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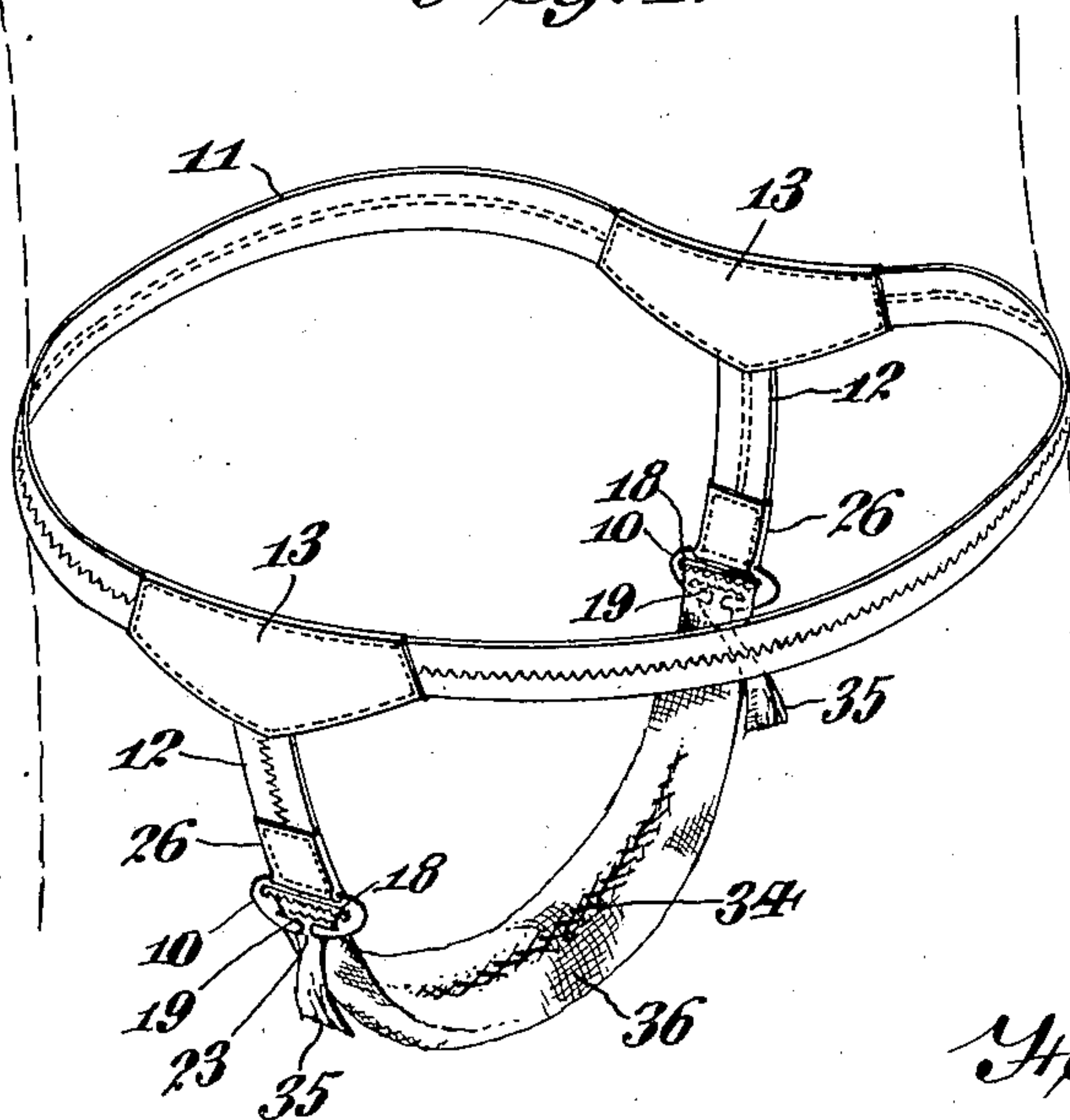
