(No Model.)

A. DENZER.

HAT CONFORMATOR AND STRETCHER.

No. 456,286. Patented July 21, 1891.

Fig. I.

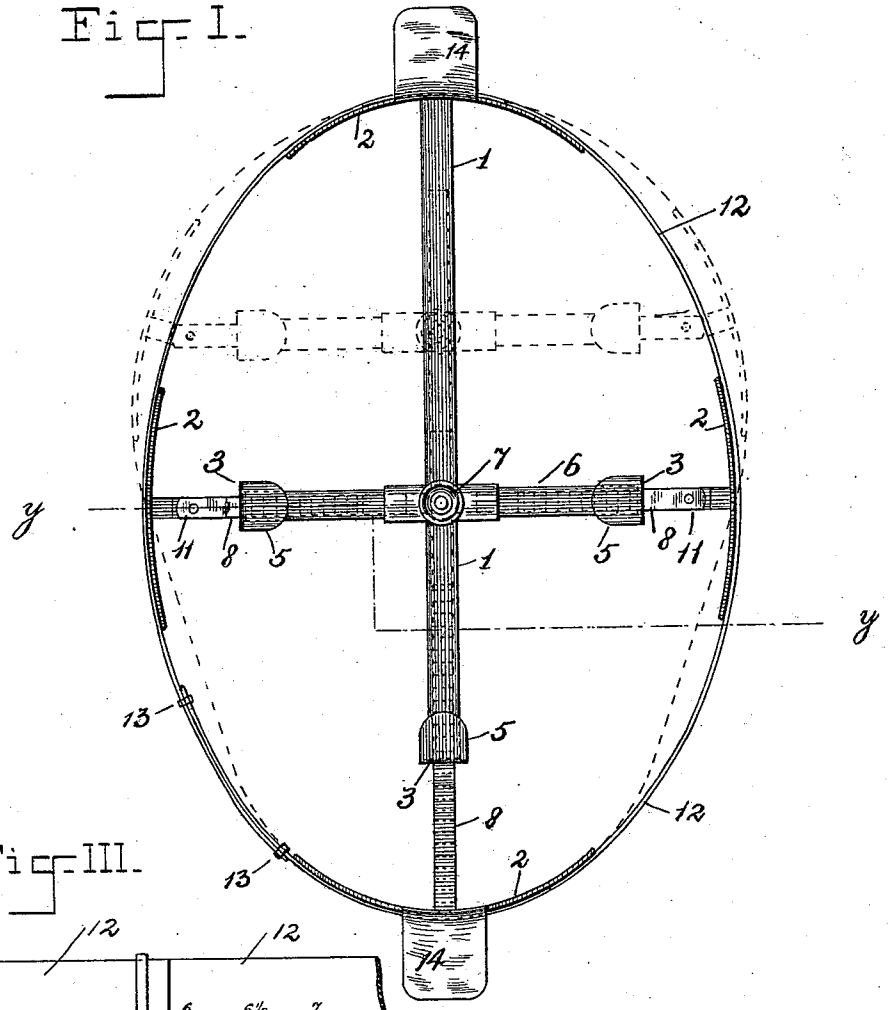


Fig. III.

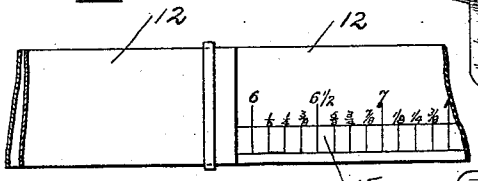
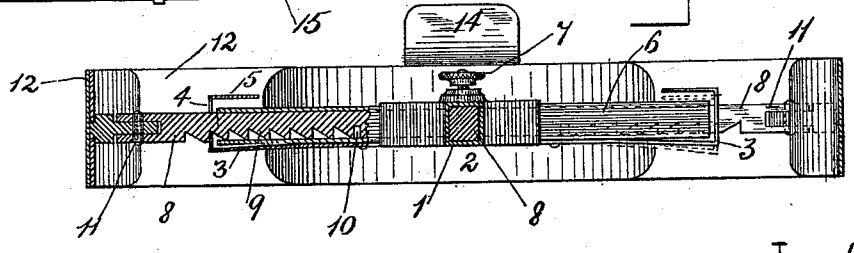


Fig. II.



Witnesses

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UNITED STATES PATENT OFFICE.

