

(No Model.)

J. A. TRAUT.  
SUSPENDER BUCKLE.

No. 447,924.

Patented Mar. 10, 1891.

Fig. 1

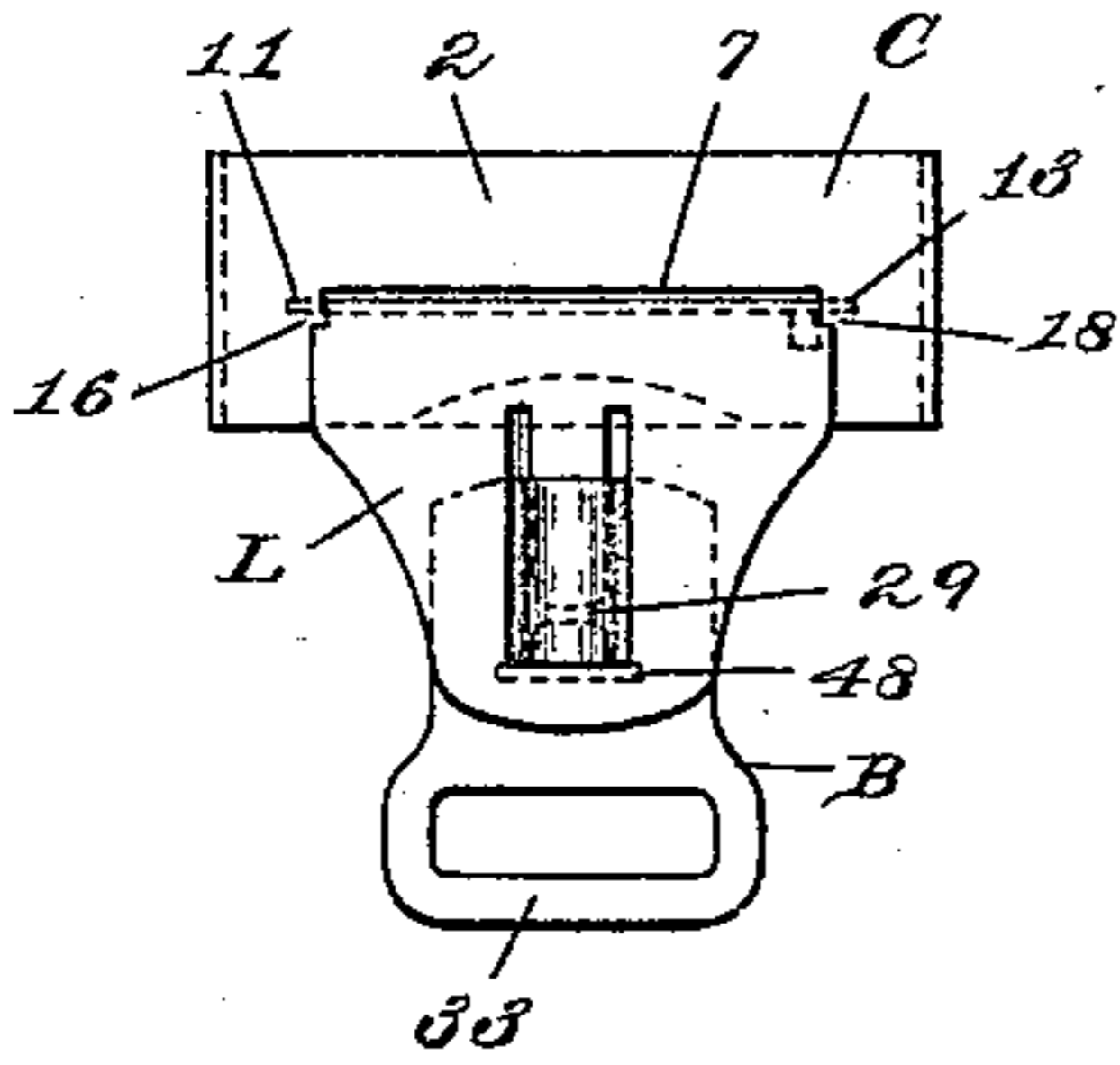


