

(No Model.)

EMIL RITTER VON SKODA.
ILLUMINATED GUN SIGHT.

No. 529,424.

Patented Nov. 20, 1894.

Fig. 1.

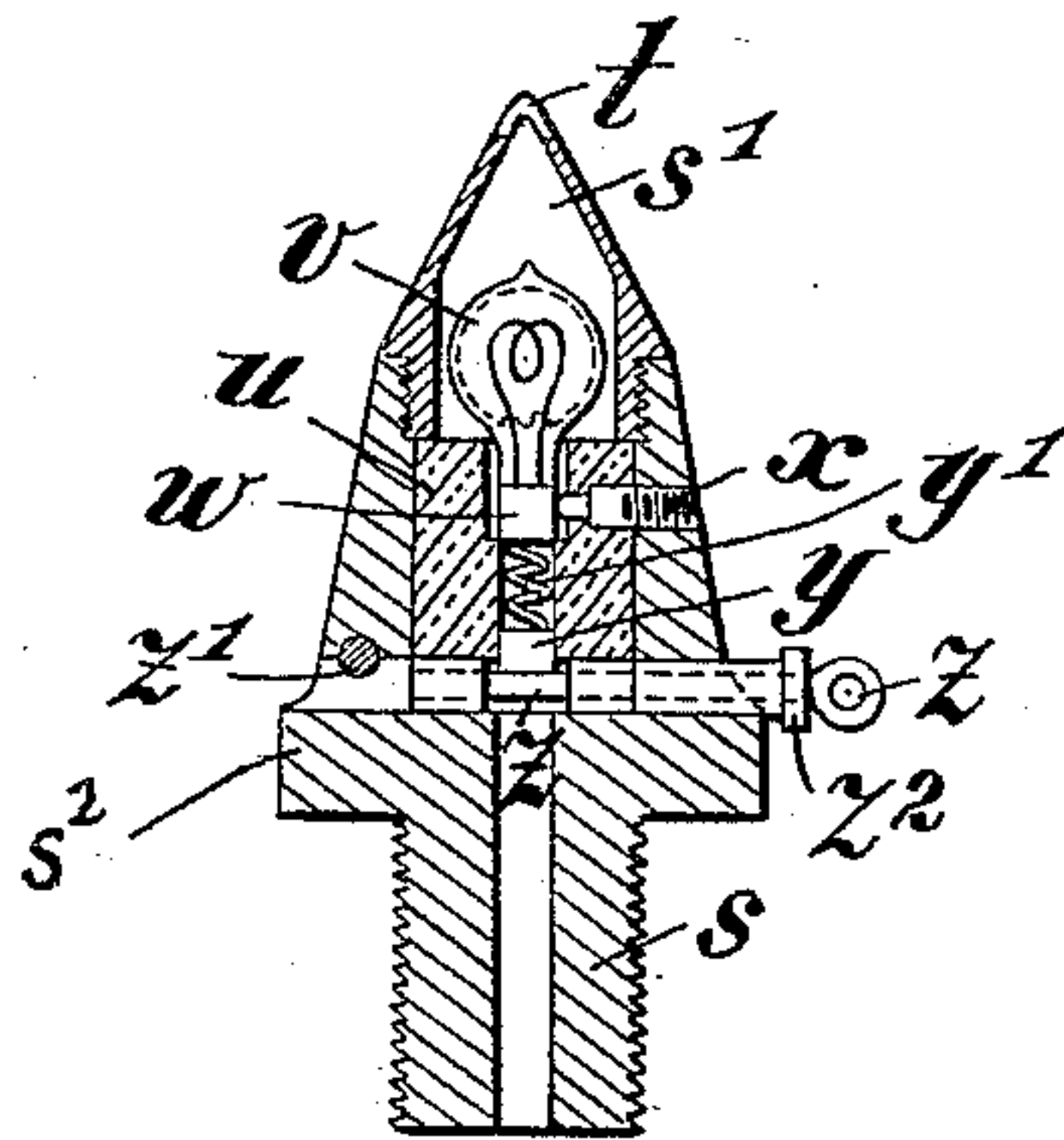
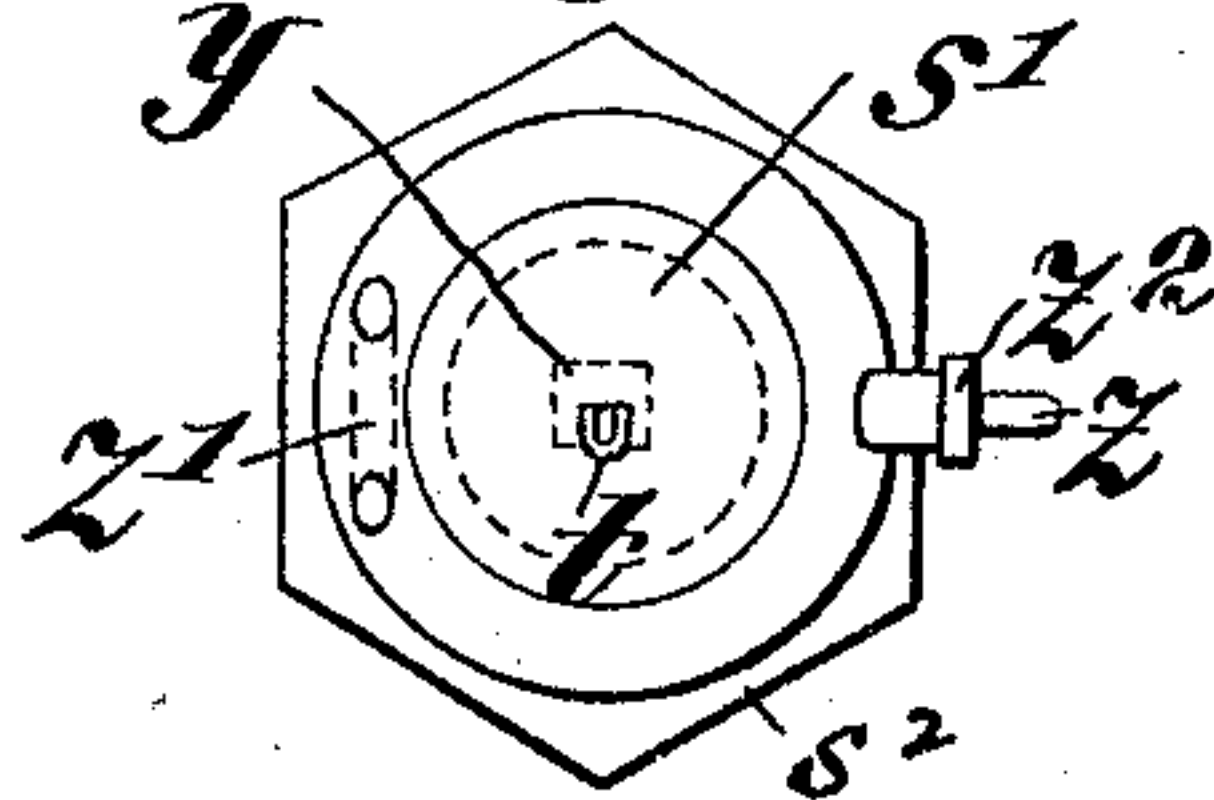


