

G. B. ADAMS.

BUCKLE.

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943,212.

Patented Dec. 14, 1909.

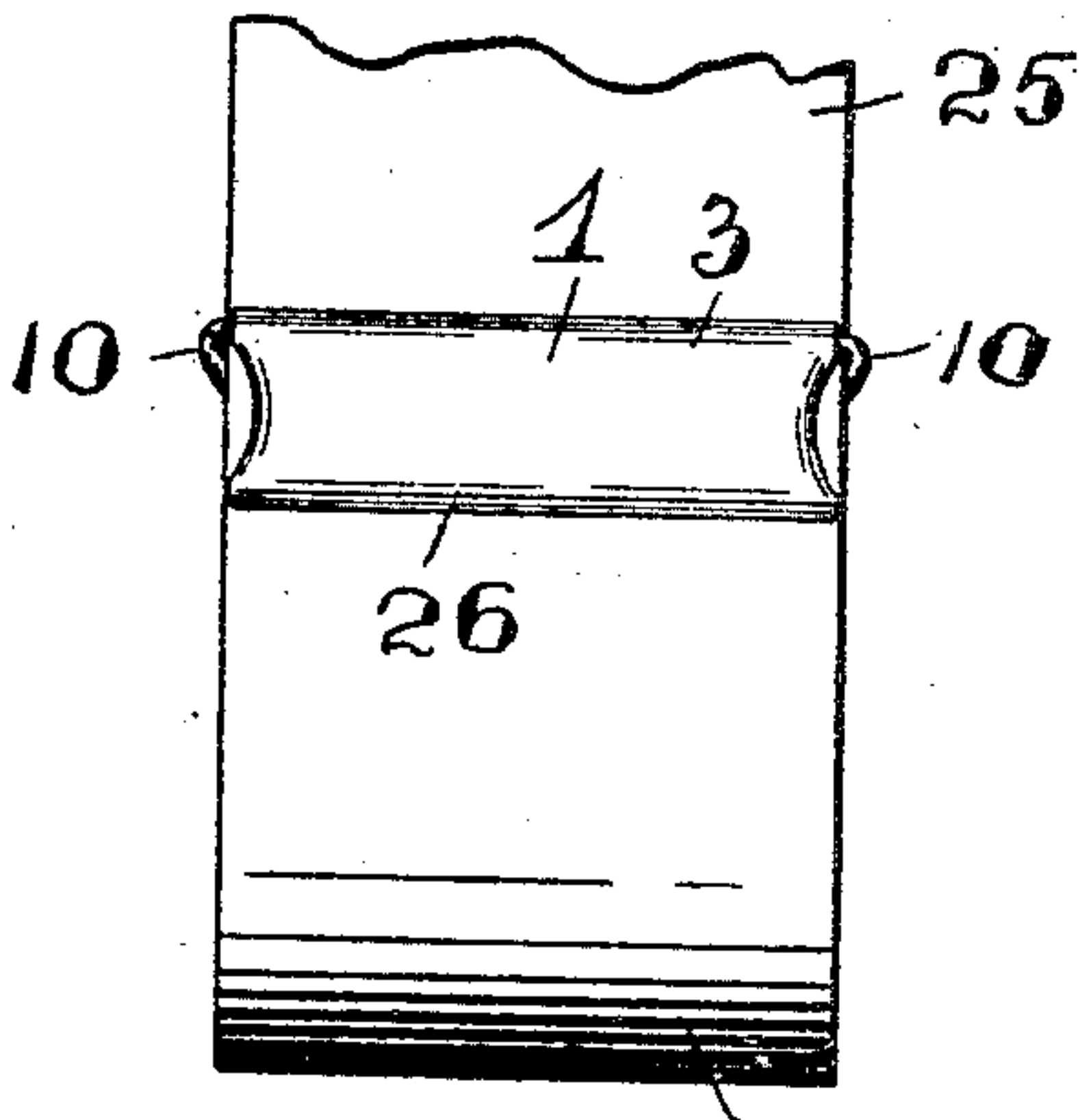


Fig. 1

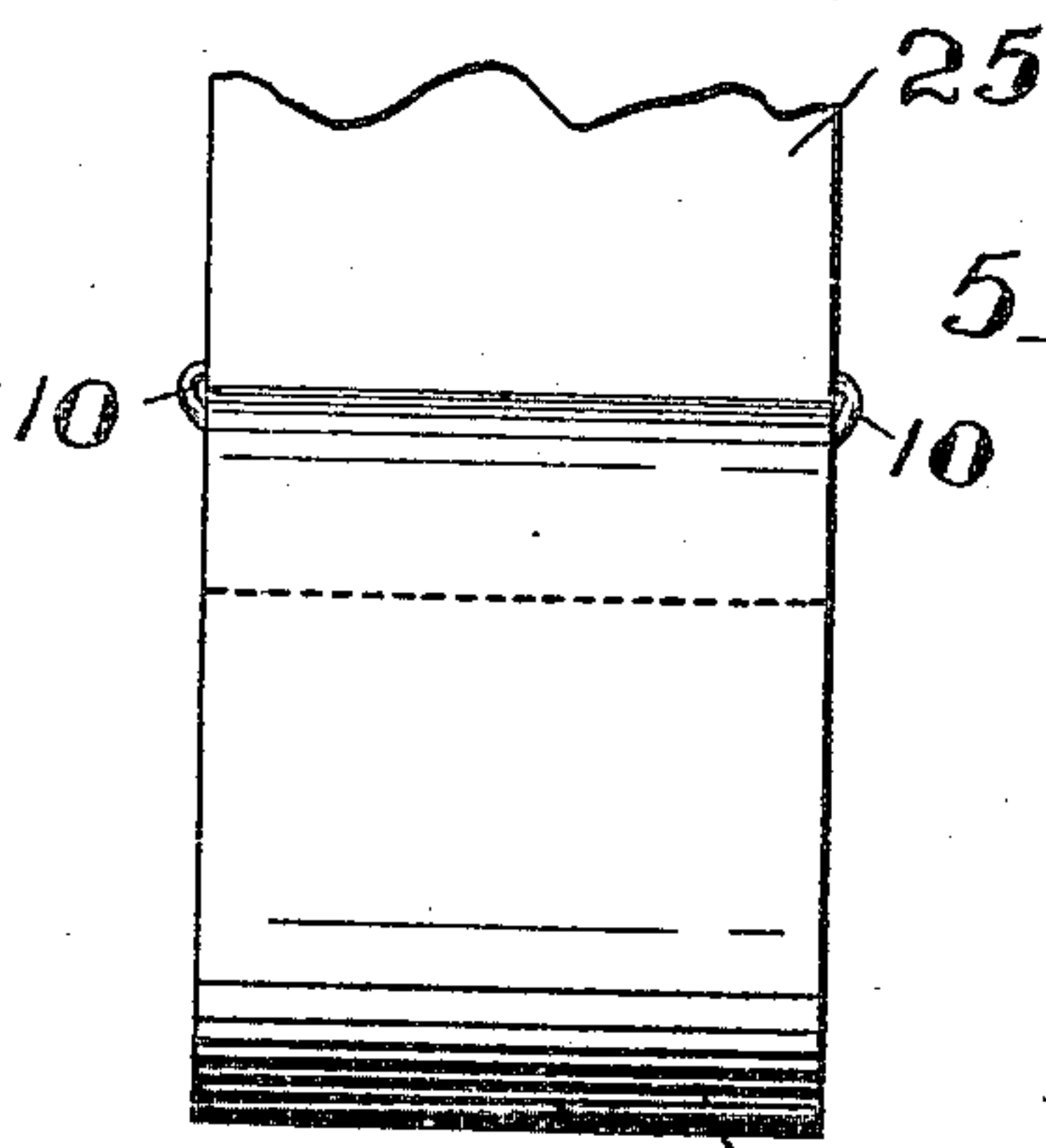


Fig. 2

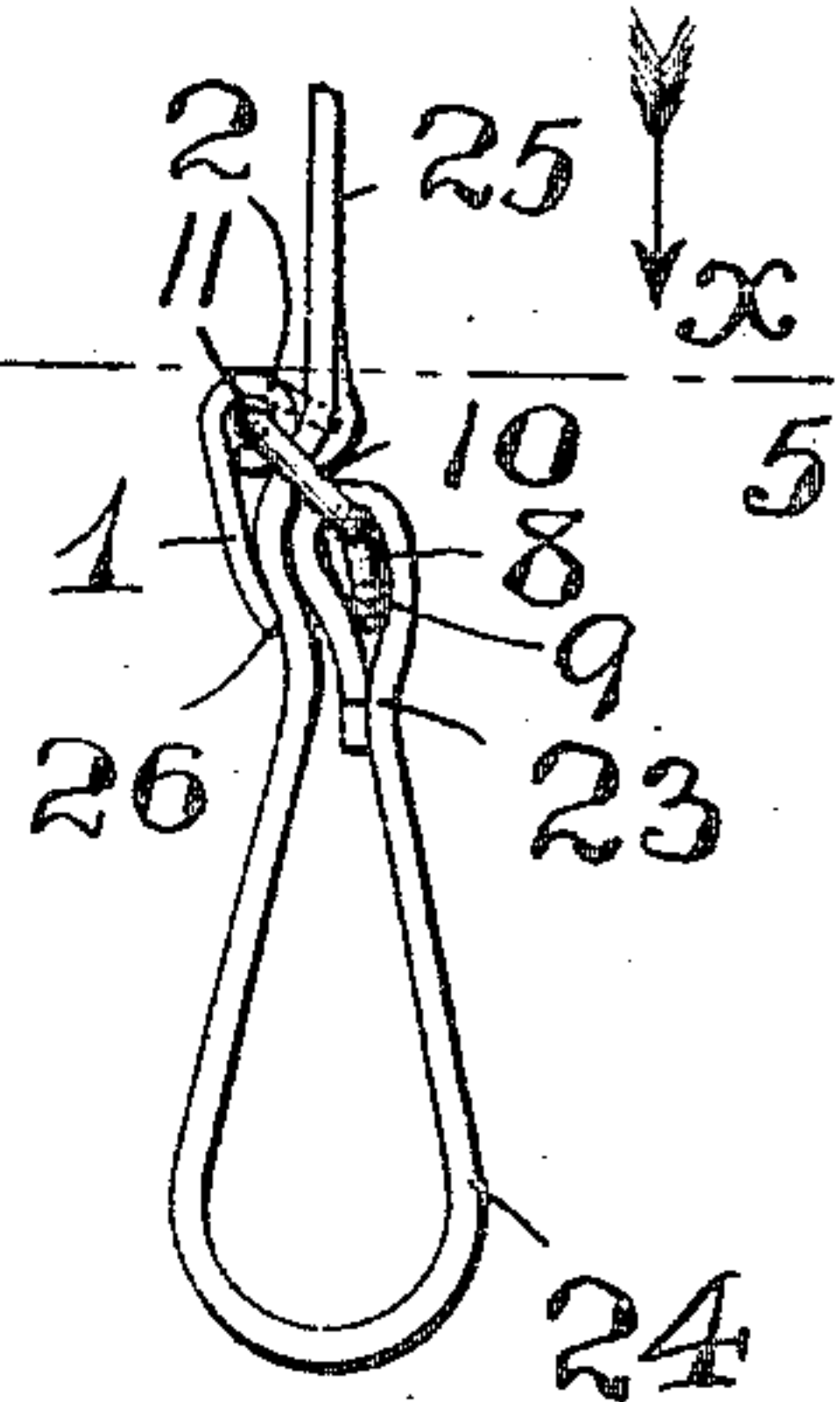


