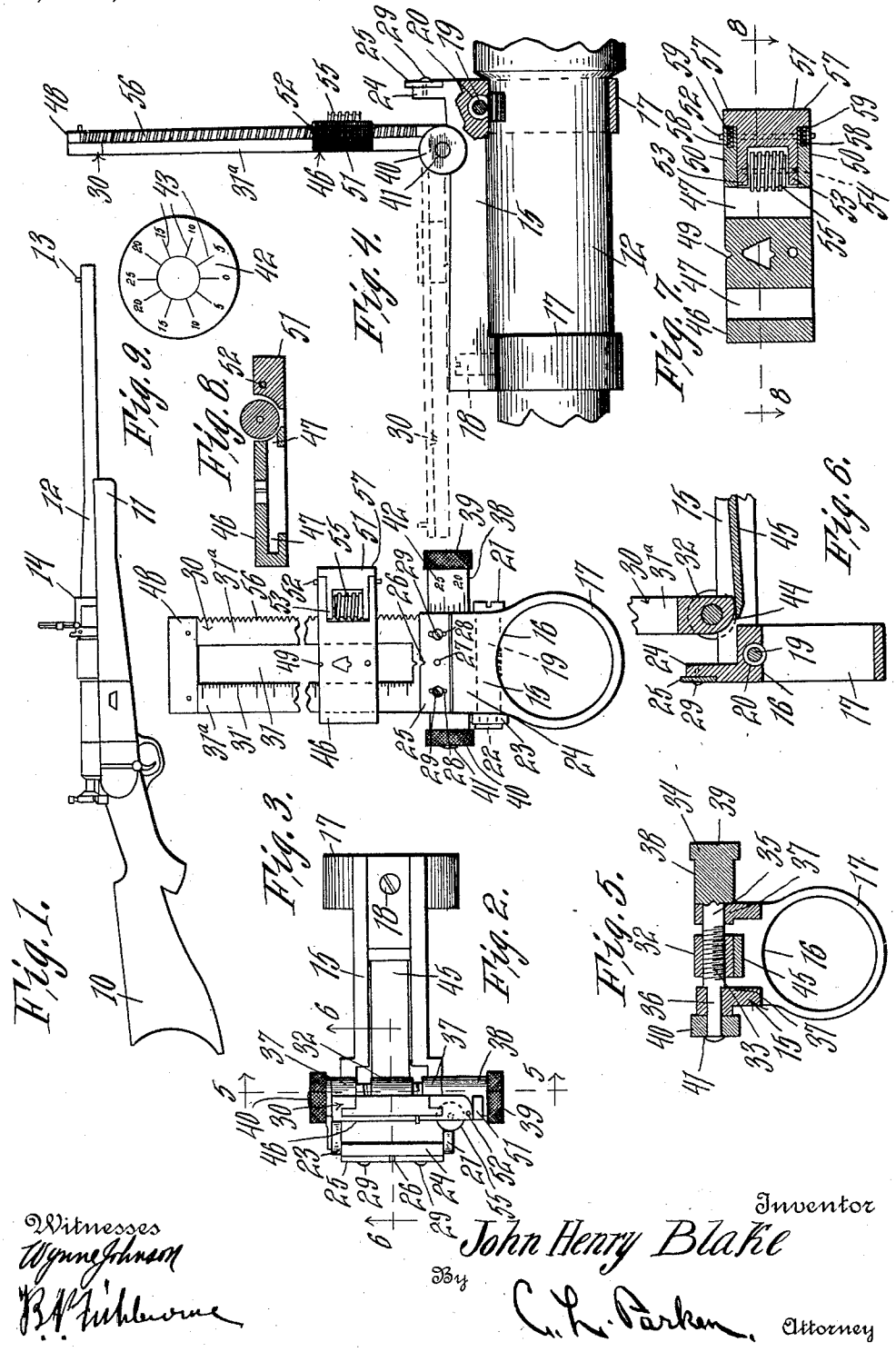
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J. H. BLAKE.

REAR SIGHT FOR GUNS OR RIFLES.

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Witnesses
Wynne Johnson
B. A. Fahlenberg

Inventor
John Henry Blake
By C. L. Parker. Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C

UNITED STATES PATENT OFFICE.

JOHN HENRY BLAKE, OF PARIS, FRANCE.

REAR SIGHT FOR GUNS OR RIFLES.

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To all whom it may concern:

Be it known that I, JOHN HENRY BLAKE, a citizen of the United States, residing at Paris, in the country of France, have invented certain new and useful Improvements in Rear Sights for Guns or Rifles, of which the following is a specification.

My invention relates to improvements in rear sights for guns or rifles and has particular reference to such means adapted for use in connection with army rifles while not restricted to such use.

An important object of the invention is to provide a rear sight of the above mentioned character, embodying a stationary point blank sight bar or plate, which may be used in point blank aiming, upon the sight-leaf being thrown to the lowered position, irrespective of the lateral adjustment of the sight-leaf and the vertical adjustment of the sight-slide with relation to the barrel.