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HAT CONFORMATOR AND STRETCHER.

SPECIFICATION forming part of Letters Patent No. 456,286, dated July 21, 1891.

Application filed March 24, 1891. Serial No. 386,216. (No model.)

To all whom it may concern:

Be it known that I, ALBERT DENZER, a subject of the Emperor of Germany, residing at the city and county of New York, in the State of New York, have invented certain new and useful Improvements in Hat Conformators and Stretchers, of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a hat-conformator cheap in construction, but simple and effective in operation, upon which hats may be blocked or set to the exact shape of the wearer's head, and, if desired, stretched at any given points upon or throughout the entire circumference of the band, and this I do by means of a device constructed of any preferred material, preferably of brass or other metal.

The said invention is fully disclosed in the following specification, of which the accompanying drawings form a part, wherein similar numerals of reference designate like or equivalent parts wherever found throughout the several views, and in which—

Figure I is a top plan view of my improved hat conformator and stretcher; Fig. II, a view in central vertical section thereof on the line *y y* of Fig. I, and Fig. III a detail view of a portion of the encircling band.

Referring to the drawings, the numeral 1 designates a hollow rod or bar, provided at one end with a curved flat head 2 and at the other with a spring 3, bent upward and backward, as shown, so as to cover the end of the rod 1. The upper part of the upwardly-extending portion of this spring 3 is provided with a hole 4 of the same size as the hollow of the rod 1, and adapted to register therewith when the spring 3 is depressed from its normal position, which may be accomplished by pressing upon the backwardly-extending portion 5 thereof.

Sliding upon the hollow rod 1 and transverse thereto is a second hollow rod 6, having at each end a spring 3, similar in construction to that upon the rod 1, and this rod 6 is also provided with a set-screw 7 or other convenient device, by which the rod 6 may be fixed at any desired point on the rod 1 and prevented from sliding along the same.

Passing through the holes 4 in the springs 3 into the hollow portions of the rods 1 and 6 are longitudinally-adjustable supplemental rods or bars 8, provided with ratchet-teeth 9, adapted to engage with the bottom edges of said holes 4 in such manner as to prevent the same from being slid back into the hollow rods 1 and 6, when once drawn out, as long as the springs 3 retain their normal position, although the same may at all times be moved freely outward. Near the inner ends of these longitudinally-adjustable supplemental bars 8, and at the inner end of each ratchet, is a right-angled slot or notch 10, of such form as to allow the spring 3 to engage therewith when the supplemental bar is pulled out sufficiently far in the same manner that it does with the ratchet-teeth 9, the form of this slot, however, being such as to prevent the pulling entirely out or pushing in of the supplemental bars 8 when the spring 3 is engaged therewith, so long as such spring retains its normal position. To the outward ends of these supplemental longitudinally-adjustable rods or bars 8 are attached curved flat heads 2, similar in form and construction to that secured to the end of the hollow rod 1. The heads 2, however, which are secured to those rods 8, which slide in the hollow rod 6, are connected with such rods 8 by means of a hinged connection 11, by which they are enabled to adapt themselves to different degrees of curvature, as made necessary by the sliding of the rod 6 along the rod 1. Around the outside of these heads 2 is placed a band 12, preferably of thin metal, which may be for convenience secured to one or more of the heads 2 by a sliding connection of any preferred form, and the ends thereof may be, if desired, provided with a sliding-band connection 13, as shown. The heads 2 at either end of the rod 1 are also provided with outwardly-extending lips or projections 14, by which the device is supported in place in the hat while being adjusted, and by which the removal thereof is greatly facilitated.

At the sliding joint 13 the band 12 is, if desired, provided with a scale 15 upon the inside thereof, as shown in detail in Fig. 3, by which the size of the hat by number or by measurement in inches, or by both, may be ascertained at a glance.

As shown in full lines in Fig. I, the band 12 is in the form of an oval or oblong spheroid, and the egg shape which the same would be made to assume by merely shifting the position of the sliding rod 6 upon the rod 1 is shown in dotted lines, and it is evident that by various adjustments of said rod 6 upon the rod 1, and by various adjustments of the ratchet-toothed supplemental rods 8, the heads 2 and band 12 may be made to assume almost any shape desired, from that of a perfect spheroid to the most irregular form thereof conceivable.