Fig. 3

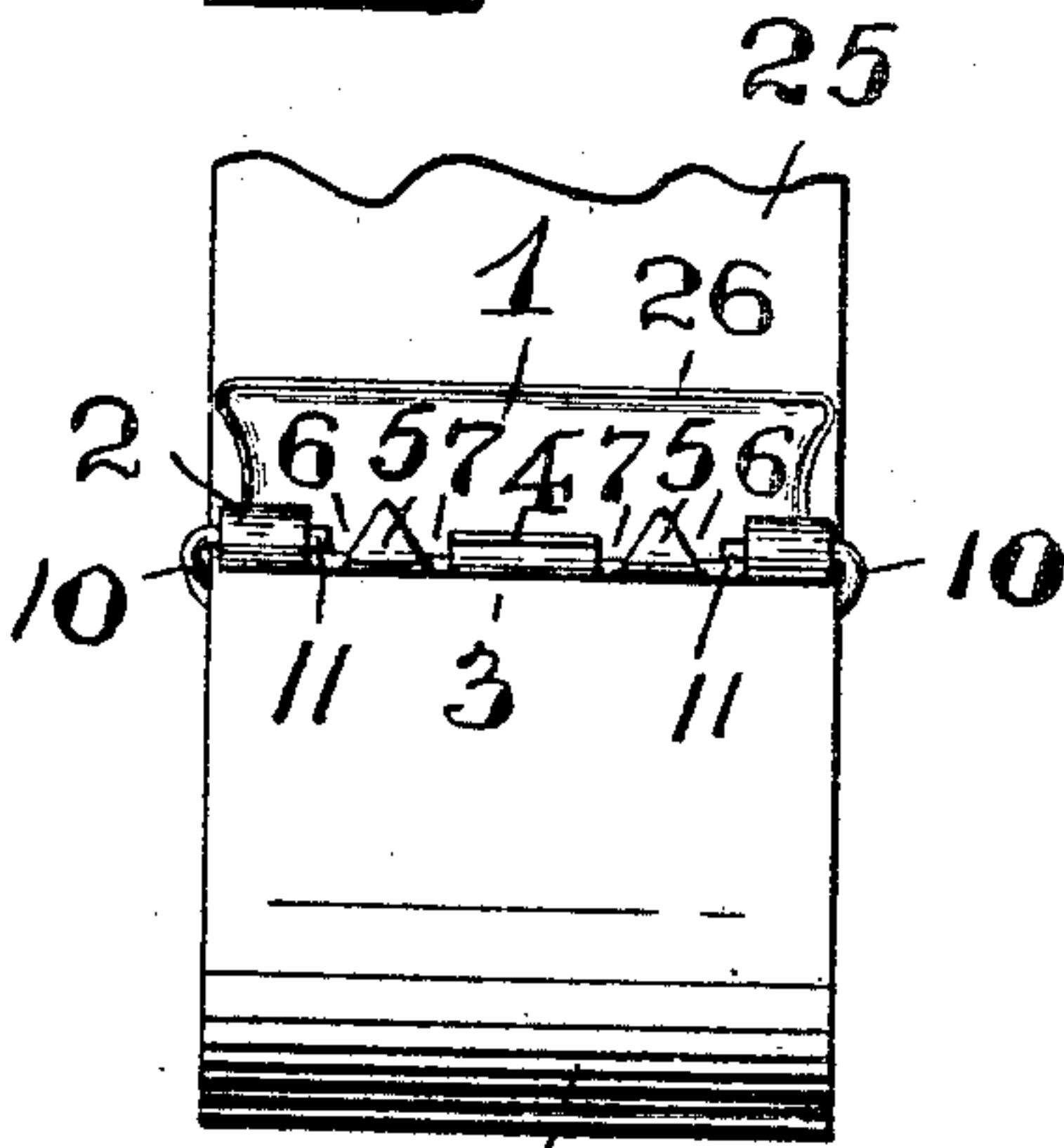


Fig. 4

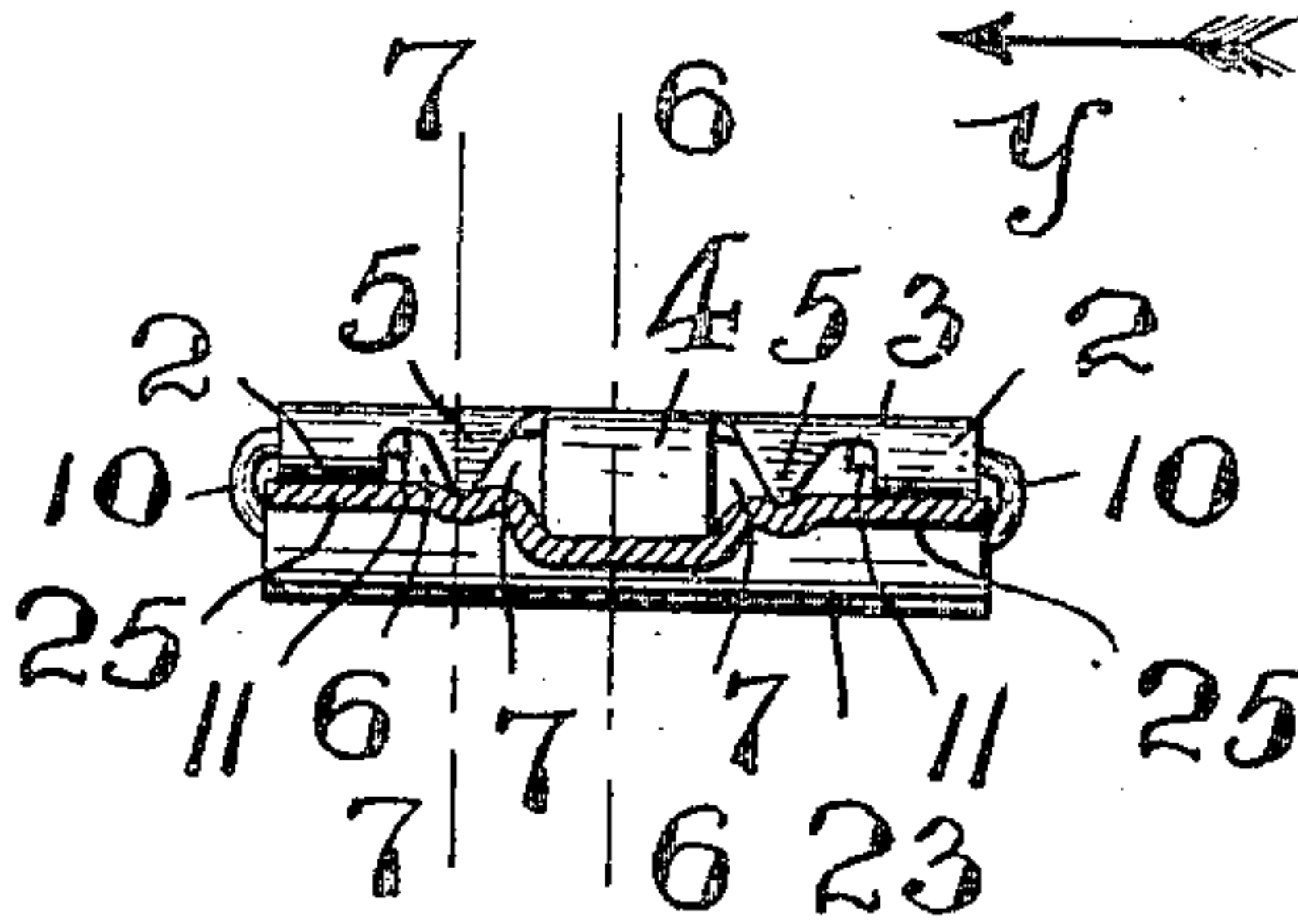


Fig. 5

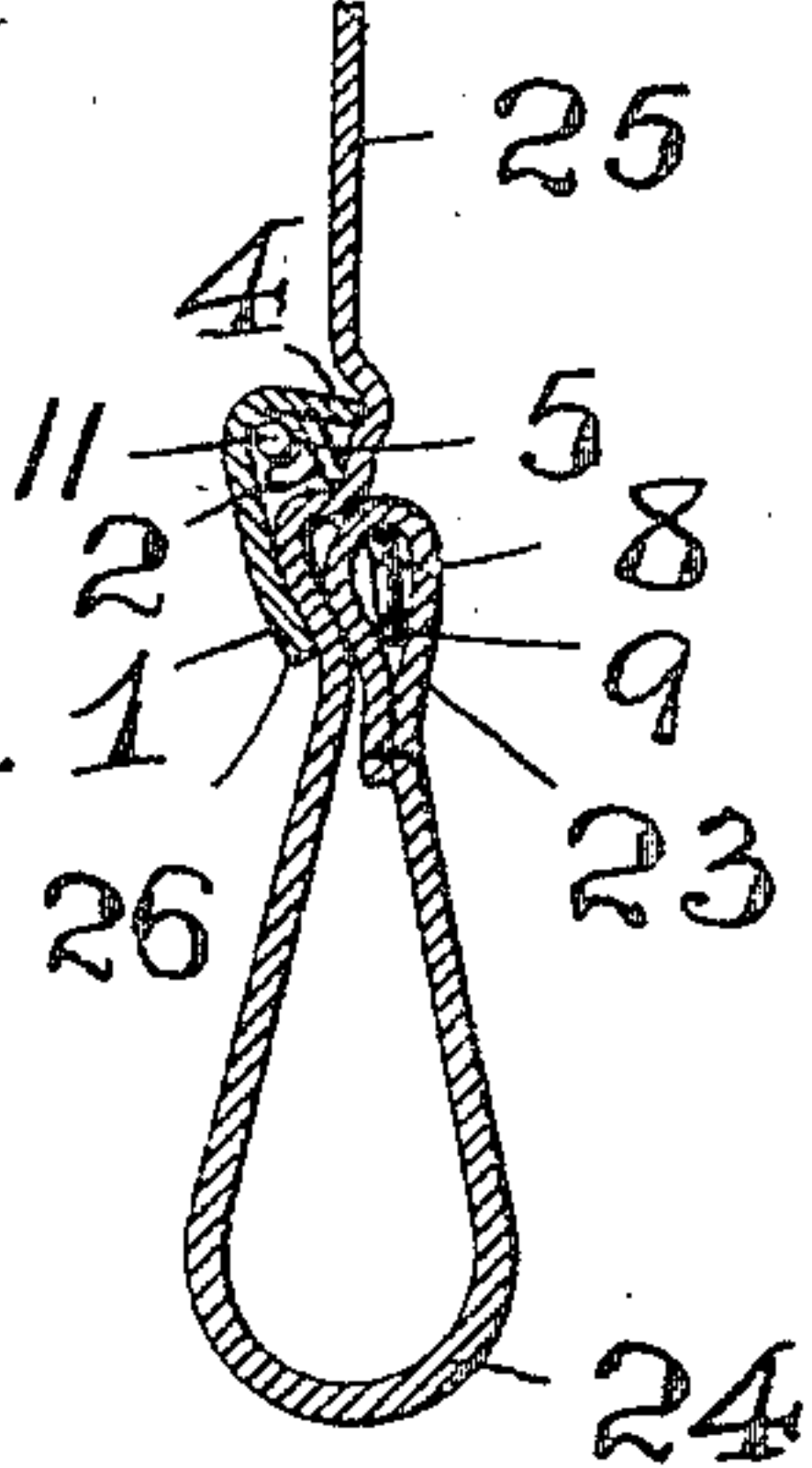


