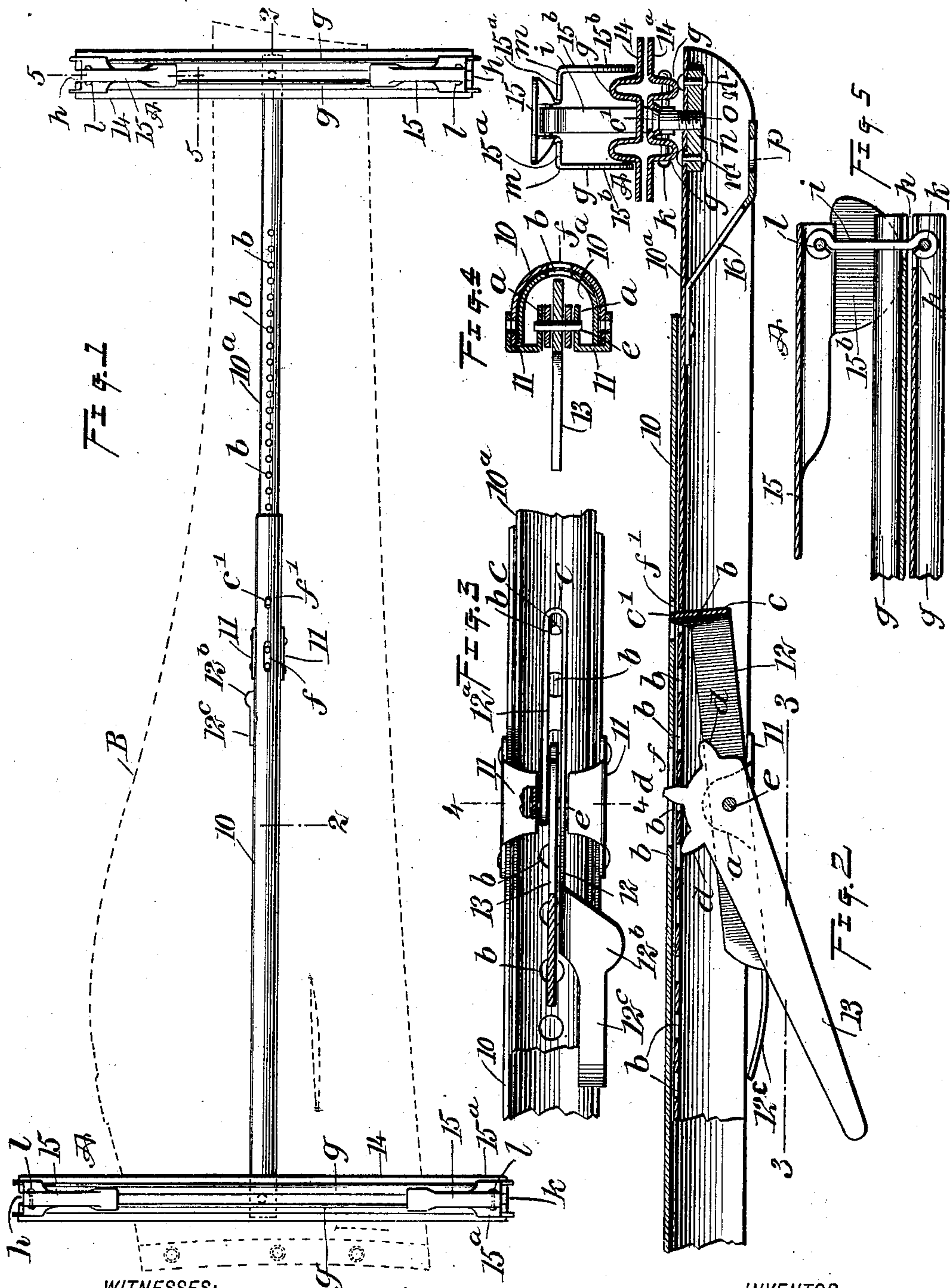


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TROUSERS STRETCHER.

