

May 16, 1933.

H. LOEB, SR

1,908,906

SURGICAL BELT

Filed Sept. 17, 1932

2 Sheets-Sheet 1

Fig. 1.

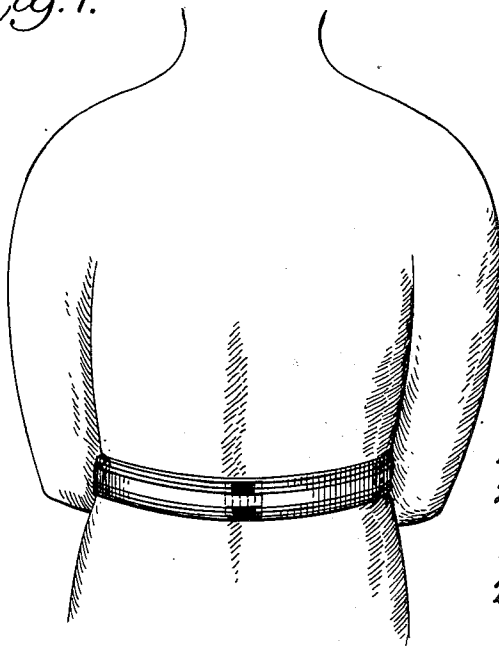


Fig. 4.

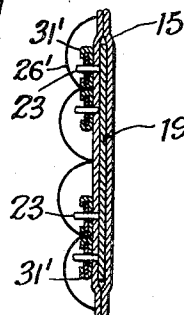


Fig. 2.

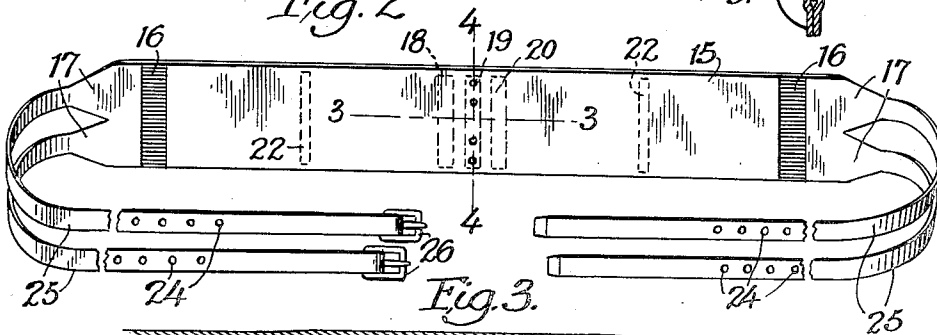


Fig. 3.

Fig. 5.

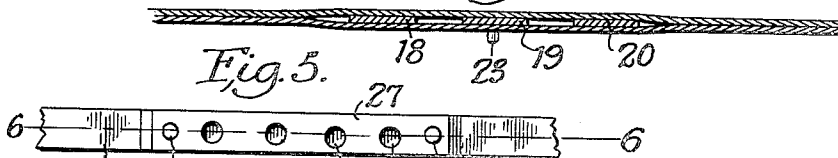


Fig. 6.



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2 Sheets-Sheet 2

Fig. 7.

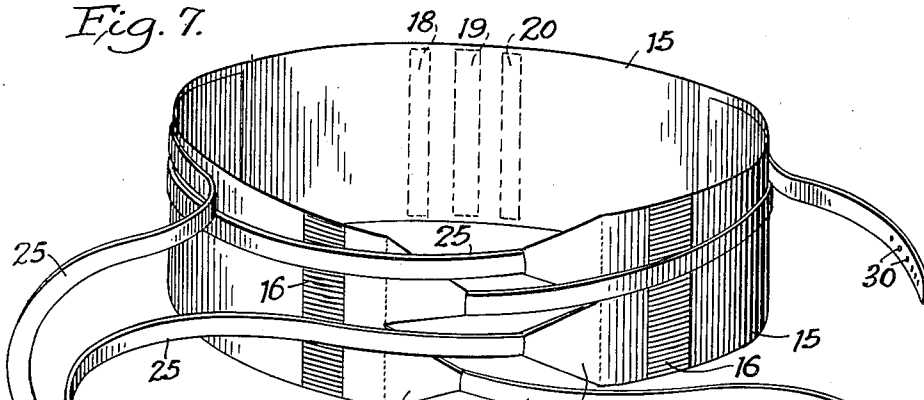


Fig. 8.

