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June 15, 1937.

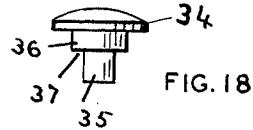
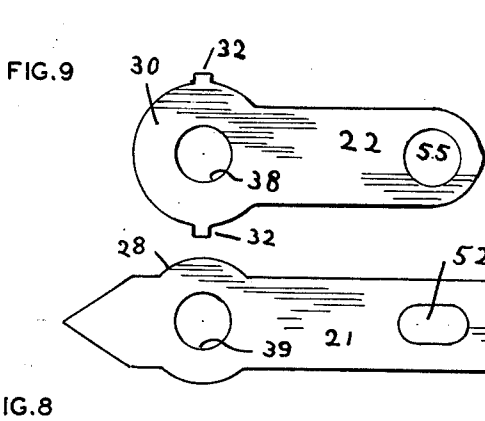
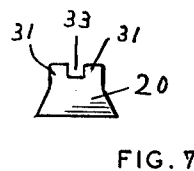
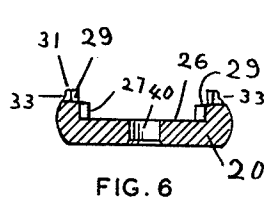
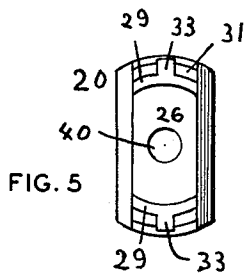
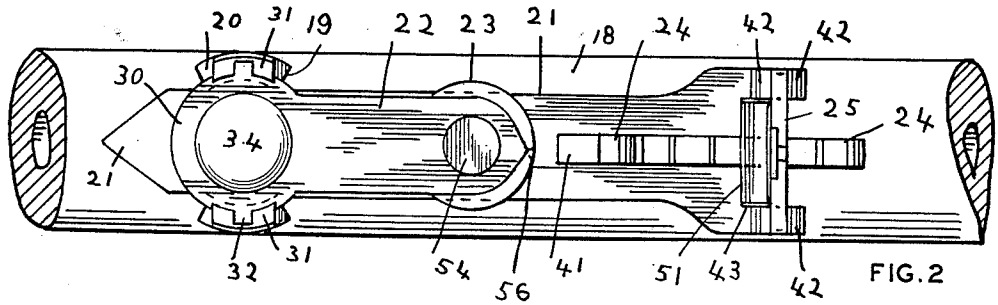
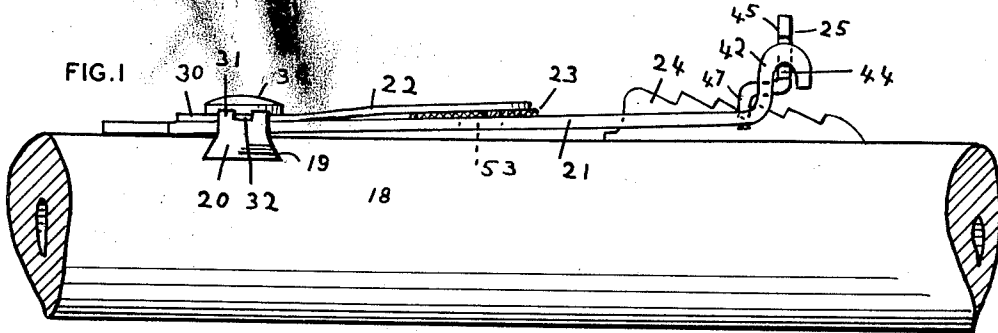
F. S. WILCOX

2,083,677

SIGHT FOR FIREARMS

Filed July 21, 1936

2 Sheets-Sheet 1



INVENTOR
 Frederic S. Wilcox
 By Martin & Rendell
 ATTORNEYS

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Spring action

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June 15, 1937.

