

H. M. POWERS.
 BODY BRACE.
 APPLICATION FILED APR. 21, 1910.

975,454.

Patented Nov. 15, 1910.

Fig. 1.

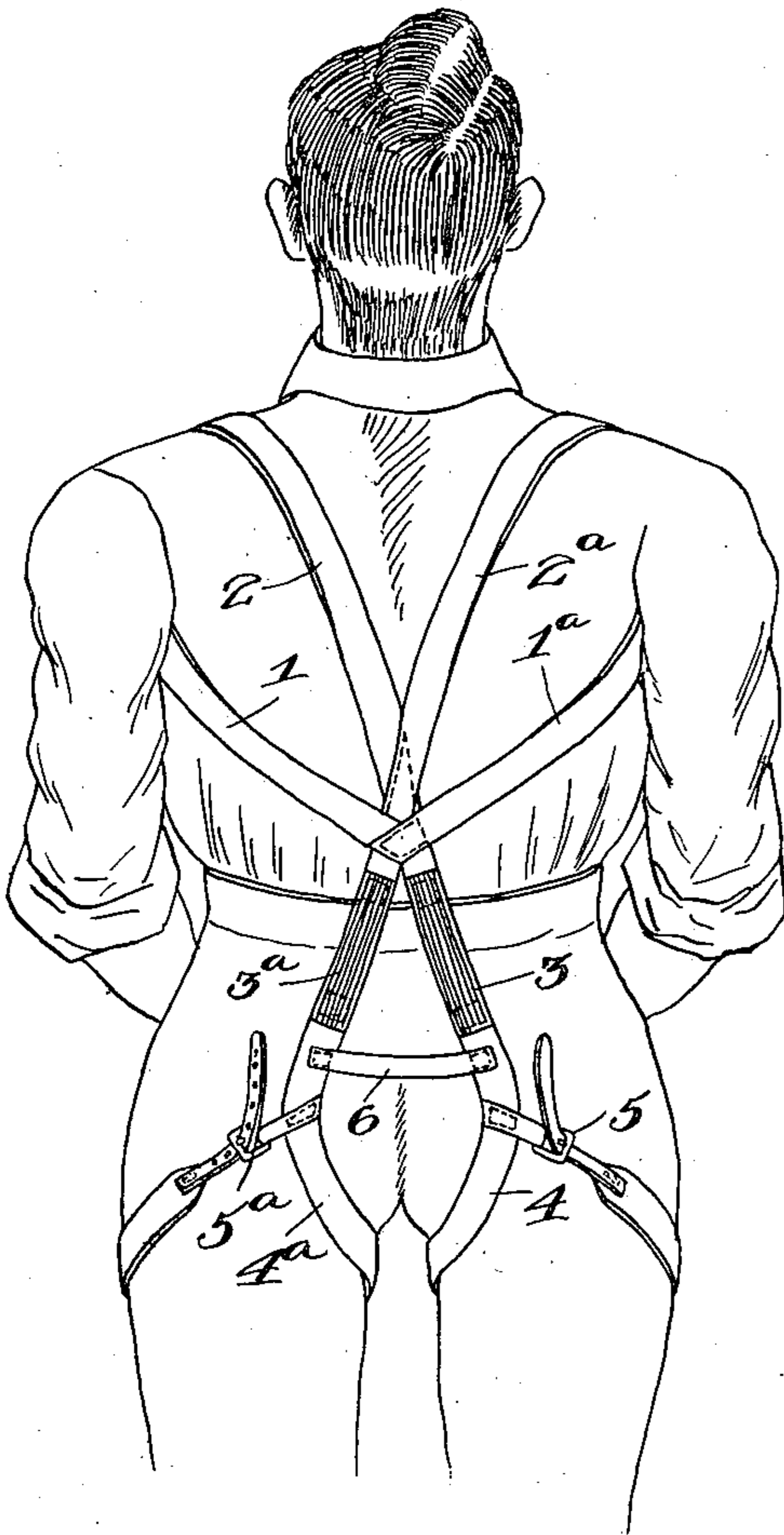
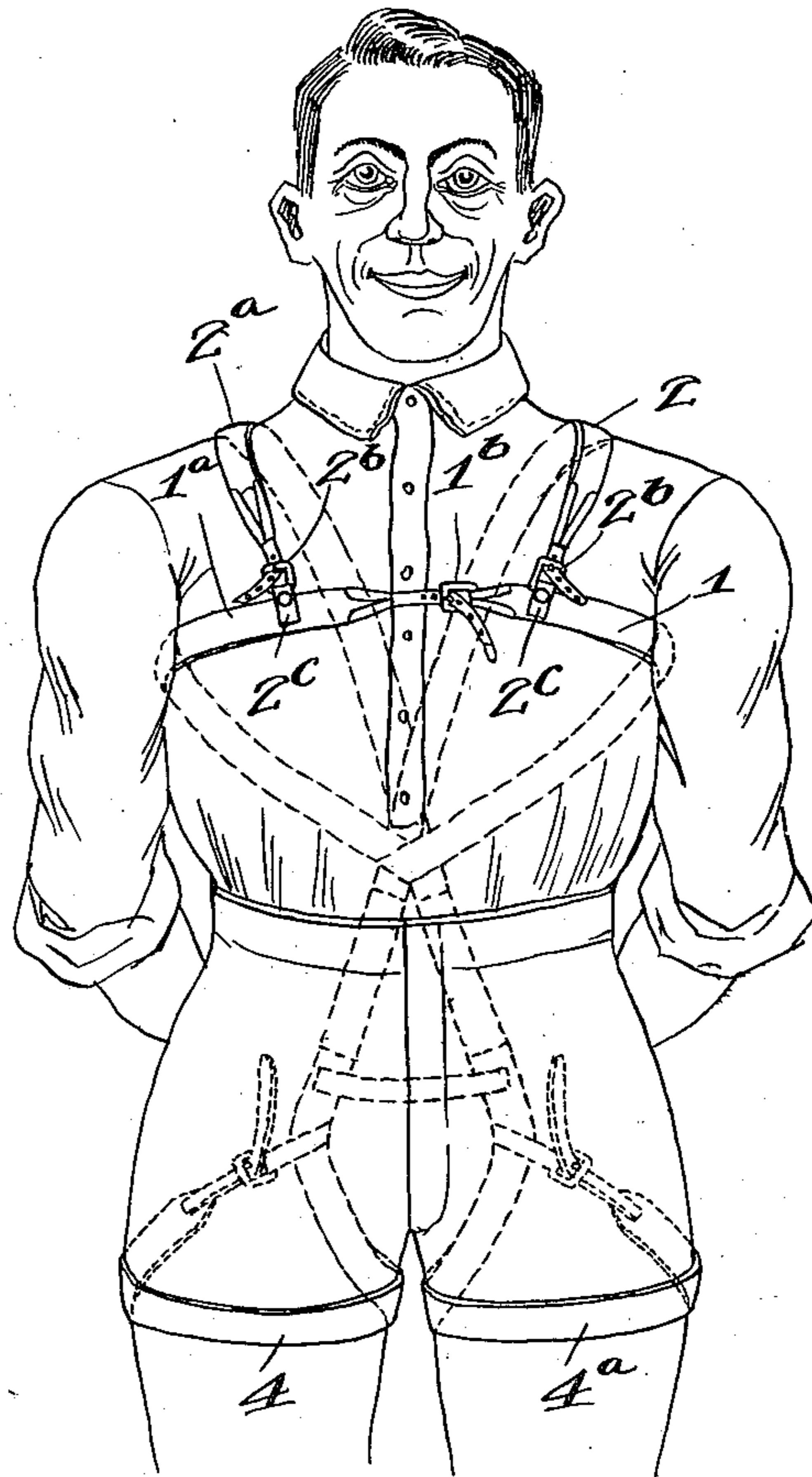


