

June 29, 1943.

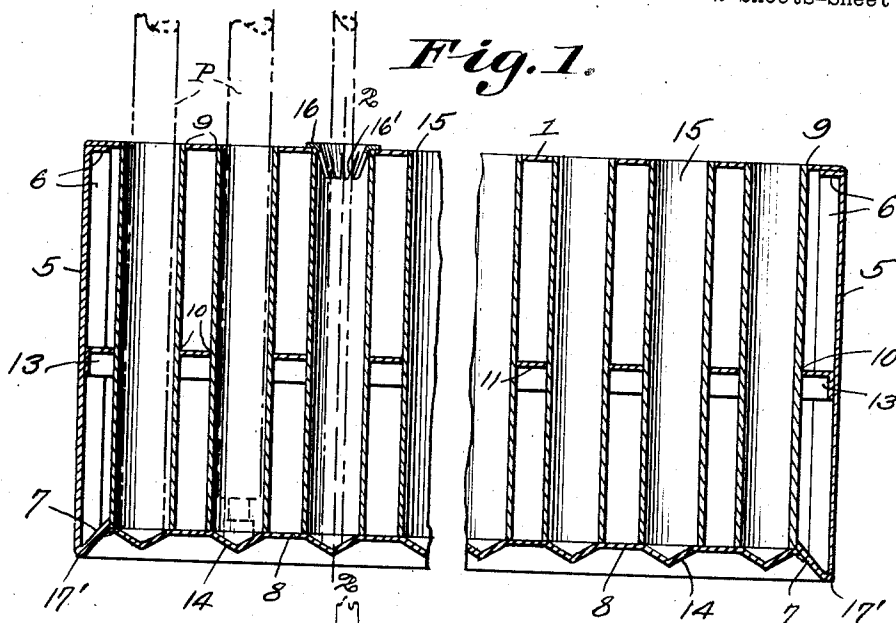
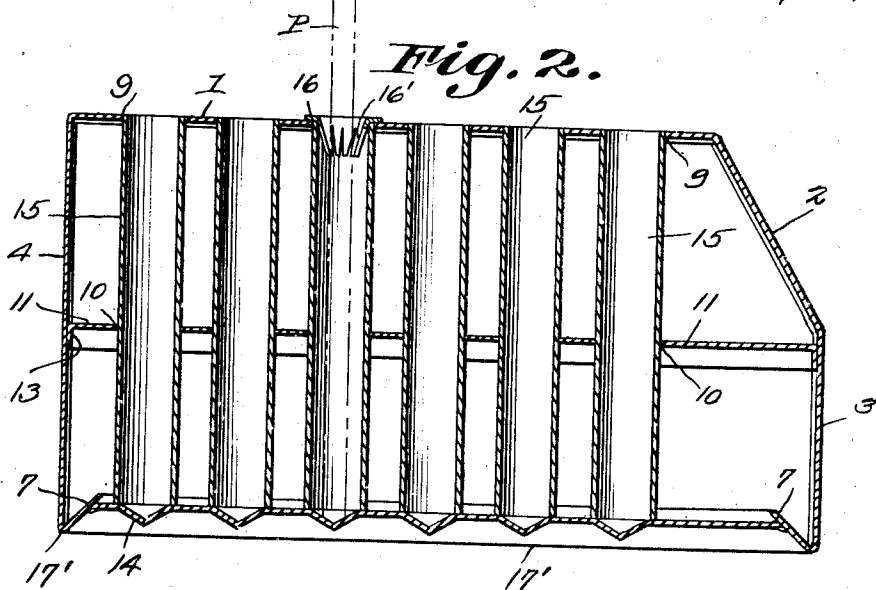
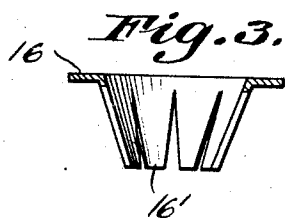
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2,322,797

