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[54] FIREARM CARRYING HANDLE AND SIGHT
PROTECTOR

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[51] Int. Cl. F41g 1/00, F41c 27/00
[58] **Field of Search** 42/1 S

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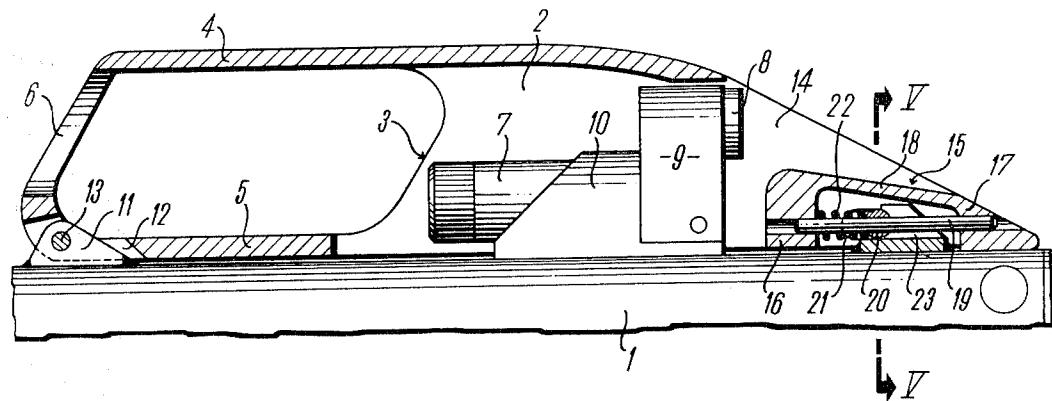
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[57]

ABSTRACT

A hand firearm incorporates a carrier handle at about the centre of gravity of the firearm which carrier handle is of generally tubular shape which is adapted to protect a sight such as a telescopic sight giving a smooth outer surface not likely to become entangled with undergrowth or otherwise impede usage of the firearm. Side apertures in the tubular member provide an easy hand hold.

7 Claims, 5 Drawing Figures



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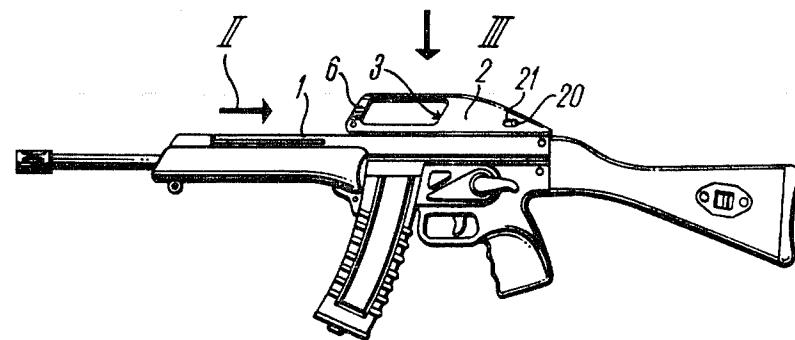


