Oct. 24, 1944. J. L. LOCHHEAD 2,360,881

COLLAPSIBLE STOCK FOR FIREARMS

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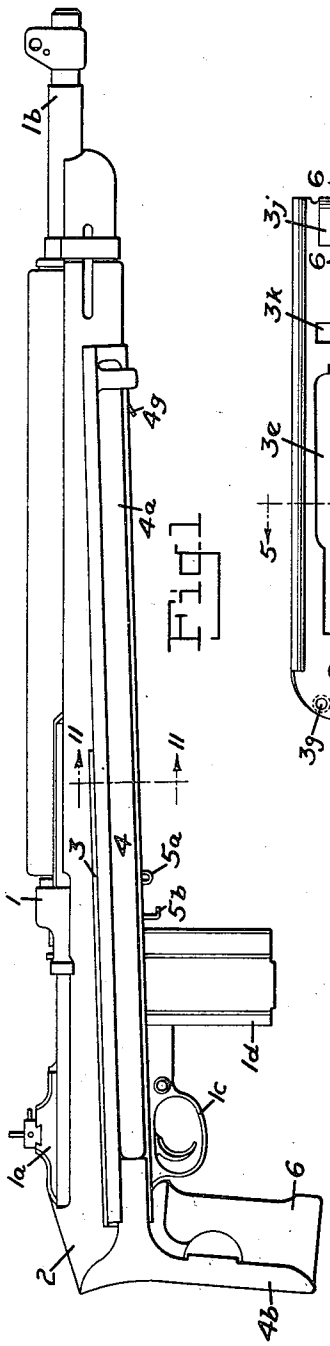


Fig. 1

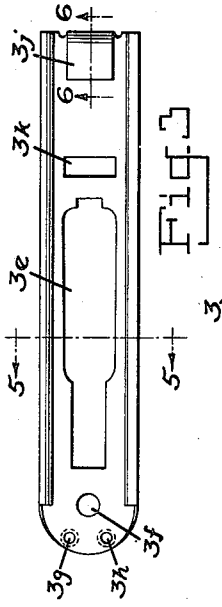


Fig. 7

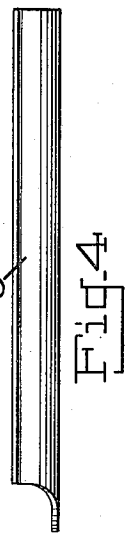


Fig. 4

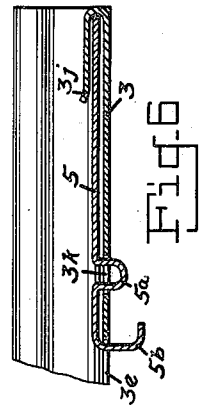


Fig. 6

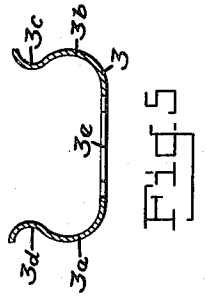


Fig. 5

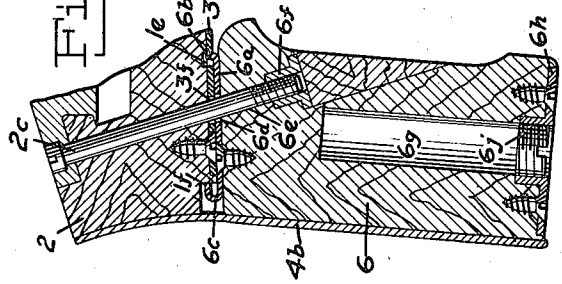


Fig. 2

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COLLAPSIBLE STOCK FOR FIREARMS

