

Sept. 5, 1961

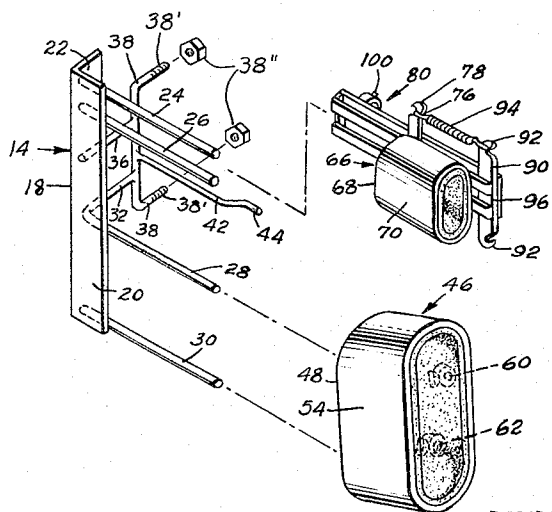
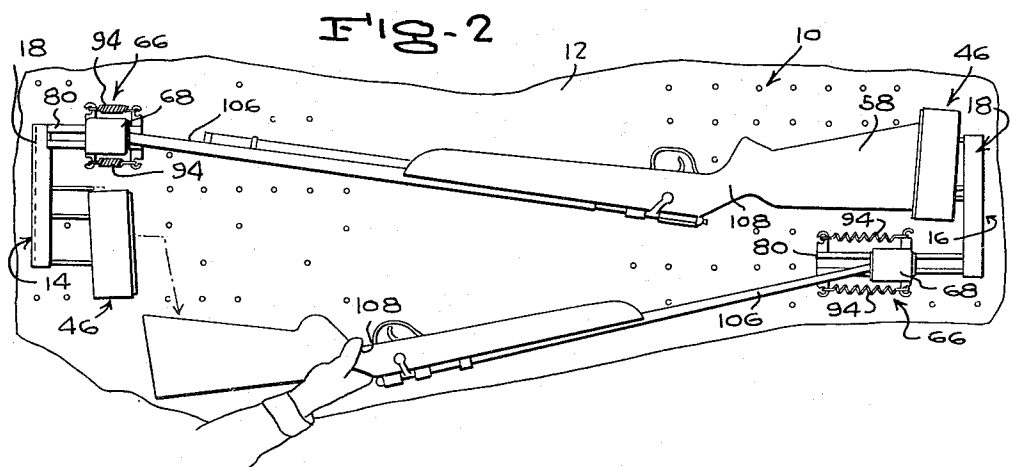
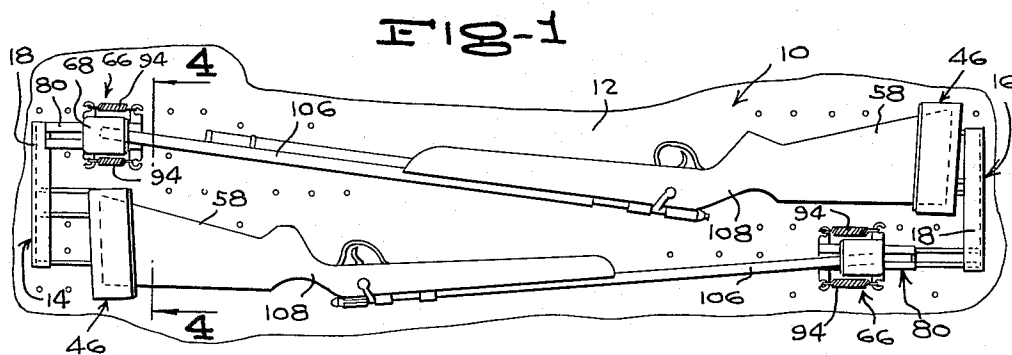
G. A. SURFACE

