved forward one stitch. The thread S is thus formed, Fig. 11, and the point  $C^6$  then occupies the advanced position of  $J^4$ , Fig. 11. The take-up coacting with the looper draws the overseam and underseam thread taut and

the looper completes the chaining of the loop to its successor in the following well-known manner: After the primary needle has reached its lowest point and the looper L has taken the secondary loop  $G^8$  therefrom, as shown in Figs. 3 and 4, the loop then slides off the looper-hooks and is caused to lodge in the angular recess of the looper, (shown at  $W^3$ , Fig. 5.) The loop is then twisted by the spur  $W^2$ , carried by the looper, which is so arranged in its relation to the hook carried by the looper and the angular recess aforesaid that the loop is spread for the hook's nose to pass therethrough in taking a fresh loop from the needle J. At this moment the looper has two loops engaged, as shown in Fig. 7—i. e., the fresh loop at the nose and the proceeding loop, which now bears against the corner part of the hook or looper, Fig. 7. The next motion of the looper will allow the latter loop to slip from the looper, and it is drawn tight partly in opening the new loop and in part by the take-up of the machine. The series of operations is repeated at each loop. I have thus a continual chain lock-stitch from my vertical needle and a chain loop-engaging thread and loop formed by my twenty-degree needle from a single thread.

Having now described the method of forming my stitch and sewing my sweat-band to the hat, what I claim, and desire to secure by Letters Patent, is—

1. A method of securing sweat-bands to hats consisting in holding the reed in position on the hat-body, and subsequently securing the sweat-band to the reed by a single thread and successive passes of alternately-operating needles, each needle engaging the same thread and one portion of the thread being interlooped or concatenated, on the underside of the sweat-band, with another looped portion of the same thread, the portion of thread between the said looped portions being laid over and around the reed overseaming the latter.

2. A hat-body, a reed, means for securing the reed to the hat-body only, and a sweat-band, in combination with means for uniting the sweat-band to said reed consisting of a single thread formed into a fabric-penetrating loop and an overfabric loop, said overfabric loop being carried through the space between the reed and hat-body, without penetrating either, and overseaming said reed, and said fabric-penetrating loop being carried through the overfabric loop and both loops locked together.

3. A hat including a sweat-band, a reed, and reed-holder and means for securing the reed and its holder to the hat-body only, and means for uniting the sweat-band to the reed-holder consisting of a single thread formed into two loops one of which is a fabric-penetrating loop and the other an overfabric loop, said latter loop being carried through the space between the reed and hat-body, without penetrating either, and overseaming the



reed, and said fabric-penetrating loop being passed through the overfabric loop and both loops chained together.

5 4. A hat-body, a reed, means for securing the reed to the hat-body only, and a sweat-band, in combination with means for uniting the sweat-band to said reed consisting of a single thread formed into a fabric-penetrating loop and an overfabric loop, said over-  
10 fabric loop being carried through the space between the reed and hat-body, without pene-

trating either, and overseaming the reed and said means for securing the reed to the hat-body only, and said fabric-penetrating loop being carried through the overfabric loop and 15 both loops locked together.

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

HELEN A. BLANCHARD.

Witnesses:

H. A. HERR,  
JOSHUA R. MORGAN.