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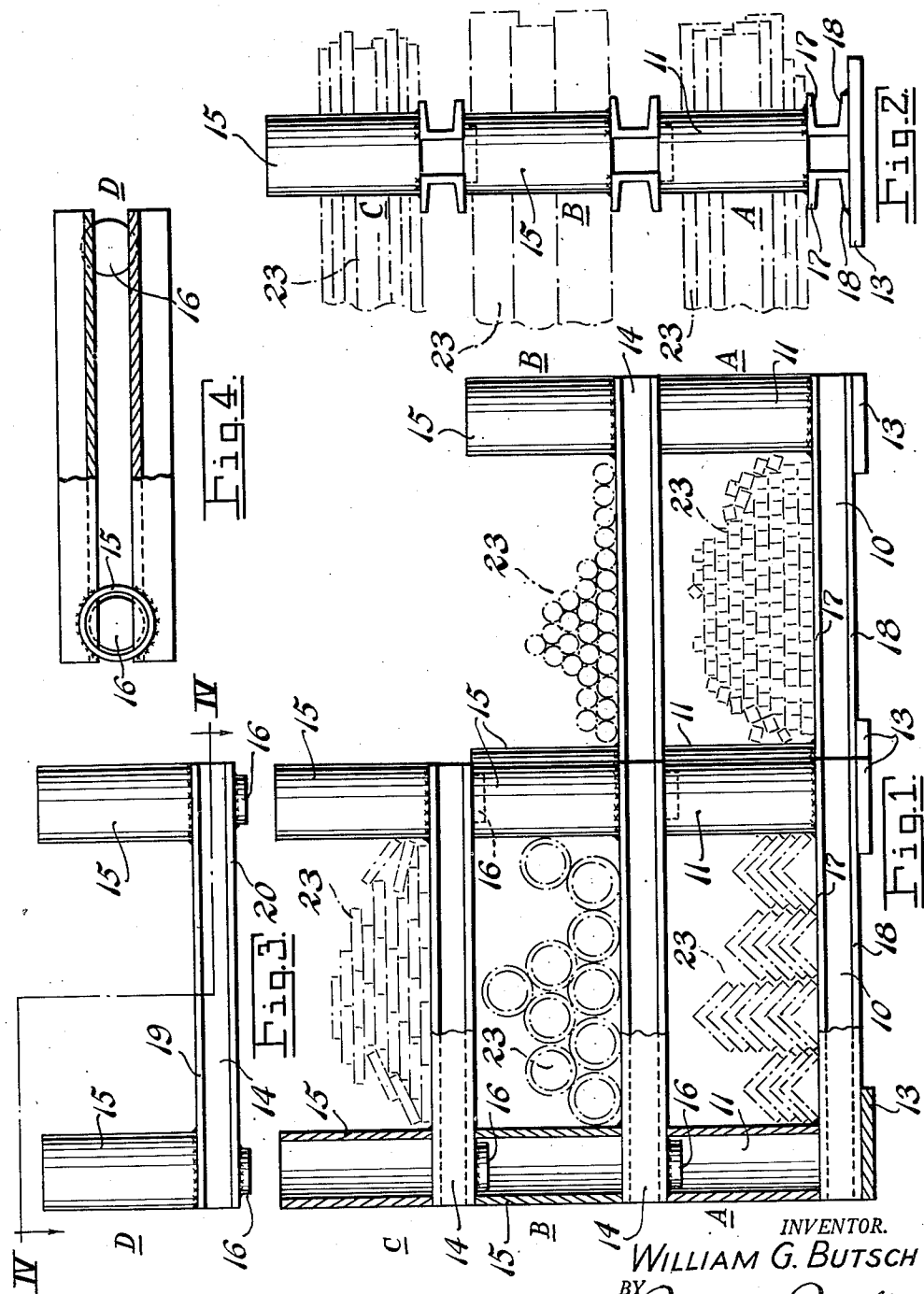
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2,591,049