Fig. 2.



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UNITED STATES PATENT OFFICE.

EMIL RITTER VON SKODA, OF PILSEN, AUSTRIA-HUNGARY.

ILLUMINATED GUN-SIGHT.

SPECIFICATION forming part of Letters Patent No. 529,424, dated November 20, 1894.

Application filed October 10, 1893. Serial No. 487,737. (No model.) Patented in England October 4, 1892, No. 17,672; in Germany October 4, 1892, No. 69,368; in Switzerland October 4, 1892, No. 5,920; in France October 4, 1892, No. 222,716; in Belgium October 4, 1892, No. 101,598, and in Italy December 31, 1892, XXVII, 32,844, LXIX, 330.

To all whom it may concern:

Be it known that I, EMIL RITTER VON SKODA, manufacturer, a subject of the Emperor of Austria-Hungary, residing at Pilsen, in the Province of Bohemia, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Gun-Sights, (for which patents have been obtained in Germany, dated October 4, 1892, No. 69,368; in Switzerland, dated October 4, 1892, No. 5,920; in France, dated October 4, 1892, No. 222,716; in Belgium, dated October 4, 1892, No. 101,598; in Italy, dated December 31, 1892, XXVII, 32,844, LXIV, 330, and in England, dated October 4, 1892, No. 17,672;) 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention has relation to front sights for ordnance, and more particularly to that class of sights adapted to be illuminated for night service.

Various constructions have been proposed with a view to render the front sight visible at night to the gunner, but invisible from the target, as for instance, by inclosing a suitable illuminating device within the sight and providing the latter with a perforation facing the breech, or by using a light refracting body, as a sighting point, so arranged as to throw a pencil of light in a horizontal plane toward the breech. In either construction, the effect upon the eye of the gunner is a dazzling and injurious one that interferes materially with accurate sighting. In order that a refracting body may be used, it is necessary that it should be rendered invisible from the target side, and to this end a metallic shield has been used, and owing to the fragile nature of these sights it became necessary to protect the same by suitable metallic caps, such being also necessary in order to render the sight sufficiently visible by day and avoid interfering rays or pencils of light, as for instance, pencils or rays of refracted

sunlight; but irrespective of these disadvantages, and of the comparatively great cost of construction of this class of sights, there is another very serious inconvenience, namely, the difference in the level of the day and night sight lines, which unless carefully accounted for will seriously interfere with good sighting.