2,998,885

GUN RACK

Filed Jan. 8, 1960

2 Sheets-Sheet 1



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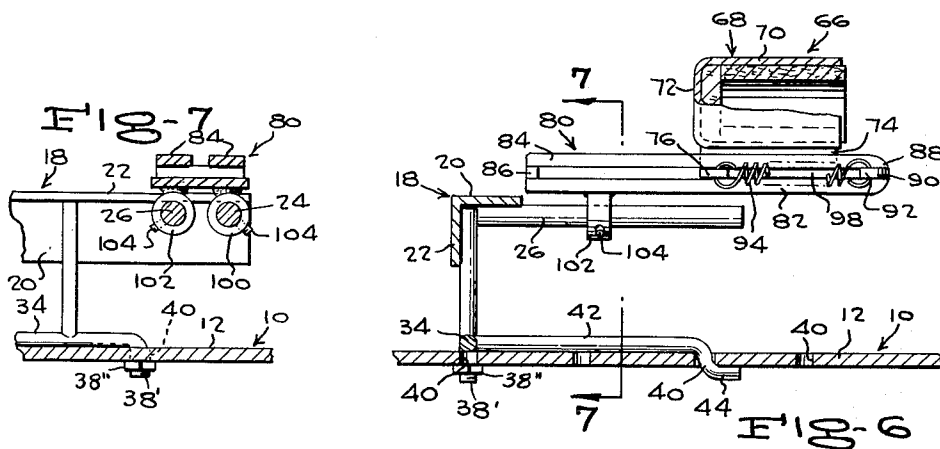
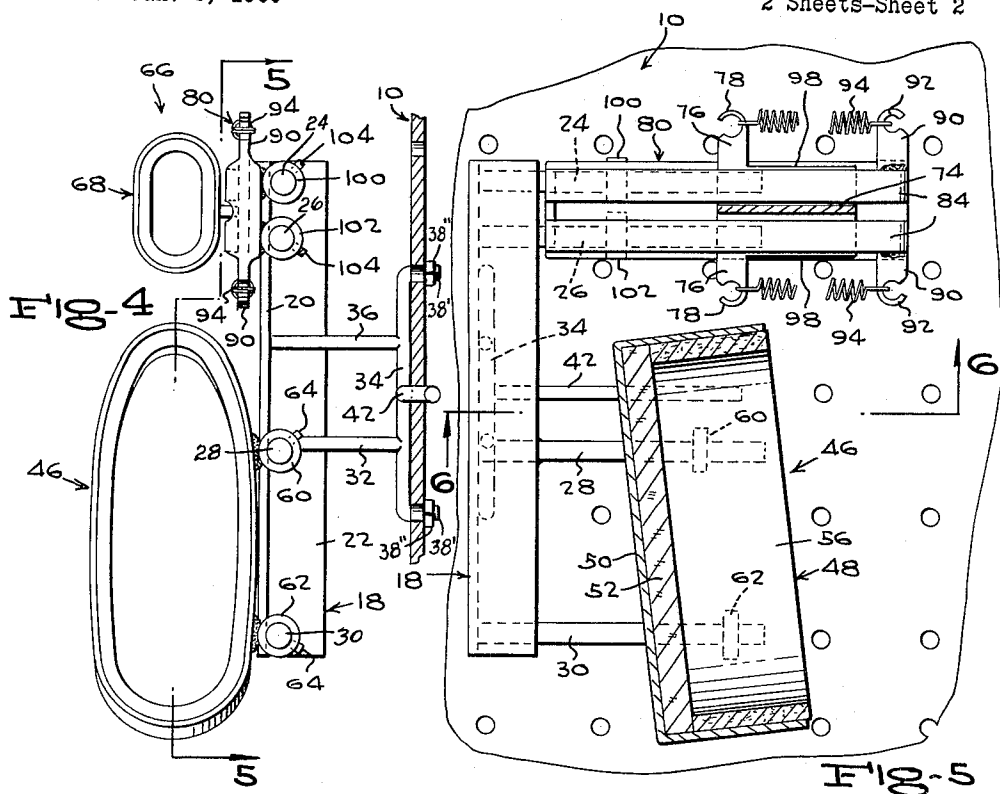
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GUN RACK

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This invention relates to a novel safety gun rack.

