United States Patent [19]

Hillberg

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[54] **AUXILIARY GUN STOCK**

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[52] **U.S. Cl.** ..... **42/72,** 42/71 R

[51] **Int. Cl.** **F41c 23/00**

[58] **Field of Search** ..... 42/72, 73, 71 R

[56] **References Cited**

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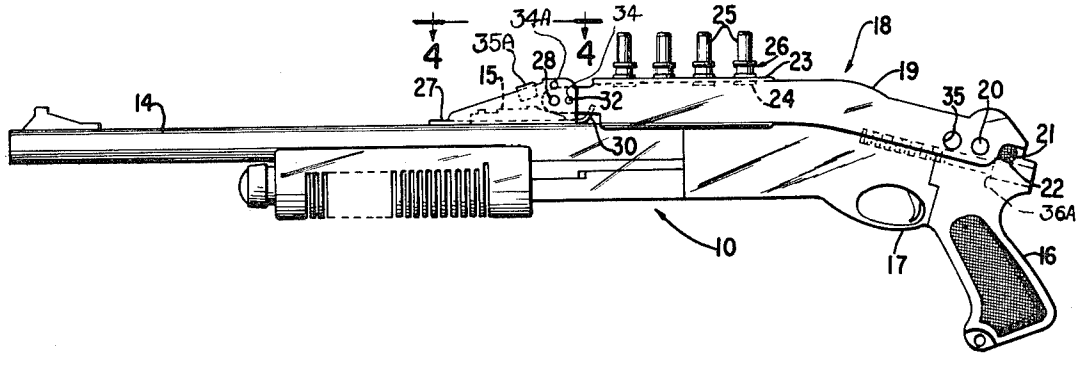
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[57] **ABSTRACT**

A conventional pump shotgun having a receiver from which the stock has been removed is provided with a pistol grip assembly on the end of the receiver and an elongated arm pivotally mounted on the pistol grip to be pivotable to an extended position. A butt plate is pivotally mounted on the other end of the arm and is pivotable to a position to define a shoulder plate.

