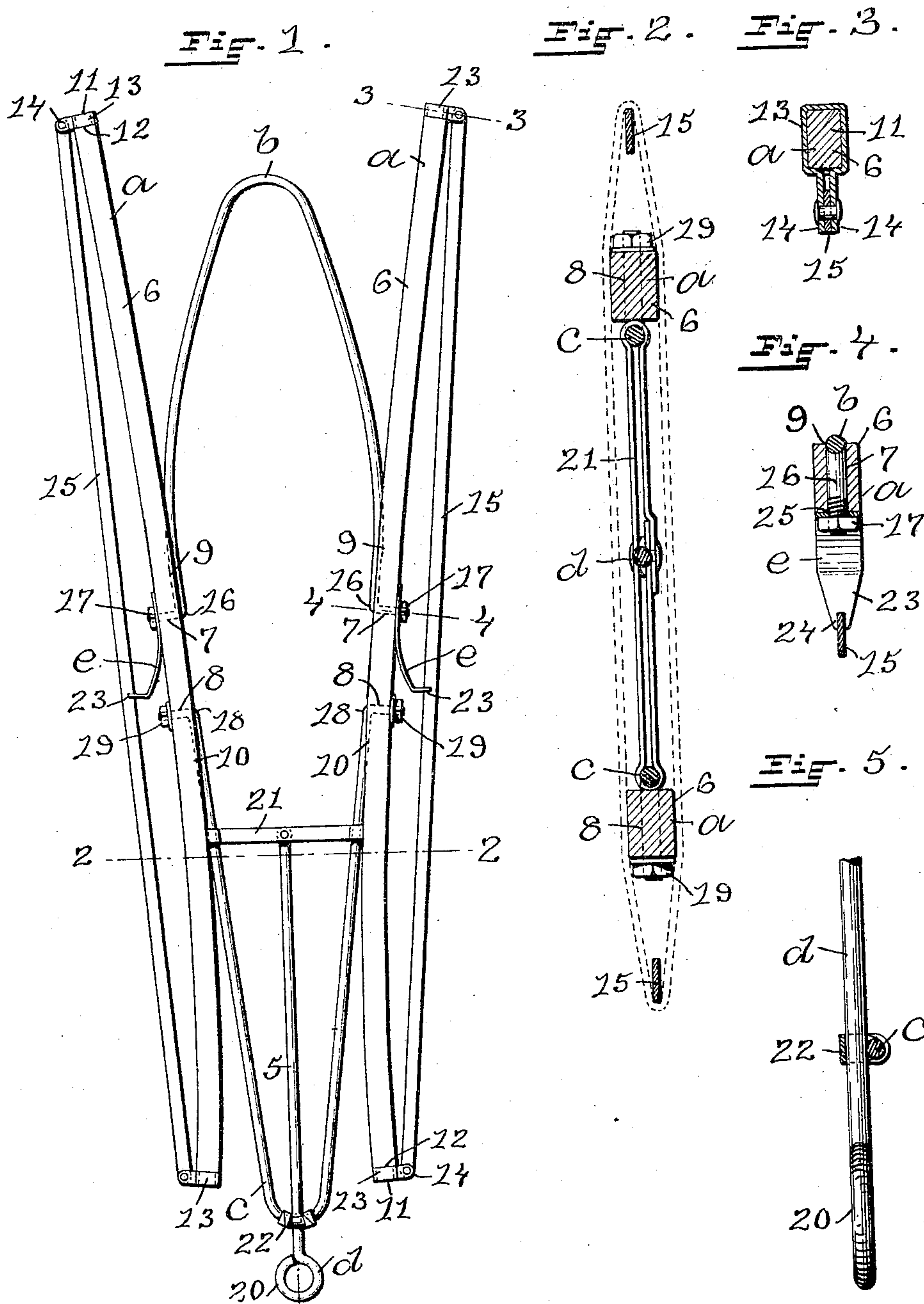


No. 855,794.

PATENTED JUNE 4, 1907.

I. B. MACOMBER.  
TROUSERS STRETCHER.  
APPLICATION FILED NOV. 17, 1906.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ISAAC B. MACOMBER, OF PORTSMOUTH, RHODE ISLAND.

## TROUSERS-STRETCHER.

No. 855,794.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed November 17, 1906. Serial No. 343,873.

*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 has reference to an improvement in trousers' stretchers and more particularly to an improvement in a form of trousers' stretchers adapted to be inserted into the legs of the trousers.

The object of my invention is to improve the construction of a trousers' stretcher whereby the legs of the trousers are more perfectly and permanently creased than has heretofore been done.

A further object of my invention is to construct an adjustable stretcher for different sizes of trousers, for varying the tension of the stretcher in the trousers, for different thicknesses of cloth, and for increasing or decreasing the sharpness of the crease in the legs of the trousers.

A still further object of my invention is to construct an adjustable trousers' stretcher that will readily adjust itself to the shape of the legs of the trousers.

My invention consists in the peculiar and novel construction of an adjustable trousers' stretcher adapted to be inserted into the legs of the trousers, with details of construction, as will be more fully set forth hereinafter and claimed.

Figure 1 is a face view of the trousers' stretcher, showing the same in the contracted position. Fig. 2 is an enlarged transverse sectional view taken on line 2 2 of Fig. 1, showing the stretcher in the leg of a pair of trousers, shown in broken lines. Fig. 3 is an enlarged transverse sectional view taken on line 3 3 of Fig. 1 through the fitting and end of a side arm. Fig. 4 is an enlarged transverse sectional view through a side arm taken on line 4 4 of Fig. 1, and Fig. 5 is an enlarged detail sectional view of the operating rod taken on line 5 5 of Fig. 1.

