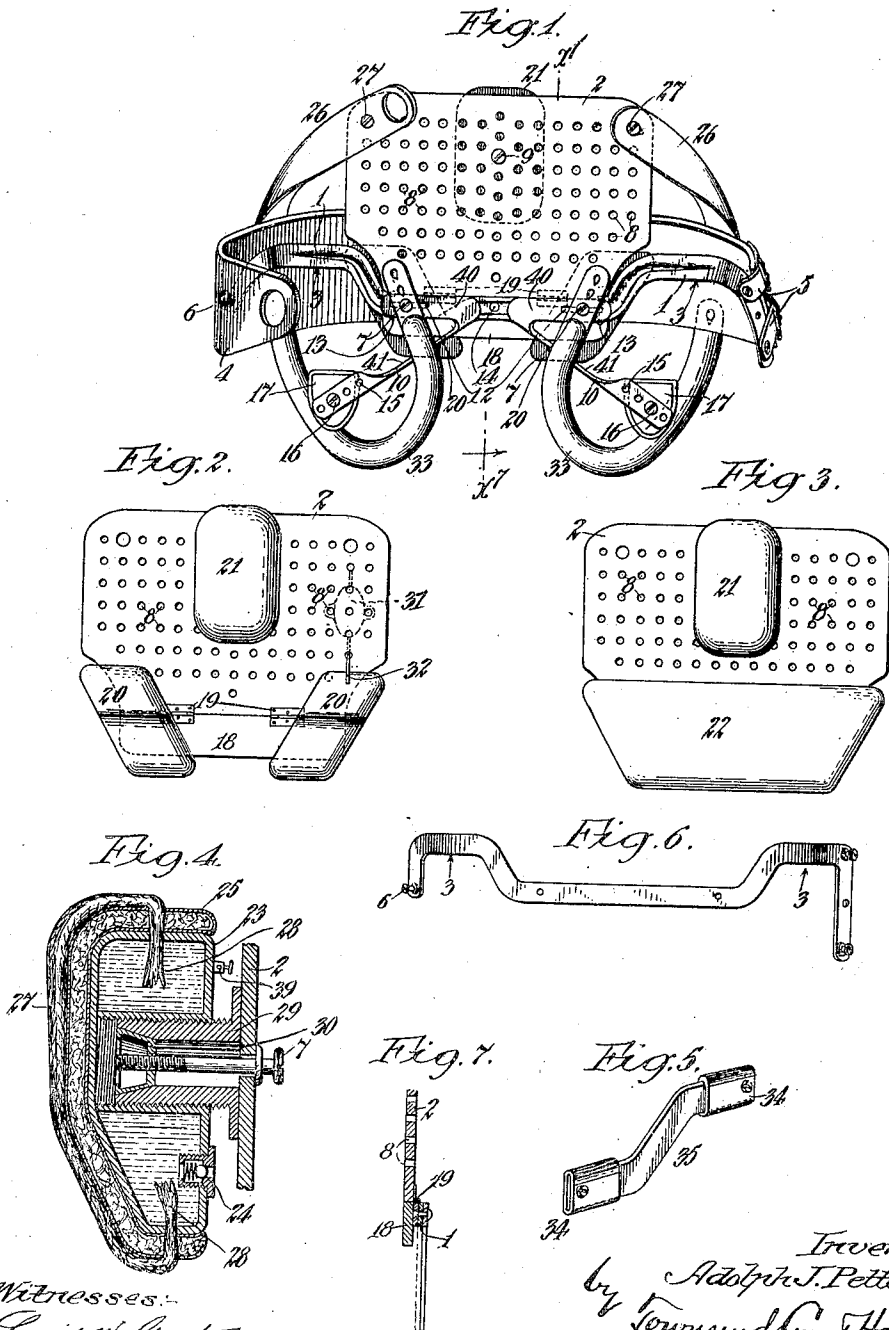


A. J. PETTER.
SURGICAL APPLIANCE.
APPLICATION FILED AUG. 21, 1907.

971,783.

Patented Oct. 4, 1910.

2 SHEETS—SHEET 1.



Witnesses:
Louis W. Grady
Frank C. Callahan.

