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W. W. KNIGHT

1,842,527

GUN STOCK PAD

Filed May 31, 1930

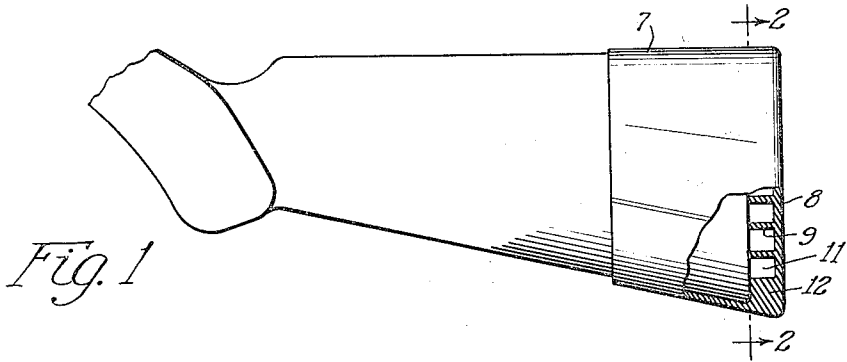


Fig. 1

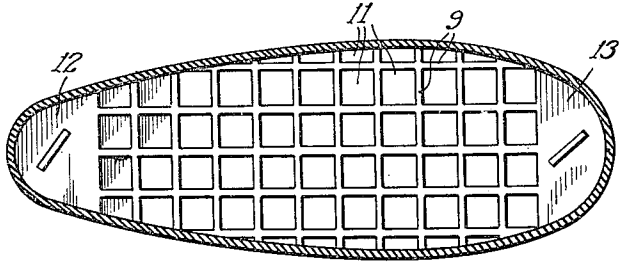


Fig. 2

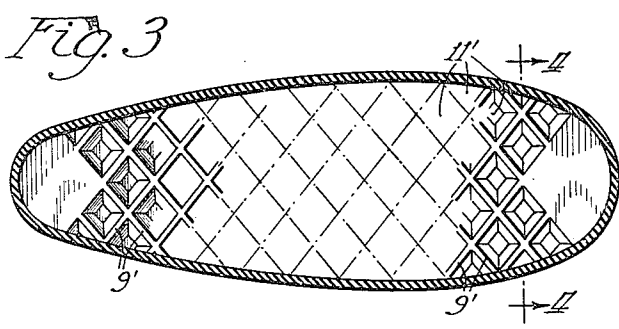


Fig. 3

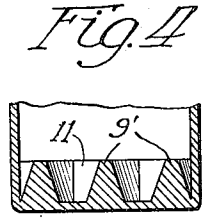


Fig. 4

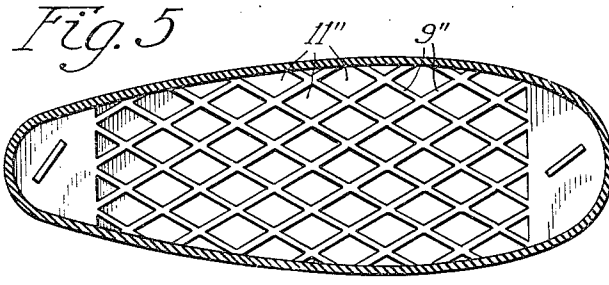


Fig. 5



Fig. 6

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UNITED STATES PATENT OFFICE

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GUN STOCK PAD

Application filed May 31, 1930. Serial No. 458,186.

My invention relates to a gun stock pad for absorbing the impact of the recoil of a gun.

A pad of this type is preferably made of resilient material such as rubber. However, a solid rubber pad does not have sufficient resilient compressibility to satisfactorily answer the purpose.

An object of my invention is to provide a new and improved recoil pad.

A further object is to provide a pad having high impact absorbing qualities.

A further object is to provide a pad which is durable and efficient and economical to manufacture.

Other objects and advantages will appear as the description proceeds.

Referring to the drawings:

Fig. 1 is a side elevation of a recoil pad of my invention applied to a gun stock, a part thereof being broken away to show the pad in section,

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1,

Fig. 3 is a sectional view similar to Fig. 2 showing a modified form of the invention,

Fig. 4 is a sectional view taken on line 4—4 of Fig. 1,

Fig. 5 is a sectional view similar to Fig. 2 showing another modified form of the invention, and,

Fig. 6 is a sectional detail view illustrating another modified form of the invention.

