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G. R. HENKEL.

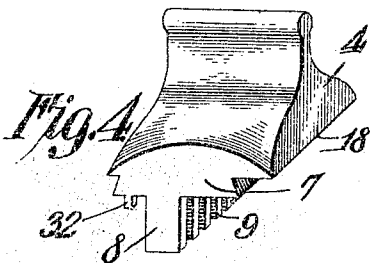
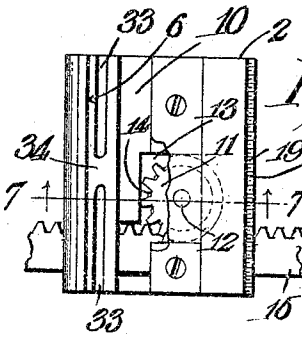
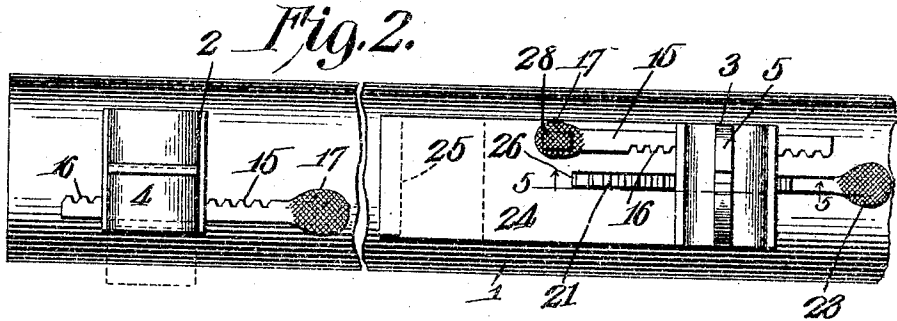
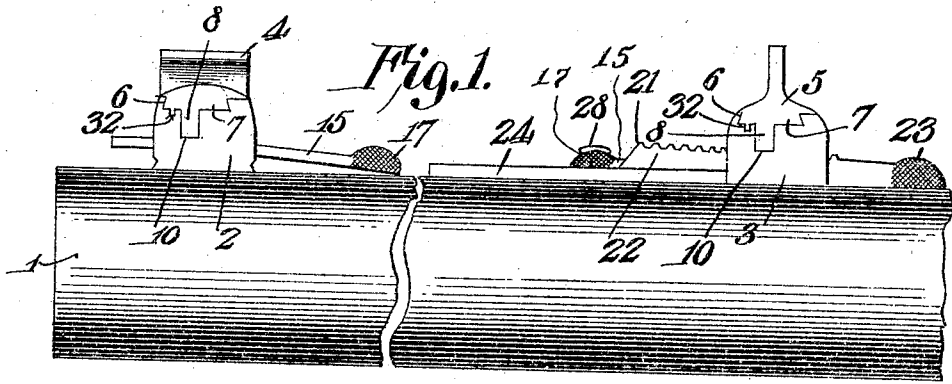
FIREARM SIGHT.

APPLICATION FILED APR. 13, 1909.

946,357.

Patented Jan. 11, 1910.

3 SHEETS—SHEET 1.



Witnesses

V. J. Evans
R. M. Smith

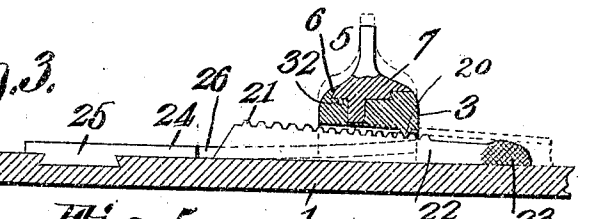


Fig. 5.

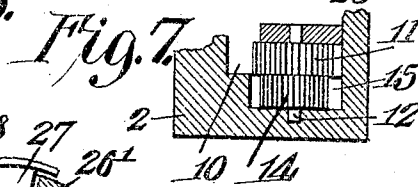
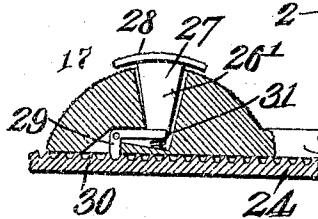


Fig. 6.



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2 SHEETS—SHEET 2.

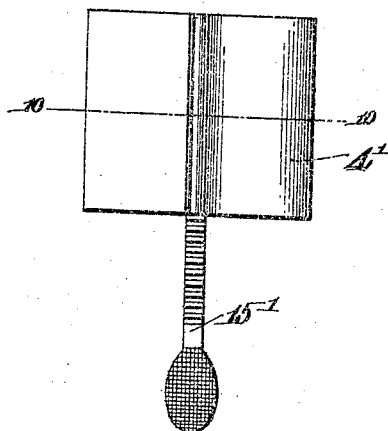


Fig. 8

Fig. 11.