CRANE LOADING PORTABLE BAR RACK

Filed Feb. 18, 1949

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

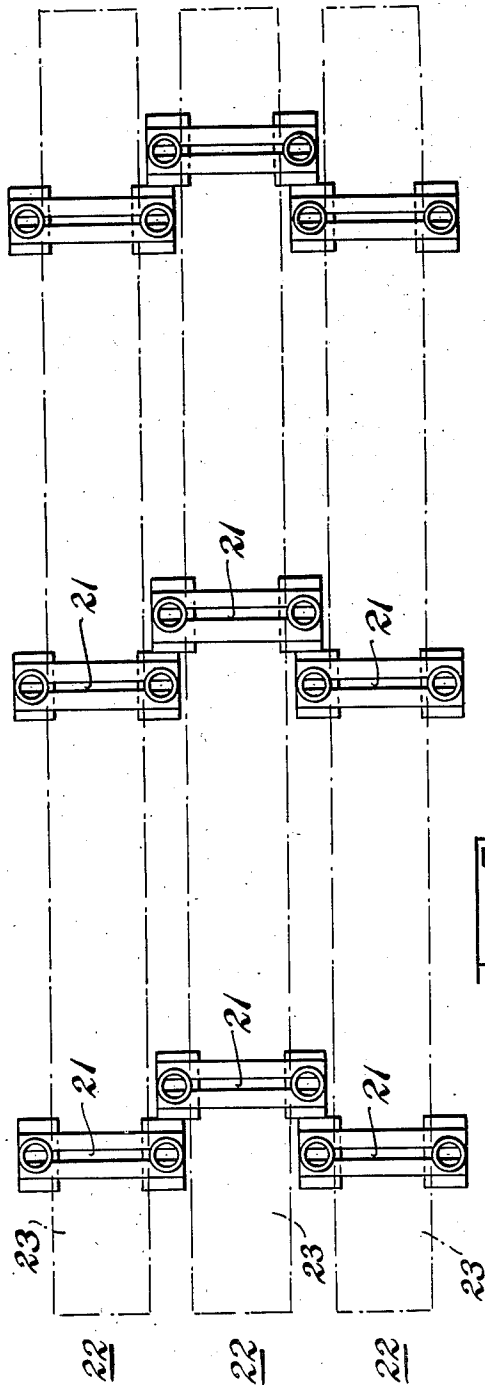


Fig. 5

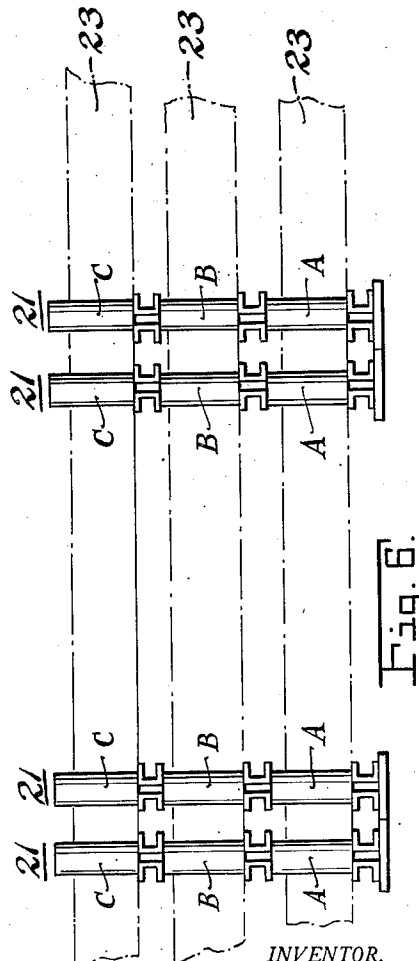


Fig. 6

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## UNITED STATES PATENT OFFICE

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## CRANE LOADING PORTABLE BAR RACK

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1 Claim. (Cl. 211-60)

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This application relates to a demountable rack for storing heavy rod, bar, and tube stock and the like and more particularly relates to a sectional rack for storing heavy stock.

An object of this invention is to provide a rack consisting of sections which are easy to assemble and to take apart.

A further object of this invention is to provide rack sections which may be stored in a small space when not in use.

A further object of this invention is to provide a rack in which the rack sections are stabilized by the weight of stock loaded thereon.

A further object of this invention is to provide self-supporting rack sections made from standard parts which require no complicated fastenings between sections.

A further object of this invention is to provide a rack having portable and movable sections which need not be anchored to a floor.

A further object of this invention is to provide a rack adapted for loading with a crane.

The above and other objects and features will in part be apparent and will in part be obvious from the following detailed description and drawings, in which:

Figure 1 is a view in end elevation showing two supporting columns formed of rack sections constructed in accordance with this invention;

Fig. 2 is a view in side elevation showing one column of the rack;

Fig. 3 is a view in end elevation showing an upper rack section;

Fig. 4 is a view in section taken along a line IV-IV in Fig. 3;

Fig. 5 is a top plan view showing three racks in side by side relation, each rack consisting of three columns of rack sections; and

Fig. 6 is a view in side elevation of the racks illustrated in Fig. 5.

