July 4, 1933. G. FORDHAM 1,916,789

GARMENT

Filed Oct. 26, 1932 2 Sheets-Sheet 1

Fig. 4.

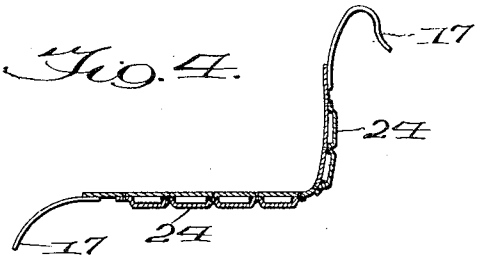


Fig. 1.

Fig. 5.

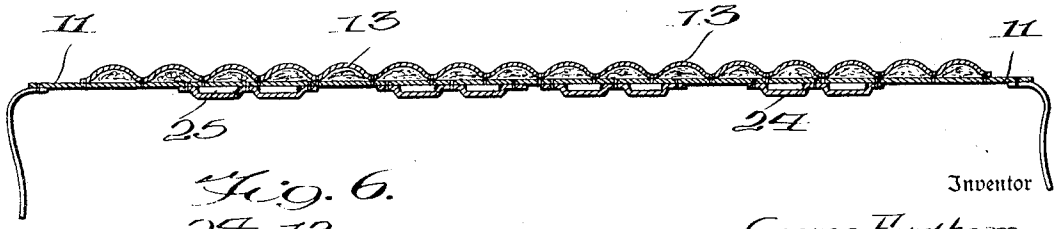
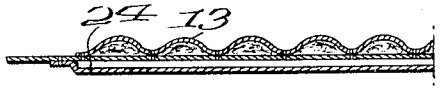


Fig. 6.



Inventor

George Fordham,

By Rinaldo & Rinaldo

Attorneys

July 4, 1933. G. FORDHAM 1,916,789

GARMENT

Filed Oct. 26, 1932 2 Sheets-Sheet 2

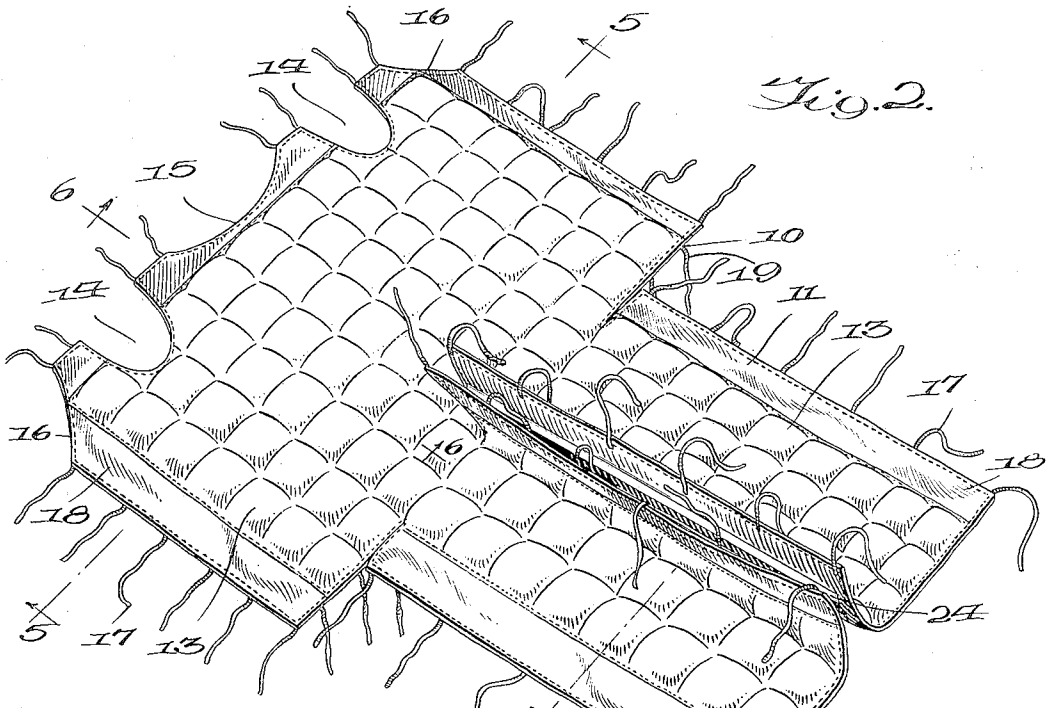


Fig. 2.

