May 16, 1933. R. C. COUPLAND 1,909,171

SHOULDER STOCK FOR MACHINE GUNS

Filed March 23, 1931

Fig. 1.

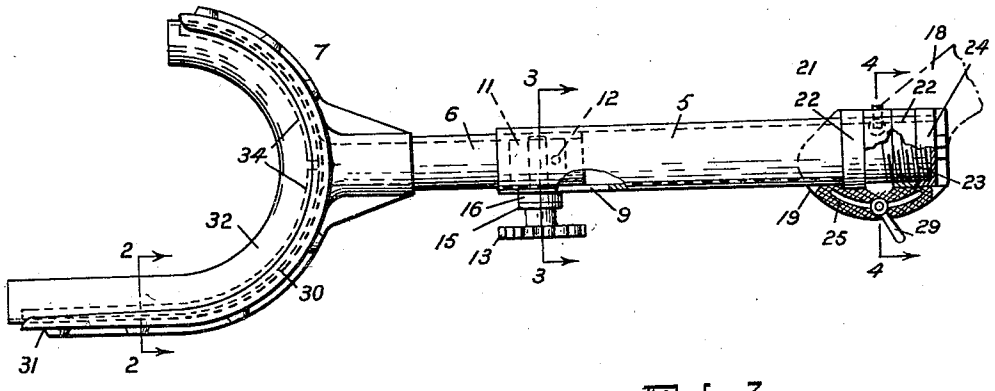


Fig. 2.

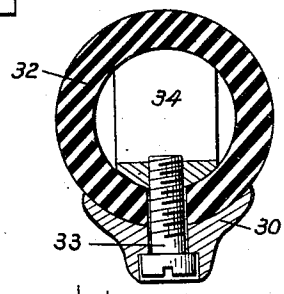
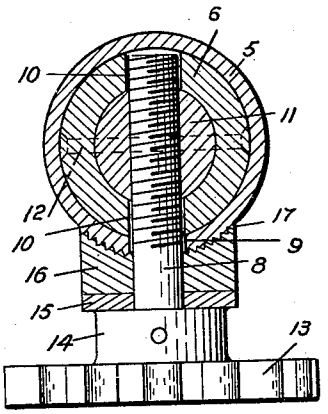


Fig. 3.



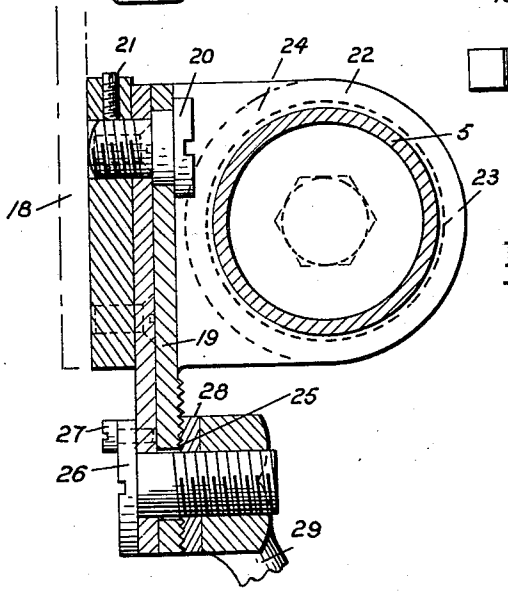


Fig. 4.

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UNITED STATES PATENT OFFICE

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SHOULDER STOCK FOR MACHINE GUNS

Application filed March 23, 1931. Serial No. 524,648.

(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 the governmental purposes, without the payment to me of any royalty thereon.

The subject of this invention is an auxiliary stock for machine guns.

Free-mounted machine guns employed against aircraft are steadied during firing by means of a shoulder stock. Because of the rapid travel of the target and its constant change of position, the gunner in tracing the target is obliged to move around the gun mount and to frequently change his stance.

In order to facilitate the task of the gunner in holding the gun it is proposed in the present invention to provide means for adjustment of the shoulder stock which may be conveniently operated without discontinuing firing. At the same time the adjusting means are conducted and positioned to afford a strong unit that will withstand all the stresses occasioned by firing of the gun.

A further object of the invention is to provide a shoulder piece which is especially designed to permit elevation and depression of the gun through movement of the body of the gunner and which carries a cushion secured in a simple and effective manner.