F. S. WILCOX

2,083,677

SIGHT FOR FIREARMS

Filed July 21, 1936

2 Sheets-Sheet 2

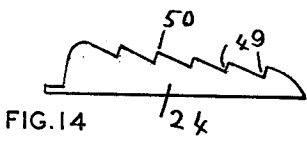
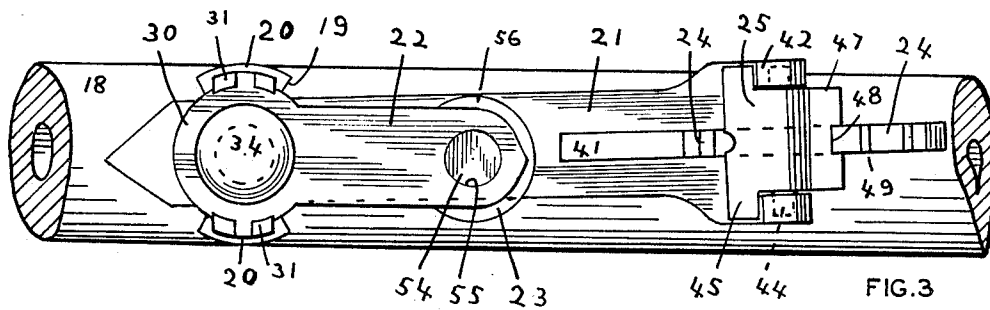
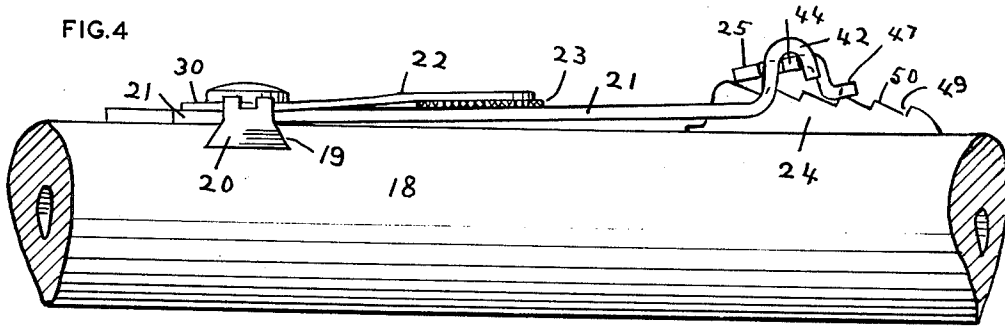


FIG. 14



FIG. 13

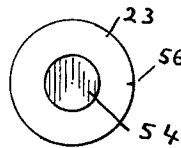


FIG. 10

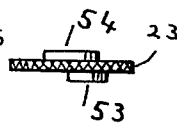


FIG. 12

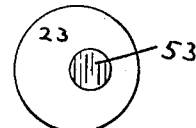


FIG. 11

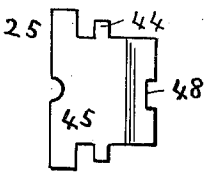


FIG. 17

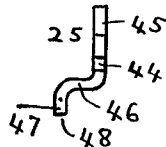


FIG. 15

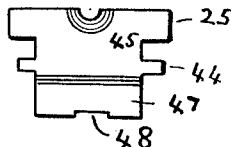


FIG. 16

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Patented June 15, 1937

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UNITED STATES PATENT OFFICE

2,083,677

SIGHT FOR FIREARMS

Frederic S. Wilcox, Springfield, Mass., assignor by mesne assignments, to Savage Arms Corporation, New York, N. Y., a corporation of Delaware

Application July 21, 1936, Serial No. 91,732

5 Claims. (Cl. 33—56)

This invention relates to a sight for firearms.

