

A. C. COOKE.
TRUSS.

APPLICATION FILED DEC. 9, 1907.

910,504.

Patented Jan. 26, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

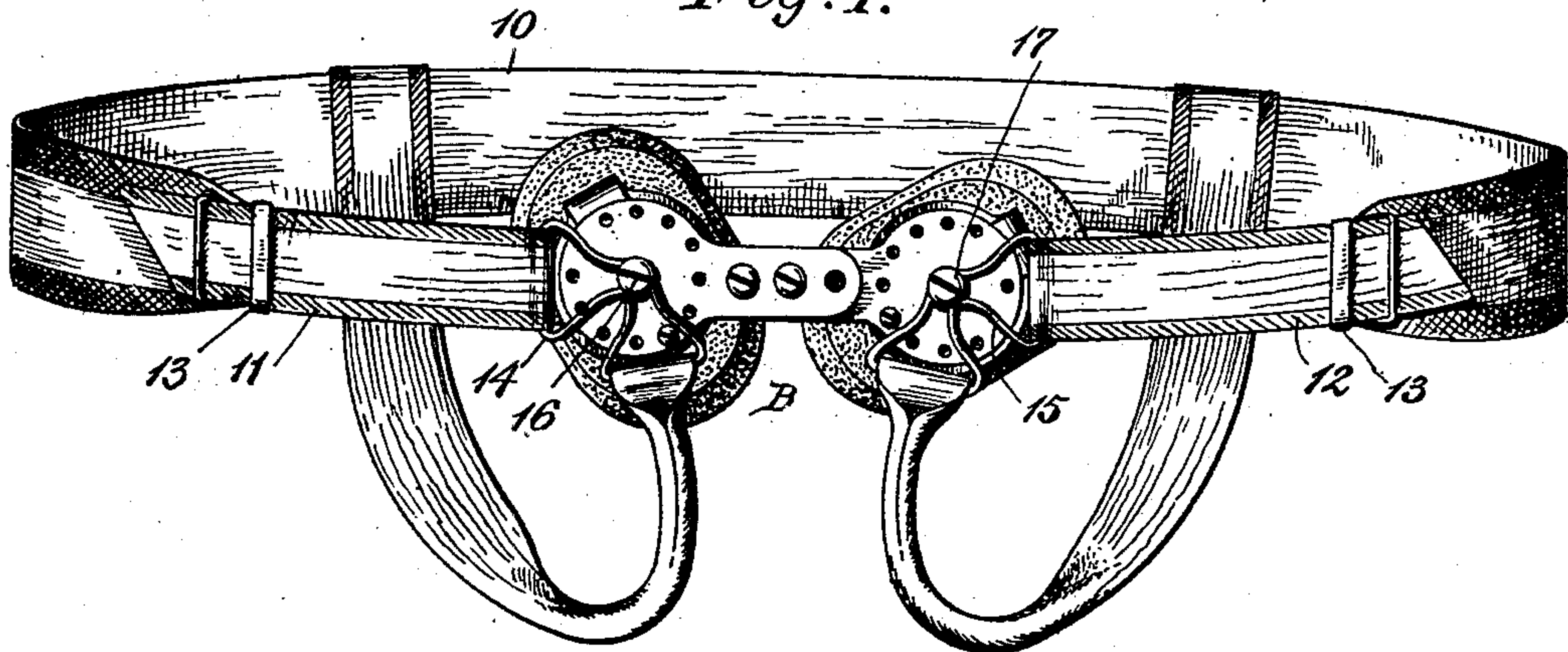


Fig. 2.

