

No. 612,073.

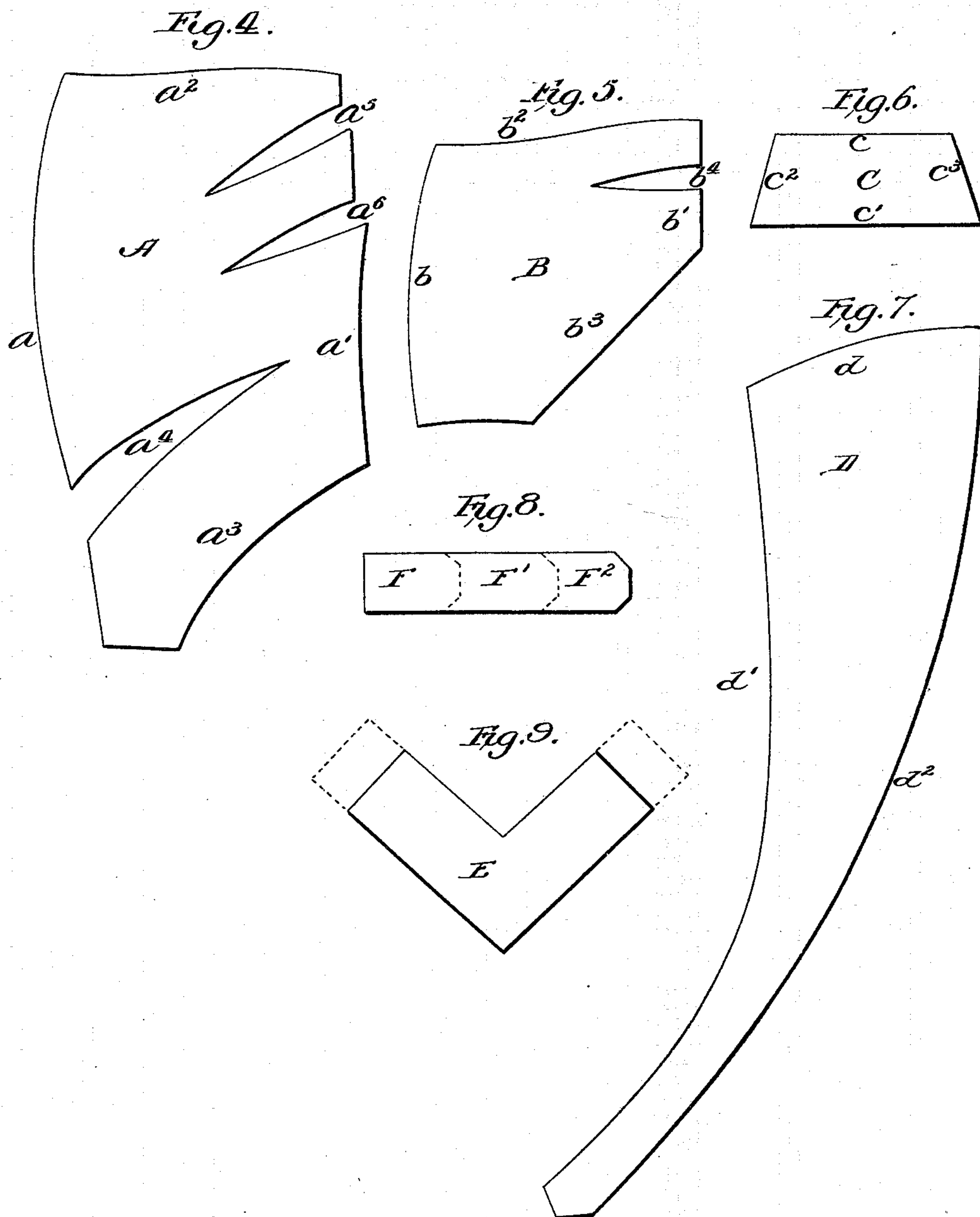
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M. A. WATSON.
ABDOMINAL BANDAGE.

(Application filed Apr. 29, 1897.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES

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ABDOMINAL BANDAGE.

SPECIFICATION forming part of Letters Patent No. 612,073, dated October 11, 1898.

Application filed April 29, 1897. Serial No. 634,466. (No model.)

To all whom it may concern:

Be it known that I, MATTIE A. WATSON, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Abdominal Binders or Supporters; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of an abdominal binder embodying my invention, the binder spread out showing the front thereof on the left hand and the sides and back on the right hand. Fig. 2 is an inner or back view of the front section of the binder, illustrating how the binder may be boned, if desired. Fig. 3 is a perspective view of the binder shown as if in position on the wearer. Figs. 4, 5, 6, 7, 8, and 9 are diagrams showing the patterns or forms of the several sections constituting the binder or supporter.

Like symbols refer to like parts wherever they occur.

