C. H. PETERS.

MAST STEP FOR DERRICKS.

APPLICATION FILED JAN. 22, 1910.

965,741. Patented July 26, 1910.

Fig. 1.

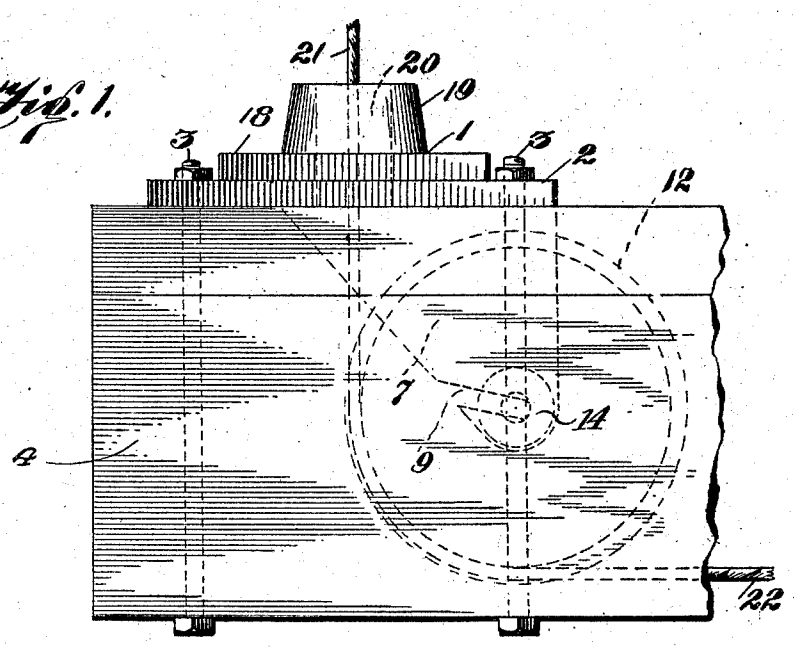
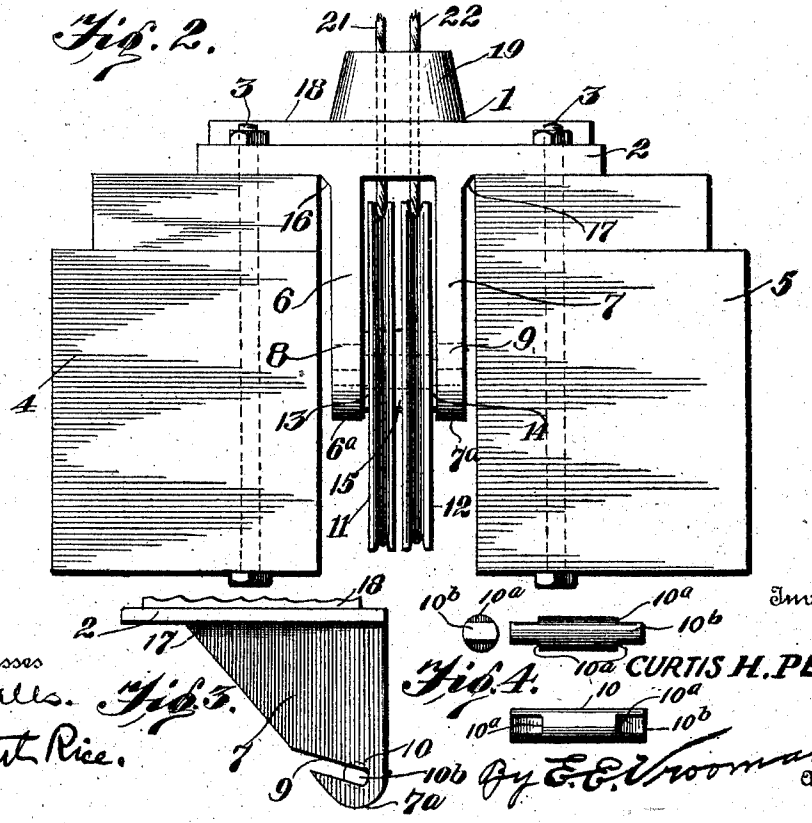


Fig. 2.



Witnesses

J. R. Wells.

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Fig. 3.

Fig. 4.

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MAST-STEP FOR DERRICKS.

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To all whom it may concern:

Be it known that I, CURTIS H. PETERS, a citizen of the United States of America, residing at Brown Station, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Mast-Steps for Derricks, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in mast steps for derricks, and has for its object to provide a mast step from which the sheaves can be easily and expeditiously removed and replaced, without the necessity of removing the mast and lifting the mast step.

