

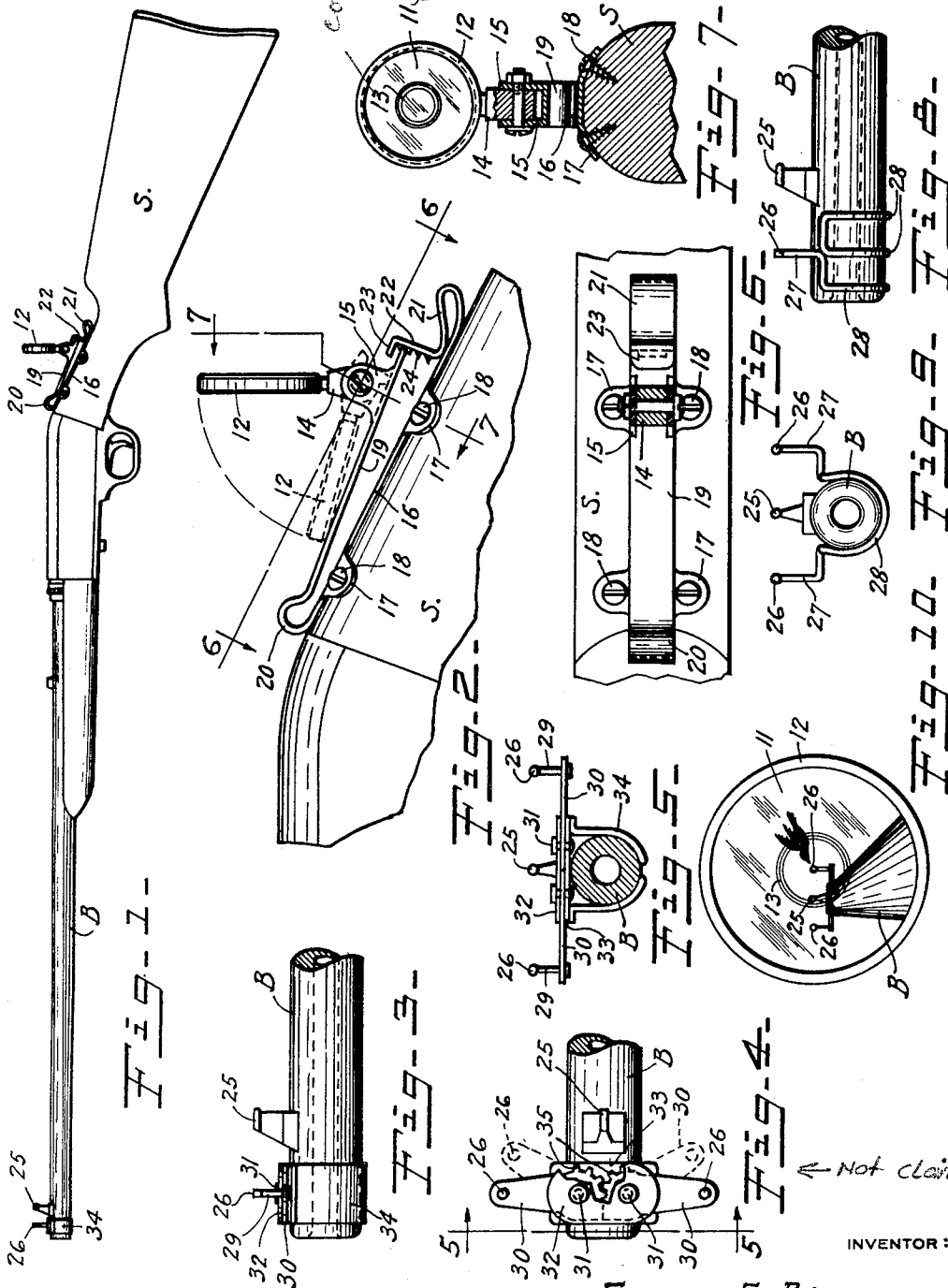
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F. E. BLISS

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GUN SIGHT

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INVENTOR :

FRANK E. BLISS.