Fig. 2

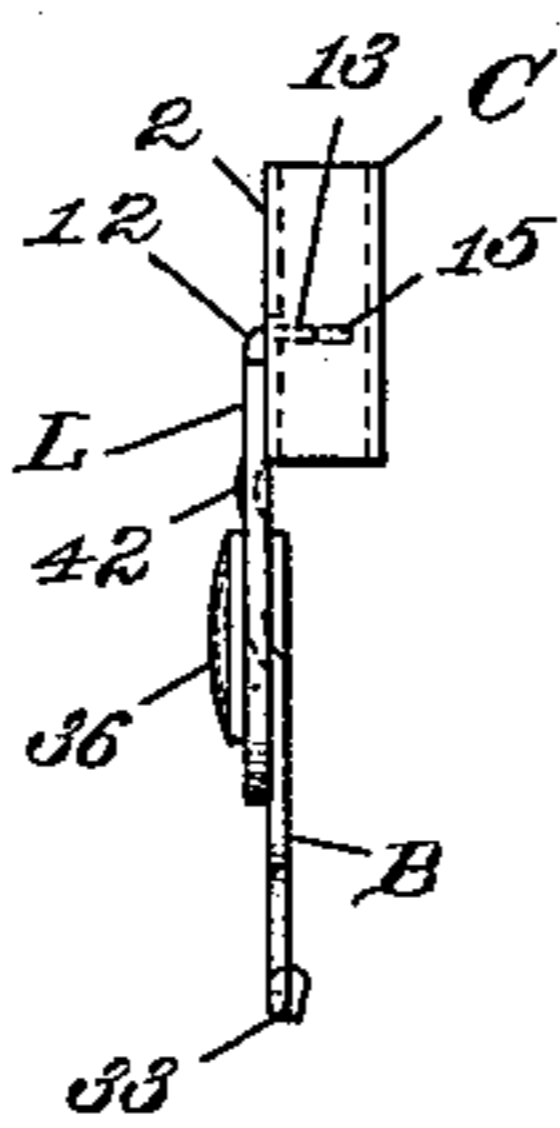


Fig. 3

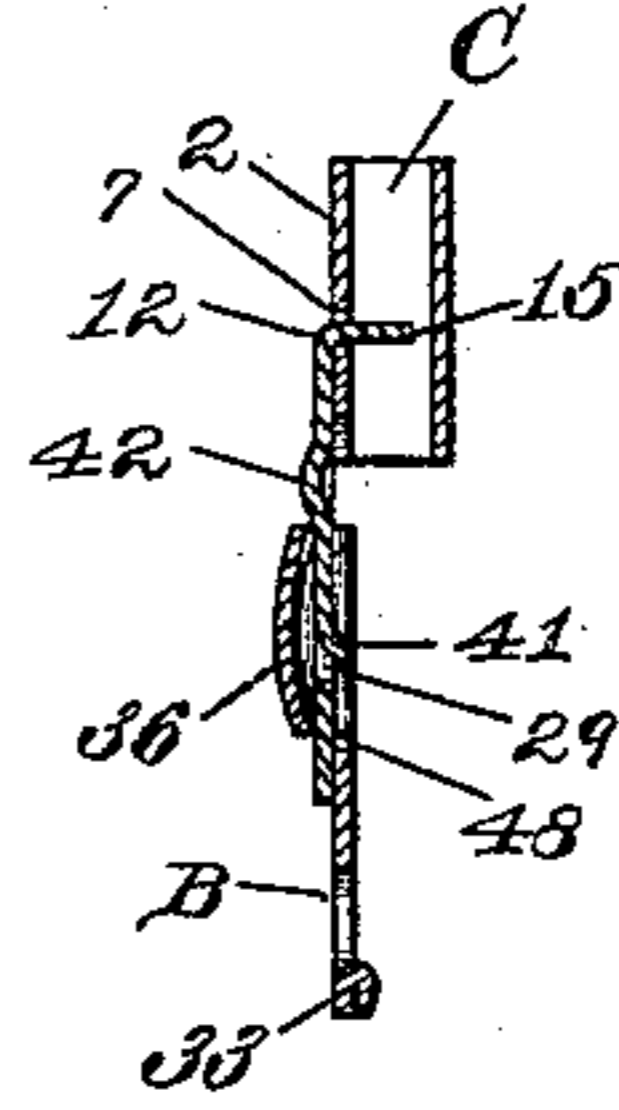


Fig. 4

