

May 5, 1936.

C. J. JEFFERSON

2,039,907

FIREARM SIGHT CONSTRUCTION

Filed July 23, 1935

2 Sheets-Sheet 1

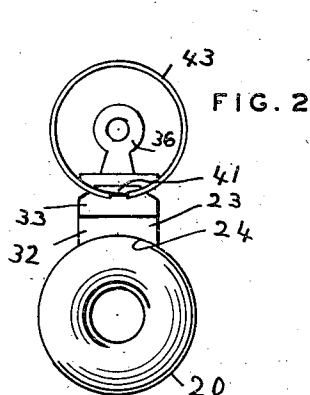
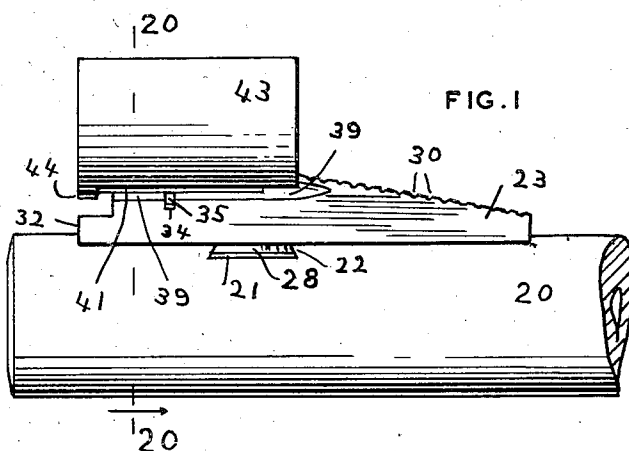
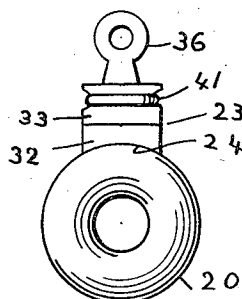
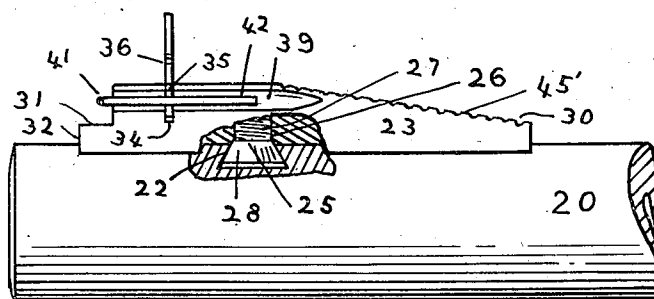
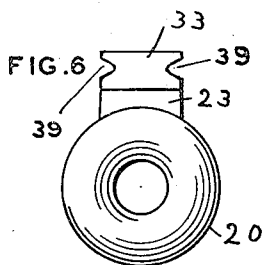
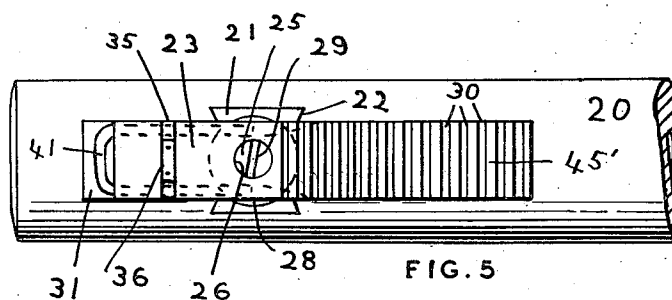
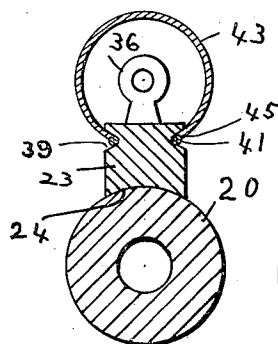


FIG. 20

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May 5, 1936.

