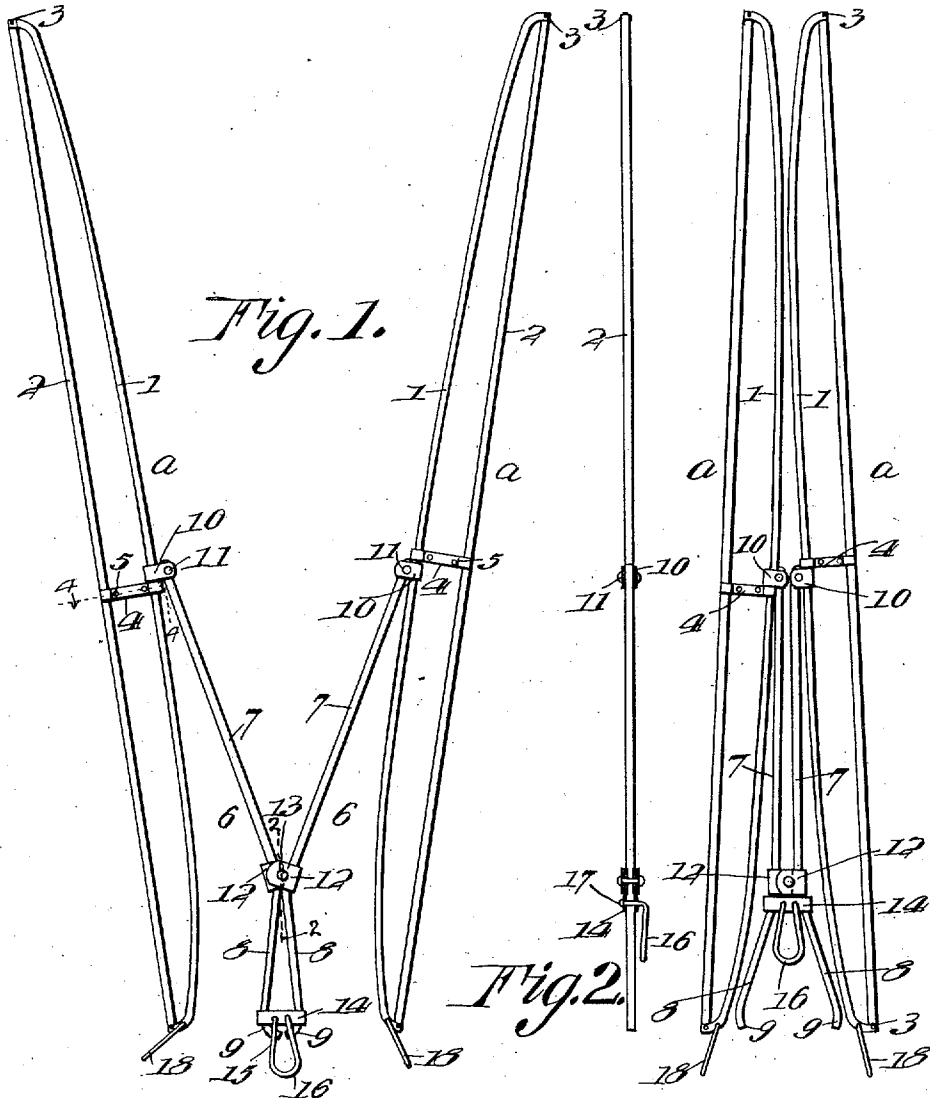


I. B. MACOMBER.
 TROUSERS STRETCHER.
 APPLICATION FILED DEC. 23, 1909.

973,443.

Patented Oct. 18, 1910.



Witnessed
 Ada C. Bagerty
 Elva D. Dana

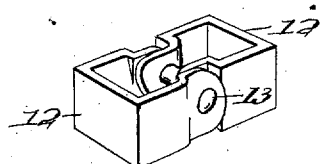


Fig. 5. Inventor
 Isaac B. Macomber
 by Joseph H. Miller
 Attorney

UNITED STATES PATENT OFFICE.

ISAAC B. MACOMBER, OF PORTSMOUTH, RHODE ISLAND.

TROUSERS-STRETCHER.

973,443.

Specification of Letters Patent.

Patented Oct. 18, 1910.

Application filed December 23, 1909. Serial No. 534,707.

To all whom it may concern:

Be it known that I, ISAAC B. MACOMBER, a citizen of the United States, residing at Portsmouth, in the county of Newport and State of Rhode Island, have invented a new and useful Improvement in Trousers-Stretchers, of which the following is a specification.

This invention relates to improvements in trousers stretchers and pertains more particularly to an improvement in that type of stretchers adapted to be inserted into the legs of trousers, as disclosed in my Patent No. 855,794, granted June 4, 1907.

The object of the present invention is to improve the construction by simplifying same and reducing the number of parts required without impairing the efficiency of the stretchers.

Further and other objects of the invention will be later herein manifested and set forth.

Referring to the accompanying drawings in which like characters of reference designate similar parts throughout the several views, Figure 1 is a front elevation of the trousers stretchers showing the same in expanded position, Fig. 2 is an elevation partly in section taken on the line 2—2 of Fig. 1, Fig. 3 is a view similar to Fig. 1, showing the parts in contracted position ready for insertion into the legs of the trousers, Fig. 4 is a transverse section taken on the line 4—4 of Fig. 1, and Fig. 5 is a view in perspective of the hinge connection between the two side members of each stretcher.

