

July 3, 1923.

1,460,421

M. A. KEELER

ABDOMINAL SUPPORT

Filed Oct. 24, 1918

Fig. 1.

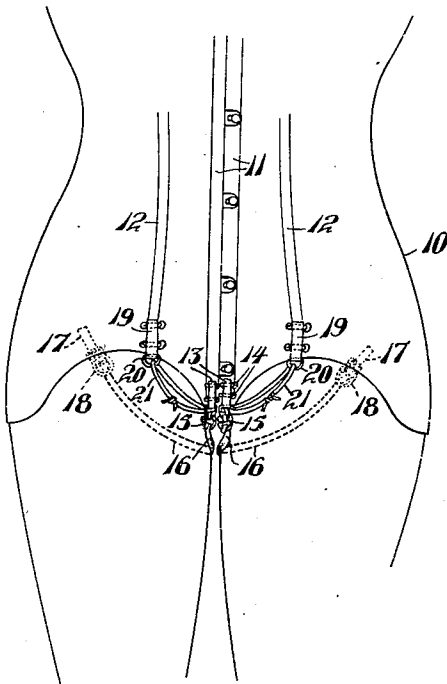


Fig. 2.

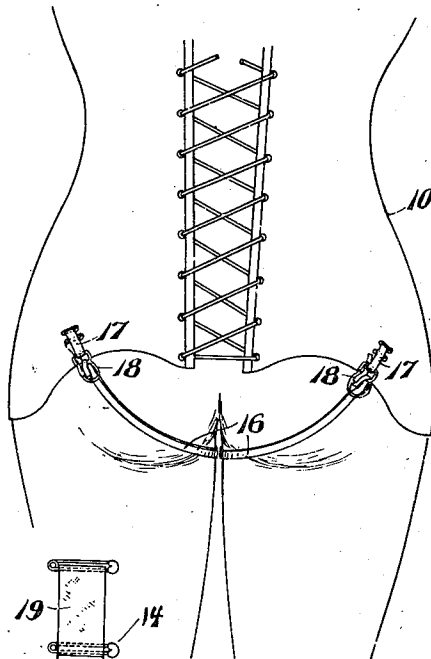


Fig. 3.

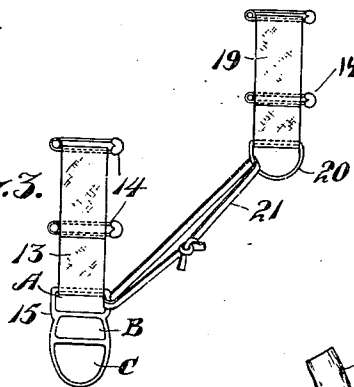


Fig. 4.

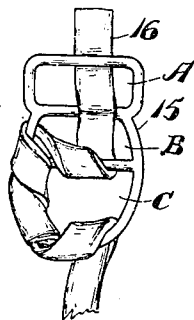
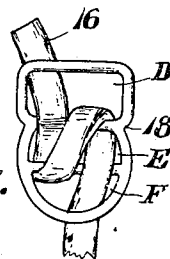


Fig. 5.



INVENTOR

May A. Keeler

BY

Strong & Townsend
ATTORNEYS

Patented July 3, 1923.

1,460,421

UNITED STATES PATENT OFFICE.

MAY A. KEELER, OF SAN FRANCISCO, CALIFORNIA.

ABDOMINAL SUPPORT.

Application filed October 24, 1918. Serial No. 259,514.

To all whom it may concern:

Be it known that I, MAY A. KEELER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Abdominal Supporters, of which the following is a specification.

This invention relates to an abdominal supporter.

It has been found by those wearing abdominal supporters of the classes commonly obtainable, that they have resulted in not only being inconvenient to apply but have also been quite painful to wear. This has been especially true of the cases where a supporter of this sort has been used to relieve floating kidneys and weakened conditions of the abdominal wall.

It is the principal object of this invention to provide an abdominal supporting appliance which will not only be simple and inexpensive in its construction but which may be readily applied and will act to effectively support and reenforce the weakened parts; at the same time allowing free movement of the body without restriction and also eliminating the pain incident to the use of most appliances of this sort.

In the drawings, Fig. 1 is a view in front elevation, disclosing the appliance as applied to the human body.

Fig. 2 is a view in elevation similar to Fig. 1, disclosing the manner in which the rear portion of the appliance is formed.

Fig. 3 is a view in elevation, illustrating one set of the front straps forming a part of the supporter.

Fig. 4 is an enlarged view in elevation, illustrating the manner in which the perineal straps are secured to the front of the appliance.

Fig. 5 is a view in elevation, illustrating the fastening rings for the rear ends of the perineal straps.

Referring more particularly to the drawings, 10 indicates a corset or girdle which may be formed with reenforcing ribs or may be otherwise designed to provide an abdominal encircling girdle.

As shown in the drawings a corset 10 is indicated, having separable front stays 11 and substantially parallel reinforced or strain stays 12. Connected to the front stays 11 are straps 13, which are either pinned through the fabric and disposed on

the outside of the stays, or may be permanently attached on the inner side of the stays 11 between the corset and the body. These straps 13 are preferably fitted with pins 14, by which they may be fastened in position. The straps are looped and carry at the lower ends, front straps or fasteners 15. As clearly shown in Fig. 3, these fasteners are in the form of a loop with a plurality of transverse bars and open portions A, B and C, through which the forward ends of the straps 16 may be interwoven as indicated in Fig. 4. The straps 16 are preferably formed of flexible rubber tubing and are therefore both sanitary and of a pliable nature so that they may be easily worn without abrading the surface of the skin over which they pass.

