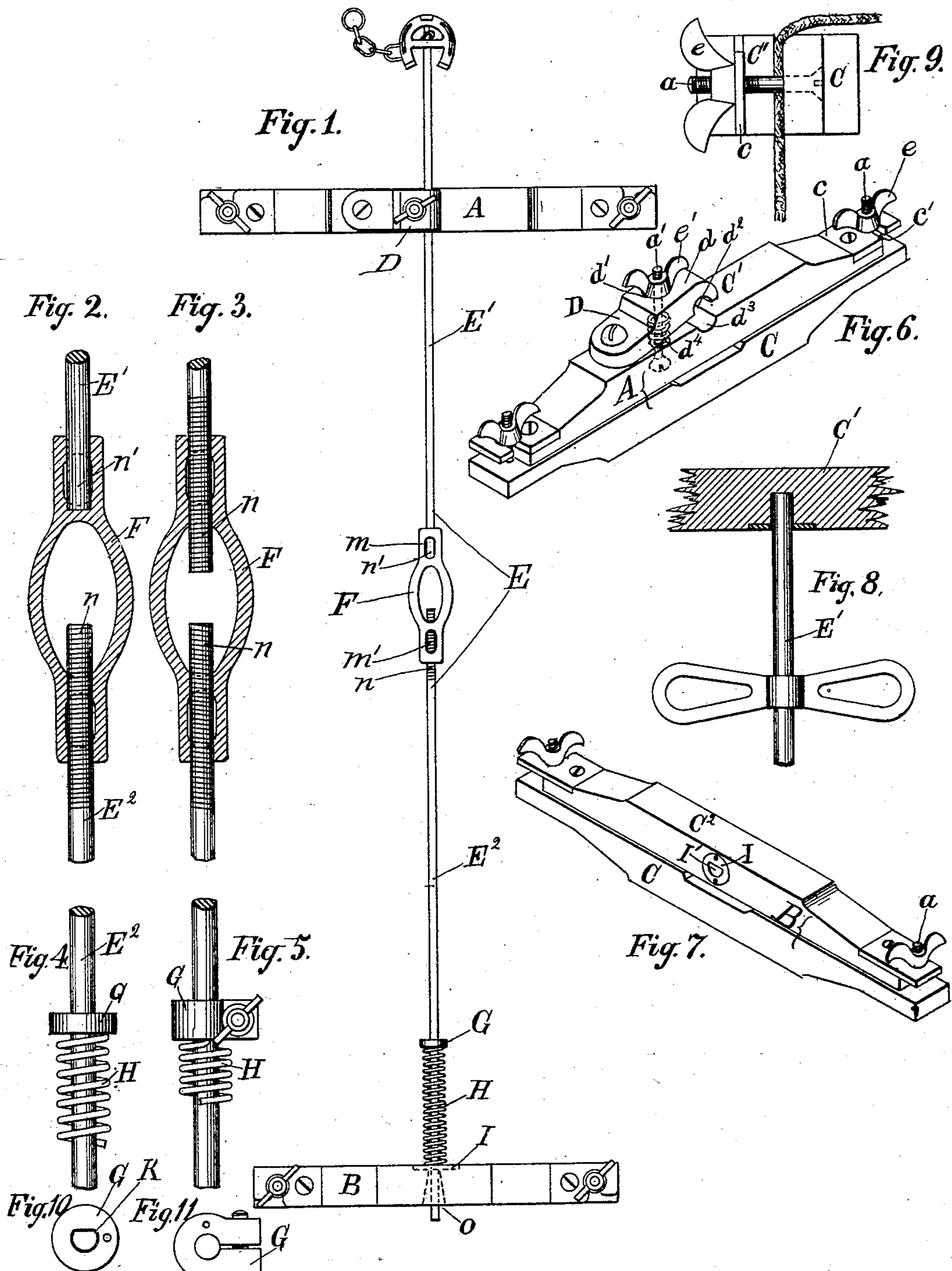


(No Model.)

C. BRINTON.
TROUSERS STRETCHER.

No. 360,412.

Patented Apr. 5, 1887.



Witnesses:
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UNITED STATES PATENT OFFICE.

CALEB BRINTON, OF CHICAGO, ILLINOIS.

