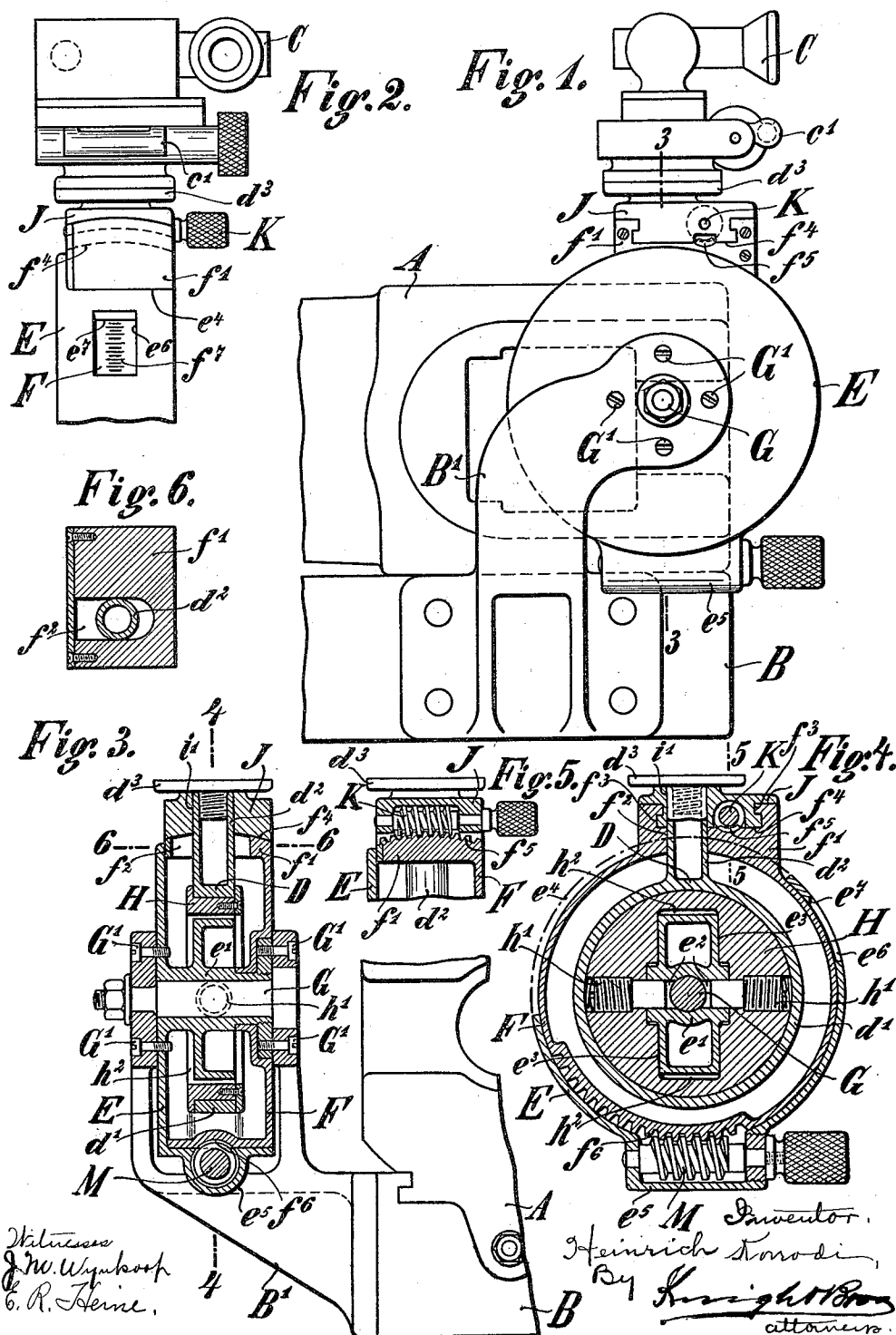


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GUN SIGHTING DEVICE.
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1,055,920.

Patented Mar. 11, 1913.



UNITED STATES PATENT OFFICE.

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GUN-SIGHTING DEVICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HEINRICH KORRODI, a citizen of Switzerland, and a resident of Berne-Kirchenfeld, Switzerland, have invented certain new and useful Improvements in Gun-Sighting Devices, of which the following is a specification.

The present invention relates to gun sighting devices, wherein a journaled member is provided by means of which the sight carrier can be set in the firing angle, said member being so mounted, that it can swing on a joint for adjusting the sight axis parallel to the gun axis in order to eliminate the influence of any inclined position of the gun carriage wheels.