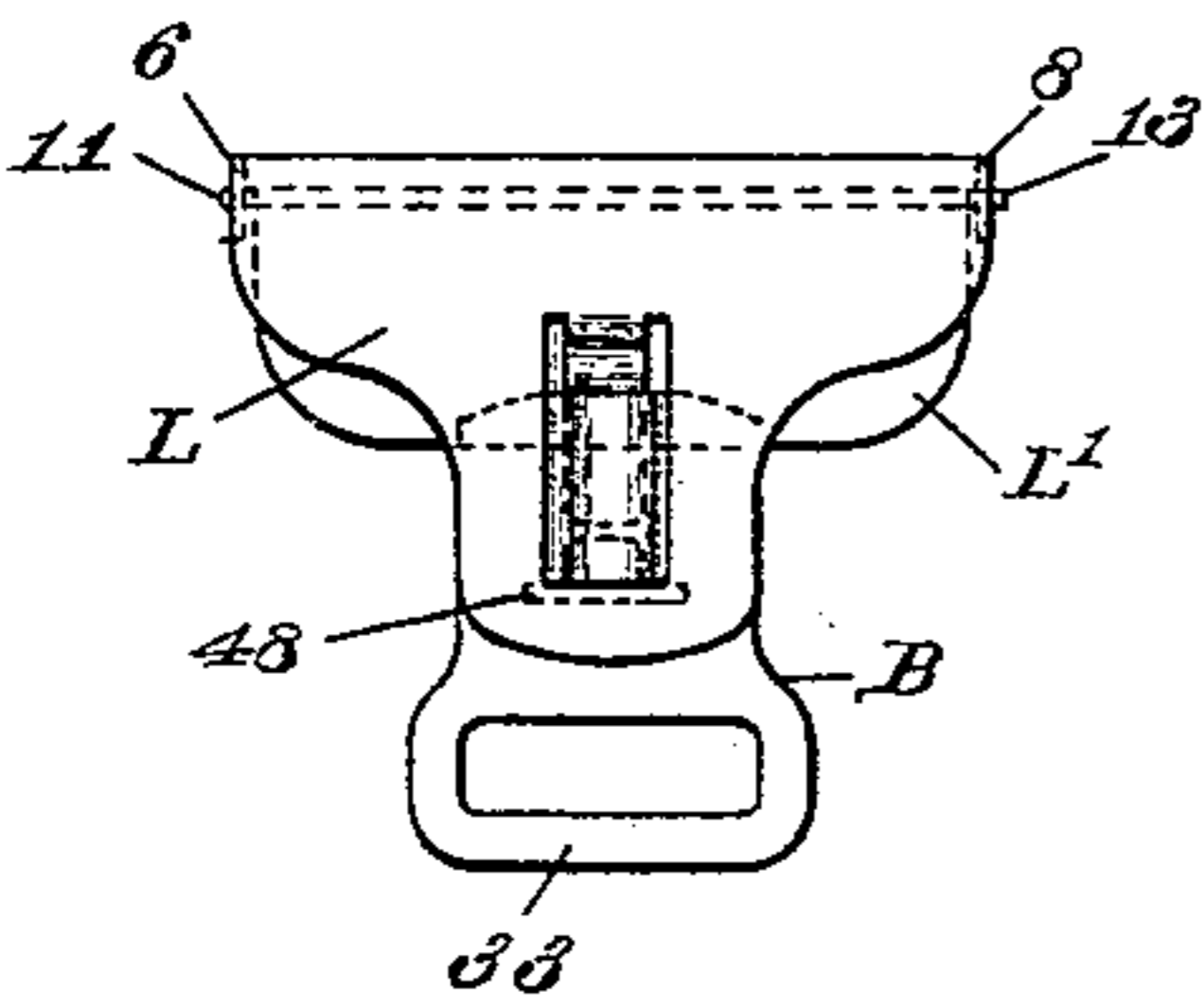


Fig. 5

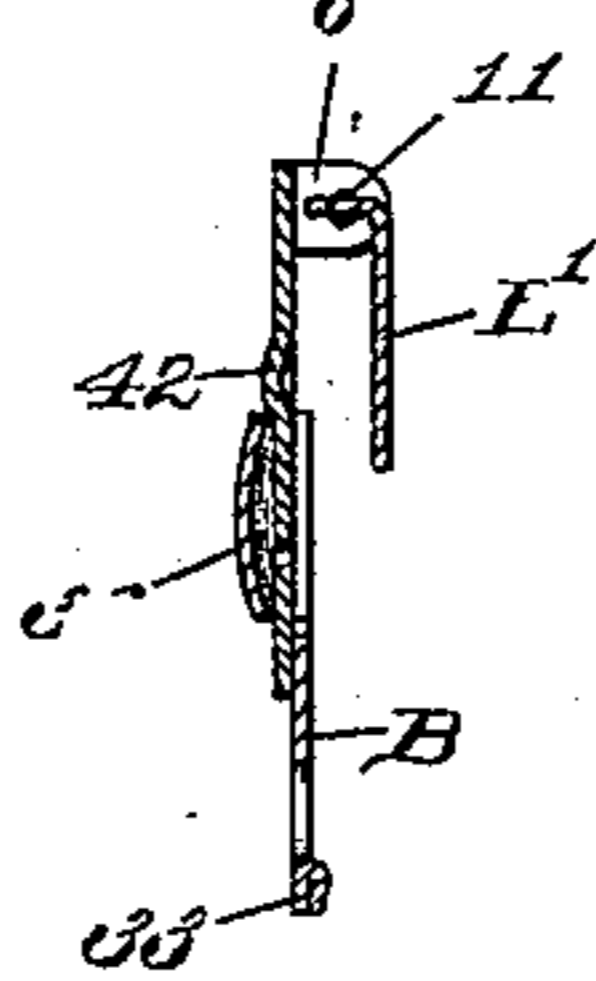


Fig. 6

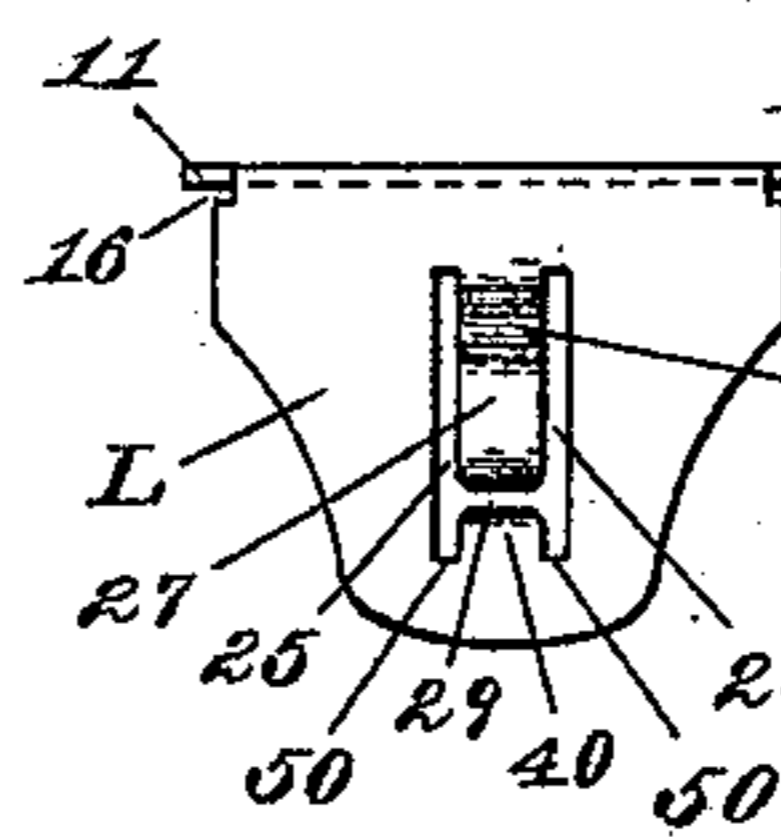


