

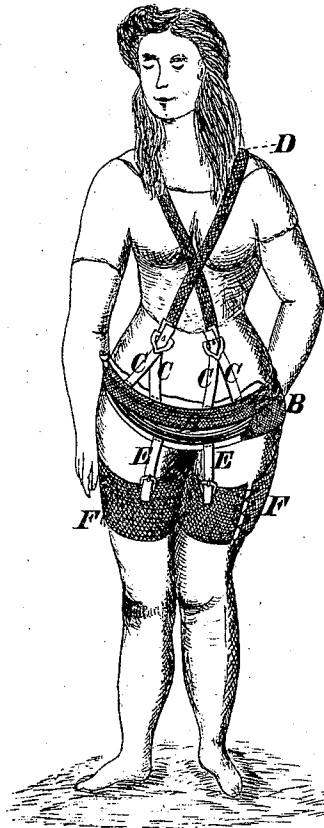
2 Sheets—Sheet 1.

F. H. SALE.
ABDOMINAL SUPPORTER.

No. 177,569.

Patented May 16, 1876

Fig. 1.



WITNESSES-

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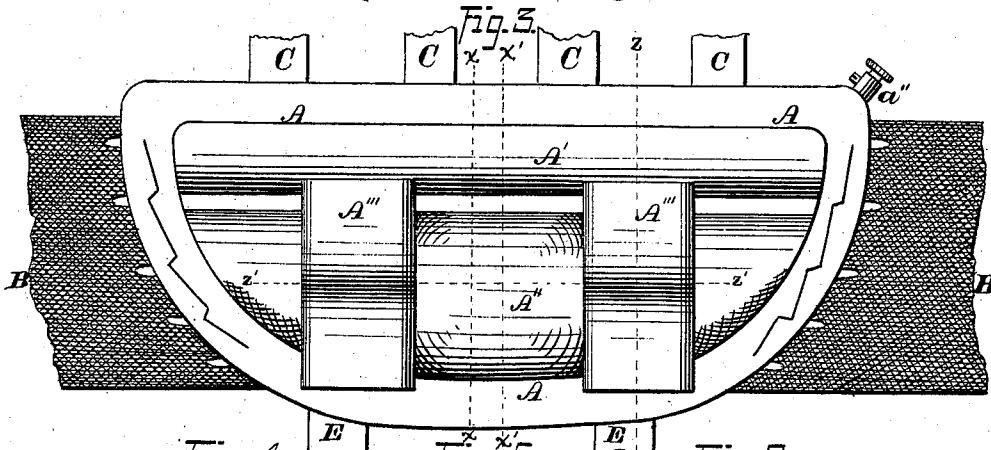
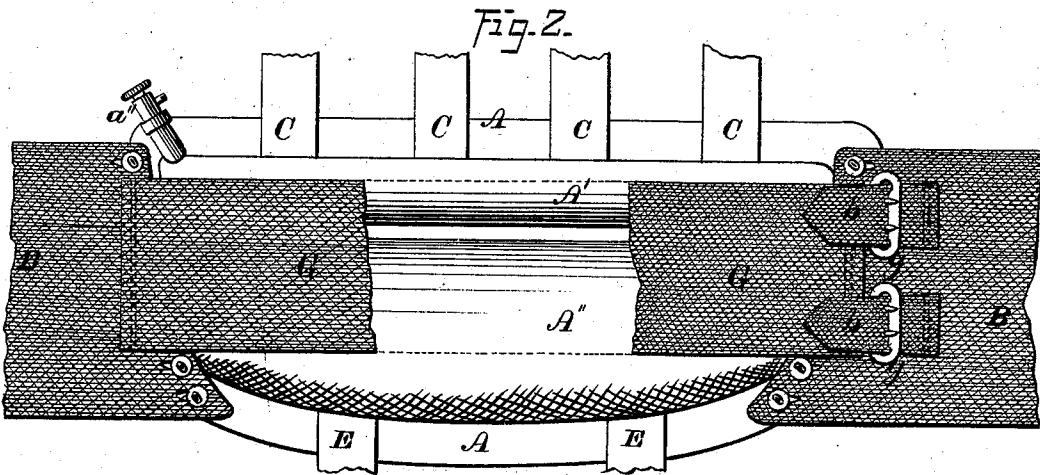


Fig. 4.

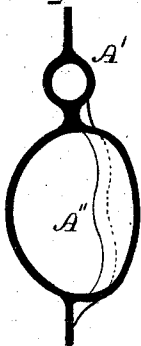


Fig. 5.

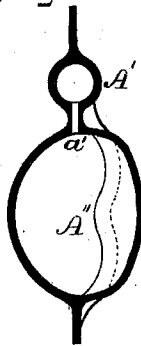


Fig. 6.

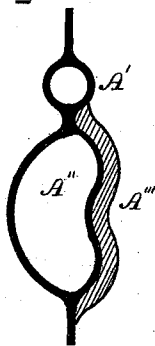
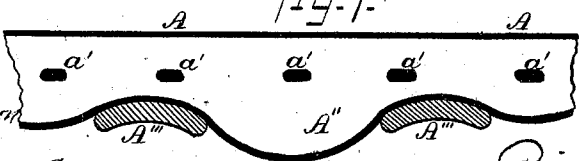


Fig. 7.



WITNESSES=

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UNITED STATES PATENT OFFICE.

FLEETWOOD H. SALE, OF DILLSBOROUGH, INDIANA.

IMPROVEMENT IN ABDOMINAL SUPPORTERS.

Specification forming part of Letters Patent No. 177,569, dated May 16, 1876; application filed January 18, 1876.

