

No. 828,380.

PATENTED AUG. 14, 1906.

A. J. BURBANK.

HOIST.

APPLICATION FILED NOV. 13, 1905.

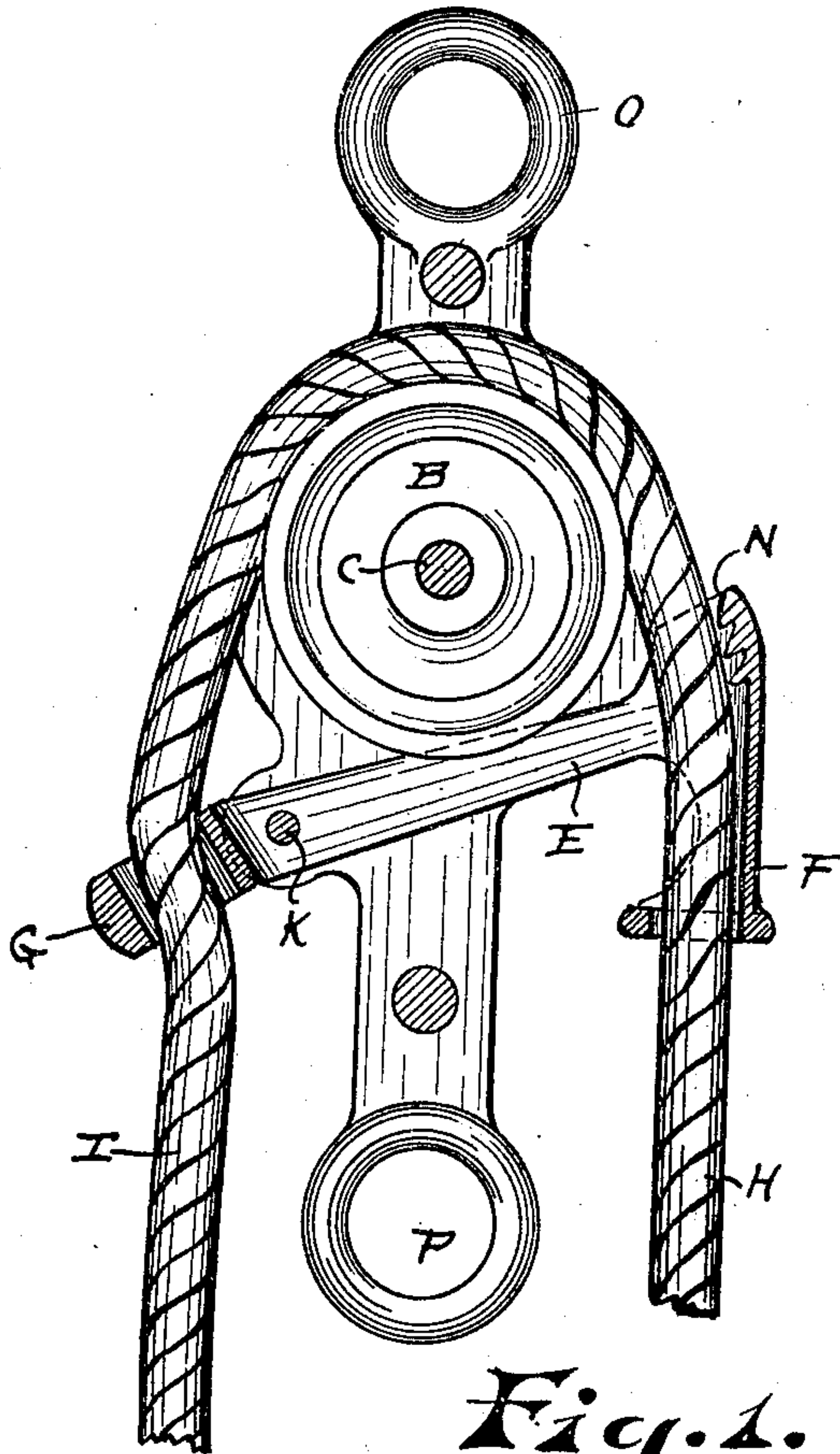


Fig. 1.