It is the object of this invention to avoid all of the difficulties above referred to, by constructing the sight of metal in the general form of a hollow cone or pyramid, forming an aperture therein, extending from the apex downwardly and facing the breech, and arranging within the sight, below the aperture, a suitable illuminating device, as an incandescent electric lamp. It is obvious that by means of this construction the point or apex which constitutes the sighting point is preserved both for day and night service, that the rays of light instead of being refracted horizontally issue from the sight in a vertical direction and illuminate only a small portion of the sight facing the breech from the sight point downwardly, whereby the dazzling interfering pencil of light above referred to is avoided, the point of the sight facing the gunner appearing as if glowing, and in order that this effect may be increased I employ a glass bulb for the incandescent lamp that is preferably stained red, thus producing a reddish glow about the sight point, as if it were heated to a red heat, which is no wise injurious to the eyes.

But that my invention may be fully understood, I will now describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical transverse sectional view, and Fig. 2 a top plan view of a front sight for a gun combined with means for illuminating the same.

Similar letters indicate like parts wherever such may occur in the figures of drawings just described.

Referring to the drawings which illustrate a front sight S, being visible at night, s indicates a screw plug that is screwed as usual to the gun chase or to the forward end of the gun barrel, that portion of the plug above the re-

taining flange s^2 having the form of a truncated cone or pyramid, and is socketed, the upper end of the socket being of slightly greater diameter to form an annular seat
 5 flange for the hollow conical top or sight proper, s' , said enlarged part of the socket being screw-threaded to receive the correspondingly threaded lower end of the sight cone s' . Across the base of the conical portion of the
 10 plug s is formed an opening in which is seated an ivory tube z^2 , held against endwise motion by a wire z' inserted into a suitable hole and lying in a recess formed in the tube, which latter contains a copper rod z , terminating in
 15 an eye. As shown in Fig. 1, the tube has a central slot or opening for the purpose of exposing the copper rod or wire z .

Within the socket of the conical portion of the plug s is fitted an insulation block u , preferably constructed in two parts, said block
 20 bearing on the ivory tube and held in place by the sight cone s' . The said insulation block is cored out to receive the neck of an incandescent lamp v , one of the leading-in wires
 25 of which is connected to one end of a spring y' , whose other end is connected with a metallic plug y , that is in contact with the exposed portion of the copper wire z . The other leading-in wire of the lamp is connected through
 30 the metallic socket w in which the neck of the lamp v is secured, with the body of the cone plug. Hence with the gun barrel, preferably through the medium of a screw x as shown, the metallic socket w being covered with
 35 rubber.

The bulb of the lamp I preferably make of red glass, and in order to render the sight luminous I cut away a portion of the apex of the cone to form an opening t , the converging
 40 walls of which extend through the apex of the sight cone in such manner that said opening will face the breech of the gun, whereby the apex or top of the sight cone s' is illuminated or rendered luminous.

45 By means of the copper wire z and the screw x or the plug itself the lamp can be readily included in the battery circuit, which is made and interrupted by a suitable key or switch, as may be readily understood.

50 When the lamp is brought to incandescence the apex of the front sight will have the appearance of a metal heated to a dull red glow. Consequently it will be readily visible yet will not be dazzling, and as the opening t faces to-
 55 ward the breech, the luminous or illuminated

apex of the gun cannot be seen by looking in the direction of the breech at any distance from the muzzle of the gun.

In view of the arrangement just described of the illuminating device for the front sight, 60 the operator is enabled to bring the uppermost point of the rear sight into coincidence with the clearly visible apex of the front sight.

I have referred to ivory tubes in respect of the connection for the lamp v , as an insulating material, but do not wish to confine myself thereto, as other suitable insulating materials may be used in the construction of these tubes.

Having thus described my invention, what 70 I claim as new therein, and desire to secure by Letters Patent, is—

1. A front sight for guns comprising a hollow body of an opaque material, as metal exclusively, and of a substantially conical or 75 pyramidal form provided with an opening facing the breech and extending from the apex or sight point downwardly, and an illuminating device within the sight below the aforesaid opening, whereby the apex of the sight 80 is adapted for use by day and to be illuminated for use by night.

2. A front sight for guns, comprising a hollow body of an opaque material, as metal exclusively, and of a substantially conical or 85 pyramidal form provided with an opening facing the breech and extending from the apex or sight point downwardly, and an incandescent electric lamp provided with a stained glass bulb within the sight below the aforesaid opening, for the purpose set forth. 90

3. A front sight for guns, comprising a hollow body of an opaque material, as metal exclusively, and of a substantially conical or 95 pyramidal form, a portion thereof being removed by cutting along the minor to the major axis, and thence through the apex, whereby an opening t extending from the apex downwardly is formed, and said apex preserved for sighting by day, and an illuminating device 100 within the sight below said opening, whereby said apex is adapted to be illuminated for sighting by night.

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

EMIL RITTER VON SKODA.

Witnesses:

ALFRED HÜFFNER,
 ADOLPHE FISCHER.