The aim of the present invention is the production of a sight of this kind which provides a perfectly dust proof construction for the bearings.

One embodiment of the invention is illustrated in the drawing, wherein:

Figure 1 represents a side view of the sight and adjoining parts of the gun and carriage; Fig. 2, a partial rear view thereof; Fig. 3, a section on line 3—3 of Fig. 1 seen from the right; Fig. 4, a section on line 4—4 of Fig. 3 seen from the left; Fig. 5, a section on line 5—5 of Fig. 4 seen from the right and Fig. 6, a section on line 6—6 of Fig. 3 seen from above.

The gun A is in a well known manner slidably mounted on the guide carrying cradle B, which can rock on its horizontal trunnions (not shown). Rigidly attached to the cradle B is a bracket B¹, on which the sighting device with its telescope C is carried. The telescope C including accessory parts (such as training arc, etc.) is seated in the usual way on the sight carrier D, which comprises principally an annular sleeve d¹ and a cylindrical shank d² for the greater part inclosed in a housing consisting of two boxes E and F, one fitting inside the other. This housing E F is held in the fork-shaped extension of the bracket B¹ (see Figs. 1 and 3). The outer one E of the two cylindrical boxes E and F is rigidly attached to the bracket B¹, by means of a shaft G and a number of studs G¹, while the inner box F is mounted to turn in the outer box E. The axis of rotation of the box F is parallel to the axis of the horizontal trunnions of the gun carriage. The box E has at its center a sleeve e¹ extending

through box F, and on which is pivotally mounted inside the box F a rocking block H which is surrounded by the annular part d¹ of the sight carrier rocking loosely around it. To this end the block H around which rocks the sight carrier D when the angle of elevation corresponding to the range is adjusted is provided with two co-axial pivot bolts h¹, rigidly connected therewith and engaging suitable sockets e² in the box sleeve e¹. The sleeve e¹ has furthermore two plain guiding surfaces e³ arranged at right angles to the axis of the sockets e² and engaging corresponding surfaces of the hollow chamber h² of the block H. The axis of the joint produced by this arrangement, coinciding with the axis of sockets e², lies parallel to the axis of the gun, partaking in the elevation and has consequently always the same elevation as the gun. Said joint axis intersects at one point the axis of revolution of box F and also the axis of block H, both which latter axes are perpendicular to said joint axis. At the same point intersects further the axis of revolution of the sight carrier D (identical with the axis of block H) and the longitudinal axis of the shank d², which is perpendicular to the former. The shank d², terminating with a table d³ on which the telescope C is seated, extends upward through an outer projection f¹ of the box F, for which projection a sufficiently large opening e⁴ has been provided (Fig. 4) in the cylindrical wall of the box E. The projection f¹ has a cut f² (Fig. 6) which permits a movement of the shank d², transversely to the plane of elevation. The shank d² is adjusted in the cut f² by a slide J guided on the projection f¹ of the box F; said slide is adapted to cover the cut f² and is provided with a boring i¹ for the shank d² of the same diameter as the latter. The guide f⁴ provided on the projection f¹ on the box F for the slide J has the shape of a circular arc whose center is situated at the intersection of the axis of the above mentioned joint and the axis of the box F. By means of a worm K mounted on the slide J and in mesh with teeth f⁵ on the box F, the slide J can be moved in its guide along guiding surfaces f³ in a plane parallel to the axis of revolution of box F whereby, as the axis of the block H is simultaneously turned around the axis of the above mentioned joint, the latter axis is parallel

to the gun axis; and with the assistance of the transverse level c^1 situated on the telescope, the influence of the inclined position of the carriage-wheels is thus eliminated.

5 To set the sight for range, a second worm M is utilized, which has its bearings in the downward projection e^5 of the box E, and is in mesh with teeth f^6 on the cylindrical wall of box F, whereby the latter can be
10 revolved relatively to the box E, simultaneously turning the sight carrier D on block H. A sight graduation f^7 is placed on the cylindrical wall of the box F (Fig. 2), and read off against the edge e^7 of window e^9
15 in the box E. The position of the toothed part f^6 has been so chosen, that it will always be covered by the wall of box E in whatever position the box F may be turned by the worm M.

20 The above given description should be sufficient to explain the operation of the sight. The advantages of the sight must then be evident, namely, that a dust proof construction has been provided not only for
25 block H, around which the sight carrier turns in setting the sight for range; but also for the joint $h^1 e^2 e^1$, around which block H swings in order to eliminate the influence of the inclined position of the gun carriage
30 wheels. Furthermore the range gear M f^6 has a well protected position in the described embodiment of this invention.