BY

David O. Barnell.

ATTORNEY

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GUN SIGHT

Frank E. Bliss, Omaha, Nebr.

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1 Claim. (Cl. 33—51)

My invention relates to gun sights, and particularly to sights for sporting firearms used for firing at moving game. It is the object of my invention to provide sighting devices for firearms of the foregoing class, whereby the same may be aimed with a minimum of obstruction of view of the game, whereby suitable adjustments of the sights for different ranges may be effected rapidly and without visual observation of the adjusting means, whereby the sights may be employed to indicate and effect the proper lead for game which is in motion laterally of the line of sight, and whereby the sights may be adapted to the vision of a particular user, to correct defects thereof such as might usually be compensated by the use of eyeglasses.

In the accompanying drawing Fig. 1 is a side view of a rifle equipped with sights embodying my invention, Fig. 2 is a detail side view of the rear sight, Fig. 3 is a similar view of the front sight, Fig. 4 is a detail plan view of the same partly broken away, Fig. 5 is a transverse section on line 5—5 of Fig. 4, Fig. 6 is a detail section on the line 6—6 of Fig. 2, Fig. 7 is a section on the line 7—7 of Fig. 2, Fig. 8 is a side view of a modified front sight device, Fig. 9 is a front view of the same, and Fig. 10 is a diagrammatic rear view, showing the sights as the same appear to the user during the aiming of the gun at moving game.

In carrying out my invention I preferably employ for the rear sight a transparent lens 11 of which the refractive qualities may be suited to the vision of the individual user, substantially as a monacle, the sight being mounted upon the gunstock or upon the tang of the barrel in the same location as the ordinary rear peep-sight, so as to be quite close to the eye of the user when aiming the gun. Obviously, if the vision of the user does not require correction, the lens or monacle may be non-refractive. The lens or monacle 11 is mounted in a ring 12, and about the center of the transparent disk there are formed by any suitable means one or more concentric circular lines 13, which are preferably thin enough to appear as a shadowy ring, without materially obstructing vision through the lens. The mount-ring 12 has a stem-portion 14 connected pivotally between the parallel lugs 15 on a holder or range-adjuster which is secured to the grip portion of the gunstock S adjacent to the breech of the gun-barrel B. In the structure shown, the range-adjuster is formed integrally of flat resilient metal, and comprises a straight lower member 16 having perforate lugs 17 for receiving the

screws 18 by which the same is attached to the stock S, a straight upper member 19 from which the lugs 15 are turned up near its rear end, a curved front part 20 connecting the front ends of the lower and upper members 16 and 19, a loop 21 at the rear end of the lower member 16, and a part 22 extending upwardly from the terminal of said loop, said part 22 having at its upper end a lip 23 extending forwardly over the end of the upper member 19 behind the lugs 15, and having also a plurality of ratchet-like teeth 24 adapted for engagement with said rear end of the member 19. The pivotal connection of the stem 14 with the lugs 15 allows the ring 12 to swing forwardly from the upright operative position shown by the full lines in Fig. 2, to the carrying or folded position shown by dotted lines in said figure. The loop 21 is curved upwardly from the plane of the member 16, so that by pressing downwardly upon the rear portion of said loop the part 22 may be moved slightly rearward, sufficiently to disengage the teeth 24 from the end of the member 19, but not enough to prevent engagement of said member with the lip 23. The front part 20 is formed to provide spring-tension tending to raise the upper member 19 as far as permitted by the lip 23. By pressing downward upon the loop 21 the member 19 is released and allowed to move up to the extreme position at which it engages the lip 23. This position is for maximum range adjustment, and for shorter ranges the member 19 is pushed downward to engage successively the several teeth 24 on the upright part 22.