Fig. 6

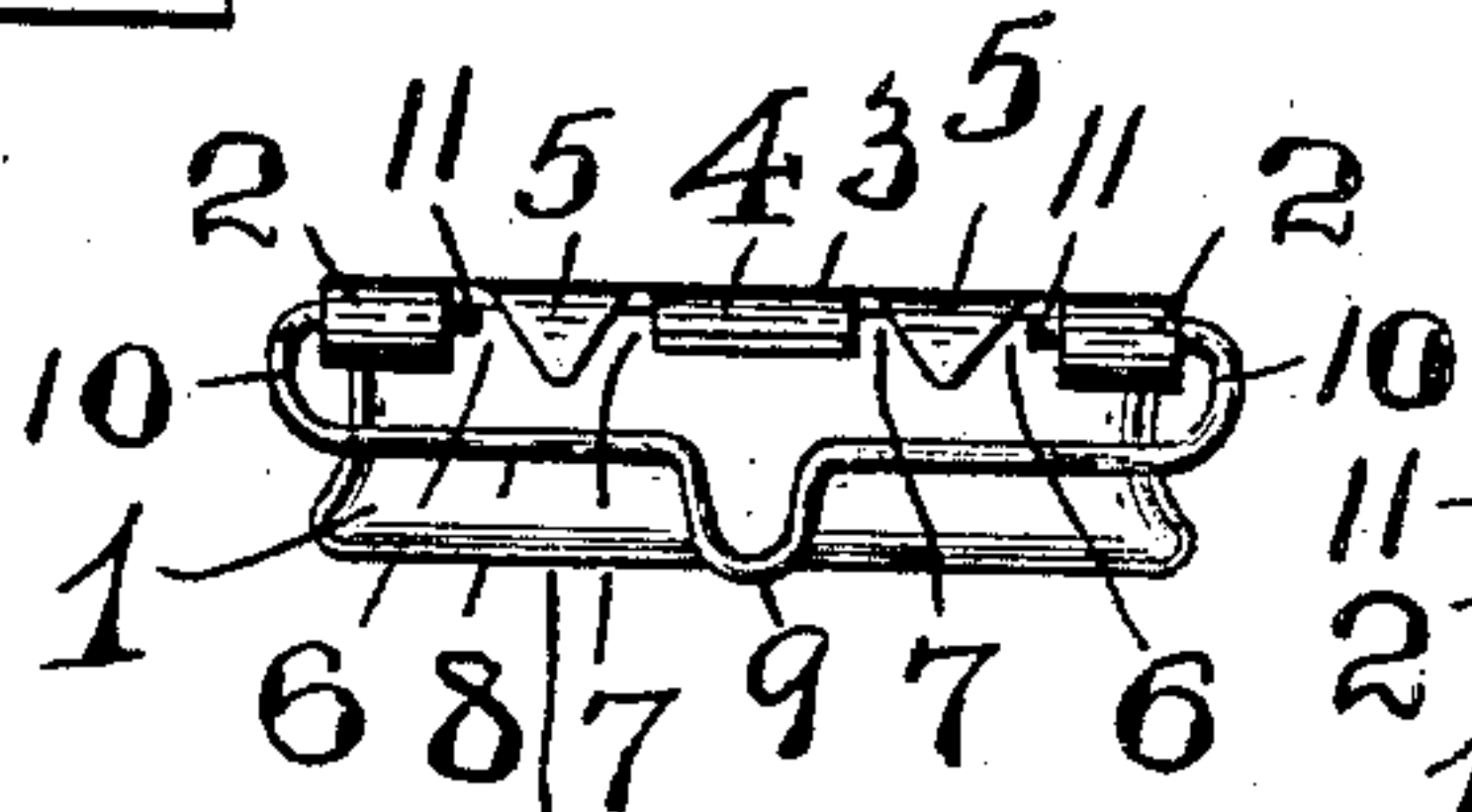


Fig. 7



Fig. 7a

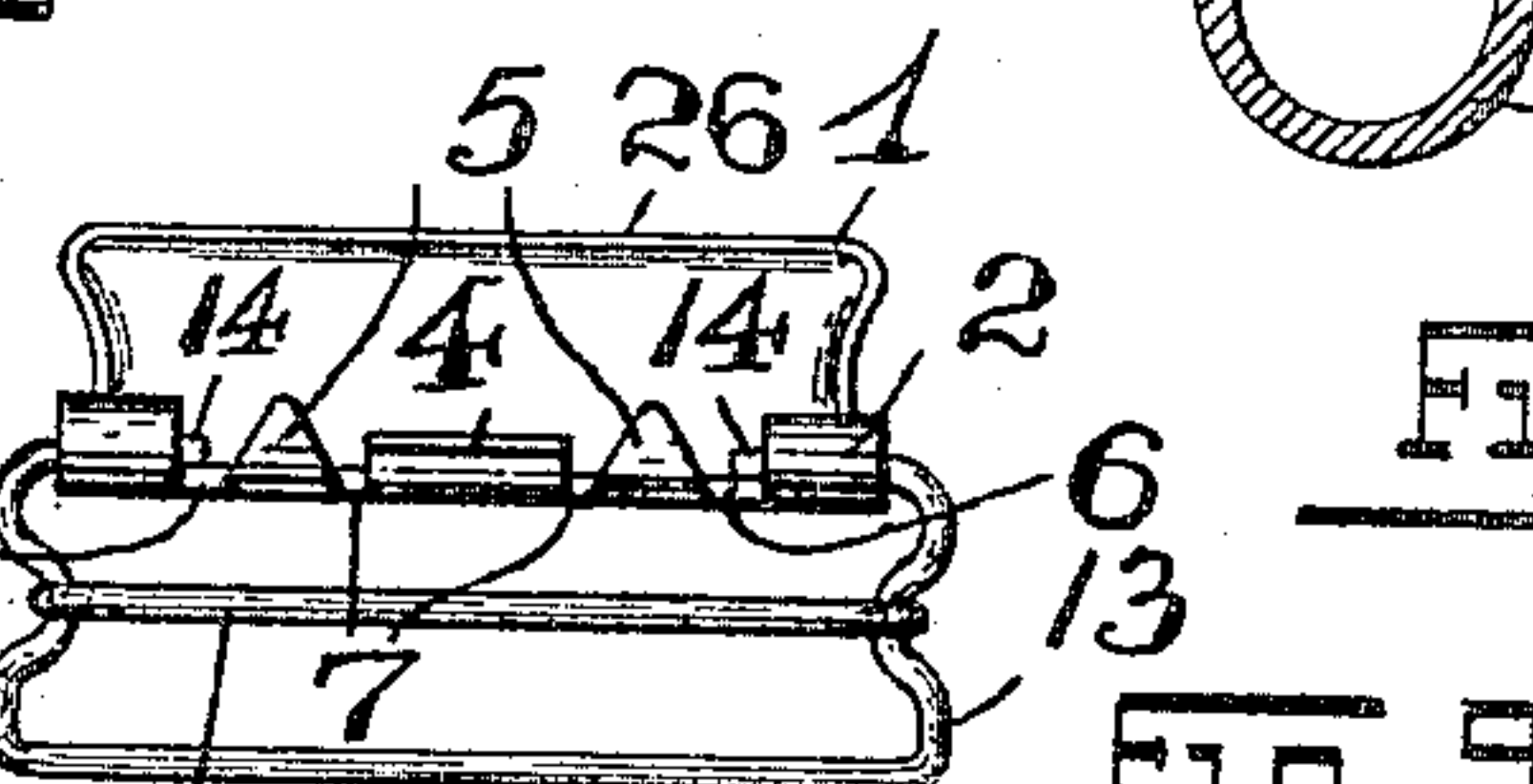


