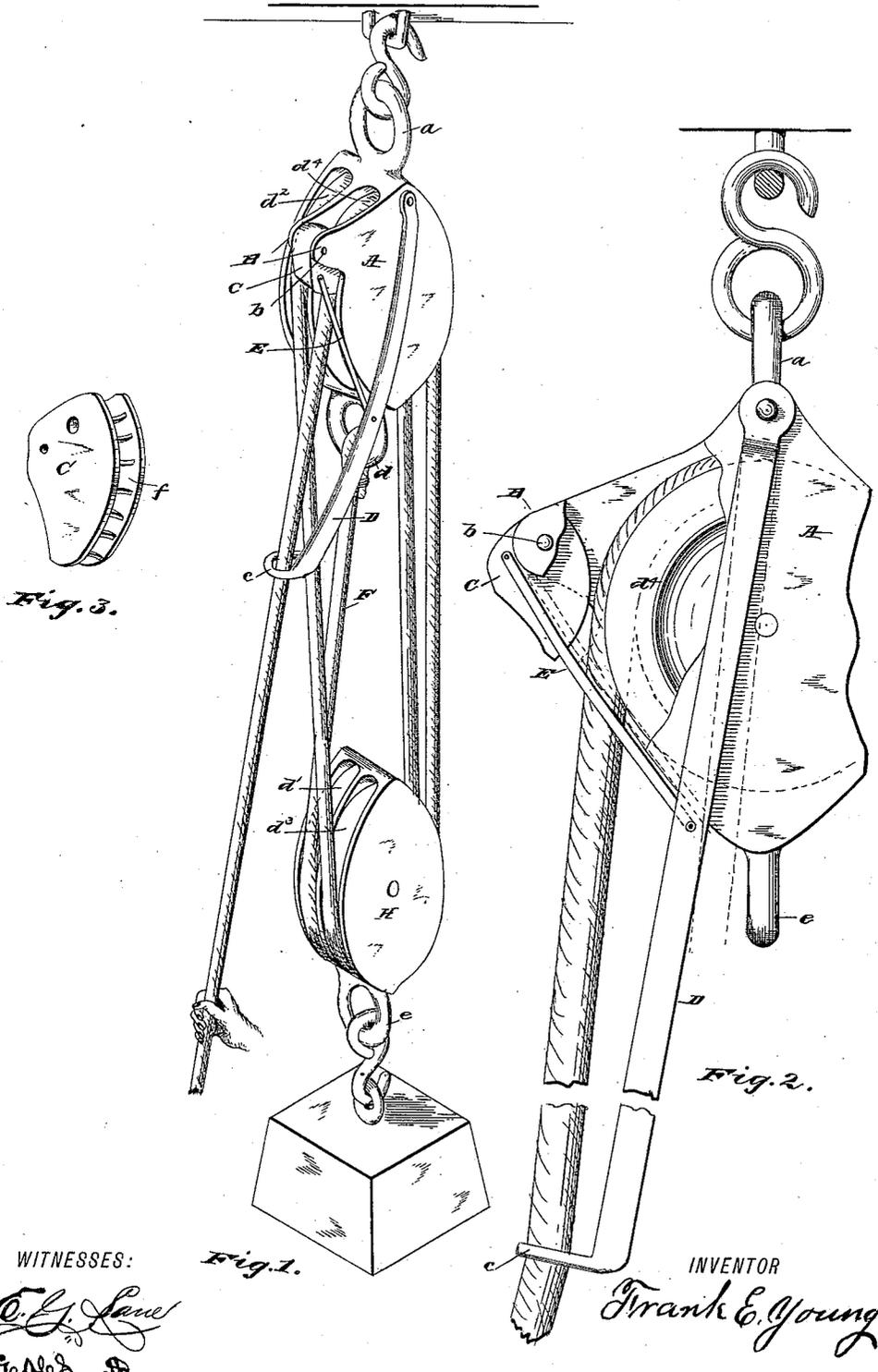


(No Model.)

F. E. YOUNG.
HOIST.

No. 447,483.

Patented Mar. 3, 1891.



WITNESSES:

C. G. Lane
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UNITED STATES PATENT OFFICE.

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HOIST.

SPECIFICATION forming part of Letters Patent No. 447,483, dated March 3, 1891.

Application filed June 21, 1889. Serial No. 315,072. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. YOUNG, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Hoists; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a view showing the hoist properly attached to elevate a weight. Fig. 2 is an enlarged view of the upper pulley-block, showing a portion of its cover broken away to illustrate the locking-eccentric. Fig. 3 is a detached view of the locking-eccentric.

The present invention has relation to hoists; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the upper pulley-block, which is substantially of the form shown, and, as shown, is provided with the eye *a*, which is for the purpose of providing a means of attaching a suspending-hook. The pulley-block A is provided with the side extensions B, which are for the purpose of receiving the locking-eccentric C and holding the same in proper position by means of the rivet or bolt *b*. To the side of the pulley-block A is pivotally attached the pendent arm or lever D, which arm or lever may be straight or curved, as shown in the drawings. The bottom or lower end of this arm or lever D is provided with the eye *c*, which is for the purpose of allowing the rope to pass through.

To the arm or lever D is pivotally attached one end of the connecting-bar E. The opposite end of said connecting-bar E is pivotally attached to the locking-eccentric C, and is for the purpose of operating said eccentric, as hereinafter described. One end of the elevating-rope F is attached to the eye *d*, and is passed under the pulley *d'* and thence over

the pulley *d*² and under the pulley *d*³, and finally over the pulley *d*⁴ and through the eye *c*. As shown, four pulleys are used; but it will be understood that a greater or less number can be used if desired, the number of pulleys used being in proportion to the work required or the power to be applied.

The pulley-block H is provided with the eye *e*, which is for the purpose of attaching the weight to be elevated.

The locking-eccentric C is provided with the serrated groove *f*, which is for the purpose of binding the elevating-rope F between the eccentric and pulley *d*⁴, thereby locking said elevating-rope F and holding the weight or load at any desired height. In use the pulley-block H is lowered and the load properly attached, when the free end of the elevating-rope F is drawn down, thereby elevating the pulley-block H and its load.

It will be seen that the load can be suspended at any desired point of elevation by drawing the elevating-rope toward the pulley-block H and releasing the rope.

It will be seen that as the lower end of the arm or lever D is drawn inward the locking-eccentric C will be forced against the elevating-rope F by means of the connecting-bar E, thereby securely locking the elevating-rope against the pulley *d*⁴.

When it is desired to lower the load, the free end of the elevating rope is drawn outward, which carries with it the free end of the arm or lever D, thereby releasing the elevating-rope by means of the connecting-bar E operating upon the eccentric C, which throws said eccentric away from the elevating-rope.

It will be understood that the pulleys located in the pulley-blocks A and H are attached or journaled in the ordinary manner.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a pulley-block, of a locking-eccentric and a lever having a pivotal connection therewith and adapted to engage the lifting-rope through an eye, so as to engage and release said eccentric, as and for the purpose specified.

2. The combination of the pulley-block A, a pivoted lever D, provided with the eye c, the connecting-bar E, and the locking-eccentric C, adapted to engage the elevating-rope
 5 E, substantially as and for the purpose set forth.

In testimony that I claim the above I have

hereunto subscribed my name in the presence of two witnesses.

FRANK E. YOUNG.

Witnesses:
 E. A. C. SMITH,
 F. W. BOND.