Fig.1

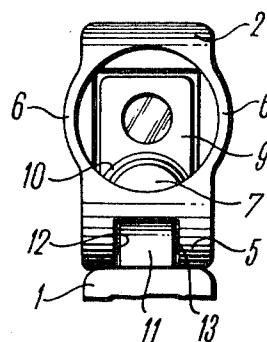


Fig.2

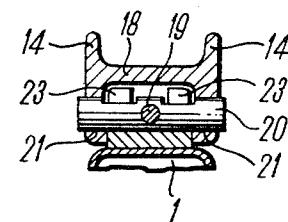


Fig.5

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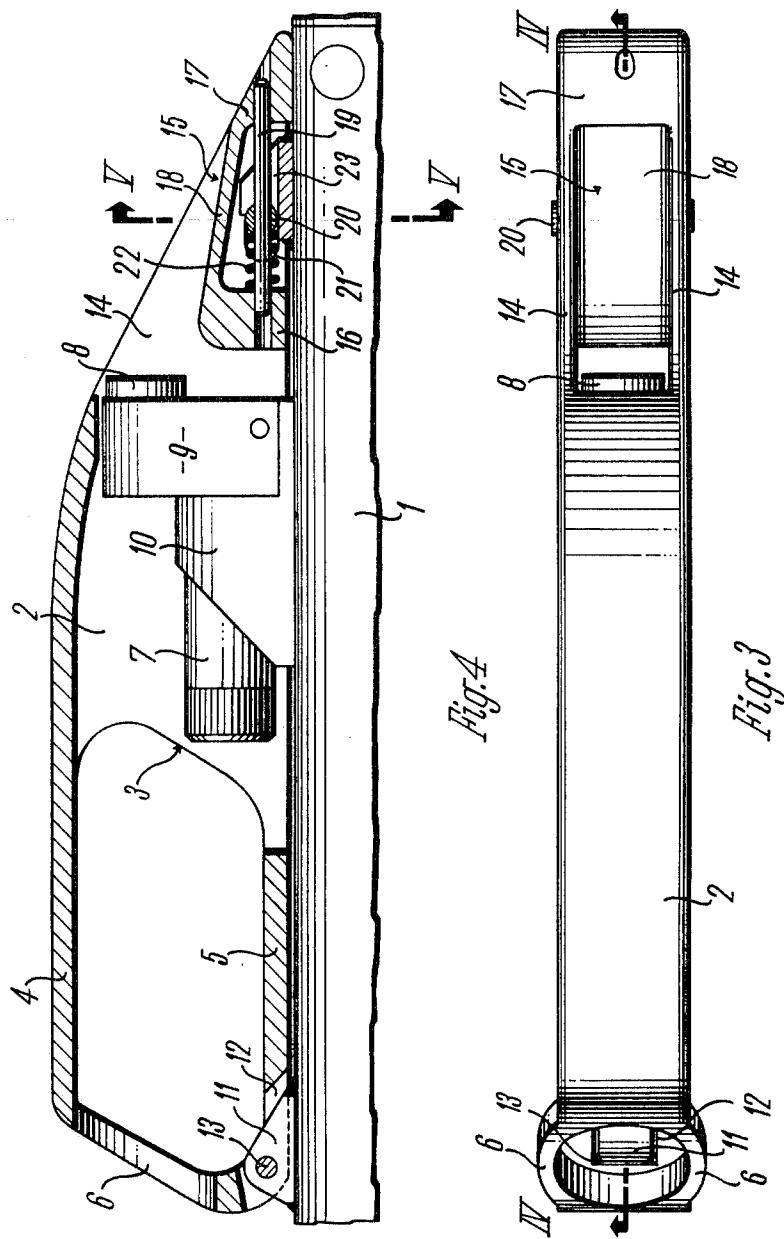
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FIREARM CARRYING HANDLE AND SIGHT PROTECTOR

The invention relates to improvements in firearms, especially an automatic hand firearm, with a carrier handle fitted to the upper side of the firearm casing or receiver.

It is known to provide hand firearms with carrier handles which facilitate the carrying of such firearms on the march if it is not necessary to hold the firearm ready for firing. These carrier handles certainly facilitate carrying the firearm but form additional parts which involve additional costs and increase the weight of the firearm so that with many firearms such carrier handles are omitted for reasons of saving of cost and weight.

On the other hand sighting devices are fitted to the receiver of hand firearms and represent projecting parts which often have depressions and undercut portions so that the firearm can easily become caught up at the sighting devices if the user must move for example in dense undergrowth. Moreover projecting sight devices, which are often quite delicate, are subjected to particularly severe shocks which may easily lead to damage of the relatively delicate sighting devices. Optical sighting devices are particularly sensitive to mechanical stresses, being used not only in the form of target telescopes by snipers but used in the form of small sights for normal firearms.

The invention is directed to the problem of increasing the scope of application of carrier handles known for hand firearms so that the costs for such carrier handles can be more satisfactorily provided for and the user of the firearm is more inclined to accept the additional weight.

This problem is solved according to the invention by the fact that the carrier handle is arranged also as a protective hood for a sighting device and embodies, apart from lateral grip openings, sight apertures at its two ends.

In a firearm according to the invention the carrier handle serves the double purpose of facilitating carrying the firearm and also of protecting the sighting device against damage by external influences. Moreover such a protective hood can have a smooth and rounded outer surface so that catching up of the firearm by this protective hood is less probable than with projecting irregular shaped sighting components. The use of the carrier handle in the hand firearm according to the invention as a protective hood for a sighting device is of particular advantage if the firearm embodies a known optical small sight as the sighting device since these optical sighting devices are very sensitive to external influences so that without such a protective hood they are of little use for normally used firearms especially for military firearms which must withstand very rough handling.

It is of course known in itself to combine a carrier handle and a sighting device but only in such manner that the carrier handle is arranged at the same time as a holder for a target telescope. In this case however the carrier handle offers no sort of protection for the target telescope fitted and moreover the carrier handle is no longer satisfactorily useable with the target telescope installed since then the target telescope is in the way of satisfactory gripping of the carrier handle.