In the drawings *a a* designate generally the two side members of which each stretcher is composed, each member consisting of a substantially bow-shaped bar 1 preferably formed of a bar of metal having their out-turned extremities bifurcated to receive the thin, flexible metal creasing bars 2, the latter being substantially straight throughout their length, and being secured in the bifurcated ends by means of small pins or rivets 3. For the purpose of bracing the creasing bars 2, and to assist the same in holding the creased portion of the trousers legs in a stretched state, there are provided members 4 which consist of a strip of metal which is bent to embrace the bars 2 at an intermediate portion (Fig. 4), the ends of the strip being extended in abutting relation and adjacent their extremities or free ends being slightly off-set so as to provide a space

in which the creasing bars 2 are received. Rivets 5 are employed to maintain the sides of the bracing members 4 in their position illustrated in Fig. 4. As the bracing members 4 are disposed central of the length of the creasing bars 2 it will be observed that they thus afford a substantial bracing point for the bars 2 maintaining the latter rigid and against lateral movement in the position depicted in Fig. 1.

The means for expanding the two side members *a* consist of a pair of arms 6, each having a long leg 7, and a short leg 8, the latter being arranged at an obtuse angle to the former and having their free extremities curved inwardly as shown at 9. The free ends of the legs 7 are pivoted to central points along the length of the bow-shaped supporting bars 1, by means of U-shaped clips 10 suitably supported on the bars 1, and pins 11 which extend through the free ends of legs 7 and the two sides of the clips 10, the free ends of legs 7 being received in the space between the two sides of the clips 10. The two arms 6 are pivoted together by means of the connection shown in Fig. 5, which connection consists of two substantially U-shaped members 12 which embrace the arms 6 at the inner ends of the legs 7 and 8 thereof as illustrated in Fig. 1. Each of the members 12 have their inner or free ends off-set and in engagement, a pin 13 being passed through such ends so as to provide a hinge connection in an obvious manner. The means for operating the arms 6 from collapsed position to extended position and vice versa consists of a guide member 14 which is freely slidable along the length of the legs 8 of the arms 6. The guide member 14 is preferably constructed of a piece of metal which completely incloses the legs 8 and which is conveniently operated by a bail member 15, which latter consists of a hand engaging loop 16, the free ends of which are turned at right angles as shown in Fig. 2 and passed through points intermediate the length of the guide member 14, the extremities of the ends of loop 16 being headed as shown at 17. By reference to Fig. 1 it will be observed that when the parts are in extended position the right angular ends of loop 16 will engage with the inner side faces of the inwardly curved extremities 9 of the legs 8 of arms 6 and will thereby restrict the movement of the guide member with respect to the legs 8, prevent-

ing disengagement of the parts in an obvious manner. The bars 1 are also provided with the clips 18 by means of which the bottom of the trousers legs are secured to the side member *a*.

In the operation of stretching and creasing trousers two stretchers are used, one for each leg, each stretcher being contracted into the position shown in Fig. 3 by moving the guide member 14 inwardly, after which the stretchers are inserted into the legs of the trousers. The clips 18 are then turned down on the material of the trousers legs to clamp them to the side member *a*. The stretcher is then expanded by moving the guide member 14 outwardly causing the creasing bars 2 to be placed under the required tension effecting proper creasing of the trousers legs.

It will be seen from the above that the entire structure can be made of metal, and being so constructed is light in weight, serviceable, and efficient in operation and can be easily applied or removed with respect to the legs of the trousers.

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

1. A trousers stretcher comprising side members, a pair of arms having long legs and short legs, the legs of each arm being arranged at an angle and being disposed so that the points of juncture between the long and short legs of each arm are opposite each other, a U-shaped member secured to each arm at said points of juncture between the long and short legs thereof, the free ends of each U member being disposed in engagement with each other, a pivot pin passing through said contacting free ends of said U members, and means to operate the short legs.

2. A trousers stretcher comprising two side members and means for expanding and contracting said side members, said means comprising a pair of arms having long legs and short legs, the latter being arranged at an obtuse angle to the long legs, means for pivoting the outer ends of the long legs to the side members substantially central of the length thereof, means for pivoting said arms together at the point of juncture between the long legs and the short legs, and a guide member slidably embracing the short

legs and adapted to expand and contract said arms.

3. A trousers stretcher comprising side members, each member consisting of a supporting bar of bow shape and a thin flexible metal creasing bar secured to the ends of the supporting bar, means for rigidly bracing the creasing bar at a central point consisting of a strip of metal bent centrally of its length to embrace the supporting bar on all four sides of the latter, and having its free ends in abutting relation, the extremities of said free ends being off-set so as to form a space in which the creasing bar engages, and means for securing the ends of the said strip of metal together.

4. A trousers stretcher comprising side members, a pair of arms having long legs and short legs, the legs of each arm being arranged at an angle, means for pivotally relating said arms, means for pivoting the free ends of the long legs to the side members, the free ends of the short legs being curved inwardly toward each other, a guide member slidably embracing the short legs, and means carried by the guide member to engage said curved end of the short legs to restrict the outward movement of the guide member.

5. A trousers stretcher comprising two side members, means for expanding and contracting the side members comprising a pair of pivotally related arms having their inner ends pivoted to the side members and having their outer ends divergently related, a guide member slidably embracing said divergent outer ends of said pair of arms, the free extremities of the divergent outer ends of said pairs of arms extending inwardly toward each other, and a hand engaging loop for operating the guide member having its ends turned at right angles thereto and passed through the guide members so as to engage the inwardly extending free extremities of the divergent outer ends of said pair of arms to prevent the guide member from leaving the arms.

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

ISAAC B. MACOMBER.

Witnesses:

ADA E. HAGERTY,
J. A. MILLER.