Feb. 7, 1933. W. WHITE 1,896,266

LOAD BLOCK

Filed June 13, 1931

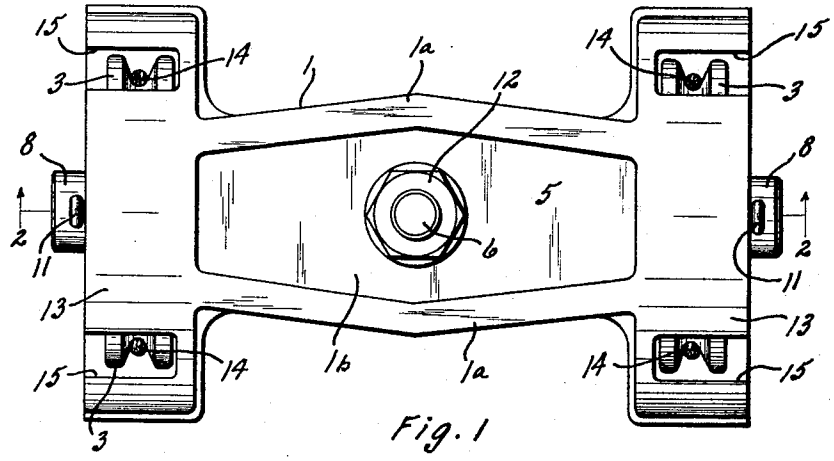


Fig. 1

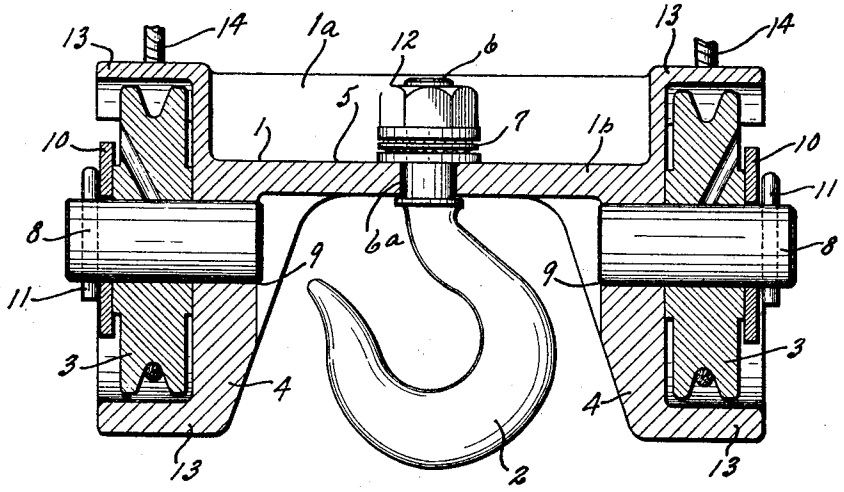


Fig. 2

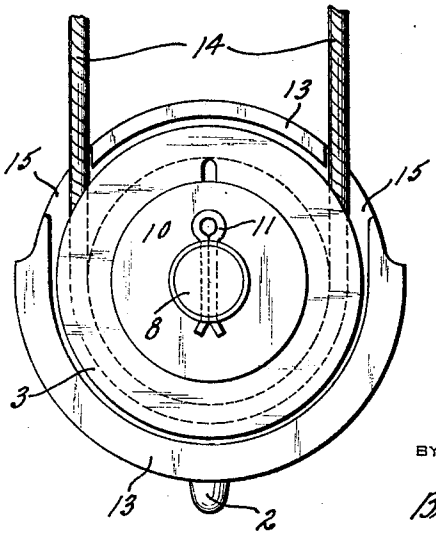


Fig. 3

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UNITED STATES PATENT OFFICE

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LOAD BLOCK

Application filed June 13, 1931. Serial No. 544,231.