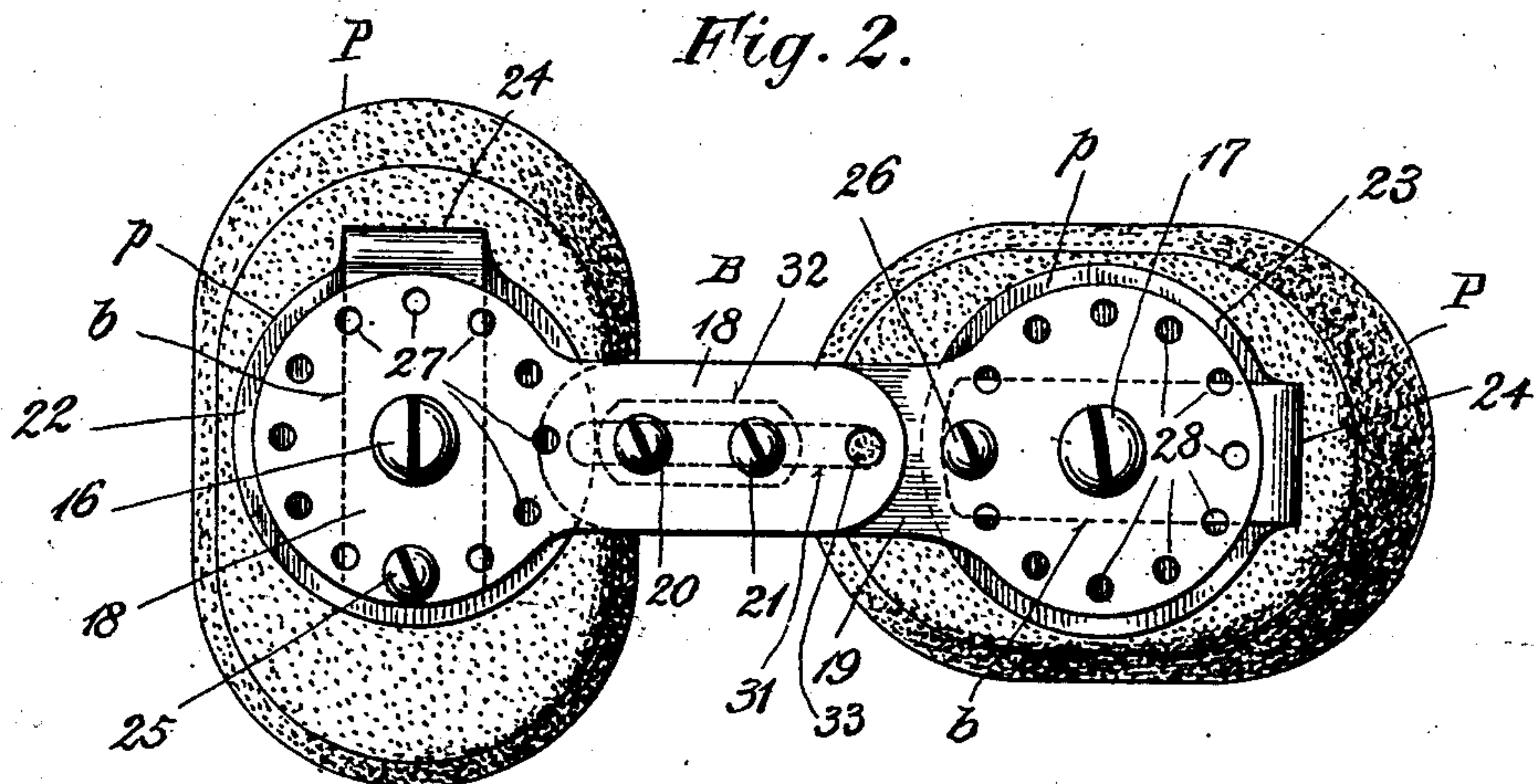
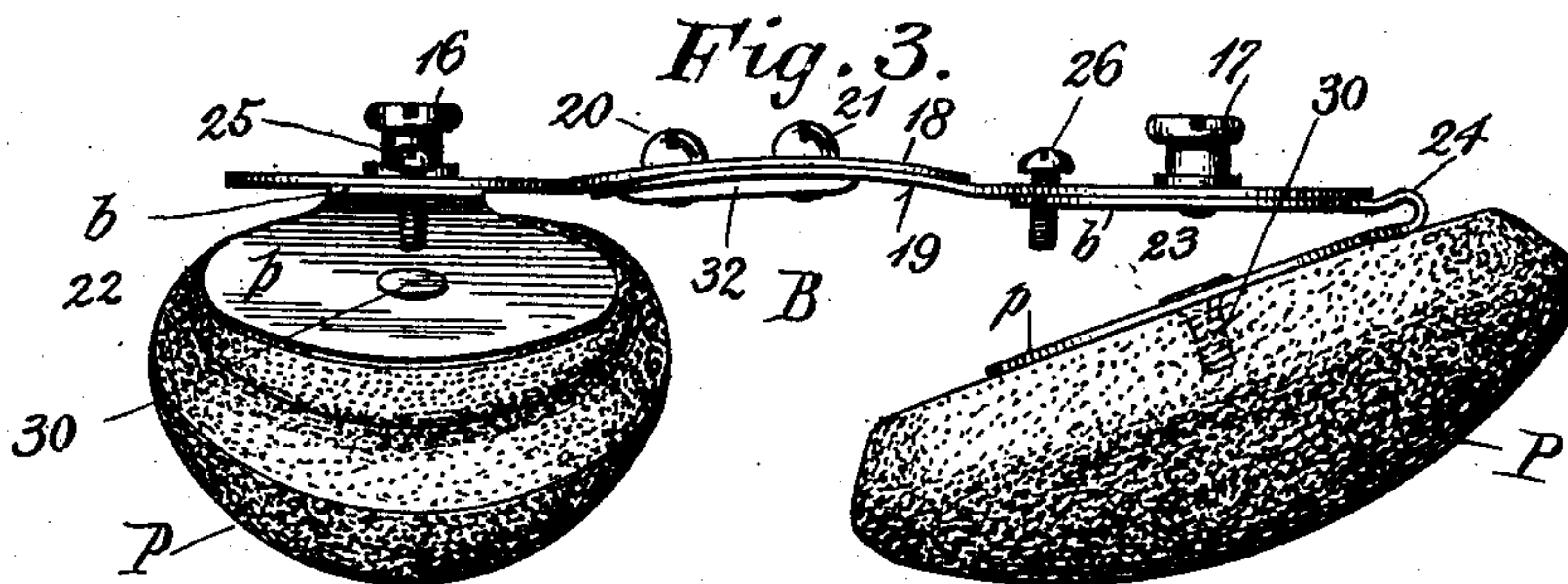