Connected to the back side of the corset are straps 17, and back buckles or fasteners 18 for the rear ends of the perineal straps. The straps 17 are spaced substantially midway between the side line of the hip and the back center of the corset as clearly shown in Fig. 2. The buckle fasteners 18, which are carried by the straps 17 are formed with a rectangular loop D, and cross bars with intermediate opening E and an end opening F, through which the rear end of a perineal strap may be interwoven, as shown in Fig. 5. Due to this peculiar construction of the buckles, the opposite ends of the perineal strap may be adjustably secured and the front ends conveniently tightened or loosened after the device has been applied to the body without the use of fastening tongues on the buckles. These buckles also afford means for readily removing the perineal strap and replacing it by others when it has become worn or for any other reason is to be discarded.

Wearers of abdominal supporters have greatly objected to that class of supporters in which the perineal straps connect directly with the front and rear portions of a corset or girdle at substantially the centers thereof. This has produced an excessive downward pull upon the hips and an unnatural pressure upon the spine. In order to transfer the strain from these points, strain straps 19 are provided and connected to the front of the corset, midway between the front stays and hip. These members are particularly shown in Fig. 3, where they will be seen to be provided with pins 14 by which they may be detachably secured in position.

The lower ends of each of the straps 19 are looped to receive a buckle 20. This buckle is adapted to receive a cord 21 which passes through the buckle and through the loop portion A of the buckle 15.

Due to the fact that the cord 21 is loosely tied, it may be tightened as desired and will, in that instance, draw the buckle 20 and the perineal strap buckle 15 toward each other. As shown in Fig. 1 of the drawing, the cord 21 will extend along the lower front line of the abdomen and may thus be used to maintain a pad in position against the wall of the abdomen in the event that extra pressure or reenforcement is desired. Due to the use of this strap 19 and the cord 21 along each side of the corset, the lower marginal edge of the front of the corset will be held down and at the same time the strain of the perineal straps will be transferred slightly around the hips and the waist of the wearer in the manner to hold the corset snugly against the body without the possibility of becoming displaced when the torso is twisted or relaxed.

In operation, front straps 13 and 19 are fitted to each side of the corset front. The straps 13 are preferably secured to the front stays in a temporary or permanent manner and the straps 19 are secured to one of the side stays in substantially the position shown in Fig. 1. The straps 17 may be connected at any desired point on the rear of the corset, which will most comfortably support the ends of the perineal straps and will permit them to more readily conform to the contour of the body. The perineal straps may then be connected to the buckle 18 by passing their free ends upwardly through the opening F from the underside and then downwardly through the opening E. The weaving is then continued upwardly through the loop D and back over the buckle and into the opening F. The end of the strap is then drawn upwardly through the opening E and extended downwardly through the loop D. This will cause it to assume the position shown in Fig. 5 in relation to the buckle 18. The perineal straps are then drawn forwardly between the legs and their forward ends then are extended upwardly through the opening C of the buckles 15. The straps are then threaded through this opening twice and carried around the side thereof to be brought up through the opening B. This is followed by a downward movement through the opening C and an upward movement thereafter through the opening B. The operation is completed by carrying the ends of the perineal strap through the loop portion A and permitting them to extend upwardly beneath the straps 13. The cords 21 may be then adjusted as desired and the application of the appliance will be complete. It will thus be seen that by the provision

of the present appliance, a firm, elastic, tight abdominal binder will be provided which will render steady, even and reliable support for the abdomen at all times. It will also be recognized that the appliance is especially of interest to those suffering with floating kidneys, as persons of this sort are usually thin and it is very difficult to provide a bandage which will remain in proper position or will hold a pad in place.

While I have shown the preferred form of my invention, it will be understood that various changes in the combination, construction and arrangement of parts may be made by those skilled in the art, without departing from the spirit of the invention as claimed.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. An abdominal supporter comprising a corset, straps secured to the front and back of said corset, at each side of a central line, elastic perineal straps, means upon the ends of the first named straps through which the ends of the perineal straps may be detachably and adjustably interwoven, and side connecting cords by which the downward pull of the perineal straps may be adjustably distributed to the corset.

2. An abdominal supporter including front straps connecting to and in line with the central uniting stays and descending below the lower edge of the corset, adjustable perineal straps formed of elastic, flexible material, means carried by the front straps by which the front ends of the perineal straps may be detachably secured to the corset, straps fixed to the rear of the corset midway between the hips and back center, means carried by said straps to detachably secure the rear ends of the perineal straps, and side connecting cords between the front and rear corset straps to transfer strains from the front to the sides of the corset.

3. An abdominal supporter comprising a corset having front central uniting stays, straps secured to each stay and substantially in line therewith, short straps fixed to the back of the corset between the center thereof and the hips, perineal straps extending from the front straps to the back straps, the perineal straps being adjustably secured to said straps and a second set of front straps secured to the front of the corset between the center thereof and the hips, and an adjustable connection between the last named straps and the perineal straps whereby the latter may be adjusted to the body.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

MAY A. KEELER.

Witnesses:

W. W. HEALEY,
M. E. EWING.