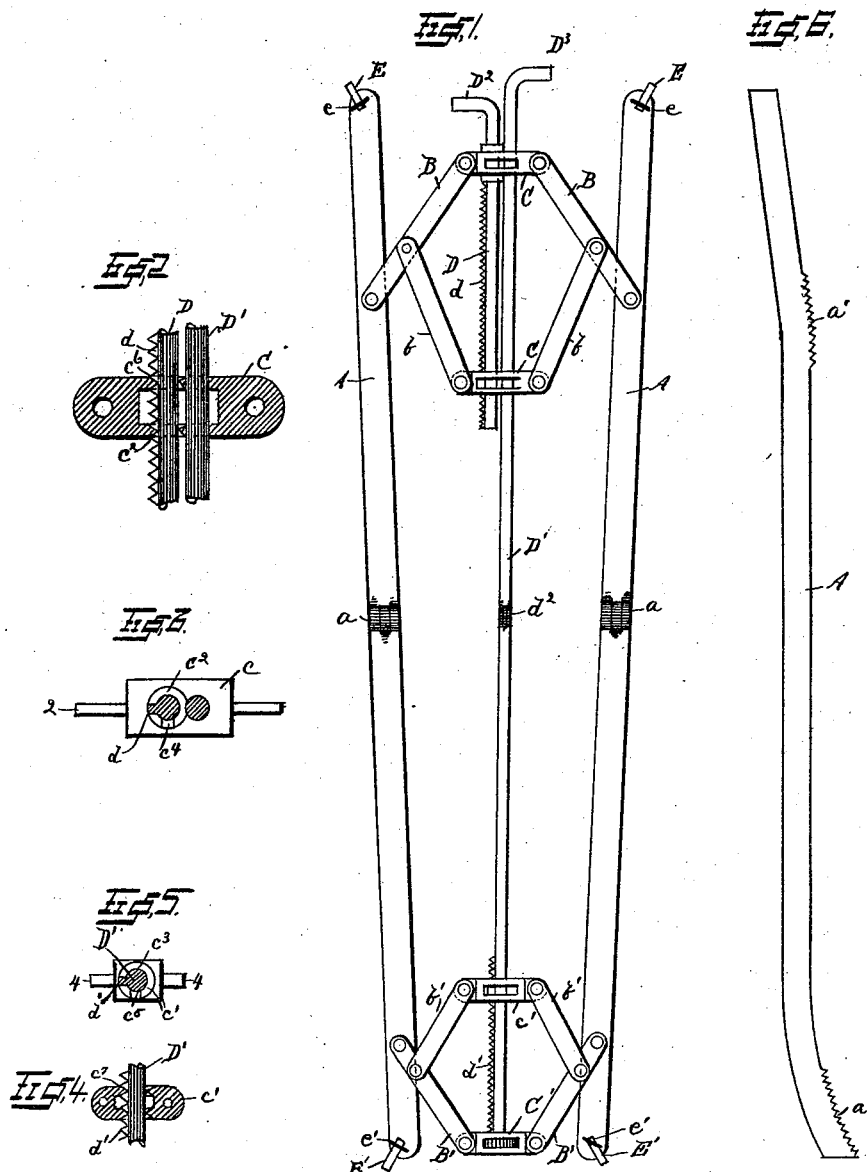


(No Model.)

H. A. SALTSMAN.  
TROUSERS STRETCHER.

No. 525,288.

Patented Aug. 28, 1894.



Witnesses  
Wm. Marley Jr.  
H. C. Long

Inventor  
Harry A. Saltzman  
By Attorneys  
Hallock & Hallock

# UNITED STATES PATENT OFFICE.

HARRY A. SALTSMAN, OF ERIE, PENNSYLVANIA.

## TROUSERS-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 525,288, dated August 28, 1894.

Application filed March 31, 1893. Serial No. 468,529. (No model.)

### *To all whom it may concern:*

Be it known that I, HARRY A. SALTSMAN, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Trousers-Stretchers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to trousers stretchers, and consists in certain improvements in the construction thereof as will be hereinafter fully described and pointed out in the claims.

The objects of this invention are to provide means for stretching laterally both ends of the trousers, either simultaneously and equally or independently and at different tensions; and to provide means for holding the trousers in a taut or stretched position lengthwise while being stretched laterally.

The invention is illustrated in the accompanying drawings as follows: Figure 1 is a front elevation of the device. Fig. 2 is an enlarged vertical section of the slide, *c*, on the line 2—2 in Fig. 3. Fig. 3 is a plan of said slide. Fig. 4 is an enlarged vertical section of the slide, *c'*, on the line 4—4 in Fig. 5. Fig. 5 is a plan of said slide. Fig. 6 shows an alternative construction of the stretcher bar, A.