Fig. 3.



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TRUSS.

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To all whom it may concern:

Be it known that I, ALFRED C. COOKE, a citizen of the United States, and resident of Rockyhill, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Trusses, of which the following is a full, clear, and exact specification.

This invention relates to trusses, such as are generally used for supporting ruptures, hernia, etc., and it has for one of its objects the provision of a truss, the pad holder of which is adapted for adjustment so as to exert a pressure in any desired direction without requiring any change in the general position of the holding appliance on the body of the wearer, and so that when the holder has once been fitted, the direction on which the pad or pads are pressing, can be regulated to meet the condition required in any particular case.

My invention has furthermore for its object the provision of means, in connection with the multiple-pad truss, whereby the distance between the pads may be varied as required; while on the other hand each pad is adjustable independently of the other to produce the results above stated.

My invention has furthermore for its object the provision of a resilient or spring-member for each pad of the device, this spring being removably held on the holder so as to permit a substitution of a stronger or a weaker spring, irrespective of the manner in which the device, as a whole, is attached to the body of a patient.

From the foregoing it will be understood that the generic purpose of the present invention resides in a universality of adjustment of the truss pads, each of which is adapted to be regulated as to pressure, in direction as well as in force, the latter feature being particularly desirable as the cure of the patient progresses, or to adapt the device to meet the requirements of ease and comfort.

The invention has been clearly illustrated in the accompanying drawings, in which similar characters denote similar parts, and in which—

Figure 1 is a perspective view of a strap truss embodying my invention. Fig. 2, represents a front view of a pad holder adapted for two pads. Fig. 3, is an end view thereof. Fig. 4 shows a double-spring truss

embodying my invention, and Fig. 5, illustrates a single-spring truss.

In the trusses heretofore in use, it has been the aim of the manufacturers to obtain ease for the patient by shaping the body straps or springs in different ways, without, however, considering the essence of the method for supporting the rupture, the pads being, as a rule, rigidly secured to the body springs, so that consequently the pressure of the spring or strap is transferred, with its full force, on the pad, and irrespective of the direction of support required by each particular case. In the present instance, the strap or spring can be fitted to the person, without in any way considering the question of either the direction or the force under which the pad is to be applied to the rupture, inasmuch as the adjustment of the pad on the holder is a separate and distinct operation to be subsequently entered into. In other words, my present invention will enable me to secure results similar to that of the patient's own fingers which will unconsciously adapt themselves (when repressing the protrusion of a rupture) both as to force and direction, it being furthermore evident that when one pad is used to hold the rupture, and a second pad is employed at the other side, as what may be termed a preventive or safeguard against another rupture at that point, the pressures under which the pads operate against the body may be entirely different from each other.