With a preferred embodiment of the invention the carrier handle is formed by a tubular hollow body of approximately rectangular cross-section which embodies near its forward end the lateral grip openings and the sighting device is arranged between the rearwardly extending side walls beyond the grip openings. Such a hollow body is of high strength, can be very easily produced and can also be fastened easily to the upper side of the firearm receiver. The wall of the tubular hollow body bearing on the firearm receiver is conveniently recessed in the region of the sighting device in order that the sighting device can be secured to the upper side of the receiver independently of the carrier handle.

In order that the sighting device can be exposed for cleaning operations and for adjustment, a further arrangement of the invention provides that the carrier handle is pivotally connected at one of its ends to the receiver and is latched to the receiver at the other end. If with such an arrangement of the invention a tubular hollow body is used as the carrier handle as above stated, this hollow body is advantageously pivotally mounted at its forward end. At its rearward end the hollow body may embody side wall sections projecting over the sighting devices between which a locking device is secured. The pivoting of the hollow body at its forward end permits the upwardly folded carrier handle to have a substantial spacing from the sighting device which permits free access to the sighting device and moreover the forces occurring during carrying the firearm operate in the neighbourhood of the pivot bearing for the carrier handle and therefore the lock is not excessively loaded.

A very reliable and yet very simple lock is obtained in one construction of the invention by a locking device which comprises a bearing member provided at the locked end of the carrier handle in which a guide rod is supported displaceable in the longitudinal direction of the carrier handle and loaded by means of a coil spring arranged concentrically to it, which carries a locking bar extending transversely to it and guided in side walls of the carrier handle. Furthermore a catch surrounding the locking bar is secured to the upper side of the receiver.

In order to provide a sufficient field of view even towards the sides through the carrier handle without the carrier handle having to be made excessively wide, the viewing opening provided at the forward end of the carrier handle can be defined by a preferably circular ring.

Further details and arrangements of the invention will be seen from the following description in which the invention will be further described and explained on the basis of the constructional example shown on the drawing, and in which:

FIG. 1 is a side view of an automatic firearm according to the invention,

FIG. 2 is a front view in the direction of the arrow II of the carrier handle with the sighting device of the firearm according to FIG. 1 arranged beneath it,

FIG. 3 is a plan in the direction of the arrow III on the carrier handle of the firearm according to FIG. 1,

FIG. 4 is a section along the line IV—IV through the carrier handle according to FIG. 3 as well as a side elevation of the upper portion of the receiver of the firearm according to FIG. 1 and the sighting device fastened to it, and

FIG. 5 is a section on the line V—V through the arrangement according to FIG. 4.

One example of an automatic firearm is shown in FIG. 1 and embodies a carrier handle 2 on the upper side of the receiver 1 thereof which, as shown particularly by FIGS. 2 to 4, is formed by a tubular hollow body of approximately rectangular cross-section. This hollow body incorporates in each side wall a grip opening 3 which extends in height from the upper wall 4 as far as the lower wall 5 of the hollow body and continues nearly to the front end of the hollow body. These lateral grip openings 3 are limited at the front end of the hollow body 2 by webs 6 which join together the upper and lower wall 4 or 5 of the hollow body 2 and together with the joining portions of these walls form a circular ring which surrounds the front viewing opening of the carrier handle 2.

In the portion of the hollow body 2 leading from the lateral grip openings 3, which is still covered by the upper wall 4 of the hollow body, there is located an optical small sight 7 the eye-piece 8 of which is fitted to the back of a casing part 9 of the small sight 7 which terminates at the rear edge of the upper wall 4 of the hollow body 2. The small sight 7 is held in a carrier 10 secured to the upper side of the receiver 1, in order that the fastening of the carrier 10 and thus of the optical small sight 7 to the upper side of the receiver 1 is possible, the lower wall 5 of the hollow body 2 forming the carrier handle adjacent to the receiver is recessed in the region of the carrier member 10 with the optical small sight.

The hollow body 2 is pivotally connected at its forward end with the receiver 1 and locked to the receiver near its rear end. For this purpose a triangular lug 11 is secured to the upper side of the receiver 1, for example welded to it, which engages in a slot 12 formed at the forward end of the hollow body 2 in the region of the transition between the lower wall 5 and the projecting webs 6. A bearing pin 13 traverses the lug 11 which also engages in bores formed in portions of the lower wall part 5 of the hollow body 2 defining the slot 12. The pin 13 extends transversely to the longitudinal direction of the receiver 1 and of the carrier handle 2 and thus also transversely to the sight line defined by the optical small sight 7.