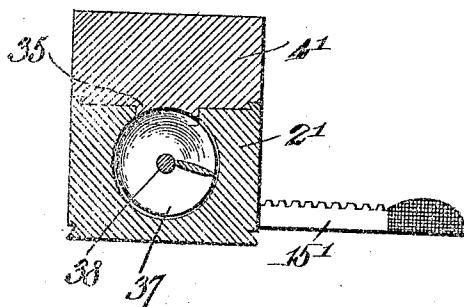


Fig. 10.

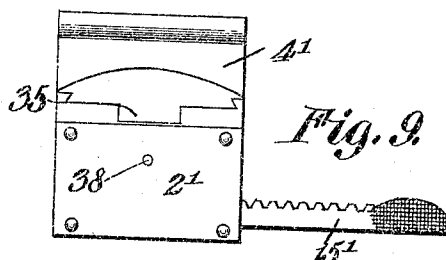
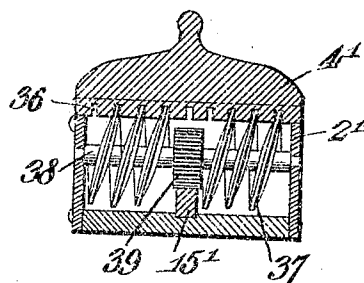


Fig. 9.

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UNITED STATES PATENT OFFICE.

GEORGE R. HENKEL, OF BABE, MONTANA, ASSIGNOR OF ONE-HALF TO CHARLES E. MATSON, OF BABE, MONTANA.

FIREARM-SIGHT.

946,357.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed April 13, 1909. Serial No. 489,562.

To all whom it may concern:

Be it known that I, GEORGE R. HENKEL, a citizen of the United States, residing at Babe, in the county of Teton and State of Montana, have invented new and useful Improvements in Firearm-Sights, of which the following is a specification.

This invention relates to sights for fire arms, the object in view being to provide a wind gage sight embodying means for easily and quickly adjusting, shifting and locking the sight; also means for elevating the sight, thereby adapting the fire arm to different ranges and to different wind pressures.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a side elevation of a portion of the barrel of a fire arm, showing the front and rear sights of this invention mounted thereon. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged plan view of the base of one of the sights, showing also a portion of the push pin or rack bar. Fig. 4 is an enlarged perspective view of the movable section of the sight. Fig. 5 is a vertical longitudinal section through the upper wall of the barrel and the rear sight, showing the sight elevating means. Fig. 6 is an enlarged vertical longitudinal section, showing the means for locking and unlocking the push pin or rack bar. Fig. 7 is a detail vertical section on the line 7—7 of Fig. 3. Fig. 8 is a plan view showing a modification in the arrangement of the sliding element for actuating the shiftable sight. Fig. 9 is a side elevation of the same. Fig. 10 is a transverse section taken in line with the shaft of the pinion. Fig. 11 is a cross section taken at right angles to Fig. 10 and to one side of the central pinion.

1 designates the barrel of the fire arm upon which I have shown two sights mounted, 2 designating the front sight and 3 the rear sight. The front sight embodies a base or fixed section to which the reference numeral 2 is applied, said base being secured

to the barrel in any convenient manner and adjacent to the front end thereof. The base section of the rear sight is indicated by the reference numeral 3 while 4 and 5 designate the shiftable sections of the front and rear sights, respectively. Each of the base sections is provided in its top surface with a dove-tailed recess 6 in which is slidably fitted the dove-tailed bottom 7 of the shiftable section of the sight as clearly shown in Fig. 1, said dove-tailed recess extending transversely of the barrel, whereby the shiftable sight section is movable across the top of the barrel.

In addition to the dove-tailed portion 7 each sight is provided with a downwardly extending rack flange 8 provided on one of its faces with rack teeth 9. The rack flange fits into a corresponding recess 10 extending through the base of the sight and transversely of the barrel while the rack teeth 9 thereof are engaged by the teeth of a pinion 11 the shaft 12 of which is journaled in the base of the sight, as illustrated in Fig. 3, said base being recessed as shown at 13 to receive the pinion 11 and also to receive a relatively smaller pinion 14 which revolves with the pinion 11 and is actuated by a push pin 15 in the form of a rack bar having teeth 16 along one edge thereof, said rack bar or push pin 15 operating lengthwise of the barrel at one side of the pinion. The pinion with which the rack bar meshes is of smaller diameter than the pinion 11 which meshes with the rack flange 8 so that a very slight movement of the push pin 15 results in a comparatively accelerated movement of the movable section of the sight transversely of the barrel.

