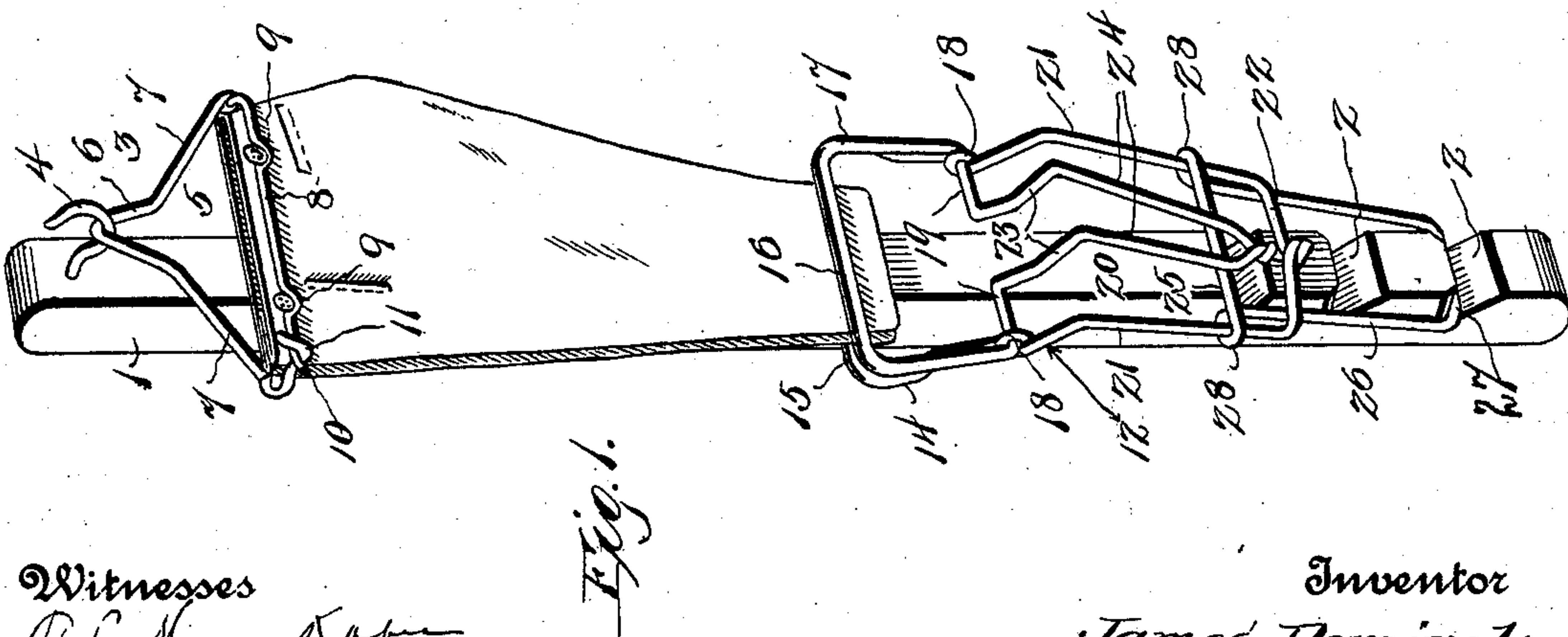
