(No Model.)

A. H. J. APPELT.

MATERIAL FOR BULLET PROOF SHIELDS.

No. 532,857. Patented Jan. 22, 1895.

Fig 1.

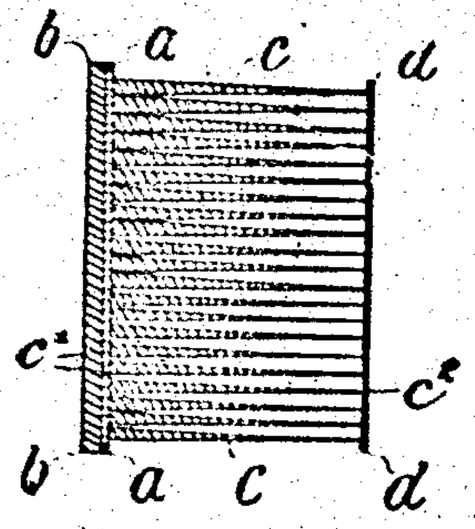
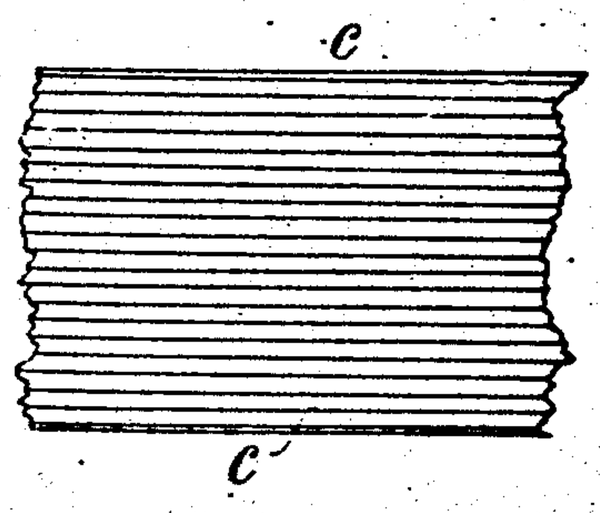


Fig 2.



WITNESSES:
Geo. L. Schneider
Juan C. Abel

INVENTOR
Andreas Hans Jacob Appelt
BY Lacey & Lacey
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANDREAS HANS JACOB APPELT, OF COPENHAGEN, DENMARK.

MATERIAL FOR BULLET-PROOF SHIELDS

SPECIFICATION forming part of Letters Patent No. 532,857, dated January 22, 1895.

Application filed September 24, 1894. Serial No. 523,895. (No model.)

To all whom it may concern:

Be it known that I, ANDREAS HANS JACOB APPELT, manufacturer, a citizen of Denmark, and a resident of Copenhagen, Denmark, have invented certain new and useful Improvements in Bullet-Proof Shields, of which the following is a specification.

My invention relates to what is modernly known as a "bullet-proof shield" which affords an effective protection against projectiles.

On account of the strong explosive power of smokeless powder and of the small caliber of modern guns it is well known that such a high speed and great power of penetration are attained that no covering material such as leather, wood, steel, &c., having dimensions which permit of carrying the shield or garment made therefrom on the body, offers effective resistance against the penetrability of the projectile. The object of my invention is to provide such a bullet-proof shield.

My invention to this end consists of material for bullet-proof shields which is composed of a thin back-plate or mount of hard metal on which is supported a series of closely arranged knife edged metallic strips, the thick backs of the same resting against the back-plate and the thin knife-edges being presented outwardly and provided with a protecting-facing of suitable fabric so that the strips are inclosed between the back-plate and facing.

In the drawings,—Figure 1 is a transverse section showing the construction of the material, and Fig. 2 is a face-view, the facing being removed.

Similar letters of reference indicate corresponding parts.

The back-plate or mount *a* is formed of thin plate steel or other suitably hard metal and is covered over with a layer of preferably elastic or soft material, such as rubber, leather, card-board, &c. The thick rear edges *c'* of the knife-edged metallic strip *c* rest against the inner surface of the plate metal mount *a* so that the sharp front edges c^2 of the same will be presented outwardly. The backs of the strips *c* are arranged closely together and preferably in contact, so that the knife edges c^2 will be disposed at very small intervals. The knife-edges are covered over by a facing *d* of linen, canvas or other suitable fabric so as to protect the same and impart a finish to the material. It is obvious that the knife-edged strips may be disposed in other relations than as shown. For instance, some may extend longitudinally and others transversely, and several layers of the described structure may be provided, the knife-edged strips of one layer extending across those of the other layer. When a bullet strikes a shield composed of this material the same is cut up into small pieces by means of the knife-edges, and as the pieces pass inwardly they meet with still greater resistance by reason of the gradual rearward thickening of the strips so that their force is usually spent ere they reach the back-plate or mount *a*, which, however, offers further resistance in case any pieces of the bullet should reach it.

By reason of the structural arrangement of the component parts of the bullet-proof material the same possesses a certain degree of flexibility so that it can be bent to conform to the body of the wearer.

Of course in forming a shield for the body it may be found necessary to variously arrange the knife-edged strips, some extending one way and some another.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. Material for bullet-proof shields consisting of a plate-metal mount, and knife-edged metallic strips arranged closely together and resting at their backs against the inner surface of the mount, with their knife-edges presented outwardly, substantially as set forth.

2. Material for bullet-proof shields consisting of a plate-metal mount, knife-edged metallic strips arranged closely together and resting at their backs against the inner surface of the mount, with their knife-edge presented outwardly, and a suitable facing, covering the knife-edges, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ANDREAS HANS JACOB APPELT.

Witnesses:
ROBT. J. KIRD,
L. HOFMAN BANG.