Fig. 7

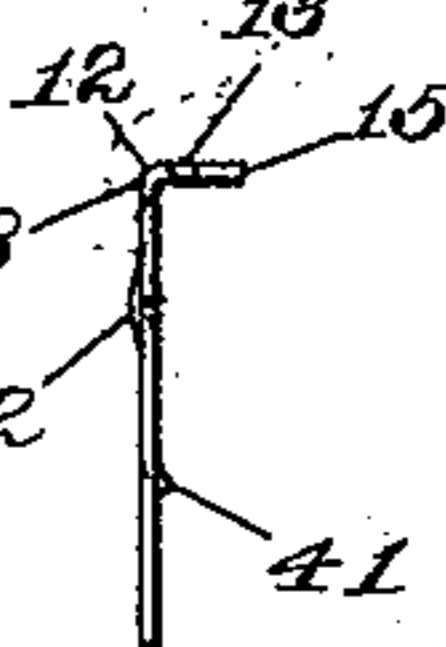


Fig. 9

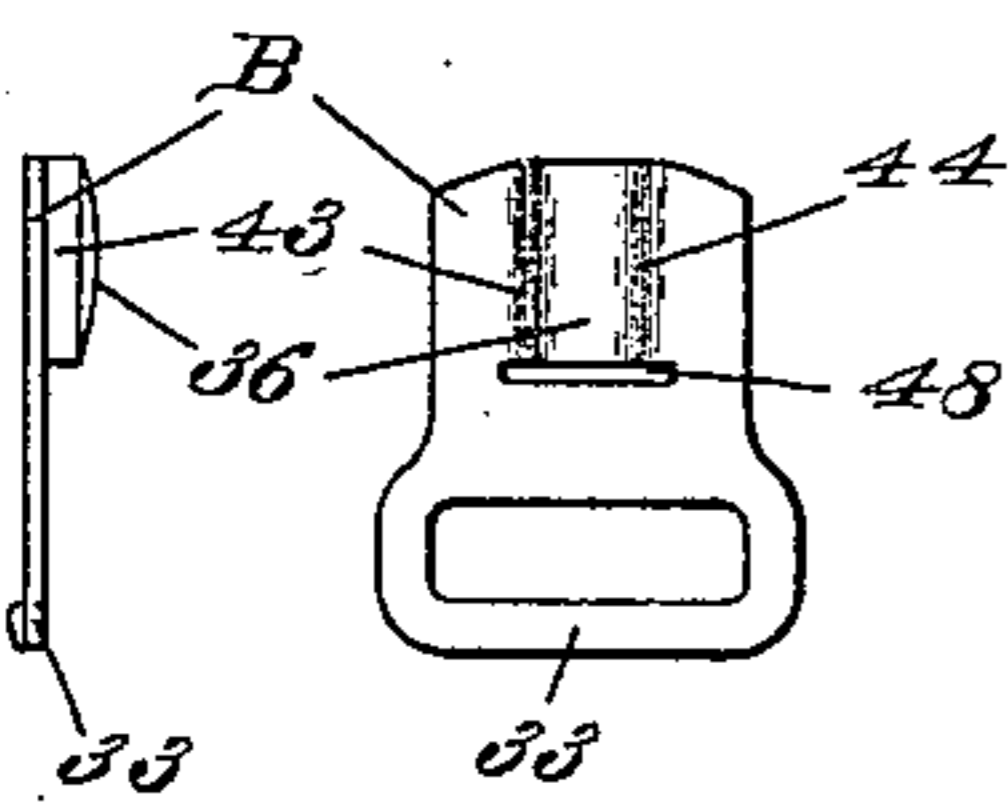


Fig. 8