TROUSERS-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 360,412, dated April 5, 1887.

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To all whom it may concern:

Be it known that I, CALEB BRINTON, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented a new and useful Device for Stretching Pantaloons and other Articles, of which the following is a specification.

My invention relates to improvements in the construction of a stretcher for removing wrinkles and restoring the shape to pantaloons and other articles, which shall be simple in its operation and more efficient in its action than others of its class. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view. Figs. 2 and 3 are sectional detail views showing means for connecting the adjusting-rods. Figs. 4 and 5 are detail views showing means for connecting the collars and springs to the adjusting-rods. Figs. 6 and 7 are detail views of the two clamps shown in Fig. 1. Fig. 8 is a detail view of a modification of the upper portion of Fig. 1. Fig. 9 is an end view of the clamp A shown in Fig. 1. Fig. 10 is an end view of the rod shown in Figs. 1 and 4. Fig. 11 is an end view of the collar G shown in Fig. 5.

Similar letters refer to similar parts throughout the several views.

The clamps A and B are composed of bars C, C', and C². The bars C have headed screw-bolts *a* secured rigidly therein, so as to remain in a fixed upright position, as shown in Figs. 1, 6, and 7. The bars C' and C² have plates *c*, provided with lateral slots *c'*, and said plates are secured to said bars. The slots *c'* stride the bolts *a* in opposite directions to and at right angles with a longitudinal line of said bars, as shown in Figs. 1, 6, and 7. The bolts *a* have threaded thumb-nuts *e*, which are adapted to force the bars of clamps A and B toward each other, whereby articles placed between said bars (see Fig. 9) may be firmly secured.

The adjusting-rod clamp D is fastened to bar C'. (See Figs. 1 and 6.) The part *d* of said clamp has its fulcrum end secured pivotally to said bar. A headed screw-bolt, *a'*, is secured firmly in bar C', and passes freely through an aperture, *d'*, in part *d*. A threaded thumb-nut, *e'*, is fitted to bolt *a'*. The under side of the

movable end of part *d* and the top side of bar C' have semi-cylindrical recesses, forming bearings *d²* and *d³*. An open spiral spring, *d⁴*, lifts up part *d* to facilitate the entering of rod E into said clamp and its removal therefrom. The clamp D serves to secure the rod E firmly to clamp A.

The extension-rod E is composed of rods E' and E² and turn-buckle F. One end of said buckle has a smooth chamber, *m*, and the other end a threaded chamber, *m'*. A smooth end, *n'*, and a threaded end, *n*, of said rods engage with said chambers, as shown in Figs. 1 and 2. By rotating the buckle F, the rods E' and E² are moved longitudinally, whereby the distance between clamps A and B is varied as desired. The said buckle also serves to keep the rods in a true position with relation to each other, and permits their separation for the purpose of packing in compact form. The rod E² is provided with a collar, G, which is secured firmly thereto. A spring, H, is fastened to said collar. The free end of said spring rests against plate I, which is fastened to bar C², as shown. The lower portion of rod E² has a flat part, K, (see Fig. 10,) which is adapted to pass freely through a corresponding aperture, I', as shown in Fig. 7.

The aperture O in bar C² is made flaring laterally outward, as shown in Fig. 1, through which the end of rod E² projects.

To operate the device, a garment being firmly secured in the clamps A and B, as shown in Fig. 9, the clamp A is held while the rod E is slid through clamp D and plate I, thus compressing spring H, whereby the clamp B is forced from clamp A, and the garment is stretched. The clamp D is then closed upon rod E, to hold clamps A and B apart. The strain upon the articles being stretched can be further increased or diminished by means of the buckle F, which enables the operator to move the clamps apart with greater force than that exerted by pressing on top end of rod E.

The clamp D and plate I serve to prevent the rotating of rods E' and E² when the buckle F is turned. The spring H compensates for any shrinkage or stretching of the article while under strain. The flaring aperture O permits the clamp B to oscillate upon the rod in the direction of the length of the clamp, thus

equalizing the tension upon the different parts of the garment.