8 Claims, 7 Drawing Figures



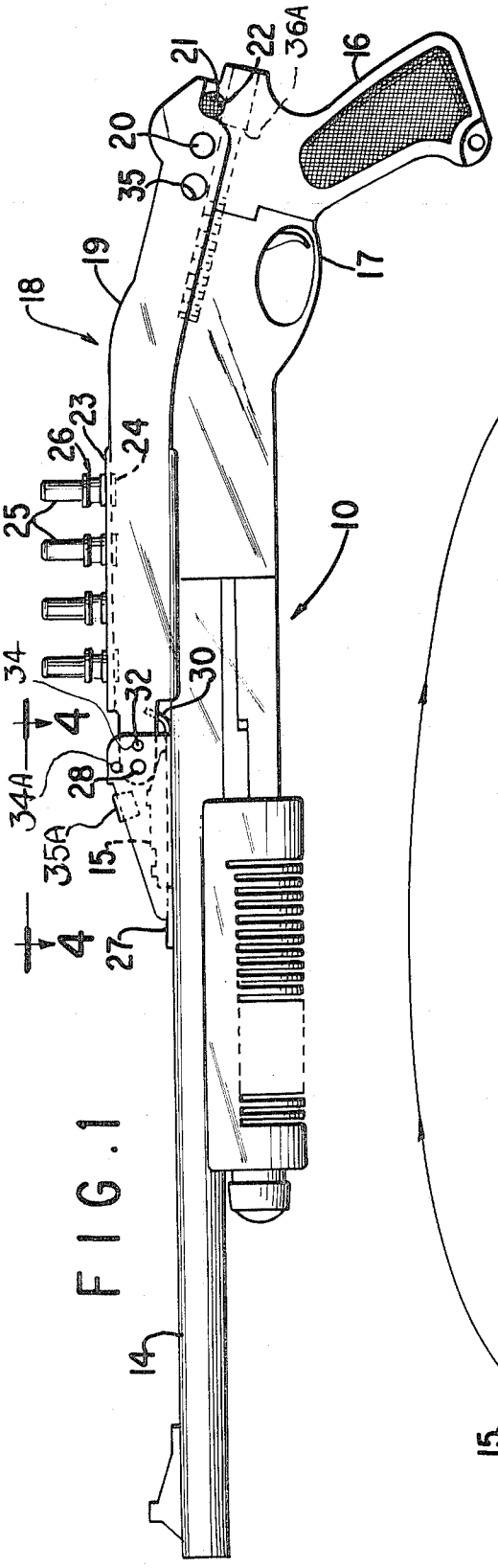


FIG. 1

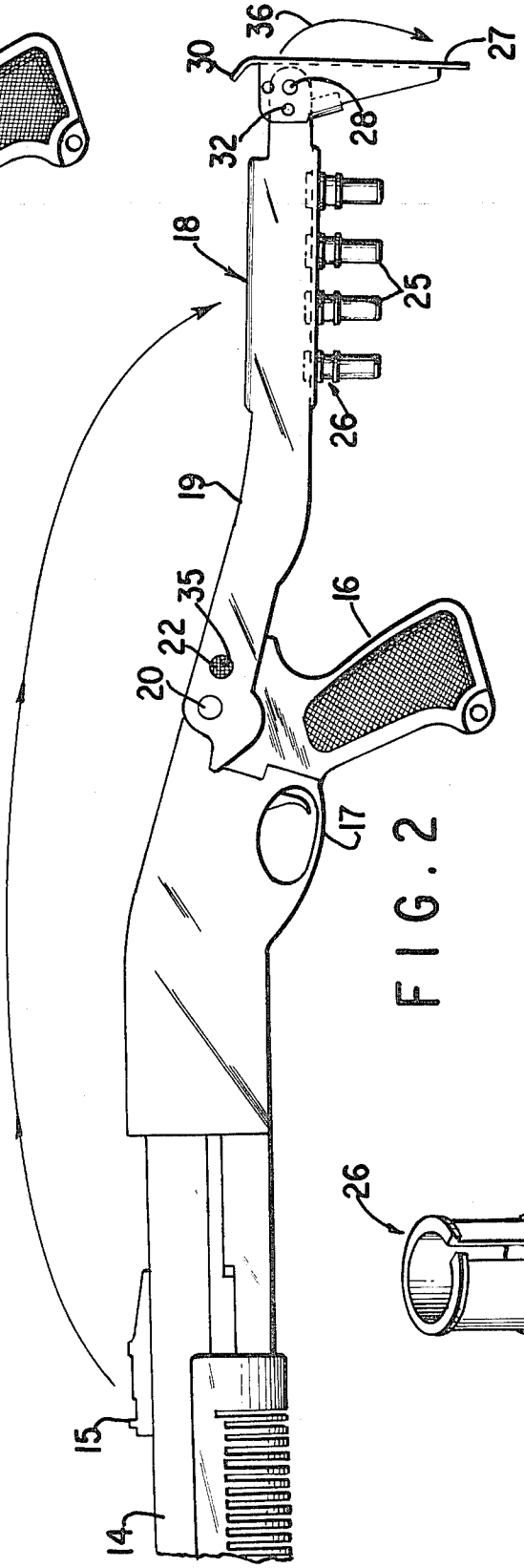


FIG. 2

FIG. 3

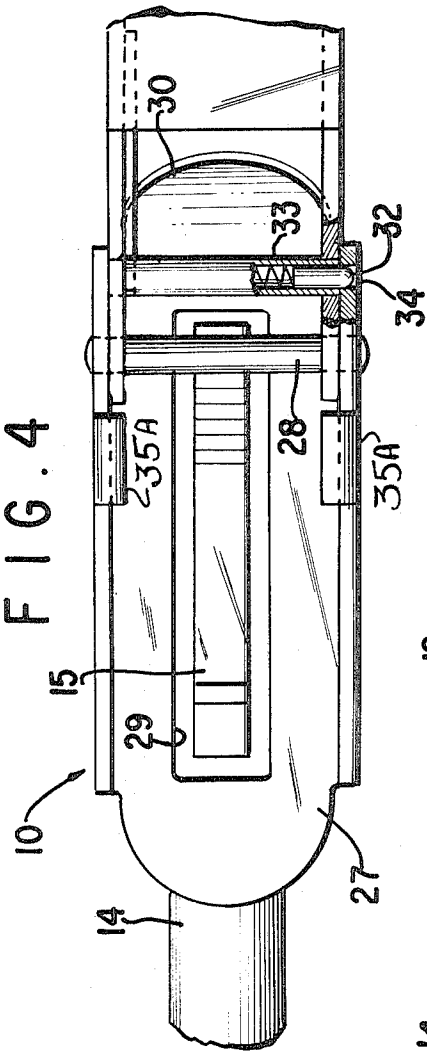


FIG. 4

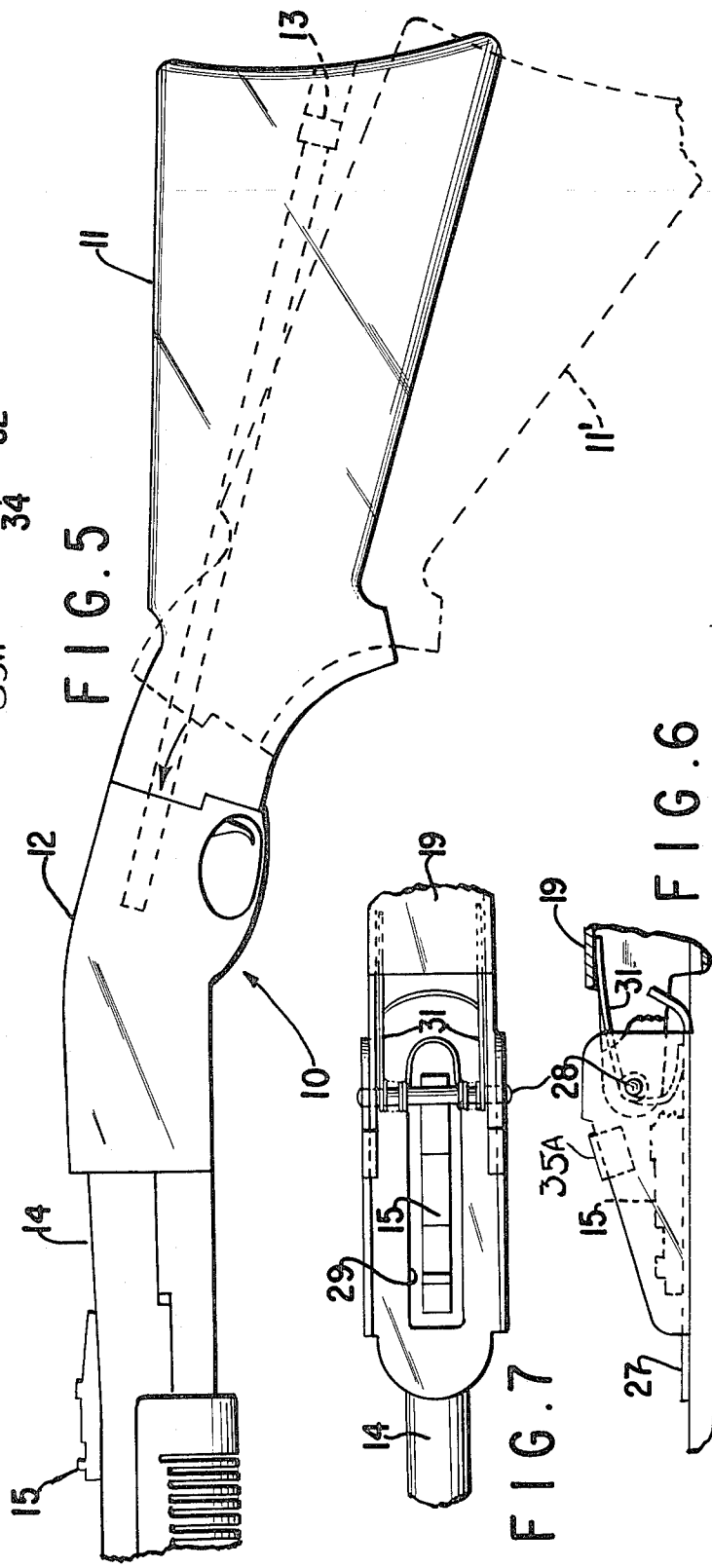


FIG. 5

FIG. 6

FIG. 7

AUXILIARY GUN STOCK

The present invention relates to a pump shotgun provided with an auxiliary stock which is pivotable between folded and extended positions.

The desirability of providing law enforcement officers with a rifle or shotgun with a folding stock that can be extended and fired from the shoulder has been generally recognized. This is particularly true with respect to shotguns since shotguns are used to fire gas shells during riots or other civil disturbances. While the conventional shotgun is adequate for firing such gas shells, the length of such a shotgun, which is provided with a conventional shoulder stock, makes the firearm awkward and clumsy to handle. This is especially true when law enforcement officers are in a motor vehicle and desire to remove the firearm quickly from the vehicle for use. It has, therefore, been proposed to remove the conventional stock and replace this stock by a pistol grip. In order to accommodate the firearm for use as a shoulder firearm, some form of a collapsible, foldable, or telescoping auxiliary stock has generally been mounted on the firearm. However, such an auxiliary stock has been generally disadvantageous in that it is unduly complicated or else requires additional manipulative steps before the firearm can be fired from the shoulder. The present invention is an improvement on U.S. Pat. No. 3,618,249.