Filed Nov. 12, 1942 2 Sheets-Sheet 2

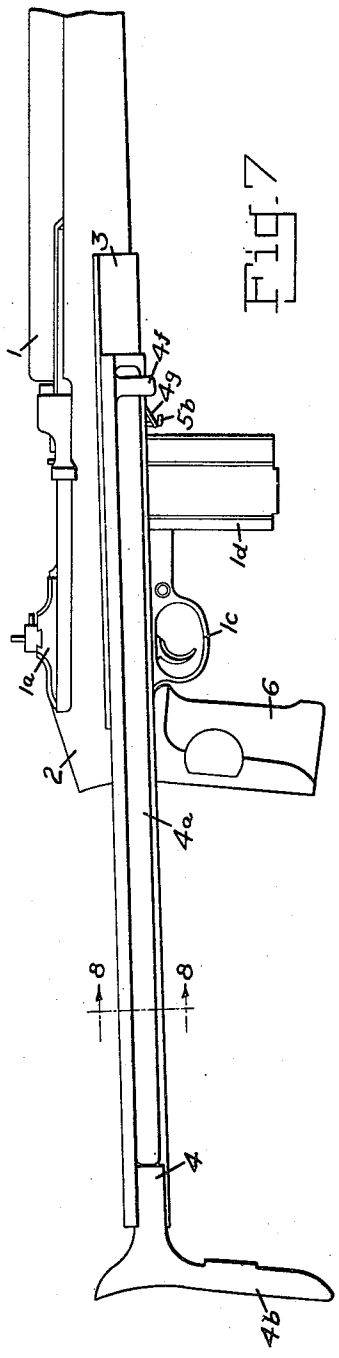


Fig. 7

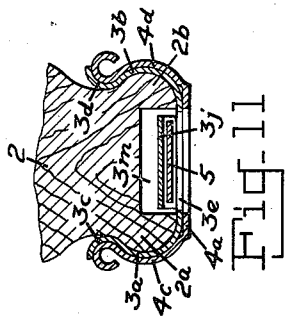


Fig. 11

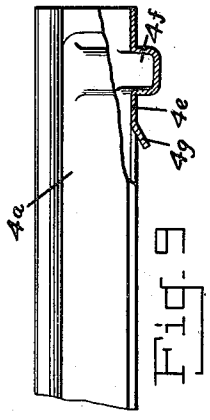


Fig. 9

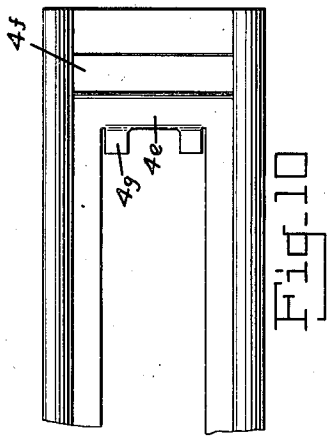


Fig. 10

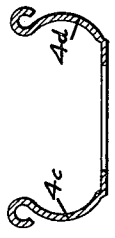


Fig. 8

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UNITED STATES PATENT OFFICE

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COLLAPSIBLE STOCK FOR FIREARMS

John L. Lochhead, Springfield, Mass.

Application November 12, 1942, Serial No. 465,315

6 Claims. (Cl. 42—72)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to an improved stock for a firearm, particularly to a collapsible stock therefor.

Modern warfare has established a demand for lightweight automatic rifles and machine guns. Weapons of this type are particularly necessary for air-borne troops. For such service the weapon must not only be light but also should occupy a minimum of space and be ready for instant use. Some form of stock is essential for the accurate firing of such firearms and yet the conventional stock offers a considerable deterrent to meeting such limited weight and space requirements. Hence it has been previously suggested that a collapsible stock be applied to these arms. However, collapsible stocks heretofore known were not sufficiently rigid in the firing position and furthermore required appreciable time to be put into condition for firing from their collapsed condition.

Accordingly it is an object of this invention to produce an improved collapsible stock for a firearm.

A further object of this invention is to provide a lightweight yet sturdy collapsible stock which may be quickly assembled for firing or collapsed after firing.

The specific nature of the invention as well as other objects and advantages thereof will clearly appear from a description of a preferred embodiment as shown in the accompanying drawings in which:

Fig. 1 is a side elevational view of a firearm showing the collapsible stock in the closed position.

Fig. 2 is an enlarged longitudinal sectional view of the pistol grip of the stock as viewed in Fig. 1 showing the method of securing the pistol grip to the firearm.

Fig. 3 is an enlarged top elevational view of the collapsible stock guide member.

Fig. 4 is a right side elevational view of the guide member shown in Fig. 3.

Fig. 5 is a cross-sectional view of Fig. 3 taken along the plane 5—5.

Fig. 6 is an enlarged partial longitudinal sectional view taken along the plane 6—6 of Fig. 3 showing the locking latch in operating position.

Fig. 7 is a fragmentary side elevational view of the firearm showing the collapsible stock in the fully extended position.

Fig. 8 is a cross-sectional view of the collapsible stock as shown in Fig. 7 taken along the plane 8—8.

Fig. 9 is an enlarged fragmentary side view of the right end of the collapsible stock as viewed in Fig. 7 showing the locking latch in longitudinal section.

Fig. 10 is an enlarged fragmentary view showing the underside of the right end of the collapsible stock as viewed in Fig. 7.

Fig. 11 is an enlarged cross-sectional view taken along the plane 11—11 of Fig. 1.

