No. 697,862. Patented Apr. 15, 1902.

J. F. MEIGS.

SHIELD ATTACHMENT FOR GUNS.

(Application filed Nov. 4, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

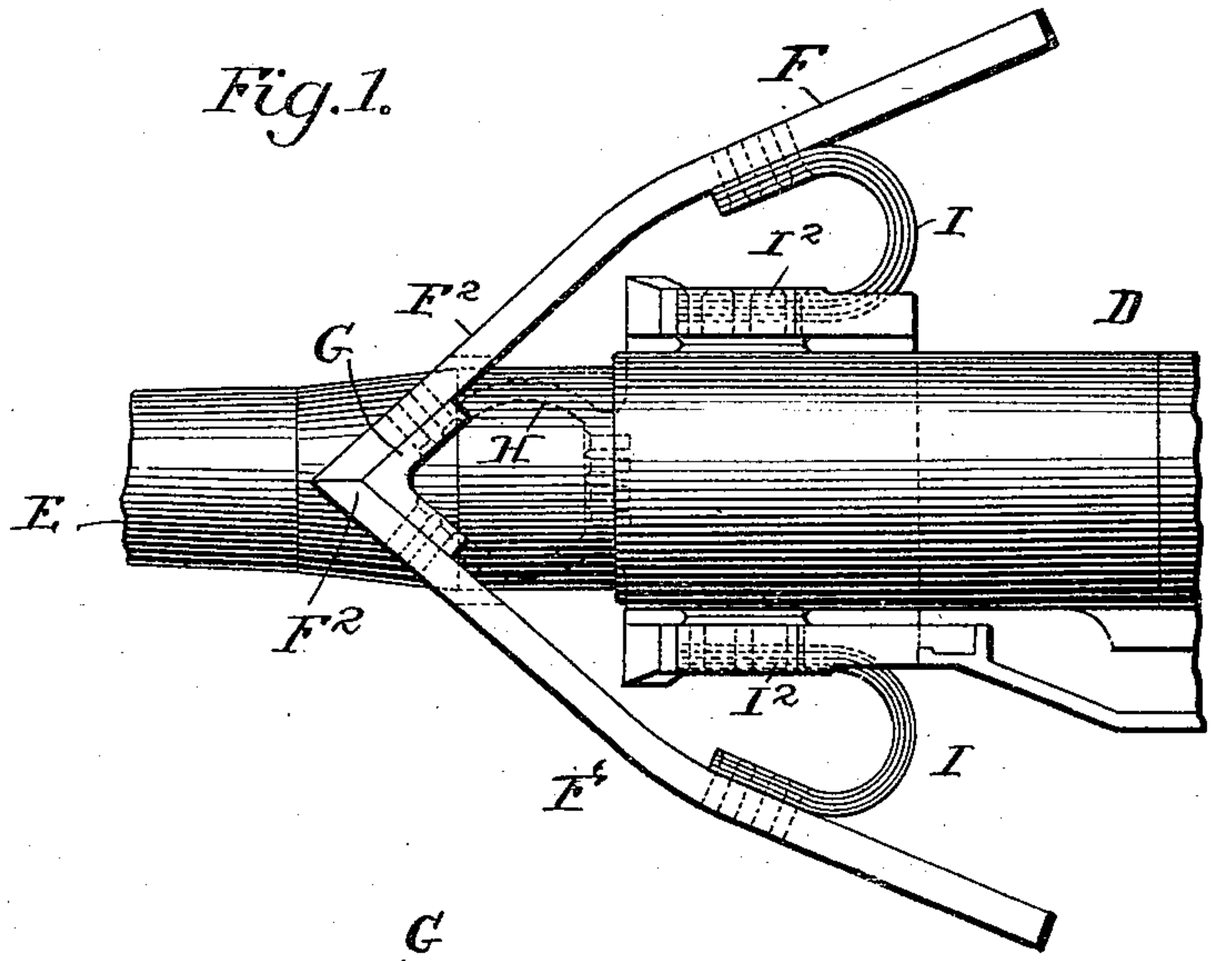

Fig. 2.

