

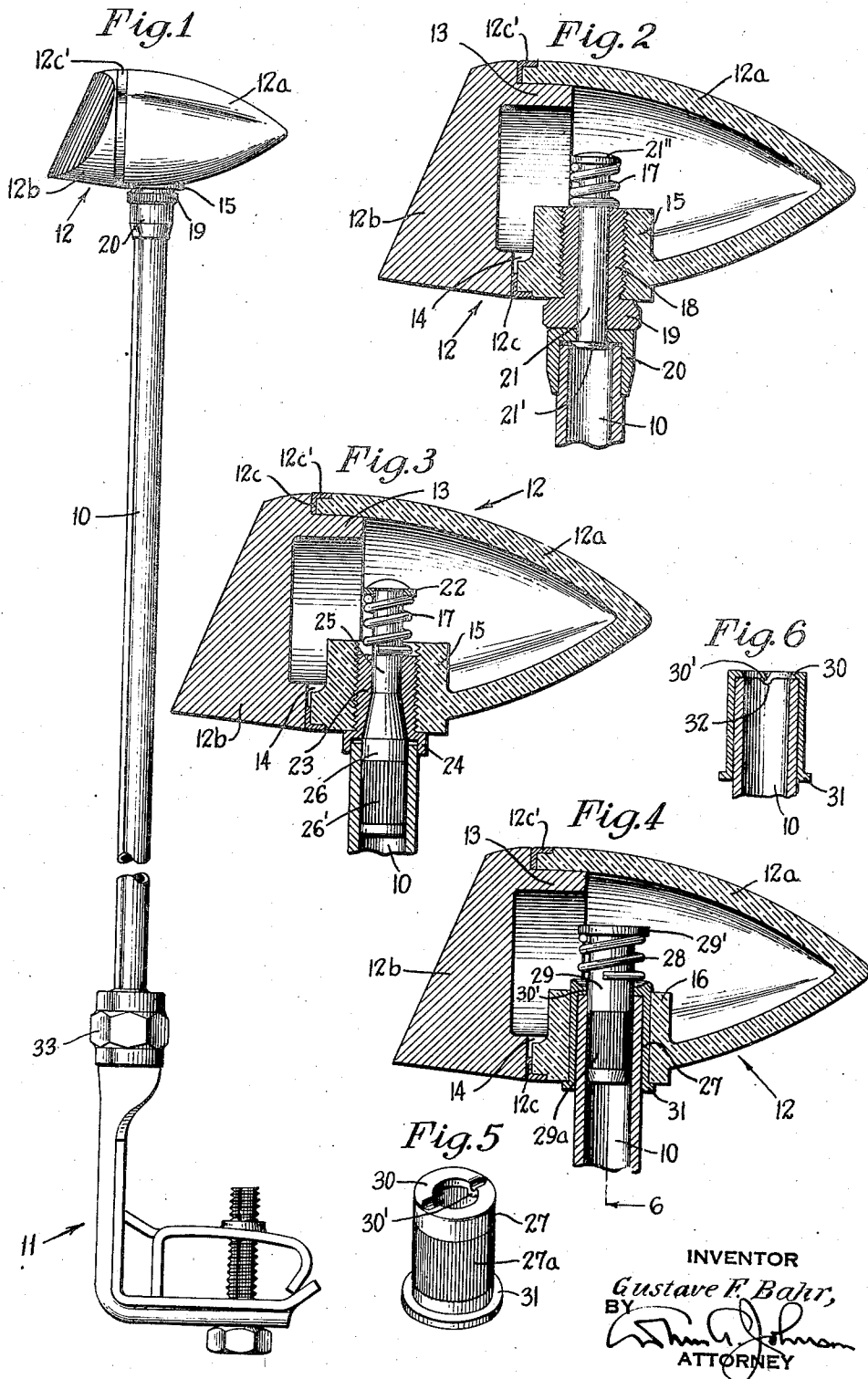
Feb. 13, 1940.