A further object of the invention is to provide improved means for vertically adjusting the sight-slide upon the sight-leaf in a highly convenient and expeditious manner.

A further object of the invention is to provide means to laterally adjust the entire rear-sight to compensate for the lateral drift of the bullet due to the rifling of the barrel, with means for adjusting the point blank sight-bar or plate to retain it horizontal, upon such adjustment.

A further object of the invention is to provide means of the above mentioned character, which are simple in construction, inexpensive to manufacture, strong and durable.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a side elevation of an army rifle showing my improved rear sight attached thereto, Fig. 2 is a plan view of the rear sight removed, Fig. 3 is a rear end elevation of the same, with the sight-leaf in the elevated position, Fig. 4 is a side elevation of the same, parts in section, Fig. 5 is a detail section taken on line 5—5 of Fig. 2, Fig. 6 is a longitudinal sectional view taken on line 6—6 of Fig. 2, Fig. 7 is a central longitudinal sectional view through the sight-slide, Fig. 8 is an enlarged detailed section taken on line 8—8 of Fig. 7, and Fig. 9 is a diagrammatic view of a scale.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention the numeral 10 designates a stock or butt of an army rifle, having a forearm 11, upon which is mounted a barrel 12, in the usual manner. The barrel is provided at its end with a front sight 13, as shown.

The numeral 14 designates my rear sight as a whole, which is shown mounted upon the barrel 12 in Fig. 1. This rear sight includes a base 15, having a transversely curved bottom wall 16, adapted to conform to the curvature of the barrel. Depending from the ends of the base 15 are attaching rings 17, receiving the barrel. The base 15 is clamped to the barrel 12 by a set screw 18 or the like. The attaching rings 17, when the set screw 18 is loosened, permit of the turning of the sight in either direction with relation to the barrel, whereby the rear sight as a whole may be laterally adjusted with relation to the barrel to compensate for the lateral drift of the bullet during flight, due to the rifling of the barrel. Means are provided to adjust or turn the base 15 with relation to the barrel, embodying a transverse feed screw 19, rotatably mounted in a transverse opening 20 formed in the rear end of the base 15. The opening 20 is larger in diameter than the threads of the feed screw 19 and is smooth, whereby the feed screw may turn within the opening but does not move longitudinally therein. The feed screw 19 is provided at one end with a screw-head 21 and at its opposite end with a smooth reduced extension 22, the end of which is flattened to prevent a ring 23 from slipping off of the same. It might be stated at this point that in testing the rifle and ascertaining the lateral drift of the bullet during flight, caused by the rifling, the feed screw 19 is turned to laterally shift the entire rear sight, such adjustment however not being employed to correct the lateral drift of the bullet caused by the wind as separate means are provided for that purpose, to be hereinafter explained. At its rear end, the base 15 is provided with an upstanding flange or attaching member 24, to which is adjustably secured a horizontal point blank sight-bar or plate 25 extending transversely

of the base 15, as shown. This sight-bar or plate 25 is provided at a point equidistantly spaced from its ends with a notch 26, which is preferably V-shaped. The sight-bar or plate 25 is provided directly beneath notch 26 with an aperture for receiving a pivot element 27, whereby it may be swung vertically transversely of the base 15. The sight-bar or plate 25 is provided upon opposite sides of the pivot 27 with elongated openings or slots 28, receiving clamping screws 29 or the like, adapted to lock the sight-bar or plate to the flange or attaching member 24. It is thus seen that the sight-bar or plate 25 may be swung slightly vertically with relation to the base 15, and locked in the desired position to the flange or attaching member 24, and the function of this construction is to provide means whereby the sight-bar or plate 25 may be retained horizontally when the base 15 is turned slightly by the feed screw 19, with respect to the barrel of the rifle.

The numeral 30 designates a sight-leaf, pivotally connected with the base 15 in a manner to be described, and when this sight-leaf is swung to the lowered or collapsed position, the same and the elements carried thereby are arranged beneath the point blank sight-bar or plate 25, and in no manner interfere with the use of the sight-bar or plate 25 in point blank sighting. The sight-leaf 30 is provided with a longitudinally extending opening 31 forming arms 31^a, one of which is provided with a scale 31′ to indicate the range in yards, as is customary. At its lower end the sight-leaf 30 carries a knuckle 32, as shown in Fig. 5. This knuckle has a screw-threaded aperture receiving the screw-threaded portion 33 of a feed-screw 34, the pitch of the threads being low. This feed-screw 34 has smooth portions 35 and 36, rotatably mounted in knuckles 37, extending upwardly from the base 15 and preferably formed integral therewith. This feed screw comprises an enlarged portion 38, carrying a milled head 39 by which the feed screw may be turned. The portion 36 of the screw 34 extends outwardly beyond the knuckle 37 and receives thereon a ring 40, held in place by flattening the end of the portion 36, as shown at 41. It is thus apparent that the portion 38 and ring 40 prevent the feed-screw 34 from moving longitudinally with relation to the knuckles 37, while it is free to rotate with relation thereto. Upon rotating the feed-screw 34 the sight-leaf 30 is moved transversely with relation to the base 15, compensating for the lateral drift of the bullet during flight, caused by the wind. In order that the soldier or marksman may readily adjust the feed-screw in accordance with the rate the wind is blowing per hour, the portion 38 of the feed screw is provided with a scale 42, more clearly shown in Fig. 9. This scale consists of graduations 43, starting from "0" and increasing in opposite directions, in order that the feed-screw may be set by turning it in opposite directions in accordance with the direction in which the wind is blowing.