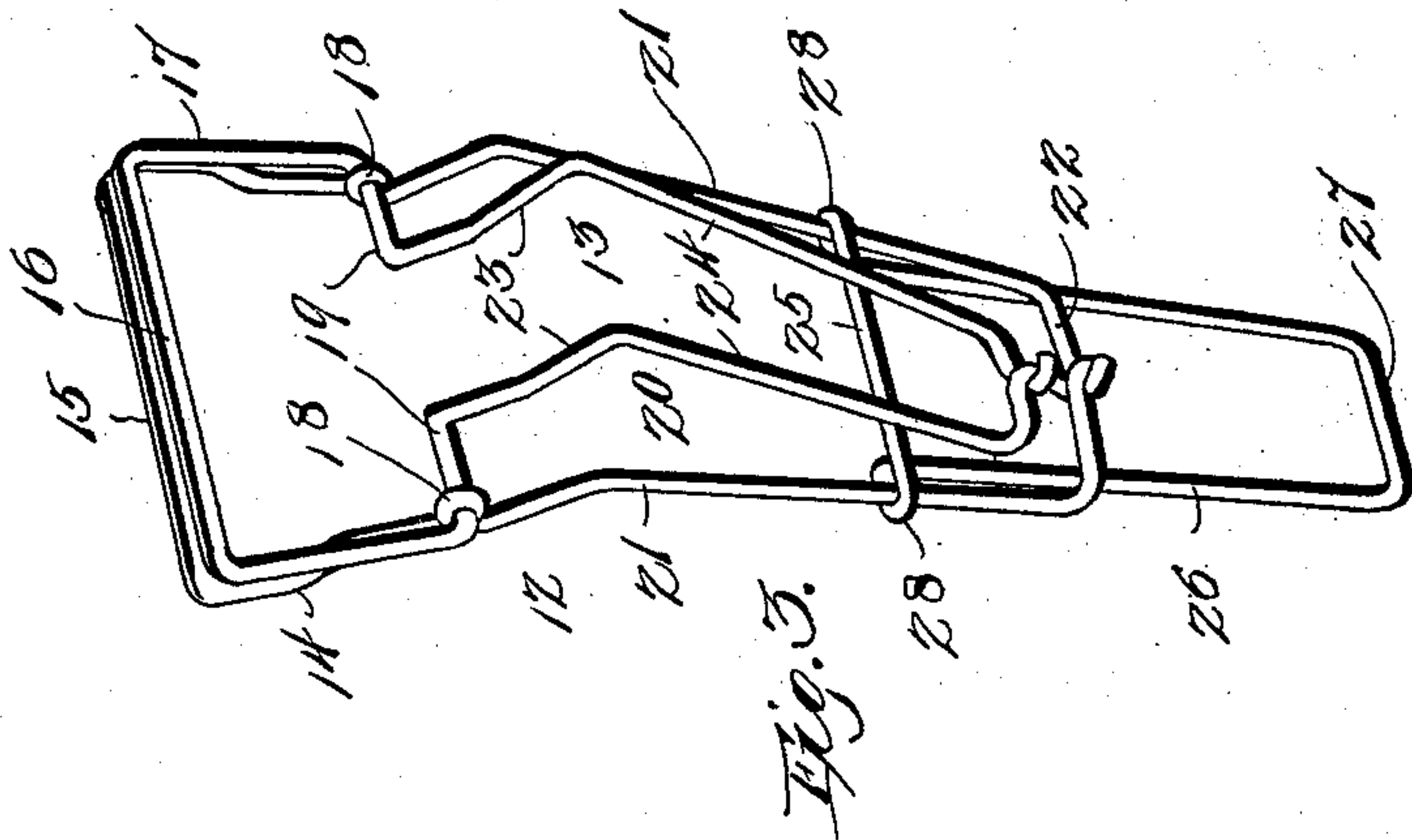
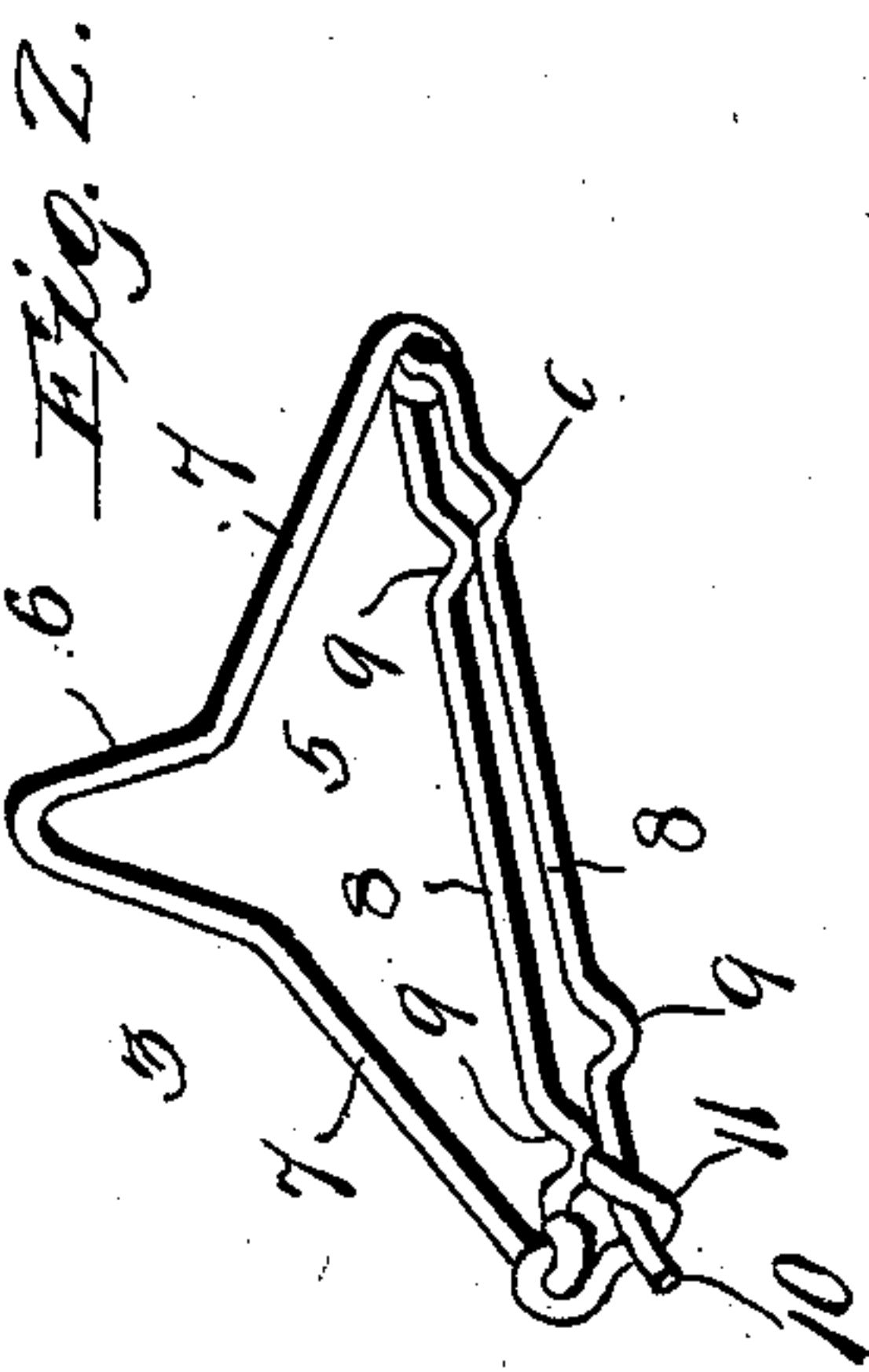