Fig. 8

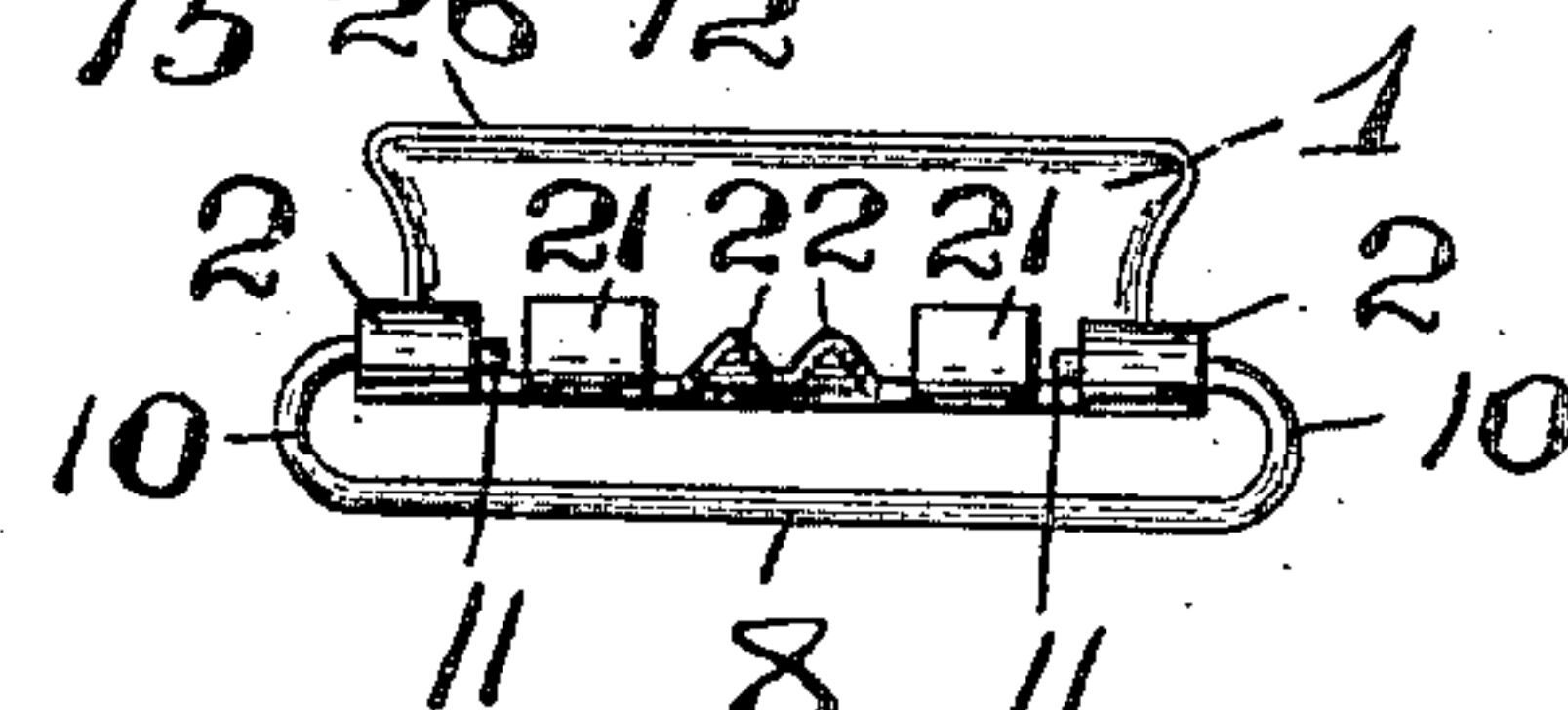


Fig. 9

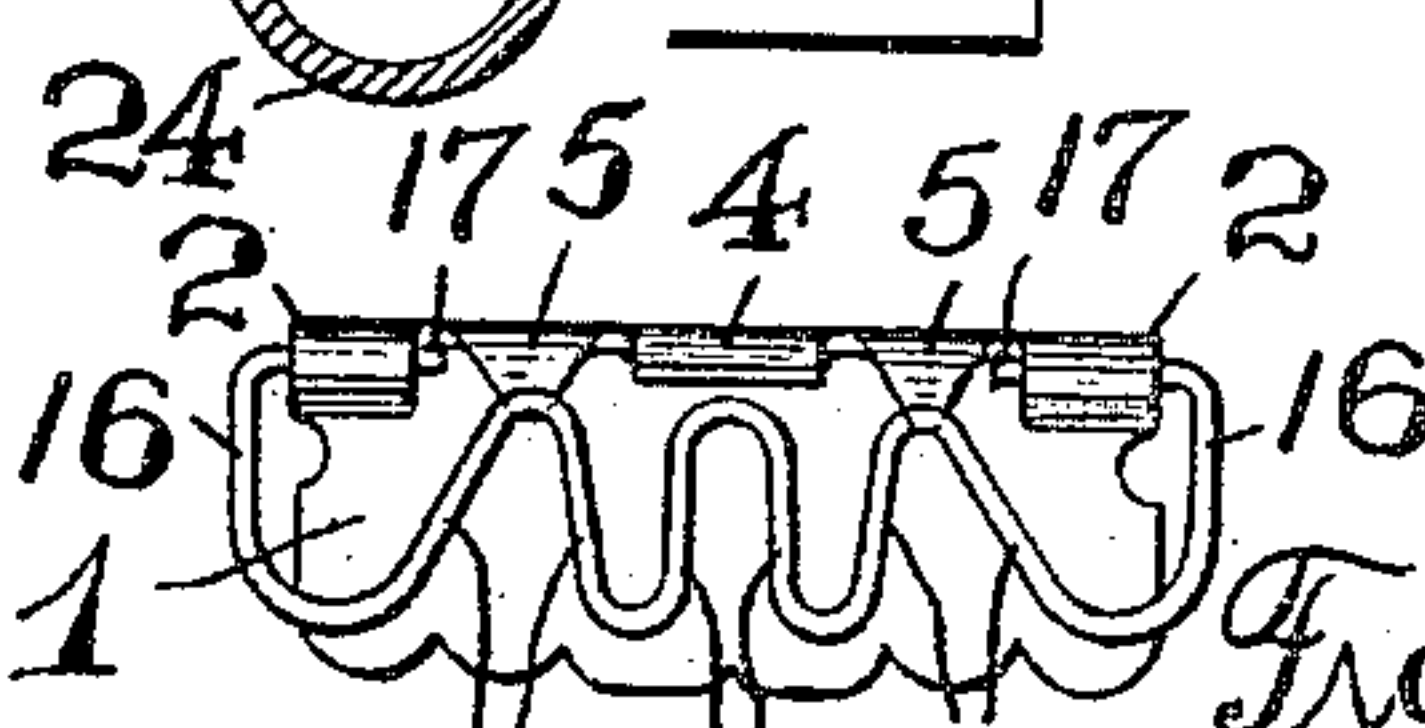


Fig. 10

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UNITED STATES PATENT OFFICE.

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BUCKLE.