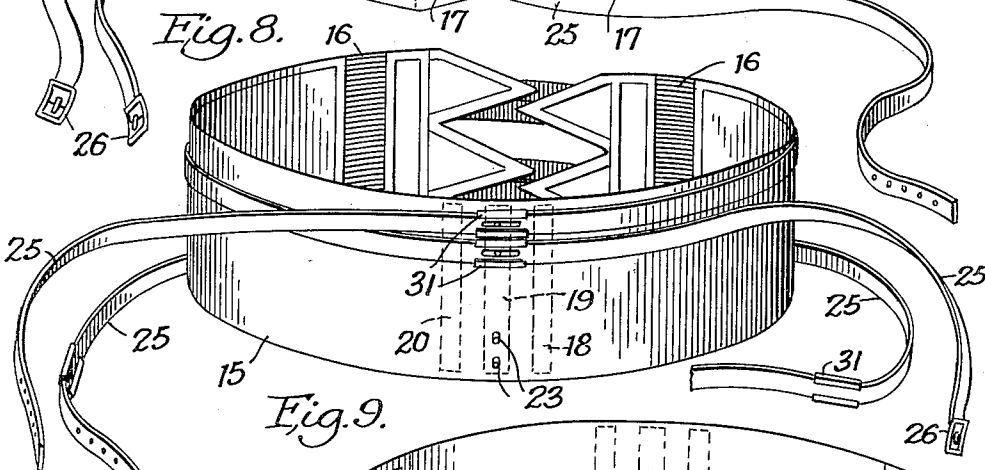


Fig. 9.

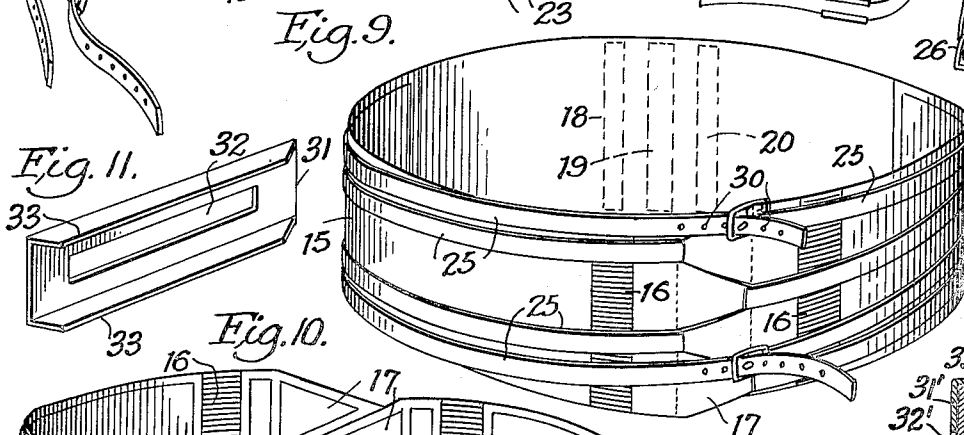


Fig. 11.

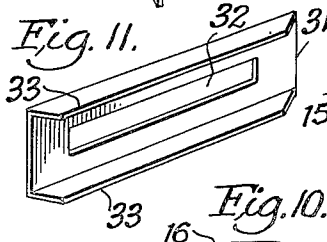


Fig. 10.

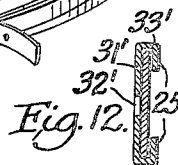
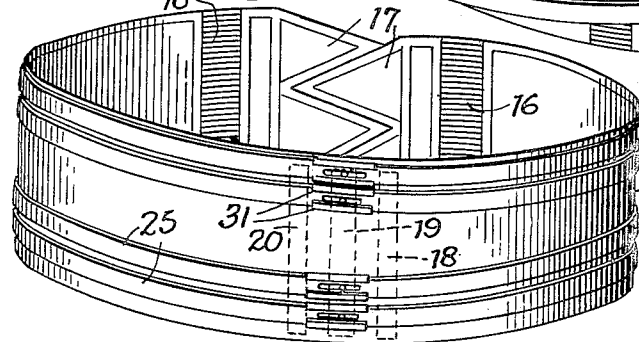


Fig. 12.