Abdominal binders or supporters as heretofore constructed have been open to several serious objections, among which may be enumerated, first, the failure to perfectly adapt themselves to the form of the wearer and afford a firm and readily-graded support to the parts to be supported; second, when the requisite front depth has been obtained the depth at the sides and back has been necessarily excessive in order to properly support and sustain the front section by lacing or otherwise, and as a result thereof deep wrinkles would form at the waist-line to the great discomfort of the wearer, and, third, the difficulty experienced in applying, adjusting, and removing such binders from a patient, as well as the inability to obtain ready access to the person of the wearer, has almost precluded their use in surgical and obstetrical cases and caused the surgeon and obstetrician to return to the use of the old straight or plain bandage.

The object of the present invention is the production of a simple and efficient abdominal binder of a character which will readily adapt itself to the form of the wearer, will afford a firm and uniform support which can be graded to obtain the desired pressure or support at any given point or points, and will

therefore readily lend itself to the treatment of hernias—femoral, umbilical, or ventral—and can be readily removed and replaced in whole or in part to facilitate access to the person of the wearer for the examination or dressing of wounds of the abdomen or for other purposes.

To this end the main feature of my invention, generally stated, embraces the combination, with side and back sections, of a detachable front section provided with a series of lateral diagonally-arranged darts, whereby the required fullness is produced and the side depth reduced, and a series of strap connections for uniting the front and side sections, whereby an abdominal binder or supporter deep at the front and shallow or narrow at the back is obtained and the drawing or strain from the front of the binder is concentrated at the waist-line at the back of the binder, thus rendering the abdominal support uniform, avoiding wrinkling of the binder, and insuring a proper fit at the sides thereof.

There are other minor features of invention, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

The binder, considered as a whole, may be said to be composed of seven sections, of which 1 1^A constitute the front of the binder or support, 2 2^B the side backs, 3 the center back, and 4 4^D the limb-straps or limb-eyes, which parts or sections are either permanently united or detachably united, as at the sides, by a series of straps, as will hereinafter appear. The sections above enumerated are, however, except as to the center back section 3, counterpart rights and lefts, and therefore but four patterns, which are marked A, B, C, and D, (see Figs. 4, 5, 6, and 7,) are all that are required, the general dimensions being changed for the required sizes of binder, while the outline or configuration will remain the same, except that in cases of a binder with which a femoral pad is to be used the front section A will be somewhat lengthened.

The material employed in making the binder will preferably be fine ducking, fine drilling, silesia, or equivalent washable fabric of a firm non-elastic quality which will properly support the wearer and not give way under undue strain on the straps.

The pattern A, as will be noted, has a convex front edge a , a slightly-concave rear edge a' , of less length, united above by the straight waist edge a^2 and below by the curved lower edge a^3 , and said section A is deeply notched or cut out on converging lines below from the front or convex edge a , as indicated at a^4 , and in like manner above and from the rear concave edge a' , as at a^5 and a^6 , which notches produce the dart seams of the front section of the binder, as will hereinafter appear.

The second pattern B has a convex front edge b , of considerably-less length than the rear edge a' of section A, and a rear edge b' of less than half the length of its front edge b , the two connected above by the curved waist-line b^2 and below by the diagonal line or lower edge b^3 , to which latter edge the upper edge of the limb-strap or limb-eye D is secured. A notch b^4 extends forward from the rear edge b' of the section B to constitute the waist-dart in the finished binder.

The third pattern C is a narrow band having the parallel top and bottom edges c c' and converging ends c^2 c^3 of general trapezoidal shape, and in the finished binder it constitutes the center back 3, while the fourth pattern D is a tapering strap, wide above at the convex edge d —say five and one-half inches—where it unites with edge b^3 of pattern B, and tapering by a concave front edge d' and convex rear edge d^2 to a strap somewhat more than an inch in width, said section measuring about two feet, more or less, in length and constituting the limb-straps or limb-eyes 4 4^D of the finished binder.

The triangular pattern E forms the front and rear napkin-loops, and the several patterns F, F', and F² form the side buckle and front straps of the completed binder, the dotted lines in both of said figures indicating the different lengths required in straps and loops.

In constructing the binder the several sections 1 1^A, 2 2^B, 3, and 4 4^D having been shaped in general accordance with the patterns A B C D in duplicate—once to form rights and lefts where required and again in duplicate to obtain a double thickness of material in the finished binder—the notches a^4 , a^5 , and a^6 are closed to form the groin-darts 1⁴, which will be about two and a half (2½) to three (3) inches above the bottom of the binder, and the lateral or side darts 1⁵ and 1⁶, which will be about two (2) to two and a half (2½) inches apart, the lower or groin dart extending upward and backward from the convex edge a and the lateral darts downward and forward from the concave rear edge 1^a. The sections 1 1^A are then united on the median line or along the convex line a , down to a point x just at the top of the pelvic bones, below which the sections 1 1^A retreat or diverge, forming the triangular opening X, and thus a binder-front is finally obtained having the required fullness over the hypogastric region, with the slack taken up at the sides and over

the pubes, said binder having a deep front—say twelve inches—along the median line reduced considerably at the sides—say to nine inches—where the side straps are secured. The second patterns B B are then duly connected with the fourth patterns D D, the waist-notches b^4 having been closed to form the waist-darts 4^b (see Fig. 1) and cause the side backs 2 2^B to conform to the incurve of the back of the wearer, after which the side backs 2 2^B are united by the center back 3.

