D. ANDERSON.

SHIELD OR PROTECTOR SUITABLE FOR THE USE OF SOLDIERS AND OTHERS.

APPLICATION FILED MAY 5, 1917.

1,256,422.

Patented Feb. 12, 1918.

3 SHEETS—SHEET 1.

Fig. 1.

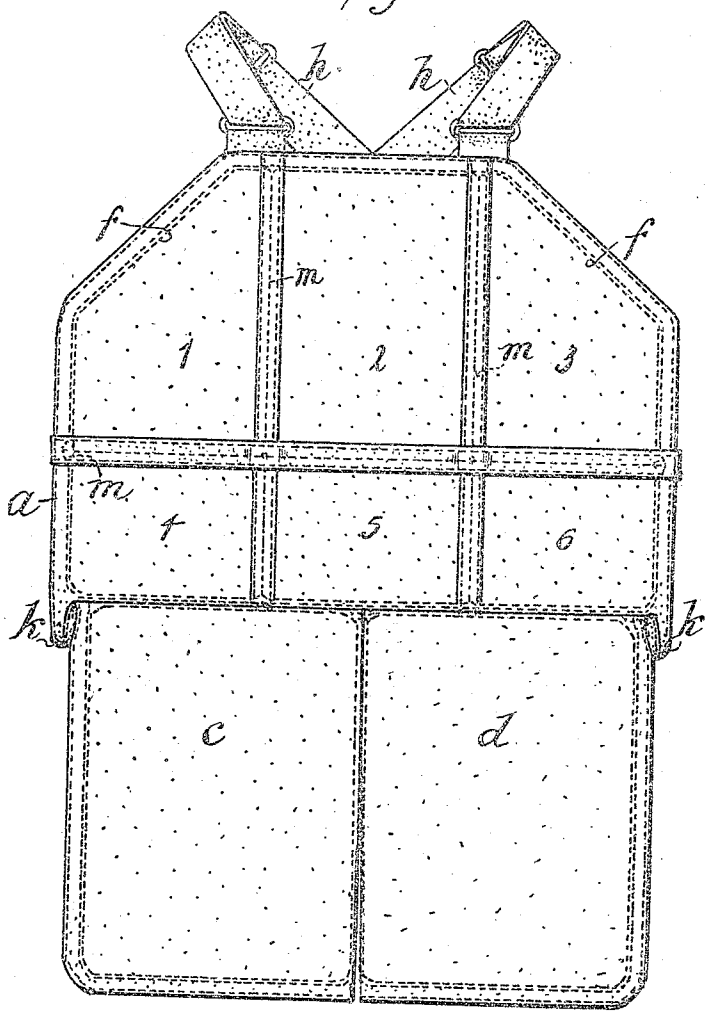
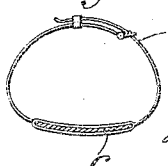


Fig. 4.



WITNESSES

Benjamin B. Dowell.