The primary object of the invention is the provision of a gun rack, especially but not exclusively, for out-of-the-way installation on the undersides of the hard tops of automobiles, such as passenger cars and trucks, and military and police vehicles, whereby the guns are carried in a safe and secure condition, even though the automobiles be operated at high speeds and over rough roads or in back country, as when hunting or prospecting, and the guns are conveniently and instantly reachable, when wanted, from inside of the automobile.

Another object of the invention is the provision of a structurally simple, mechanically efficient, vibration-proof, and rugged gun rack of the character indicated above, which is composed of a relatively small number of uncomplicated and easily assembled parts, can be easily installed and serviced, the rack being adaptable to carry more than one gun, and to carry guns having different lengths and different conformations of butts and sight assemblies.

A further object of the invention is to provide a gun rack of the character indicated above wherein gun butts are engaged in relatively stationary padded boots, and the forward ends of the barrels and their sight assemblies are engaged in padded sliding sockets which are spring-pressed toward the boots, the sockets being adjustable on the rack to accommodate guns of different lengths, and guns being quickly and easily removable from the rack merely by pushing the guns toward the sockets, against the resistance of their springs, pulling the butts of the guns out of the boots, and withdrawing the barrels out of the sockets, a reversed procedure being followed for securing the guns in place on the rack, no other expenditures of time or effort being required, as for undoing straps, catches, or other securing or locking means.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

In the drawings:

FIGURE 1 is a face or bottom plan view of a gun rack of the present invention, two guns of different lengths being shown secured on the rack;

FIGURE 2 is a view similar to FIGURE 1, showing one of the guns and a socket displaced for removal and for replacement of the gun on the rack;

FIGURE 3 is an enlarged exploded perspective view of the left-hand socket and boot assembly of FIGURE 1;

FIGURE 4 is an enlarged fragmentary transverse section taken on the line 4-4 of FIGURE 1;

FIGURE 5 is a longitudinal section taken on the line 5-5 of FIGURE 4;

FIGURE 6 is a fragmentary longitudinal section taken on the line 6-6 of FIGURE 5; and

FIGURE 7 is a fragmentary transverse section taken on the line 7-7 of FIGURE 6.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, the illustrated rack comprises a flat, normally horizontal rigid support panel 10, of such as heavy composition pegboard or metal, which is to be fixed, in any suitable manner, to a stationary surface, preferably the underside of a roof panel (not shown) in the driver's com-

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partment of a vehicle, directly behind and along the windshield.

Mounted on the face or underside 12 of the support panel 10 and are longitudinally spaced from each other crosswise of the panel 10 are similar socket and boot bracket assemblies 14 and 16, which are in line with and reversed with respect to each other. Each assembly, as shown in FIGURE 3, comprises bracket means which is composed of a transverse angle bar 18 having a longitudinally inwardly directed flange 20 and a laterally inwardly directed flange 22. Suitably fixed to the inward side of the flange 20, at one end of the bar 18 is a pair of parallel spaced, longitudinally inwardly extending first rods 24 and 26. At the other end of the bar 18 and fixed to the inward side of the flange 20, and spaced from the first rods 24 and 26, is a pair of parallel spaced longitudinally inwardly extending second rods 28 and 30, the second rods being spaced from each other at a greater distance than the spacing of the first rods, all of the rods being of the same length and have free longitudinally inward ends.

For rigidly mounting an assembly on the panel 10, the second rod 28 has a laterally inwardly extending arm 32 which is suitably fixed to the flange 22 and extends toward the panel 10 and is fixed to one end of a transverse rod 34, in spaced relation to a brace rod 36, which is fixed to the other end of the transverse rod 34 and to the flange 22. The transverse rod 34 has lateral fingers 38 on the ends of which are threaded portions 38' which fit and extend through perforations 40 of the panel 10, the threaded portions 38' being fixedly secured to the panel by means of nuts 38'' in threaded engagement therewith, as shown in FIGURES 4, 6 and 7. Fixed to the mid length point of the transverse rod 34 is a longitudinally inwardly extending rod 42 which terminates in an offset terminal 44 which is inserted through a perforation 40 and engaged securably behind the panel 10, as shown in FIGURES 4 and 6. Because the said first and second rods could be single rods or flat bars, in certain adaptations of the present invention, the first and second rods are hereinafter referred to as first and second rod means, and the arm 32 and the rods 34 collectively as bracket means.

