No. 639,072. Patented Dec. 12, 1899.

M. LYONS.

BODY BRACE.

(Application filed Nov. 5, 1898.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.

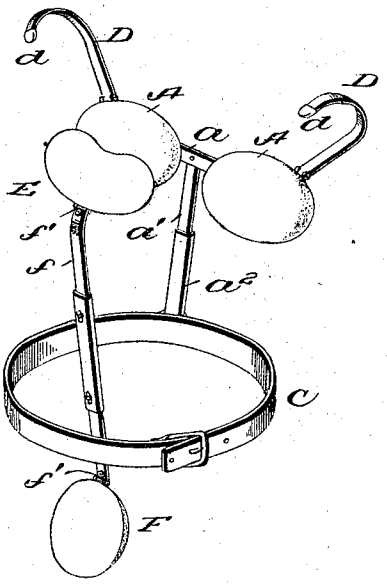


FIG. 2.

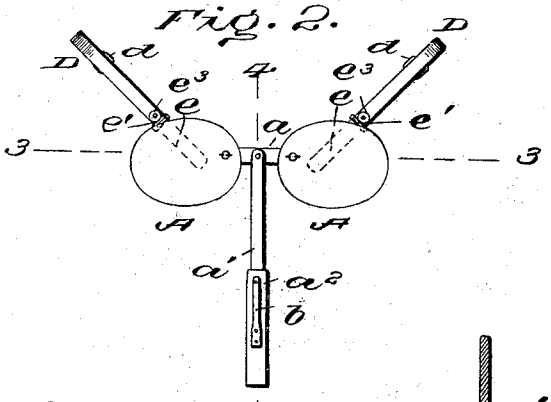


FIG. 3.

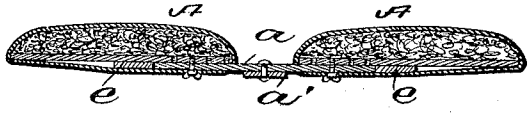
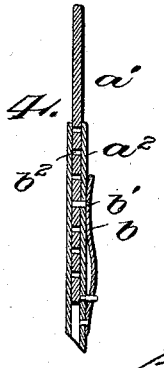


FIG. 4.



Witnesses

Inventor

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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M. LYONS.

BODY BRACE.

(Application filed Nov. 5, 1898.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 5.

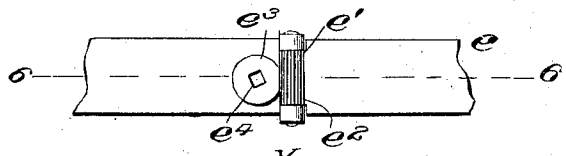


Fig. 6.

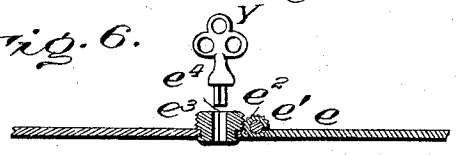


Fig. 7.

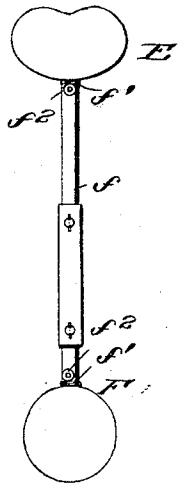


Fig. 8.

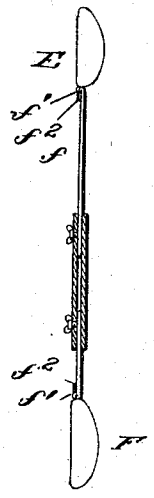


Fig. 9.

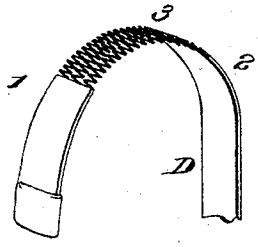
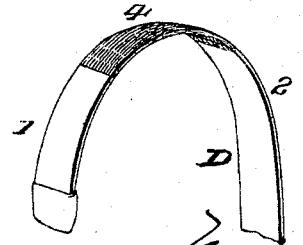


Fig. 10.