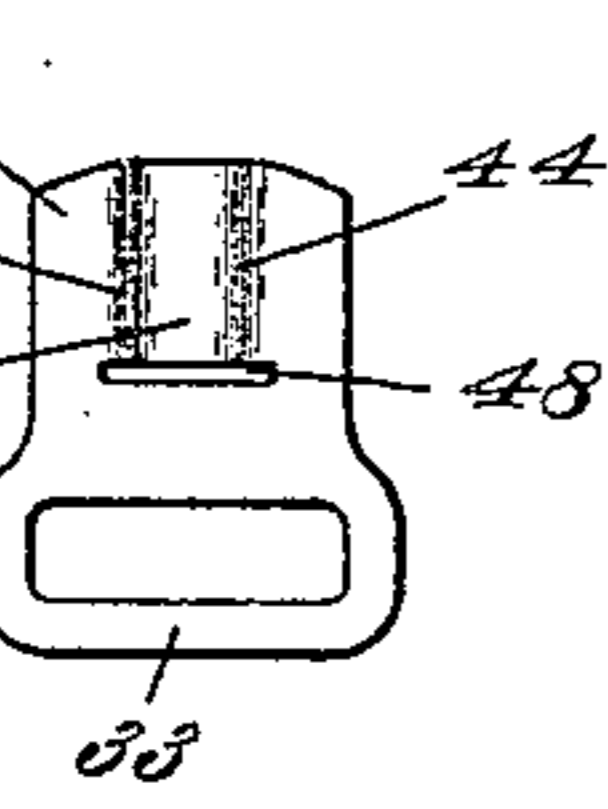


Fig. 10

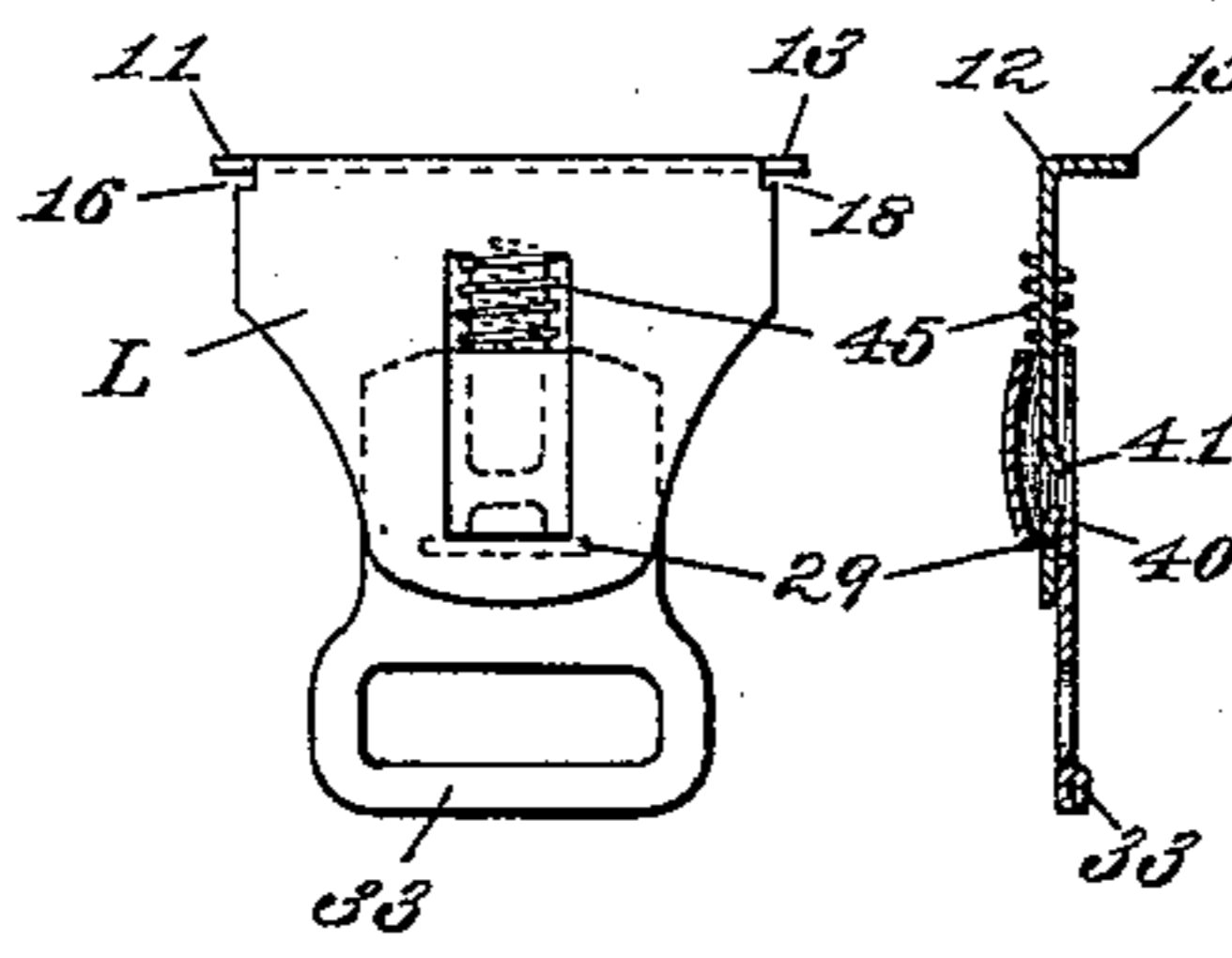


Fig. 11

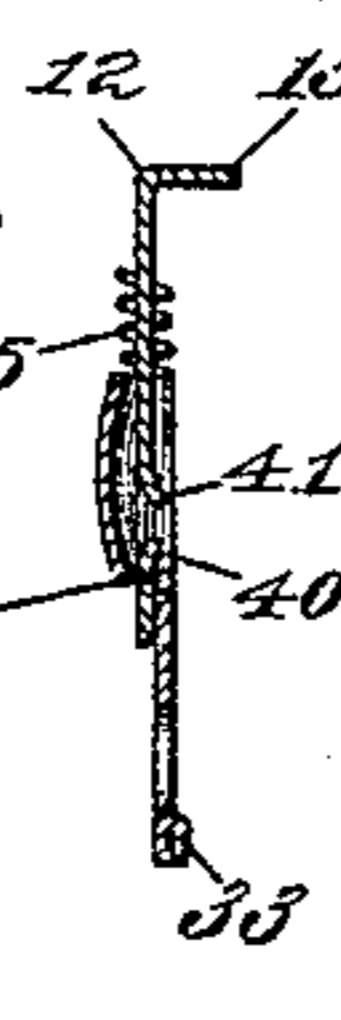