Slidably and adjustably mounted on the second rods 28 and 30 is a relatively stationary gun butt boot 46 which comprises a rigid oval outer shell 48, which is longer and wider than gun butts and recoil pads to be accommodated, and which has a closed longitudinally outward end wall 50. The inside of the end wall 50 is cushioned by a pad 52, of such as cork, and the inside of the boot side wall 54 has thereon a liner 56, of such as heavy felt, the pad 52 and the liner 56 serving to protect gun butt 58, engaged in the boot 46, against abrasion damage, and to absorb vibration and shock and to provide a good purchase of the boot on the gun butt 58.

The boot 46 is mounted on the second rod means in angled relationship thereto, as by means of first collars 60 and 62, which are fixed on the panel side of the socket side wall 54 and are severally slidably engaged on the second rods 28 and 30, and have set screws 64 therein to be tightened against the second rods so as to hold a stationary adjusted position of the boot 46.

Adjustably mounted on the first rod means is a barrel end receiving socket assembly, generally designated 66, which comprises a rigid oval socket 68 which is longer and wider than the dimensions of gun barrel ends and front sights intended to be accommodated in the socket 68, the socket 68 having a side wall 70 and a closed longitudinally outward end wall 72. The end wall 72 and the side wall 70 are lined and padded like the boot 46.

Fixed centrally on and extending longitudinally along the panel side of the socket side wall 70 is a combined clearance spacer and guide rib 74 which has, at its longitudinally outward end, oppositely directed fixed lateral arms 76, having outwardly facing hooks 78 thereon. The rib 74 and the arms 76 slide longitudinally in a slideway 80 which comprises an elongated back plate 82, along whose face side extends a pair of longitudinal, laterally spaced guide bars 84 which are spaced from the back plate 82 but are fixed at related ends thereof to the back plate, as indicated at 86 and 88, respectively. The guide rib 74 is disposed between the guide bars 84 and the arms 76 are disposed between the back plate 82 and related ones of the guide bars 84, so that the socket 68 is secured to and is confined to longitudinal movements along the slideway 80.

Fixed on and extending laterally from the opposite sides of the slideway 80, at the longitudinally inward end of the slideway are spring-anchor arms 90 which have inwardly facing hooks 92 on their outer ends. Contractile helical springs 94 extend along the opposite sides of the slideway 80 and are secured at related ends thereof to the hooks 78 of the arms 76 and the hooks 92 of the anchor arms 90, whereby the socket 68 is biased in a longitudinally inward direction. A spacer portion 96 of the piece which forms the anchor arms 90 at and between the longitudinally inward ends of the guide bars 84, serve as "stops" for the adjacent ends of the arms 76, the arms 76 being on the longitudinally outward ends of elongated lateral flanges 98 on the rib 74 which slide between the bars 84 and the back plate 82, as shown in FIGURES 5 and 6.

The socket assembly 66 is slidably and freely mounted on the first rod means of the bracket assembly, as by means of transversely aligned collars 100 and 102, fixed on the panel side of the slideway back plate 82 and engaged over the rods 24 and 26, and provided with set screws 104 to engage the rods 24 and 26.