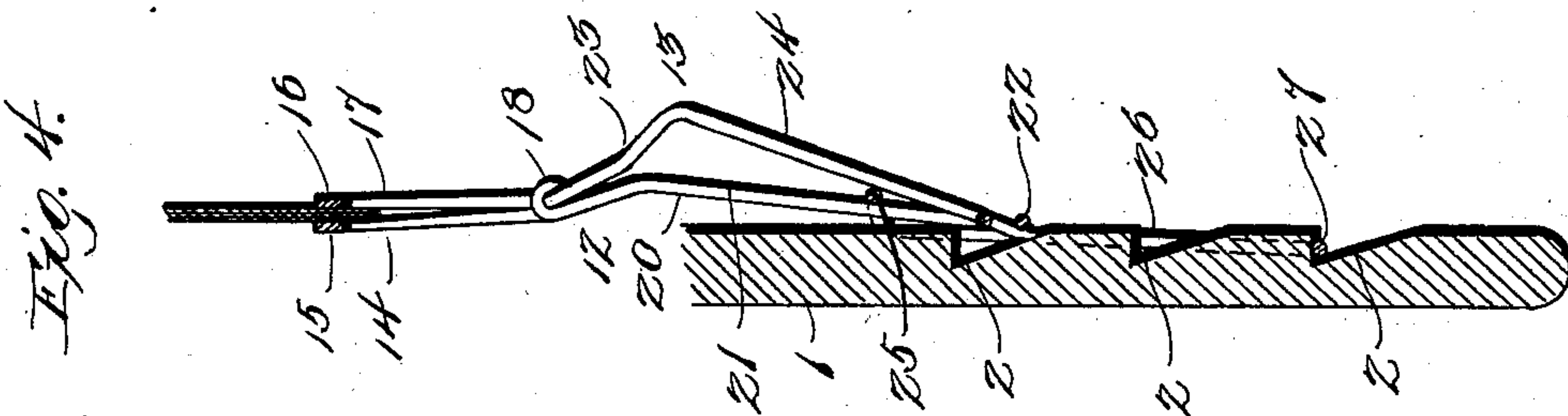