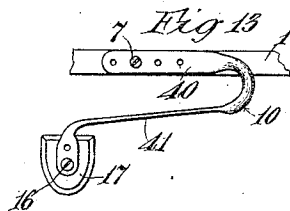
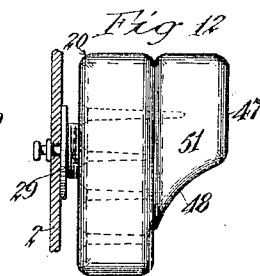
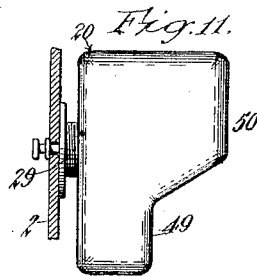
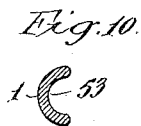
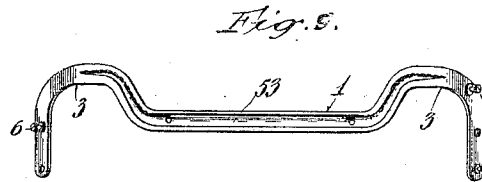
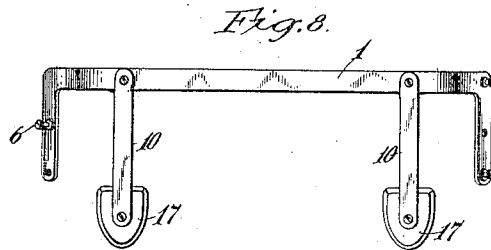
Inventor
by Adolph J. Petter
Townsend & Hackley
His Atty

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2 SHEETS—SHEET 2.



Witnesses:
Louis W. Gratz
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UNITED STATES PATENT OFFICE.

ADOLPH J. PETTER, OF LOS ANGELES, CALIFORNIA.

SURGICAL APPLIANCE.

971,783.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed August 21, 1907. Serial No. 339,583.

To all whom it may concern:

Be it known that I, ADOLPH J. PETTER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Surgical Appliance, of which the following is a specification.

This invention relates to an appliance for application to the abdominal and adjacent regions to relieve and overcome any rupture or tendency to prolapsus of any of such parts.

The main object of the present invention is to provide means for this purpose which will operate by easy support of the parts, so as to aid nature in the restoration of the parts to normal condition.

A further object of the invention is to provide means for the above stated purpose, which will not interfere with the natural movements of the person, and will not cramp or bind the person in a sitting position.

A further object of the invention is to provide means for the stated purpose, which is also adapted to support various appurtenant devices, for the relief of local prolapsus, in any of the adjacent parts.

Another object of the invention is to provide an appliance of this character, with means for the application of medicinal agents.

In the accompanying drawings: Figure 1 is a front elevation of the appliance. Fig. 2 is a rear elevation of the body of the appliance, showing attached thereto, certain forms of pads for applying local support. Fig. 3 is a similar view, showing a different form of local supporting device. Fig. 4 is a vertical section on one of the pads for local application provided with means for supplying medicinal and electrical agents. Fig. 5 is a detail perspective, showing a sectional construction for the lateral arms of the appliance. Fig. 6 is a front elevation of a modified form of the arched bar that serves to attach and connect the various parts. Fig. 7 is a partial section on line x^7-x^7 Fig. 1, showing the hinged construction of the body member. Fig. 8 is an elevation of a different form of the supporting bar for the pads. Fig. 9 is an elevation of another form thereof. Fig. 10 is a cross section of the bar. Fig. 11 is a vertical section showing a pressure pad construction.

Fig. 12 is a similar view showing the formation of the pad with a removable part to give changeable form. Fig. 13 is an elevation showing a spring support for the pads.

The appliance comprises an arched bar 1, more or less flexible having interchangeably secured thereto body members 2, 20, 21, 10 and containing members 17, all adapted to localize support to various parts of the body, and strap means for attachment of these parts to the body of the wearer.

The bar 1 which may be formed of metal or of any other suitable material, is bent upwardly, then outwardly, and then downwardly and backwardly at each end, this construction giving it the required flexibility and adaptability to the body of the patient, the end portions of the bar being made thinner or knife-edged, to increase the flexibility. The end portions are twisted to the rear so as to lie in a plane at an angle to the main portion of the bar and they may descend in a curve, as in Fig. 1, or abruptly, as shown in Fig. 6, forming in any case an arch 3, which permits of free movement of the muscles of the thighs, and also prevents cramping when the person is in a sitting posture.

A fastening band 4 is attached by one or more straps 5 to the outer end portion of the arch 3 at one end of the bar 1, and at its other end is provided with one or more eyelets to engage over buttons or studs 6 on the outer end portion of the arch 3 at the other end of the bar 1, so as to apply equal pressure to both ends of the pads or appliances carried by the bar or to increase it above or below the bar as may be desired. Said straps may also have, at this loose end portion, handholes to enable them to be pulled into position. The middle portion of the bar 1, to which the body member is attached, is about on a level with the button 6 at the end of the arch 3 at one end of the bar, and is about midway between the strap fastenings 5 on the arch 3 at the other end of the said bar. Both ends of bar 1 may extend to any desired distance below the center portion thereof so as to permit of the pressure applied through the body straps at the end being increased at the lower edge of a pad or other appliance on the bar.

