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3,284,905

SIGHT FOR SHOTGUNS

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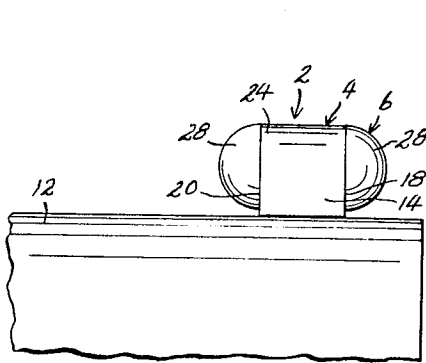


Fig. 1

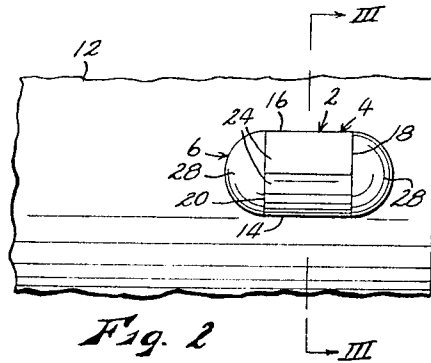


Fig. 2

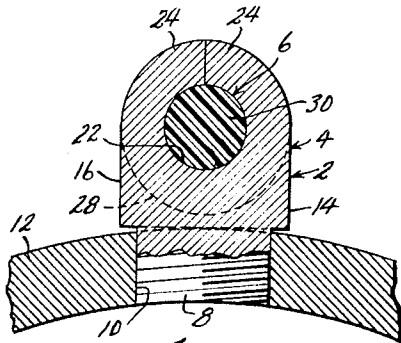


Fig. 3

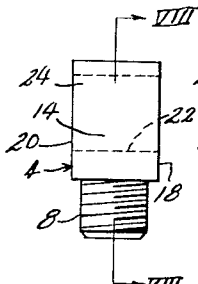


Fig. 4

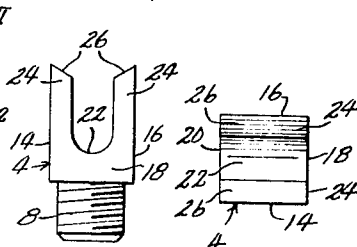


Fig. 5

Fig. 6

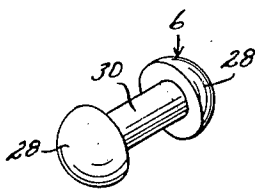


Fig. 7

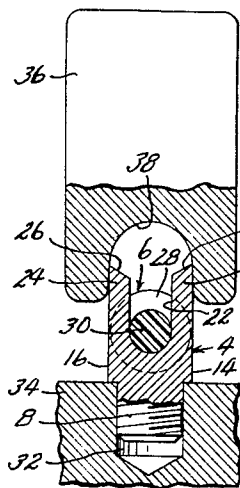


Fig. 8

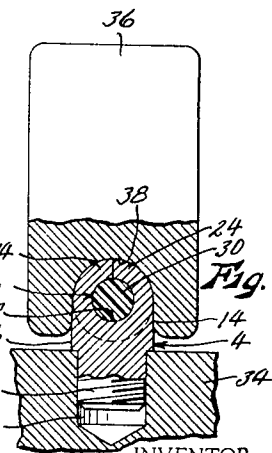


Fig. 9

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SIGHT FOR SHOTGUNS

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This invention relates to new and useful improvements in firearms, and has particular reference to a front sight for shotguns and the like.

Customarily, the front sights of shotguns have consisted of a small bead, suitably supported at or adjacent the forward end of the gun barrel, of some material which is readily visible to the gunner by reason of light reflection or transmission thereby. For example, such sight beads are often formed of ivory or a white or light-colored plastic so as to be readily visible, or they are formed of a transparent or translucent plastic, so as to entrap light therein and transmit it to the portion of the bead viewed by the gunner, whereby to appear to "glow." This "glow" characteristic is often further enhanced by mixing a fluorescent dye in the plastic bead. All of the beads of this type are, however, subject to the problem that they are necessarily formed of a material which is inherently fragile or easily breakable, and are hence difficult to mount securely and substantially rigidly without breakage or damage. This difficulty is aggravated further by the fact that such beads are quite small, often only $\frac{1}{8}$ inch in diameter or smaller, with mounting shanks or other still smaller parts, and are hence quite delicate and fragile. The mounting of such beads has heretofore been a tedious and time-consuming operation, usually accompanied by a high percentage of breakage and loss.