No. 698,316.

Patented Apr. 22, 1902.

J. PERCIVAL.
GARMENT STRETCHER.
(Application filed Jan. 29, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JAMES PERCIVAL, OF YOUNGSTOWN, OHIO.

GARMENT-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 698,316, dated April 22, 1902.

Application filed January 29, 1902. Serial No. 91,771. (No model.)

To all whom it may concern:

Be it known that I, JAMES PERCIVAL, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, 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 apparel apparatus, and has special reference to an improved trousers or pantaloons stretcher embodying simple and practical means for holding a pair of trousers or pantaloons evenly and thoroughly stretched in order to maintain the same in the best possible condition.

To this end the invention has in view the provision of a trousers-stretcher constructed of a minimum number of parts, while at the same time having the different elements constituting the same arranged in an effective relation to secure a firm and tight gripping of the trousers-legs simultaneously with the stretching thereof to the desired degree. Also the invention provides a device which can be easily and quickly manipulated through the medium of a single adjusting element, and also which involves no complicated parts.

With these and many other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, illustrated, and claimed.

The essential features of the invention involved in the novel construction of the stretching-clamp or stretching device proper are necessarily susceptible to embodiment in different modifications without departing from the spirit or scope of the invention; but a preferred embodiment of the device is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the complete trousers-stretching device or apparatus embodying the improvements contemplated by the present invention. Fig. 2 is a detail in perspective of a form of holder for the upper end of the trousers which may be utilized in connection with the stretcher. Fig. 3 is a similar view of the stretcher-clamp or stretch-

ing device proper. Fig. 4 is an enlarged detail sectional view showing more plainly the relative positions of the different elements of the stretching-clamp when gripped upon the trousers-legs and held in a closed condition by engagement with the supporting-base or stretcher-bar.

Like numerals of reference designate corresponding parts throughout the several figures of the drawings.

In carrying out the invention the parts which are engaged directly with the trousers or pantaloons may be associated with any suitable character of support or base—such, for instance, as the supporting-base indicated by the numeral 1 in the drawings. This supporting-base is shown preferably in the form of a single bar, which may be properly termed a “stretcher-bar,” inasmuch as it coöperates with the trousers-engaging elements to provide for holding the trousers in a stretched condition. At a point preferably contiguous to one end thereof the said base or stretcher-bar 1 is provided with a series of locking-notches 2, designed to accommodate the device to different lengths of trousers, as well as to permit of their being stretched as tightly as desired, as will hereinafter more fully appear. At the end opposite the portion having the said locking-notches 2 the base or stretcher-bar 1 is designed to have detachably supported thereon a fixed holder 3 for the upper end of the garment.

Any suitable and effective means of holding the upper end of the trousers upon the base or stretcher-bar may be utilized in carrying out the invention, and this holder may be detachably or otherwise connected with the base or bar in any suitable manner so long as means are provided for constituting a proper support for the upper end of the trousers, which are to be held in a stretched condition over the base or bar 1. However, for illustrative purposes there is shown a simple and practical form of holder, which is detachably engaged with a supporting-hook 4, fitted in the base or bar 1 contiguous to one end thereof. The said holder, as shown, preferably consists of a spring-wire body 5, bent to provide a centrally-arranged hanger loop or eye 6, which engages with the hook 4, and also hav-