The body member 2 is flat, or formed as a plate, and is preferably of hard fiber, or hard rubber, but may be of any material

suitable for the purpose and have electrical attachments thereon for supplying electricity to the parts. This body member has a lower portion 18 hinged thereto as at 19 and
 5 attached to the bar 1 by screws 7. The upper portion of plate 2 widens out above the supporting bar into more or less rectangular shape, this portion of the plate or body member being perforated as shown at 8, for the
 10 purpose of affording ventilation, as well as to enable attachment of fastening screws or bolts 9 for various pads or localizing devices to different portions thereof, as hereinafter described. When it is desired to attach the
 15 plate 2 rigidly to the bar 1 the screws 7 may be passed through perforations 8 in the upper part instead of in the lower part 18.

One or two spring arms 10 are connected to the bar 1 by screws 7 which pass through
 20 slots or a series of holes 12 in the spring arms, and screw into slots or any one of a number of holes 13, on each side of the center of bar 1. To increase the yielding capacity of spring arms 10 they may be formed
 25 substantially V shape as shown in Figs. 1 and 13, having a flattened spring portion 40 which is slotted or perforated for the screw 7, and which permits of outward yielding of the pad and a flattened spring portion 41
 30 which permits of upward yielding of the pad said flattened portions lying in two planes with the plane of the portion 40 intersecting the portion 41 longitudinally. Or the arm may be otherwise formed to
 35 produce the same result. The end portion of each arm 10 may be bent downwardly, and has a slot or series of holes 15 to receive fastening screws 16, for securing thereto
 40 pads 17. These pads are preferably formed of vertically and laterally yielding material or construction, although any style of pad may be substituted. By loosening the screws 7 these arms may be adjusted to position
 45 to bring the pads 17 to the proper height or to bring them opposite any part of the body requiring treatment, the pads 17 being fastened at suitable longitudinal position on the arms 10 by securing the screws in any one of the series of holes there-
 50 in. The screws 7 are then tightened to hold the arms firmly in their adjusted position. Straps 26 are also provided, adjustably fastened by buttons or any suitable fastening 27 to the upper corners of plate 2, and may
 55 be adjustably fixed to the band 4 to which are also secured perineal straps 33 adapted to pass under the crotch, and to be adjustably fastened to screws 7.

Various forms of pads, as indicated at 20,
 60 21, 22, also arms 10 and pads 17 in Figs. 2 and 3, may be attached to the plate or body 2 or to the bar 1 direct. In Fig. 2 are shown two right and left pads 20, fastened to the lower part of the body 2 at each side by
 65 means of the screws 7 which also fasten the

body 2 to the bar 1. Each of these pads may be fastened separately to the bar 1 independently of the plate or body member 2 and are of the form and construction shown in Fig. 4, consisting of a chamber 23 of
 70 metal or other suitable material, having a filling valve 24 and electrical attachments 39 to enable the chamber to be charged with medicament, as well as apply electricity to the parts, and the chamber being covered
 75 with a padding 25 of any yielding material, such as, for instance, stuffed leather or a non-absorbent covering and over that preferably with an absorbent layer 27, ending in a wick 28, which extends across the face
 80 of the pad and preferably into the chamber 23 at each end. These right and left pads are revoluble on their fastenings and for anatomical reasons are thicker at one end than the other so as to give greater pressure
 85 at any desired portion by turning the pad to proper position to correct any specific derangement or breach occurring in the pelvic, groin, or abdominal region, and next to the body each thick and thin portion has
 90 a flat face with slightly rounded edges. It is desirable to have the pads with flat faces, preferably two such faces, one of which, 47, may be parallel to the base of the pad, the other, 48, being inclined. Or the two faces
 95 may both be parallel to the base, as at 49, 50 in Fig. 11. The upper face portion may be on a separable pad member 51 attached to the main pad member by screws or otherwise, see Fig. 12. Pads 20 are adjustably
 100 supported on the body plate or pad 2, or bar 1 as desired, by screwing on a stud 29 which is clamped to the body or bar by the screw 7 and a cone nut 30 thereon. An auxiliary medicine bulb 31 may be provided,
 105 having one or more discharge wicks 32, as shown in dotted lines in Fig. 2.

The pad 21 may be attached to the upper middle or any other portion of the body or
 110 plate 2. In some cases, instead of the pads 20, solid pads of similar or other shapes may be substituted, or a single large pad 22 may be used as in Fig. 3. All of the pads 17, 21 and 22 may be of similar construction
 115 to the pads 20.

To facilitate ease of adjustability, packing, etc., the end portions of bar 1 may be adjustable and detachable, the central and end portions of the said bar having sockets
 120 34 to receive the ends of a bent section 35, with narrow holes serving to adjustably couple the parts of the bar together.

The pad supporting spring arms may be extended directly down from the bar 3, as
 125 shown in Fig. 8.