A. Pauline Davis

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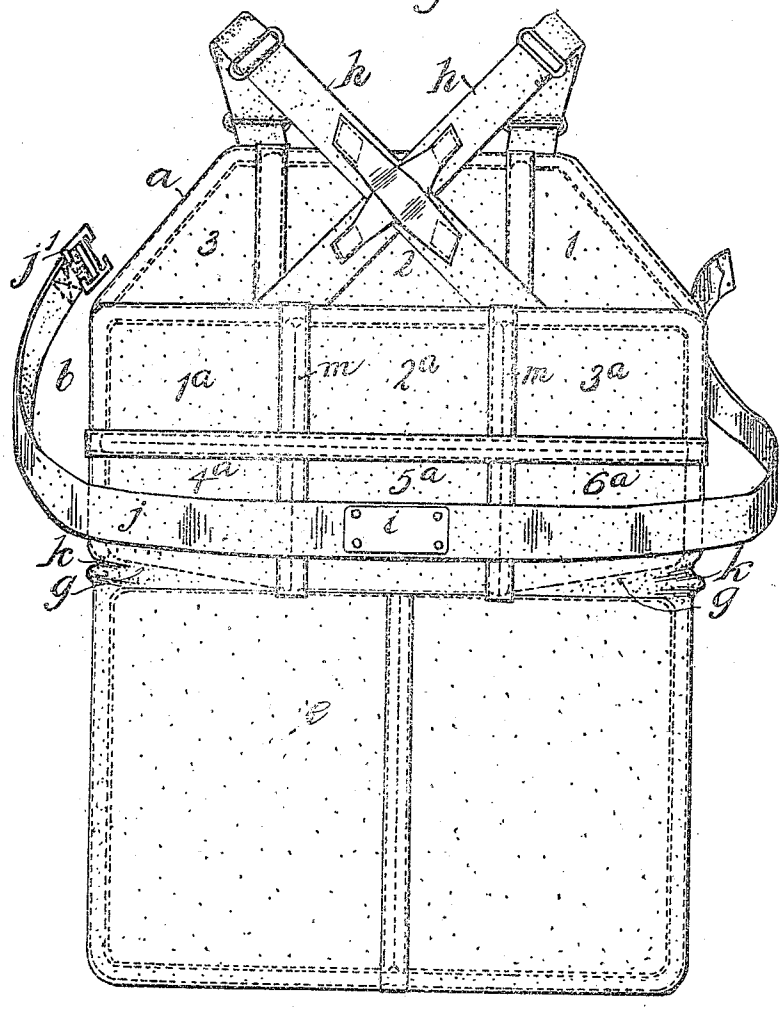
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3 SHEETS—SHEET 2.

Fig 2.



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3 SHEETS—SHEET 3.

Fig 3.

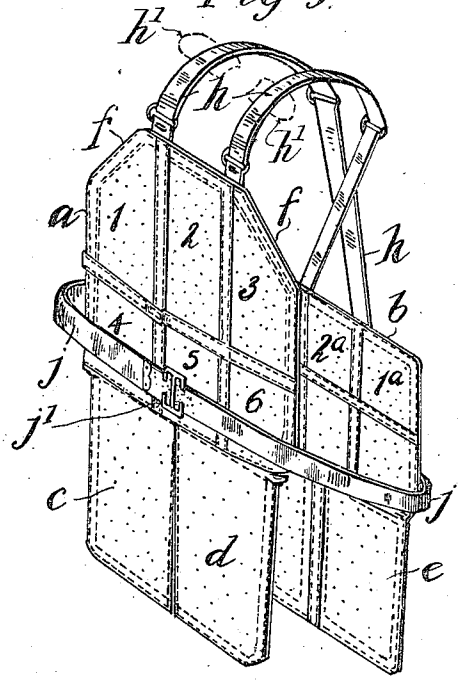


Fig 5.

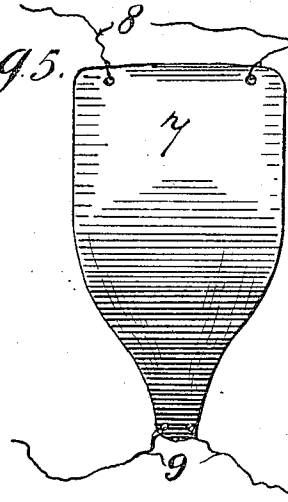


Fig 6



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UNITED STATES PATENT OFFICE.

DAVID ANDERSON, OF LONDON, ENGLAND.

SHIELD OR PROTECTOR SUITABLE FOR THE USE OF SOLDIERS AND OTHERS.

1,256,422. Specification of Letters Patent. Patented Feb. 12, 1918.

Application filed May 5, 1917. Serial No. 166,739.

To all whom it may concern:

Be it known that I, DAVID ANDERSON, a subject of the King of Great Britain and Ireland, residing at London, England, have invented Improvements in or Relating to Shields or Protectors Suitable for the Use of Soldiers and others, of which the following is a specification.

This invention has reference to shields or protectors comprising a number of plates composed of hard and tough sheet metal or alloy, flexibly connected or hinged together and particularly to shields or protectors of the kind described in the specification of Letters Patent No. 1214517, according to which the plates are arranged to form butt joints protected, it may be, by overlapping strips of metal, and are inclosed in a casing or sheath of textile material stitched to form pockets for such pieces of metal and provided with straps, tapes or the like for securing the shield or protector thus formed easily and conveniently to the body of a soldier or other person.

