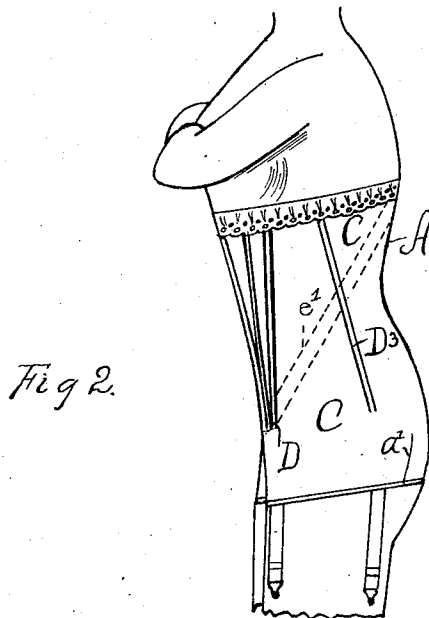
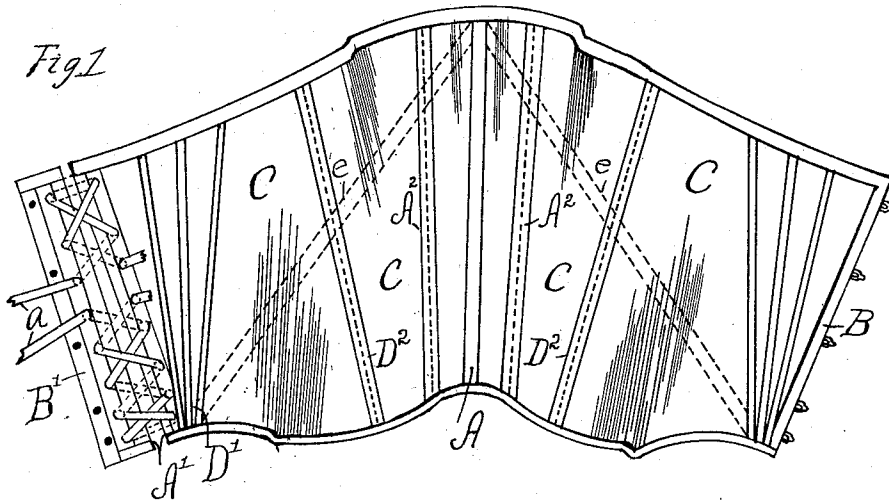


M. M. FRANKLIN.
BODY SUPPORTER.
APPLICATION FILED JAN. 17, 1912.

1,049,692.

Patented Jan. 7, 1913.
2 SHEETS—SHEET 1.



Witnesses.
A. V. Wilson
Wells Goodhue

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Margaret M. Franklin
By *James K. H. H. H.*

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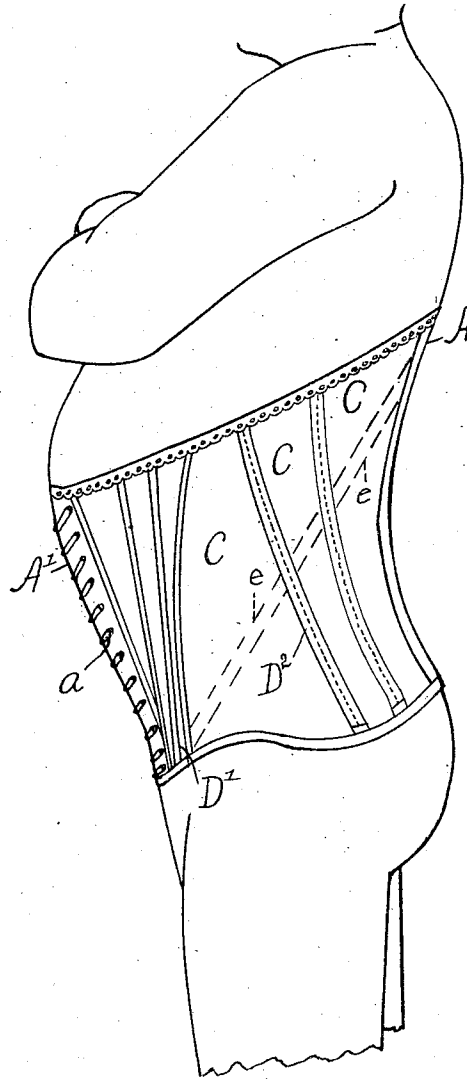


Fig. 3.