This invention relates to load blocks for hoists, cranes and like apparatus, the function of such a load block being to provide connection between the hook of the apparatus and the sheaves of the hoisting cables thereof whereby the hook may receive support from the sheaves.

It has been the general practice in the art that the hook is in dependent relation to the sheaves, and as these parts have some appreciable dimensions it follows that the maximum lift is reduced by this amount.

It is the object of this invention to provide an arrangement whereby the hook is between, instead of below, the sheaves so that the available lift of the hook may be substantially that of the sheaves.

The exact nature of this invention together with further objects and advantages thereof will be apparent from the following description taken in connection with the accompanying drawing, in which Fig. 1 is a plan view of an embodiment of the invention; Fig. 2 is a sectional elevation as in the plane of line 2—2, Fig. 1; and Fig. 3 is an end view.

With reference now to the drawing, the principal members of the load block are the frame 1, hook 2 and sheaves 3, a pair of the latter being shown.

The frame is of generally arched form comprising a pair of leg portions 4 with a transverse or bridge portion 5 therebetween. The frame includes the webs and flanges shown to provide against breaking down of its arch under the stresses imposed thereupon, as will be appreciated by one familiar with the art.

Particularly the bridge portion of the frame is provided with the upstanding flanges 1*a* and horizontal web 1*b* connecting the base portions thereof to provide a typical section of U-shape.

The hook 2 is generally of conventional form, disposed between the legs of the frame, with its shank portion 6 secured with the central arch portion thereof to be dependent from the latter as indicated Fig. 2. The manner of securement includes the usual thrust bearing 7 immediately above the opening 6*a* in the frame through which the hook shank 6 passes, whereby the hook may swivel; and the bolt 12 turned onto the hook shank. It will be observed that this hook securing means does not project above the frame, being located in the cavity provided by the U-characteristic of the frame at this point.

For each of the leg portions 4 of the frame is provided a sheave pin 8. The frame is provided with aligned openings into which the sheave pins are fitted and there welded as at 9, with portions extending from the hook and beyond the frame as indicated Fig. 3.

The sheaves 3 are mounted on the projecting portions of the pins 8 and there secured for free rotation as by the washers 10 and cotter pins 11.

The frame is provided on each side with a guard flange 13 extending about and beyond the corresponding sheave for protection of the latter and its cable 14; the flanges 13 being interrupted by notches as at 15 to clear the sheave cables.

By the arrangement described it will be apparent that the frame is in straddling relation with the hook, the sheaves being laterally disposed one at either side of the hook, so that the latter is substantially at the level of the sheaves instead of considerably therebelow as heretofore. Moreover, the frame does not extend substantially above or below the sheaves, nor does the hook securing means project above the frame. In fact frame, sheaves and hook are all so disposed as to be substantially coextensive in vertical dimension. Thus it will be apparent that the lift of the hook is substantially coincident with that of the sheaves themselves. Also, by the described arrangement either sheave may be removed without disturbing either its cable or the other sheave. At the same time each cable is secured on its sheave by the guard flange provided.

What I claim is:

1. A load block for the purpose described comprising a frame of generally arched form, a hook disposed between the legs of the frame and secured with the central arch portion thereof to be dependent from the latter, and a sheave mounted on either leg of the

frame, said frame central portion being of U-section, and securing means for said hook arranged in the cavity of said section.

2. A load block for the purpose described comprising a frame of generally arched form, a hook disposed between the legs of the frame and secured with the central arch portion thereof to be dependent from the latter, and on either leg of the frame, a sheave pin set thereinto to extend from the hook, and a sheave mounted on the projecting portion of said pin.

3. A load block for the purpose described comprising a frame of generally arched form, a sheave mounted on either leg of the frame, and a hook disposed between said sheaves and secured dependent from the central arch portion of said frame, said hook being mounted for swivelling and said frame legs being spaced to permit said swivelling.

In testimony whereof I hereby affix my signature.

WILLIAM WHITE.