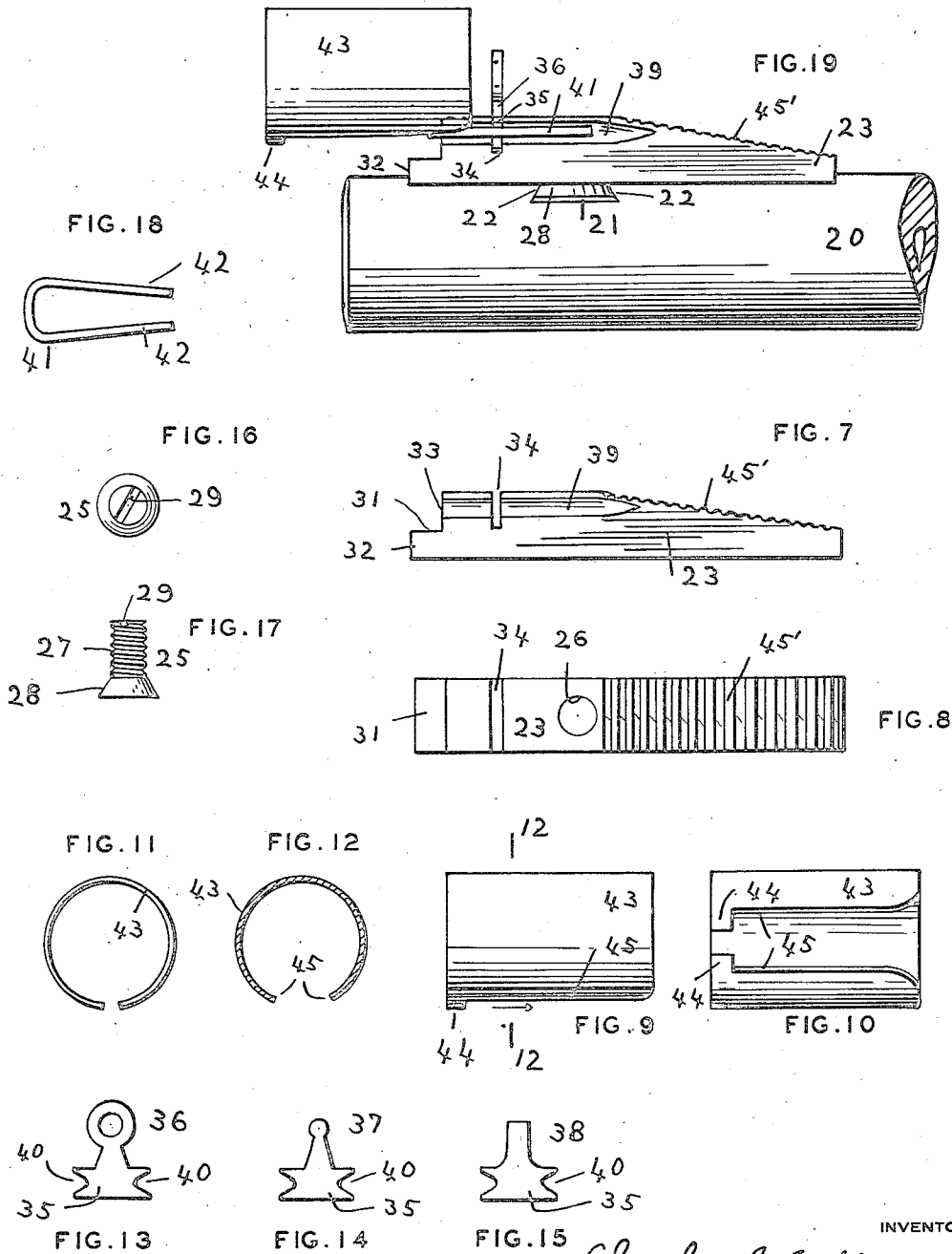
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,039,907

FIREARM SIGHT CONSTRUCTION

Charles J. Jefferson, Springfield, Mass., assignor
to J. Stevens Arms Company, Chicopee, Mass.,
a corporation of Massachusetts

Application July 23, 1935, Serial No. 32,779

1 Claim. (Cl. 33—47)

My present invention relates to firearm sights and firearm sight constructions and more particularly to the front sight and front sight constructions of rifles and guns.

5 The purpose of this invention is to provide a firearm sight and a firearm sight construction of new and improved construction and of a construction which is simple, strong and accurate and readily assembled and durable and effective
10 in use.