One of the objects of the invention is to provide an improved auxiliary stock for shotguns.

Another of the objects of the invention is to provide an auxiliary stock which is pivotally mounted to the end of a shotgun from which the stock has been removed and which is pivotable between foldable and extended positions.

Still another of the objects of the invention is to provide a shotgun having an auxiliary stock which is quickly and easily pivotable to an extended shoulder position.

According to one aspect of the present invention, there is provided an auxiliary stock assembly adapted to be mounted on the receiver of a conventional pump shotgun from which the stock has been removed. The auxiliary stock assembly may comprise a pistol grip mountable on the receiver and an auxiliary stock including an elongated arm pivotally mounted on the end of the receiver or to a pistol grip mounted on the receiver and pivotable in a vertical plane relative to the shotgun to a position to define a stock. Vertical plane refers to the gun when in its normal vertical position when being fired under normal use. A butt plate is pivotally mounted on the outer end of the arm and is pivotable to a position to define a shoulder plate when the arm is extended. The arm may have a channel cross section so as to fit over the top of the receiver and barrel assembly when in the folded position. In one form there may be spring detent locking means or spring biased locking plunger to retain the arm in the folded or operative position.

These and other objects, advantages, and features of the invention will become apparent from the following description and drawings which are merely exemplary.

In the drawings:

FIG. 1 is a side elevational view of a shotgun provided with a stock according to the present invention with the stock bein shown in its folded position;

FIG. 2 is a view similar to that of FIG. 1 but showing only the rear portion of the shotgun with the stock being pivoted to its extended position;

FIG. 3 is an enlarged overall perspective view of a clamp ring for retaining shells in openings formed in the arm;

FIG. 4 is a top plan view of a portion of the shotgun shown in FIG. 1 viewed along the line 4—4:

FIG. 5 is a side elevational view of the rear portion of a shotgun provided with a conventional shoulder stock and showing in dash lines the manner in which this stock is removed;

FIG. 6 is a fragmentary side view of an alternate form of butt plate arrangement having a spring; and

FIG. 7 is a top view of FIG. 6.

Proceeding next to the drawings wherein like reference symbols indicate the same parts throughout the various views, a specific embodiment of the present invention will be described in detail.

As may be seen in FIG. 5, a conventional pump shotgun indicated generally at **10** has a stock **11** which is secured to the rear end of a receiver **12** by means of a stock bolt **13.** The shotgun is conventional in structure in that it comprises a barrel **14** on the rear end of which is attached a rear sight assembly **15.**

According to the present invention, stock **11** is removed from the receiver assembly as indicated at **11'** in FIG. 5 and replaced by a pistol grip means **16** as may be seen in FIG. **1.** The pistol grip **16** enables the firearm to be fired as a handgun, but using two arms, since the relationship of the pistol grip **16** to a trigger **17** is similar to that of a conventional handgun.

The auxiliary stock according to the present invention is indicated generally at **18** and comprises an elongated arm **19** which has a substantially U-shaped or channel-shaped cross section. One end of the arm **19** is pivotally mounted by a pin **20** to the upper end of the pistol grip assembly **16** as show in FIG. 1 so as to form an auxiliary stock assembly. The extreme end of the arm **19** is provided with a notch **21** which is engaged by a spring-biased detent or locking pin **22** when the arm is in the folded position as shown in FIG. 1 to retain the arm in this position. That portion of the arm **19** indicated at **23** has a U-shaped cross section which enables the arm **19** to fit closely over the top of the receiver assembly and barrel when in the folded position. The web of this U-shaped portion is provided with a plurality of copenings **24** into which may be inserted a number of shot shells **25** with the shells being retained in position by resilient clamping rings **26** shown in greater detail in FIG. **3.**

The other end of the arm **19** is provided with a butt plate **27** which is pivotally mounted on pin **28.** The butt plate is provided with a slot **29** to accommodate rear sight **15.** If desired, but not preferably, the end **30** of the butt plate can be curved upwardly.

In the form shown in FIG. **4,** a spring biased detent or locking pin **32** is positioned in a tubular socket **33** secured in the other end of the auxiliary stock assembly and is engageable with an opening **34** in the side wall of the butt plate to retain the butt plate in the position as shown in FIG. **1.**

In order to use the shotgun incorporating the present invention, the firearm, with the auxiliary stock in a folded position, is removed from its supporting bracket in a vehicle, such as a police car, and the detent **22** pressed to release the arm **19.** The arm **19** is then piv-

oted to its extended position as shown in FIG. 2 and is retained in this position by means of detent pin 22 becoming lockingly engaged in an opening 35 formed adjacent to the end of the arm 19. Concurrently with the pivoting of the arm to its extended shoulder position, the butt plate 27 will be manually pivoted downwardly as indicated by the arrow 36 in FIG. 2 and will be locked in place by pin 32 in aperture 34A. The firearm is now ready for use.