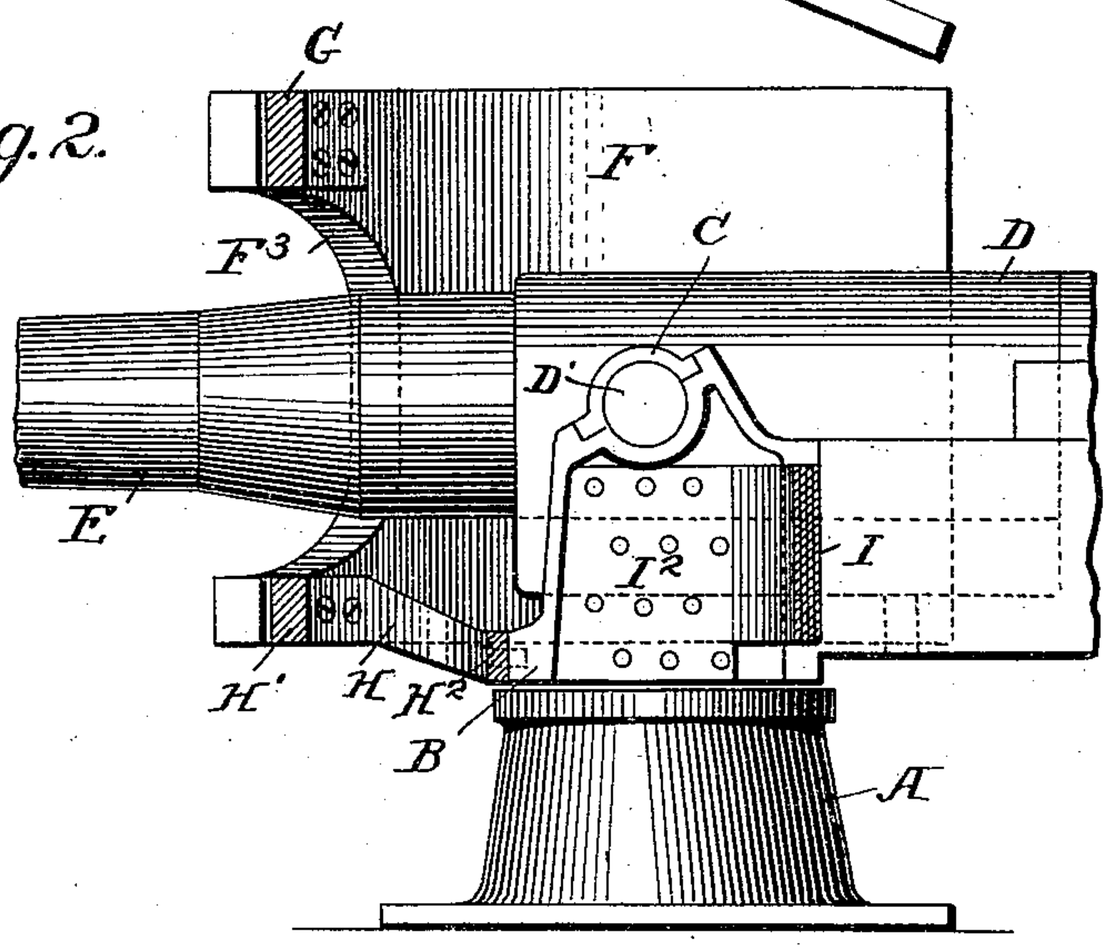

Fig. 3.

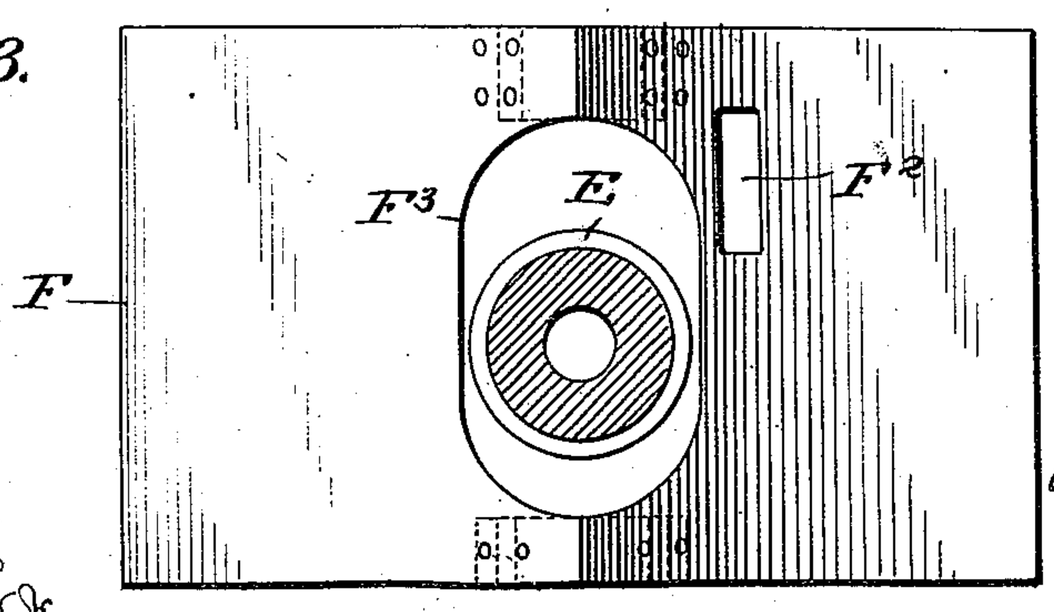

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Fig. 4.