In order to facilitate the understanding of the present invention, I have shown in Fig. 1 an ordinary body strap supporting a pair of pads which are differently disposed on the holder, the body strap or band being designated by the numeral 10, and having adjusting straps 11, 12, which are secured to the body strap by buckles 13. The adjusting straps 11, 12, carry at the other ends loops 14, 15, adapted to be placed over screw-posts 16, 17, which constitute parts of the pad holder base B, consisting of a pair of similarly shaped sheet metal members or plates 18, 19 (see Fig. 2) which are positioned relatively to each other by screws 20, 21, in a manner hereinafter described.

The threaded ends of the posts 16, 17, pass through the plates 18, 19, and engage screw-threaded apertures in pad-retainers 22, 23 respectively, each comprising a base plate *b*, and a pad-plate *p*, both formed of a unitary

piece of sheet metal and bent at 24 (see Fig. 3) to establish the resiliency of a V-spring, as will be readily understood. The posts 16, 17, serve as trunnions, around which the retainers 22, 23 may be swung into any desired position, and then fastened into place by screws 25, 26, respectively, which are adapted to pass through apertures 27, 28, concentrically arranged relative to the posts 16, 17, and to engage a screw-threaded aperture in each of the base plates *b*; and the resilient movement of the pad plates *p* relative to the base plates *b* may be limited by said screws also.

From the foregoing it will be seen that the resiliency of the pad-retainer can become effective in any desired direction, as determined by its position on the pad holder base B. Furthermore, each pad-retainer has a central screw-threaded stem 30 in the pad plate *p* for holding the pad P, which latter may be turned around on said stem to present the best possible surface or contour to the rupture.

Means are provided for varying the distance between the pad-retainers, these means consisting of the screws 20, 21 above mentioned, as uniting the two holder sections 18, 19. Of the latter, the plate 19 is slotted at 31 (see Fig. 2) to permit the free passage of the screws 20, 21, which engage a nut 32, and thus clamp the sections 18, 19 together. By loosening said screws, the plates 18, 19 may be moved relatively to each other, either to increase or decrease the difference between their ends, and, in order to provide for an extra expansion, the plate 18 has near its end a spare aperture 33, so that the screw 21 may be passed therethrough, and the screw 20 will then pass through the aperture previously occupied by the screw 21. Hence it will be understood that I am enabled: to vary the distance between the pads (by virtue of the separate sections 18, 19); to obtain the pad-thrust in the proper direction (by virtue of the rotative adjustment of the pad-retainer on the holder); to adapt the pad contour to the shape of a rupture (by turning the pad on the retainer); and to vary the spring pressure of each pad independently of the other (by substituting a weaker or a stiffer retainer).

In Fig. 4 I have shown a double-spring truss, in which the strap 10 of Fig. 1 is replaced by the spring-wire bows 40, 41, inserted and clamped with their front ends in clips 42, 43, which are positioned on the

plates 18, 19, by means of screws 44, 45; while the rear ends support the back pads 46, 47, the posts 48, 49 of which are adapted to be engaged by loops 50, 51, carried by a strap 52, so that in this manner the truss may be readily put on or taken off. It will be noted that in this construction, the pad holder base B and the spring-bows are adjustably and rigidly connected, and the entire device is, therefore, self-sustaining, namely: in retaining the bows 40, 41, in their respective positions over the hips, of the patient, while their resiliency will enable them to conform to the body movements without undue pressure.

In Fig. 5 is represented the "single-spring" truss, in which only one rupture-supporting pad is used in connection with a hip bow-spring 55, combined with body straps 56, 57, adapted for adjustment. In this instance the pad holder and bow clip are formed of a casting 58, and the pad-retainer is held thereon in the manner described in connection with Figs. 2 and 3.

Many changes may be made in the detail construction of the several elements of my improved device, and any of the different forms of body-straps or springs, either for single-pad or double-pad, may be employed without in any way departing from the spirit of the invention.

I claim:

1. The combination with a holder plate, of a V-shaped resilient pad-retainer, means for variably positioning said retainer relatively to the holder, means for limiting the yielding movement of said retainer, and means for preventing said holder against tilting.

2. The combination, with a holder plate having a series of concentrically-disposed apertures, of a V-shaped pad-retainer rotatably mounted on said holder plate, a screw carried by said retainer and adapted for engaging any one of said apertures to lock said retainer against movement on the holder, and to limit the yielding movement of said retainer, and means for holding said holder plate against tilting.

3. The combination, with a holder plate, of a pair of V-shaped resilient pad-retainers carried thereby, independent means for variably positioning each of said retainers relatively to the holder, and means for holding said plate against tilting.

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Witnesses:

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CHAS. F. SCHMELZ.