ing projected from opposite sides of the said loop or eye 6 the oppositely-extending side arms 7. The said side arms 7 carry and are connected by a pair of holding-bars 8, preferably arranged in parallel spaced relation and provided with offset engaging loops 9, adapted to hook over the buttons upon opposite sides of the trousers, at the upper end of the latter, when folded and inserted between the said holding-bars 8. One of the holding-bars 8 may be provided with a free end 10, constituting a latch-terminal adapted to be sprung into engagement with a keeper-hook 11 at one end of the spring-wire body. This construction, as will be seen, provides a spring-holder which will firmly grasp the upper end of the trousers, while at the same time the latter are positively prevented from displacement when the movable holding-bar 8 is latched by reason of the engagement of the buttons on the trousers with the said loops 9.

The construction of fixed holder 3 just described may be varied in different ways without affecting the invention, and it will therefore be understood that this construction is simply disclosed for illustrative purposes, although it is necessary in any form of fixed holder employed to provide the same with means for not only grasping the upper end of the trousers, but also for positively preventing disengagement of the trousers from said holder when subjected to a stretching strain.

The principal part of the invention resides in the stretching-clamp or stretcher proper, which is associated with the lower ends of the trouser-legs and which also coöperates with the base or stretcher-bar 1. In its preferred construction the stretching-clamp or stretcher proper primarily consists of a pair of lever members, (designated, respectively, by the reference-numerals 12 and 13 and pivotally united.) They have a firm clamping or gripping action upon the lower end of the trousers-legs to provide for holding the clamp upon the trousers while the latter are stretched to the desired degree and maintained in the stretched condition. Each of the lever members 12 and 13 of the stretching-clamp is preferably formed of a suitable length of wire bent to provide the different elements of the levers, although it is obvious that the members of the clamp may be constructed in any suitable manner, provided the essential features of the construction are preserved. The lever member 12 may be properly termed the "inner" lever member, as it usually lies next to the base or stretcher-bar 1 when the parts are in operative position, and the said lever member is formed at one end portion with a gripping-jaw 14, essentially in the form of an open approximately rectangular loop and having a cross-bar 15, usually flattened to provide one of the grip-bars of the clamp, and which is opposed to a corresponding cross or grip bar 16, carried by the gripping-jaw 17, formed at one end of the lever member 13. The gripping-jaw 17 is likewise essentially in the form of

an open approximately rectangular loop and is arranged in opposition to the jaw 14 of the inner lever member 12. The said inner lever member 12 also preferably has the side arms thereof coiled to provide the coiled bearing-eyes 18, which loosely receive the short pivot-bars 19, bent inwardly from the side portions of the gripping-jaw 17 in approximate parallelism to the grip-bar 16 of such jaw, thus completing a pivotal or hinge connection between the two levers, whereby the jaws thereof may have the proper hinge action.

The portion of the inner lever member 12 beyond or below the gripping-jaw 14 thereof is preferably in the form of an open guide-frame 20, essentially consisting of the opposite side bars 21 and the cross-bar 22, connecting the latter at their lower ends, and the other or outer lever member 13 is provided beyond the pivotal connection between the levers with an offset angled arm 23, having an inwardly-extended inclined pressure member 24, which is of a narrower width than and projects through the opening of the guide-frame 20. The said inwardly-extended inclined pressure member 24 of the outer lever member coöperates with a transverse slide-bar 25, carried at one end of a slidable clamp-adjuster 26. This slidable clamp-adjuster 26 is preferably in the form of a wire link closed at its opposite ends, respectively, by the engaging loop 27 and the slide or cross bar 25, just referred to. The slide-bar 25 is offset from one side of the body-link 26, so as to slide at the front side of the guide-frame 20, and at the ends of the side-bar 25 the link is bent to provide the guiding-eyes 28, which slidably work upon the side bars 21 of the guide-frame 20. The closed end or loop 27 of the link 26 is designed to be hooked into engagement with any of the locking-notches 2.