Further purposes are to provide an article of the class described which provides new and improved parts and combinations of parts and which with a moderate number of removable and replaceable sight inserts or sight pieces provides
15 a large number of useful forms of sights and a construction wherein any of these forms of sights may be quickly provided without the use of tools.

A further purpose is to provide a construction
20 of the class described where any one of the sight inserts or sight pieces may be used in connection with a hood therefor or without the use of a hood, and further to provide a combination of parts wherein the hood may be added to the
25 rest of the construction without interference or adjustment of its parts and wherein the means used to already secure the removable insert to the sight base also aids in holding and securing the hood in place over the sight and adjacent
30 part of the sight base.

A further purpose is to provide new and improved means and mechanism for fastening the sight base to the firearm barrel and particularly to provide a combination of parts wherein the
35 sight base is readily, properly and permanently secured to the barrel by the use of a single screw the tapered head of which engages an undercut notch extending transversely of the barrel.

Fig. 1 is a side elevation on a somewhat enlarged scale of the front end of the firearm and a firearm sight embodying this invention, the sight being shown with a hood in place.

Fig. 2 is a front elevation of the construction shown in Fig. 1.

45 Fig. 3 is a side elevation similar to Fig. 1, but without the hood, the parts of the barrel and the sight base being broken away to show the means for fastening the sight base to the barrel.

Fig. 4 is a front view of the sight shown in
50 Fig. 3.

Fig. 5 is a top or plan view of the parts shown in Fig. 3 and Fig. 6 is a front elevation of the parts shown in Fig. 5, but without the removable sight piece and without the retaining spring.

55 Fig. 7 is a side elevation and Fig. 8 a top or

plan view of the sight base. Fig. 9 is a side elevation of the hood and Fig. 10 a bottom view thereof.

Fig. 11 is a front end view of said hood and Fig. 12 is a sectional view thereof on line 12—12
5 of Fig. 9. Figs. 13, 14 and 15 are front elevations respectively of different forms of sight inserts or removable sight pieces illustrating different forms of such sight pieces that may be used with this
10 sight.

Figs. 16 and 17 are respectively top and side elevations of the sight base holding screw.

Fig. 18 is a plan view of the spring or spring clip used for retaining the sight pieces in place
15 in the base and to aid in holding the hood in place upon the base when the hood is required. Fig. 19 is a side elevation showing the position of the parts when the hood is being placed upon the sight or about to be removed therefrom.

Fig. 20 is a vertical sectional view on line 20—20
20 of Fig. 1.

Referring to the drawings in a more particular description, it will be seen that this invention is illustrated as having the sight applied to the front end of a rifle barrel, but it will be understood that this showing is for the purpose only of
25 illustration and that the sight can obviously be used upon other firearms and in some circumstances might be used not at the front end of a firearm.

The firearm barrel 20 is provided with a common form of sight-holding notch 21 extending transversely of the barrel commonly at its upper side and the said notch has undercut opposite sides 22—22, that is, the said sides of the notch
30 slant towards each other as they extend upwardly. For the purpose of clearness and definiteness throughout this description it will be assumed that the sight is applied to the top of the firearm barrel and that the sight is in an upright position. The sight base 23 has its lower side or its barrel-engaged side 24 shaped transversely to fit the side of the barrel engaged thereby and this transverse shaping of the barrel-engaging side
40 of the sight base preferably extends for the whole length of the relatively long base so as to insure an easy, accurate and permanent adjustment of the sight base upon the barrel by the use of a single fastening means, namely a screw
45 25 connecting the sight base to the barrel at the middle portion of the base. In a line to register with the notch 21 when the base 23 is in proper position upon the barrel there is provided in the base an upwardly-extending hole 26 preferably placed midway the width of the base and
55