Accordingly, the principal object of the present invention is the provision of a sight consisting of a bead and mounting body so configured and interrelated that the body holds the bead securely and permanently, but with little or no danger that the fragile bead member will be damaged, either during the installation of said bead member in its mounting body, or during the attachment of said mounting body to the gun.

Another object is the provision of a sight of the character described wherein the mounting body is provided with a stem adapted to be threadably engaged in a tapped hole provided therefor in the gun, and wherein the mounting body provides wrench flats for facilitating this connection with no danger of breaking the bead member.

A further object is the provision of a sight of the character described wherein the bead member provides in effect two beads angularly spaced apart 180 degrees about the axis of the threaded stem connecting the sight to the gun, whereby either bead may be used. This reduces the continued rotation of the mounting body after the threads have initially become tight which may be necessary to align the bead with the gun barrel, and hence reduces the possibility of breakage due to overtightening.

Other objects are simplicity and economy of construction, and efficiency and dependability of operation.

With these objects in view, as well as other objects which will appear in the course of the specification, reference will be had to the accompanying drawing, wherein:

FIG. 1 is an enlarged fragmentary side elevational view of the forward end portion of a shotgun, having a front sight embodying the present invention mounted operatively thereon,

FIG. 2 is a top plan view of the parts shown in FIG. 1, FIG. 3 is an enlarged fragmentary sectional view taken on line III—III of FIG. 2,

FIG. 4 is a side elevational view of the mounting body only of the sight, prior to the affixing of the bead member therein,

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FIG. 5 is a front elevational view of the mounting body as shown in FIG. 4,

FIG. 6 is a top plan view of the mounting body as shown in FIG. 4,

FIG. 7 is a perspective view of the bead member utilized in the sight,

FIG. 8 is a sectional view taken on line VIII—VIII of FIG. 4, showing an initial step in the affixing of the bead member in the mounting body, and

FIG. 9 is a view similar to FIG. 8, but with the affixing operation completed.

Like reference numerals apply to similar parts throughout the several views, and the numeral 2 applies generally to the sight forming the subject matter of the present invention. Said sight includes body member indicated generally by the numeral 4, and a bead member indicated generally by the numeral 6. Body member 4 is formed of steel or other suitable metal possessing a degree of malleability, and prior to the mounting of bead 6 therein, as shown in FIGS. 4—6, has the general form of a rectangular block. At the bottom of the block, so that its axis corresponds to a major axis of the block, is an integral cylindrical threaded stem 8 adapted to be threaded into a correspondingly tapped hole 10 provided therefor at the forward end of a shotgun barrel 12, as best shown in FIG. 3. If said stem projects into the interior of the barrel, its inner end may be ground off to conform to the bore contour of the gun as shown. If the shotgun is equipped with a ventilated sight rib, hole 10 will of course be formed in said rib rather than in the barrel. When the mounting member is properly oriented, parallel opposite side surfaces 14 and 16 thereof will be disposed parallel to the axis of the gun barrel, and parallel end surfaces 18 and 20 thereof will be disposed at right angles to the axis of the barrel. Formed horizontally through the body member, so as to extend through surfaces 18 and 20 thereof, is a notch 22. The base of said notch is semi-cylindrical, with its axis parallel to the gun barrel. Said notch opens through the top of the body member as shown, the body material at opposite sides of the notch constituting a half of bendable ears 24. The upper end of each of said ears may be inwardly bevelled as shown at 26, for a purpose which will presently appear.

Bead member 6, as best shown in FIG. 7, is substantially rivet-shaped, having a pair of hemispherical heads 28 disposed in coaxial relation with their planar faces parallel and confronting, said heads being connected by a cylindrical shank 30 of reduced diameter and integral therewith. The diameter of heads 28 is no greater than, and preferably equal to the transverse thickness of body member 4 between the surfaces 14 and 16 thereof. The diameter of shank 30 is slightly smaller than the width of body notch 22, and the axial length of shank 30 is slightly greater than the longitudinal thickness of body member 4 between surfaces 18 and 20 thereof. As previously described, said bead member may be formed of ivory, plastic which may be either opaque or transparent or translucent, or other suitable material.