The operation of this device is as follows: The shape and size of the head of the wearer of the hat desired to be shaped having been determined, the band 12 is made to assume such shape by a proper adjustment of the sliding rod 6 and of the supplemental rods or bars 8, but is adjusted to a slightly smaller size than the one desired—say one tooth of each ratchet less—and the hat having then been prepared for blocking by softening the same in the well-known manner the device is inserted therein until the lips 14 of the heads 2 rest upon the brim thereof, when the band 12 is made to assume the desired size by pulling out the supplemental rods 8 to the desired length. After the hat has cooled and set by pressing down upon the backwardly-extending upper portions 5 of the springs 3 said springs will be released from the ratchet-teeth and the supplemental bars or rods may be slid back into the hollow rods 1 and 6, and the device removed from the hat, which will retain the shape and size thus given to it. It is also evident that by simply exerting considerable force upon the various supplemental sliding rods or bars 8, when the same are pulled out, the hat may be stretched to almost any desired extent, either throughout the entire circumference of the band thereof or at one or more points, according as force is exerted on one or two or all of the said supplemental sliding rods 8.

The band 12 is preferably entirely unattached to the rest of the device; but if for any reason it is desired to secure the same to any or all of the heads 2 it should be secured thereto in such a manner as to allow of its freely slipping around, so that no matter how much the same might be shortened the sliding connection 13 would always be between two of the heads 2 and never any part of such connection between the face of said heads 2 and the hat-band, for when in the latter position the first tightening of the band would bind the sliding connection and prevent the proper working of the device.

It is evident that the supplemental rods 8 may be made hollow, so as to slide over the rods 1 and 6, instead of vice versa, or that such sliding connection may be made in many other ways; that other means than the ratchet and teeth may be used to prevent the retroaction of the supplemental rods; that the band 12 may, if desired, be omitted and the hat formed directly upon the heads 2, and that many other changes in the construction, combination, and arrangement of parts of my improved hat conformator and stretcher may be made without departing from the scope of my invention, and I do not limit myself to any particular form thereof; but,

Having particularly described my invention, its construction, and operation, what I claim, and desire to secure by Letters Patent, is—

1. A hat conformator and stretcher having rods or bars arranged transversely of one another, one of which is adapted to slide along and is adjustable upon the other, each of said rods or bars being provided at the ends thereof with longitudinally-adjustable supplemental bars having suitable heads, substantially as shown and described.

2. A hat conformator and stretcher having rods or bars arranged transversely of one another, one of which is adapted to slide along and is adjustable upon the other, each of said rods or bars being provided at the ends thereof with longitudinally-adjustable supplemental bars, the whole being encircled by an adjustable flexible band, substantially as shown and described.

3. A hat conformator and stretcher having rods or bars arranged transversely of one another, one of which is adapted to slide along and is adjustable upon the other, each of said rods being provided at the ends thereof with longitudinally-adjustable supplemental bars having suitable heads, the transverse and supplemental bars being provided the one with a series of ratchet-teeth and the other with a spring-detent adapted to engage the same in such manner as to prevent the retroaction of the supplemental bars when once extended, substantially as shown and described.

4. A hat conformator and stretcher having rods or bars arranged transversely of one another, one of which is adapted to slide along and is adjustable upon the other, each of said rods being provided at the ends thereof with longitudinally-adjustable supplemental bars having suitable heads connected therewith by a hinged connection, substantially as shown and described.

5. A hat conformator and stretcher having rods or bars arranged transversely of one another, one of which is adapted to slide along and is adjustable upon the other, each of said rods being provided at the ends thereof with longitudinally-adjustable supplemental bars having suitable heads connected therewith by a hinged connection, the whole being encircled by an adjustable flexible band, substantially as shown and described.

6. A hat conformator and stretcher having rods or bars arranged transversely of one another, one of which is adapted to slide along and is adjustable upon the other, each of said rods being provided at the ends thereof with longitudinally-adjustable supplemental

bars, the transverse rods or bars being hollow and the supplemental bars sliding within the same, means for preventing the retroaction of the supplemental bars when once extended, and suitable heads attached to the outer ends of the supplemental rods or bars, substantially as and for the purposes set forth.

Signed at the city and county of New York, in the State of New York, this 21st day of March, A. D. 1891.

ALBERT DENZER.

Witnesses:
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C. L. DAVIS.