extending through the full thickness of the base. Said hole is screw-threaded to fit the threaded shank 27 of screw 25. The enlarged tapered head 28 of screw 25 is at the lower end of said screw as it is shown in Figs. 1, 3 and 17 herein. Preferably the taper of this head corresponds with the slant of the undercut sides 22 of the retaining notch 21. The upper end of the screw is provided with tool-receiving means for rotating said screw from the top of the base 23. Most conveniently such means may consist of a slot 29 adapted to be engaged by a screw driver or other proper tool. In practice the screw 25 will be inserted into the lower end of the hole 26 of the base and run partly into said hole, then the base with the head depending considerably therebelow will be placed to one side of the barrel with the projecting head in line with the notch in the barrel and then the sight moved sidewise until it is directly over the top of the barrel. Further rotation then of the screw from its upper end will move the head of the screw farther up into the notch and draw the sight base 23 firmly down upon the top of the barrel. Removal of the sight base may be readily accomplished by reversing this simple step of operations. Preferably the screw-threading upon the shank of the screw and the hole 26 will be a left hand thread so that rotation of the screw from its upper end in a clockwise direction will draw the screw upwardly to tighten the same in the notch and consequently rotation of the screw in an anti-clockwise direction will loosen the hold of the screw. It will be seen that this method of fastening a firearm sight base to a barrel is very simple in that it involves the use simply of a single hole in the sight base and one screw beside the usual sight-retaining undercut notch commonly found in the barrel. This reduces by one or more parts the pieces heretofore commonly used to mount and fasten a sight base upon a barrel.

About the rear half of the upper surface of the sight base 23 is formed as a ramp 45' slanting downwardly as it extends rearwardly of the barrel. Preferably this ramp is provided with numerous transverse recesses or corrugations 30 best shown in Figs. 3, 5 and 8 and operating to render the slanting face or ramp non-reflective of light relative to the eye of the person looking across the ramp to the sight piece.

Preferably for convenience in assembling and handling the complete sight the sight base 23 is cut away at its forward end above its lower side so as to form the horizontal step 31 connecting the extreme front end 32 at the bottom of the base with the vertical face 33 more or less as shown in Figs. 3 and 7. Part way back from this face 33 the forward half of the base 23 is provided with a slot 34 extending from the top of the base two-thirds or more through its thickness. This slot is to receive the uniformly shaped lower part or foot 35 of any one of the several interchangeable sight pieces 36, 37 and 38 such as shown in Figs. 13, 14 and 15 respectively. The width of slot 34 is sufficient to readily but snugly receive the foot 35 of any one of the interchangeable sight pieces shown or in fact any other sight pieces having a similarly shaped foot but a different shaped top. From the front face 33 of the sight base there extends back on the opposite upright sides of said base inwardly extending horizontally arranged recesses 39 best shown as to their shape and depth in Fig. 6 and best shown as to their extent in Figs. 7 and 3 and 5. In opposite sides of the foot 35 of any sight piece there are

provided recesses 40 corresponding closely in shape, size and arrangement with the recesses 39 in the sides of the base 23. Accordingly assuming that the proper sight piece such as sight piece 36 of Fig. 13 is placed in an upright position in the slot 34 of the base 23, the recesses 40 of the sight piece will be in alignment with the recesses 39 on both sides of the base 23. Thereupon a U-shaped spring or resilient holder, preferably and most conveniently in the form of a U-shaped wire spring 41 (see Fig. 18) will have its arms 42 temporarily sprung apart sufficiently to slide back along the recesses 39 at the front end of the base 23 and through the recesses 40 of the sight piece and then along the rear half of the recesses 39 in the base 23. It will be seen that the side walls of both the recesses 39 in the base and the recesses in the opposite sides of the foot of any of the sight pieces taper or slant towards each other so that the tension in the spring holder 41 operating to close its arms 42 functions to grip securely the foot of the sight piece and to hold it securely in upright position.

In order to insure the proper action for this spring grip of the holder 41 upon the foot of a sight piece it may be stated that the bottom edge of the foot does not need to rest absolutely in contact with the bottom of slot 34. In other words, the adjustment of the sight piece to the base is by means of the spring holder and not controlled primarily from a contact of the bottom of the foot engaging the bottom of the slot 34.

It will be understood of course that after the spring holder 41 has once been placed in position upon the base to hold a sight piece, the said spring holder will not need to be entirely removed in order to remove the sight piece in position and re-place it by another. The spring holder 41 will simply be drawn forward by means of its forward curved end (see Figs. 3 and 5) until the said spring holder has passed forwardly of the foot of the sight piece. Then in an obvious manner the sight piece may be removed from the slot 34 and another sight piece of the desired form inserted in the slot with the recesses thereof approximately in alignment with the then adjacent ends of the arms of the spring holder 41. The spring holder will then be pushed backwardly to the limit of its travel and the new sight piece will be securely and permanently held in position free from any danger of accidental displacement.