In Fig. 1 a collapsible stock embodying this invention is shown in assembled relation to a firearm 1. The usual wooden stock 2 is provided for the firearm fitting snugly around the bottom portion of the receiver 1*a* and the barrel 1*b*. The wooden stock 2, however, is terminated just beyond the rear of the receiver 1*a*. Any conventional method of securing the stock 2 to the receiver and barrel may be utilized. Suitable openings are provided in the rear base portion of the stock 2 to accommodate the trigger guard 1*c* and the magazine 1*d*.

The base of the wooden stock 2 is provided with rounded, slightly projecting corners 2*a* and 2*b* thus producing a re-entrant surface on each side of the stock extending longitudinally along the stock (Fig. 11). A metallic guide member 3 is shaped to conform to the base of the stock 2 and is secured to the stock 2 by integral upwardly extending guide-arms 3*a* and 3*b* which fit snugly around the projecting corners 2*a* and 2*b* of the stock. The edges of the guide-arms 3*a* and 3*b* are bent slightly outward to define respectively channels 3*c* and 3*d*. It should be mentioned that the guide member 3 is provided with a suitable opening 3*e* to accommodate the trigger guard 1*c* and the magazine 1*d* of the firearm. The guide member 3 is secured to the stock 2 by suitable screws passing through holes 3*g* and 3*h* in its rear portion. An integral tongue 3*j* at the front of the guide member 3 is folded back under the guide member to provide a mounting for a latch 5. The latch 5 comprises a piece of flat resilient metal having its forward end inserted under the tongue 3*j*. The latch 5 extends rearwardly therefrom and has a bent end portion 5*b* projecting through the guide member 3 at the forward end of the magazine opening 3*e* in the guide. Intermediate its length the guide 3 is bent to form a downwardly projecting latching detent 5*a* which projects through a hole 3*k* in the guide member 3. A suitable recess 3*m* is provided in the base of the stock

to accommodate the latch 5 and permit it to be depressed until the latching detent 5a is flush with the surface of guide member 3.

A wooden pistol grip 6 is secured to the bottom of the rear end of the stock 2. A metallic plate 6a is secured to the top surface of the pistol grip 6 by suitable screws and has bent up forward and rear edges 6b and 6c which engage respectively a recess 1e and a shoulder 1f on the bottom of the receiver 1a. The pistol grip 6 is secured to the firearm by a bolt 2c which passes obliquely downward through the stock 2, through a hole 3f in the guide 3, thence through hole 6d in plate 6a, thence into hole 6e in pistol grip 6 and thence threaded into metallic insert 6f mounted in hole 6e. The plate 6a is sufficiently narrow as to provide a substantial clearance between the arms 3a and 3b of guide member 3 and the pistol grip 6 when it is assembled to the firearm.

A central recess 6g may be provided in pistol grip 6 to provide space for an oil can or tool for the firearm. The recess 6g is closed by a plate 6h screwed onto the bottom of the pistol grip 6 and having a threaded opening in alignment with recess 6g into which a plug 6j is threaded.

The collapsible stock 4 comprises a forward slide portion 4a and a shoulder rest 4b secured to the rear of the slide portion. Sliding portion 4a comprises two parallel arms 4c and 4d having an arcuate cross-section corresponding to the guide arms 3a and 3b, and in fact the arms 4c and 4d of the collapsible stock 4 snugly engage and slide on the exterior of the guide arms 3a and 3b of the guide member 3. The top of arms 4c and 4d are bent to a practically circular cross-section and thus secured in channels 3c and 3d formed by the top of the guide arms 3a and 3b. The arms 4c and 4d of the collapsible stock 4 are connected to the shoulder rest 4b at the rear of the sliding stock 4 and connected at the front of the sliding stock by an integral plate-like portion 4e. The intermediate portion of the slide 4a is therefore slotted and permits the slide to be moved for an appreciable distance on the guide 3 without interference with the trigger guard 1c or the magazine 1d. The forward portion of the shoulder rest 4b is shaped to conform to the rear end of the stock 2 and pistol grip 6 so that when the collapsible stock 4 is slid to its extreme forward position on guide 3 the shoulder rest 4b will fit snugly against these members.

A latching hole 4f is provided in the forward plate portion 4e of the slide portion 4a. In the firing position of the collapsible stock the hole 4f is engaged by latching detent 5a of the latch 5. A latch depressor 4g comprising an integral obliquely depending tongue is provided on the rear edge of plate portion 4e. When the collapsible stock 4 is slid rearwardly along the guide 3 to its firing position, the latch depressor 4g cams the latching detent 5a upwardly permitting plate portion 4e to pass over the latch until hole 4f is aligned therewith. The collapsible stock 4 then is locked in such firing position by the engagement of the latch projection 5a in the latching hole 4f in the plate 4e at the front of the collapsible stock.

