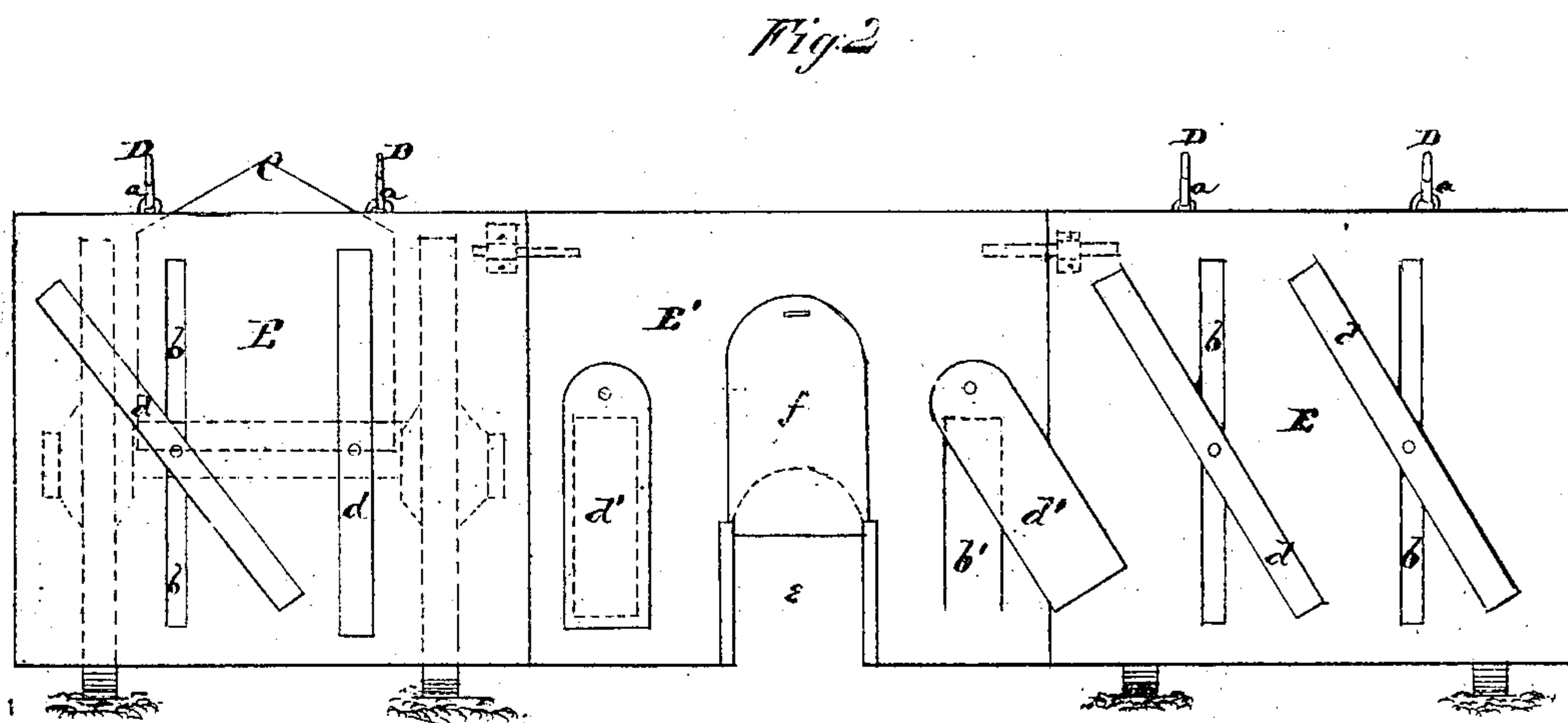
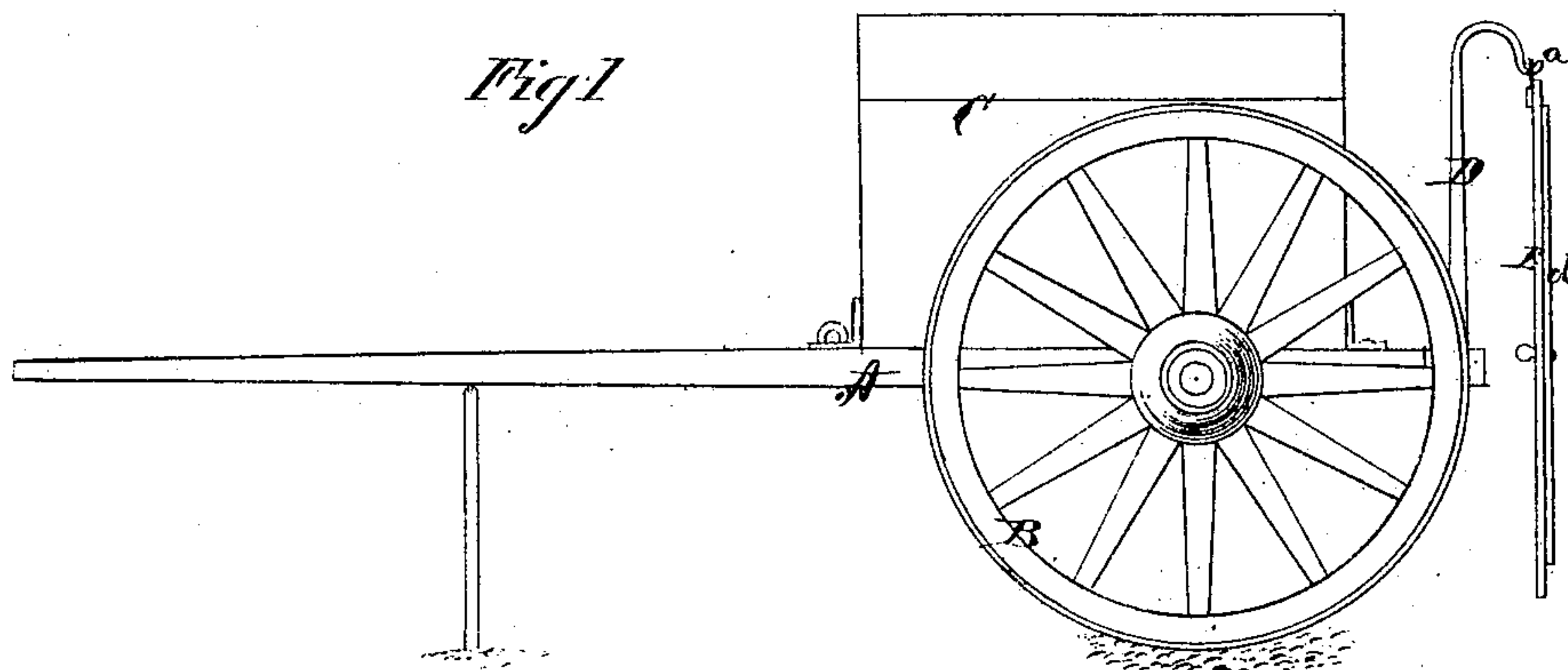