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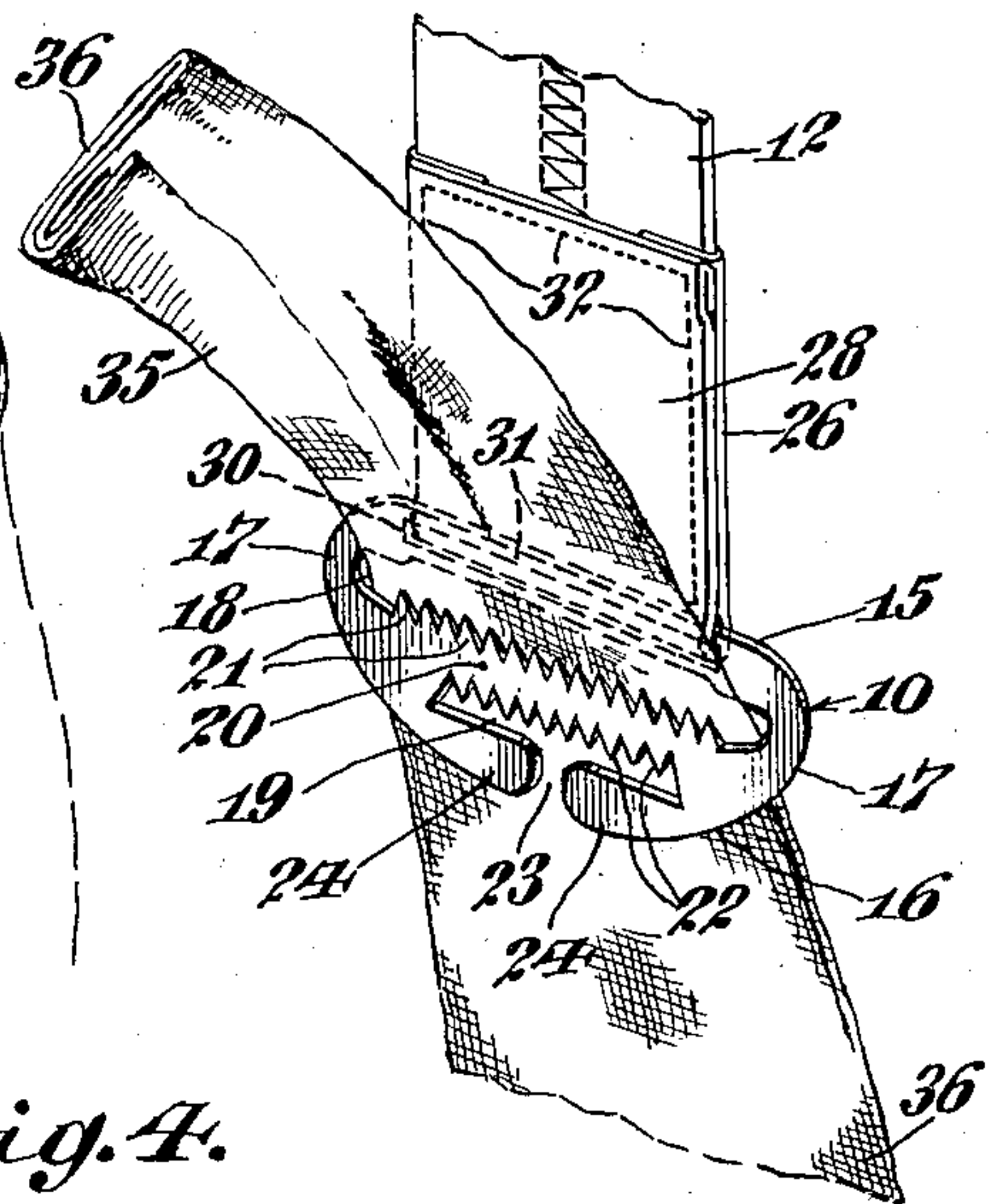
BUCKLE