In Figs. 13, 14 and 15 there is shown an outfit of three decidedly different and very usable forms of sight pieces. Sight 36 shown in Fig. 13 has a circular aperture. Sight 37 has a small circular disk or bead at the top of its stem and sight 38 has a plain relatively large post.

For occasions where it is desired that the sight piece be protected by a hood or be surrounded by a hood, I have provided a hood 43 which is of such construction and combination with the sight so far described as to be readily applied thereto without interfering in any wise with the interchangeable sight pieces or the means for fastening them in place or removing them therefrom. This hood 43 will preferably be circular in shape and formed of thin sheet metal of the proper thickness. At its front end the metal of the hood forms almost a complete circle, there being inwardly extending ears 44 best seen in the bottom view Fig. 10 of the drawings. These ears serve to limit the rearward movement of the hood when it has come to the proper assembled position as shown in Fig. 1. To the rear of these ears 44 the edges 45 of the hood at its lower side are spaced 75

considerably farther apart and at a distance which allows these edges of the hood to be inserted in the recesses 39 of the base 23 above and outside of the spring holder 41 already in place in said recesses 39. In fact as best appears in Fig. 20 these edges 45 of the hood slide along and remain in contact with the upper part of the outer and exposed surface of the spring holder 41 while the interior surface of the hood adjacent the two edges 45 slides along and engages the outer portion of the upper face of the recesses 39 in the base. In other words, the two arms of the spring holder 41 occupy the inner and narrow parts of the two recesses 39. Accordingly, as will be seen particularly from Fig. 20, the upper portion of the exposed face of the arms of the spring holder provide the surface for direct engagement with the edges 45 of the hood and this portion of the surface of the spring holder with the adjacent outer portion of the upper slope of the recesses 39 forms the guideways to receive and hold the said hood. Preferably the rearward ends of the edges 45 are curved outwardly at the rear end of the hood as seen in Fig. 10 in order to aid in readily starting the hood into position upon the base as shown in Fig. 19 preparatory to pushing the hood all the way rearwardly to its ultimate position as shown in Fig. 1.

It will be understood that the metal of this C-shaped hood is slightly resilient so that it can expand a small amount as the said curved ends at the rearward part of the hood are forced along the recesses 39 and spring holder 41 and this slight resiliency of the hood operates to securely hold the hood in place upon the sight base and so insures the hood against accidental displacement from the sight but still allows the hood to be readily removed from the sight without the use of any tools. It will be seen that actually this inwardly springing action of the bottom edges 45 of the hood operates to reinforce the tension of the spring holder 41 and also to further lock the spring holder 41 in place upon the base.

The hood may be readily removed when desired by simply sliding it forwardly from the sight

base. The removal of the hood will not affect or disengage the sight piece that happens to be in place upon the base. If it is desired to change from one sight piece to another when the hood is being used, it will be understood of course that the hood will be first entirely removed and then the sight piece removed and replaced by another as already described and then the hood again placed in position. It will be seen especially that the hood may be used in connection with any one of the selective forms of sight pieces herein illustrated or that any of said sight pieces may be used without the hood being in place. In other words, given a set of three different sight pieces the user of this sight will have six different combinations available; that is, three sight pieces without the hood and the three sight pieces severally with the hood.

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

In a firearm sight, the combination of a base having in each of its opposite sides a recess extending longitudinally from one end of the base, said base having a transverse narrow slot intersecting said recesses and extending to the top of the base, a readily removable, thin sight piece having a foot adapted to fit into the slot of the base and having a sight part projecting above the base, the foot of said sight piece having in its opposite side edges notches corresponding to the two recesses in the sight base, a forked holder having its arms adapted to fit and slide along the recesses of the base and through the notches in the foot of the sight piece and a C-shaped hood adapted to extend longitudinally over the top of the base and to surround the sight part of the sight piece, the opposite longitudinal edges of the hood being spaced apart to fit into and slide along the said recesses in the base outside of the arms of said forked holder whereby the hood is readily attachable to and detachable from the sight without moving the sight piece in the base.

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