Fig. 3.

Inventor
George Fordham
By Rinaldo & Rinaldo
Attorneys

Patented July 4, 1933 1,916,789

UNITED STATES PATENT OFFICE

GEORGE FORDHAM, OF POWELLTON, WEST VIRGINIA

GARMENT

Application filed October 26, 1932. Serial No. 639,697.

This invention relates to a garment, reinforced at suitable points, with splints, whereby the garment is particularly adapted to hold various members of an injured person rigid.

It may be stated generally that the transportation of a disabled person from the depth of a mine or quarry, up and down ladderways, stair-ways, steep embankments, over rough and mountainous country, etc., has long been a serious problem, taxing the resourcefulness of those engaged in the work.

It has been suggested that a stretcher, to which the body might be strapped, be utilized for this purpose, but a stretcher in itself fails to provide the desired flexibility of use, or to offer the advantages of a garment such as hereinafter described.

One object of the present invention is to provide a splint structure possessing adequate strength and durability, while light and inexpensive, and which may be rolled or folded into compact form when not in actual use.

A further important object is to provide a device which will not interfere with the normal use of a stretcher when same is available, and of such a character that an injured person may be handled with the maximum ease and comfort, and to support the injured members with minimum discomfort, while at the same time affording a maximum of protection.

A man injured in a mine is generally subjected to shock and cold, in addition to his actual injury, and it is further contemplated that this garment be designed to protect against both shock, cold and dampness, thus taking the place of blankets, or other coverings.

More specifically it is an object of the present invention to provide a combined splint and garment which is particularly efficacious in handling cases of fracture of the pelvis, legs and back.

Still another object contemplates an arrangement whereby access may be had readily to any injured part, for dressing thereof, separately and independently of the other parts of the body, and in the case of fractures of the pelvic bone, to provide means which will prevent any overlapping or movement of the fractured segments, thus eliminating any chance of perforating the bladder.

To the attainment of the above and other objects which will appear as the description proceeds, reference may be made to the accompanying drawings, in which:—

Fig. 1 is a perspective of the device partially applied;

Fig. 2 is a plan showing the inside of the device;

Fig. 3 is a plan showing the outside thereof;

Fig. 4 is a section on the line 4—4 of Fig. 2;

Fig. 5 is a section on line 5—5 of Fig. 2; and

Fig. 6 is a section on line 6—6 of Fig. 2.

It will be observed that the garment, when opened for application, comprises a relatively flat body of sheet material such as canvas, rubber, rubberized fabric or the like, having a jacket portion 10, with leg portions 11 and 12 depending therefrom, and that the inside of the garment, i. e., the side which is to be positioned against the body is quilted substantially throughout its area, as indicated at 13.

The top edge of the jacket portion is cut away at 14 to provide arm holes and at 15 and 16 to provide a neck opening when in use. Ties 17 are arranged at suitable intervals entirely about the edges of the jacket portion 10 and the leg portions 11 and 12, and across the top edge or shoulder portions for the purpose of securing the garment in position.

Suitable flaps 18 are projected from the quilted section, along the longitudinal edges of the garment, to permit overlapping and to ensure a certain amount of adjustability in the device, effective to accommodate individuals of variant size.

To increase the adjustability and adaptability of the garment, the leg portions are permanently attached to the jacket portion over part only of their upper edges, ties 19 being relied upon to complete the attachment thereof to the jacket portion, after the in-

dividual leg portions have been secured to the injured party.

Extending longitudinally of the garment are a series of splints or stays 20, 21, 22 and 23, these stays reaching substantially from the top edge of the jacket portion 10 to the bottom edge of the leg portions 11 and 12. An important feature of this invention resides in the fact that the central splints or stays 20 and 21 diverge toward the leg portions, although the splints 22 and 23 are substantially parallel to the longitudinal axis and thus are disposed in converging relation to the splints 20 and 21.

The ties 19, being effective to secure the front of the leg portions to the jacket, increase the general stiffness of the garment, by minimizing any tendency toward bending between the upper and lower parts of the garment.