Filed May 5, 1934

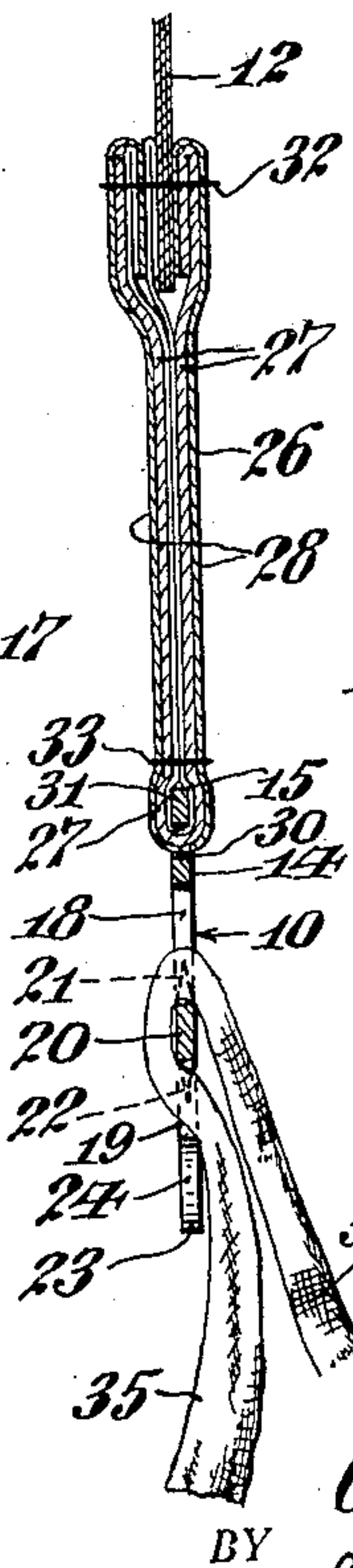
*Fig. 1.*



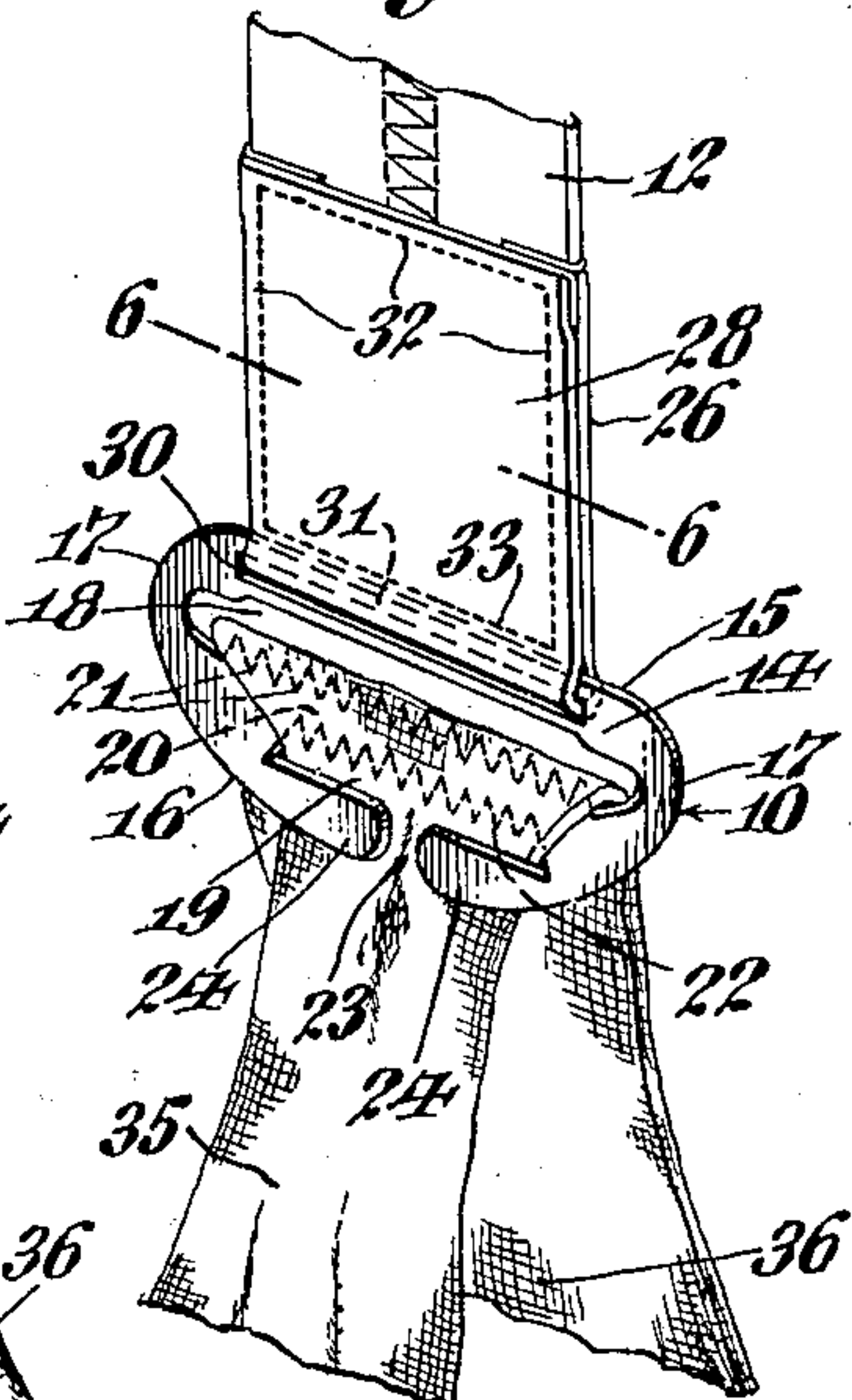
*Fig. 2.*



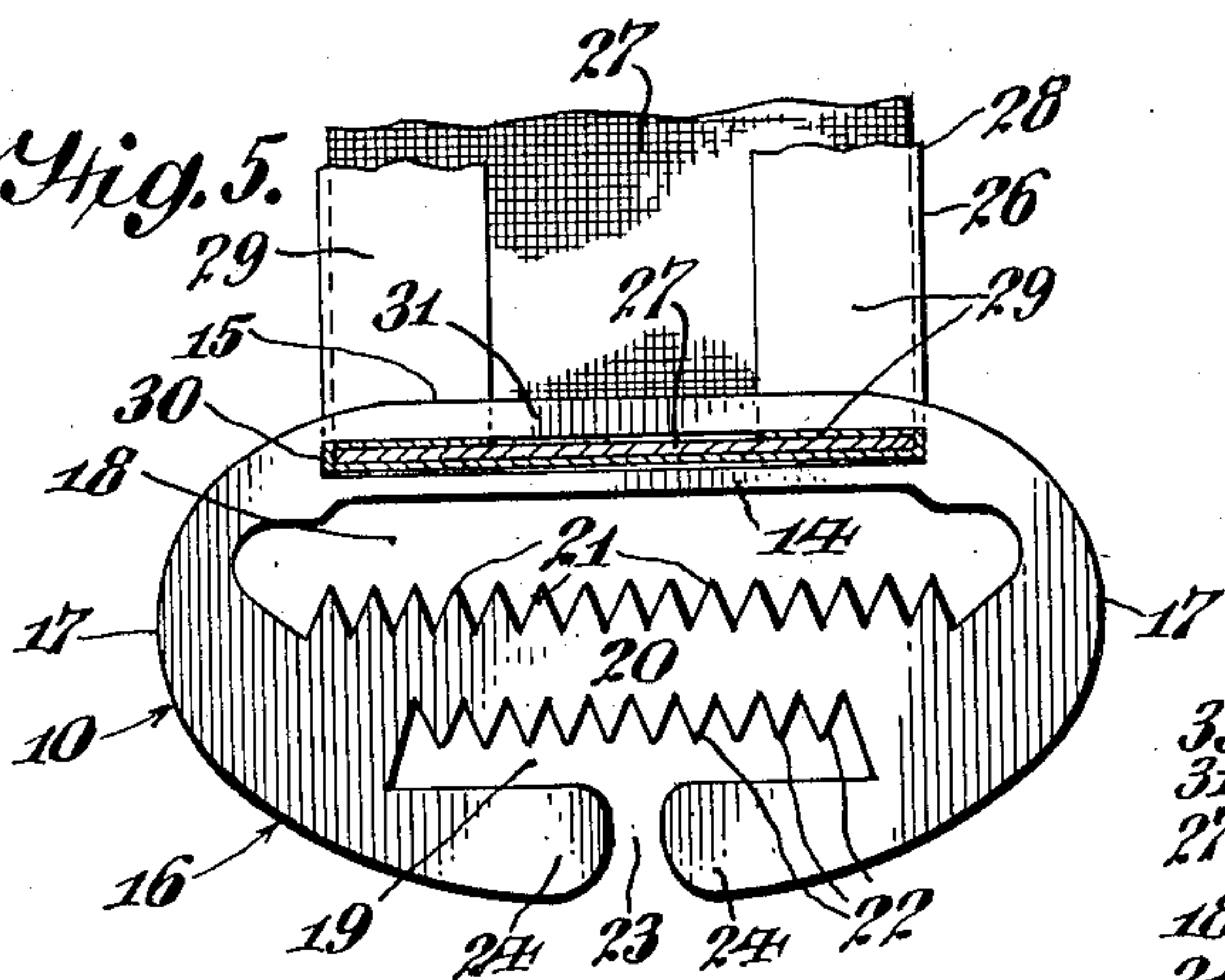
*Fig. 4.*



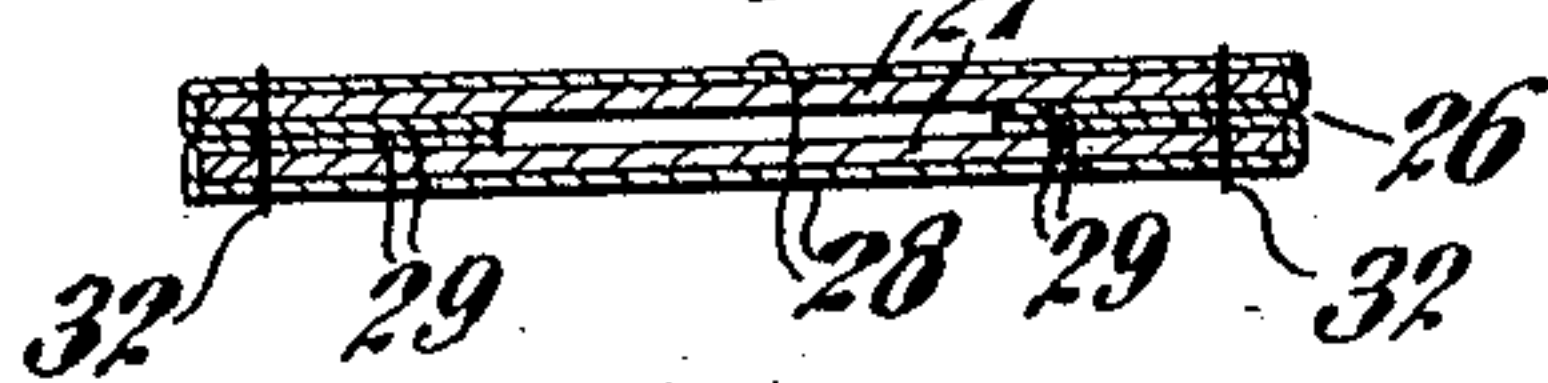
*Fig. 3.*