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Inventor:

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By

John H. [Signature] Atty.

UNITED STATES PATENT OFFICE.

MARGARET M. FRANKLIN, OF CHICAGO, ILLINOIS, ASSIGNOR TO FRANKLIN WARD-ROBE CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BODY-SUPPORTER.

1,049,692.

Specification of Letters Patent.

Patented Jan. 7, 1913.

Application filed January 17, 1912. Serial No. 671,752.

To all whom it may concern:

Be it known that I, MARGARET M. FRANKLIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Body-Supporters, of which the following, taken in connection with the drawings, is a description.

My invention has for its object the production of a mechanical support designed to be used in the treatment of splanchnoptosis and all medical and surgical cases requiring a support for any cause whatsoever.

This support is so designed and constructed that the lines of traction in the support correspond with the lines of traction of the recti-muscles and the external obliques of the body.

My invention is also so designed and constructed that the principal features thereof may be incorporated in the construction of a corset, combining the corset and supporter in one garment when it is to be worn by a woman.

It has been found that to correctly support the visceral contents of the abdomen the point of support in the supporting garment must be higher than the waist line at the back; the back must be rigid and the front adjustable; the material out of which the support is made must be non-elastic and have no bias seams across the abdomen; there should be no inward curve at the waist line anterior to the iliac crests, and no narrow strip or waist line belt should be incorporated in the garment; the support should be properly boned or stiffened with the front bones parallel at the center, and the adjacent bones should spread apart at the top of the support and converge toward the center at the bottom thereof; the side bones should slant backwardly so that the lower ends thereof will be posterior to the iliac crests; the back must be curved so that it will induce a normal poise.

The objects of my invention are to produce a supporter which will embody all of these necessary requirements and which will supplement or take the place of the action of the abdominal recti and the external obliques, which give traction in the support of the abdomen, and so hold the structure that the pelvis will tend always to assume its normal position.

With the human body in a correct stand-

ing position the symphysis pubis is directly beneath the center of the abdominal cavity and forms the natural bony support of the abdomen. As the plane of the pelvic inlet approximates the horizontal the center of visceral gravity is shifted into the pelvis, and as it approaches the perpendicular, the weight of the viscera is thrown upon the recti muscles. This invention is therefore designed to act as a support or to replace the function of the recti-muscles and the external obliques, and not the transversalis or the internal obliques; therefore the lines of traction in this device are in the direction of the action of these particular muscles. It is well known that the external obliques gain their fundamental support from the upper part of the vertebral column, and the upper fibers thereof rising from the ribs which communicate the traction to the vertebrae.

In the drawings Figure 1 is a plan view of the simplest form in which the supporter may be constructed; Fig. 2 illustrates the support embodied in the construction of a corset applied to a female figure; Fig. 3 illustrates the support shown in Fig. 1 applied to a male figure.

Referring for the present description more particularly to Fig. 1, A represents the center back of the support and A' the center front. The back of the support A is rigid from top to bottom, and as will be observed is considerably higher than in front. The support is maintained rigid vertically by the use of bones or steels inserted in the garment in the usual manner. This forms the posterior median portion of the support and is the foundation for the lines of traction hereinafter referred to.

A' is the center front of the garment and is provided with the laces *a* for adjusting the support, in the same manner as the front lace corset. B and B' are the hook and clasp steels respectively, and are preferably arranged to close at the right of the lacing strips.

The body portion of the support C is made of any strong non-elastic material suitable for the purpose, and in designing and cutting the support or corset from the material, particular attention is paid to the seams so that there shall be no bias seams over the abdomen. The bones or steels are so arranged that they conform to the lines

of the muscles they are intended to supplement. The boning adjacent to the front steels are brought close together at the bottom as at D, D', and spread upwardly and outwardly in the umbilical region, forming a triangle with the base upward. At the side of the basic angles of this triangle, one or more stiff side steels D², D³ extend downwardly and backwardly, posterior to the iliac crests. When a person having on one of these supporting garments is in sitting position, the buttocks will push backward upon the lower portion of these side steels D², D³, thrusting their upper ends, together with the base of the anterior triangle, away from the chest wall. This causes the posterior upper portion of the appliance to cling closely to the body, while the support over the pubic region is further reinforced by the inward pressure upon the lower point of the triangle. It is very important that these side steels should be placed at the angle shown in the drawing and above described, or the wearer will have trouble in maintaining the same in proper position and they would cause pain at the points where the steels pass over the iliac crests.