To return the collapsible stock 4 to its collapsed position, it is only necessary to push the bent end portion 5b of latch 5 upwardly with the finger whereby latching detent 5a is withdrawn from the latching hole 4f and the sliding stock 4a may freely slide forward to a collapsed position.

It will be apparent that the construction described will not only be light in weight but will also possess unusual rigidity due to the arcuate cross-section of the arms of the slide portion 4a of the sliding stock 4. Furthermore the collapsible stock may be placed in firing position very quickly merely by grasping the shoulder rest 4b and pulling the collapsible stock backward with respect to the firearm until latch 5 engages the hole 4f.

I claim:

1. In a firearm having a receiver, a stock terminating adjacent the rear end of the firearm receiver, a guide member mounted on the stock and fitting snugly to the lower portions of the stock, the sides of said guide member defining spaced parallel channels, an extension member comprising two spaced parallel arms, said arms being connected only by a shoulder rest at their rear and by a latching plate at their front, said arms respectively engaging said channels in sliding relation, a recess in said latching plate, and a resilient latch mounted on the guide member and engageable in said recess when the extension member is in a rearward position with respect to the stock.

2. In a firearm having a receiver, a stock terminating adjacent the rear end of the firearm receiver, a guide member mounted on the stock and fitting snugly to the lower portions of the stock, the sides of said guide member defining spaced parallel channels, an extension member comprising two spaced parallel arms, said arms being connected at their rear by a shoulder rest and at their front by a latching plate, said arms respectively engaging said channels in sliding relation, a depending pistol grip secured to the base of the rear end of the stock intermediate said parallel arms, the front facing surface of said shoulder rest shaped to conform to the rear surfaces of the stock and pistol grip, a recess in said latching plate and a resilient latch mounted on the guide member and engageable in said recess when the extension member is in a rearward position with respect to the stock.

3. In a firearm having a receiver, a stock terminating adjacent the rear end of the firearm receiver, a guide member mounted on the stock and fitting snugly to the lower portions of the stock, the sides of said guide member defining spaced parallel channels, an extension member comprising two spaced parallel arms, said arms being connected at their rear by a shoulder rest and at their front by a latching plate, said arms respectively engaging said channels in sliding relation, a depending pistol grip secured to the base of the rear end of the stock intermediate said parallel arms, the front facing surface of said shoulder rest shaped to conform to the rear surfaces of the stock and pistol grip, a recess in said latching plate, a resilient latch mounted on the guide member and engageable in said recess when the extension member is in a rearward position with respect to the stock, and an extension on said latch projecting downwardly thru the extension member whereby said latch may be manually released.

4. In a firearm having a receiver, a stock terminating adjacent the rear end of the firearm receiver, a U-shaped guide member mounted around the lower portions of the stock, the exterior of each arm of said guide member being shaped to form a re-entrant curved surface extending along the stock, an extension member comprising two spaced longitudinal arms, said arms being shaped to respectively conform to said re-entrant surfaces whereby said extension member is slidably supported on said stock, said

arms being connected only by a shoulder rest at their rear and by a latching member at their front, and means on said guide member cooperating with said latching member to latch said extension member in a rearward position with respect to the stock.

5. In a firearm having a receiver, a stock terminating adjacent the rear end of the firearm receiver, each side of said stock being shaped to provide a longitudinal re-entrant curved surface, a U-shaped guide member mounted around the bottom of said stock, the arms of said guide member being shaped to conform to the contour of said re-entrant surfaces on each side of said stock, an extension member shaped to conform to the exterior contour of said arms of said guide member whereby said extension member is slidably supported on said stock by engagement in the re-entrant portions of said arms of the guide member, a shoulder rest secured to the rear end of the extension member and means for latching the extension member to the stock in a rearward position of the extension member with respect to the stock.

6. In a firearm having a receiver, a stock terminating adjacent the rear end of the firearm receiver, a guide member mounted on the stock and fitting snugly to the lower portions of the stock, the sides of said guide member defining spaced parallel channels, an extension member having two parallel arms respectively engaging said channels in sliding relation, a recess in the forward end of the extension member, a resilient latch mounted on the guide member, said latch comprising a resilient strip, a first depending projection on said strip engageable in said recess when the extension member is in a rearward position with respect to said stock, a second depending projection on said strip arranged to project downwardly between said parallel arms whereby said latch may be manually released and pivotal mounting means for said resilient latch comprising a bent over tongue portion of said guide member.

JOHN L. LOCHHEAD.