Witnesses

Inventor

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MARY LYONS, OF NEW YORK, N. Y.

BODY-BRACE.

SPECIFICATION forming part of Letters Patent No. 639,072, dated December 12, 1899.

Application filed November 5, 1898. Serial No. 695,547. (No model.)

To all whom it may concern:

Be it known that I, MARY LYONS, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Body-Braces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention contemplates certain new and useful improvements in body-braces.

The object of the invention is to provide a brace which will insure to the wearer the proper hygienic position of the body by throwing back the shoulders and prevent protrudence of the abdomen.

A further object is to provide means for regulating the tensions and positions of the parts and insure perfect contact with the body and also render the brace applicable for use by different persons.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective. Fig. 2 is a rear view of the shoulder pads and braces. Fig. 3 is a horizontal sectional view on line 3 3, Fig. 2. Fig. 4 is a sectional view on line 4 4, Fig. 2, with parts broken away. Fig. 5 is an enlarged view of one of the hinges. Fig. 6 is a sectional view thereof on line 6 6. Figs. 7 and 8 are front and longitudinal sectional views of the breast and abdomen pads. Figs. 9 and 10 are views of slight modifications of the shoulder-braces.

Referring to the drawings, A designates two pads, which are connected together by a horizontal cross-piece *a*, which may be so constructed as to be adjustable. In this way the two pads may be made to fit squarely against the shoulder-blades of persons of different sizes. Depending from this cross-piece is a bar *a'*, which is held by a pivot. This bar is rendered extensible by a sliding section a^2 thereof, which is held to the bar proper by a spring-plate *b*, having a lug *b'* at its free end. This spring-plate is fast at one end to the outer face of the section a^2, and its lug projects through a hole in said section and is designed to engage any one of a series of holes b^2 in bar *a'*. In practice the lower end of bar *a'* fits in a belt C, which is passed around the wearer's waist.

D D designate two shoulder-braces, which at their inner ends are hinged to pads A. These braces may be made of thin springy metal or any other suitable material and are so bent or curved that they will extend over and engage the shoulders of the wearer. A small pad *d*, such as a piece of leather, incloses the extreme end of each brace. The pads being placed against the shoulder-blades and the ends of the braces against the fronts of the shoulders, the wearer is made to assume a perfectly erect position, with the shoulders well thrown backward.

As different degrees of pressure are requisite for different persons or at various stages in the treatment of any one person, each shoulder-brace is capable of being positioned at various angles relative to the pad to which it is secured. Each brace at its inner end is hinged to a short plate *e*, fast within the pad A. The central barrel *e'* of this hinge, which barrel is preferably the turned-over end of plate *e*, is formed with a series of exterior grooves or threads e^2, extending longitudinally thereof. With this threaded barrel engages the threaded periphery of a small disk or wheel e^3, mounted on the brace proper. By inserting a key Y in a central squared opening e^4 of this wheel the latter may be readily turned, and being in engagement with the threaded barrel of the rigidly-held plate *e* the brace will be caused to turn on its hinge and assume any desired angle or pitch relatively to the pad. Into whatever position it is thus brought the brace will be held as against turning on its hinge, the wheel e^3 serving as a lock.

If desired, for the purpose of providing for a varying tension on the shoulders and to permit of the free movement thereof in addition to the yielding of the brace, each brace may be made as shown in Figs. 9 and 10. The brace is shown in Fig. 9 as being composed of two sections 1 and 2, united together by an elastic or yielding section 3, such as a series of coiled springs similar to those employed in certain forms of suspenders, while in Fig. 10 a section 4 of rubber is substituted for the coiled springs.