As shown in FIGURES 1 and 2, the butt boots 46 having been adjusted on the second rods 28 and 30, for the lengths of guns to be accommodated, a gun is secured in carrying position on the rack merely by inserting the free end of a gun barrel 106 in a socket 68, preferably holding the gun at the small 108 of its stock and pushing endwise in the direction of the socket, until the butt can clear the inward or open end of the related butt boot 46, whereat the gun is angled to align the butt 57 with and enter the boot 46, under the tension of the springs 94. The contracting of the springs 94 force the padded closed end of the socket 68 against the gun barrel end and force the gun butt 58 against padded closed end of the boot 46, so that the gun cannot be jolted out of the socket and the boot, or otherwise removed therefrom, except by the application of endwise push to the gun, of sufficient force and magnitude to produce a reversal of the above described operations.

It is to be noted that, as shown in FIGURES 1 and 2, the bracket assemblies 14 and 16 carry two guns in a compact and space-saving relationship, which enables these assemblies to be smaller in size than otherwise. In this relationship, the boots 46 are canted, relative to their supporting rod means, in a direction away from the sockets 68 thereon, so that the boots and the sockets can be closer together, and so that two adjacent guns can be disposed with their barrels and stocks in reversed and relatively close and somewhat nested relationship.

Although there has been shown and described herein a preferred form of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structure of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. In combination, a support, a gun rack comprising

a panel secured to a side of said support, a relatively stationary gun butt receiving boot mounted on and extending laterally from the panel, a gun barrel end receiving socket mounted on the panel and extending laterally therefrom and longitudinally spaced from the boot, and spring means biasing the socket toward the boot.

2. A gun rack comprising a rigid support panel, a relatively stationary gun butt receiving boot assembly mounted on the panel, a gun barrel and receiving socket assembly, means mounting the socket assembly on the panel in longitudinally spaced relation to the boot assembly and for movements toward and away from the boot assembly, and spring means biasing the socket assembly toward the boot assembly.

3. A gun rack comprising a rigid support panel, a relatively stationary gun butt receiving boot assembly mounted on the panel, a gun barrel and receiving socket assembly, means mounting the socket assembly on the panel in longitudinally spaced relation to the boot assembly and for movements toward and away from the boot assembly, and spring means biasing the socket assembly toward the boot assembly, bracket assemblies secured to the panel and mounting said boot and said socket assemblies in spaced relation to a surface of the panel.

4. A gun rack comprising a rigid support panel, a relatively stationary gun butt receiving boot assembly mounted on the panel, a gun barrel and receiving socket assembly, means mounting the socket assembly on the panel in longitudinally spaced relation to the boot assembly and for movements toward and away from the boot assembly, and spring means biasing the socket assembly toward the boot assembly, bracket assemblies secured to the panel and mounting said boot and said socket assemblies in spaced relation to a surface of the panel, said bracket assemblies comprising transverse bars, bracket means extending between the bars and the panel, and longitudinal rod means fixed on and extending longitudinally inwardly from the transverse bars, the boot and the socket being severally and directly mounted on the rod means of related bracket assemblies.

5. A gun rack comprising a rigid support panel, a relatively stationary gun butt receiving boot assembly mounted on the panel, a gun barrel and receiving socket assembly, means mounting the socket assembly on the panel in longitudinally spaced relation to the boot assembly and for movements toward and away from the boot assembly, and spring means biasing the socket assembly toward the boot assembly, bracket assemblies secured to the panel and mounting said boot and said socket assemblies in spaced relation to a surface of the panel, said bracket assemblies comprising transverse bars, bracket means extending between the bars and the panel, and longitudinal rod means fixed on and extending longitudinally inwardly from the transverse bars, the boot and the socket being severally and directly mounted on the rod means of related bracket assemblies, said socket assembly comprising a slideway fixed on and extending along the related rod means, a slide confined in the slideway for movements along the slideway in opposite directions, a socket fixed to the slide, said spring means being connected to and stretched between the slideway and the socket.

6. A gun rack comprising a rigid support panel, a relatively stationary gun butt receiving boot assembly mounted on the panel, a gun barrel and receiving socket assembly, means mounting the socket assembly on the panel in longitudinally spaced relation to the boot assembly and for movements toward and away from the boot assembly, and spring means biasing the socket assembly toward the boot assembly, bracket assemblies secured to the panel and mounting said boot and said socket assemblies in spaced relation to a surface of the panel, said bracket assemblies comprising transverse bars, bracket means extending between the bars and the panel, and longitudinal rod means fixed on and extending longitudinally

nally inwardly from the transverse bars, the boot and the socket being severally and directly mounted on the rod means of related bracket assemblies, said panel having perforations, and said bracket means comprising rod components bearing against the panel and having elements engaged through perforations, some of said elements being engaged behind the panel.