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UNITED STATES PATENT OFFICE

HENRY LOEB, SR., OF MEMPHIS, TENNESSEE

SURGICAL BELT

Application filed September 17, 1932. Serial No. 633,557.

My invention relates to a surgical belt and it is an object of the same to provide a belt equipped with means for exerting pressure on the spine.

Another object of the invention is to provide such a belt with means serving effectively to preserve the desired relation of all the parts.

Another object of the invention is to provide a belt of the character described which shall afford considerable freedom of movement to the user while at the same time serving effectively to exert pressure at the desired place.

Referring to the drawings, which are made a part of this application and in which similar reference characters indicate similar parts:

Fig. 1 is an elevation illustrating in a general way the manner of use of the belt,

Fig. 2, a perspective of the belt on a larger scale,

Fig. 3, a section on line 3—3 of Fig. 2,

Fig. 4, a section on line 4—4 of Fig. 2,

Fig. 5, an elevation of a fragment of a strap attached to the belt,

Fig. 6, a section on line 6—6 of Fig. 5,

Figs 7 to 10, a series of perspectives illustrating the manner of applying the belt and the positions of the various parts when in use,

Fig. 11, a detail of a slide shown in Fig. 10, and

Fig. 12, a cross-section of a modified form of slide together with the strap engaged thereby.

In the drawings reference character 15 indicates the body of the belt, which may be made of any suitable material such as cotton webbing. Near the ends of said body portion strips 16 of elastic webbing are interposed between said portion and forks 17 constituting the ends of the body portion proper.

At a point of the body portion adjacent the spine there are shown three upright stiffening members 18, 19 and 20, these being of rigid or substantially rigid material, such as spring steel. Between the ends of the belt and the three members just referred to

(whose number may of course be varied to suit particular conditions) there may be one or more additional and similar upright stiffening members 22 extending approximately from edge to edge of the belt to prevent wrinkling of the belt.

In Fig. 3 I have shown the belt as consisting of two thicknesses of material with stiffening members 18, 19, 20 fastened between them in suitable manner. The number of straps may be varied as needed for the particular situation, i. e., whether the treatment is for spinal trouble, stoop shoulders, a weak back, broken ribs, etc. The member 19 is provided with pins 23, of which four are shown. These pins are intended to coact with apertures at 24 in body-encircling straps 25 for preventing the body-encircling straps from moving up or down with reference to the body portion of the belt. The straps 25 are provided with a sufficient number of holes to permit the necessary adjustment of the straps according to the waist measure of the user and the straps are provided with buckles 26 or other convenient means for securing their ends together.

It will be noted that the ends of the body portion of the belt are forked so that the interengaging straps will tend to hold each other in place, as more fully explained hereinafter. If desired I may rely on the pins 23 to hold the straps in place by engagement with apertures 24 or I may add a narrow strip of material 26' (Fig. 4) formed into loops extending over each strap, said strip being secured at its ends to the body of the belt and being also secured thereto at intermediate points so as to form a primary guide for each strap to hold the same approximately in desired position relatively to the body of the belt.

It is sometimes desirable to exert pressure against the sustaining members 18, 19, 20 as when the back of the user is hollowed out more than usual. For such use I provide means illustrated in Figs. 5 and 6, consisting of blocks or heavy strips 27 of flexible material such as rubber, these being secured to the respective straps in any suitable manner as by means of rivets 28. These rubber

blocks are provided with holes 29 of suitable size to engage over projecting pins 23 and as they are at the inner side of the respective strips it will be seen that they will press 5 yieldingly but effectively against the sustaining members 18 to 20 to force them inwardly against the spine.

Figs. 7 to 10 illustrate successive steps in the application of my surgical belt to the 10 body. In Fig. 7 it will be seen how the straps 25 and the forks 17 are crossed or interlaced so as to hold the parts in place at the front and also how the two upper straps completely encircle the body twice, each one 15 passing once around the body and the ends being then secured together by means of a buckle 26, the tongue of the buckle on one strap engaging openings at 30 near the end of the other strap. In like manner the lower 20 pair of straps each pass completely around the body and are then buckled together at the front or at the side, as the case may be, as more particularly illustrated in Fig. 9.