To these and other ends, the invention consists in the construction, arrangement and combination of elements described hereinafter and pointed out in the claims forming a part of this specification.

A practical embodiment of the invention is illustrated in the accompanying drawing, wherein:

Fig. 1 is a view in side elevation of a shoulder rest constructed in accordance with the invention.

Figs. 2, 3 and 4 are detail sectional views on the respective lines of Fig. 1.

Referring to the drawing by numerals of reference:

The auxiliary stock consists of a pair of telescoping tubular members, the front and outer member 5 arranged for attachment to a gun member and the inner or rear member 6 arranged to carry a shoulder piece 7.

The members 5 and 6 are adjustably connected by means of a clamping device (Fig. 3) consisting of a bolt 8 inserted through a slot 9 in the outer member 5 and through diametrically opposite apertures 10—10 in the inner member 6 and threaded in a plug 11 fitting within and secured to the member 6 by a pin 12. The member 6 is of a relatively soft metal such as aluminum while the plug 11 is of a hard metal. A hand-wheel 13 fast on the outer end of the bolt 8 is formed with a collar 14 confining a flat washer 15 and a lock washer 16 both mounted on the bolt. The inner face of the washer 16 is curved to conform to the tube 5 and is preferably provided with serrations 17. When the bolt is unthreaded to remove pressure from the washer 16 the member 6 may be moved relative to the member 5 to vary the length of the stock.

The stock is attached to a gun-member 18 by means of a bearing plate 19 (Figs. 1 and 4) which is mounted on a trunnion pin 20 threaded into the gun-member 18 and locked by a set screw 21. A pair of spaced annular bearings 22—22 on the plate 19 receive the end of the member 5 which is in threaded engagement 23 preferably with the foremost bearing. The stock is held in angularly adjusted relation with respect to the bearings 22 by means of a nut 24 threaded on the extremity of the member 5 and drawn up against the foremost bearing 22.

The lower portion of the plate 19 is provided with an arcuate slot 25 centered on the axis of the trunnion pin 20. A bolt 26 locked to the gun member by the set screw 27 passes through the slot 25 and carries a serrated lock washer 28 confined by a threadedly mounted clamping handle 29. When the handle 29 is loosened the stock may be rotated about the trunnion pin 20.

The shoulder piece 7 on the rear extremity of the member 6 consist of an arcuate channeled plate 30 designed to fit the shoulder of the gunner, and having a straight extension 31 on the lower arm to fit between the body and the arm of the gunner. A tubular cushion 32 fitting on the inside of the plate 30 is retained by means of screws 33—33 passing through the plate 30 and the wall of the cushion and threadedly engaging one or more

anchoring bars 34 placed within the cushion.

In operation the gunner employs the shoulder stock to steady the gun and to move it in elevation and azimuth. The handwheel 13 and the clamping handle 29 are both accessible to the right hand of the gunner and may be operated without discontinuing firing. The positioning to afford accessibility has also been made with a view to providing a strong unit. By placing the means for angular adjustment relative to the gun member at the point of attachment to the gun member instead of at the arcuate shoulder piece, as has been the general practice heretofore, a larger and stronger construction may be employed.

I claim:

1. In combination with a gun member, a shoulder stock comprising a pair of tubular telescoping members adjustable relative to length, means for clamping said tubular members together, a plate having bearings in which the front tubular member is secured, means for trunnioning the plate to the gun member, means for clamping the plate in position of angular adjustment relative to the gun member, and a shoulder piece fixed on the rear tubular member.

2. In a shoulder stock, a pair of telescoping members, the outer member formed with a slot and the inner member formed with aligned apertures, a plug secured within the inner member, and having a threaded aperture coaxial with the aligned apertures, a bolt inserted through the slot in the outer member and the aligned apertures of the inner member and engaging the threaded aperture in the plug, a head on the outer end of the bolt and a locking washer confined between the head and the outer member.

3. In a shoulder stock, a pair of telescoping members, the outer member formed with a slot, a plug secured within the inner member, a bolt insertable through the slot in the outer member and threaded into the plug, and a clamping means on the outer end of the bolt.

4. In a shoulder stock, a channeled shoulder-piece, a tubular cushioning member fitting therein, anchoring means within the cushioning member, and retaining means passing through the shoulder-piece, cushioning member and anchoring means.

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