No. 660,716. Patented Oct. 30, 1900.

R. S. ANDERSON.

ROLLER SHIELD OR BREASTWORK.

(Application filed Mar. 31, 1900.)

(No Model.)

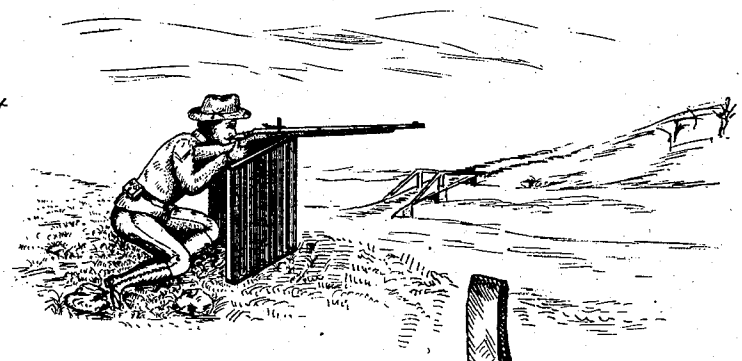


Fig. 1.

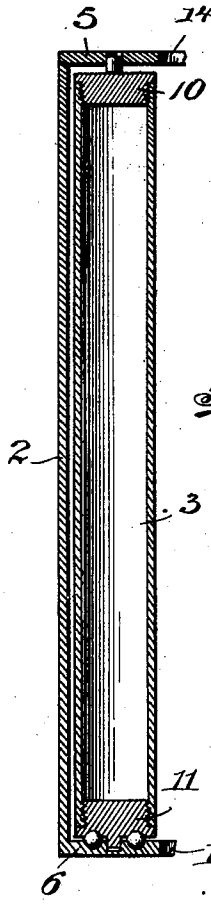


Fig. 4.

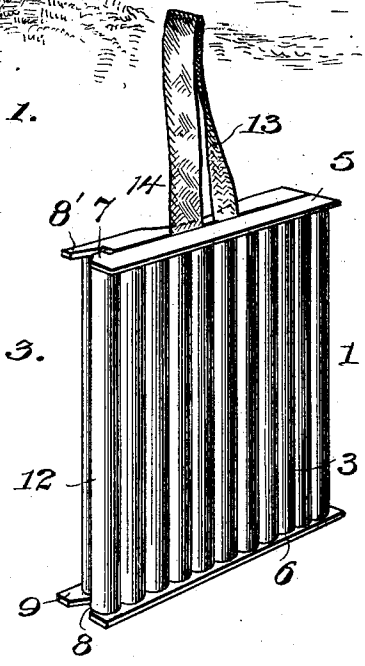


Fig. 3.

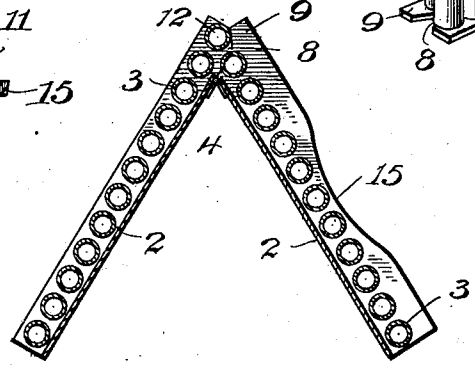


Fig. 2.

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

UNITED STATES PATENT OFFICE.

ROBERT S. ANDERSON, OF TACOMA, WASHINGTON.

ROLLER SHIELD OR BREASTWORK.

SPECIFICATION forming part of Letters Patent No. 660,716, dated October 30, 1900.

Application filed March 31, 1900. Serial No. 10,997. (No model.)

To all whom it may concern:

Be it known that I, ROBERT S. ANDERSON, a citizen of the United States, residing at No. 2803 McCarver street, Tacoma, Pierce county, Washington, have invented certain new and useful Improvements in Roller Shields or Breastworks; and I do hereby declare the following to be a full, clear, 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.

My invention relates to improvements in infantry roller shields or breastworks; and the object is to provide a portable shield or breastwork which may be folded up and carried from place to place and may be opened and so located as to protect soldiers or others from bullets or other missiles.

It consists in a shield or breastwork comprising leaves or backs hinged together at their edges and a series of rollers journaled in front of the said leaves so as to be in such position as to intercept bullets and other missiles of war.

It also consists of other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a perspective view of an infantry roller shield or breastwork constructed in accordance with my invention. Fig. 2 represents a horizontal section through the same, the shield or breastwork being in its open position. Fig. 3 represents a perspective view of the same in its folded position, showing the band or belt for carrying the same; and Fig. 4 represents a vertical section through one of the rollers of the shield, showing the manner of mounting the same in the top and bottom plates of the shield.

1 in the drawings represents a shield or portable fortification, 2 2 leaves hinged together, and 3 3 rollers revolubly mounted thereon.

