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2,432,802

STORAGE RACK FOR AMMUNITION

Filed April 5, 1945

3 Sheets-Sheet 1

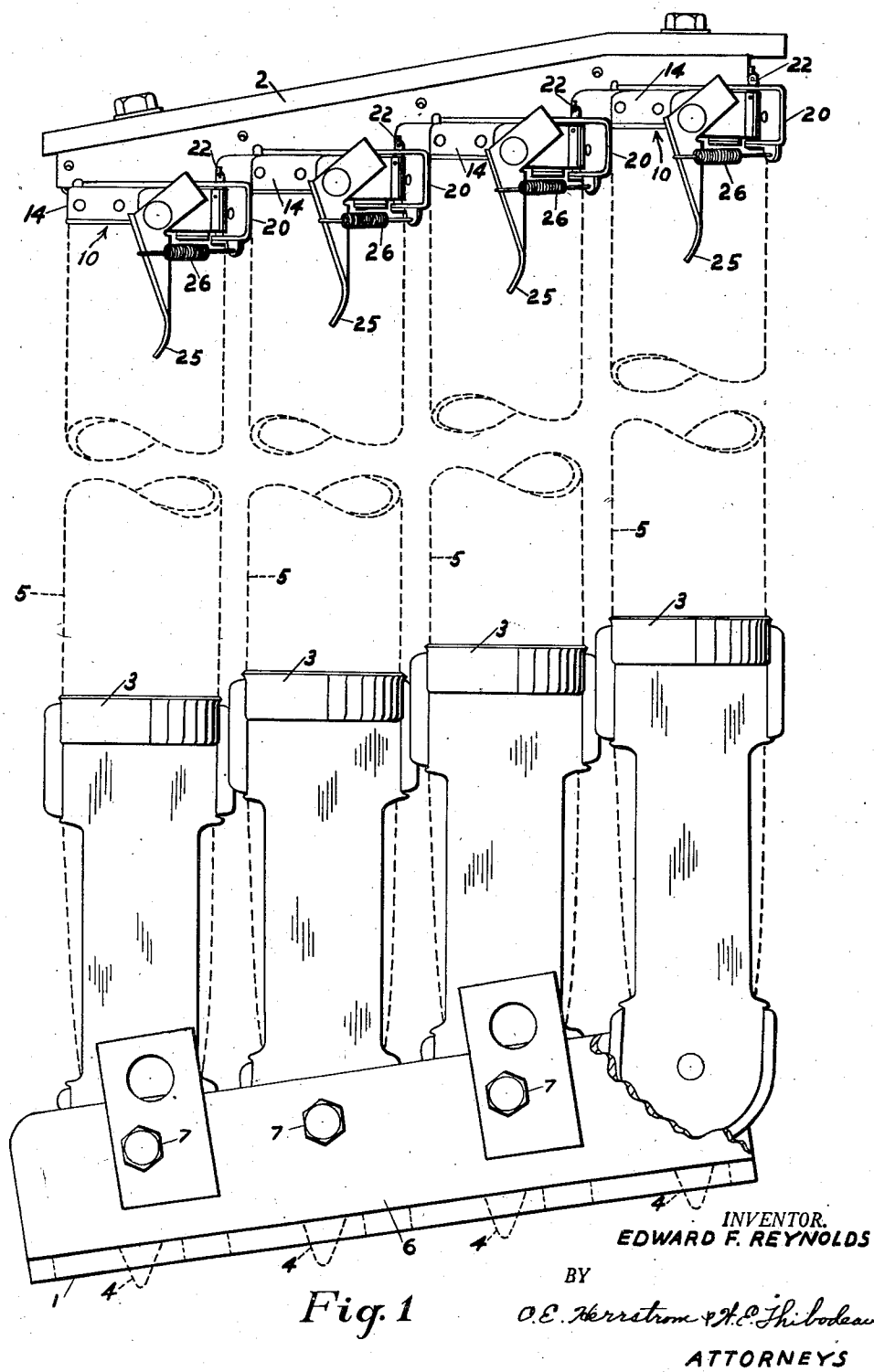


Fig. 1

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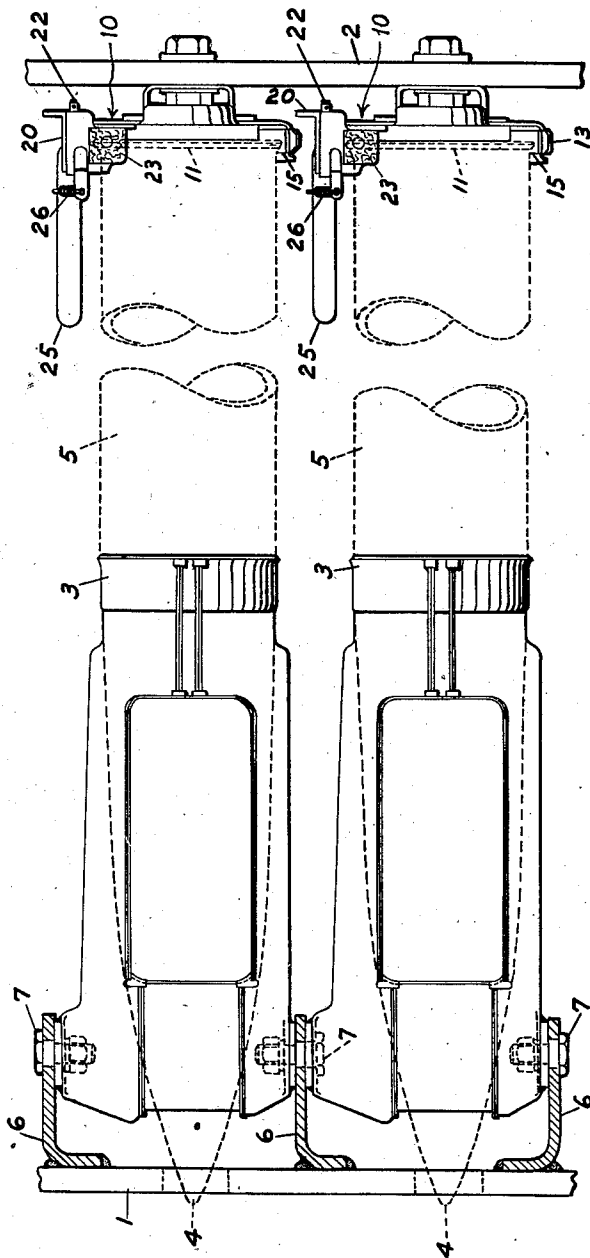


Fig. 2

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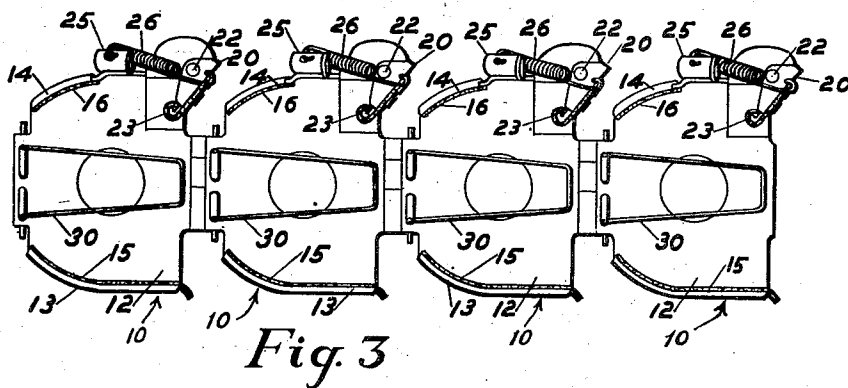
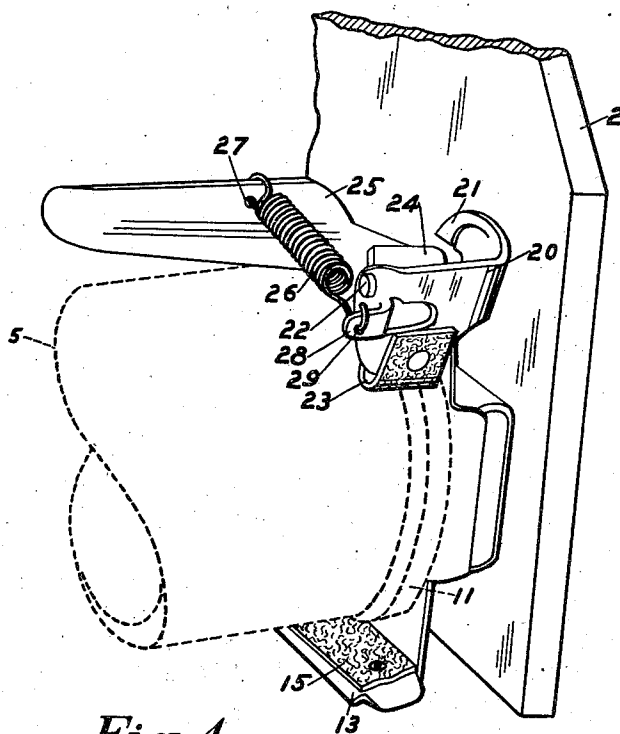
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3 Sheets-Sheet 3



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STORAGE RACK FOR AMMUNITION

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10 Claims. (Cl. 211—89)

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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 generally to storage racks and more particularly to storage racks for storing fixed rounds of ammunition.