The frame of the stretcher consists of two longitudinal stretcher bars, A A, connected and operated laterally by two oppositely hinged toggle joints, pivoted near their upper and lower ends. These joints are composed of the links, B B and B' B', pivoted to the stretcher bars, as stated, and to the boxes, C and C', at their knees. Two counter toggle joints composed of the links, b b and b' b', and carrying the locking slides *c* and *c'*, at their knees are pivoted respectively to the upper and lower toggle joints. The locking slides, *c* and *c'*, are provided with the openings, *c*<sup>2</sup> and *c*<sup>3</sup>, in which the operating rods, D and D', slide freely. They have the slots, *c*<sup>4</sup> and *c*<sup>5</sup>, at their sides, as shown in Figs. 3 and 5, and the inner annular threads, *c*<sup>6</sup> and *c*<sup>7</sup>, as shown in Figs. 2 and 4. The racks, *d* and *d'*, are placed on the sides of the rods,

D and D', and conform in length and location to the movement of the locking slides. They are of such height and width as to run freely in the slots, *c*<sup>4</sup> and *c*<sup>5</sup>, and are of such shape as to readily enter and engage the inner annular threads, *c*<sup>6</sup> and *c*<sup>7</sup>, of the slides. The rod, D, is journaled in the box, C, and is bent at its end forming the handle, D<sup>2</sup>. The rod, D', is journaled to the box, C', runs through the slide, *c'*, as before stated, and through the slide, *c*, and box, C, and has its end bent to form the handle, D<sup>3</sup>. The clamps, E E and E' E', are provided for holding the trousers taut lengthwise while being stretched laterally by the mechanism heretofore described. They are of the ordinary shape, having the usual thumb screws, *ee* and *e'e'*, placed in "G" shaped jaws. The serrations, *a'* and *a*<sup>2</sup>, shown in Fig. 6, may be provided to attain the same result. The stretcher bars and the rod, D', are hinged at *a*, *d*<sup>2</sup> and *a*, to allow the stretcher to be folded for convenience in packing. The stretcher bars may be made to conform to the shape of any style of trousers, one of which shapes is shown in Fig. 6, and their outside edges may be sharp or blunt in order that the trousers may be creased or not as desired.

In operating the stretcher is placed in the trousers leg, preferably, with the handle at the top and the stretcher bars midway between the seams of the leg, the operator having a handle in each hand. By turning the rod, D', so as to bring the rack, *d'*, into the slot, *c*<sup>6</sup>, and drawing out on the handle, the lower end of the frame may be expanded to any desired tension by the action of the lower toggle joint; and by turning the rack back into engagement with the inner annular threads, *c*<sup>7</sup>, the frame is locked in its expanded position. By similarly turning the rod, D, and thrusting it in, the upper end of the frame may be expanded and locked at any desired tension. By similarly operating both rods at the same time, the upper and lower ends of the frame may be simultaneously adjusted and equally tensioned.

If it is desired to stretch the trousers lengthwise as well as laterally, the lower end of the frame should be expanded first. If the bars are provided with the serrations, *a*<sup>2</sup>, they will engage the cloth and hold the bottom of the

trousers leg securely. In the absence of the serrations,  $a^2$ , the bottoms of the trousers may be clamped to the bars by means of the clamps,  $E' E'$ . The top of the frame should  
 5 then be expanded to a slight tension, and the trousers leg drawn taut lengthwise with the hand. If the serrations,  $a'$ , are provided, they will engage the cloth and hold the trousers taut. In the absence of these serrations, the trousers may be clamped to the  
 10 tops of the bars by means of the clamps,  $E E$ . By then expanding the top of the frame to the desired tension, the desired result is attained.

15 What I claim as new is—

1. In a trousers stretcher, the combination of longitudinal laterally moving stretcher bars, upper and lower toggle joints connecting said bars, boxes at the knees thereof, toggle joints set counter to said main toggle  
 20 joints, slides at the knees thereof, rods that are journaled to said boxes and run through said slides, and means for locking said slides to said rods for the purposes set forth.

25 2. In a trousers stretcher, the combination

of the longitudinal laterally moving stretcher bars,  $A A$ , upper toggle joints composed of the links,  $B B$ , and box,  $C$ , counter toggle joint pivoted thereto composed of the links,  $b b$  and  
 30 slide,  $c$ , that has the annularly threaded opening,  $c^2$ , and slot,  $c^4$ , therein, rod,  $D$ , that is journaled to said box and which runs through the opening,  $c^2$ , rack,  $d$ , thereon that runs through the slot,  $c^4$ , and is adapted to engage  
 35 the inner annular threads of the opening,  $c^2$ , the lower toggle joint composed of the links,  $B' B'$  and box,  $C'$ , counter toggle joint composed of the links,  $b' b'$ , and slide,  $c'$ , that has the inner annularly threaded opening,  $c^3$ ,  
 40 and slot,  $c^5$ , rod,  $D'$ , that is journaled to the box  $C'$ , and which runs through the slides,  $c'$  and  $c$  and box  $C$ , and rack,  $d'$ , thereon that runs in the slot,  $c^5$ , and is adapted to engage the inner annular threads of the opening,  $c^3$ .

In testimony whereof I affix my signature in  
 45 presence of two witnesses.

HARRY A. SALTSMAN.

Witnesses:

C. B. HAYES,

H. C. LORD.