A preferred means for holding the straps 25 against up and down movement relative to the body of the belt is illustrated in Figs. 9, 10 and 11. Such means comprises a slide 31 adapted to be mounted on a body-encircling strap in freely slidable relation thereto, in 30 such manner that the slot at 32 is at the inner side of the strap or in position to receive a pin 23. It will be evident that the slide can move relatively to the pin 23, as in the case of the form of the invention first 35 described and this affords greater freedom for movement of the body of the user, all without in any way detracting from the efficiency of the belt. The slide is provided with upper and lower flanges 33 to engage 40 the edges of the strap on which it is mounted and prevent loss.

Fig. 9 shows the belt in the position assumed by the parts when in use, this being a front view whereas Fig. 10 is a similar 45 view from the rear.

In Figs. 4 and 12 I have shown a slightly modified form of slide 31' generally similar to that of Fig. 11 except that the flanges 33' are bent down to substantial L-shape as 50 shown at 35, this being a preferable form for the reason that the slide can not so readily slip off its strap. The slot for engaging a pin 23 is shown at 32'.

Preferably the sustaining members are 55 parallel, this arrangement being most effective for exerting pressure on the backbone in desired manner. Ordinarily the belt is about six inches wide and when made of such width the upper and lower straps fall 60 respectively above and below the swell of the abdomen so as to be effective for holding the front of the belt at the desired height.

It is to be noted that the use of blocks or pads 27 serves to bring additional and effective 65 pressure on the sustaining ribs 18 to

20 (of whatever number may be desirable) all without requiring undesirable tightening of the straps 25.

Because of the shape and arrangement of the forks 17, and the straps 25, the belt when 70 in use appears and feels as if it were all one piece and fabric is economized with substantially uniform pressure at the front and sides and with effective support of the spine, yet the belt is so comfortable that the sleep 75 of a patient wearing the same is not interfered with.

It will be obvious to those skilled in the art that various modifications may be made in my device without departing from the spirit 80 of the invention and that it may be used in other ways or for other reasons and purposes than those herein set forth, and therefore I do not limit myself to what is shown in the drawings and described in the specification 85 but only as indicated in the appended claims.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent is:

1. In a surgical belt, a wide body-encircling 90 portion, an upright stay on said portion positioned to bear against the spine of the user, vertically spaced straps attached to the ends of said wide portion, vertically spaced pins on said stay for holding the 95 straps in place at the back of the user, and resilient blocks on the inner faces of said straps for exerting yielding pressure on said stay said blocks having holes to engage said pins. 100

2. In a surgical belt, a wide body-encircling portion, an upright stay on said portion positioned to bear against the spine of the user, vertically spaced straps attached 105 to the ends of said wide portion, vertically spaced pins on said stay for holding the straps in place at the back of the user, and cushioning means between the straps and the stay whereby said stay is pressed resiliently 110 against the spine.

3. In a surgical belt, a wide body-encircling portion, an upright stay on said portion positioned to bear against the spine of the user, vertically spaced straps attached 115 to the ends of said wide portion, vertically spaced pins on said stay for holding the straps in place at the back of the user, and slides on the straps said slides having slots to engage said pins for positioning the straps at the back of the user. 120

4. In a surgical belt, a wide body-encircling portion, an upright stay on said portion positioned to bear against the spine of the user, vertically spaced straps attached 125 to the ends of said wire portion, vertically spaced pins on said stay for holding the straps in place at the back of the user, slides on the straps said slides having slots to engage said pins for positioning the straps at the back of the user, and loops on 130

the belt adjacent said stay for roughly positioning the straps.

5 In a surgical belt, a wide body-encircling portion, an upright stay on said portion positioned to bear against the spine of the user, a pair of vertically spaced straps attached to each end of said wide portion, each strap extending completely around the body, means at the ends of the straps
10 for connecting them at the front of the body, and means on said wide portion for holding the straps in spaced relation at the back of the body.

6. In a surgical belt, a wide body-encircling portion, an upright stay on said portion positioned to bear against the spine of the user, vertically spaced straps attached to the ends of said wide portion, each strap extending completely around the body,
20 means at the ends of the straps for connecting them at the front of the body, and means on said wide portion for holding the straps in spaced relation at the back of the body the wide body-encircling portion having
25 tapering portions for attachment of the respective straps, said portions being shaped for interengagement to provide a zone of substantially uniform width extending completely about the body.

30 In testimony whereof I affix my signature.

HENRY LOEB, Sr.

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