E designates a breast-pad, and F an abdomi-

nal pad, which are mounted, respectively, on the upper and lower ends of an extensible bar *f* by means of adjustable hinges *f'*, similar in every respect to the hinges by which the shoulder-braces are united to the shoulder-pads. Each hinge has its complementary adjusting and locking wheel f^2, by turning which the pitch or inclination of the two pads may be regulated to suit the figure of the wearer. Both pads normally project inwardly at an angle to their supporting-bar, the upper pad being against the breast of the wearer, while the lower pad presses inwardly against the abdomen. In this way the wearer of my brace is caused to assume the proper hygienic position—the shoulders well thrown backward and the abdomen held in. The bar of the front pads is held in place by the belt C, which is buckled tight around the wearer's waist.

This body-brace is designed, primarily, for temporary use around the house for a specified period each day until the body of the wearer has been made to assume the proper upright position.

A brace such as is herein described has most superior advantages, and by means thereof rounded or stoop shoulders, hollow chests, and protruding abdomens may be readily and effectively cured.

I claim as my invention—

1. The body-brace herein described, comprising two pads connected together and designed to bear against the shoulder-blades of the wearer, shoulder-braces projecting diagonally upward from such pads and having forwardly and downwardly bent curved portions designed to extend over and engage the fronts of the shoulders, and means for regulating the tensions of the shoulder-braces, substantially as set forth.

2. The body-brace herein described, comprising two pads connected together and designed to bear against the shoulder-blades of the wearer, shoulder-braces extending diagonally upward from such pads and having forwardly and downwardly bent curved portions designed to extend over and at their forward ends engage the fronts of the shoulders, and means for setting said shoulder-braces at different angles relatively to said pads, substantially as set forth.

3. The body-brace herein described, comprising two pads designed to bear against the shoulder-blades of the wearer, yielding shoulder-braces secured to said pads and having forwardly and downwardly extended hooked portions, and means for regulating the tensions of the shoulder-braces, substantially as set forth, said braces being designed to extend over and engage the fronts of the shoulders, as stated.

4. A body-brace having two pads for the shoulder-blades, bent or hooked shoulder-braces projecting from such pads, hinges uniting said braces and pads, comprising an exteriorly-threaded barrel, and a disk or wheel having peripheral threads engaging said threaded barrel, substantially as set forth.

5. The body-brace herein described comprising two pads designed to bear against the shoulder-blades of the wearer, an adjustable connection between said pads, and shoulder-braces extending from said pads having forwardly and downwardly bent or curved portions designed to engage the fronts of the shoulders, substantially as set forth.

6. The body-brace herein described comprising two pads designed to bear against the shoulder-blades of the wearer, an adjustable connection between said pads, shoulder-braces extending from such pads and having bent or curved portions designed to engage the fronts of the shoulders, and means for adjusting and holding said shoulder-braces in fixed relations to said pads, substantially as set forth.

7. The body-brace herein described comprising two pads designed to bear against the shoulder-blades of the wearer, shoulder-braces extending from said pads and designed to pass over and engage the fronts of the shoulders, means for regulating the tensions of the shoulder-braces, a connection between said pads, an extensible bar pivoted to and depending from said connection, and a belt, designed to encircle the wearer's waist, for engaging and holding said bar, substantially as set forth.

8. A body-brace having two padded members designed to bear against the shoulder-blades of the wearer, braces for the shoulders designed to extend over and contact at their ends with the fronts of the shoulders, chest and abdominal pads, means for increasing or lessening the bracing force of each pad, supports for said pads, and means for engaging and holding said supports to the body of the wearer, substantially as set forth.

9. The body-brace herein described, comprising an upright bar designed to extend over the chest and abdomen of the wearer, pads on the upper and lower ends of said bar, two pads designed to bear against the shoulder-blades of the wearer, a connection between said latter pads, shoulder-braces secured to said latter pads and designed to extend over the shoulders of the wearer, a bar depending from said connection between the shoulder-pads and having an extensible section, and a belt or strap designed to engage both of said bars when encircling the wearer's waist, substantially as set forth.

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

MARY LYONS.

Witnesses:
OWEN WARD,
SAMUEL AMES.