Fig. 12

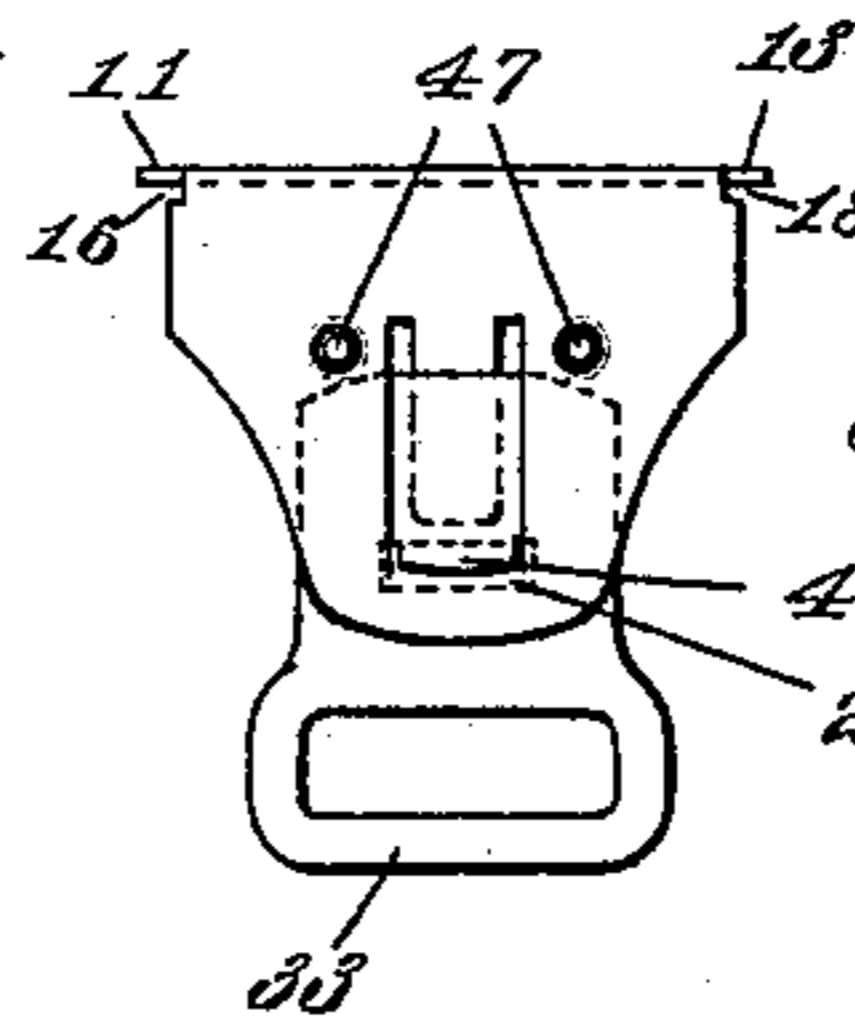
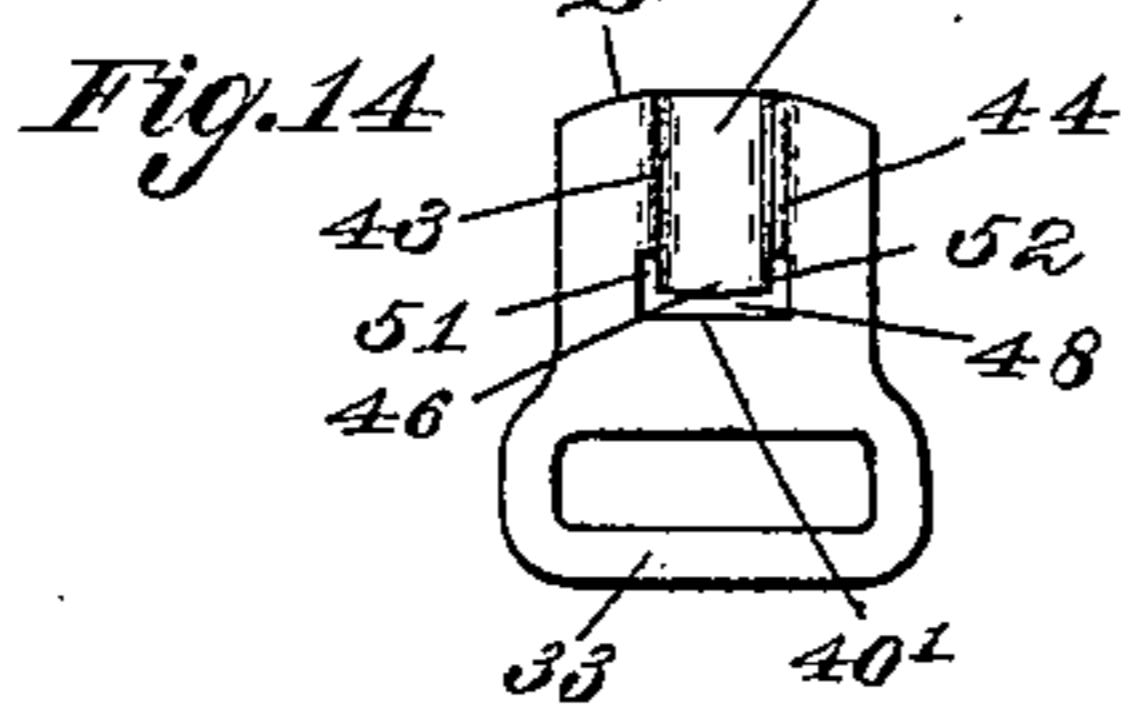
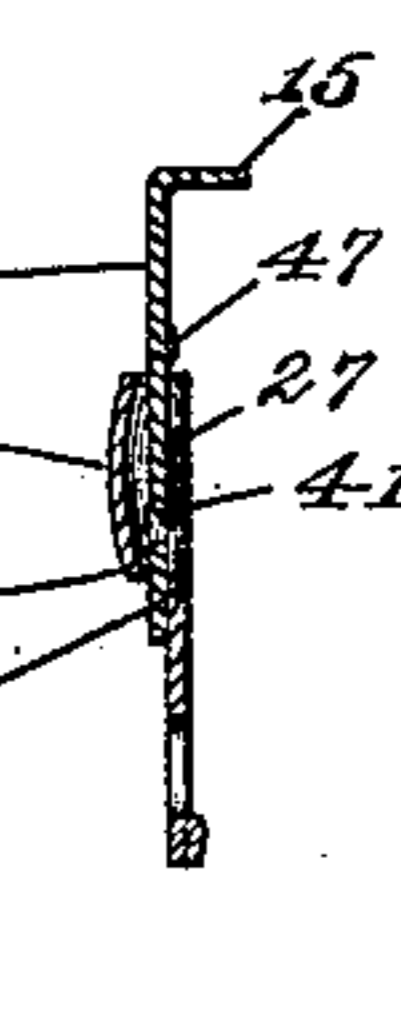