These splints are made of any material suitable for the purpose, such as wood, leather, whale bone, rawhide or the like.

Additional splints may be provided as desired in the several portions of the garment, for example, the splints 24 and 25 extending along the leg portion and terminating short of the jacket, thus providing increased rigidity about a fractured leg. If desired other additional stays might be placed in the jacket.

From the foregoing it will be seen that a garment is provided which may be laid out flat and an injured party placed thereon, whereupon the garment may be secured in position by tying same together over the shoulders, down the front of the trunk, and about the legs.

This device is particularly effective in cases of a fractured pelvis, the splints or stays 20 and 21 diverging from top to bottom for the purpose of preventing and avoiding any overlapping of broken sections of the pelvic bone, by holding the legs in slightly spread position, thus preventing any tendency toward perforation of the bladder. The manner in which this divergence acts to prevent such overlapping will be obvious, when it is considered that the splints run the full length of the garment and are in effect strapped to the trunk at one end and strapped individually to the legs at their other ends, thus holding apart those bones which might move back and forth against each other under influence of leg movements, or which might overlap, if the legs were strapped together. Furthermore, such divergence facilitates individual leg dressing. The garment is also advantageous in cases of injury to the back and legs. Because it is quilted and preferably made of a waterproof material, the garment itself forms a warm, waterproof covering, taking the place of a blanket or poncho, as well as providing a splint.

The quilting also serves to care for inequalities of bone protrusion, and as a padding for bruised areas.

While in no sense of the word a stretcher, this invention may be used for many purposes in lieu of a stretcher, and in locations where a stretcher is impracticable, as well as in addition to a stretcher when same is available.

Although the preferred form comprises a waterproof, quilted structure, it is evident that this garment might be constructed of light, perforated or foraminous material, or even of springlike mesh material, for use in warm locations, and it is not intended that it shall be limited, other than as provided in the appended claims.

When not in use, the garment can be compactly rolled and stored or carried on a mine car without taking up any unnecessary room.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. In a garment of the class described, a relatively flat flexible body having a jacket portion and leg portions, said leg portions being independent of and separate from each other and longitudinal stiffening members extending through the jacket portion into said leg portions for a distance sufficient to stiffen the respective leg portions.

2. In a garment of the class described, a relatively flat, flexible body having a jacket portion and leg portions, said leg portions being independent of and separate from each other and longitudinal stiffening members extending throughout the length of the garment in diverging relation to each other as they approach the leg portions.

3. In a garment of the class described, a relatively flat flexible body having a jacket portion and leg portions, said leg portions being independent of and separate from each other and longitudinal stiffening members extending through the jacket portion into said leg portions, for a distance sufficient to stiffen the respective leg portions said stiffening members diverging toward the leg portions.

4. In a garment of the class described, a relatively flat body having a jacket portion and leg portions, partially secured thereto, the unattached section of the leg portions forming longitudinally extending flaps free of said jacket portion, means to secure said flap portions to said jacket portion and longitudinal stiffening members extending through the jacket portion into said leg portions, for a distance sufficient to stiffen the respective leg portions.

5. In a garment of the class described, a relatively flat body having a jacket portion and leg portions partially secured thereto, the unattached sections of the leg portions forming longitudinally extending flaps free of said jacket portion, means to secure said flap portions to the jacket portions, and longitudinal

stiffening members extending throughout the length of the garment in diverging relation to each other as they approach the leg portions.

6. In a garment of the class described, a relatively flat body having a jacket portion and leg portions, partially secured thereto, the unattached sections of the leg portions forming longitudinally extending flaps free of said jacket portion means to secure said flap portions to the jacket portions, and longitudinal stiffening members extending through the jacket portion into said leg portions, for a distance sufficient to stiffen the respective leg portions said stiffening members diverging toward the leg portions.

7. In a garment of the class described, a flexible body formed of sheet material and having a trunk portion and depending leg portions attached thereto, said leg portions being independent of and separate from each other and splints extending substantially the length of the body from the trunk portion into the respective leg portions, said splints diverging toward the leg portions.

8. In a garment of the class described, a close fitting, flexible body portion, leg portions depending therefrom, said leg portions being independent of and separate from each other and longitudinal stiffening members extending throughout the length of the garment in diverging relation to each other.