Other objects and advantages of my invention will appear in the course of the following specification.

In the accompanying drawings: Figure 1 is a side elevation of my improved mast step showing the same mounted on suitable timbers. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a side elevation (reduced) of the lower portion of the mast step. Fig. 4 comprises two different side elevations and an end elevation of the sheave pin or axle.

Referring to the drawings, which illustrate the preferred embodiment of my invention, 1 designates the mast step which is preferably an integral casting. The base 2 of the mast step rests on and is secured by means of suitable bolts 3 to beams 4 and 5 which are spaced apart and arranged opposite each other, as illustrated. Centrally of the under side of the base 2 are a pair of correspondingly shaped, oppositely-arranged, spaced, depending lugs 6 and 7. Each lug is approximately triangular in shape in side elevation, the inclined side thereof running from a point some distance to one side of the center of the base, while the front side of the lug extends straight down from the edge of the opposite side of the base. The lower end of each lug is rounded, as at 6^a and 7^a, respectively. Near their rounded lower ends each lug is provided with a correspondingly shaped, downwardly-inclined, slot 8 and 9, respectively. The upper ends of the slots 8 and 9 open into the inclined side of their respective lugs and at their lower or closed ends are curved or rounded, as shown.

Removably positioned in the diagonally-extending slots 8 and 9 is a sheave pin or axle 10 on which are journaled two sheaves 11 and 12. The sheave pin 10, near each end, is abruptly cut down or shouldered, as at 10^a, on opposite sides to form flattened portions 10^b which fit snugly in the slots 8 and 9 with the shouldered portions 10^a abutting the contiguous sides of the lugs to hold the sheave pin in position. Mounted on the sheave pin 10 and between the side of the lug 6 and the side of the sheave 11 is a washer or spacer 13, and also between the sheave 12 and the lug 7 a washer or spacer 14 is mounted on the sheave pin. Another washer 15 is mounted on the sheave pin between the sheaves. The washers or spacers 13, 14 and 15 serve to steady the sheaves in their rotation on the sheave pin and reduce the wear that would be caused by the sheaves contacting with each other or with the sides of the lugs 6 and 7.

Each lug 6 and 7 is provided with a beveled portion 16 and 17, respectively, at its outer side at its intersection with the underside of the base 2 in order to space the outer sides of the lugs from the sides of the beams 4 and 5 to allow ample space to withdraw the sheave pin 10 from the slots 8 and 9.

Above the upper edges of the base 2, the sides of the mast step 1 are set back to form a platform 18, and centrally of the platform is a circular flat-topped projection 19, the sides of which are inclined upwardly. Upon the projection 19 a mast (not shown) is mounted. Extended centrally through the mast step 1 is an aperture 20, indicated in dotted lines in Fig. 1, having its lower opening between the lugs 6 and 7. Adapted to pass through the aperture 20 and positioned in the grooves of the sheaves 11 and 12 are ropes or cables 21 and 22 for operating the derrick. Referring to Fig. 1 of the drawings, it will be noted that the sheaves 11 and 12 are so positioned with respect to the aperture 20 that the ropes 21 and 22 are substantially vertical or perpendicular to the mast step.

As is readily apparent with my improved mast step when it is desired to remove the sheaves 11 and 12 for any reason all that it is necessary to do is to release the tension on the ropes 21 and 22 to allow a sufficient amount of slack when the sheave pin 10 can be drawn back out of the slots 8 and 9 in which it is mounted. The inclination of

the slots 8 and 9 and the weight of the sheaves will be found sufficient to hold the sheave pin in position in the slots.

What I claim is:—

1. In a mast step provided with oppositely-arranged slots, and a sheave pin, said sheave pin being shouldered near its ends, said shouldered portions being adapted to abut the contiguous edges of said slots.

2. In a mast step, a pair of oppositely-arranged spaced lugs, each of said lugs provided with an oppositely-arranged inclined slot, and a sheave pin positioned in said slots.

3. In a mast step, a pair of oppositely-arranged spaced lugs, each of said lugs being provided with an oppositely-arranged slot, and a sheave pin shouldered near each end to form flattened portions, said shouldered portions being adapted to abut the edges of said slots to hold said sheave pin in position.

4. In a mast step, a base, an apertured support on which said base rests, lugs depending from said base and positioned in said aperture, and beveled portions at the intersection of the outside of said lugs with said base whereby the sides of said lugs are spaced from the sides of the aperture in said support.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

CURTIS H. PETERS.

Witnesses:

A. J. Pleasants,

S. C. Stimcipher.