Fig. 13



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# UNITED STATES PATENT OFFICE.

JUSTUS A. TRAUT, OF NEW BRITAIN, CONNECTICUT.

## SUSPENDER-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 447,924, dated March 10, 1891.

Application filed September 25, 1890. Serial No. 366,092. (No model.)

*To all whom it may concern:*

Be it known that I, JUSTUS A. TRAUT, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Buckles for Suspenders, of which the following is a specification.

This invention relates to buckles for suspenders, and to that class of said buckles having "cast-offs," the object being to provide a buckle of that class which shall be simple and effective, and adapted to be manufactured at a low cost.

In the drawings accompanying and forming a part of this specification, Figure 1 is a front view of a buckle embodying my present improvements. Fig. 2 is an edge view of the complete buckle shown in Fig. 1. Fig. 3 is a vertical sectional view through the middle of the buckle. Fig. 4 is a front view of a buckle having a modified form of buckle-plate and modified means for attaching said plate to the suspender-web. Fig. 5 is a sectional view similar to Fig. 3, of the form of buckle shown in Fig. 4. Fig. 6 is a front view of the buckle-plate or lever of the buckle shown in Figs. 1, 2, and 3. Fig. 7 is an edge view of the buckle-plate shown in Fig. 6. Fig. 8 is a front view of the slide or cast-off of the form of the buckle shown in Figs. 1, 2, and 3. Fig. 9 is an edge view of the slide shown in Fig. 8. Fig. 10 is a front view of a lever or buckle-plate and the slide, showing certain improvements. Fig. 11 is a sectional view through the middle of the parts shown in Fig. 10. Fig. 12 is a front view of a buckle-plate and slide having a modified form of guide and catches. Fig. 13 is a sectional view through the middle of the parts shown in Fig. 12. Fig. 14 is a front view of the slide shown in Figs. 12 and 13.

Similar characters designate like parts in all the figures.

My improved buckle consists of a buckle-plate, which may be either a lever-plate or the principal part of the frame of the buckle, means for attaching said plate to the suspender-web, (which is not herein shown,) and the slide or cast-off constructed for attachment to the lever-plate.

In the form of buckle shown in Figs. 1, 2, 3, 6, 8, and 9 the part which I herein designate as the "buckle-plate" is designated by

the letter L and constitutes the lever of that form of the buckle. Said lever is bent backwardly in a well-known manner at the point 12, and is provided with teeth 15 for engaging the suspender-web. Said plate L has, in the form shown in said figures, notches 16 and 18, engaging with the front plate 2 of the frame or web-case C, and, as shown herein, has ears 11 and 13, which project under said front plate at the ends of the pivot-slot 7, (see Fig. 1,) and thus form a reliable working-joint. This feature of said buckle is more fully set forth and is claimed in my application, Serial No. 365,604, filed September 20, 1890, to which reference may be had for a more particular description thereof. It is not essential, however, that said buckle-plate L shall be pivotally connected with the frame, for said plate may also, as shown in Figs. 4 and 5, constitute the principal part of the frame of the buckle and be provided with ears, as 6 and 8, to which is pivoted at 11 and 13 the ordinary lever L' in a well-known manner, shown in prior Letters Patent.