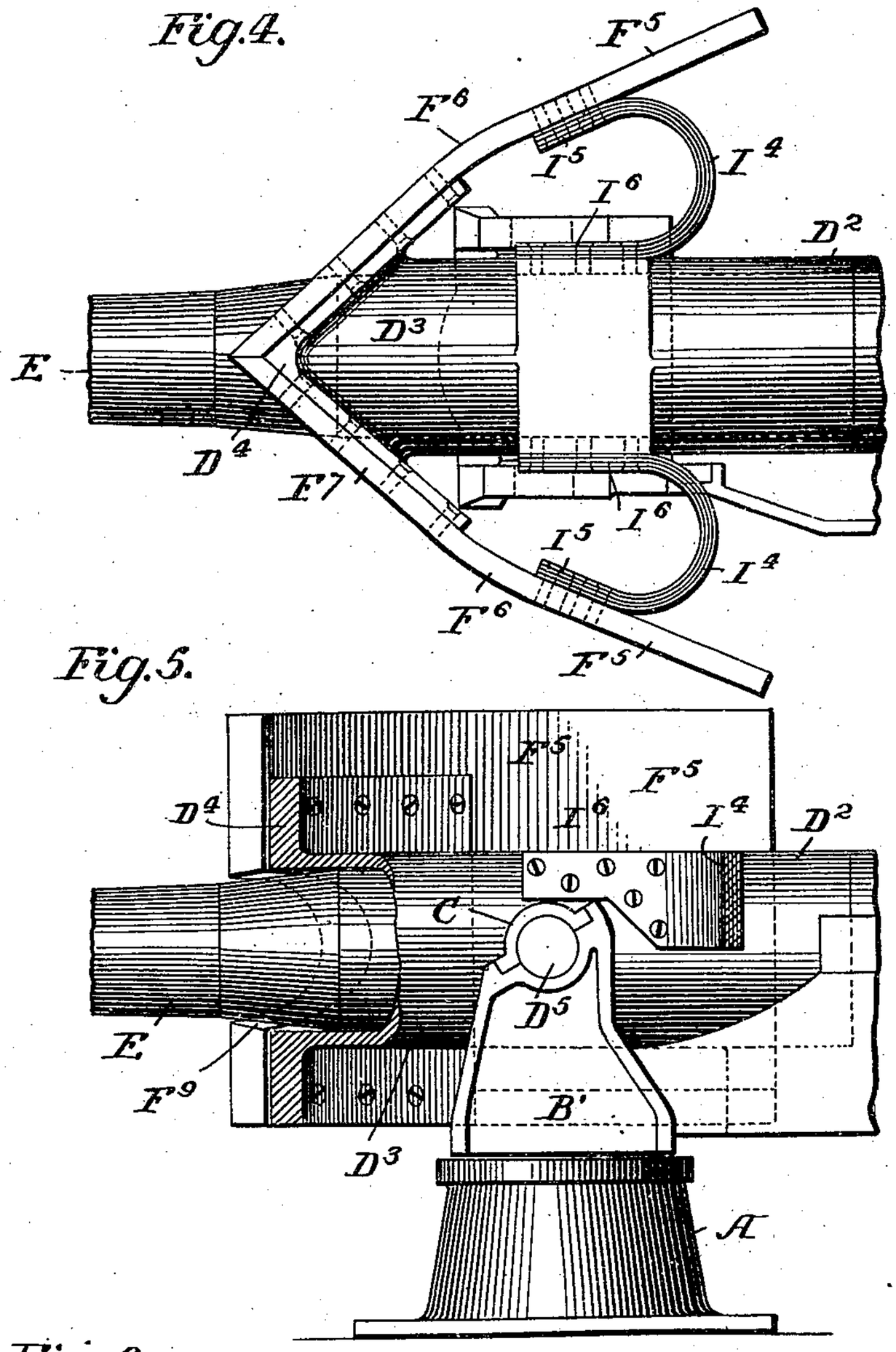
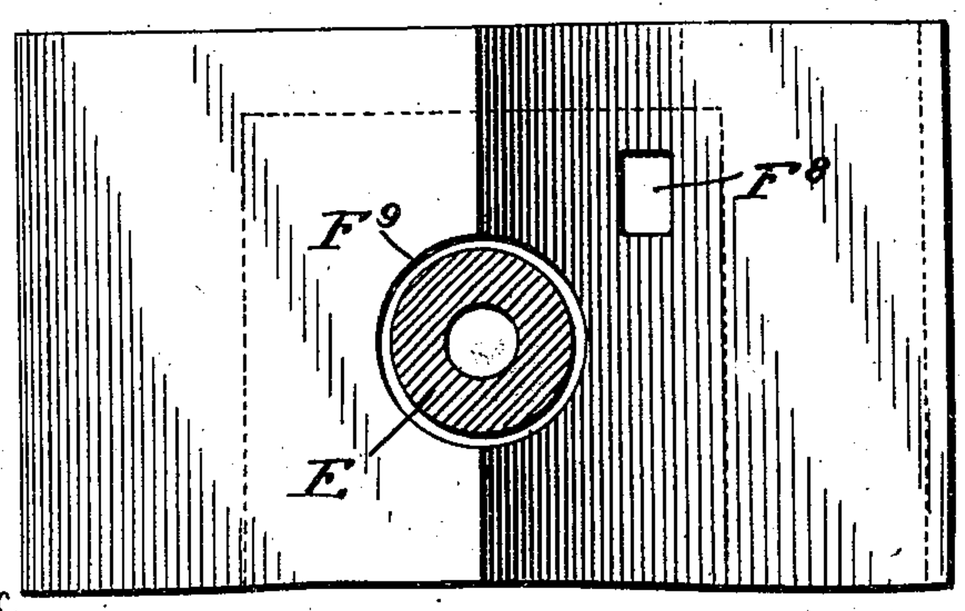