PORTABLE SHIELD FOR INFANTRY AND ARTILLERY.

Patented Dec. 27, 1870



WITNESSES.

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Harde 5 Years
for
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Letters Patent No. 110,599, dated December 27, 1870.

IMPROVEMENT IN PORTABLE SHIELDS FOR INFANTRY AND ARTILLERY.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HARDE SPEARS, of Snow Hill, in the county of Greene and in the State of North Carolina, have invented certain new and useful Improvements in Portable Breast-work and Battery; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of "portable breast-works or shields to be applied to limbers or caissons of a battery," as will be more fully hereinafter set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, and

Figure 2, a front view.

A represents the carriage-frame of a limber or caisson, mounted upon wheels, B B.

C is the ammunition-box, which is attached to the frame A in such a manner that it may be either turned or slid down upon the shafts, so as to make room for infantry upon the rear part of the frame.

On the rear part of the frame A are two pivoted standards, D D, made of steel or other suitable material that will give or yield and not break from sudden concussion.

The upper ends of these standards are bent outward, as shown in fig. 1, and form hooks, *a*, upon which is suspended a metallic plate, E, of such dimensions as to extend beyond and protect the wheels B B.

The plate E may be made of boiler-iron, or other suitable material, from five-sixteenths to half an inch thick, and heavily coated with black or other paint.

In the same are two or more vertical slots or ports, *b*, each one covered on the outer side with a pivoted shutter, *d*.

These slots or ports are for the purpose of allowing infantry to fire through, the men being placed not only on the ground below the frame A, but also on the rear portion of said frame.

Two of these limbers or caissons being placed side by side, or rather, on a line, a suitable distance apart, an additional plate, E', is suspended between them, by means of pins and sockets, as shown, or other

suitable means, thus covering up the space between the limbers or caissons.

Behind this middle plate E', the cannon is placed there being a port-hole, *e* in said sheet for that purpose.

This port-hole may be provided with a sliding or pivoted gate, *f*, as shown, and on each side thereof are one or more openings, *b'* with shutters, *d'*, for the infantry to fire through.

When not in use, the plates E E' may be carried on the limbers or caissons in any suitable manner.

The advantages of this breast-work will readily be appreciated when it is remembered that the plates constituting such breast-work are not rigid but hang loosely on the hooks *a*; hence, when musket-balls, or even cannon-balls and shells strike the same, it yields to the force of the balls, diverting the direction of the same, the balls thus becoming spent and passing harmlessly into the ground or over the heads of the men behind the breast-work. It protects the gunners and the infantry supporting them.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A breast-work, formed of metal plates, suspended loosely upon hooks, substantially as and for the purposes herein set forth.

2. Metallic sheets suspended upon or from standards on the rear portion of limber or caisson-frames, combined with an additional plate suspended from and between two of said plates to protect the space between two of said limbers or caissons, substantially as and for the purposes herein set forth.

3. The combination of the sheets E E', having openings *b b*, and shutters *d d*, with the middle plate E', provided with port-hole *e*, openings *b' b'*, and shutters *f* and *d' d'*, all constructed, arranged, and suspended, substantially in the manner and for the purposes herein set forth.

4. The portable and adjustable defensive plates E E', with or without ports and shutters, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of December, 1870.

HARDE SPEARS.

Witnesses:

A. H. MARR,
C. L. EVERT.