The pivot 28 is located relative to the butt plate so that a high percentage of the plate 27, e.g., 80 percent, is below the pivot point. Thus, when the gun is fired, the forces are such that the plate will not tend to fold. In the form shown in FIGS. 6 and 7, detent 32 and related parts are omitted and a torsion spring 31 is provided. The torsion spring 31 is mounted on shaft 28 and is arranged so that as the auxiliary stock is moved toward its extended position, the butt plate will be pivoted to its downward position such as seen in FIG. 2. Ledges 35A limit the movement of the butt plate in both illustrated forms of the invention. The shoulder 36A for the stock bolt preferably is located forward of the pin 22 so as to avoid any deformation of the hole in which pin 22 is located because of tightening of the stock bolt.

The present invention thus constitutes a substantial improvement to standard riot guns or pump shotguns since a convenient pistol grip is provided and a folding auxiliary stock is provided which can be carried by the pistol grip and which pivots back over the barrel and permits firing of the firearm with the stock folded. It should also be apparent that the shotgun can be fired without extending the auxiliary stock by using the pistol grip alone.

It will be understood that changes in various details of construction and arrangement of parts may be made without departing from the spirit of the invention, except as defined in the appended claims.

What is claimed is:

1. In a conventional shotgun normally having a barrel, receiver and stock, an auxiliary stock adapted to be mounted on the receiver of said conventional shotgun from which the stock has been romoved, comprising a single elongated arm having one end pivotally mounted adjacent the rear end of said receiver and pivotable in a vertical plane and upwardly relative to said shotgun to a position to define a stock, said auxiliary stock in folded position being on top of said receiver, a butt plate pivotally mounted on the other end of said arm and pivotable to a position to define a shoulder plate when the arm is rotated from over the top of the receiver to an extended position, and spring means for pivoting the butt plate to its shoulder position.

2. An auxiliary stock as claimed in Claim 1 wherein said arm has a channel cross section having sufficient space between the sides of the channel section to fit over and straddle the top of the receiver and barrel in the folded position.

3. An auxiliary stock as claimed in claim 1 wherein a plurality of holes are provided in the arm into which shells can be inserted.

4. An auxiliary stock as claimed in claim 3 and further comprising clamp rings positioned over the shells when inserted in said holes to retain the shells.

5. In combination, a pump shotgun having a receiver from which a stock has been removed, a pistol grip assembly attached to the end of said receiver a single elongated arm pivotally mounted on said pistol grip assembly and pivotable in a vertical plane and upwardly relative to said receiver to a position to define a stock and having a folded position on top of said receiver so that the pistol grip can be used, and a butt plate means pivotally mounted on the outer end of said arm and pivotable to a position to define a shoulder plate when the arm is rotated from over the top of the receiver to an extended position.

6. An auxiliary stock as claimed in claim 5 wherein said pistol grip assembly has means for selectively locking said elongated arm in its folded and extended position, stock bolt means for holding said pistol grip assembly on said receiver, said pistol grip assembly having a stock bolt receiving aperture through said pistol grip assembly with an internal shoulder located forward of said means for locking said elongated arm.

7. In a conventional shotgun normally having a barrel, receiver and stock, an auxiliary stock adapted to be mounted on the receiver of said conventional shotgun from which the stock has been removed, comprising an elongated arm having one end pivotally mounted adjacent the rear end of said receiver and pivotable in a vertical plane relative to said shotgun to a position to define a stock, a butt plate pivotally mounted on the other end of said arm and pivotable to a position to define a shoulder plate when the arm is extended, and means on said auxiliary stock to lock said elongated arm selectively in a folded and extended position, stock bolt means to hold said auxiliary stock assembled to said receiver, said auxiliary stock having a stock bolt receiving aperture therethrough, said aperture having an internal shoulder forward of said means to lock.

8. In a shotgun normally having a barrel, receiver and stock, an auxiliary stock adapted to be mounted on the receiver of said conventional shotgun from which the normal stock has been removed, comprising an elongated arm having one end pivotally mounted adjacent the rear end of said receiver and pivotable in a vertical plane relative to said shotgun to a position to define a stock, and a butt plate pivotally mounted on the other end of said arm and pivotable to a position to define a shoulder plate when the arm is extended, said butt plate having an opening therein to receive a rear sight when the arm is in its folded position.

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