No. 642,649. Patented Feb. 6, 1900.

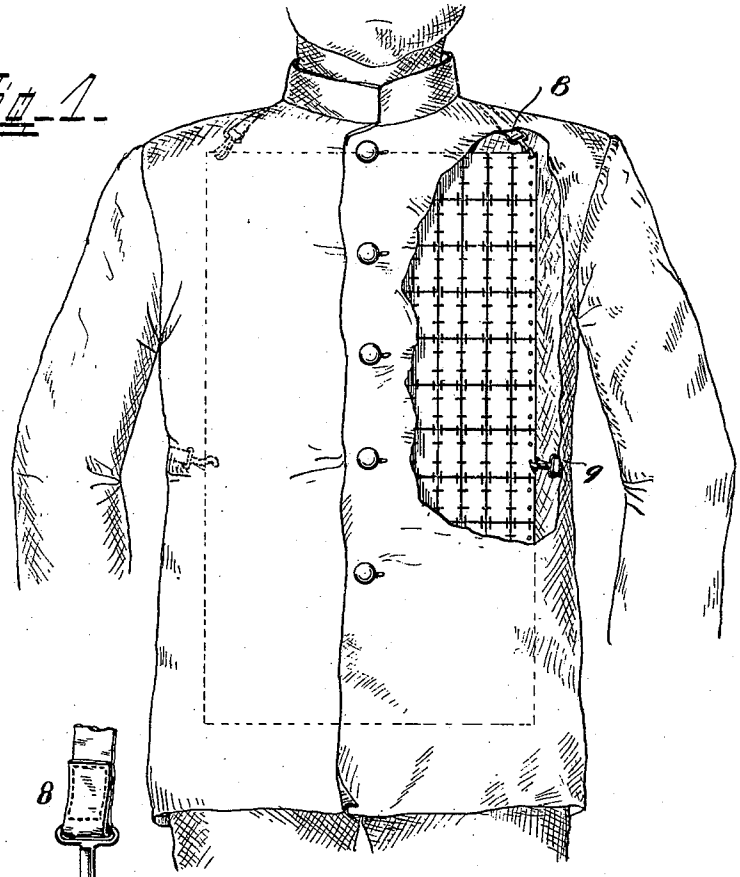
N. C. VAUGHAN.

ARMOR.

(Application filed May 29, 1899.)

(No Model.)

Fig. 1.



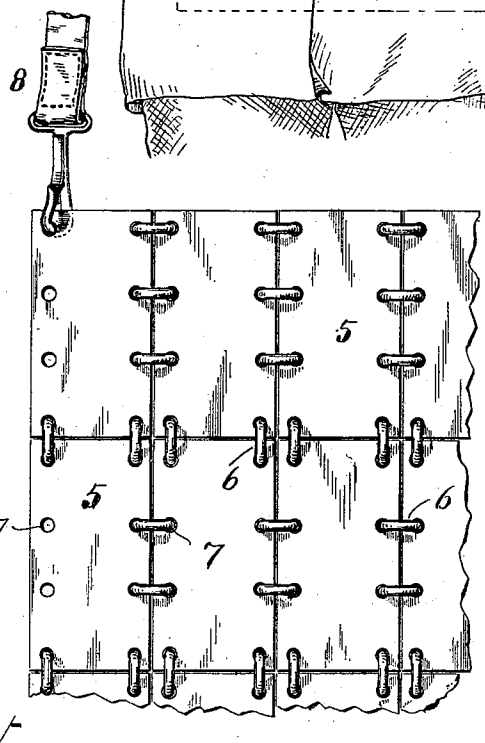
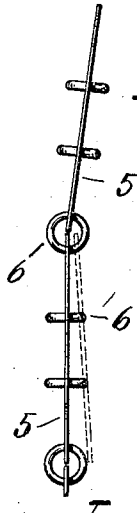


Fig. 2.

Fig. 3.



Attest
Mary C. Bosley.
John C. Rogers

Inventor
Norval C. Vaughan
by C. Spengel atty.