I claim:

1. A gun sighting device having a rocking member swingable about an axis adjustable parallel to the direction to be imparted to the axis of the bore of the gun, a sight carrier rotatably mounted on said rocking member for adjusting the sight line
35 corresponding to the range; a box shaped member inclosing said rocking member and adapted to revolve relatively to a gun part partaking of the elevation of the gun about
40 an axis transverse to the axis of the bore of the gun; said box shaped member having an opening for a projection of the sight carrier permitting the sight carrier to swing in unison with said rocking member; so that the
45 desired firing angle may be set by altering the relative angular position of said box shaped member and said gun part partaking of the elevation of the gun on the one hand, and the influence of the inclined position of the gun carriage wheels eliminated
50 by swinging the sight carrier with its projection along said opening in unison with the rocking member on the other hand.

2. A gun sighting device having a rocking member, a sight carrier mounted on said
60 rocking member and rotatable thereon; said rocking member having a journal whose axis is always parallel to the gun axis; a box shaped member inclosing said rocking member and journal adapted to revolve in a
65 plane parallel to the elevating plane of the

gun, and on a part of the mount that partakes of the gun's elevation; said box shaped member having an opening for a projection of the sight carrier, with guide faces for the sight carrier at right angles to its plane of
70 revolution; so that said sight carrier may be set in the desired firing angle by turning said box shaped member, on the one hand, and adjusted to eliminate the influence of the inclined position of the gun carriage
75 wheels by displacement of said sight carrier along said guide faces on the other hand.

3. A gun sighting device, having a rocking member, a sight carrier rotatably mounted on said rocking member and provided
80 with a cylindrical shank; a revolving box shaped member inclosing said rocking member, the axis of said shank intersecting at right angles the axis of revolution of said sight carrier in a point, where also the axis
85 of revolution of said box shaped member intersects with the rocking axis of said rocking member.

4. A gun sighting device, having a rocking member, a sight carrier rotatably mounted on said rocking member and provided
90 with a cylindrical shank; a revolving box shaped member inclosing said rocking member; the axis of said shank intersecting at right angles the axis of revolution of said
95 sight carrier in a point, where also the axis of revolution of said box shaped member intersects with the rocking axis of said rocking member; said box shaped member having a slot for the sight carrier shank; and a
100 slide, covering said slot and surrounding said shank, slidably mounted on said box shaped member along flat guide faces parallel to the axis of revolution of the box shaped member.

5. A gun sighting device, having a rocking member, a sight carrier rotatably mounted on said rocking member and provided
105 with a cylindrical shank; a revolving box shaped member inclosing said rocking member; the axis of said shank intersecting at right angles the axis of revolution of said sight carrier in a point, where also the axis of revolution of said box shaped member intersects with the rocking axis of said rocking
110 member, said box shaped member having a slot for the sight carrier shank and a slide, covering said slot and surrounding said shank, slidably mounted on said box shaped member along flat guide faces parallel to the axis of revolution of the box
115 shaped member, said box shaped member being further provided with a circular guide for said slide, the axis of the arc of said guide being at right angles to said flat guide
120 faces in the point where the axis of revolution of the box shaped member intersects with the rocking axis of said rocking member.

6. A gun sighting device, having a rock- 130

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ing member, a sight carrier rotatably mounted on said rocking member and provided with a cylindrical shank; a revolving, box shaped member inclosing said rocking member; the axis of said shank intersecting at right angles the axis of revolution of said sight carrier in a point, where also the axis of revolution of said box shaped member intersects with the rocking axis of said rocking member, said box shaped member having a slot for the sight carrier shank and a slide, covering said slot and surrounding said shank, slidably mounted on said box shaped member along flat guide faces parallel to the axis of revolution of the box shaped member, said box shaped member being further provided with a circular guide for said slide, the axis of the arc of said guide being at right angles to said flat guide faces in the point where the axis of revolution of the box shaped member intersects with the rocking axis of said rocking member, gear teeth on said box shaped member in mesh with a driving gear mounted in a suitable case fixedly attached to a part of the gun mount that partakes of the elevation, for setting the sight in the desired firing angle; said case, box shaped member and slide forming a dust proof housing for the internal sight parts.

The foregoing specification signed at Berne, this 29 day of June, 1911.

HEINRICH KORRODI.

In presence of—
CARL GRUNWALD,
HANS GOTTMANN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."