The gun-barrel B carries a front sight comprising the usual fixed bead 25, which is employed when aiming at fixed objects, or at objects which have little, if any, motion laterally of the line of sight. In addition to the central or fixed normal sight-bead 25, I provide a pair of laterally spaced sight-beads 26, for use in aiming at objects which are in motion laterally of the line of sight. For some purposes, the auxiliary or lateral sight-beads may be fixed in position, and in such cases the beads may be formed on the terminal portions 27 of a wire whereof the intermediate portions 28 are bent to form a plurality of C-shaped resilient clips, embracing and frictionally retained about the lower side of the barrel B, as shown in Figs. 8 and 9. Preferably, however, the beads 26 are mounted adjustably to enable the same to be disposed at various lateral spacings from the central bead 25. A suitable adjustable mounting for the lateral beads is shown in Figs. 3, 4 and

5, wherein the vertical stems 29, carrying said beads, are affixed to the outer ends of a pair of flat arms 30, each of said arms being pivoted upon a short vertical stud or post 31 connecting an upper plate 32 and a lower plate 33, between which the arms 30 are swingable. To the lower plate 33 are affixed a pair of resilient clip-members 34, adapted to embrace the barrel B and to be frictionally retained thereon. At the adjoining ends of the arms 30, and extending concentrically about the pivot-posts 31, are teeth 35 which intermesh as segments of gears, as shown in Fig. 4, wherein the upper plate 32 is partly broken away to show said gear-teeth. By the toothed connection of the arms 30, the same are maintained in symmetrical relation to the longitudinal axis of the barrel B, or, for example, so that if one of the arms be moved from the fully extended position shown in Fig. 4 to an angular position such as partly indicated by dotted lines, the opposite arm will be actuated to a like position by the segmental gear connection between the arms.

The auxiliary or lateral sights are so spaced from the normal or central sight 25 as to indicate the proper "lead" when aiming the gun at objects moving laterally of the line of sight. For moderate variations of range, such that the velocity of the projectile fired from the gun is substantially uniform within the range variation, the required lead for an object moving at a certain rate is angularly uniform for any distance, and the same lateral spacing of the auxiliary sights will suffice for any range. It will thus be seen that if the gun is to be used only for firing at objects which move at a substantially uniform and known velocity, the auxiliary sights may be supported by fixed non-adjustable means, such as represented in Figs. 8 and 9, and in such case the spacing of the sights is appropriate for the one velocity only, while minor variations of velocity, if any, may be estimated by the user, for the instant occasion. With the described adjustable supporting means for the

auxiliary sights, the lateral spacing thereof may be varied by swinging the arms 30 inwardly or outwardly to positions determined by experiment or calibrated by calculation. With the auxiliary sights properly spaced laterally according to the transverse velocity of the moving object, the manner of aiming the gun will be obvious from Fig. 10. In the large field of vision afforded by the monocle 11 the game may be clearly observed while far out of line with the gun-barrel axis in any direction. In the exceedingly large total aperture of the monocle, the circles 13 serve to indicate the center or sight-axis, and by so pointing the gun that the lateral sight-bead 26, at the side from which the game is approaching the line of fire, covers or registers with the object, the proper lead is assured.

As a particular convenience to the user thereof, the range-adjuster for the rear sight may be set for the desired range without visual observation thereof, whereby the sportsman is enabled to continuously observe any game that may be seen, while adjusting the range of the gunsights entirely by tactile sense. Such adjustment for range is effected by first pressing down the loop 21 to release the member 19 and permit its movement upward to engage the lip 23 for maximum range, and then depressing the member 19 to engage the successive teeth 24, each of which may be felt, until the tooth corresponding to the desired range is reached.

Now, having described my invention, what I claim and desire to secure by Letters Patent is:

Sighting means for firearms, comprising in combination a monocle rear sight having means for indicating the center thereof, a fixed central front sight-bead, and auxiliary sight-beads spaced laterally from said central sight-bead, the total aperture of the monocle rear sight being materially greater than necessary to place said auxiliary sight-beads simultaneously in the field of vision through said rear sight with the eye in normal shooting position.

FRANK E. BLISS.