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PORTABLE AND COLLAPSIBLE BARREL RACK

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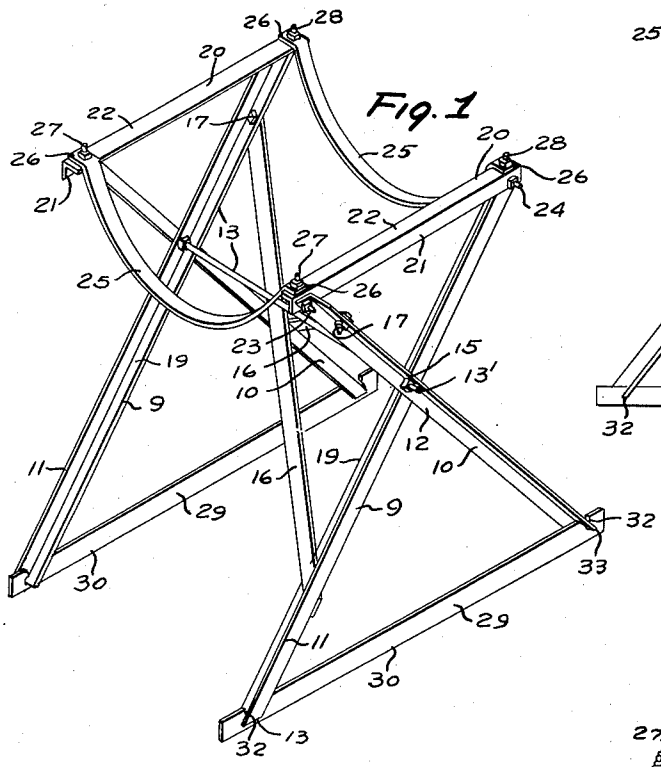


Fig. 1

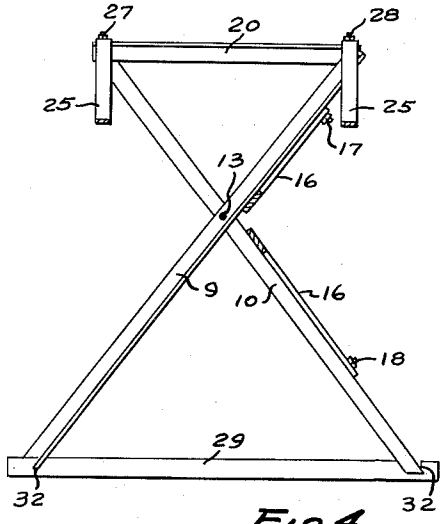


Fig. 4

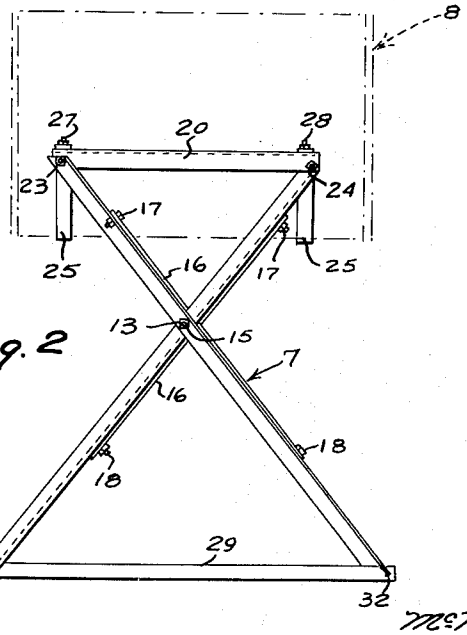


Fig. 2

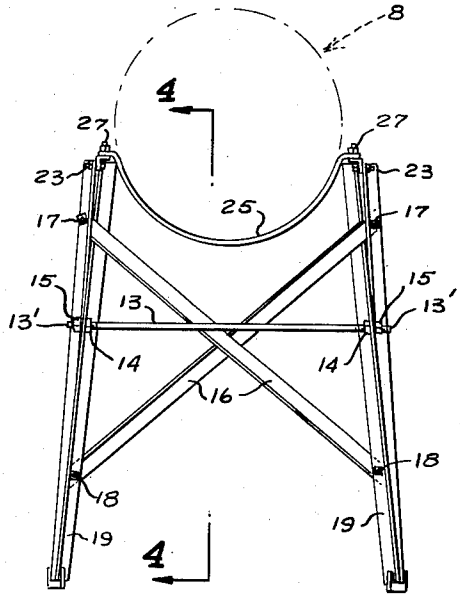


Fig. 3

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PORTABLE AND COLLAPSIBLE BARREL RACK

