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RETAINING DEVICE FOR ELEVATING CABLES.

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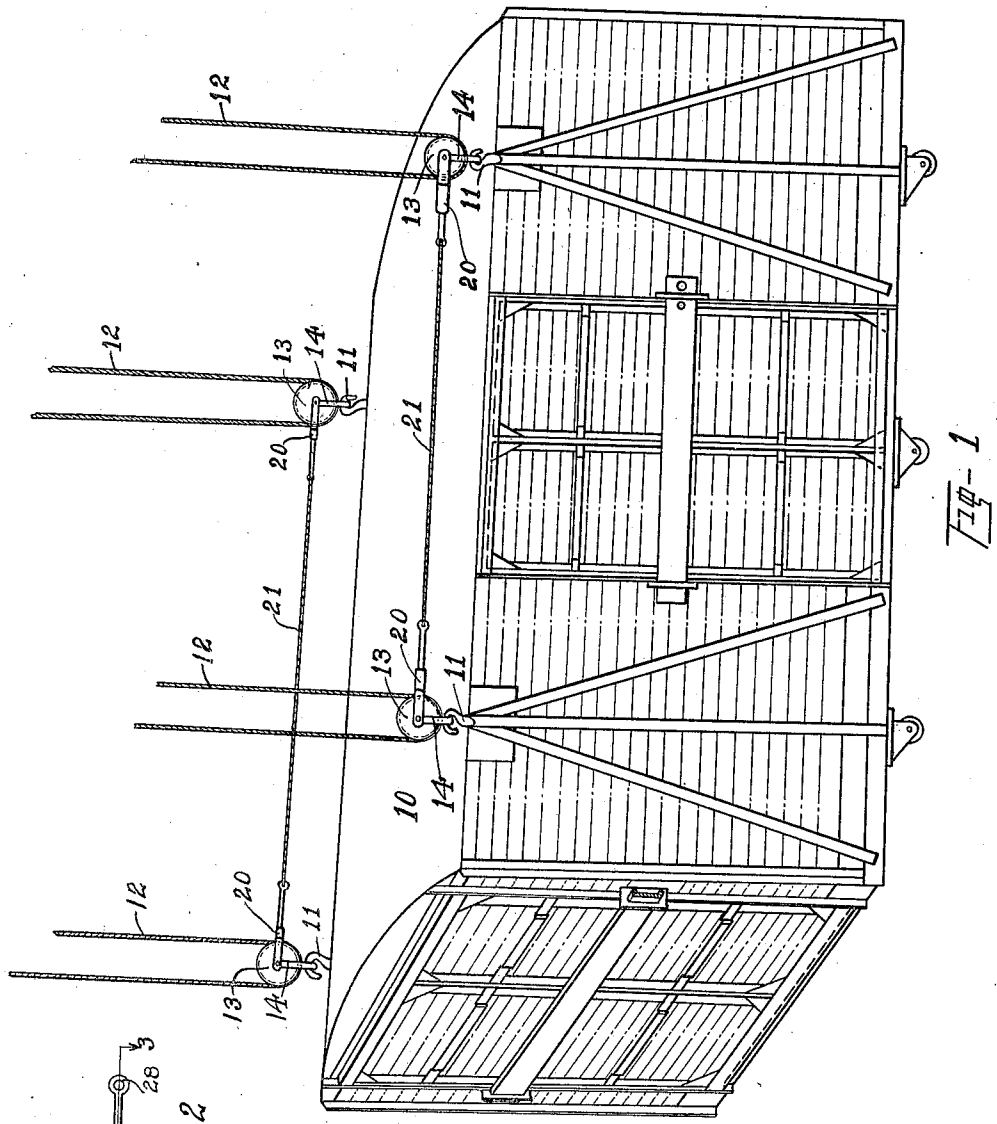


Fig. 1

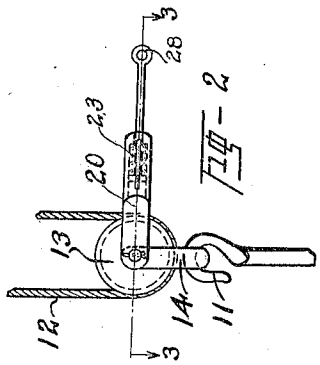


Fig. 2

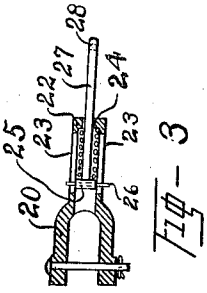


Fig. 3

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RETAINING DEVICE FOR ELEVATING-CABLES.

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To all whom it may concern:

Be it known that I, BENJAMIN F. FITCH, a citizen of the United States, residing at Evanston, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Retaining Devices for Elevating-Cables, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to a device adapted for securely attaching elevating cables to crates or boxes to be lifted thereby.