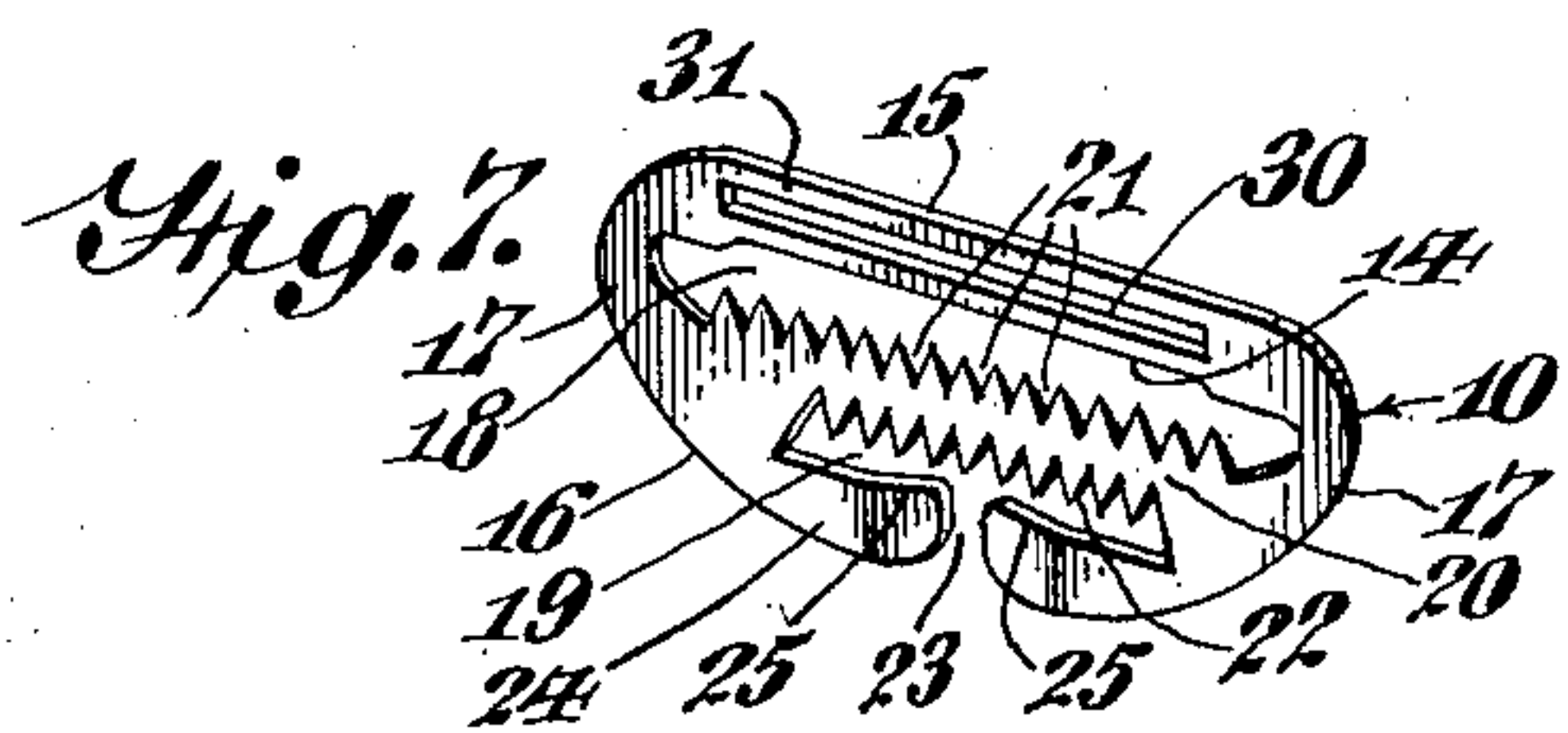
*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



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## UNITED STATES PATENT OFFICE

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## BUCKLE

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Application May 5, 1934, Serial No. 724,055

3 Claims. (Cl. 24—186)

The invention relates to an improvement in buckles and, as disclosed herein, the improvements are embodied in buckles which are adapted primarily for use in securing in position the ends of a strip of loosely woven fabric such as the gauze within which the absorbent element of sanitary pads are commonly encased.