To all whom it may concern:

Be it known that I, FLEETWOOD H. SALE, of Dillsborough, in the county of Dearborn and in the State of Indiana, have invented certain new and useful Improvements in Abdominal Supporters; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 shows my improved apparatus in position upon a woman. Fig. 2 is an elevation of the front side of the cushion of the supporter. Fig. 3 is a like view of the rear side of the same. Figs. 4, 5, and 6 are vertical cross-sections of said cushion upon lines $x x$, $x' x'$, and $z z$ of Fig. 3; and Fig. 7 is a longitudinal section of the same upon line $z' z'$ of said figure.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to furnish an elastic and naturally-yielding support for the abdomen of women; and, to this end, it consists, principally, in a support provided with an air-cushion, which has an upper and a lower air-chamber that are connected by suitable passages, so as to cause the compression of either of said chambers to operate to distend the other chamber, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for causing said air-cushion to have an outward vertical curve, substantially as and for the purpose hereinafter shown. It consists, further, in the means employed for giving an inward longitudinal curve to said cushion, substantially as and for the purpose hereinafter set forth.

In the annexed drawings, A represents a pad or cushion, constructed of rubber in the general form shown by Figs. 2 and 3, and provided, between its front and rear walls, with an upper and a lower air-chamber, A' and A'' , respectively, which extend lengthwise of said pad, and are separated from each other by the union of said walls, as seen in Figs. 4 and 6. The upper chamber A' has about one-fourth the transverse dimensions of the lower chamber A'' ; and between the same are provided a number of small passages, a' and a'' , through which air may pass from one of said chambers to

the other, for the purpose hereinafter named. At a point midway between the center and each end of the air-chamber A'' , upon the inner side of the pad, is placed a strip of rubber, A''' , which has, preferably, a width of about two inches, and a thickness of about one-fourth of an inch, and, at its upper and lower ends, respectively, is secured to the lower side of the upper chamber A' , and to the lower edge of said pad below said air-chamber A'' , which strips A''' and A''' have such length as to cause said pad to curve outward vertically in a greater or less degree, the amount of such curve depending upon the pressure of air within said chambers, and upon the force exerted upon the upper and lower edges of said pad by the straps employed for securing the same in position. The pad or cushion, thus constructed, is provided with a suitable opening, a'' , for the introduction of air, and is secured to or upon the person of its wearer by the following-described means: Secured by buttons or other suitable means to each end of the pad A is a band, B, which has any desired breadth, and has such length as to enable it to be passed around the wearer, and its rear ends connected by lacings, or other equivalent means. Said bands, at their points of connection with said pad, are cut upon such an angle as to cause the latter to be drawn inward at its lower edge for the purpose of causing a greater pressure upon the abdomen at such point, and preventing the downward passage of the bowels into the space between the os pubis in front, and the prominence of the os sacrum in the rear. From the upper edge of the pad A four elastic straps, C and C, extend upward to, and are connected with, two bands, D and D, that extend over the shoulders of the wearer, which latter bands are connected at their rear ends to the upper edge of the bands B and B. The office of said straps and bands is to sustain the said pad, and enable the requisite upward pressure of the same to be exerted upon the abdomen of its wearer. The pad A is prevented from being drawn upward out of its position by means of two elastic straps, E and E, which are secured to its lower edge, and extend downward to, and are connected with, two bands, F and F, that are fitted around the thighs of the wearer.

The device thus constructed operates as follows: The pad A adapts itself to the shape of the abdomen of the wearer, and, as the abdominal muscles expand or contract during the operation of breathing, the air from one chamber will be partially expelled therefrom, and forced into the other chamber, so as to cause the former to be more or less flattened, and the latter to become more prominent, said operation being reversed as said muscles resume the first position, by which means a yielding but constant pressure is caused upon the parts in contact with said pad, which pressure automatically adapts itself to the requirements of the person. The strips A''' and A''' exert a constant but elastic force upon the upper and lower portions of the pad, and cause said pad to curve around and adapt itself to the vertical shape of the lower portion of the abdomen of the wearer, and to automatically follow the changes in form or position of her abdomen. In order that the pad may be caused to fit an abdomen which has greater or less prominence a band, G, is secured at one end to or upon one of the bands B near the end of the pad A, and extending across the face of the latter, has its opposite end connected with the second band B by means of straps and buckles b and g, respectively. As thus arranged, by shortening said band G a greater inward pressure will be exerted upon the central portion of the said pad, and the latter caused to fit a flat abdomen, while, by lengthening said band, said pad will be enabled to curve outward to a greater degree, in order that it may conform to the shape of a prominent round abdomen. In addition to the of-

fice before described, the strips A''' and A''' confine the lower cushion upon each side of its longitudinal center, and cause it to have unusual prominence at the latter point, the same being the portion of the pad which should exert the greatest pressure upon the abdomen.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In an abdominal support, a pad or cushion, constructed from elastic material, and provided with an upper and a lower air-chamber, which are connected by suitable passages, so as to cause the compression of either of said chambers to operate to distend the other chamber, substantially as and for the purpose specified.

2. In combination with the pad or cushion A, the elastic strips A''' and A''', placed vertically against its inner face, and having their ends secured to or upon the upper and lower portions of said pad, substantially as and for the purpose shown.

3. In combination with the pad A, provided with the bands B and B, the band G, placed longitudinally across the front of said pad, having its ends attached to or upon said bands, and arranged to be shortened or lengthened, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of January, 1876.

F. H. SALE.

Witnesses:

GEO. S. PRINDLE,
WILLIAM FITCH.