All devices of this character made according to the teachings of the prior art, and with which I am familiar, have provided no means for securely and compactly racking fixed rounds of ammunition close together in horizontal and vertical rows where they could be easily removed one at a time from the rack without disturbing any of the remaining racked ammunition.

It is, accordingly, an object of my invention to overcome the above and other defects in present ammunition racks, and it is more particularly an object of my invention to provide an ammunition rack which is simple in construction, economical in cost, compact in area, and efficient in storage.

Another object of my invention is to provide an ammunition rack wherein individual rounds of fixed ammunition may be conveniently removed from the rack without disturbing other of the racked ammunition.

Another object of my invention is to provide an ammunition rack wherein the rounds of ammunition may be securely and compactly stowed in a vehicle without touching each other.

Another object of my invention is to provide novel means for locking individual rounds of fixed ammunition in racks.

Other objects of my invention will become evident from the following detailed description, taken in conjunction with the accompanying drawings, in which:

Figure 1 is a plan view of my novel ammunition rack with parts broken away for better illustration;

Figure 2 is a fragmentary side elevational view of my novel ammunition rack;

Figure 3 is an end elevational view of a stepped series of cradles with clamping means for clamping the based portions of fixed rounds of ammunition, and

Figure 4 is an enlarged fragmentary perspective view showing my novel cradle and clamping means for the base portion of fixed rounds of ammunition.

Referring now to the drawings, Figs. 1 to 4, inclusive, show opposing walls 1 and 2 in substantially parallel relationship, adapted to be disposed at an angle other than perpendicular to stored ammunition 5. Wall 1 has pivotally mounted thereon horizontal and vertical rows of support members 3 the said support members being adapted to permit passage of the nose portions 4 of rounds of ammunition 5 through a tubular

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portion thereof. Support members 3 are pivoted on wall 1 by brackets 6 and bolts 7.

Wall 2 has disposed thereon vertical and horizontal rows of cradle members 10, each cradle member 10 being opposite to a support member 3 on wall 1. Cradle members 10 receive the base ends 11 of each round of ammunition 5. Each cradle member 10 comprises a back plate 12 having a lower flange portion 13 and an upper flange portion 14 for receiving the base end 11 of a round of ammunition 5 as shown in Fig. 4. Strips of leather or like material 15 and 16 are disposed on the faces of the flange portions 13 and 14 for engaging the base ends 11 of the rounds of ammunition 5. A pivot member 20 having an extension 21 is pivoted on pin 22 and is adapted to engage the base end 11 of the round of ammunition 5. A leather or like strip 23 is disposed on the portion of the pivot member 20 contacting the base end 11 of the round of ammunition 5. The pivot member 20 locks the base portion 11 of the round of ammunition 5 when it is engaged with it as shown in Fig. 4 and the engaging portion 24 of bell-crank lever 25 is moved under the extension 21 of the pivot member 20. A spring member 26 engages an aperture 27 in the lever 25 and an extending ear 28 having an aperture 29, for urging the engaging portion 24 of the lever 25 in locking engagement with the extension 21 of the pivot member 20. A bowed spring member 30 is disposed horizontally across the face of the back plate 12 of the cradle 10 for engagement with the base end 11 of the round of ammunition 5 to urge the round of ammunition through the opposing support member 3 disposed on the opposing wall 1 to secure the round of ammunition 5 firmly in the rack. Spring member 26 tends to hold the pivot member 20 in an upright position when it is not engaged with the base end 11 of a round of ammunition 5 in order that the base end 11 of the ammunition 5 may be easily inserted in the cradle 10.