The purpose of my present invention is to provide a new and improved form of sight for firearms and particularly to provide a sight of simple but durable construction and a sight wherein the tension of a spring tongue is utilized both to yieldingly hold a folding sight piece in either upstanding or folded position and also to yieldingly hold a stepped wedge piece with any one of its notches engaging the sight piece for the purpose of raising the sight piece to different heights above the barrel and so obtaining an adjustable range for the sight.

A further purpose is to provide a firearm sight wherein a tongue carrying at its free end a sight piece is swung laterally on a pivot at its other end so as to adjust the said sight piece transversely of the barrel for windage and further to have the means for so swinging the tongue of such character as to be self-holding in any position to which adjusted and also adapted to be adjusted to another position by manipulation of the adjusting means without having to unlock or loosen any fastening or holding means, and further to provide such windage adjustment of readily made and assembled parts and of such construction that the adjustment either to the right or the left may be made to the precise extent desired, that is not limited to a few positions.

A still further purpose is to provide a firearm sight combining both of the main features hereinbefore mentioned, namely that of a windage adjustment by swinging a spring tongue relative to the barrel and at the same time to have said spring tongue co-operate to yieldingly hold the folding sight piece in either raised or folded position and also to hold the stepped wedge piece in any one of several positions relative to the sight piece and barrel for the purpose of obtaining an adjustment of the range of the firearm.

Further purposes and advantages of this invention will appear from the specification and claims herein.

Fig. 1 is a side elevation on an enlarged scale of a firearm sight embodying this invention, the said sight being shown and described as a rear sight applied to a rifle barrel. This figure shows the sight as seen from the left hand side of the barrel and with the folding sight piece raised.

Fig. 2 is a plan view of the parts shown in Fig. 1, the laterally adjustable spring tongue and the folding sight piece and notched wedge or stepped bar carried at the free end thereof being in central position.

Fig. 3 is a plan view similar to Fig. 2 but showing the spring tongue and the parts carried thereby shifted to the right of central position, the folding sight being shown as folded down towards the barrel.

Fig. 4 is a side elevation of the sight as shown in Fig. 3.

Figs. 5, 6 and 7 are respectively plan, cross sectional and end elevation views of the sight base 20.

Fig. 8 is a plan view of the spring tongue 21.

Fig. 9 is a plan view of the anchor arm 22.

Figs. 10, 11 and 12 are respectively top and bottom views and a side elevation of the cam disk 23.

Figs. 13 and 14 are top and side views of the notched wedge or stepped bar 24.

Fig. 15 is an edge view of the folding sight piece 25 and Fig. 16 is a front view thereof when the sight piece is elevated and Fig. 17 is a top view of said piece when it is folded down. Fig. 18 is a side view of the pivot pin 34.

Referring to the drawings in a more particular description it will be seen that the sight is shown as applied to the rear end of a rifle barrel 18 having a suitable dovetail notch 19 in its upper side to receive the similarly shaped lower portion of the sight base 20 and that the sight comprises this sight base 20, a spring tongue 21 pivotally mounted at its forward end in said sight base with an anchor arm 22 mounted above the spring tongue and fixedly mounted in the upper part of the sight base 20 and carrying at its rear end a cam disk 23 the rotation of which in any suitable manner moves the spring tongue 21 to the right or left of the barrel and thereby carries to the right or left the folding sight piece 25 for the purpose of adjusting the sight for windage. The rear end of said spring tongue holds in desired adjustment the notched wedge or stepped bar 24 by the longitudinal adjustment of which the sight piece 25 is held selectively at the desired different distances above the rifle barrel for the purpose of adjusting the range of the rifle.