The present invention has for its object to adapt shields or protectors of the kind mentioned to afford still further protection to the wearer of such shield or protector (hereinafter referred to for brevity and distinction as a body shield).

For this purpose the body shield is provided with downwardly projecting protecting means adapted to protect the legs or the upper portions or thighs thereof.

Such protecting means may comprise metal plates like those used in the body shield, arranged to form butt joints with themselves and with the lower plates in the body shield and flexibly jointed to the latter plates, as for example by inclosing them in textile material attached to or forming part of the textile material used for the body shield and stitched to form pockets to receive such plates, so as in any case to form an apron-like extension of the body shield, the horizontal joint between the two being made sufficiently flexible as to admit of the apronlike extension being turned upward to some extent to allow of the wearer readily and comfortably sitting down.

Or the downwardly projecting protecting means may be made in two separate main portions each composed of one or more suitably curved or bent plates adapted to fit over and around the front and side portions of the adjacent thigh of the wearer and provided, it may be, with means such as a strap or tape, to fasten it to the thigh. In each case the downwardly extending leg or thigh protecting means and the body shield may be so relatively formed that the former can be readily detached from the latter when desired.

According to another construction the downwardly projecting protecting means comprises two separate metal plates flexibly connected to the body shield and arranged to hang loosely in front of the thighs of the wearer so that the wearer can readily bend, stoop, kneel or sit as occasion may require, while the body shield admits of the wearer readily using his arms for throwing bombs or for other purposes. The body shield when comprising a back portion or shield may also have flexibly combined with such back shield, downwardly projecting protecting means adapted to form a rear tail-like extension of the back shield for the purpose of protecting the back of the thighs, such rear extension being flexibly connected to the back portion of the body shield in such manner that it can be readily turned upward to admit of the wearer sitting down.

Such a construction is illustrated in the accompanying drawings, Figure 1 being a front elevation of the same, Fig. 2 a rear elevation and Fig. 3 a perspective view. Fig. 4 is a cross section showing a modification. Figs. 5 and 6 are views at right angles to one another showing a supplementary shield.

As shown in Figs. 1, 2 and 3 the body shield comprises front and rear portions *a*, *b* carrying two depending front portions *c*, *d* to protect the front of the thighs, and a single rear depending portion *e* to protect the back of the thighs. The front portion *a* of the body shield comprises six metal plates, as represented by dotted lines, arranged to form upper and lower sets of three plates in each set, these plates being inclosed in a casing or sheath of textile material stitched to form pockets for their reception. The plates 1, 2, 3 in the upper set are deeper than those, namely 4, 5 and 6, in the lower set and the two side ones 1 and 3 have outer inclined edges at *f* to allow of free movement of the arms of the wearer. The back portion *b* of the shield

is also composed of six plates 1^a to 6^a arranged to form upper and lower sets of three plates in each set, these plates being also inclosed in a casing or sheath of textile material like the plates in the front portion. The lower set of plates 4^a, 5^a, 6^a is deeper than the upper one comprising plates 1^a, 2^a, 3^a, and the total depth of both sets is less than the total depth of the two sets in the front shield. The lower edges *g* of the two lower side plates 4^a, 6^a of the back shield may, as shown, conveniently be inclined upwardly and outwardly so as to fit more comfortably over the hips.

The front and back shields *a*, *b* are connected together at their upper ends, as by a pair of crossed straps or strips *h* of suitable flexible material, and to the outer side of the back shield *b* may be secured, as shown, the central portion *i* of a strap or belt *j* the end portions of which can be brought to the front and secured around the front shield *a* by a buckle *j'* or in any other convenient way.

The two separate metal plates *c*, *d* for the protection of the front of the thighs are each separately inclosed in a casing or sheath of textile material by which it is flexibly connected, it may be in a detachable manner, to the casing or sheath of the front shield. The rear protecting means or tail-like extension *e* for the protection of the back of the thighs may comprise two plates arranged side by side and inclosed in separate pockets in the same casing or sheath that is flexibly connected, it may be in a detachable manner, to the back shield *b*.