At its rear end the side walls of the hollow body 2 are extended beyond the rear edge of the upper wall 4 and form triangular side wall portions 14 the upper edges of which approach the upper side of the receiver 1 at an acute angle. Between these side wall portions there is located a filler block 15 which comprises a front and a rear cross wall 16, 17 respectively. These cross walls 16, 17 connect the side wall portions 14 and are themselves joined at their upper ends by a further wall section 18 so that the filler block 15, in conjunction with parts of the side wall portions 14, forms a type of downwardly open casing.

A guide pin 19 displaceable in its longitudinal direction is supported in the cross walls 16 and 17 of the carrier block 15 in coincident bores, on which at about the centre there is fastened a transversely arranged locking bar 20 which in turn engages at its ends in slots 21 formed in the side wall portions 14. A coil spring 22 is arranged on the guide pin 19, which on the one hand rests against the inner side of the front cross wall 16, and on the other hand on the locking bar 20 and tends to engage the locking bar 20 at its ends against the rear-

ward ends of the slots 21. The ends of the locking bar 20 project from the side wall portions 14 of the carrier handle 2 so that they are easily engageable for sliding the locking bar 20 in the slots 21.

5 A catch 23 is secured to the upper side of the receiver 1 which engages in the casing formed internally of the carrier block 15 and embodies a semi-circular recess on one end face in which the locking bar 20 is allowed to engage under the pressure of the coil spring 21. In the position of the handle 2 shown in the drawings the coil spring 21 holds the locking bar 20 reliably in the recess of the catch 23 forming a catch groove so that the carrier handle 2 is rigidly connected to the receiver 1 both at its front end and at its rear end, which 15 is not releasable from the carrier handle by the action of external forces.

It is however immediately possible to force the locking bar 20 out of engagement with the catch groove of the catch 23 by pressure on the outer ends of the bar 20 and thereby to release the positive connection at the rear end of the carrier handle 2. Thereafter the carrier handle can be raised about its front pivot pin 13 so that the optical small sight 7 is exposed which otherwise is surrounded by the portion of the carrier handle 2 adjacent to the grip opening 3. The carrier handle 2 thus forms a protective hook surrounding the optical small sight 7, and embodies, apart from the lateral grip openings 3, a rearward sight opening substantially filled by the casing part 9 of the optical small sight 7 and moreover a front sight opening defined by the webs 6.

It should be understood that the invention is not limited to the protection of special sighting devices but other sighting devices for example V- or binocular arrangements can be located beneath the protective hood formed by the carrier handle 2. Furthermore such carrier handles can also be fastened in desired ways to the firearm, for example screwed on, if it is not necessary or even desired that the user of the firearm has access to the sighting device. Furthermore, the external form 35 of the carrier handle will be selected both according to the shape of the firearm and also the shape of the surrounded sight. In this case attempts are always made that the grip openings lie approximately over the centre of gravity of the firearm. In the firearm shown as a constructional example this condition is fulfilled and also the sight is located at the best point for handling the firearm.

We claim:

1. Hand firearm incorporating a carrier handle which also serves as a protective hood for a sighting device and embodies sighting apertures at its two ends and lateral grip openings, characterized in that the carrier handle is formed by a tubular hollow body of approximately rectangular cross-section which embodies the lateral grip openings near its front end, and the sighting device is arranged between side walls lying behind the grip openings.

2. Hand firearm according to claim 1, characterized in that the tubular hollow body is pivotally supported at its front end and embodies side wall sections projecting at its rear end beyond the sighting device and a locking device secured between said wall sections.

60 65 3. Hand firearm according to claim 1, characterized in that the carrier handle embodies a filler block at its locking end in which a guide pin is displaceable in the longitudinal direction of the carrier handle and is loaded by a coil spring arranged concentrically to it,

which carries a locking bar transversely to it and guided in side walls of the carrier handle and that a catch is secured to the upper side of a receiver of the firearm and surrounds the locking bar.

4. Hand firearm according to claim 1, characterized in that a viewing opening provided at the front end of the carrier handle is limited by a preferably circular ring.

5. Hand firearm according to claim 1, characterized in that the firearm embodies an optical small sight as 10 the sighting device.

6. Hand firearm incorporating a carrier handle which also serves as a protective hood for a sighting device

and embodies sighting apertures at its two ends and lateral grip openings, characterized in that a wall of a tubular hollow body adjacent to a receiver of the firearm is recessed in the region of the sighting device.

5 7. Hand firearm incorporating a carrier handle which also serves as a protective hood for a sighting device and embodies sighting apertures at its two ends and lateral grip openings, characterized in that the carrier handle is pivotally connected at one end of a receiver of the firearm and is locked to the receiver at the other end.

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