The recoil pad comprises a boot 7 tapered toward one end to conform to the shape of the gun stock and fit snugly thereover. The end of the boot has a smooth outer wall 8 and perpendicular to this wall are a plurality of intersecting walls 9 which form air pockets 11 opening toward the end of the stock. When the boot is in place on the stock the air pockets are covered and each serves as an individual pneumatic cushion. The toe and heel of the boot are provided with cushions 12 and 13 of solid rubber. These solid cushions perform a plurality of functions. When a gun is rested upon the ground or other surface the toe and heel of the stock are apt to cut into the boot, and for this reason the toe and heel of the boot are provided with the solid cushions 12 and 13 to form protecting reinforcements at

this point of the boot. On account of the thickness of the cushions 12 and 13, these portions are more rigid, thereby preventing the bottom of the boot from sliding or slipping over the side of the stock. The solid cushions thus tend to retain the boot in proper position upon the gun stock.

While the solid cushions have considerably less resiliency than the intermediate pneumatic cushions, it is found that on account of the shape of the shoulder against which the stock is placed, these solid portions are usually above and below the shoulder so that the portion of the stock actually engaging the shoulder is highly resilient and shock absorbing. The solid cushions at the toe and heel of the boot also help to retain the shape of the intermediate air cushions. If, for instance, the gun is stored away standing in an upright position, the weight of the gun rests upon the cushions 12 and 13, taking the weight of the gun from the pneumatic air cushions. If the walls of the pneumatic cushion were held in a distorted position for an extended period of time they might lose some of their resiliency and tend to become permanently distorted. However, since the weight of the gun rests wholly upon the cushions 12 and 13, when the gun is resting on its stock there will be no weight upon the walls 9 of the pneumatic cushion.

Figs. 3 and 4 represent a modified form of the invention in which the walls 9' are tapered downwardly and extend at such an angle to each other as to form diamond shaped pockets 11'.

Fig. 5 represents another modified form of the invention in which the walls 9'' are of uniform thickness but extending in such a direction as to form diamond shaped air pockets 11''.

Fig. 6 represents still another modification. It is found that a pad made completely of rubber or other material having a high coefficient of friction, sometimes interferes with the quick positioning of the pad against the shoulder. I have found that by placing a plate 14 of metal, hard rubber or the like over the upper end of the stock it is much easier to slide the butt of the stock in posi-

tion against the shoulder. This plate may be molded in the pad or secured thereto by adhesive material as is well known in the art. A brass plate for instance may be so securely attached to the pad that it is impossible to remove it without tearing the material of the pad.

The invention forms a simple and efficient recoil pad having a smooth appearance on the outside and adapted to effectively absorb the recoil of a gun in spite of the solid rubber portions at the heel and toe of the boot, which are so located as to not interfere with the shock absorbing qualities of the boot, but come into action only when the gun is resting on the stock.

It will be understood that the nature and embodiments of the invention herein described and illustrated are merely illustrative of the invention and that many changes and modifications may be made therein without departing from the spirit and scope of the invention.

What I claim is new and desire to protect by Letters Patent of the United States is:—

1. A recoil pad for a gun stock comprising a resilient boot fitting over the end of the stock, a solid cushion at the toe and heel of the boot, and a cushion having air pockets intermediate the toe and heel.

2. A recoil pad for a gun stock comprising a resilient boot fitting over the end of the stock, a solid cushion in the heel and toe of the boot, and intersecting walls forming pockets intermediate the heel and toe.

3. A recoil pad for a gun stock comprising a rubber boot fitting over the end of a gun stock, a pad in the end of said boot having a relatively thick wall at one point to add rigidity to the end and prevent the end from slipping over the side of the stock, and a portion having air pockets to render it more resilient.

4. A recoil pad for a gun stock comprising a rubber boot fitting over the end of the gun stock, and a smooth hard surface plate having a lower coefficient of friction than the rest of the pad, secured to the bottom at one end of the boot.

5. A recoil pad for a gun stock comprising a resilient boot fitting over the end of the stock, a solid cushion in the heel and toe of the boot, and intersecting walls forming pockets intermediate the heel and toe, and a smooth hard surface plate having a lower coefficient of friction than the rest of the pad secured to one of the solid cushions.

In witness whereof, I hereunto subscribe my name this 20th day of May, 1930.

WILLIAM W. KNIGHT.