The sight base 20 at about the level of the top of the barrel is provided with a flat face 26 bounded at its right and left ends by upwardly extending arcuate shaped steps 27 the distance between which steps and the curves of which steps correspond to the diameter and curve of the convex portions 28 upon the spring tongue 21. Said face and said steps form a socket to receive the end of the spring tongue having said convex portions 28 and allowing the slight lateral swinging motion of the spring tongue. The steps 27 are slightly higher than the thickness of the spring tongue received therebetween and above these steps 27. The said base is provided with a slightly larger diameter ledge 29 upon which rests the opposite sides of the enlarged front end 30 of the anchor arm 22. The ledges 29 are bounded by upstanding flanges 31 provided upon the base which flanges are shaped to fit closely to the circular outline of the front portion 30 of

the anchor arm. To insure the holding of the anchor arm in fixed and non-rotative position relative to the base the part 30 of the said anchor arm is provided at its opposite sides with short ears 32 fitting into two notches 33 provided in the opposite upstanding flanges 31 of the base. To help in swingingly holding the spring tongue upon the base in swinging position and the anchor arm securely in position upon the base there is provided a headed pivot pin 34 of which a side elevation is shown in Fig. 18. The lower half 35 of the shank of this pin is of smaller diameter than the upper half 36 providing a downwardly facing step 37 in the length of said shank. The large portion 36 of the shank of this pivot pin extends down through the hole 38 in the anchor arm and the hole 39 in the spring tongue and the step 37 rests upon the face 26 of the sight base. The lower and smaller diametered end of this pin then projects down through the central hole 40 in the base 20 and is conveniently riveted over into the enlarged lower end of said hole 40 thus securely and permanently holding the pivot pin in place and thereby the spring tongue and the anchor arm. Conveniently also the flanges 31 will be turned over and down against the adjacent edges of the anchor arm.

The rearward portion of the spring tongue 21 is provided with a longitudinally extending slot 41 within which is mounted slidably the notched wedge or stepped bar 24. Rearwardly of this slot 41 the spring tongue is provided with two spaced curved hooks 42 which are spaced apart farther than the width of the slot 41 and provide an opening 43 in which is located the body of the folding sight piece 25. The hooks 42 as will best appear from Figs. 1 and 4 are made by bending the rearward bifurcated extremities of the tongue first up and then back and then downward part way to the barrel so as to form the open-bottomed hooks beneath which are located the two opposite pintles 44 upon the right and left sides of the folding sight piece 25. The sight piece 25 is conveniently formed out of proper sheet metal as by punching or stamping and is shaped when seen in end elevation as in Fig. 15 to be in the form of a fillet or a Z-shaped member having an upright portion 45, a portion 46 extending from the bottom thereof forwardly at substantially a right angle and a third part 47 extending from the forward end of the second portion downwardly. When the sight is assembled and this sight piece is in upstanding position the lower edge 48 of the offset third portion 47 of the sight piece engages one of the notches 49 between adjacent steps 50 provided in the upper face of the notched wedge or stepped bar. It will be understood that the spring tongue 21 is so formed and mounted in the base as to have its rearward end tensioned to bear downward or towards the barrel and that the stepped wedge bar and the folding sight piece are so proportioned that the hooks 42 exert a downward tension upon the pintles 44 of the folding sight piece no matter which of the notches of the wedge bar is engaged at any given time by the folding sight piece. This tension of course is sufficiently yielding so that the folding sight piece may be readily swung by hand from its upright to its folded position against the tension of said spring tongue. On account of the offset position of the third or offset portion 47 of the sight piece it will be seen that the spring tension exerted by the spring tongue against the lower edge 48 of said offset or third portion 47 of the sight piece tends to hold the said sight piece in