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RUSSELL C. MITCHELL, OF FAYETTEVILLE, ARKANSAS.

TROUSERS-STRETCHER.

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To all whom it may concern:

Be it known that I, RUSSELL C. MITCHELL, a citizen of the United States, and a resident of Fayetteville, in the county of Washington and State of Arkansas, have invented a new and Improved Trousers-Stretcher, of which the following is a full, clear, and exact description.

This invention has for its object to provide novel features of construction for a trousers stretcher which afford a light, strong, shapely and very convenient device of the character indicated, that is adapted for manufacture from metal rapidly and perfectly by machinery, at a moderate cost.

The invention consists in the novel construction and combination of parts, as is hereinafter described and defined in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is an outer side view of the improved trousers stretcher, shown applied upon a pair of trousers represented by broken lines; Fig. 2 is an enlarged longitudinal sectional view of a main portion of the device, taken substantially on the line 2—2 in Fig. 1; Fig. 3 is a partly sectional reverse side view of a middle portion of the device, taken substantially on the line 3—3 in Fig. 2; Fig. 4 is a transverse sectional view of details, substantially on the line 4—4 in Fig. 3; and Fig. 5 is an enlarged partly sectional side view of an end portion of a clamp employed, taken substantially on the line 5—5 in Fig. 1.

The invention, briefly described, comprises an extensible stretcher-bar and a clamp at each end of the bar, these parts embodying novel features that will be specifically described. The stretcher-bar consists of two sections, each made of plate metal cut and pressed into form that is essentially U-shaped, one section 10 receiving the other section 10^a, which is longitudinally adjustable, whereby to increase or diminish the aggregate length of the bar by a specially devised clamp the construction of which is clearly shown in Figs. 2 and 3 comprising the following details. Upon the bar section 10 near the end that laps upon the exterior of the section

10^a, two similar bracket plates 11, 11, are oppositely secured by rivets, each having an ear *a* formed thereon by bending the material of each plate first inward and then downward, said ears being parallel with each other as appears in Fig. 4. In the section 10^a a series of spaced perforations *b* is formed that are disposed from the lapped end of the section toward the outer end thereof.

A locking arm employed that is preferably formed of a strip of plate metal, is return bent at *c* to produce two spaced and parallel members 12, 12^a, between said members receives an end portion of a flat thin lever 13, which is furnished with a plurality of teeth *d* that radiate from the arcuate edge of said end portion of the lever. At the radial center of the arcuate edge a pivot is passed through a perforation in the head of the lever, said pivot *e* also passing through aligned perforations in the ears *a*, and in the members 12, 12^a, of the locking arm. On the free end of the limb or member 12, of the locking arm a grip piece 12^b, is formed that trends laterally and is adapted to overhang the side edge of the stretcher bar sections 10, 10^a, where they are engaged one within the other, terminating in a curved plate spring finger 12^c. At the doubled end *c* of the locking arm, a toe *c'*, is formed which, as shown in Fig. 2, is normally pressed toward and into either of the perforations *b* that the longitudinal adjustment of the stretcher bar sections may dispose opposite said toe, the spring finger 12^c enforcing such an engagement of the toe within the registered perforation, and to enable the free action of the teeth *d* and toe *c'*, openings *f* and *f'* are formed in the exterior U-shaped stretcher-bar section 10, the perforation *f'* permitting the toe *c'* to pass through the section 10^a far enough to render its action positive. The toe *c'* is sloped on the edge nearest to the lever 13, which will permit one stretcher-bar section to be slid endwise in the other one, until an approximately correct length is obtained, and the spring pressure of the finger 12^c will adapt it to enforce the entrance of the toe within a perforation *b* it may be opposite, which will lock the two stretcher-bar sections from longitudinal sliding movement. At the outer ends of the stretcher-bar sections 10, 10^a two clamp-

ing devices are removably secured, having a similar construction, and each comprising the following details, that are shown in section for one clamp A in Figs. 2 and 5, and in plan for both in Fig. 1. Each clamp A embodies as main portions two substantially similar sections 14, 14^a, the pair of these clamping sections at one end of the stretcher bar, being preferably somewhat longer than the other pair, as will hereinafter be further explained.