In the use of these supporters for the treatment of splanchnoptosis it is very important that the wearer should have a correct poise. The angle of the plane of the pelvic inlet determines whether the center of gravity of the abdominal viscera passes through the symphysis pubis. If the symphysis is tilted upwardly as it is when the vertebral column is rounded backward then the center of visceral gravity passes into the pelvic inlet and increased pressure is exerted upon the pelvic floor. If the symphysis is depressed, the abdominal gravity center becomes anterior to the symphysis, adding a further strain to the recti muscles. To avoid these difficulties, the back A of the support is so shaped that the spine will assume its normal contour, and the pelvis will then assume its proper angle, providing no bony deformity exists. The front bones or steels D and D' should reach just to the pubic crests, and the bones or steels D² and D³ adjacent to them should be short enough so that they will not press into the groin when the wearer is sitting. The posterior boning A, A² consists of vertically placed bones or steels which serve to stretch the support longitudinally preventing the area of pressure from accumulating at the waist line by distributing it to the dorsal and sacral regions. When the support is used also as a corset, the lower part or skirt is made long enough posteriorly to reach the gluteal folds, and is provided with a dart a' extending upwardly from the bottom of the garment, to allow it to conform more closely to the body of the wearer. When the wearer is in a standing position, this skirt is re-

laxed and exerts no force whatever upon the support, but when in a sitting position, the skirt becomes an important factor. The skirt is then filled out and counteracts the upward and forward pressure exerted by the thighs. This prevents the entire garment from sliding up, and will keep the pelvic portion in continuous contact with the abdomen. If the support is to be worn instead of a corset, this feature need not be considered, because the belt should not extend below the Poupart's ligament, hence there is no upward and downward pressure by the thighs when sitting. Whether the garment is a support or corset, the back thereof should be as high as in the corset, no matter how low it may be in front.

In applying the support to the patient in the treatment of splanchnoptosis it is essential that the support be adjusted with the patient in the Trendelenberg position, thus allowing the internal organs of the body to assume a natural position. The support is then hooked together and laced so that the point of concentrated pressure by the support will be directly above the symphysis pubis, gradually diminishing toward the umbilicus, above which there should be no pressure at all upon the anterior wall of the abdomen. Mechanically, the most pressure will be produced at the point where the lacing is drawn tightest. The pubic region being a small area in comparison with the area of the back and hips, it is obvious that the pressure exerted over the pubic region is greater than the same pressure distributed over the wider area of the spinal region. Therefore with the adjustment in front the point of concentrated pressure may be placed where it is most needed. It will thus be seen that in this support the lines of traction extend diagonally between the upper center of the back and the lower center of the front as shown by the dotted lines e, e' and will, with the adjustment above described, at all times relieve the strain upon the lower pelvic region, allowing the patient freedom of movement of the entire body, the mechanical support performing the natural functions of the external oblique and the recti-muscles.

The height of the front of the garment when constructed as a corset is a matter of choice with the individual.

In the construction of the supporter as above described there is no compression at the front of the garment above the umbilicus. This is avoided by three important features of construction of this support, first, the vertical lines on which the garment is constructed preventing any definite waist line, or inward curvature, from exerting an inward and downward pressure; second, the arrangement of the front steels at each side of the center of the support,

which steels are spread apart at the top and converge toward the center at the bottom of the garment; third, the diagonal position of the side steels which extend from the upper forward portion of the garment backwardly toward the rear thereof. By this construction the support has both compression and traction distributed exactly where needed; the arrangement of the steels causing the garment to extend away from the body above the umbilicus and thereby preventing any downward pressure in the viscera.

I claim:

1. A body support constructed of non-elastic material, posterior bones extending vertically from the top to the bottom of the support, anterior bones arranged upon angles converging toward the lower center of the support, and side bones extending at an angle from the upper portion of the garment downwardly and rearwardly to a

point posterior to and below the iliac crests, substantially as described.

2. A body support comprising a garment adapted to encircle the abdominal portion of the body and being higher at the back than at the front thereof, vertical center back steels extending a greater distance above the waist line than below it, front steels converging toward the lower center of the support, and steels extending diagonally from the upper portion of the support downwardly and rearwardly to a point posterior to and below the iliac crests, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MARGARET M. FRANKLIN.

Witnesses:

MARGARET A. HARROLD,
FLORENCE E. HAEGG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."