It will be observed from the foregoing that clamp D and collar G are adapted to grip at any point of the smooth portion of rod E, thus permitting a wide range of adjustment, whereby a single machine of the class described is adapted for restoring the shape to the various sizes of men's and boys' pantaloons and other garments. The plates *c*, provided with open slots *c'*, are secured to the bars *C'* and *C''*, and are adapted to take the wear of the thumb-nuts *e*, and said plates stride the bolts *a* in such manner as to prevent their displacement by pressure of rod E. The bars *C'* and *C''* and rod E can be removed without separation entirely from bars C, thus greatly facilitating the manipulation of the device and garments.

The upper end of rod E', Fig. 8, terminates within clamping-bar C'. Its opposite end may be screw-threaded, as shown in Fig. 3; but both or either end of said rods may be made smooth. In like manner the ends of buckle F may be made to conform to the ends of said rods. When the construction of ends of turn-buckle F and the ends of rods connecting therewith, as shown in Figs. 1 and 2, are reversed, the flattened portion of rod E', as shown in Fig. 10, may be omitted.

For certain classes of work the rod E can be made of a single piece, and a single or sectional rod may be provided with the split collar G, (see Fig. 11,) whereby the distance between the free end of spring H and the adjacent clamp may be varied, and the said rod may pass through each end of a clamp in a manner similar to that shown at bar C', and be secured thereto by stirrups, clevises, or other suitable means.

The lateral slots *c'* in plate *c* can be formed in the bars *C'* and *C''*, thus dispensing with said plates, and the open end of the slots in one end of said bars and plates may be closed, the bolts thus retaining the bars pivotally at that end and permitting said bars to swing horizontally off of bar C. The ends of said bars can also be shaped and adapted to engage with suitable bearings attached to bars C C, to serve in lieu of clamps first mentioned.

It is obvious from the foregoing description that various mechanical equivalents other than those mentioned may be employed in lieu thereof without departing from this invention. Therefore I do not propose limiting the device to the precise construction herein shown and described; but

What I claim is—

1. A garment-stretcher composed of the clamps A B, the adjusting-rods E' E'', the turn-buckle F, having in one end a chamber in which is loosely fitted the rod E', and in the other a threaded chamber for the rod E'', the said rod E' having a collar, G, adjustable thereon, and the spring H, placed between the said collar

and clamp B, all substantially as and for the purpose set forth.

2. In a garment-stretcher, the combination of the clamps A B, the adjusting-rods E' E'', and the gripping device consisting of the part *d*, pivoted to bars C of the clamp A and having in its under face the lateral groove *d''*, the said bar C having the screw-bolt *a'* and the transverse groove *d'''*, the latter coinciding with transverse groove *d''*, and the spring *d''*, all substantially as and for the purpose set forth.

3. In a garment-stretcher, the clamp A, having a gripping device consisting of a pivoted part with a transverse groove and provided with a spring adapted to raise said pivoted part, in combination with a sectional rod and a turn-buckle engaging ends of said sections, and the clamp B, loosely connected to one of said sections, all substantially as and for the purpose set forth.

4. In a garment-stretcher, clamps and a clamp-adjusting rod, one of said clamps having the flaring aperture O, through which one of the rods passes and whereby the clamp may oscillate upon the rod in the direction of its length, the other clamp having means, substantially as described, for securing said adjusting-rod in position, all substantially as described.

5. A garment-stretcher composed of clamps and adjusting-rods, one of said clamps having a gripping device for securing the adjusting-rods thereto, and the other clamp loosely engaging the said adjusting-rods, the means for operating the adjusting-rods being detachably connected therewith, all substantially as described.

6. A garment-stretcher having a clamp provided with a gripping device for securing the adjusting-rod thereto, said gripping device consisting of the part *d*, pivoted to one of the bars of the clamp and having on its under face the lateral groove *d''*, the said bar of the clamp having a corresponding groove, *d'''*, and means, substantially as described, for securing said part *d* in fixed position on said clamp, all of said parts combined substantially as and for the purpose described.

7. A garment-stretcher having a clamp with the lateral groove *d'* on the outer face of one of the bars thereof, in combination with the part *d*, pivoted to said bar and having the transverse groove *d''*, the screw-bolt *a'*, secured to the said bar and passing through an opening in said part *d*, and provided at its outer end with a nut, and the coil-spring *d''*, encircling said bolt *a'*, all substantially as and for the purpose set forth.

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Witnesses:

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