9. In a garment of the class described, a close fitting, flexible body portion, leg portions depending therefrom, said leg portions being independent of and separate from each other and longitudinal stiffening members extending throughout the length of the garment in diverging relation to each other, and additional longitudinally extending stiffening members extending throughout the length of the leg portions.

10. In a garment of the class described, a relatively flat, flexible body having a jacket portion and leg portions, said leg portions being independent of and separate from each other and longitudinal stiffening members extending through the jacket portion into said leg portions, for a distance sufficient to stiffen the respective leg portions and additional longitudinally extending stiffening members extending throughout the length of the leg portions.

11. In a garment of the class described, a relatively flat body having a jacket portion and leg portions, partially secured thereto, the unattached section of the leg portions forming longitudinally extending flaps free of said jacket portion, means to secure said flap portions to said jacket portion and longitudinal stiffening members extending through the jacket portion into said leg portions, for a distance sufficient to stiffen the respective leg portions and additional longitudinally extending stiffening members extending throughout the length of the leg portions.

12. In a garment of the class described, a body formed of sheet material and having a jacket portion and depending leg portions, longitudinally extending stiffening members extending in divergent relation to each other from the jacket portion into the respective leg portions, for a distance sufficient to stiffen the respective leg portions, means to secure said jacket portion in position about a human trunk, and means to secure the leg portions individually in position.

13. In a garment of the class described, a body formed of sheet material and having a jacket portion and depending leg portions, partially secured thereto, the unattached sections of the leg portions forming longitudinally extending flaps free of said jacket portion, means to secure said flap portions to the jacket portions, longitudinally extending stiffening members extending in divergent relation to each other from the jacket portion into the respective leg portions, for a distance sufficient to stiffen the respective leg portions, means to secure said jacket portion in position about a human trunk, and means to secure the leg portions individually in position.

14. In a garment of the class described, a relatively flat body having a jacket portion and leg portions, longitudinally extending stiffening members diverging relative to each other from the trunk portion into the respective leg portions, for a distance sufficient to stiffen the respective leg portions, means to secure said trunk portion in position, means to secure the individual leg portions in position, and means to secure the leg portions to the trunk portions.

15. In a garment of the class described, a body formed of sheet material and having a jacket portion and depending leg portions, longitudinally extending stiffening members extending in divergent relation to each other from the jacket portion into the respective leg portions, for a distance sufficient to stiffen the respective leg portions, means to secure said jacket portion in position about a human trunk, and means to secure the leg portions individually in position, and additional longitudinally extending stiffening members located in the leg portions.

16. In a garment of the class described, a relatively flat body formed of waterproof material and quilted on one side, having a jacket portion and leg portions, and longitudinal stiffening members extending through the jacket portion into said leg portions for a distance sufficient to stiffen the respective leg portions.

17. In a garment of the class described, a body formed of waterproof sheet material and quilted on one side, and having a trunk portion and depending leg portions attached thereto, and splints extending substantially

the length of the body from the jacket into the respective leg portions, said splints diverging toward the leg portions.

18. In a garment of the class described, a relatively flat flexible body having a jacket portion and leg portions, said leg portions being independent of and separate from each other and divergent, longitudinally extending stiffening members extending through the jacket portion into said leg portions, for a distance sufficient to stiffen the respective leg portions and additional stiffening members extending from the jacket portion into the leg portion in convergent relation to said first stiffening members.

19. In a garment of the class described, a body formed of sheet material and having a trunk portion and depending leg portions attached thereto, and splints extending substantially the length of the body from the jacket into the respective leg portions, said splints diverging toward the leg portions, and additional splints extending from the jacket portion into the leg portions in convergent relation to said first stiffening members.

20. In a garment of the class described, a body formed of sheet material and having a jacket portion and depending leg portions, longitudinally extending stiffening members extending in divergent relation to each other from the jacket portion into the respective leg portions, for a distance sufficient to stiffen the respective leg portions, said jacket and leg portions being provided with flaps along their longitudinal edges, means to secure said jacket portion in position about a human trunk, with the flaps thereof in overlapping relation, and means to secure the leg portions individually in position, with their respective flaps in overlapping relation.

In testimony whereof I affix my signature.

GEORGE FORDHAM.