In the drawings, *a a* indicate the side arms, *b* the U-shaped intermediate spring, *c* a V-shaped intermediate spring, *d* the operating rod, and *e e* auxiliary whip springs of the trousers' stretcher.

Each of the side arms *a a* consists of a rectangular shape bar 6 constructed preferably of wood, such as hickory, having a spring tension and shaped to have the two transverse

holes 7 and 8 adjacent the center of the bar, the semicircular grooves 9 and 10 in the inner edge of the bar extending outward from the holes 7 and 8 toward the ends of the bar and the reduced ends 11 11 forming the shoulders 12 12. A fitting 13, formed from sheet metal and shaped to fit the ends 11 11 of the bar and having the outwardly-extending ends 14 14, is secured to each end of the bar by forcing the fitting over the end 11 against the shoulder 12 and a thin flexible metal creasing bar 15 is held at each end under spring tension by bowing the wood bar 6 and pinning the ends of the metal creasing bar 15 to the ends 14 14 of the fittings 13 13, as shown in Figs. 1 and 3.

The U-shaped intermediate spring *b* is constructed of round wire having a spring tension and shaped to have the L-shaped screw-threaded ends 16 16 secured to the bars 6 6 in the holes 7 7 by the nuts 17 17 with the arms of the spring adjacent the L-shaped end in the grooves 9 9, as shown in Figs. 1 and 4.

The V-shaped spring *c* is constructed of round spring wire and shaped to have the L-shaped screw-threaded ends 18 18 secured to the bars 6 6 in the holes 8 8 by the nuts 19 19 with the arms of the spring adjacent the L-shaped ends in the grooves 10 10, as shown in Figs. 1 and 2.

The operating rod *d* is constructed of round wire and shaped to have the ring 20 on its outer end and secured at its inner end to a cross strap 21 which extends around the arms of the V-shaped spring *c*, as shown in Figs. 1 and 2. A guide clip 22 reciprocally supports the rod *d* on the closed end of the spring by bending the clip around the spring to form an opening for the rod, as shown in Figs. 1 and 5.

The auxiliary whip springs *e e* are each constructed from sheet metal having a spring tension and shaped to have the L-shaped end 23 in which is a notch 24 for the flexible creasing bar 15 and a hole 25 in the opposite end for securing the spring to the end 16 of the U-shaped spring *b* by the nut 17 in a position for the bar 15 to enter the notch 24 in the whip spring *e*, as shown in Figs. 1 and 4. The springs *b* and *c* are shaped so that the stretcher when completed is approximately the shape of a leg of a pair of trousers, as shown in Fig. 1.

In the operation of stretching and creasing a pair of trousers two stretchers are used.



Each stretcher is contracted into the position as shown in Fig. 1 by pushing in on the operating rod *d* and the stretcher inserted into the leg of the trousers through the body of the same. The stretcher is now allowed to expand by pulling the operating rod *c* outward until the leg of the trousers is stretched over the thin flexible creasing bars 15 15 under the required tension, thereby creasing the leg of the trousers. The thin flexible creasing bars 15 15 yield readily to the shape of the leg of the trousers and are supported centrally under spring tension by the whip springs *e e*. The stretchers may now be used as a garment supporter or hanger by hanging the stretchers with the trousers up by the rings 20 20 until the trousers are required for use.

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

1. A trousers' stretcher comprising two side arms, each side arm consisting of a spring bar, fittings on the ends of the spring bar and a thin flexible creasing bar secured by bowing the spring bar and securing the ends of the creasing bar to the fittings, intermediate springs secured to the side arms, and means for contracting the side arms against the tension of the intermediate springs.

2. A trousers' stretcher comprising two side arms, each supporting a thin flexible creasing bar under tension, intermediate connecting springs secured to the side arms, and means operatively connected with one of the springs adapted to contract the side arms against the tension of the springs.

3. A trousers' stretcher approximately the shape of a trousers' leg and comprising two side arms, each side arm consisting of a spring bar and a thin flexible creasing bar secured to the spring bar under tension, an intermediate U-shaped spring secured to the side arms, an intermediate V-shaped spring secured to the side arms, and means operatively connected with the V-shaped spring

adapted to contract the side arms against the tension of the springs.

4. A trousers' stretcher comprising two side arms, each side arm consisting of a spring bar and a thin flexible creasing bar secured to the spring bar under tension, an intermediate U-shaped spring secured to the side arms, an intermediate V-shaped spring secured to the side arms, a cross strap extending around the arms of the V-shaped spring, a rod connected to the cross strap, and means for reciprocally supporting the rod on the closed end of the spring, whereby on operating the rod the stretcher is contracted or allowed to expand, as described.

5. A trousers' stretcher comprising two side arms *a a*, each side arm *a* consisting of a bar 6 constructed preferably of wood having a spring tension, fittings 13 13 having the ends 14 14 secured to the ends of the bar, and a thin flexible metal creasing bar 15 secured at each end under tension to the ends 14 14 of the fittings 13 13, intermediate springs secured to the bars 6 6, and means for contracting the side arms *a a* against the tension of the intermediate springs, as described.

6. In a trousers' stretcher, the combination of two side arms *a a*, a U-shaped intermediate spring *b* secured to the side arms, a V-shaped intermediate spring *c* secured to the side arms, an operating rod *d* reciprocally supported on the V-shaped spring *c* and secured to a stop 21 extending around the arms of the V-shaped spring *c*, and auxiliary springs *e e* on the side arms, whereby on operating the rod *d* the stretcher is contracted against the tension of the springs *b* and *c* or allowed to expand, as described.

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.