upstanding position when it is once adjusted thereto. When the folding sight piece is in this upstanding position the front face of the said offset portion 47 bears against the rearwardly facing edges 51 of the spring tongue at the forward end of the opening 43 and thus prevents the folding sight piece from moving beyond upright position under the tension of the spring tongue. When it is desired to fold the sight piece towards the barrel the upper part of the upright portion 45 is pushed forwardly and downwardly towards the barrel causing the sight piece to swing on its pintles 44. As the sight piece is so swung the tension of the spring tongue has to be overcome somewhat temporarily until the lower edge 48 of the offset part of the sight piece swings past center beneath the pintles 44. After the offset portion does swing past center the spring tongue again is free to exert its downward tension and completes the swinging of the sight piece to folded position. The folding down of the sight piece in this manner may through the engagement of the lower edge 48 with a notch in the wedge bar cause the wedge bar to slide rearwardly, but the adjustment of the range is not permanently lost because of the movement of the sight piece and the wedge bar. The engagement between the offset portion 47 and the notch therebeneath is continued and the notched wedge or stepped bar 24 simply slides forwardly to its original position occupied before the sight piece was folded. The stepped wedge bar is moved farther rearwardly against the tension of the spring tongue when it is desired to increase the range of the firearm in the ordinary manner. When it is desired to shift the wedge bar to get a closer range the spring tongue is temporarily lifted sufficiently to clear the successive steps in the bar.

It will now be seen that the spring tongue exerts its tension downwardly upon the folding sight piece so as to hold the sight piece in either up-raised or folded position and yet this tension may be temporarily overcome enough so as to allow the folding sight piece to be moved from one position to the other. It will also be seen that the tension of the spring tongue upon the sight piece is transmitted downwardly to the notched wedge or stepped bar 24 so as to yieldingly hold the said wedge bar in any position to which it is adjusted and yet allow the said stepped bar to be moved to any other position, there to be again held by the tension of the spring tongue.

The means for adjusting this sight for windage by laterally swinging the free end of the spring tongue and therewith the folding sight piece carried thereby will now be described. These means consist of the spring tongue 21, the anchor arm 22 and the cam disk 23. The spring tongue 21 as already described has its forward end pivotally mounted in the sight base 20 and the anchor arm 22 has its forward end fixedly mounted in the said base 20 immediately above the spring tongue 21.

Midway the length of the spring tongue 21 and just forward of the slot 41 said spring tongue is provided with a slightly elongated slot 52 into which projects the downwardly extending cam pin 53 provided upon the bottom face of the cam disk 23. This disk as plainly shown in Figs. 10, 11 and 12 has the cam pin 53 eccentrically located in the lower face of the disk while from its upper face there extends upwardly a centrally located circular pin 54 forming a pivot pin projecting into the circular hole 55 provided at the rearward end of the anchor arm 22. It will

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be understood that the anchor arm just rearwardly of the sight base 20 is bent or slanted upwardly and then bent to have its rearward portion parallel with the spring tongue 21 but spaced therefrom so as to readily hold therebetween the thin cam disk 23. The anchor arm 22 is of spring material so that as the spring tongue is lifted more or less from the barrel by movement of the notched wedge bar the said anchor arm would also spring upwardly and again move downwardly when the spring tongue is allowed to approach the barrel. The diameter of the cam disk 23 is slightly greater than the width of the spring tongue 21 therebeneath or the rearward end of the anchor arm 23 thereabove so that the opposite sides of the disk may be readily grasped between the finger and thumb for rotation of the disk. Preferably the periphery of the disk is knurled or notched to be more readily grasped by the finger and thumb. It will now be seen that when the eccentrically mounted cam pin 53 is in either of its two positions where its axis is in line longitudinally of the barrel with the axis of the centrally located pivot 54 carrying the said disk, the spring tongue will be located midway of the width of the barrel as appears in Fig. 2. When, however, the said cam disk is rotated in either direction from this central position the eccentrically located cam pin 53 will move to the right or left relative to the axis of the pivot 54 and will in an obvious manner swing the spring tongue to the right or left following said cam pin. The slight elongation in slot 52 allows for the slight lengthwise travel of the cam pin 53. The anchor arm being rigidly mounted at its forward end upon the base holds the cam disk centrally located relative to the barrel and accordingly rotation of the cam disk moves its cam pin to the right or left of the barrel and carries therewith the swingingly mounted tongue.

