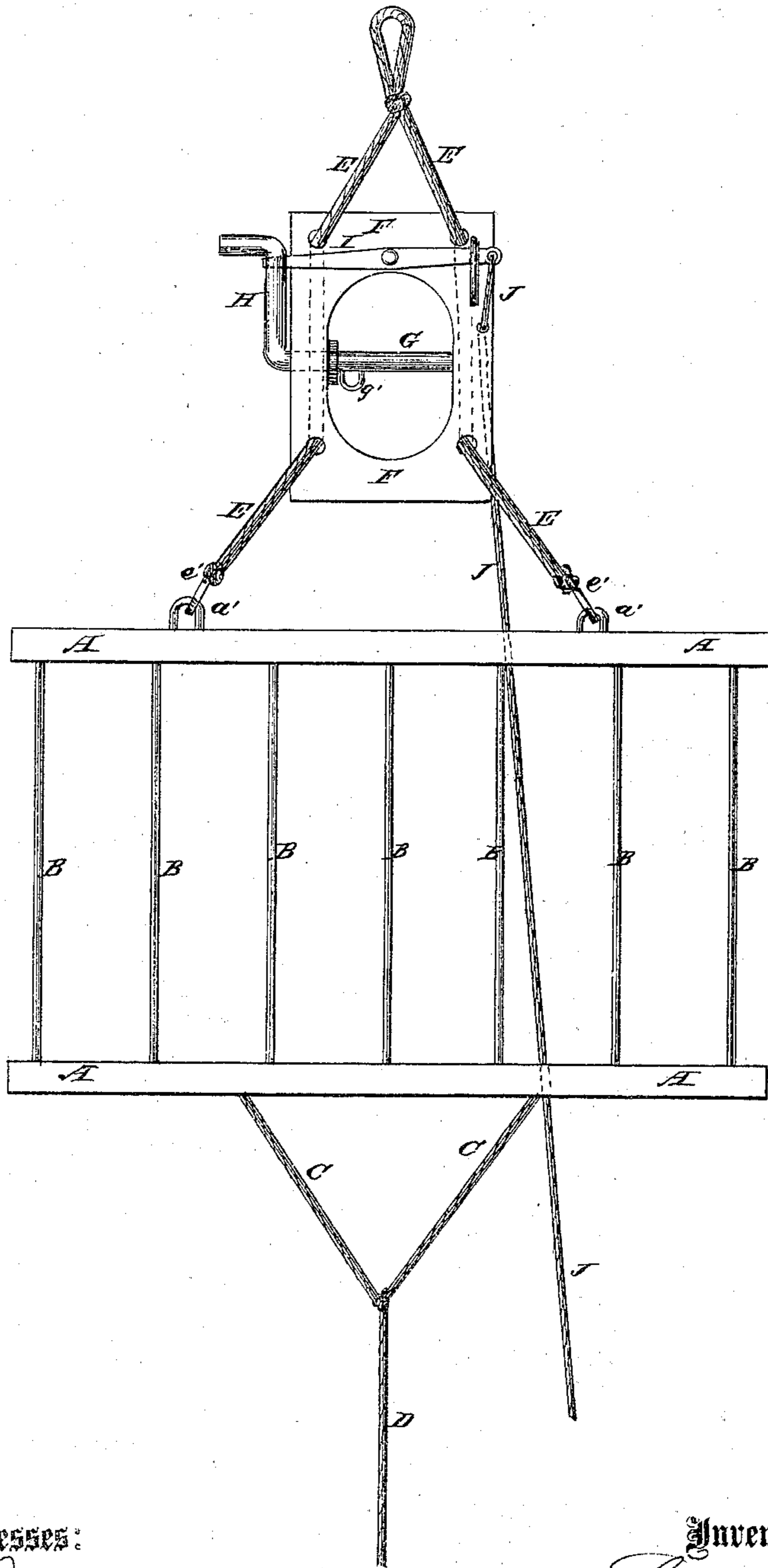


G. W. LONG.

Apparatus for Loading and Unloading Hay.