The slide or strap carrying member of the buckle consists of a plate, as B, provided with a strap-carrying loop, as 33, or other convenient means for attaching thereto the usual suspender-straps. For removably attaching the slide to the buckle-plate L said parts are each constructed for interlocking, substantially as shown in the drawings. The buckle-plate has formed therein suitable guides, consisting of the parallel edges of the plate formed by the making of a slot in the plate, thereby providing one of the two sets of interlocking devices. The preferred construction of said slot or opening is shown best in Figs. 1 and 6 and consists of the vertical and substantially parallel cuts or slots 25 and 26, which are united at or near the lower end thereof by the crosswise cut 29, thus forming in said guide-slot the guide-bar 27 and forming between the lower ends of said side cuts the catch 40. Said guide-bar 27 is to some extent of the nature of a spring, and in practice the lower end thereof is turned back slightly, as at 41, Fig. 3, for facilitating assembling of the parts. In the upper portion of said guide-bar there is or may be made a short bend, as 42, serving as a detent for preventing accidental unlocking of the said buckle plate and slide. The other set of interlocking devices appertain to the slide B,

and consist in a guide-case 36, formed in the upper end of the slide by throwing forward the middle portion thereof, thus forming the two guide-surfaces 43 and 44 for engaging between the edges of the plate L on the outside of the aforesaid buckle-plate opening. At the lower end of the guide-case 36 is formed a catch for engaging the corresponding catch 40 of the buckle-plate. Said slide-catch consists in practice of the lower end of the guide-case 36, this being made available as such catch by means of a cut or slot 29. (Shown best in Fig. 8.) The metal below said cut 29 not being thrown forward leaves a clear space between the planes of the slide-plate and of the slide-catch for the aforesaid buckle-plate catch, as will be understood by comparison of the detail, Figs. 6 and 8, with the sectional view, Fig. 3.

In using this form of buckle the user, taking the slide in hand, inserts the upper end of the slide-case into the cross-cut 29 and pushes the slide up in the guide-slot until the lower end or catch of the slide-case is above the buckle-plate catch 40. Then the lower end of the slide is brought forward, bringing the slide-catch 36 forward of the said buckle-catch, when the slide is drawn down, as in Fig. 3, thereby interlocking the two parts L and B. When thus assembled, the slide hangs on the surfaces 50, Fig. 6, at the lower end of the guide-slot, so that the strains are in the direction of the plane of the buckle-plate, thus avoiding any tendency to distort the buckle and obtaining strength and security with the use of thin and small parts. For the purpose of facilitating the assembling, as aforesaid, of the buckle plate and slide the slide-case 36 may be formed outwardly curved, as best shown in Figs. 3 and 5, thereby providing for the upward movement of the slide with less deflection of the guide-bar or tongue 27.

As a means for holding the slide down in engagement with the buckle-plate catch 40, I provide in some cases the spring 45, (see Figs. 10 and 11,) carried on the upper part of the aforesaid guide-bar 27. In this form or modification of the buckle it is desirable to use a guide-bar somewhat longer than would be necessary in the form of buckle shown in Figs. 1, 2, and 3. On assembling said parts the upward movement of the slide compresses the spring, which reacts to hold the slide, when the same is brought into full engagement, down firmly onto the aforesaid surfaces 50. The spring here described is not of the nature of a substitute for the detent on the guide-bar, but may be used in connection therewith.

In Figs. 12, 13, and 14 a modified construction of the catches is shown. In this form of buckle the cross-cut is made at the extreme lower end of said vertical cuts 25 and 26, so that the edge 40', Fig. 14, of the buckle-plate at the lower side of said cross-cut constitutes the buckle-plate catch. The corresponding

catch on the slide is formed by extending upward the ends of the cut 48, as shown at 51 and 52, Fig. 14, thus forming of the lower part of the slide-case 36 a downwardly-projecting catch 46, as shown best in Fig. 14. In this form of buckle, also, the aforesaid spring 45 (shown in Figs. 10 and 11) may be used for providing space therefor above the slide.

As a substitute for the aforesaid detent 42, (shown in Figs. 1 to 7, inclusive,) another form of detent may be substituted, as indicated in Figs. 12 and 13. This form of detent consists of one or more slight elevations, as 47, formed in the buckle-plate immediately above the upper end of the slide when the slide is in its lowermost position, as will be understood by comparison of Figs. 12 and 13. Said detents being oveled on their working-faces, the slide-plate is slightly sprung thereby when the slide is forcibly raised to disengage the same, and when the slide is drawn down to engage the catches the slide-plate springs under the detents and is thereby detained from being moved by slight pressure.

The method of using the modified forms of buckles shown in Figs. 10 to 14, inclusive, is substantially the same as the mode of using the buckles shown in the preceding figures and hereinbefore described, and will be understood from the drawings and preceding description.

Having thus described my invention, I claim—

1. In a buckle, the combination, with the buckle-plate having a guide-slot closed at the lower end thereof, a guide-bar in said slot, and the catch at the lower end of the slot below the guide-bar, of a slide-plate shaped in its upper end to engage said guide-bar and having a catch adapted to engage said buckle-plate catch.

2. In a buckle, the combination, with the buckle-plate having the guide-slot, a guide-bar, and a catch, substantially as described, of the slide-plate located in said guide-slot to engage said guide-bar and catch, and upward slide movement resisting means, substantially as described, for resisting the upward movement of the slide on the buckle-plate.

3. In a buckle, the combination, with the buckle-plate having the guide and catch, of the slide constructed to engage said guide and catch, and a spring supported on the buckle-plate and acting on the slide to hold the same in engagement with the buckle-plate catch, substantially as described.

4. In a buckle, the combination, with the buckle-plate having the vertical slot, the guide-bar in said slot, and the upwardly-projecting catch 40 below said guide, of the slide having the slide-case constructed to engage said guide-bar, the lower end of said slide-case for engaging said buckle-plate catch.

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