In order to increase the strength of the limb-straps or limb-eyes 4 4^D at that point where they are subjected to the greatest strain and are liable to wrinkle, the material is laid in a narrow fold, (see Fig. 1,) stitched twice, and inclosed by a sheath d^4 , formed of a double thickness of the material cut diagonally of the cloth and folded and stitched to present a smooth surface to the groin of the wearer, and thus avoid wrinkling of the strap and chafing of the person of the wearer.

The several sections 1 1^A having been permanently united to form the front of the binder, and the sections 2 2^B, 3, and 4 4^D having been permanently united to constitute the side backs, limb-eyes, (or limb-straps,) and center back of the binder, the side fronts and side backs are detachably united by means of a series of diverging straps f f f , permanently attached to the side backs, and a series of short straps (or buckle-tabs) f' f' f' , secured to the binder-fronts 1 1^A a short distance back of the side edges of said front, so that in case buckles f^2 f^2 or like metal fastenings are employed the lap of the front will prevent any chafing or annoyance therefrom.

It will be noted (see Fig. 1) that the side edges of the front section are slightly concave, while the front edges of the side backs which face the same are slightly convex, which construction allows of the divergence of the side straps and the separation of the buckles or other fastenings, and while it permits the side straps f f f to adapt themselves to the sides of the wearer also causes all strains or drafts on the front of the binder to converge and be taken up by the narrow center back 3.

In order to take up any unusual slack at the pubes or to apply graded pressure at such point, if desired, a pubic strap P and buckle or equivalent means of adjustment are provided.

L L indicate short straps placed on the binder-front below the groin-darts 1⁴ and provided with buckles or suitable means for detachably securing the free ends of the limb-straps or limb-eyes 4 4^D.

M M' indicate triangular straps or napkin-supports, the rear one of which, M', is somewhat longer than the front and is attached by its ends to the side backs 2 2^B just above the seams which unite the limb-straps or limb-eyes 4 4^D to the side backs 2 2^B, while

the front or shorter support M is secured by its ends to the front sections 1 1^A just below the groin-darts 1^A 1^A.

In case the binder is to be boned (see Fig. 2) to afford greater support I place tape end caps *e' e'* over the mouths of the bone-pockets *e e*, into which the upper ends of the bones will fit themselves and by means of which the bones will be kept in place, and to provide for the use of hernia-pads I work at any required point a series of four or more eyelet-holes *i i*, and having secured together at right angles two pieces of tape *t t* of suitable length and rolled the free ends thereof into points, fastening the same by a button-hole-stitch, I pass the ends of the tapes through the eyelet-holes and tie the tapes on the outside of the binder-front, thus securing the hernia-pad against displacement and insuring the required pressure at the desired point.

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

1. An abdominal binder or supporter, composed of a front section having a series of lateral and diagonally-arranged darts, side back sections, and a series of side straps, whereby the front and side back sections are adjustably connected, substantially as and for the purposes specified.

2. In an abdominal binder or supporter, the combination with a center back and side back sections, of a front section composed of side front sections each of which is provided with a groin-dart and diagonally-arranged lateral darts, said side front sections having convex edges by which they are united, and side straps for adjustably connecting the side fronts with the side backs, substantially as and for the purposes specified.

3. In an abdominal binder or supporter, the combination with a center back and side back sections, of a front section composed of front side sections united by convex adjacent edges each of said side fronts having a groin-dart and diagonally-arranged lateral darts, a series of side straps for adjustably connecting the side fronts to the side backs, and an adjustable pubic strap, substantially as and for the purposes specified.

4. In an abdominal binder or supporter, the combination, with a center back, side backs, and limb-straps, of side fronts united on the median line by their convex edges, each of said side fronts provided with a groin-dart and diagonal lateral darts, a series of side straps for adjustably connecting the side fronts and side backs, and means for detachably connecting the free ends of the limb-straps with the side fronts, substantially as and for the purposes specified.

5. In an abdominal supporter, the combination with a center back and side back sections, of limb-straps connected to the side back sections, a front section having independent detachable connections with the side back sections, said front section having a notch below and at its center, front and rear napkin-loops, and means for detachably connecting the free ends of the limb-straps with the front section below the front napkin-loop, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 19th day of April, 1897.

MATTIE A. WATSON.

Witnesses:

LOUISE E. VOLK,
Mrs. JOSEPH H. MAYOU.