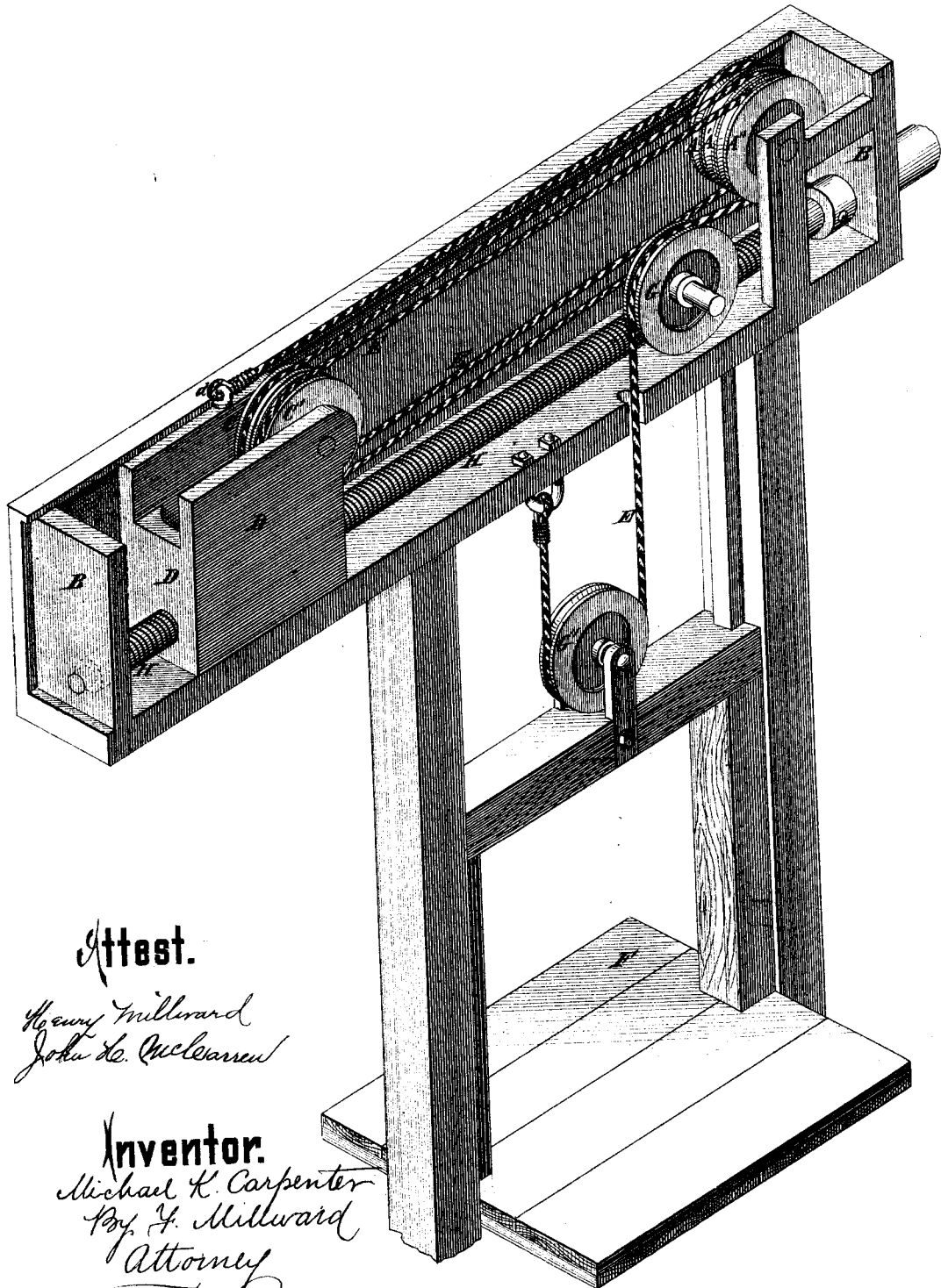


*M. K. Carpenter,*

*Elevator.*

*No. 106,914.*

*Patented Aug. 30, 1870.*



**Attest.**

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# United States Patent Office.

MICHAEL K. CARPENTER, OF CINCINNATI, OHIO.

Letters Patent No. 100,914, dated August 30, 1870.

## IMPROVED HOISTING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, MICHAEL K. CARPENTER, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Hoisting Apparatus; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawing making part of this specification.

### Nature and Objects of Invention.

My invention relates to hoisting apparatus in which a rope or chain is used to support the load, and consists in a certain provision and combination of driving-screw, sliding and stationary pulley-blocks, and rope or chain, by which the driving-power is connected to the hoisting-platform or weight to be raised by simple and efficient means, and in such a way that the weight is sustained at all times, even after the power is thrown off.

The object of my invention is the production of an apparatus in which "winding-drums" for the rope or balance-weights for the load are entirely avoided.

### Description of Accompanying Drawing.

The accompanying drawing represents in perspective the essential features of my invention, a portion of the case, containing the sliding pulley-block, being removed to exhibit interior arrangement of the parts.

### General Description.

A A' A" represent a series of sheave-pulleys, permanently journaled in the case B of the apparatus, and

O C' represent similarly-constructed sheave-pulleys, journaled in the sliding block D.

E is the hoisting-rope or chain which supports the load.

It is attached at one end to the sliding block D at

d, and, after passing in succession over the sheave-pulleys A O A' C' A", it connects in the manner shown, or in any preferred way, to the platform or load F.

"Idler" sheave-pulleys G G' may be used at pleasure, to give direction to the hoisting-rope or chain E.

The load is raised or lowered simply by the sliding motion of the block D, and this block is operated by the screw H, which is journaled at both ends in the case B.

The screw H may be operated by hand or "power," and may be connected in any preferred way to the motor.

It will be readily seen that, although the screw can impart motion to the load in the manner shown, the load cannot reverse the action and move the screw. The load, therefore, is at all times safely supported, and cannot run down even when the driving-belt is thrown off or the driving-power otherwise removed.

My apparatus is obviously applicable to cranes, derricks, and other machines for raising or lowering loads. Where it is used in connection with a hoisting-platform, the customary safety-catches can be employed to support the load in case of the breaking of the rope.

I do not desire to confine myself to the use of a specified number of pulleys A or pulleys O, as the number will, of course, be determined by the work to be done.

### Claim.

The sliding pulley-block D O, stationary pulleys A and driving-screw H, combined and operating substantially in the manner and for the purpose specified

In testimony of which invention I hereunto set my hand.

MICHAEL K. CARPENTER.

Witnesses:

FRANK MILLWARD,  
J. L. WARTMANN.