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STORAGE RACK FRAME

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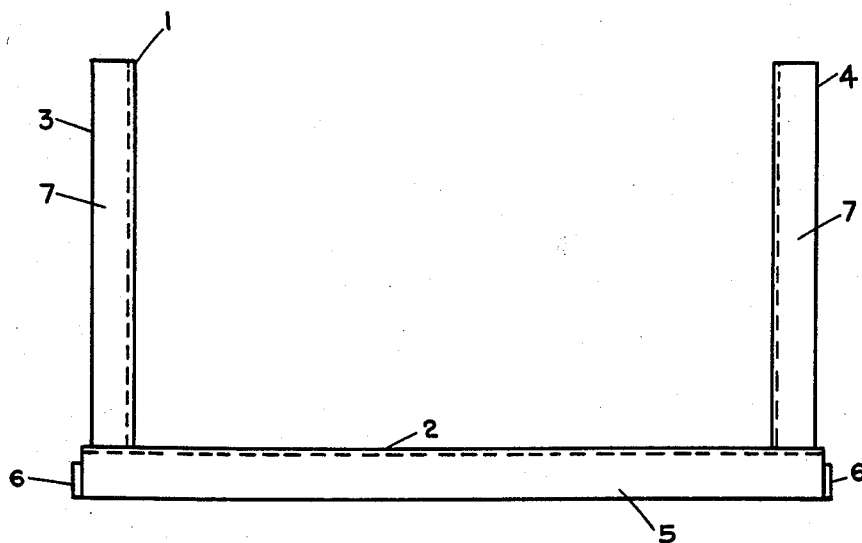


FIG. 1

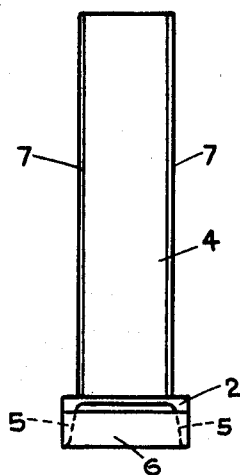


FIG. 2

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STORAGE RACK FRAME

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2 Claims. (Cl. 211-49)

This invention relates to frames for storage of lengths of metal and particularly to U-shaped frames formed of channel sections whereby these frames may be securely stacked when one frame is placed upon another to provide racks for the storage of lengths of metal.

Heretofore it has been the general practice in storing stocks of lengths of bar and pipe to use metal racks which are bolted, riveted, or welded together and consequently cannot be readily altered to suit changing needs.

The primary object of this invention, therefore, is to provide storage racks for lengths of metal, which racks may be quickly and easily erected, dismantled, or otherwise altered.

Another object of this invention is to provide a storage rack frame which is sufficiently light in weight so that it may be quickly and easily erected or dismantled by one person.

Another object is to provide a storage rack frame formed in the shape of a U in such proportions that the upright ends of one frame telescope into the base of another frame superimposed thereon.

Another object is to provide a rack of the above type which may be readily and economically fabricated from channel bars having a U-shaped cross section.

Other objects and advantages will appear from the following more detailed description of the invention.

In order to attain the above objects there is provided a frame comprising a base channel having downwardly-turned flanges with a closing plate formed at each end of said channel, together with uprights in the form of channel sections of less width than the base channel so that their upper ends may telescope between the flanges of a counterpart frame superimposed thereon for the purpose of increasing the height and capacity of the rack.

In the accompanying drawings:

Fig. 1 is a side elevation of one embodiment of the invention; and Fig. 2 is an end elevation of the embodiment shown in Fig. 1.

The frame 1 comprises a base member 2 having secured thereto, by welding, riveting, or other suitable means, an upright member 3 disposed at one end of the base 2 and an upright member 4 disposed at the other end of said base, both of said upright members being of the same height and squared at the top.

The base 2 comprises a pair of parallel, downwardly-extending flanges 5 formed integrally with, and extending longitudinally relative to said base. The channel thus formed by the flanges 5 is closed at each end by closing plates 6 which are preferably welded to said flanges. These closing plates 6 are provided for the purpose of preventing one rack frame from slipping from the top of another rack frame upon which it is superimposed, as will appear more fully later.

As shown in Fig. 1, the opening between the closing plates 6 is sufficient to clear the outer longitudinal limits of the upright members 3, 4, and as shown in Fig. 2, the space between the flanges 5 is greater than the width of these upright members so as to enable the uprights 3, 4

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of one frame to telescope into the base of another similarly constructed frame when the frames are stacked to form a larger rack.

The upright support members 3, 4 are each provided with a pair of outwardly-extending flanges 7 formed integrally with said upright members. As is well known, substantially the strength of a solid column having the same overall proportions is obtained without greatly increasing the weight of the frame. It is preferred, however, that the flanges 7 extend outwardly to obviate the possibility of the ends of the metal lengths entering the channels thus formed in the upright members 3, 4 and interfering with the proper storage of the lengths of metal.

It will be apparent that the base member 2 and the upright members 3, 4 in the structure shown in Figs. 1 and 2 may be cut to the desired lengths from channel bars having the usual cross-sectional dimensions. Also, the closing plates 6 may be cut from plate or strip metal of ordinary stock dimensions. Consequently, the components of the rack frame may be provided with a minimum of expense. In the interests of economical manufacture it is also preferred that the aforesaid components be fabricated by welding since it is believed to be a reliable and economical method of fabricating. However, the described structure is readily adaptable to other types of securing means such as riveting or bolting if it is found desirable.

In operation, when a workman wishes to increase the capacity of a rack composed of frames 1 in the form just described, he may simply place an additional frame over the upright members 3, 4 of the frame already in use, allowing the downwardly-extending walls (flanges 5 and closing plates 6) of the base 2 to overlap the upper ends of the members 3, 4 and obtain the previously mentioned telescoping result.

The closing plates 6 provide abutments on the base which will engage the ends of the uprights of a similar rack when one is stacked upon another to prevent the shifting of the frame in a direction longitudinal of the base 2 while the flanges 5 will prevent shifting of the frame in a lateral direction in the same plane.

I claim:

1. A storage rack frame designed for stacking upon similar frames comprising a base member in the form of a channel section having a flat top web and parallel depending side flanges extending along the web at the sides thereof and forming a recess in the under surface of the base, a pair of spaced uprights of equal height and of channel-shaped section each having a web and side flanges having their lower ends setting on and secured to the top surface of the web of the base, the uprights being of less width than the base and of such width that their upper ends will fit between the flanges of a superimposed similar frame and engage the under face of the web of the base channel of such superimposed similar frame and confine such superimposed similar frame against transverse movement, and means on the base extending transversely between the depending channels to limit endwise movement of the frame when it is placed on the uprights of a similar frame by engaging the uprights of such similar frame.

2. A storage rack frame as defined in claim 1, the last-named means comprising a piece of metal welded across each end of the base channel and closing the ends of the recess on the under face of the base channel, the uprights having their flanges turned away from each other, the uprights being so close to the ends of the base that the flanges of the uprights are sufficiently close to said pieces of metal on the ends of the channel of a superimposed similar frame that the relative endwise

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movement between the superimposed frames will be so restricted as to assure the upright of one unit being in substantially vertical alignment with the uprights of the other unit.

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