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2 Claims. (Cl. 248—150)

This invention relates to an improved portable and collapsible barrel rack, and the primary object of the invention is to provide a lightweight more efficient and practical device of this character, which, while being composed of simple and relatively light gauge parts, affords reliable and rigid support for a barrel, and is especially suitable for use by operators of automobile trailers and the like, for supporting a 50 or 55 lb. oil barrel or drum on the ground or other surface to supply fuel for cooking and heating purposes.

Another important object of the invention is to provide a device of the character indicated above which is especially constructed to be quickly and easily collapsible so as to be capable of being stored and transported in a small or confined space, such as in an automobile trunk compartment or in a trailer, the device being capable of being knocked down or collapsed into one or more bundles of small compass and of being collapsed or knocked down in such a way that portions of the device serve as carrying handles for other portions of the device.

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

In the drawings:

Figure 1 is a perspective view of a barrel rack in set up position in accordance with the present invention;

Figure 2 is a side elevation thereof, a barrel being shown in dotted lines in position on the rack;

Figure 3 is an end elevation, taken from the left in Figure 2; and

Figure 4 is a vertical longitudinal section, taken on the line 4—4 of Figure 3.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, the illustrated barrel rack is generally designated **7** and the associated conventional oil barrel or drum **8**.

The rack **7** comprises a collapsible and demountable frame having two sides each composed of two crossed angle iron inner and outer legs **9** and **10** respectively. The inner legs **9** are located at the laterally inward sides of the outer legs **10**, with the vertical flanges **11** and **12**, respectively, of these legs engaged with each other. A combined spreader rod and pivot bolt or spindle **13** extends between the frame sides and has threaded ends **13'** passing through holes provided in the vertical flanges of the pairs of legs at the points of their intersections. Stops **14**, **14**, which may be in the form of nuts threaded on the spindle ends **13'** are spaced from the terminals of the ends and bear against the laterally inward sides of the vertical flanges **11** of the inner legs **9** so as to space the frame sides apart at the proper distance. Other nuts **15** are threaded on the spindle ends **13'** against the laterally outward sides of the vertical flanges **12** of the outer legs **10** so as to assemble the legs of each pair relative to each other and to the other pair of legs. Similar

crossed diagonal brace bars **16**, **16** are separably bolted at their upper and lower ends as indicated at **17** and **18**, to upper and lower end portions of the horizontal or lateral flanges **19**, **19** of the inner frame side legs **9**, **9** respectively, so as to hold the frame sides parallel to and rigid with respect to each other. The brace bars are engaged only with the upper sides of the horizontal or lateral flanges **19**, **19** of the inner legs **9** of the pairs of legs.

Similar angle iron side rails **20**, **20** having vertical flanges **21** and laterally inwardly projecting horizontal or lateral flanges **22**, extend between the upper ends of each pair of legs. As shown in Figure 1, the vertical flanges **21** of the rails **20** are engaged with the laterally outward sides of the vertical flanges **11** of the inner legs and with the laterally inward sides of the vertical flanges **12** of the outer legs **10**, at the upper ends of the legs, where bolts **23** and **24**, respectively, traverse the vertical flanges of the legs and the vertical flange **21** of the rails **20**, at the opposite ends of the rails.

Arcuate barrel cradling bands **25** extend between the rails **20**, **20** at the opposite ends of the rails and have ears **26**, **26** on their ends which rest upon the horizontal flanges **22** of the rails, and bolts **27**, **27** and **28**, **28**, respectively, traverse the opposite end portions of the rail flanges **22** and the ears **26**, **26** and secure the bands **25** in place, with the curvatures of the bands extending below the rails **20**, **20** for receiving a barrel **8**, in the manner shown in dotted lines in Figures 2 and 3. It is to be observed that the bands, being preferably rigid, like the brace bars **16**, **16** and the legs **9**, **9**, and **10**, **10** add to the rigidity and strength of the device when in assembled condition, and that these parts can be of relatively light gauge material without sacrifice of adequate strength and stability. While I have shown the parts as being made of metal, it is also intended that they can be made of other suitable material, such as wood.