The clamping sections 14, 14^a for each clamp A are of plate metal, and are stiffened by the formation of two spaced grooves or corrugations *g*, *g* in each clamping section, said corrugations in one section being disposed opposite those in the corresponding one, and as shown in Fig. 2, at the right, said corrugations project from the outer sides of the clamping section. A central notch *h* is formed in each end of each clamping section for a clamp A, the side walls for said notches being adjacent walls of the corrugations *g*. In the coinciding notches *h* at each end of the two-part clamp A, a link bar *i* is adapted to rock, by means of a pivot *k*, that is inserted fixedly in the walls of the corrugations *g* in one clamping section 14^a, and passes loosely through a looped end of the corresponding lock-bar. Upon the other ends of the link bars *i*, on each clamp A, and which extend a distance above the corrugations on a respective clamping section 14, similar cam levers 15 are pivoted, each lever being constructed substantially as follows. The body portion of a respective lever 15, is of plate metal, cut into shape marginally and pressed by dies so as to assume an approximately U-shape in cross section. From one end of each lever body 15, two flanges 15^a, are projected laterally an equal degree, and at *m*, are bent at a right angle, affording two members 15^b, thereon that are parallel with each other, and adapted to loosely embrace the outer walls of the corrugations *g*. The pivot *l* that connects each lever 15 with a respective link bar *i*, is passed transversely through the side walls of the U-shaped body thereof, which loosely embrace the link at its end, and eccentric to said pivot the edges of the flanged members 15^a, are curved, thus adapting them to serve as cams, which by closure of the lever body toward the clamping section 14 cause said clamping section to approach the mating clamping section 14^a.

As shown for one clamp A, at the right in Fig. 2, the means for removably connecting each clamp with a respective end of a stretcher bar section, preferably comprises a nut block *n*, of elongated form secured by rivets *n'* upon the inner surface of the bar section, the nut block being centrally perforated and tapped, this threaded hole being opposite a corresponding perforation in the

stretcher bar section. From the longitudinal center of each clamping section 14^a, that in service seats upon the convex surface of a respective stretcher bar section 10, 10^a, extends the body *o* of a screw stud, for a screwed engagement with a respective nut block *n*. The stud *o* for each clamp A is headed, and a counter-sunk perforation is formed in the clamping section 14^a, for the reception of the coniform head *o'* of the stud when the latter is passed outward through the perforation; and to add to the durability of the connection for each stud with a respective clamping section, the stud is secured in place by solder or brazing.

In use the garment, such as trousers B, shown by broken lines in Fig. 1, is folded, so that the leg portions are flat upon each other, whereby to crease them at the front and rear, and also to dispose the body portion thereof correspondingly; then the extremities of the lapped legs of the garment are together passed between the clamping sections of an appropriate clamp A, to permit which the levers 15 are rocked upward from the clamping section 14, and when the garment is thus inserted the cam levers 15 are rocked toward said clamping section, which will cause the cam edges of the flanges 15^a to forcibly impinge upon the end portions of the clamping section 14, and clamp the trousers legs between the clamp sections 14, 14^a.

The body portion of the trousers is now passed near the upper edge thereof between the clamping sections of the clamp A at the opposite end of the stretcher bar, which latter has been previously adjusted for length, approximately by pulling the bar section 10^a outward, causing the toe *c'* to engage with an appropriate perforation *b*.

After pulling upon the trousers so as to stretch them in the frame, the clamping levers 15 on the remaining clamp A are folded toward the clamping section 14, which will secure the garment body between the clamping sections 14, 14^a, in a stretched condition. The body of the lever 13, which should have been projected outward from the stretcher-bar section 10^a, is now pressed toward said section.