No. 135,720.

Patented Feb. 11, 1873.



Witnesses:
P. C. Dutcher.
C. Edgwick.

Inventor:
G. W. Long
PER *Munn*
Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE W. LONG, OF DELAWARE CENTRE, IOWA.

IMPROVEMENT IN APPARATUS FOR LOADING AND UNLOADING HAY.

Specification forming part of Letters Patent No. 135,720, dated February 11, 1873.

To all whom it may concern:

Be it known that I, GEORGE W. LONG, of Delaware Centre, in the county of Delaware and State of Iowa, have invented a new and useful Improvement in Hay-Unloader, of which the following is a specification:

The figure is a detail view of my improved device, shown in position for discharging the load.

My invention has for its object to furnish an improved device for unloading hay, corn in the ear, and various other things; and which shall be simple in construction and effective in use. The invention consists in the combination of the sling, the ropes attached to it, the block, crank-shaft, lock and trip latch, and trip-rope with each other, as hereinafter fully described.

A are two timbers, two by five inches, more or less, in size, and of a length about equal to the length of the hay-rack, and which are connected by a number of small ropes, B, of such a length that when extended across the hay-rack the timbers A may hang down at its sides. When the device is used for unloading ears of corn the ropes B should be placed close together, and other ropes should be interwoven with them. To one of the timbers A, at equal distances from its center, are attached the ends of a rope, C, to the center of which is attached the end of the rope D, the other end of which is left free. To the other timber A, at equal distances from its center, are attached eyebolts or staples *a'* to receive hooks *e'* attached to the ends of the rope E, upon the center of which is formed a loop or eye to receive a hook attached to the pulley upon the hoisting-rope. F is a block, through holes in the side parts of which the rope E is passed, so that the said block F may be slipped back and forth upon the said rope E to adjust it. In the middle part of the block F is formed a large hole or opening, across which extends the shaft G, which passes through holes in the side edges of the block F, and to one end of which is attached, or upon it is formed, a crank, H. To the shaft G, within the opening in the block F, is attached a staple or loop, *g*, to receive and hold the end of the rope D while said rope is being wound upon the said shaft G. I is a lever or latch, which is pivoted, at or near its middle part, to the side of the block F. One end of

the latch or lever I projects so much beyond the edge of the block F that when moved toward the shaft G the crank H may strike against it and be kept from turning back. The latch I is kept in place against the side of the block F by its pivoting-bolt, and by one or more keepers attached to the said block F. To the other end of the latch or lever I is attached the end of a rope, J, which passes through a guide-hole in the block F, and the other end of which extends down into such a position that it can be conveniently reached and operated to discharge the load.

In using the device, the sling A B is extended upon the wagon-rack, the load is built upon it, and the loaded wagon is drawn upon the barn-floor, to the side of the stack, or to any other place where the load is to be unloaded. The hooks *e'* of the rope E are hooked into the eyes *a'* of the timber A, and the block F is so adjusted upon the said rope E that it will come about over the middle of the load. The end of the rope D is passed through the loop *g'* of the shaft G, and the crank H is operated to wind the rope D upon the shaft G. When the sling has been drawn sufficiently tight about the load the latch J is adjusted to catch upon the crank H to lock it, and the hoisting-rope is drawn upon to raise the load and carry it to the desired place. When the load is brought over the place where it is to be deposited the trip-rope J is drawn upon to withdraw the latch I and release the crank H and shaft G, allowing the rope D to unwind and the load to drop.

The hoisting-rope is designed to be operated by a capstan, which should be so constructed that the sweep or lever may be readily thrown out of gear to allow the device to be readily drawn down without waiting for the horse to be backed.

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

The combination of the sling A B, ropes C D, rope E, block F, crank-shaft H G, latch I, and trip-rope J with each other, substantially as herein shown and described, and for the purpose set forth.

GEORGE W. LONG.

Witnesses:

THOMAS J. WEBB,
JAMES S. KNOWLES.