As more clearly shown in Fig. 6, the knuckle 32 of the sight-leaf 30 is provided with a cam face 44, to engage with a leaf-spring 45, formed in the bottom of the base 15, whereby the sight-leaf may be held in the raised or lower position.

The numeral 46 designates a vertically adjustable sight-slide, having transverse openings 47, to receive the arms 31^a of the sight-leaf 30, said arms carrying a detachable transverse member 48. The sight-slide 46 is provided centrally of the opening 31 with peep openings or notches 49, of any well known or preferred type. The sight-slide 46 is provided at one end with spaced laterally extending arms or knuckles 50, between which is arranged a swinging-carrier 51, pivotally connected therewith by means of a pin 52 or the like. This carrier embodies inwardly extending knuckles 53, arranged between the knuckles 50 and having a pin 54 connected therewith. Rotatably mounted upon the pin 54 is a feed-worm or screw 55, adapted to engage and disengage teeth 56 formed upon one edge of the sight-leaf 30, as shown. The carrier 51 is provided near its outer end with extensions or ears 57, engaged by compressible coil springs 58 mounted in openings 59. The function of these springs is to hold the carrier 51 in the active position whereby the screw 55 will engage with the teeth 56. In adjusting the sight-slide 46, the carrier 51 is swung to bring the screw 55 out of engagement with the teeth 56 whereby the sight-slide may be quickly moved longitudinally of the sight-leaf 30 to bring the upper edge thereof in proximity to the desired graduation of the scale 31′. The carrier 51 being released, the springs 58 automatically return the screw 55 into engagement with the teeth 56, and this screw 55 is then turned to accurately and conveniently advance the sight-slide 46 so that its upper edge is moved in alinement with the desired graduation of the scale 31.

The operation of the sight is as follows: When shooting at long distance, the sight-leaf 30 is moved to the elevated position and is held therein by the spring 45 engaging the cam face 44. The range having been ascertained, the sight-slide 46 is longitudinally adjusted upon the sight-leaf 30, as above described. The travel of the wind per hour being ascertained, the feed screw 34 is properly rotated to laterally adjust the sight-leaf 30 to compensate for the lateral drift of the bullet, during flight, caused by

the wind. The soldier or marksman then uses the rifle in the usual manner, peeping through the opening 49 and aiming the front sight 13 at the target. It not infrequently happens in battle, that the soldier while having the sight-leaf and elements carried thereby adjusted for long range and high wind, is suddenly surprised by the enemy approaching at a short distance. When this occurs, the adjustment of the sight-leaf for the wind and for long range is obviously disadvantageous. When using my rear sight, and upon the sudden approach of the enemy at a short distance, the sight-leaf 30 is quickly thrown to the lowered position, allowing the fixed sight-bar or plate 25 to be used in point blank aiming at short distance.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described the invention, I claim:—

1. In a rear sight for a gun or rifle, a base adapted to be secured to the barrel of a rifle, a point blank sight-bar secured to the base, and a sight-leaf adjustably connected with the base and adapted to be moved independently thereof to a lowered position entirely out of the way of the point blank sight-bar.

2. In a rear sight for a gun or rifle, a base adapted to be secured to the barrel of a rifle, a point blank sight-bar secured to the base, a sight-leaf adjustably connected with the base, means to laterally shift the base with relation to the barrel, the point blank sight-bar being so mounted that it may be restored to the normal horizontal position when moved therefrom by the lateral shifting of the base.

3. In a rear sight for a gun or rifle, a base adapted to be mounted upon the barrel of the rifle, means to turn the base around the longitudinal axis of the barrel, a sight-leaf adjustably connected with the base, a point blank sight-bar pivotally connected with the base, and means to lock the point blank sight-bar to the base in adjustment at the desired position with relation thereto.

4. In a rear sight for a gun or rifle, a base to be mounted upon the barrel of the rifle, means to turn the base around the longitudinal axis of the barrel, a point blank sight-bar carried by the base, so that it may be moved with relation to the base and restored to the normal horizontal position when moved therefrom upon turning the base around the longitudinal axis of the barrel.

5. The combination with the barrel of a gun or rifle having a front sight, of a normally stationary point blank sight arranged near the rear end of the barrel, a movable sight-leaf arranged near the rear end of the barrel in proximity to the point blank sight and adapted to be shifted with relation to the point blank sight for assuming a position out of the way of the point blank sight, and means for securing the point blank sight and the sight-leaf to the barrel.

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

JOHN HENRY BLAKE.

Witnesses:
C. L. PARKER,
JAMES L. CRAWFORD.

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