J. F. WAGONER.

SHOCK ABSORBER.

APPLICATION FILED DEC. 7, 1917.

1,328,700. Patented Jan. 20, 1920.

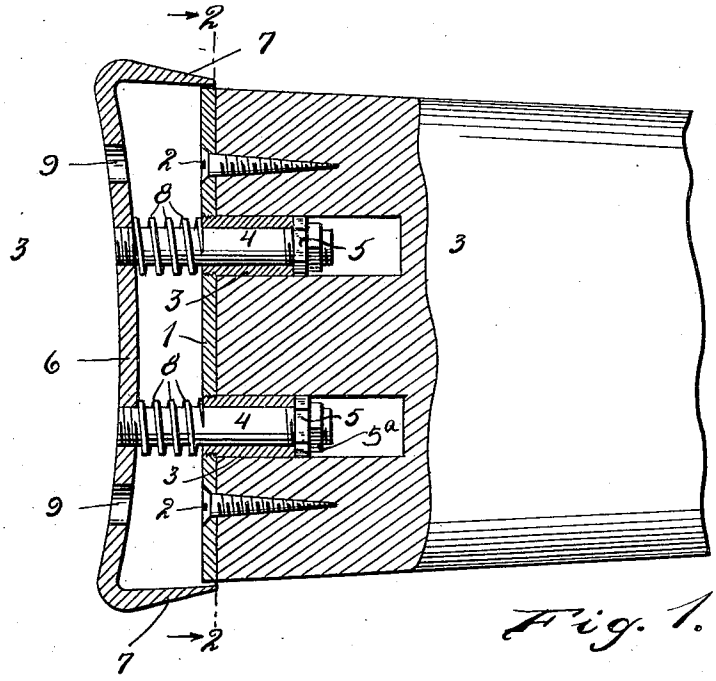


Fig. 1.

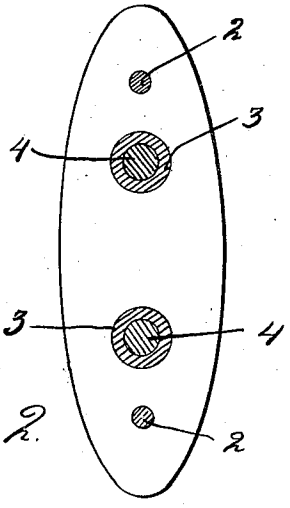


Fig. 2.

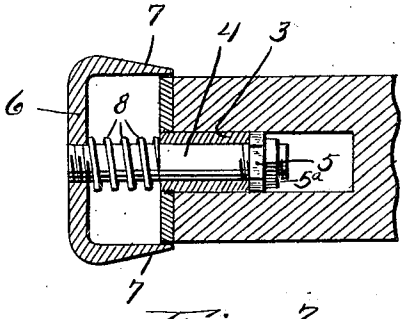


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH F. WAGONER, OF DANVILLE, ILLINOIS.

SHOCK-ABSORBER.

1,328,700. Specification of Letters Patent. **Patented Jan. 20, 1920.**

Application filed December 7, 1917. Serial No. 206,036.

To all whom it may concern:

Be it known that I, JOSEPH F. WAGONER, a citizen of the United States, residing at Danville, in the county of Vermilion and State of Illinois, have invented new and useful Improvements in Shock-Absorbers, of which the following is a specification.

This invention relates to shock absorbers especially adapted to be applied to rifle stocks and it consists in the novel features hereinafter described and claimed.

An object of the invention is to provide a simple and effective device for cushioning the recoil of a rifle when the same is discharged to prevent injury to the shoulder and to prevent soreness or stiffness of the muscles which may result from repeated pounding or shocks incident to the recoil of the fire-arm.

With this object in view the device comprises a plate adapted to be applied to the end of a rifle or fire arm stock and having a plurality of sleeves which are inserted in the stock. Bolts are slidably mounted in the said sleeves and nuts are screw-threaded upon the inner ends of the said bolts and may operate against the ends of the sleeves to prevent the withdrawal of the bolts. A frame is carried at the outer ends of the bolts and is provided with flanges which extend around the edges of the said plate. Springs are interposed between the plate and frame and serve to normally hold the nuts which are carried by the bolts in engagement with the forward ends of the sleeves.

In the accompanying drawing:—

Figure 1 is a fragmentary sectional view of a rifle stock showing the shock absorber in section.

Fig. 2 is a transverse sectional view of the same cut on the line 2—2 of Fig. 1.

Fig. 3 is a horizontal sectional view of the same.

The shock absorber comprises a plate 1 which is secured to the end of a rifle stock by means of screws 2. Sleeves 3 are carried by the plate 1 and may be inserted in the end of the rifle stock. Bolts 4 are slidably mounted in the sleeves 3 and nuts 5 are screwthreaded upon the forward ends of the said bolts 4 and may engage the forward ends of the sleeves, Jam nuts 5^a are also screwed on the bolts and serve to lock the nuts 5 in adjusted position. The nuts 5 not only limit the movement of the bolts 4 but in connection with the jam nuts 5^a also enable the bolts to be adjusted to vary the tension of the springs, as will be understood. A frame 6 is carried at the rear end of the bolts 4 and is of a configuration to fit conveniently against the shoulder of the person who is using the rifle. The frame 6 is provided with a flange 7 which extends around the edge of the plate 1. Coil springs 9 surround the bolts 4 and are interposed between the sleeves 3 and the frame 6 and are under tension with a tendency to normally hold the nuts 5 in engagement with the forward ends of the sleeve 3. The frame 6 is provided with apertures 9 through which a screw driver or other implement may be inserted for the purpose of forcing the screws 2 into the rifle stock when the device is applied to the same.

Inasmuch as the springs 8 normally maintain the nuts 5 in engagement with the forward ends of the sleeves 3 when the frame 6 is applied to the shoulder and the rifle is discharged the recoil is taken up by the springs 8 which will compress and thus the bolts 4 will move longitudinally in the sleeves 3 and the shoulder of the person who is using the rifle is protected. As soon as the force of recoil is expended the tension of the springs 8 comes into play and the bolts 4 are moved in the sleeves 3 whereby the nuts 5 are brought in contact with the ends of the sleeves 3 which is their normal position.

In view of the fact that the springs 8 are housed under the frame 6 the bolts 4 may be made relatively large and may fit snugly within the sleeves 3 but by reason of the compact assemblage of the parts they do not occupy excessive space nor do they weaken the stock of the rifle. Furthermore the said bolts which carry the nuts 5 coöperate with the sleeves which serve as guiding means for the bolts to limit the relative movement of the frame 6 with respect to the plate 1.

Having described the invention what is claimed is:—

A shock absorber for gun stocks comprising a plate secured upon the end of a gun stock and provided with holes, sleeve members secured within said holes, the gun stock being provided with recesses receiving and of considerably greater length than said sleeve members, a shoulder engaging plate

having a peripheral flange slidably engaging the periphery of the gun stock at the end thereof, pins extending from said shoulder engaging plate and slidable through said sleeves, a spring surrounding each pin and interposed between said plates, an adjusting nut threaded on each pin and engaging the inner end of the sleeve member whereby to regulate the tension of the spring, and a lock nut engaged upon each pin and engaging said first named nut.

In testimony whereof I affix my signature.

JOSEPH F. WAGONER.