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

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SHIELD ATTACHMENT FOR GUNS.

SPECIFICATION forming part of Letters Patent No. 697,362, dated April 15, 1902.

Application filed November 4, 1901. Serial No. 81,057. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. MEIGS, a citizen of the United States, residing at Bethlehem, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Shield Attachments for Guns, of which the following is a specification.

This invention relates to gun-shields especially intended to be used in connection with ordnance to shield the gun-crew from projectiles while operating the piece.

In the accompanying drawings, in which the same reference characters represent similar parts in the several figures, Figure 1 is a top view of my shield attached to a gun, parts being broken away. Fig. 2 is a side view of the same, part of the shield being removed. Fig. 3 is a front view. Fig. 4 is a top view showing a modified form. Fig. 5 is a partial side view of the same, and Fig. 6 is a front view.

A represents the pedestal of a gun, about which the top carriage B is mounted to revolve in the usual manner. In the top carriage are formed the heavy bearings C to receive the trunnions D', supporting the gun-sleeve D. The gun E is mounted to slide in the sleeve, and suitable recoil mechanism is connected with these two parts, so that the recoil is taken up in a manner well known in this art. The gun and sleeve are elevated together, turning about the trunnions D'.

The gun-shield is formed of two similar parts F F of armor-plate hardened in any desired way and held together at an angle by an angle-piece G, which by suitable screw-bolts, as indicated, unites the two beveled end portions F^2 of the shield-sections to form a rigid joint between them. A lower bracing member H has an angular front portion H', to which the front ends of the shield-sections are secured by suitable screw-bolts at their lower portions, as indicated in Fig. 2, while the rear of this bracing member is curved at H^2 to conform to the front end of the top carriage B, to which it is secured by suitable screw-bolts. I employ additional lateral supporting means in the form of springs I, which, as shown, are of laminated structure, such as ordinary leaf-springs, and these springs are securely bolted at their inner ends I^2 to the top carriage, while their outer ends, projecting forward from the curved portions of the springs, are secured to the shield-sections by suitable bolts. In this way the shield-sections are rigidly secured together at their front edges, so as to form a V-shaped shield, and this shield, as shown in Figs. 1 to 3, is rigidly secured to the top carriage to turn with it, the apex of the shield being substantially in a line extending vertically through the axis of the gun. In one of these sections is a suitable sight-hole F^2, and in the apex or angular portion of the shield is a gun-port F^3, through which the muzzle of the gun is projected and in which it may be elevated and depressed to the necessary extent. I prefer to form both of my shield-sections with a slight curve at about the middle of each section at F', as shown in Fig. 1, although I may make these shield-sections either plain-surfaced or curved in any other way.