In mounting bead member 6 in body member 4, the body member is first solidly supported, as by inserting stem 8 thereof in a socket 32 formed therefor in a block 34, as shown in FIGS. 8 and 9, and the block supported on any smooth surface. Shank 30 of bead member 6 is then rested in notch 22, as shown in FIG. 8. Then a die member 36 constituting a flat bar having a thickness equal to the longitudinal thickness of body 4 between surfaces 18 and 20 thereof, and having a semi-circular notch 38 formed in the lower end thereof and having a diameter equal to the transverse thickness of body member 4 between surfaces 14 and 16 thereof, is placed as shown in FIG. 8, ears 24 of the body member ex-

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tending into die notch 38 and the notch axis parallel to shank 30. The upper end of die 36 is then tapped with a hammer, or pressed downwardly in any other suitable manner, whereupon the curved contour of die notch 38 forces the upper end portions of body ears inwardly above shank 30 until the bevelled ends 26 of said ears engage each other above the midline of the shank, as shown in FIG. 9. Beveling of the ends of the ears as at 26 has been found desirable in order to provide broad contact therebetween as shown.

It will be apparent that if the length of body ears 24 has been properly proportioned to the diameter of shank 30, the ears will engage whereby to prevent further closure thereof about the shank, before said shank is gripped tightly, or even while the shank is still loose. This prevents possible breakage of the bead by compression of the shank. The looseness of the shank may permit a slight free movement of the bead, but this movement is so slight as to be imperceptible, and the bead is still prevented from slipping out of the body by the engagement of the heads 28 with the end surfaces 18 and 20 of the body. Also, the fact that shank 30 is slightly greater than the thickness of the body parallel to the axis of notch 22 prevents any possibility that the bead might be broken by ears 24 as said ears are bent between said heads. Surfaces 14 and 16 of body 4 provide wrench flats for engagement by a wrench similar to die 36, for use in threading stem 8 of the body into hole 10 of the gun barrel, and setting it tightly therein without contacting bead member 6 or applying a pressure thereto, which might cause breakage thereof.

Either of heads 28 of bead member 6 may be faced rearwardly of the gun barrel to serve as the sight bead for the gunner. It will be seen that when body member stem 8 is initially tightened in hole 10, the axis of bead member 6 may not be aligned with the gun barrel, depending on the cutting of the threads on stem 8 and in hole 10, and that the desired alignment must be provided by further rotation of the stem. This "overtightening" has been a source of trouble where a sight including only a single bead is employed, since then up to a full revolution of the stem may be required, resulting often in torsional failure of the stem itself. In the present structure, the use of two beads, spaced apart angularly 180 degrees about the axis of stem 8, provides that the "overtightening" discussed above need never require more than

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a half revolution of stem 8, and thereby reduces any possible stem damage.

While I have shown and described a specific embodiment of my invention, it will be readily apparent that many minor changes of structure could be made without departing from the spirit of the invention as defined by the scope of the appended claims.

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

1. A front sight for shotguns and the like comprising:
 - (a) a mounting body member,
 - (b) means for affixing said body member to the upper side of the barrel of a shotgun adjacent the forward end thereof, said body member having an aperture formed therethrough so as to be parallel to the axis of said barrel, and
 - (c) a bead member constituting a pair of enlarged heads connected by a shank of reduced diameter, said shank being contained in said aperture with said beads disposed respectively forwardly and rearwardly of said body member, the diameter of said aperture being slightly greater than the diameter of said shank, and the length of said shank being slightly greater than the thickness of said body member in a direction parallel to the axis of said aperture.
2. A sight as recited in claim 1 wherein said bead member is formed of a relatively fragile and easily breakable material.
3. A sight as recited in claim 1 wherein said aperture is formed by a notch of said body member adapted to receive said shank therein, the portions of said body member at opposite sides of said notch constituting bendable ears, said ears being curved about said shank with their outer ends in abutting relation.

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