Figs. 1, 9 and 10 show the preferred formation of the bar 1, with a fluting or channel 53 along the same, to stiffen it without increasing its weight, this channel decreasing in size toward the end so that the bar is
 130

thinner toward the end and thus more comfortable to the body when reclining on the side.

In Fig. 12 I have shown the pad 20 provided with a series of holes so that the position of a revoluble pad 51 attached thereto may be adjusted as desired. This auxiliary pad 51 is used to train the bowel back up into the abdomen. As a rule this cannot be accomplished at once but requires the gradual adjustment of the pad 51. This pad can also be used on the bar 1 and, as it is revoluble, is in many cases preferable to a non-revoluble pad.

It will be noted that the bearing or pressure faces of the pads 20, 21, are flat instead of rounded or spherical. I have discovered that the use of a flat faced pad effectually presses the rupture back without danger of lateral distention thereof,—for instance, when applied to the body at the side of the inguinal canal, a flat pressure face causes the distended bowel to be pressed back out of the canal and holds the walls of the canal against extension of the bowel therinto. If a round faced pad is used the pressure of the apex or point of the pad is greater than the pressure of the edges of the face of the pad and the walls of the canal are not evenly held together.

What I claim is:—

1. A surgical appliance for the purpose stated comprising a flexible bar having attaching means at its end portions, said end portion being arched vertically, and a vertical plate attached by a hinge connection to the center portion of the bar and provided with means for attachment of local pressure applying devices thereto.

2. A surgical appliance for the purpose stated comprising a flexible bar having attaching means at its end portions, said end portions being arched, one of said end portions having strap fastener means for alinement of the center portion of the bar and the other end portion having fastening means for the same purpose out of said alinement, a plate attached to the center portion of the bar and provided with means for attachment of local pressure applying devices thereto, the ends of said bar bent rearwardly for the purpose stated.

3. A surgical appliance for the purpose stated comprising a flat flexible bar having its ends arched vertically and provided with attaching means, the central portion of said bar being adapted to have a pad secured thereto, a fastener secured at its ends to said attaching means so as to vary the pressure of the pad above and below the bar, a substantially V shaped pad carrier adjustably secured to the bar at one end, and a pad adjustably secured to the other end, said carrier being flexible vertically and horizontally.

4. A surgical appliance for the purpose stated comprising a bar, a body member attached thereto, said bar being arched at each end, said ends being of uneven lengths, flexible attaching means secured to the ends of the bar, and flexible attaching means secured to the upper end of the said body member, the lower end of the body member being attached to the said bar above and below a point which is balanced with regard to the center portions of the bar to which the flexible attaching means are secured.

5. In an appliance for the purpose described, a bar having its ends arched and its central portion perforated so as to have attachments secured thereto at different points, the downwardly extending portions of said ends extending rearwardly and being flat and flexible and twisted into a plane at an angle to the length of the bar and provided with fastening means, pressure applying devices secured to the central portion of the bar, and an adjustable body strap secured to one of said ends substantially in a line with the bar and to the other end at points above and below the bar, respectively.

6. An appliance of the class described having a bar bent upwardly on each side of the center and then outwardly and then downwardly and then backwardly, and channeled along more or less its entire length, said channel being deeper in the center and gradually decreasing in depth as each end is approached, said bar having a series of holes on each side of the center for attaching various sorts of pads, and means on each end for adjustably fixing a belt thereto, and means for attaching perineal straps thereto.

7. In an appliance of the class described, a bar, adjustable means connected with its ends for securing it in position, and a perforated invertible pad secured to the bar by either its top or bottom edge, one of said edges being hinged.

8. A surgical appliance for the purpose stated comprising a bar having attaching means at its end portions, said end portion being arched, and a plate attached by a hinge connection to the center portion of the bar and provided with means for attachment of local pressure applying devices thereto.

9. In an appliance of the class described, a bar, a pad thereon having a vertically arranged series of perforations in its back, one of said perforations extending through the pad, a screw through said perforation, and an adjustable pad on said screw provided with a flat pressure face.

10. A surgical appliance for the purpose stated comprising a bar having arched end portions, a plate attached to the central portion of said bar and extending upwardly from such central portion, said plate having

perforations in different vertical and horizontal positions in its upper portion, and pad means provided with screw devices for attachably securing the same to the plate by
5 engagement in such perforations.

11. An appliance of the class described comprising one or more right and left oblique shaped pads having the top and bottom lines of each on a relative horizontal
10 plane and the inner face of each pad thicker on one end than the other and revoluble, and adjustable as to height, on its support, said pads being hollow with means for fill-

ing and conducting medicament to the face thereof, and means for electrical attachment 15 and means for attaching and conducting an auxiliary medicament supply to the face thereof.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 20 10th day of August 1907.

ADOLPH J. PETTER.

In presence of—

FREDERICK S. LYON,

FRANK L. A. GRAHAM.