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To all whom it may concern:

Be it known that I, GEORGE B. ADAMS, a citizen of the United States, residing at Irvington, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Buckles; 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, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention relates, generally, to garment-clasps; and, my present invention has reference, more particularly, to a novel buckle for suspenders, hose-supporters, and the like, in which practically all of the parts of the buckle-construction are covered by the webbing, except the front operating plate or fingerpiece, so that the garments of the user are protected against rust from contact with any exposed metal portions of the buckle.

This invention has for its principal objects to provide a novel and simply constructed buckle for suspenders, hose-supporters, and the like, in which the parts, when the buckle-members or elements are in their clamped or closed relations with the parts of webbing, lie flat and closely against the webbing, so that when the suspenders carry a weight, the thickness of the folded or doubled-over layers of the webbing, at the point of the buckle, will be very slight, and a bulky and objectionable connection of the webbing with the buckle is thereby fully overcome.

A further object of this invention is to provide a novel buckle-construction of the general character hereinafter set forth, the parts of which are of such construction and the operating-plate being provided with clamping devices or means acting by deflection as well as by clamping, that it enables the same buckle to be used equally as well, as far as its holding-power is concerned, upon a very thin web as on a thick web, and thereby obviates the necessity of manufacturing different sizes of buckles.

A further object of this invention is to provide a novel clamping or grasping means connected with the pivoted or oscillating operating plate of the buckle, said clamping or grasping means, being in the form of devices which act by deflection as well as by clamp-

ing, and said devices being arranged at different angular relations to the plane of the body of the operating plate, so that the said devices will engage with a web, by the combined action of deflection and clamping, whether thick or thin, directly against or upon the back-bar of the buckle, and will positively prevent the slipping or accidental displacement of the buckle upon a heavy or light web, when clamped thereon.

Other objects of this invention not at this time more particularly enumerated will be clearly evident from the following detailed description of the same.

With the various objects of my present invention in view, the said invention consists, primarily, in the novel buckle hereinafter set forth; and, the invention consists, furthermore in the novel arrangements and combinations of the devices and parts, as well as in the details of the construction of the same, all of which will be more fully described in the following specification, and then finally embodied in the clauses of the claim which are appended to and which form an essential part of the said specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a front face view of the looped portion of a piece of web and the buckle in its clamped position thereon; Fig. 2 is a rear face view of the parts; and Fig. 3 is a side-edge view of the said parts represented in said Figs. 1 and 2. Fig. 4 is a front face view of the parts represented in said Fig. 1, but showing the operating plate or fingerpiece of the device in its raised position, to permit of the adjustment of the buckle upon the web; and Fig. 5 is a transverse section, taken on line 5—5 in said Fig. 3, looking in the direction of the arrow x in said figure, and said view showing the deflecting action. Fig. 6 is a central longitudinal vertical section, said section being taken on line 6—6 in said Fig. 5; and Fig. 7 is a longitudinal vertical section, said section being taken on line 7—7 in Fig. 5, looking in the direction of the arrow y , said view showing the clamping action. Fig. 7^a is a back or rear view of the buckle detached from the web. Fig. 8 is a back view of the buckle in its detached relation from the web; and Fig. 9 is a similar view of a slightly modified form of buckle, the same, however, still embodying the principles of

this invention. Fig. 10 is a rear or back view of still another slightly modified buckle embodying the principles of this invention.

Similar characters of reference are employed in all of the above described views, to indicate corresponding parts.

Referring now to the several figures of the drawings, the buckle comprises a front and back having in general a pivotal or oscillatory holding or retaining relation with reference to the web with which the buckle is to be employed. This front comprises a suitably formed main body 1, of any marginal configuration and desirable surface-ornamentation, being provided upon one of its edges, as 3; and at each side with rearwardly bent and curled members or elements 2 which form suitable bearings for the back of the buckle in the manner and for the purposes to be presently more fully described. The said body-portion 1 is made along the said edge 3 with a rearwardly extending and angularly disposed deflector-member or element, as 4, and with a pair of preferably V-shaped clamping lugs or tongues 5, the said tongues being separated from the bearings 2, by the cut-away parts 6, and from the deflector-member or element 4 by the cut-away parts 7. As shown more particularly in Figs. 6 and 7 of the drawings, the plane of the faces of the clamping or holding lugs or tongues 5 is at a more acute angle to the plane of the body-portion 1, than the angular relation of the plane of the deflector-member or element 4 is to the said plane of the body-portion 1, the purpose of which will be presently more fully described.

The back of the buckle which is preferably made from wire consists, essentially, of a wire back-bar 8, which may be left straight, as in Fig. 8, or it may be made with a centrally disposed and rearwardly extending bent portion 9, which serves as a support or pressure-piece, when forcing the main-body 1 and its grasping or holding devices into operative holding engagement with the web. This wire-bar, as will be seen from the several figures of the drawings, is made with the curved end-members 10 which terminate in inwardly projecting pintle-members or pivots 11, extending into and operatively arranged within the bearings 2. Instead of the form of backs for buckles just described, the back may be made as indicated in Fig. 9 of the drawings. In this construction, the back consists of a wire-bar 12 formed with the looped side-members 13, each looped side-member terminating in an inwardly projecting pintle-member or pivot 14, similar to and for the same purposes as the pintle-members 11. Suitably secured to and connecting the said looped side-members 13 is a laterally extending back-bar 15, the said bar 15 serving the same purposes as the wire-bar 8, and the bar 12 serving the same pur-

pose as the bent portion 9 of the bar 8, in the manner and for the purposes to be hereinafter more fully described.

In lieu of the forms of backs herein-above described, I may make the back as indicated in Fig. 10 of the drawings. In this construction, the back which is also made of wire comprises a pair of side-members or elements 16, each element terminating in an inwardly projecting pivot or pintle 17, and the main portion consisting of the longitudinally extending and connected members or elements 18, 19 and 20, said members forming a back-bar, as will be clearly understood. The members or elements 18 and 20, as will be noticed from an inspection of said Fig. 10, are made of such lengths, so that when the parts are in their closed or relatively holding positions, the curved end-portions of said members 18 and 20 will lie directly above the free end-portions of the clamping devices or lugs 5. If desired, the front plate or body-portion 1 may be provided along its marginal edge with a multiplicity of deflector-members or elements 21 and intermediately placed clamping tongues or lugs 22, all of which have the same general angular relation to the plane of the front-plate or body-portion 1, as herein-above described.

