

UNITED STATES PATENT OFFICE.

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MEANS FOR INDICATING THE LINE OF FIRE OF RIFLES.

SPECIFICATION forming part of Letters Patent No. 793,131, dated June 27, 1905.

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To all whom it may concern:

Be it known that I, DAVID A. HENKES, a citizen of the United States, residing at Farmersburg, in the county of Clayton and State of Iowa, have invented certain new and useful Improvements in Means for Indicating the Line of Fire of Rifles, of which the following is a specification.

This invention provides means to enable one to acquire a knowledge of the relation between the line of sight and the line of fire of a rifle or like firearm.

The invention is primarily designed to devise a sight appliance of novel formation to be readily fitted to the barrel of a service-rifle to indicate the line of fire and enable the soldier to become skilled in determining the relation between the line of sight and the line of fire at different distances, so that proper allowance may be made in aiming at an object.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a magazine-rifle having a portion of the breech and muzzle of the barrel broken away to indicate the manner of applying the invention. Fig. 2 is a sectional view of a rifle-barrel, on a larger scale, illustrating more clearly the application of the invention, the intermediate portion of the barrel being broken away. Fig. 3 is a perspective view of the member or part of the sight appliance designed for the breech of the barrel. Fig. 4 is a perspective view of the member or part of the sight appliance designed for the muzzle of the barrel. Fig. 5 is a detail view showing the manner of placing the two parts or members together and fitting them within a box or casing for convenience of carrying, said box being in section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The invention is designed for the army-rifle of any approved design and embodies two parts or members, the one adapted to be fitted to the breech of the barrel and the other to the muzzle thereof. It is to be understood that the appliance does not affect the accustomed gun-sight, but is intended for use solely in instructing the soldier in the relation between the line of sight and the line of fire, so that accuracy may be acquired in aiming at objects at different distances.

The member or part to be fitted to the breech of the barrel is indicated at 1 and may be a shell of a size and shape to accurately fit the breech-cavity. This shell is open at one end and closed at the opposite end, which latter is provided with a minute opening 2, centrally disposed, so as to correspond with the longitudinal axis of the barrel irrespective of the position of the shell when inserted into said breech. The body of the member or part may consist of an empty cartridge-shell, the butt or priming end being pierced at a central point to provide the minute opening 2, which constitutes a peep or sight hole. When the sight appliance is to be placed in position, the breech-bolt or like part is removed and the shell 1 slipped into the breech.

The part or member intended to be fitted to the muzzle of the barrel is represented at 3 and consists of a thimble of a size and shape to snugly fit the muzzle of the barrel. A longitudinal slot 4 extends into the thimble from its inner end and receives the stud 5 at the muzzle of the barrel and which constitutes the outer sight and the bayonet-fastening. The outer end of the thimble 3 has an inner flange 6 to extend over the end of the muzzle and limit the inward movement of the thimble. Cross-wires 7 are right-angularly disposed and are arranged at the outer end of the thimble. These wires are extremely fine, and their point of crossing coincides with the longitudinal axis of the barrel, which also is the line of fire representing the center of the missile

or projectile. The thimble 3 is preferably of thin metal, similar to the shell 1.

The inner side of the shell 1 is blackened to avoid confusion of rays of light and enable
 5 the line of fire to be readily determined when sighting the rifle or other firearm. A straight line passed through the sight-opening 2 and the point of crossing of the wires 7 and projected corresponds with the line of fire. A
 10 straight line determined by the component parts of the gun-sight is the line of aim. There is a difference between the line of fire and the line of sight, and this difference is readily determined by the present invention
 15 and enables the soldier to make proper allowance or to adjust the sight-piece so as to obtain accuracy of aim.

The complementary parts comprising the sight appliance of the present invention are
 20 adapted to be placed one within the other, as indicated in Fig. 5, and to be received in a box or case 8, so as to be protected when not required for immediate use and to be conveniently carried. The box 8 may be of paper,
 25 metal, or other material.

Having thus described the invention, what is claimed as new is—

1. A sight appliance for a rifle or like firearm comprising complementary parts to be fitted to respectively the breech and muzzle of
 30 the barrel, the breech member consisting of a shell open at its inner end and closed at its outer end and having said closed end provided

at a central point with a minute opening, substantially as set forth. 35

2. A sight appliance for a rifle or like firearm comprising complementary parts to be fitted to respectively the breech and muzzle of the barrel, the muzzle member consisting of a thimble having an inner flange and provided
 40 with crossed wires, substantially as set forth.

3. A sight appliance for a rifle or like firearm comprising complementary parts to be fitted to respectively the breech and muzzle of the barrel, the muzzle member consisting of a thimble having a longitudinal slot extending inward from its inner end to receive the bayonet or sight stud of the barrel and having
 45 crossed wires at its outer end, substantially as specified. 50

4. A sight appliance for the barrel of a rifle or like firearm comprising complementary parts adapted to be fitted to respectively the breech and muzzle of the barrel, one member consisting of a shell closed at its outer end and
 55 provided at a central point with a minute opening, and the other consisting of a thimble having crossed wires at its outer end, substantially as set forth.

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

DAVID A. HENKES.

Witnesses:

CELIA M. HENKES,
 A. A. KISHMAN.