It will be noted, furthermore, that this swinging of the tongue to right or left of the center of the barrel will not only carry the sight piece accordingly to the right or left to the desired extent for windage, but that the tension of the said spring tongue, in any position within the range to which the spring tongue can be shifted, will not interfere with the double spring action of said spring tongue in yieldingly holding the folding sight piece in either raised or folded position while allowing it to be moved from one position to the other, but will also hold the notched wedge or stepped bar 24 in any position to which it has been adjusted notwithstanding the slight side-wise movement which the spring tongue has given the said wedge bar.

For convenience and visual indication the cam disk 23 has a marker or notch 56 on its upper face near its periphery which is near the rearward point of the anchor arm 26 when the downwardly extending cam pin 53 is in line with the center of the barrel and with the center of the spring tongue 21 as appears in Fig. 2. When the cam disk is swung to the right as in Fig. 3 this marker 56 of course swings in that direction in proportion to the extent to which the cam disk 23 is rotated.

What I claim as new and desire to secure by Letters Patent is:

1. In a firearm sight the combination of a sight base having means at its lower part for rigid attachment to a firearm barrel, a tongue pivotally

secured at one end to said sight base and extending lengthwise of the barrel, a sight piece at the free end of the tongue, an anchor arm fixedly secured at one end to said base and extending lengthwise of said tongue and means operatively connecting said rigid arm and said tongue intermediate its ends for swinging said tongue laterally and holding it at adjusted position.

2. In a firearm sight the combination of a sight base having means at its lower part for rigid attachment to a firearm barrel, a spring tongue pivotally secured at one end to said sight base and extending lengthwise of the barrel, a sight piece at the free end of the tongue, an anchor arm rigidly extending from said base lengthwise of said tongue and means including a pivotally mounted disk having an eccentrically located pin operatively connecting said rigid arm and said tongue intermediate its ends for swinging said tongue laterally and holding it at adjusted position.

3. In a firearm sight the combination of a sight base having means at its lower part for rigid attachment to a firearm barrel, a spring tongue pivotally secured at one end to said sight base and extending lengthwise of the barrel and having an elongated slot intermediate its ends, a sight piece at the free end of the tongue, an anchor arm rigidly extending from said base above the tongue, a cam disk interposed between the free end of the said anchor arm and said tongue and centrally pivoted to said arm and having an eccentrically located cam pin at its lower side engaging the said elongated slot in the tongue whereby rotation of said disk swings the tongue laterally and holds it at adjusted position.

4. In a firearm sight the combination of a barrel, a sight base rigidly attached at its lower part to said barrel, a spring tongue pivotally secured at one end to said sight base and extending lengthwise of the barrel, an anchor arm rigidly extending from said base lengthwise of said tongue, means operatively connecting said rigid arm and said tongue intermediate its ends for swinging said tongue laterally and holding it at adjusted position, a sight piece foldingly mounted in the free end of the tongue and a stepped wedge bar interposed between the barrel and the folding sight piece and movable lengthwise of the barrel, said spring tongue exerting a downward tension yieldingly holding the sight piece in either its folded or upstanding position and yieldingly holding said bar in adjusted position.

5. In a firearm sight the combination of a barrel, a sight base rigidly attached at its lower part to said barrel, a spring tongue pivotally secured at one end to said sight base and extending lengthwise of the barrel, an anchor arm rigidly extending from said base lengthwise of said tongue, means including a pivotally mounted disk having an eccentrically located pin operatively connecting said rigid arm and said tongue intermediate its ends for swinging said tongue laterally and holding it at adjusted position, a sight piece foldingly mounted in the free end of the tongue and a stepped wedge bar interposed between the barrel and the folding sight piece and movable lengthwise of the barrel, said spring tongue exerting a downward tension yieldingly holding the sight piece in either its folded or upstanding position and yieldingly holding said bar in adjusted position.

FREDERIC S. WILCOX.