My improved shield is designed for use where it is necessary for an army or body of troops to move from place to place and to be provided with quickly-located defenses. For this purpose the shield 1 is preferably constructed of comparatively light material, as of aluminium or similar metals, which are possessed of great strength, and yet will not render the article too heavy to be easily carried. The leaves are preferably made higher than they are wide and are hinged together, as at 4 4, at their forward edges. Secured to the upper and lower edges of the leaves are top and bottom plates 5 and 6. The top plates can be made quite thin, but it is preferable to make the bottom plates considerably thicker to hold the parts properly in position. The top and bottom plates of one leaf are preferably formed with offset or shouldered portions, as 7 and 8, while the top and bottom plates of the other leaf are formed with projecting head portions 8′ and 9, which are adapted to fit into the shouldered portions on the other leaf when the leaves are spread, thereby limiting their movement. Between the upper and lower plates of each of the leaves 2 are arranged a series of vertical rollers 3 3. These rollers are preferably made hollow and of a suitable strong material—say about an eighth of an inch in thickness—the rollers themselves being anywhere from three-quarters of an inch upward in diameter. For ordinary use rollers about three-quarters of an inch in diameter will be sufficient; but where field-cannon or other large guns are in use it will be desirable to have the rollers of considerably larger diameter. The rollers 3 3 are preferably formed with plugs, as 10 and 11, in their upper and lower ends, respectively. The upper plugs are provided with journals or spindles adapted to engage bearings formed in the top plates 5 5 of the leaves. The plugs at the lower ends are preferably provided with any suitable ball-bearings for rotatably supporting them upon the lower plates 6 6 of the leaves. As the weight of the rollers is upon the lower bearings, it is desirable to have them as free from friction as possible; but the upper bearings merely act as guides to hold the ends of the rollers rotatably in place and will not ordinarily need roller-bearings. The rollers are preferably arranged quite close together, so that when a bullet strikes one of them it will easily be caught by the next succeeding roller and be turned aside from its intended course. The leaves when spread apart hold the rollers in such a position that missiles coming from the front will strike the leaves

at the angle and be readily guided to one side by the rollers. One leaf is preferably provided with one more roller than the other—as, for instance, at 12—which is set farther forward than the other rollers and will come directly in front of the apex of the angle formed by the leaves when spread apart. This is necessary in order to protect the trench at the forward edge thereof.

When the shield is not in use, it is preferably folded, and a strap or band, as 13, secured at its ends to the opposite leaves of the shield, may be used to lift and carry the same from one place to another. The strap 13 may be placed over the shoulder or other portion of the body for facilitating the carrying of the shield. When the shield is to be used, it can be easily and quickly placed in the desired position and the leaves spread apart, as seen in Fig. 1 of the drawings. The strap 13 will then hang between the leaves out of the way.

In order to render it easier to carry the shield, the top and bottom plates of one of the leaves are preferably cut away, as at 14 and 15, so that the shield may rest against the body without causing discomfort to the one carrying the same.

It will be apparent from the above description that my improved shield or breastwork can be made light and yet strong, so as to be easily and quickly moved from place to place, and that the revoluble motion of the rollers will contribute largely to the easy warding off of bullets and other missiles of war without detriment to the shield or to those behind it.

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

1. A portable shield or breastwork, comprising leaves or members hinged together at one edge and adapted to be spread apart, and a series of vertical rollers pivotally mounted along the outer surfaces of the said leaves for turning aside bullets or other projectiles.

2. A shield or breastwork, comprising leaves hinged to each other at their edges, top and bottom plates secured to the said leaves, and a series of revoluble rollers mounted between said top and bottom plates for protecting the outer surface of the said leaves against projectiles.

3. A shield or breastwork, comprising leaves formed of backs hinged together at their forward edges, top and bottom plates secured to the edges of the said leaves, offset portions in the top and bottom plates of one leaf, correspondingly-shaped head portions upon the top and bottom plates of the other leaf, whereby when the leaves are opened their movement will be properly limited, and a series of protecting-rollers mounted between the top and bottom plates, substantially as described.

4. A portable shield or breastwork comprising leaves hinged together, top and bottom plates secured thereto, and a series of vertical rollers rotatably mounted between the said plates, ball-bearings engaging the lower journaled ends of the said rollers, substantially as described.

5. A shield or breastwork, comprising leaves hinged together at one edge, top and bottom plates secured to the said leaves, a series of vertically-arranged rollers revolubly mounted between the said plates, a carrying-strap secured to the inner faces of the said leaves the upper and lower plates of one leaf being provided with cut-away portions to prevent discomfort to the person carrying the same, the construction being such that the shield may be folded and carried from place to place by means of the strap, and may be opened and set up where desired for protecting soldiers from projectiles, substantially as described.

6. A portable shield or breastwork, comprising leaves or members adapted to be spread apart, and a series of rollers carried by said members for turning aside bullets or other projectiles.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

ROBERT S. ANDERSON.

Witnesses:

FRANK J. MILLER,

L. D. CRAIG.