7. A gun rack comprising a rigid support panel, a gun butt receiving boot assembly fixed on and spaced from a surface of the panel, said boot assembly comprising a boot having a side wall end, closed longitudinally outward end, and an open longitudinally inward end, the closed end and the side wall being padded, a gun barrel end receiving socket mounted on the panel and spaced from said surface in line with and longitudinally spaced from the boot assembly, said socket assembly comprising a socket having a side wall, an open longitudinally inward end, and a closed longitudinally outward end, the socket side wall and closed end being padded, said socket assembly comprising a fixed slideway, a slide confined in the slideway to work longitudinally toward and away from the boot assembly, and spring means biasing the socket toward the boot.

8. A gun rack comprising a rigid support panel, a gun butt receiving boot assembly fixed on and spaced from a surface of the panel, said boot assembly comprising a boot having a side wall end, closed longitudinally outward end, and an open longitudinally inward end, the closed end and the side wall being padded, a gun barrel end receiving socket mounted on the panel and spaced from said surface in line with and longitudinally spaced from the boot assembly, said socket assembly comprising a socket having a side wall, an open longitudinally inward end, and a closed longitudinally outward end, the socket side wall and closed end being padded, said socket assembly comprising a fixed slideway, a slide confined in the slideway to work longitudinally toward and away from the boot assembly, and spring means biasing the socket toward the boot, said spring means comprising contractile helical springs extending along opposite sides of the socket, said springs being severally connected to and stretched between portions of the slideway and portions of the socket.

9. A gun rack comprising a rigid support panel, a gun butt receiving boot assembly fixed on and spaced from a surface of the panel, said boot assembly comprising a boot having a side wall end, closed longitudinally outward end, and an open longitudinally inward end, the closed end and the side wall being padded, a gun barrel end receiving socket mounted on the panel and spaced from said surface in line with and longitudinally spaced from the boot assembly, said socket assembly comprising a socket having a side wall, an open longitudinally inward end, and a closed longitudinally outward end, the socket

side wall and closed end being padded, said socket assembly comprising a fixed slideway, a slide confined in the slideway to work longitudinally toward and away from the boot assembly, and spring means biasing the socket toward the boot, and bracket assemblies comprising longitudinally inwardly extending rod means on which the boot and the slideway are severally mounted.

10. A gun rack comprising a rigid support panel, a gun butt receiving boot assembly fixed on and spaced from a surface of the panel, said boot assembly comprising a boot having a side wall end, closed longitudinally outward end, and an open longitudinally inward end, the closed end and the side wall being padded, a gun barrel end receiving socket mounted on the panel and spaced from said surface in line with and longitudinally spaced from the boot assembly, said socket assembly comprising a socket having a side wall, an open longitudinally inward end, and a closed longitudinally outward end, the socket side wall and closed end being padded, said socket assembly comprising a fixed slideway, a slide confined in the slideway to work longitudinally toward and away from the boot assembly, and spring means biasing the socket toward the boot, and bracket assemblies comprising longitudinally inwardly extending rod means on which the boot and the slideway are severally mounted, said boot and said slideway having collar means slidably circumposed on related rod means for adjustments therealong, and position locking means on the collar means engageable with rod means.

11. A gun rack for securement to an overhead support, said rack comprising a rigid panel, means for securing the panel to the underside of a support, brackets fixed to and depending from the panel or longitudinally spaced locations, a stationary gun butt receiving boot fixed to one of said brackets, a gun barrel end receiving socket slidably mounted on the other bracket and facing said boot, and spring means acting between said other bracket and said socket and yieldably urging the socket toward the boot.

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