In order to retain the shiftable section of the sight in any determined position, the push pin 15 is made in the form of a spring bow, or in other words, is made of spring metal and curved as shown in Fig. 1, one end of such spring pin resting upon the barrel of the fire arm as shown in said figure. The end which rests against the barrel is enlarged and serrated as shown at 17 to form a thumb or finger grip or button which will facilitate the moving of the push pin by finger pressure. At the same time said pin is held against longitudinal movement

by its frictional engagement with the barrel. The movable section of the sight is provided with an indicating point or mark 18 adapted to register with a graduated scale 19 on the base of the sight so that the marksman may accurately determine the position of the sight in accordance with the wind pressure.

The rear sight embodies all the mechanical principles described in connection with the front sight and in addition thereto, said rear sight is provided with a recess in which is arranged a single tooth 20 which engages with the teeth 21 of a sliding wedge 22 provided at its rear end with a serrated face or finger button 23 to facilitate the lengthwise shifting of said wedge.

In order to allow the rear sight to be elevated and depressed, said sight is mounted on the rear free end of a spring support 24 which is secured to the barrel, a convenient means of attaching said sight removably to the barrel being illustrated in Fig. 5 wherein said spring support is shown as provided on its under side with a dove-tailed lug 25 fitting into a correspondingly shaped groove or recess in the barrel of the fire arm, which recess extends transversely of the top of the barrel. The spring support is also provided with a longitudinal slot 26 so as to straddle the movable wedge 22, the bottom edge of said wedge resting and working in contact with a fixed surface which as shown in Fig. 5 may consist of the barrel of the fire arm.

In order to retain the push pin 15 in any position to which it is adjusted, the head or button 17 thereof is recessed as shown at 26' to admit of the movement of the shank 27 serving to operate an L-shaped dog 29 pivotally mounted in a recess in the lower side of the button 17 as shown in Fig. 6, while the engaging point of the dog is normally maintained in engagement with a fixed rack 30 by means of a spring 31, said spring also acting to hold the thumb piece 28 elevated. To move the toothed push pin 15, pressure is brought to bear on the thumb piece 28 thereby disengaging the dog 29 from the rack 30, which is fixed to the barrel but which may constitute an integral part of the barrel. The push pin 15 may then be shifted to shift the rear sight to the desired point whereby by releasing the thumb piece 28, the dog reengages the rack 30 and locks the pin 15, the latter serving to maintain the rear sight in its adjusted position.

To limit the sliding movement of the shiftable section, the latter may be provided adjacent to its opposite ends with pendent stops 32 which work back and forth in grooves 33 in the base section as shown in Fig. 3, said grooves being in line with each

other and being interrupted or separated by an intervening web 34 against which the pins or stops 32 bear, thus preventing the shiftable section of the sight from moving far enough to escape from its engagement with the base section.

Another manner of shifting the movable sights is illustrated in Figs. 8 to 11 inclusive, in which it will be observed that the sliding element or push pin 15' is arranged centrally of the barrel and the base of the shiftable sight. The sight 4' is mounted to slide transversely of the barrel on the base 2', the same as above described, but is provided at the bottom with a central flange 35 having a worm rack 36 in its lower face with which meshes a worm 37 on a shaft 38 extending transversely of the barrel of the fire arm. This shaft 38 is journaled in the base 2' and is provided at its center with a pinion 39 which meshes with the push pin 15' as best illustrated in Fig. 10. It will now be observed that by sliding the pin 15' lengthwise of the barrel of the fire arm, motion is transmitted through the pinion 39 to the shaft 38 and from the worm 37 to the shiftable sight section 4', thus causing a movement of the shiftable sight transversely of the barrel.

While the means just hereinabove described differs from that previously described, the principle involved is the same, the sight being shiftable transversely of the barrel by the sliding movement of the push pin 15' which moves in a direction lengthwise of the barrel.

I claim—

1. A sight for fire arms comprising a fixed base section, a shiftable section having a sliding relation to the base and movable transversely of the barrel, and a spring push pin having a rack and pinion engagement with the shiftable section of the sight and a frictional engagement with the barrel of the fire arm.

2. A sight for fire arms comprising a fixed base section, a shiftable section having a sliding relation to the fixed section and movable transversely of the barrel, a rack face on said shiftable section, a push pin having a rack face, and a plurality of pinions housed in the base section, one engaging the rack face of the push pin and another engaging the rack face of the shiftable section of the sight.

3. A sight for fire arms comprising a base section, a spring support on which said base section is mounted and by which it is adapted to be elevated and depressed, a shiftable section having a sliding relation on the base section and movable transversely of the barrel, a push pin having a rack and pinion engagement with said shiftable section, and a toothed and sliding wedge work-

946,357

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ing through a slot in the spring support and cooperating with the base section of the sight.

4. In a sight for fire arms, a shiftable sight movable transversely of the barrel on which it is mounted, in combination with a sight-actuating slide geared to the shiftable sight and movable longitudinally of the

barrel and perpendicular to the plane of movement of the sight.

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

GEORGE R. HENKEL.

Witnesses:

C. L. BRISTOL,
WM. TAYLOR.