The engagement of the teeth *d* on the arcuate edge of the head on the lever 13 with appropriate perforations *b*, in the stretcher-bar section 10^a, causes said stretcher-bar section to slide somewhat and correspondingly lengthen the stretcher-bar, this increased length further stretching and creasing the legs of the trousers B, the spring-finger 12^c, when the lever 13 is depressed fully, serving to engage the toe *c'* within an opposite perforation *b*, which will lock the stretcher-bar sections in extended adjustment.

A hanger-arm 16 is secured near the outer end of the stretcher-bar section 10^a on its concave side, said arm being bent so as to

dispose the free end thereof outwardly and forwardly, said end having a perforation *p* therein to engage with a hook or nail on a wall, or in a closet for suspension of the hanger device and garment thereon.

The improvement may be quickly applied for the stretching of a garment, and will obviously preserve the same in proper shape, preventing the bagging and wrinkling of trousers at the knees. Owing to the convenient detachment, and easy connection of parts of this improved trousers stretcher, it may be quickly taken apart, and packed into a small package for transportation when this is desired, and when needed for use, may be assembled in a few moments and applied upon a garment for its distension and hanging support. As the device may be cut into form and pressed into shape mainly by machinery, it is evident that in quantity the improvement may be produced at a moderate cost.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A trousers stretcher comprising a stretcher bar formed of plate metal in two sections, channeled longitudinally, and slidable one on the other, means for forcing the sections longitudinally from each other, and a locking device comprising a locking arm carried by the outer section and having a toe, the inner section having perforations in any of which the toe may be engaged to hold the bar sections from sliding, and means at the ends of the bar for holding the garment.

2. A trousers stretcher, comprising in part, two substantially U-shaped stretcher bar sections, one slidable longitudinally in the other, a rockable locking arm carried by the outer section of the stretcher bar and having a toe on one end, the other section having a plurality of spaced perforations any of which may be engaged by said toe, and a spring finger on the other end of the locking arm adapted for holding the toe thus engaged.

3. A trousers stretcher, comprising in part two substantially U-shaped stretcher bar sections one slidable longitudinally in the other, a rockable locking arm carried by the outer section of the stretcher bar and having a toe on one end, the other bar section having a plurality of spaced perforations arranged longitudinally therein into either of which the toe may be pressed by an integral spring finger at the other end of the locking arm, and a lever pivoted on the locking arm having spaced teeth on one end which may engage in said perforations and move the bar

section having said perforations when the lever is rocked.

4. In a trousers stretcher, the combination with a two part stretcher bar, one part slidable on the other, and means for adjustably securing the bar sections together, of two similar clamps removably secured transversely on the ends of the extensible stretcher bar, each clamp comprising two elongated plate metal sections, having corrugated stiffening formations thereon, a lever having a cam formation on one end thereof, and held to rock on one end of one clamping section so as to bear upon the other clamping section, and a similar lever rockable on the other end of the first mentioned clamping section, for clamping contact on the opposed clamping section.

5. In a trousers stretcher of the character described, a stretcher bar, two similar clamps, each comprising two similar plate metal sections, each clamping section having two spaced corrugations formed longitudinally thereon, and a notch in each end of each section, a link bar held rockably by one end in each notch in one clamping section and working in respective notches in the opposed clamping section, two similar cam levers each having two flanges furnished with cam cut edges, and pivoted eccentrically on the respective link bars at the opposite ends thereof, and means for detachably securing the clamping devices respectively on ends of the stretcher bar that is part of the trousers stretcher.

6. In a trousers stretcher of the character described, the combination with a plate metal stretcher bar having channeled form, and two clamps each comprising two longitudinally corrugated plate metal sections, of a nut block secured in the stretcher bar near each end thereof, and two threaded studs having coniform heads and secured in respective counter-sunk perforations formed in one section of each clamp near its center of length.

7. A trousers stretcher, comprising two substantially U-shaped stretcher bar sections, one of said sections being provided with longitudinally spaced perforations, and the other with a toe engaging the perforations, and with means engaging the perforations for traversing the sections upon each other.

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

RUSSELL C. MITCHELL.

Witnesses:

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T. A. PECK.