In using the device it is understood that the upper end of a folded pair of trousers is first engaged with the fixed holder 3 in the manner described, after which the lower ends of the trousers-legs are inserted between the gripping-jaws 14 17 of the stretching-clamp. By then drawing downward upon the clamp-adjuster 26, which may also be termed a "tension-link," it will be observed that the front slide-bar 25 of said link rides against the inwardly-extending pressure member 24, causing such member to move outward, with the consequent inward movement of the gripping-jaw 17. In other words, the slide-bar 25 spreads the lever members at one side of the pivot and causes the pair of gripping-jaws to move toward each other and become tightly clamped or gripped upon the trousers-legs. The tighter the clamp-adjuster is drawn upon the tighter the gripping action, and simultaneously with the closing of the gripping-jaws the clamp adjuster or link 26 is carried to a suitable one of the notches 2 to provide for holding the trousers stretched at any desired tension. By simply disengaging the clamp-adjuster or tension-link 26 from

the locking - notch which it engages the stretcher-clamp is immediately loosened up, so as to permit of the trousers being readily removed from the apparatus or device.

5 From the foregoing it is thought that the construction, action, and many advantages of the herein-described trousers-stretcher will be readily apparent without further description, and it will be understood that various
10 changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or scope of the invention or sacrificing any of the advantages thereof.

15 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a trousers-stretcher, the combination with the supporting means for one end of the
20 trousers, of a stretching-clamp comprising a pair of gripping-jaws, a clamp-adjuster carried by one of the jaw members and holding means for the clamp-adjuster, substantially as set forth.

25 2. In a trousers-stretcher, the combination with supporting means for one end of the trousers, of a stretching-clamp comprising a pair of pivotally - connected lever members having gripping-jaws, a clamp-adjuster carried by one of the lever members and coöperating with the other member to effect a closing of both jaws, said clamp-adjuster also
30 constituting the stretching element and holding means for the clamp-adjuster, substantially as set forth.

3. In a trousers-stretcher, the combination with supporting means for one end of the trousers, of a stretching-clamp comprising a pair of lever members pivotally connected
40 and provided with opposed gripping-jaws, and a clamp-adjuster slidably mounted upon one of the lever members coacting with the other member to effect a closing of the jaws, said clamp-adjuster also constituting a stretcher element and holding means for the clamp-adjuster, substantially as set forth.

4. In a trousers-stretcher, the combination with a base, and a holder for one end of the trousers supported on the base, of the stretching-clamp comprising pivotally-connected lever members having opposed gripping-jaws, and a clamp-adjuster mounted upon one of the lever members and coacting with the
50 other member to effect a closing of the jaws, said clamp-adjuster also being engaged with

the base to hold the garment stretched, substantially as set forth.

5. In a trousers-stretcher, a supporting-base having a series of locking-notches, a holder supported upon the base and having means
60 for holding one end of the trousers, and a stretching-clamp comprising a pair of lever members pivotally connected and having opposed gripping-jaws at one side of the pivotal point, one of said lever members being provided at the opposite side of the pivotal point
65 with a guide-frame, and the other member being provided with an inclined pressure member or arm extending within the plane of the guide-frame, and a clamp-adjuster in the form of an open link slidably mounted
70 upon said guide-frame and adapted to engage the notches of the base, said adjuster having a bar working against the said pressure-arm of one of the lever members, substantially as
75 set forth.

6. In a trousers-stretcher, the combination with a base and a holder for one end of the trousers, of a stretching-clamp comprising lever members formed of wire bodies pivotally united, said lever members being formed
80 at one side of their pivot with open gripping-jaws, one of said lever members being further provided at the opposite side of the pivot with an open guide-frame and the other lever member being also further provided with an
85 outwardly-offset angled arm having an inwardly-extended inclined pressure element, and an open link having guide-eyes slidably engaging the said guide-frame and also having a slide-bar coöperating with said pressure element, substantially as set forth.

7. In a trousers-stretcher, the combination of a stretcher-bar having a series of notches, a fixed holder mounted upon the bar and having means for engaging the upper end of a pair of trousers and preventing longitudinal displacement thereof, and a stretching-clamp comprising a pair of pivotal gripping-jaws, and a slidable clamp-adjuster carried by one
95 of the jaw members and coöperating with the series of notches of the stretcher-bar, substantially as set forth.

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

JAMES PERCIVAL.

Witnesses:

C. F. BEARD,

JOHN I. WILLIAMS, Jr.