STORAGE RACK

Filed Aug. 22, 1941

2 Sheets-Sheet 1



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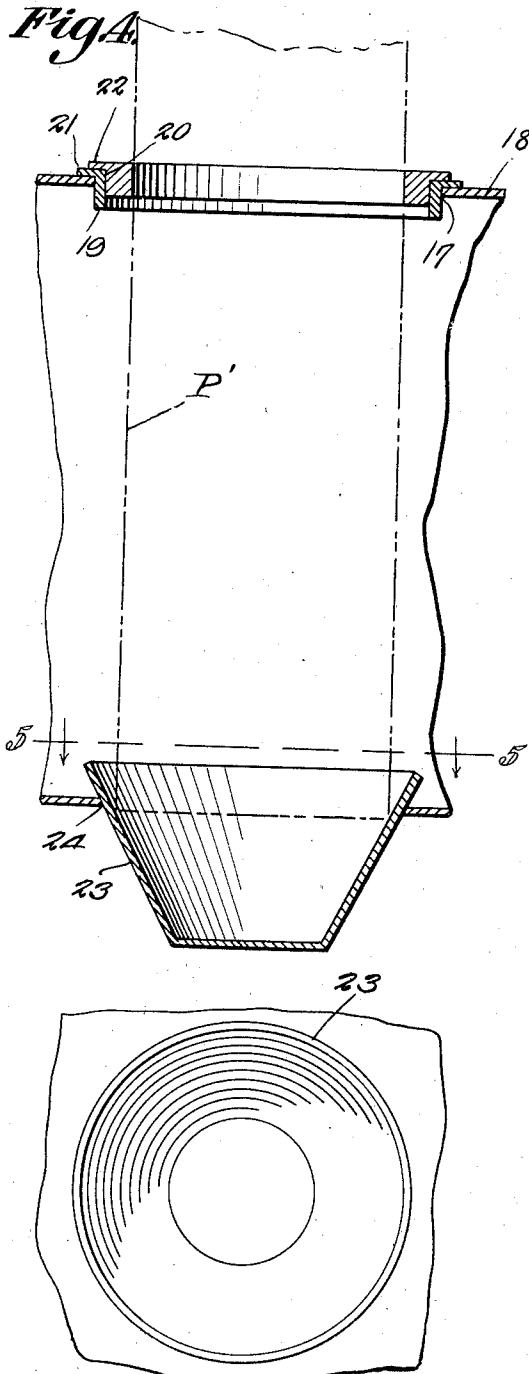


Fig. 5.

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2,322,797

STORAGE RACK

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Application August 22, 1941, Serial No. 407,995

1 Claim. (Cl. 211-69)

This invention relates to a storage rack designed primarily for holding axles and other similar parts of motor vehicles where they can be conveniently reached, it being possible, by the use of this rack, to store a large number of parts in a comparatively small space and to group them so that a part of any particular type can readily be located.

A further object is to provide a rack of this character which is cheap to manufacture, and is free of parts likely to become easily broken or otherwise injured.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:

Figure 1 is a vertical transverse section through the rack, some parts in position therein being indicated by broken lines, the middle portion of the rack being broken away.

Figure 2 is a section on line 2-2, Figure 1.

Figure 3 is an enlarged section through one type of bushing which can be used in connection with the rack.

Figure 4 is an enlarged section through a portion of the rack showing modified means for centering articles in the rack.

Figure 5 is a top plan view of one of the lower centering devices, as shown in Figure 4, said figure being on the line 5-5, Figure 4.

Referring to the figures by characters of reference, 1 designates the flat top of the rack which can be of any size desired and formed of heavy sheet metal, this top merging into a downwardly and forwardly inclined front portion 2 which, in turn, merges into a substantially vertical front portion 3. The top 1 merges at the back into a back wall 4 and it is to be understood that the top, front and back can be made of one, unbroken sheet of metal. The side walls 5 of the rack are likewise formed of sheet metal and can be provided with top, front and back flanges 6 lapped by the top 1 and the front and back walls of the rack and joined thereto by welding. The front, back and side walls have their lower portions bent upwardly and inwardly to provide inclined bottom flanges 7 and surrounded by these inturned

flanges is a bottom plate 8 the edge portions of which are joined to the flanges by welding.