It has been the usual practice heretofore to secure the ends of this gauze to suitable suspender elements by means of safety pins or other like attaching means which provide but a limited engagement with the threads of the gauze. By reason of the loosely woven character of the gauze and the limited engagement of the pins therewith, it has been difficult to retain the pads securely in position on account of the tendency of the pins to strip the transverse threads on the longitudinal threads of the gauze and thereby permit the pads to sag from the position into which they are originally adjusted.

It is one of the primary objects of the invention, therefore, to provide means for securing one or both ends of a strip of gauze or other loosely woven fabric in position. A further object of the invention is the provision of means for securing the ends of a strip of loosely woven fabric against both longitudinal and transverse movement. It is also an object of the invention to provide means for securing a strip of loosely woven fabric in such a manner as to prevent the transverse threads therein from being stripped on the longitudinal threads by the securing means. Another object of the invention is the provision of means for securing the ends of a strip of loosely woven fabric so that these ends are maintained in an evenly spread condition. A still further object of the invention is the provision of means for securing sanitary pads in position so that the folded ends of the fabric within which the pads proper are encased are disposed in such a manner and are so spread out transversely as to be unnoticeable through the outer garments of the wearer.

Still other objects and advantages of the invention will be apparent from the following description, taken with the accompanying drawing wherein:

Fig. 1 is a perspective view showing the manner in which the improved buckle is employed;

Fig. 2 is a perspective view illustrating the manner in which an end of the napkin gauze is inserted in the improved buckle in the operation of securing the sanitary pad thereto;

Fig. 3 is a perspective view showing an end of the gauze completely secured to the buckle;

Fig. 4 is a detailed sectional view through the buckle and the end of the suspender element to which it is attached;

Fig. 5 is an elevational view of the buckle with the attaching end of the suspender element shown in detailed section;

Fig. 6 is a transverse sectional view of the suspender element taken on the line 6—6 of Fig. 3; and

Fig. 7 is a perspective view of a slightly modified form of buckle.

I have disclosed my improved buckle 10 herein in connection with a supporting belt 11 of elastic or other suitable material having front and rear suspender elements 12 secured thereto for attachment of one of the buckles to the lower end of each. The upper ends of the suspender elements are preferably secured to non-elastic members 13 by means of which the side portions of the belt are connected together at the front and rear.

The buckle 10 may be stamped from a sheet of metal or other suitable rigid material, and is preferably in the form of an oblong frame provided with a straight long side 14 for attachment to one of the suspender elements 12 and having a straight edge 15 thereon. The opposite long side 16 is preferably curved and the two long sides are joined by means of curved end portions 17.

An elongated opening 18 is formed in the buckle adjacent and parallel to the straight side 14, and a substantially shorter elongated opening 19 is provided adjacent the curved side 16, the latter opening also being parallel to the straight side 14. The elongated openings 18 and 19 are separated by means of a gripper bar 20 having serrations on the opposite edges thereof, the serrations on one edge providing a plurality of teeth 21 which extend into the opening 18, and the serrations on the opposite edge forming teeth 22 which extend into the opening 19.

The curved side 16 of the buckle is provided with a transverse slot 23 which communicates with the adjacent elongated opening 19 and provides a pair of tongues 24 the free ends of which are so spaced from each other as to permit the strip of fabric or other material which is to be secured to the buckle to be inserted transversely therethrough. In the modification illustrated in Fig. 7, the free ends 25 of these tongues are slightly deflected outwardly from one face of the buckle to thereby provide a tapered opening through which the gauze may be more easily inserted in a transverse direction.



The attaching elements 26 by means of which the buckles are secured to the lower ends of the suspender elements 12 are preferably formed from a strip of strong tape 27 having a facing 28 of suitable material secured thereon with its marginal edges 29 folded about the opposite edges of the tape. This attaching strip is inserted through an elongated slot 30 formed in the straight side 14 of the buckle between the opening 18 and the straight edge 15, and providing a supporting bar 31. The dimensions of the slot 30 and the attaching element 26 are such as to provide a close fit when the attaching element is inserted in the slot and folded back upon itself about the supporting bar 31. The attaching element 26 may be secured to the suspender element 12 by a line of stitching 32 near the margin of the folded attaching element, and the transverse stitching 33 at the lower end of the attaching element is preferably closely adjacent the straight edge 15 of the supporting bar 31 in order to assist in preventing movement of the buckle lengthwise of the attaching element.