In operation, the nose portion 4 of a round of ammunition 5 is passed through a support member 3 on the wall 1 and the base end 11 of the round of ammunition 5 is swung into place and seated in the oppositely disposed cradle member 10. Pivot member 20 is then urged downwardly with the finger into engagement with the periphery of the base end 11 of the round of ammunition 5 and the engaging portion 24 of the locking lever 25 is urged under the extension 21 of the pivot member 20 to lock the pivot member 20 in engagement with the base end 11 of the round of ammunition 5. Spring member 26 constantly urges the engaging portion 24 of the lever 25 under the extension 21 of the pivot member 20 to maintain the pivot member 20 in engagement with the base end 11 of the round of ammunition 5. The bowed spring member 30 urges the nose

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portion 4 of the round of ammunition 5 through the support member 3 to hold the round of ammunition 5 securely supported therein. The support member 3 on the wall 1 pivots outwardly in order that the nose portion 4 of the round of ammunition 5 may be easily inserted therein or withdrawn therefrom, and the base end 11 swung inwardly or outwardly with respect to the cradle 10.

It will be evident from the foregoing that my novel ammunition loading rack permits the stowing of ammunition individually in a minimum of space and permits the removal of the ammunition without interference with other ammunition in the rack.

Various changes may be made in the specific embodiment of my invention without departing from the spirit thereof, or from the scope of the appended claims.

What I claim is:

1. A rack for ammunition having a nose portion and a base end, comprising opposed side walls, a support member pivotally mounted on one side wall and adapted to receive the nose portion of a fixed round of ammunition, and an opposing clamping member mounted on the other side wall and adapted to receive and secure the base end of said round of ammunition.

2. A rack for ammunition having a nose portion and a base end, comprising opposed side walls, stepped support members adapted to support the nose portions of fixed rounds of ammunition carried by one of said side walls and pivotally secured thereon, corresponding stepped cradle members mounted on the opposite side wall and adapted to receive the base ends of said rounds of ammunition, and means adapted to releasably secure said base ends of said rounds of ammunition in said cradle members.

3. A rack as set forth in claim 2, wherein spring means are provided to urge said rounds of ammunition into said support members.

4. A rack for ammunition having a nose portion and a base end, comprising opposed side walls, stepped support members pivotally mounted on one of the side walls and adapted to engage the nose portions of rounds of ammunition, corresponding oppositely disposed stepped cradles carried by the other side wall and adapted to receive the base ends of rounds of ammunition, pivoted clamping members on said cradles adapted to engage said base ends of said rounds of ammunition in said cradles, and spring retained pivot means adapted to lock said clamping members in engagement with the base ends of said rounds of ammunition.

5. A rack for shells having a nose portion and a base end, comprising oppositely disposed side walls, stepped pivoted support members mounted on one of said side walls and adapted to support the nose portions of shells, stepped oppositely disposed cradles carried by the other of said side walls and adapted to receive the base ends of shells, pivoted clamping members secured to said cradles and adapted to engage the base ends of said shells in said cradles, each of said clamping members having an extended projection, and spring-urged locking levers pivotally mounted on said cradles and adapted to engage said extending projections on said clamping members to lock said clamping members in engagement with the base ends of said shells.

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6. A rack for shells as set forth in claim 5, wherein spring means are provided for longitudinally urging said shells into said support members.

7. A rack for cylindrical members, comprising oppositely disposed side walls, stepped pivoted support members secured to one of said side walls and adapted to support one end of said cylindrical members, stepped oppositely disposed cradles secured to the other of said side walls and adapted to receive the opposite ends of said cylindrical members, pivoted clamping members attached to the said cradles and adapted to engage said cylindrical members when seated in said cradles, and means supported by said cradles and adapted to lock said clamping members in engagement with said cylindrical members.

8. A locking member adapted to secure one end of a cylindrical member to a side wall, comprising a cradle carried by said side wall and adapted to receive the end of a cylindrical member, a pivoted clamping member carried by said cradle and adapted to engage the periphery of said cylindrical member, and spring-urged locking means comprising a second pivoted member carried by said cradle.

9. A rack for individually locking cylindrical members having nose and base ends, said nose end being tapered, comprising oppositely disposed side walls, stepped support members pivotally secured to one of said side walls and disposed in horizontal and vertical rows, a portion of each of said support members being tubular in section and adapted to receive the nose end of one of said cylindrical members, stepped cradles secured to the other side wall and disposed oppositely of said support members, said cradles being adapted to receive the base ends of said cylindrical members, and spring-urged locking means carried by the said cradles and adapted to clamp the peripheries of said base ends of said cylinders to thereby lock the latter in said cradles.

10. A rack as set forth in claim 9, wherein said spring-urged locking means comprises a pivoted member having an extension thereon mounted on each of said cradles, and a locking lever pivoted on each of said cradles and movable under said extension to lock said pivoted member in engagement with the base end of one of said cylindrical members.

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