To admit of the upper and lower parts of the front and rear portions *a*, *b*, *c*, *d*, *e* of the shield more readily accommodating themselves to the movements of the body and thighs of the user, the portions of textile covering material located between such upper and lower portions and at the sides thereof are preferably made more or less loose, as by forming them with folds or plaits as indicated at *k*.

m, *m* are the strips of covered metal overlapping the joints between the metal plates in the front and back portions of the body shield, as in the body shields described in the said former specification.

As will be understood the number of plates used in each shield or protecting part can be varied, those mentioned, which are given by way of example only, being found suitable.

In addition to the front shield *a*, or front and back shields *a* and *b*, shoulder shields may be provided. These may be attached to the flexible straps or strips *h* used to support the front shield, or front and back shields, as shown at *h'* in Fig. 3, and be shaped to fit over the shoulders and over part of the breast or parts of the breast and back of the wearer above the said front shield, or front and back shields which they may overlap.

The construction hereinbefore referred to in which the front apron-like extension is divided to provide two separate depending front portions each suitably curved or bent to fit over and be secured by a strap, tape or the like over and around the front and side portions of the adjacent thigh of the wearer, will be readily understood from the foregoing description of the alternative example shown in Figs. 1, 2 and 3 of the drawings in conjunction with Fig. 4 which shows, in horizontal section and to a smaller scale, one of the front depending portions, namely *c*, curved to fit the thigh and provided with a fastening strap c^1.

The plates used in each case are made of suitable hard and tough metal or alloy, such for example as nickel or chrome steel, or nickel-chromium steel, or so called "bullet-proof steel," and are bent to a suitable curvature or radius to bear more or less closely against the body or other part to be protected, the outer corners of the outer plates and of the separate thigh protecting plates, and shoulder plates, if used, being preferably rounded off as shown.

The flexible textile material inclosing the plates is preferably permanently secured to the plates by a suitable adhesive substance. The edges of the several plates are also preferably rounded off and covered with strip material, for example textile material secured thereto by an adhesive substance.

In each case there may be associated with the body shield and the downwardly extending protecting means, further protecting means adapted to protect the groin and adjacent parts of the wearer from missiles. Such groin protecting means may, as shown in front elevation and vertical central section in Figs. 5 and 6 respectively, comprise a suitably shaped or bent metal plate 7 adapted to be suspended as by tapes or cords 8 or other suspender, at the front from the body shield, or from the downwardly extending protecting means, or from a separate belt or equivalent, it may be in a readily detachable manner, as by a hook and eye, buckle or equivalent, and at the back by a strap or tape 9 or other suspender adapted to be passed between the thighs and fastened to a strap or tape passed around the back of the wearer, as for instance for securing the body shield in place, or it may be attached to the back shield in the case of a double body shield, or to the separate belt or equivalent referred to.

Protecting shields or devices such as described are specially suitable for use by bomb throwers in exposed positions.

What I claim is:—

1. In combination a body shield compris-

ing separate front and rear portions each composed of a number of metal plates and textile fabric separately inclosing each set of plates and whereby they are flexibly connected together, an apron like extension flexibly connected to the front portion of said shield and divided into two separate depending portions, a tail like extension flexibly connected to the rear portion of the shield, shoulder straps connecting the said front and rear portions and a strap secured to said rear portion and having its ends adapted to be fastened together over said front portion.

2. In combination a flexible body shield, having a depending flexibly connected apron like portion at the front thereof divided vertically into two separate depending flexibly connected portions and a depending flexibly connected tail like part at the rear of such body shield that extends well below the trunk to protect the legs.

3. The combination with a flexible front body shield of a depending flexibly connected divided apron like portion and plaited fabric extending below the trunk and connecting such divided portion to said body shield.

4. In combination a flexible body shield comprising front and rear portions each composed of a number of flexibly connected metal plates and flexible covering material adapted to form pockets in which said plates are separately inclosed and by which they are flexibly connected together, and a depending flexibly connected apron like portion at the front vertically divided and extending below the trunk to protect the legs, said portion being composed of metal plates and flexible material covering said plates and whereby they are flexibly connected to the flexible covering material of the front portion of said body shield.

Signed at 18/20 Farringdon road, in the city of London, England, this eighteenth day of April 1917.

DAVID ANDERSON.

Witnesses:

FRANK E. BRUCKSHAW,

J. A. N. SMEATON.

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