G. F. BAHR

2,190,622

FENDER GUIDE

Filed April 1, 1937



INVENTOR
Gustave F. Bahr,
BY
[Signature]
ATTORNEY

UNITED STATES PATENT OFFICE

2,190,622

FENDER GUIDE

Gustave F. Bahr, Fairfield, Conn., assignor to
 Casco Products Corporation, Bridgeport, Conn.,
 a corporation of Connecticut

Application April 1, 1937, Serial No. 134,300

7 Claims. (Cl. 287—20)

This invention relates to fender guides for motor vehicles, of the kind comprising a rod or staff secured to and rising from a fender edge and carrying a target at the upper end of the staff to be sighted by the driver to assist him in maneuvering the vehicle.

An object of the invention is to provide an assembly of staff and target, such that these parts are easily and economically coupled, and yet the target is adjustable on the staff but at the same time is held against accidental displacement or unauthorized removal.

The target is generally elongate in one direction, and often it is shaped differently at opposite ends.

Where the target is thus nonsymmetrical, taste may dictate that one end or the other should be foremost. Also, it may be desired on one occasion to have one end of the target the leading end thereof, and on another occasion to have the other end ahead.

Best sighting is obtained, moreover, when the target is elongate and is carried with its direction of elongation parallel to the longitudinal center line of the vehicle. But various fender edges differ in shape and inclination, so that when a guide is made to have its target extend as just described when the guide is mounted on one kind of fender, and is clamped to some other kind of fender, the target is found to be at an angle to the longitudinal center line of the vehicle.

A feature of the invention is a connection between the target and the staff whereby the target may be angularly adjusted about the staff axis, and even when desired revolved about such axis, but only deliberately and not casually.

Another feature of the invention is a mounting of the target on the staff which allows the target to be rotated about the staff axis, yet which effectually prevents theft of the target. The targets of fender guides are of unique designs, and particularly attractive to juvenile pilferers. Sometimes, also, especially where the target is of costly type, its surreptitious removal is attempted by adult sneakthieves.

In the preferred way of carrying out the invention, the target is coupled to the top of the staff in such a way that while the target is angularly adjustable about the staff axis, there is a friction clutch of considerable hold between the target and the staff, so that while the target is manually readily thus adjustable, it retains any adjustment given it, indefinitely, against road vibrations, cross-winds, and the like. Also, ac-

cording to the now preferred way of carrying out the invention, the target is locked against bodily removal from the staff by means which acts frictionally yet is nonreleasable except with great difficulty and by application of a hand-power multiplying tool such as a wrench.

Other features and advantages will hereinafter appear.

In the accompanying drawing:

Figure 1 is a side elevation of a fender guide to which my invention has been applied.

Fig. 2 is an enlarged fragmentary detail view, principally a vertical section taken axially of the staff, showing the target of Fig. 1 and the upper end of the staff.

Fig. 3 is a view similar to Fig. 2, but showing a modification.

Fig. 4 is a view also similar to Fig. 2, but showing another modification.

Fig. 5 shows, in perspective, one of the parts of the modification of Fig. 4.

Fig. 6 is a vertical section, taken on the line 6—6 of Fig. 4, but showing only the part of Fig. 5 and the upper end of the staff on which said part is sleeved.

The device of the present invention, in the exemplary embodiment thereof illustrated in the drawing, is shown as having a rod or staff 10, adapted to be supported upright on the fender of a motor car, as by a clamp of the type indicated at 11, and carrying at its top a sight or target 12, shown as an elongate nonsymmetrical one.

The staff is usually a metal tube, as illustrated, and is preferably so made in carrying out the present invention.

The target is customarily hollow for lightness of weight, and the target shown is in the form of a shell having a rear ogival portion 12a of translucent material, and a dissimilarly shaped forward portion 12b of opaque material, between which is an interposed metal ring 12c for exposing a decorative and finishing band 12c' where the two shell parts are permanently joined, as by a suitable adhesive.

The lower wall of the shell portion 12a here includes an upwardly extending boss integral therewith and principally located inside this shell part. The boss is partially extended into the chamber within rear shell portion 12b, for which purpose an annular neck 13 of the rear shell portion is cut away at its bottom, as indicated at 14, to accommodate a part of the base of the boss located in the zone of overlap between the rear shell portion 12a and the neck 13 of the forward shell portion. When the shell parts 12a

and 12b are joined by adhesive, and the adhesive is applied around the exterior of neck 13, the target parts are strongly locked against separation, and access may be had to the interior of the resulting structure only through the opening in the boss.