To arrange the various forms of buckles herein-above described upon the strap or web, the latter is formed with a loop 23 which is arranged and secured about the wire bar 8 of the constructions indicated in Figs. 7^a and 8, or about the wire-bar 12 and the cross-bar 15 of the construction shown in Fig. 9, or about the longitudinally extending members or elements 18, 19 and 20 of the construction represented in Fig. 10 of the drawings. The strap or web is then doubled upon itself, as at 24, the portion 25 of the strap or web then being passed beneath the marginal edge 26, forming the lift of the fingerpiece of the front-plate 1, and beneath the deflector-member or members and the clamping or grasping lugs or tongues of the said front-plate, as clearly indicated in Figs. 3, 6 and 7 of the drawings. When the said front-plate or body-portion 1 is turned into its raised position, shown in Fig. 4, then the portion 25 of the strap or web can be freely moved back and forth between the front and back of the buckle, and the loop 23 can be made large or small, as desired, the buckle then being positively secured in its adjusted position upon the web when the front-plate 1 is brought into its closed or clamping relation with the back of the buckle and the web, as clearly indicated in said Figs. 3, 5 and 6. From an inspection of said Figs. 5 and 6 of the drawings, it will be seen, that the deflector-member or element moves directly past the wire-bar 8 and the bent portion 9, or past the cross-bar

15, or past the curved end-portions of the elements or members 18, 19 and 20; and, by the deflection of the web, thus produced, securely holds the buckle in place. At the same time, the clamping lugs of the various forms of buckles are brought in close proximity with the wire bars 8 or 15; or, as in the construction represented in said Fig. 10 of the drawings, directly back of the curved connections of the respective members 18 and 20, so that while the web is held by deflection, it is also secured and retained in a firmly clamped relation, so that the buckle will not slip when once secured in its tightened and fastened position upon the web, the prongs or pointed ends of the clamping lugs or tongues embedding themselves in the web, so as to prevent any possible movement of the buckle upon the web until its face-plate is again raised. While the portion 9 of the bar 8, and the cross-bar 12 are not of themselves necessary to the successful working of the parts of the buckle, still they are of great advantage in that they act as supports against which the operator can place the thumb or finger to thereby more easily manipulate the buckle in opening and closing the same. In like manner, in Fig. 10 of the drawings, the connecting portions between the longitudinal members 18 and 19, and 19 and 20, serve as supports for the same purpose just described.

From the foregoing description it will be clearly evident, that while the deflector-member securely holds the buckle in its fastened position upon the web, still the auxiliary clamping lugs help additionally by clamping the web to prevent any possibility of accidental slip or movement upon the web; and, this is especially so in the styles of webs or straps which are quite thin, and where there is a possibility that the deflector-member is less likely to hold on account of such thinness of the web.

Of course, I am fully aware that changes may be made in the various arrangements and combinations of the devices and parts, as well as in the details of the construction of the same, without departing from the scope of my present invention, as defined in the appended claims. Hence I do not limit my invention to the exact arrangement and combinations of the devices and parts as described in the foregoing specification, nor do I confine myself to the exact details of the construction of any of the said parts, as illustrated in the accompanying drawings.

I claim:—

1. The combination with a web, of a buckle connected therewith, said buckle comprising a back and a front-plate pivotally connected with said back, said back being provided with an open part through which a portion of the web is passed and is secured

to said back, said open part serving also to receive a looped portion of the web, and a series of projections extending at different angles from the marginal edge of the face-plate nearest its pivotal connection with said back, one of said projections constituting a deflector-member, and said other projections constituting clamping lugs, said clamping lugs being adapted to clamp the running portion of the web by penetration when the front-plate is closed, and said deflector-member acting in a cam-like manner upon said web to hold the said front-plate down upon the web, substantially as and for the purposes set forth.

2. The combination with a web, of a buckle connected therewith, said buckle comprising a back and a front-plate pivotally connected with said back, said back being provided with an open part through which a portion of the web is passed and is secured to said back, said open part serving also to receive a looped portion of the web, and a series of projections extending at different angles from the marginal edge of the face-plate nearest its pivotal connection with said back, one of said projections having a straight marginal edge-portion and said projection constituting a deflector-member, and said other projections having pointed portions and constituting clamping lugs, said pointed portions embedding themselves in the running portion of the web when the front-plate is closed, and the straight edge-portion of said deflector-member being in slidable engagement with said web and acting in a cam-like manner upon said web to hold the front-plate down upon the web, substantially as and for the purposes set forth.

3. A buckle comprising a front-plate and back, a means of pivotal connection between the same, a deflector-member and a plurality of clamping lugs, said deflector-member and clamping lugs extending from the front-plate, said back comprising a back-bar consisting of a multiplicity of connected members past which said deflector-member is adapted to be moved, but in front of which the said clamping lugs are adapted to be moved so as to clamp a web which is arranged between the said front-plate and back, and said connected portions of the back-bar serving as a support for the web, substantially as and for the purposes set forth.

4. A buckle comprising a front-plate and back, a means of pivotal connection between the same, a deflector-member and a plurality of clamping lugs, said deflector-member and the clamping lugs extending at different angle to the plane of the front-plate, the plane of the lugs being at a more acute angle to the plane of the front-plate than the plane of the deflector-member, said de-

flector-member and clamping lugs extending from the front-plate, said back comprising a back-bar consisting of a multiplicity of connected members past which said deflector-member is adapted to be moved, but in front of which the said clamping lugs are adapted to be moved so as to clamp a web which is arranged between the said front-plate and back, and said connected portions of the back-bar serving as a support for the web, substantially as and for the purposes set forth.

5. The combination with a web, of a buckle connected therewith, said buckle comprising a back and a front-plate pivotally connected with said back, said back being provided with an open part through which a portion of the web is passed and is secured to said back, said open part serving also to receive a looped portion of the web, and a series of projections extending at different angles from the marginal edge of the

face-plate nearest its pivotal connection with said back, one of said projections constituting a deflector-member, and said other projections constituting clamping lugs, said back comprising a back-bar consisting of a multiplicity of connected members past which said deflector-member is adapted to be moved but in front of which said clamping lugs are adapted to be moved to clamp said looped portion of the web when the front-plate is closed, and said deflector-member acting in a cam-like manner upon said web to hold the said front-plate down upon the web, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 6th day of October, 1908.

GEORGE B. ADAMS.

Witnesses:

FREDK. C. FRAENTZEL,
F. H. W. FRAENTZEL.