As illustrated in Fig. 2 of the drawing the sanitary pad 34 is secured to the buckles by inserting each of the free ends 35 of the gauze 36 within which the absorbent is enfolded through an opening 18, it being understood that both ends are secured in a substantially similar manner. The length of the opening 18 is preferably such that the gauze casing 35 may be fully spread therein throughout its width. The end of the gauze is then folded downwardly over the teeth 21 on the upper edge of the gripper bar 20, following which the gauze is inserted transversely through the slot 23 and spread out in the shorter opening 19 in engagement with the teeth 22 on the lower edge of the gripper bar 20.

By reason of the fact that the opening 18 is substantially longer than the opening 19, the folded strip of gauze is spread out to a greater extent in the opening 18 than it is in the opening 19, so that the gripper bar teeth do not exert a pull in straight lines lengthwise of the gauze. This arrangement of the two elongated openings prevents the teeth from stripping the transversely extending threads of the gauze on the longitudinally extending threads and thereby prevents the pad from sagging from its proper position after it has been adjusted. Preferably the pad 34 is first secured to the buckle on the rear suspender element 12, and when the belt 11 is properly positioned on the wearer, the front end 35 of the gauze is then inserted through the opening 18 in the front buckle, and, after the pad is properly adjusted, the front end of the gauze is then inserted transversely through the slot 23 into engagement with teeth 22 in opening 19 in the manner just described.

While I have disclosed herein a certain form of buckle in which my improvements are embodied, together with one modification thereof, it will be understood that my invention is not in-

tended to be limited by the specific forms and arrangements which I have shown and described, and that such other forms and arrangements of the improvements are comprehended by the invention so long as they come within the scope of the appended claims.

What I desire to claim by United States Letters Patent is:

1. A buckle for securing the end of a sanitary pad, comprising an oblong frame one of the long sides of which is provided with a transverse slot separating the same substantially midway of its ends and the other of which forms a supporting bar, a serrated gripper bar extending lengthwise of said frame and spaced from the long sides thereof to provide an elongated opening on one side with which said transverse slot communicates and an elongated opening of substantially greater length on the opposite side, the relative lengths of said openings being such that the strip of gauze will spread out laterally in the longer opening and will be laterally constricted in the shorter opening.

2. A buckle formed from an oblong sheet of rigid material having a straight edge on one side thereof, an elongated suspender slot adjacent said straight edge and parallel thereto, an elongated opening parallel to said slot and having teeth projecting therein from the edge opposite said slot, and an elongated opening of substantially less length than and parallel to the first mentioned opening adjacent the edge of said sheet opposite said straight edge and having a plurality of teeth projecting therein from the edge adjacent the first mentioned opening, the edge of said sheet opposite said straight edge having a transverse slot therein communicating with the last mentioned opening and forming a pair of spaced tongues, the relative lengths of said openings being such that the strip of gauze will spread out laterally in the longer opening and will be laterally constricted in the shorter opening.

3. A buckle formed from an oblong sheet of rigid material having a straight edge on one side thereof, an elongated suspender slot adjacent said straight edge and parallel thereto, an elongated opening parallel to said slot and having teeth projecting therein from the edge remote from said slot, and an elongated opening of substantially less length than and parallel to the first mentioned opening adjacent the edge of said sheet opposite said straight edge and having a plurality of teeth projecting therein from the edge adjacent the first mentioned opening, the edge of said sheet opposite said straight edge having a transverse slot therein communicating with the last mentioned opening and forming a pair of tongues, the free ends of said tongues being deflected out of the plane of said sheet on the same face thereof.

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