In Figs. 2 and 3 the boss is marked 15, and in Fig. 4 the same is marked 16.

As will be understood, the target may be of any size, shape or mode of construction.

According to the present invention, the target is mounted on the staff for angular adjustment about the axis thereof, and in such manner that the target when manually so adjusted will remain by friction in the adjusted position, yet be irremovable from the staff except by difficult and prolonged effort exerted by a person surreptitiously attempting its removal.

According to the exemplary constructions of Figs. 2 and 3, the opening through the boss is a tapped hole, within which an externally threaded bushing is screwed so tight as to become jammed securely therein; this bushing sleeves a rod member disengageably joined to the upper end of the staff but on which the bushing is rotatable; and there is provided a means, as a coil spring 17, for exerting an upward axial thrust on the rod member to establish, between matching end surfaces of relatively movable parts, a dependable friction clutch for holding the target in any adjusted position on the staff.

Referring to Fig. 2:

The bushing, marked 18, is enlarged at its bottom to provide a disk 19, which may be externally knurled as in Fig. 1. The lower face of this disk is flat and in contact with the flat upper surfaces of a cap 20 having a force fit on or otherwise permanently attached to the upper end of the staff.

Such flat contact surfaces provide the friction clutch aforesaid.

The rod member is a headed stud 21 having a cylindrical shank passing down through a cylindrical bore in the bushing and thence through an aperture in the top of cap 20. At its bottom, the stud is headed-over as indicated at 21'. The stud is of such length that its head 21' is at a height above the bushing to insure that the spring 17, extended between the top of the bushing and the head 21', is always under sufficient compression to cause the friction clutch between the bushing and the cap to impositively yet dependably lock the target in any angular setting given the same about the axis of the staff.

In assembling the device of Fig. 1, the stud, spring, bushing and cap are first assembled as shown and the stud is headed over at its bottom, then the cap is jammed tight on the staff, and finally the bushing is screwed up tight in the target.

Referring to Fig. 3, this is like Fig. 2 in that it shows a construction employing a spring 17 and a washer 22 on a rod member, and also an externally threaded bushing for sleeving the rod member and screwed up tight in boss 15. Here, however, the bushing, marked 23, has its bottom portion 24 formed as a cap for the top of the staff, and the bore through the bushing is cylindrical in its upper part and conical therebelow. The rod member is a headed stud 25, the upper portion of the shank of which is shaped to fit the bushing bore, and the lower portion of which is a cylindrical portion 26 for entering the upper end of the staff and permanently coupling these two parts, by forced fit of the plug, shown

as having a straight knurling 26', within the staff.

As will be noted, the clutch elements between the staff and the target, acted on by the spring 17 as in Fig. 2, are the conical surfaces on the stud 25 and within the bushing 23.

In assembling the device of Fig. 3, the stud, washer, spring and bushing, are first assembled as shown, and then the plug 26 is forced down into the staff until these parts are arranged as illustrated, after which but a single operation is necessary, that of finally screwing the bushing up tight in the target.

In Fig. 4, the boss 16 in the target is shown as having a cylindrical bore, while the bushing is in the main a cylindrical shell having at its upper end an inwardly directed annular flange 30, and at its lower end an outwardly directed annular flange 31.

The friction clutch between the target and the staff is provided by matching horizontal surfaces, one at the top of the staff and the other at the underside of the bushing flange 30; the staff being sleeved by the bushing sufficiently loosely to mount the bushing rotatably on the staff.

For serving the friction clutch, a spring 28 is on a stud 29 and extended between the head 29' of the stud and the top of the bushing. The stud is made tight in the bushing by forced fit therein desirably by the aid of a straight knurling 29a on the stud. The target is locked permanently on the bushing 27, the exterior of which is shown as having a straight knurling 27a, by applying a suitable adhesive between the bushing and the boss 16.

In assembling the device, all parts except the target are first assembled as just above explained, the stud being forced down into the staff far enough to place the spring 29 under the desired compression; and then the target is secured to the staff.