Fig. 2.



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HARRY M. POWERS, OF BALTIMORE, MARYLAND.

BODY-BRACE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY M. POWERS, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented new and useful Improvements in Body-Braces, of which the following is a specification.

This invention relates to improvements in body braces, and more particularly to an arrangement of straps and elastic members to support the back.

It is the object of this invention to provide a brace of this character comprising members encircling the thighs of the wearer connected by elastic members to straps which pass about the body under the arms and over the chest, and straps connected to the elastic members passing over the shoulders to the portion encircling the chest. The advantages of such a body brace are obvious when worn by a person whose occupation requires the wearer to remain in a stooping position for a protracted time. The elastic connection between the thigh straps and the chest and shoulder straps removes the strain upon the back and the straps passing over the shoulders being connected by the elastic member to the straps encircling the opposite thighs remove the strain from the back when the wearer in the stooping position swings his body from side to side as in the case of a locomotive fireman, who remains for hours at a time in a stooping position shoveling coal from the tender into the fire box.

While the preferred form of the invention is illustrated upon the accompanying sheet of drawing, yet it is to be understood that minor detail changes may be made without departing from the scope thereof.

Figure 1 is a rear view illustrating the application of this brace. Fig. 2 is a front view illustrating the application of this brace.

This device comprises three separate and distinct sets of straps which secure it in position upon the body, and each particular set accomplishes a separate and distinct result. One set of straps 1 and 1^a are united at the small of the back and extend around under the arms and are adjustably secured over the chest by a buckle 1^b. Another set of straps 2 and 2^a are united at the small of the back to the chest encircling straps and extend upward over each shoulder and are

adjustably secured to the chest encircling straps on each side of the chest by buckles 2^b. The securing means 2^c for the buckles 2^b are adjustably mounted upon the chest strap by detachable buttons or the like. The shoulder straps cross each other at the small of the back and extend slightly beyond their point of jointure with the chest straps and the extremities of the shoulder straps are provided with elastic members 3 and 3^a connected to the opposite thigh straps 4 and 4^a which pass the crotch, encircle the thighs and are adjustably secured to the ends of the thigh straps in proximity to the elastic members by buckles 5 and 5^a. A spacing strap 6 connects the upper ends of the thigh straps in proximity to the elastic members, thereby preventing the excessive spreading of the upper ends of the thigh strap and keeping the elastic members in line with their respective shoulder straps.

When a person wearing this brace bends forward in a stooping position, the strain upon the back is taken up by the elastic members and distributed between the chest and thighs of the wearer. The shoulder straps not only hold the chest straps in position over the chest, but take up a part of the strain upon the back in the stooping position. When the body is swung from side to side, as in the act of heaving coal, one shoulder will be raised more than the other and the strain upon the back is then distributed through the shoulder straps and the corresponding opposite side straps to remove the strain from the body. The shoulder straps being provided with a securing means adjustably mounted upon the front of the chest strap prevents any undue binding in the arm pit by the chest strap and by placing this securing means about half way between the center of the chest strap and the arm pit, the chest strap is not only held in proper position over the chest, but there can be no binding of the shoulder straps upon the arm of the wearer. By this adjustable securing means upon the chest strap the chest and shoulder straps may be so adjusted as to be perfectly comfortable and afford no inconvenience to the wearer while performing his duties which require the stooping and swinging position.

It is seen that by this device all strains are taken from the back of the wearer when the body is swung from side to side in either

an upright or stooping position, and is distributed between the chest, shoulders and thighs.

What I claim is:—

- 5 1. In a body brace, chest straps joining at the small of the back passing under the arms and over the chest, shoulder straps joined to the chest straps at the small of the back passing over the shoulders, a securing
10 means for each shoulder strap carried upon the chest strap over the chest, and thigh straps secured to the lower extremity of the shoulder and chest straps at the back passing around the opposite thighs of the wearer.
- 15 2. In a body brace, chest straps extending from the small of the back over the chest, shoulder straps secured to the chest straps at the small of the back passing over the shoulders attached to the chest straps in

front and out of engagement with the arms, 20 thigh straps, each thigh strap secured by an elastic member to the chest strap and opposite shoulder straps at the small of the back.

3. In a body brace, straps encircling the chest under the arms, straps secured at the 25 back to the chest straps passing over the shoulders attached to said straps over the chest, thigh straps, elastic members connecting each thigh strap to the opposite shoulder strap and to the chest straps, and a spacing member connecting the thigh straps ad- 30 jacent the elastic connecting member.

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Witnesses:

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