In the following detailed description and the drawings, like reference characters indicate like parts.

In Figs. 1 and 2 I have shown a plurality of rack sections or pieces mounted one on another to form columns each section having a beam on which material to be stored is supported.

As shown, sections of a column are designated A, B, C and D respectively, sections A being the base sections and sections B, C and D being upper sections.

Each base section comprises a connecting member or beam 10 having at each end thereof a post 11, the post being preferably hollow and made from steel tubing or pipe.

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The lower ends of posts 11 are welded or otherwise adequately secured to beam 10. The underside of the beam at the ends thereof is provided with bearing pads or plates 13 which rest on the floor or ground of a storage or warehouse space to support the posts in vertical position. The area of the plates or pads is such as to provide a stable bearing for the rack columns.

The upper sections B, C, and D are like the base section A in all particulars except that they do not have bearing pads corresponding to pads 13. Each upper section includes a beam 14 and a pair of spaced parallel posts 15 fixed to one side thereof. Instead of bearing pads, the upper sections each are provided with centering lugs or members 16 secured to the underside of the beam 14 in line with the posts thereof. These lugs are smaller in diameter than the inside diameter of the posts so that the lugs of each section will be received in the upper ends of the posts of a section immediately below it. Thus the rack sections may be mounted one on top of the other to provide columns of any desired and permissible height and total column load, capacity of the floor or foundation being taken into account.

The beam of each section can be an I-beam, but it is preferred to employ a modified H-beam fabricated from two outwardly facing channels mounted with their webs in spaced relation. As shown in Fig. 2, the posts of each base section are fixed to upper flanges 17 of the channels while the pads 13 are fixed to lower flanges 18. Similarly, ends of the posts of each upper section are fixed to upper channel flanges 19 (Fig. 3) while the lugs 16 are fixed to lower channel flanges 20. The posts of each section are of equal lengths and have free or upper surfaces perpendicular to the post axes so that when a rack column is assembled, lower flanges of each upper section rest on the upper surfaces of the posts of the next lower section, and the posts of each section extend vertically.

Columns of rack sections may be stacked and placed in any desired configuration. As shown in Figs. 5 and 6, racks can be formed by assembling a plurality of base sections and upper sections into a series of spaced supporting columns 21. Each supporting column consists of a base section A and one or more upper sections B and C mounted upon the base section. As shown in Fig. 5 two or three or more columns may be arranged in tandem to form a rack 22 and support elongated stock 23, indicated schematically

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in Figs. 5 and 6, which is carried by the rack sections.

As shown in Fig. 5, two or more racks may be placed parallel to each other, and the columns forming one rack may partly overlap the columns of the adjacent rack.

The weight of stock on each section of each column stabilizes the section and holds each section erect so that no fastenings or clamps are required between sections. When not in use, the rack sections can readily be disassembled and conveniently stored in a small space.

The connecting members or beams 10 may preferably be made as shown from channels but, if desired, other forms of beams such as bars, or a single member of sufficient width may be substituted for the pair of channels shown for each section. Similarly, a single flat pad or base plate of sufficient length and width may be substituted for the pair of pads 13 shown for each base section.

The embodiment of the invention described above and shown in the drawings may be modified and changed in various structural details without departing either from the spirit or the scope of the invention as set forth in the appended claim.

Having described my invention, what I claim as novel and desire to secure by Letters Patent is:

A unitary rack section which comprises a rigid beam consisting of spaced channel irons having parallel vertical webs and spaced horizontal flanges extending from the edges of said webs, said flanges on each web extending in an opposite direction from the flanges on the other web, a tubular post secured to said horizontal flanges at each end of said beam, said posts being paral-

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lel, of equal length, and both being mounted on the same side of the beam, the free ends of the posts terminating in a plane perpendicular to the axes thereof, the beam having a face on the side thereof remote from the posts parallel to the free ends of the posts, and a centering lug at each end of said face secured to the other horizontal flanges of the beam in alignment with said posts, each of said centering lugs being adapted to fit inside one of the posts of another similar rack section with said face of the beam resting on the free ends of the posts of said similar rack section.

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