A feature of the invention which it is sometimes desirable to incorporate is a biasing of the parts such that the target will be more tightly held in one or more adjusted angular positions about the staff axis than in others. Such an arrangement is shown in the embodiment of the invention now being described. The upper end of the staff is provided with a plurality of diametrically opposite recesses, one of which is shown at 32 in Fig. 6, and for coaction with these recesses the top flange 30 of the bushing carries a pair of diametrically opposite depending lugs 30', conveniently formed by crimping the flange 30 as illustrated. These lugs act as impositive detents relative to the recesses 32, due to the thrust of spring 28. In coupling the target to the staff by securing the bushing 27 in the boss 16, the parts may be set so that the line joining the recesses 32 will be one marking an extension of the target parallel to the longitudinal center line of the vehicle on which the fender guide is to be mounted. If, due to the shape or inclination of the fender, the line joining the recesses 32 is found to extend at an angle to the longitudinal center line of the vehicle after mounting the fender guide on the vehicle, this may be corrected by resetting the staff relative to the clamp by which the fender guide is attached to the car. For instance, when a clamp like that illustrated at 11 is employed, and having a nut 33 which may be tightened to grip the staff in a selected angular adjustment of the same about its own axis, it would only be necessary to loosen this nut, then give the staff 10 the angular ad-

justment required, and again tighten the nut.

Variations and modifications may be made within the scope of this invention and portions of the improvements may be used without others.

5 I claim:

1. As a new article of manufacture for a fender guide, a coupling for mounting a target on a supporting structure and comprising a bushing; a central structure including a stud extended into the bushing, said bushing and structure being relatively rotatable and having surfaces which contact during said relative rotation; and a spring urging said surfaces toward each other.

2. As a new article of manufacture for a fender guide, a coupling for mounting a target on a supporting structure and comprising a bushing; a central structure including a stud extended into the bushing, said bushing and structure being relatively rotatable and having surfaces which contact during said relative rotation; and a spring urging said surfaces toward each other, said spring being carried by the stud above the bushing.

3. A fender guide comprising a staff; a target; and a coupling between the staff and the target comprising a stud secured to the staff, a sleeve structure secured to the target and angularly adjustable about the stud, a spring on the stud above the sleeve structure and exerting an upward axial thrust on the stud, and a friction clutch including contacting surfaces one on the stud and a coacting one on the sleeve structure, said spring serving to prevent casual slip of the clutch.

4. A fender guide comprising a staff; a target; and a coupling between the staff and the target comprising a stud secured to the staff, a sleeve structure secured to the target and angularly adjustable about the stud, a spring on the stud above the sleeve structure and exerting an upward axial thrust on the stud, and a friction clutch including contacting surfaces one on the sleeve structure and a coacting one on a part

other than the stud but fixed relative to the staff, said spring serving to prevent casual slip of the clutch.

5. A fender guide comprising a staff; a target, a coupling between the staff and target comprising a stud secured to the staff; a sleeve structure secured to the target; a spring disposed on the stud above said sleeve structure adapted to exert an upward axial thrust on said stud; a friction clutch including contacting surfaces, one on the shaft and a coacting one on the sleeve structure, said spring serving to prevent casual slip of the clutch; and means including an impositive detent for holding the target in a selected adjustment.

6. A fender guide comprising a staff; a target, a coupling between the staff and target comprising a stud secured to the staff; a sleeve structure secured to the target; a spring disposed on the stud above said sleeve structure and exerting an upward axial thrust on said stud; a friction clutch including contacting surfaces, one on the shaft and a coacting one on the sleeve structure, said spring serving to prevent casual slip of the clutch; and detents formed on one of said contacting surfaces adapted to engage coacting recesses formed in the other surface whereby the target may be held in a selected adjustment.

7. A fender guide comprising a staff; a target, a coupling between the staff and target comprising a stud secured to the staff; a sleeve structure secured to the target; a spring disposed on the stud above said sleeve structure and exerting an upward axial thrust on said stud; a friction clutch including contacting surfaces, one on the shaft and a coacting one on the sleeve structure, said spring serving to prevent casual slip of the clutch; and detents formed on the coacting surface of said sleeve structure adapted to engage recesses provided in the contacting surface of said shaft, said detents being held in engagement with the recesses by said spring.

GUSTAVE F. BAHR.