In the modified form shown in Figs. 4 to 6, A is the pedestal; B', the top carriage mounted thereon, with bearings C to support the trunnions D^5 of the recoil-sleeve D^2, in which the gun E is mounted in the usual manner. The recoil-sleeve in this case is formed with a V-shaped extension D^3 at its forward portion, constituting a bracket, to which the shield-sections F^6 are securely fastened, both of the sections having beveled edges F^7 and being rigidly supported by the angular portion D^4 of the sleeve. In this case also I may use additional supporting-springs I^4, secured at their outer ends I^5 to the shield-sections, while their inner ends I^6 are bolted to the gun-sleeve. I form in one of the shield-sections F^5 the sight-hole F^8 and also cut away the adjacent portions of the shield-sections to form a gun-port opening F^9 in the angular part of the shield. In this case it will be seen that the V-shaped shield is rigidly secured to the gun-sleeve and revolves with the gun and is also elevated with it, so that by this arrangement I am enabled to form a very much smaller gun-port in the shield and secure much better protection for the gun-crew. A shield for this reason is very much stronger, since

the supporting means can be conveniently made heavier in this case. As in the construction of Figs. 1 to 3, the shield-sections have each a slight bend F^6 near the middle, so that the wings of the shield present a slightly-less angle to the line of fire than does the more rigidly-supported front portion.

If desired, I may construct my shield-sections with plain surfaces or give them different curves or shapes from that which I have described. It will be manifest also that the supporting-springs may be differently constructed.

In operation my shield has the advantages of presenting a small angle to the line of fire. It is of a symmetrical form and, furthermore, can be very readily constructed without complex fitting and be easily applied. The front portion of my shield presenting an angle where the two shield-sections join on a line extending vertically though the axis of the gun is very much stronger and resists the penetration of the projectile very much better than if curved at this point.

Numerous changes in the construction may be made by those skilled in this art without departing from the spirit of my invention. It is possible to mount my shield in other ways than those that I have shown, and, furthermore, the exact shape of the shield-sections, their size relative to the gun, and the curves of the surfaces which are exposed to fire may be varied.

Without restricting myself to the precise construction shown, I claim—

1. The combination of the gun-shield consisting of two shield-sections having their front edges beveled to fit together at an angle, the gun-support having a V-shaped extension fitting into the angular portion of the shield, means for securing the shield to said extension, and yielding side supports for the shield-sections, substantially as described.

2. The combination with a gun, of a V-shaped shield centrally supported on the gun, with its apex above and below and on a line extending through the axis of the gun, and yielding side supports for the shield, substantially as described.

3. A gun-shield formed of two shield-sections of armor-plate meeting above and below the gun on a line extending vertically through the axis thereof, a support for the forward portion of the shield, and side supporting-springs, substantially as described.

4. A gun-shield consisting of two shield-sections meeting and secured together at their front edges along a vertical line and at an angle to each other, combined with a gun-sleeve, and a V-shaped extension connected with said gun-sleeve at its forward end, and secured to and supporting said shield-sections, with a gun-port in the front end of such shield-sections, substantially as described.

5. The combination of two shield-sections of armor-plate, with the front edges beveled to fit together at an angle, a gun-sleeve having a V-shaped extension at its front end fitting within the front end of such shield, means to secure such shield to said extension, and supporting-springs secured to said gun-sleeve and to said shield-sections, substantially as described.

6. The combination of shield-sections of armor-plate, each being bent about a vertical line near the center of the same and the front edges meeting and beveled to fit together, a gun-sleeve to support a gun, an extension formed on said gun-sleeve and secured to said shield-sections, and curved laminated springs secured to said shield-sections and to said gun-sleeve, substantially as described.

7. The combination of two shield-sections of armor-plate, meeting at an angle and having a gun-port in the front and provided with a sight-hole, a gun-sleeve, a shield-supporting extension secured to said gun-sleeve, means to secure said shield-sections to said extension, and side supporting-springs, substantially as described.

8. The combination of two shield-sections of armor-plate, meeting at an angle, a gun-sleeve having a V-shaped extension at its front end fitting within the angle formed by the shield-sections, and means to secure such shield-sections to said extension, substantially as described.

9. The combination with a gun, of a V-shaped shield with its apex on a line extending vertically through the axis of the gun and having a port for the gun in the angular portion, and means for supporting the shield to swing with the gun, substantially as described.

10. The combination with a gun, of a V-shaped shield having its apex in a line extending vertically through the axis of the gun and provided with a gun-port in its angular portion, and means for supporting the shield to move in all directions with the gun, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN F. MEIGS.

Witnesses:
FRED QUIER,
W. E. MILLER.