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

UNITED STATES PATENT OFFICE.

NORVAL C. VAUGHAN, OF CINCINNATI, OHIO.

ARMOR.

SPECIFICATION forming part of Letters Patent No. 642,649, dated February 6, 1900.

Application filed May 29, 1899. Serial No. 718,737. (No model.)

To all whom it may concern:

Be it known that I, NORVAL C. VAUGHAN, a citizen of the United States, and a resident of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Armor; and I do declare that the following is a clear, full, 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, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form a part of this specification.

The subject of this invention is an armor to be worn for the purpose of protecting certain parts of the human body against accidental or intentional injury, but more particularly against the latter and where such may be inflicted by firearms or cutting implements. It is intended for use by officials and such persons who, in the legitimate exercise of their certain duties, are exposed to such dangers, and it is particularly designed to protect the chest or the abdomen, or both.

The features of the invention are in addition to the required resistance, sufficient to prevent penetration by bullet or knife, great lightness, perfect pliability, whereby it adapts itself readily to all formations of the body as well as any motions and changes of position, and convenience in attachment and removal.

In the following specification and particularly pointed out in the claims at the end thereof is found a full description of my invention, together with its manner of use, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows a front view of a part of a human figure with the armor attached in its intended position. Fig. 2 is an enlarged (about full size) view of a portion of the structure, and Fig. 3 is an edge view of the preceding figure.

The armor consists, substantially, of a collection of metal plates 5, assembled and arranged edgewise and connected by links 6, passing through perforations 7, near the contiguous edges of adjoining plates. As to shape, these latter are quadrangular and by preference rectangular, and they are arranged in parallel rows, both horizontally as well as vertically, so that the entire connected collection may readily yield and bend at any point and to any extent—that is, clear across in a certain direction from edge to edge, or only partly so. Links 6 are circular, which shape permits the greatest degree of pliability and renders the structure flexible to an extent which permits the same to be folded or doubled up when not in use. (See Fig. 3.)

The armor is supported like a bib or apron by suitable straps, one, 8, passing over the shoulders and back of the neck, the other, 9, passing around the body at about the waist-line. It is to be worn between the nether and any of the upper or outer garments, like coat or vest, and by which latter it is held snugly against the body. The straps are fitted to proper length to suit the size of the wearer, which may be done by buckles, and they are attached to the edge of the armor by suitable catch devices like snap-hooks, for instance. After once adjusted the buckles need not be opened any more on taking the armor on or off, it only being necessary to disconnect at most one end of a strap from the edge of the armor, to which it is held by a snap-hook. In most cases no detachment whatever may be required for the upper strap, which may be slipped in and out over the head.

As a material aluminium recommends itself on account of its lightness, although the structure by a size of fourteen by eighteen inches when made of steel of sufficient thickness weighs only about thirty-five ounces.

If steel is used, I have found the No. 20 spring-steel, (English standard,) tempered in oil, of sufficient resistance for the intended purpose. Links 6 do not project sufficiently (see Figs. 2 and 3 of the drawings, which are about full size) to cause any inconvenience to the wearer, and for which reason I require no padding of any kind, the underclothing alone being sufficient for all such purposes.

The device may be covered by paint, enamel, or lacquer or otherwise treated in a manner to prevent oxidation.

Having described my invention, I claim as new—

1. An armor for the purpose described, consisting of a collection of metallic plates of equal size assembled edgewise, perforations near their edges to form rows, circular links

connecting adjoining rows and plates by passing through their perforations to form a substantially rectangular sheet sufficiently pliable to permit folding up and means to hold this latter in position.

2. An armor for the purpose described, consisting of metallic plates of equal size which are assembled in parallel rows, circular links whereby they are all connected edgewise to form a pliable rectangular sheet which may be folded, straps whereby this latter is held in position and catch devices at the ends thereof, whereby the straps are detachably connected to the armor.

In testimony whereof I hereunto set my hand in presence of two witnesses.

NORVAL C. VAUGHAN.

Witnesses:
C. SPENGEL,
THOMAS CLIFTON.