For use on rough or unfirm ground or other surface, and to prevent penetration of such a surface by the lower ends of the legs, and to lend further rigidity to the structure described above, I provide a pair of similar base bars **29**, **29**, which are preferably in the form of metal angle irons, but can be of wood or of other suitable material. As illustrated in the drawings, the base bars have lower edges **30**, **30** to rest upon the ground. At the proper distance apart and near the ends of the bars **29**, notches **32**, **32** set at the proper opposite angles are provided in the upper edges of the bars **29** to receive the lower ends **33**, **34** of the lateral flanges of the inner and outer legs **9** and **10** of the rack frame sides, in an arrangement in which the vertical flanges **11** of the inner legs **9** engage the laterally outward sides of the base bars and the vertical flanges **12** of the outer legs **10** engage the laterally inward sides of the base bars **29**. In this way, with lower edges **30**, **30** of the base bars **29**, **29** frictionally engaged with the ground, the rack **7** is prevented from shifting relative to the base bars in any horizontal direction.

The above described barrel rack may be demounted or collapsed for carrying and for storage in several different ways, depending upon the convenience of the user and the nature of the storage space available.

One way is to disconnect the lower ends of the brace bars **16**, **16** from the inner legs **9**, **9**, remove the assembling nuts **15** from the ends **13'** of the spindle **13**, and disconnect the same ends of the cradle bands **25** from a rail **20**. Thereupon the two frame sides may be superimposed upon each other to form a flat package to be laid upon the floor of an automobile trunk compartment or the like.

Another way is to go beyond the foregoing way to the

extent of disconnecting both cradle bands **25** at both ends from both side rails **20, 20** and then reconnect each cradle band at its ends, by means of the bolts **27, 27** and **28, 28,** to a side rail **20,** with the bands **25** extending along the side rails with the curvatures of the bands **25** extending upwardly from the side rails **20,** in the manner of bail handles, which can then be used to manually carry the collapsed device.

When it is further desired to make an elongated package of the smallest cross section or width, the upper ends of one leg of each pair is disconnected from one end of the side rails **20, 20** so that the legs **9** and **10** of each pair can be collapsed into side by side relation.

What is claimed is:

1. In a collapsible and portable rack, two pairs of crossed and pivoted legs, a spreader bar extending between the pairs of legs having ends pivotally traversing the legs at the points of intersection of the legs, said legs having upper ends, side rails extending between the legs of each pair at the upper ends of the legs, said side rails being angular in cross section and having horizontal longitudinal flanges extending laterally inwardly of the pairs of legs and toward each other and depending vertical flanges, said horizontal flanges overlying the upper ends of the legs, said pairs of legs having laterally outward sides along which the vertical flanges of the side rails depend, said vertical flanges having laterally inward sides, means pivotally securing the upper ends of the legs to the laterally inward sides of said vertical flanges, and cradle bands extending between said side rails and secured at their ends to the horizontal flanges of the side rails, the securing means of at least one leg of each pair comprising means providing for separation thereof from the related side rails.

2. In a collapsible and portable rack, two pairs of crossed and pivoted legs, a spreader bar extending between the pairs of legs having ends pivotally traversing the legs at the points of intersection of the legs, said legs having upper ends, side rails extending between the legs of each pair at the upper ends of the legs, said side rails being angular in cross section and having horizontal longitudinal flanges extending laterally inwardly of the pairs of legs and toward each other and depending vertical flanges, said horizontal flanges overlying the upper ends of the legs, said pairs of legs having laterally outward sides along which the vertical flanges of the side rails depend, said vertical flanges having laterally inward sides, means pivotally securing the upper ends of the legs to the laterally inward sides of said vertical flanges, and cradle bands extending between said side rails and secured at their ends to the horizontal flanges of the rails, with the cradle band ends overlying the horizontal flanges.

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