The methods heretofore practised for raising large crates and such heavy articles by a plurality of hoisting elements, involve manually inserting an engaging hook into a corresponding retainer and then repeating the operation on each hoisting element. Under such conditions, it has been found that one of the engaging means frequently becomes disengaged while the operator is attempting to secure or lock another in position.

The general object of this invention is to provide means for securely holding the hooks or other engaging means in position and at the same time eliminate these difficulties.

Another object is to so arrange the securing means, between adjacent engaging and lifting elements, that an operator may insert all of the engaging means into position, without the necessity of returning to replace or readjust any of the hoisting elements. The above and other objects will become more apparent in the following description which refers to the accompanying drawings. The essential characteristics are set forth in the claims.

In the drawings Figure 1 is a perspective of a removable truck body or crate depending from hoisting elements and illustrating the use of my invention; Fig. 2 is an enlarged view of the nature of an elevation of a spring tension device; Fig. 3 is a cross section taken on the line 3—3 in Fig. 2.

Designating the parts by the use of reference characters, 10 (Fig. 1) represents a crate, or a removable automobile body having engaging hooks 11, rigidly secured to the sides thereof. The body is adapted to be suspended from supporting cables 12, which are passed through the sheaves 13, and connected to the hooks 11, by any suitable means such as U-shaped engaging members or clevises 14. The sheaves 13 have a tendency to swing about the upper support of the hoisting cables when the U-shaped members are disengaged from a load.

Secured at the center to the sheave and rotatably mounted at the center thereof, is a bifurcated member 20. As shown in Fig. 1, I have provided one of these members attached to the pivot pin of each sheave and have connected them by rods or cables 21. The bifurcated members are preferably formed to straddle a sheave and the supporting U-shaped member 14, which depends therefrom. An extension 22 on the bifurcated member 20, comprises a hollow cylinder open at one end and slotted as at 23, to receive a pin slidably mounted therein.

Mounted within the hollow cylinder 22 is a compression spring 24, one end of which abuts the cylinder head 22, while the other engages movable head or piston 25. The piston is limited in its movement by the pin 26 which is adapted to slide in the groove 23. Rigidly secured to the piston 25 and extending through an aperture in the cylinder head is a plunger 27, comprising a short rod. At the outer end 28 there may be rigidly secured cables or rods 21.

To use my retaining device the operator proceeds as follows:—Assuming that the crate 10 is resting on a platform, the hoisting cables are lowered to bring the U-shaped engaging members into position to catch the hooks 11. The operator then effects this engagement and moves to the other sheave on the same side of the crate, sliding his hand along the cable to tension it, holding the sheave in engagement. The cable 21 is not long enough to permit the second U-shaped member to engage the corresponding hook, except by compressing the springs 24. The operator must then, manually, pull the engaging means over the hook against the tension in the springs 24 at each end of the cable. When in position these springs tend to draw these sheaves together and so retain them in locking engagement with the hooks.

Having thus described my invention, I claim:

1. In a device of the class described, the combination with a plurality of hoisting sheaves, of means comprising a movable tension device for limiting the distance separating the said hoisting sheaves.

2. In a device of the class described, the

combination with a pair of overhead hoisting elements, of means comprising a tension device adapted to hold said hoisting elements in engagement with corresponding hooks.

3. In a device of the class described, the combination with a plurality of hoisting sheaves, of bifurcated members mounted on the axes of said sheaves, and a variable tension device connecting said members.

4. In a device of the class described, the combination with a pair of hoisting sheaves, of bifurcated members rotatably mounted on the axes of said sheaves, and a variable tension device connecting said members.

5. In a device of the class described, the combination with a plurality of hoisting sheaves, of members rotatably mounted on the axis of each sheave, and a cable connecting the said members.

6. In a cable retaining device, the combination with a pair of hoisting blocks, of a member secured to each block, said members carrying slidable elements, means connecting the said elements, and springs tending to urge said elements in a direction to tension said connecting means.

7. In a cable retaining device, the combination with a pair of movable hoisting blocks, of bifurcated members mounted on the axis of each movable block, said members having a hollow extension, a plunger slidably mounted in said extension, a helical spring embracing said plunger, and means connecting said plungers.

8. In a device of the class described, the combination with a pair of hoisting elements, of bifurcated members mounted on the axis of each hoisting element, plungers slidably mounted in said bifurcated members, stops to limit the longitudinal movement of said plungers, springs acting on said plungers, and means connecting the plungers whereby the springs constantly urge the hoisting elements toward each other.

9. In a device of the class described, the combination with a plurality of hoisting elements, of members rotatably mounted on the axes of the hoisting elements, and having hollow extensions, plungers slidably mounted in said extensions, stops to limit the longitudinal movement of said plungers, flexible means connecting the plungers, and springs adapted to constantly urge the hoisting elements toward each other.

10. In a device of the class described, the combination with a plurality of hoisting blocks, a flexible member connected with said blocks, and springs interposed in said connections and acting to urge the blocks into hook engaging position.

In testimony whereof, I hereunto affix my signature.

BENJAMIN F. FITCH.