A series of apertures 9 is provided in the top 1, these apertures being arranged in rows or in any other manner desired and all of the apertures are large enough to receive the parts to be stored. In the structure illustrated the apertures are in line with additional apertures 10 formed in a plate 11 which is extended horizontally within the rack and joined at its edges to the walls of the rack, this plate preferably being provided with a depending flange 13 welded to the walls.

In addition to the plate 11, forming a partition, the bottom plate 8 can be provided with sockets 14 in vertical alinement with the openings 9 and 10. As an additional means for strengthening the structure and for guiding the parts, tubes 15 may be seated within the openings and joined to the adjacent parts by welding, the lower ends of the tubes being joined to the bottom plate 8 and extended around the sockets 14.

One or more of the openings 9 can be provided with bushings 16 which, in the structure shown, have downwardly converging fingers 16'. These bushings are adapted to be fitted snugly within certain of the openings and when so located will serve to center in those openings stored parts the diameters of which are materially less than the diameters of the openings 9.

The rack herein described can be of any desired size and capacity. The inturned flanges 7 provide rounded contact portions 17' for engaging the surface of the floor on which the rack is mounted so that the rack can be pushed from place to place without difficulty. The bottoms of the sockets of course terminate above the level of the rounded portions 17', as shown.

After the rack has been set at the point of use, the parts to be stored are inserted downwardly into the openings 9 and if these openings are too large to hold the parts properly centered, the bushings 16 can be placed in the openings, the fingers of these bushings being bent to adapt them to the parts to be held. No matter what might be the diameter of the inserted part P, its lower end will be properly centered by the sockets 14 thereunder.

If tubes 15 are used they serve more readily to guide the inserted part to the sockets as well as to assist in holding the parts P in upstanding positions. However it might be desirable under some circumstances to eliminate the tubes 15 and to rely solely upon the apertured partition 11 and the top 1 to hold the parts in upstanding positions. Under other conditions both

the tubes 15 and the partition 11 could be eliminated and the inserted parts could be held in upstanding positions by the walls of the openings 9 or the bushings therein and by the walls of the sockets in which the lower ends of the parts are seated.

It has been found in practice that by using a rack such as herein described, a large and varied assortment of axles and other large vehicle parts can be stored in a small space where any one of the parts can easily be reached and removed.

As the entire structure is of box-like formation and is formed of heavy sheet metal, it is very durable and can withstand all of the rough usage to which it will be subjected ordinarily.

Importance is attached to the provision of the rounded bearing portions 17' which thus enables the loaded structure to be readily pushed from place to place.

Under some conditions the bushings indicated at 16 could not be used advantageously. Therefore it might be desirable to employ structures such as shown in Figures 4 and 5, this being true particularly where very heavy articles are to be stored on end in the rack. In the form illustrated in Figures 4 and 5, one of the openings 17 in the top 18 of the rack is shown provided with nested rings 19 and 20, ring 19 being supported in the opening 17 by an annular flange 21

while ring 20 is supported in ring 19 by an annular flange 22. Obviously by increasing or reducing the number of nested rings, the opening 17 can be adapted for use in properly holding articles of different diameters. One of these articles has been indicated at P' in Figure 4. Furthermore, instead of forming depressions in the bottom of the rack as indicated at 14, each depression can be formed of a frusto-conical cup-like member 23 seated in a bottom opening 24. These can be made of sufficient strength to properly support the lower end of the article inserted into the rack.

Obviously various other means may be used for the same purposes as those disclosed.

It is to be understood of course that the socket members 23 can be made either integral with the bottom of the rack or can be separate therefrom so as to be renewable.

What is claimed is:

A storage rack including a box-like structure having openings in the top thereof for the reception of upstanding parts to be stored, nested rings removably mounted in one of the openings for centering a part in the opening, and means below the openings for engaging, supporting and centering the lower end of the centered part in said opening.

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