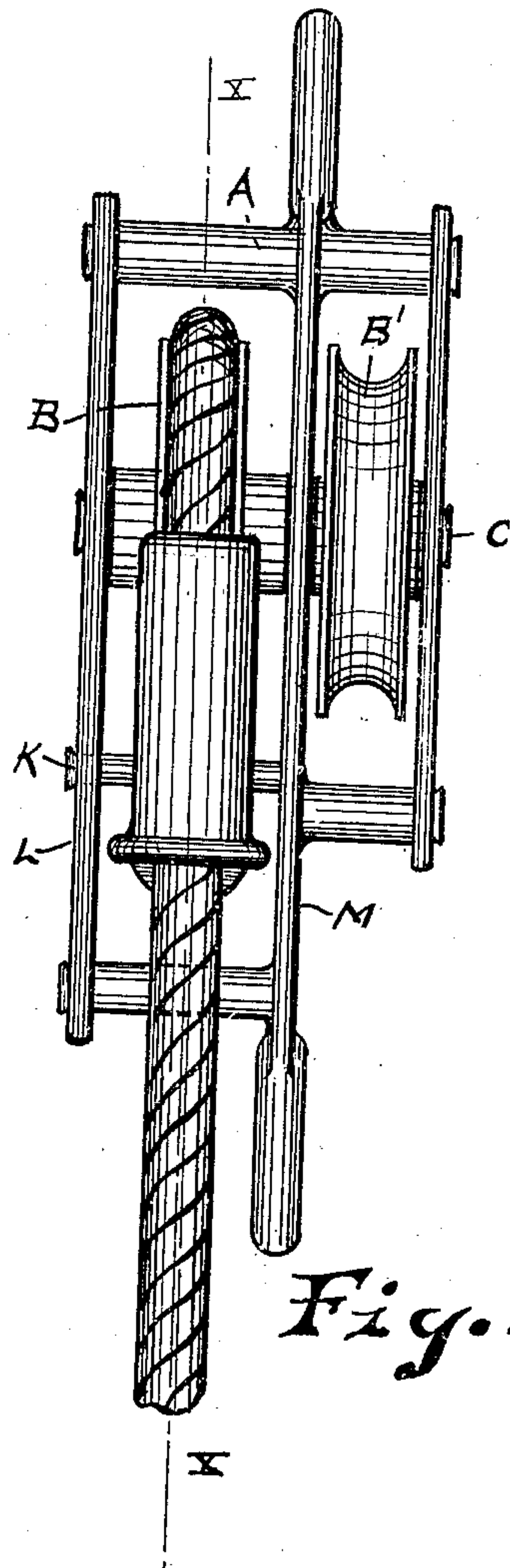


Fig. 2.

WITNESSES:

O. R. Erwin.  
H. M. Schulz

INVENTOR

A. J. Burbank  
BY  
Erwin & Schulz  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ABNER J. BURBANK, OF HARVARD, ILLINOIS, ASSIGNOR TO THE MILWAUKEE HAY TOOL COMPANY, OF MILWAUKEE, WISCONSIN.

## HOIST.

No. 828,380.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed November 13, 1905. Serial No. 287,000.

*To all whom it may concern:*

Be it known that I, ABNER J. BURBANK, a citizen of the United States, residing at the town of Harvard, county of McHenry, and State of Illinois, have invented new and useful Improvements in Hoists, of which the following is a specification.

My invention relates to improvements in rope clamping and releasing mechanism for hoists.

The object of my invention is to provide a simple, efficient, and comparatively inexpensive rope-clamping device which is adapted to be operated by the lateral movement of the hoisting-rope.

The construction of my invention is explained by reference to the accompanying drawings, in which—

Figure 1 represents a vertical section drawn on line *x x* of Fig. 2, and Fig. 2 is a side view thereof.

Like parts are identified by the same reference-letters in both views.

My hoist comprises, among other things, a sheave-block A; pulleys B and B'; pulley-axle C, upon which the pulleys B and B' are revolubly supported from the sheave-block; a single two-arm lever E, provided at its respective ends with guiding-channels F and G for the respective ends H and I of the hoisting-ropes and pin K, by which the lever E is pivotally supported from the plates L and M of the sheave-block. The upper end of the guiding-channel F is provided with a clamping-bearing N, which is adapted to be brought into contact with and to impinge upon the free end H of the rope as such end is swung outwardly or away from the sheave-block, whereby said rope is securely clamped between said clamping-bearing N and the pulley B and the load thereby suspended from the opposite end I of the rope.

When desirous to lower the load, which is suspended from the hoisting-rope, it is necessary simply to move the taut end I of the rope outwardly or in the opposite direction away from the sheave-block, whereby motion will be communicated from the taut end of the rope to the clamping-bearing N through the

guiding-channel G, two-arm lever E, and guiding-channel F, whereby said clamping-bearing is thrown out of engagement with the rope and the load is free to descend. Thus it will be obvious that the rope-clamping bearing may be thrown into clamping contact with the rope by swinging the free end H of the rope outwardly or away from the sheave-block, and such clamping-bearing may be thrown out of engagement with the rope and the rope released by swinging the other end of the rope in the opposite direction. The clamping-bearing N is preferably serrated to facilitate engagement with the rope.

Attention is called to the fact that by the construction shown the two-arm lever E, the guiding-channels F and G, and clamping-bearing N are all formed integrally and may be cast in a single piece, and the same is connected with the sheave-block A, which is substantially of ordinary construction, by a single supporting-pin K, whereby the labor and cost of construction are reduced to the minimum.

The rope-channel G is preferably formed at an angle to the longitudinal center of the lever E, whereby when said lever is in its normal position for raising a load said channel G will be brought to the vertical in line with the taut end of the rope and the rope will pass freely through the same. It will be understood that the two-arm lever E is pivoted to the sheave-block eccentric to the pulley-axle C and at one end of the pulley, whereby the long arm of said lever is free to pass the periphery of the pulley as it approaches the pulley-axle and whereby as said arm is thrown upwardly by the movement of the hoisting-rope the clamping-bearing N will be thrown toward the pulley against the hoisting-rope, whereby the hoisting-rope will be securely clamped between the bearing N and the periphery of the pulley.

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

1. The combination with a hoist comprising a sheave-block, pulley and rope, of a two-arm lever provided at one end with a clamp-

ing-bearing and a guiding-channel for the free end of the rope and at its opposite end with a guiding-channel for the taut end of the rope formed at an angle to the longitudinal center of said lever.

5 2. The combination with a hoist comprising a sheave-block, pulley and rope, of a two-arm lever provided at one end with a rope-

clamping bearing and at both ends with tubular guiding-channels for the hoisting-rope. 10

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

ABNER J. BURBANK.

Witnesses:

H. D. CRUMB,

\_\_\_\_ R. G. EHLE.