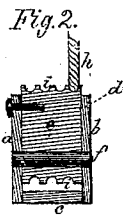
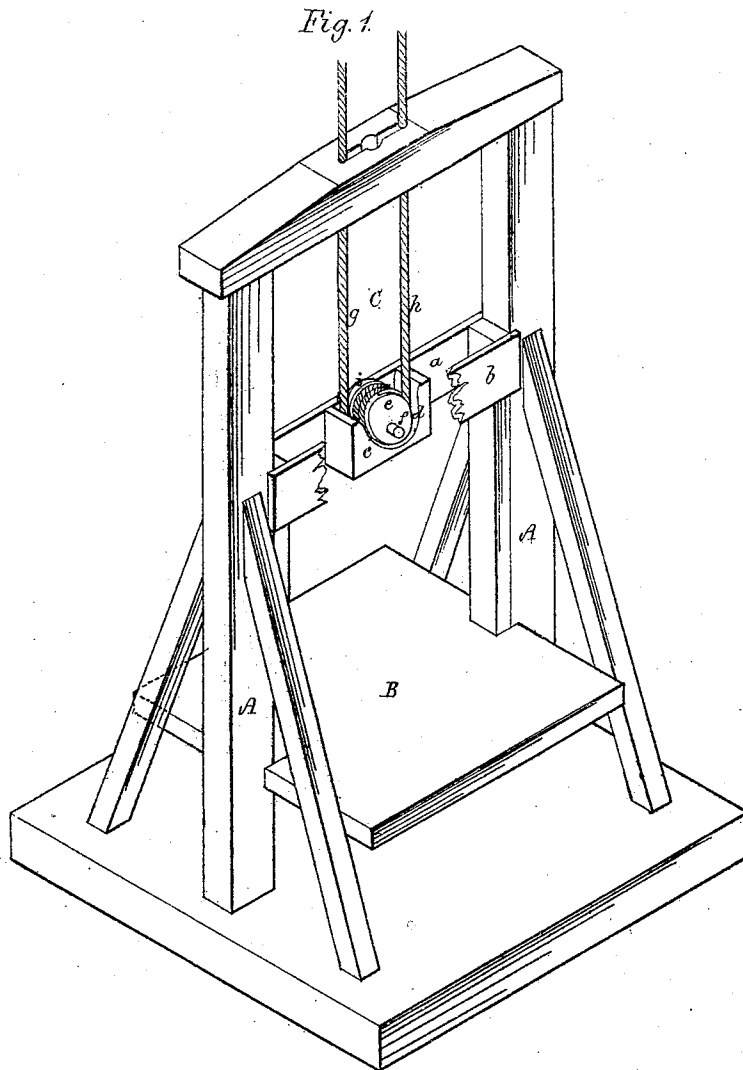


C. WHITTIER.
Elevators.

No. 134,179.

Patented Dec. 24, 1872.



Witnesses.
David Soungesour
Waldo K. Boardman

Charles Whittier,
Attorney.

UNITED STATES PATENT OFFICE.

CHARLES WHITTIER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND HENRY H. MCBURNEY, OF SAME PLACE.

IMPROVEMENT IN ELEVATORS.

Specification forming part of Letters Patent No. 134,179, dated December 24, 1872.

To all whom it may concern:

Be it known that I, CHARLES WHITTIER, of Boston, Suffolk county, Massachusetts, have invented an Improvement in Power-Elevators, of which the following is a specification:

This improvement relates to a class of elevators for hoisting goods, carrying passengers, &c., in which a rope, doubled one or more times, is attached to a hoisting or driving drum, and passes about one or more sheaves or pulleys pivoted to the cross-head or other part of the elevator carriage or platform, the rope being preferably wound or coiled spirally several times about its sheave or pulley for purposes of greater security. The purpose of this improvement is to provide an additional guard against accident in the event of fracture or failure of one side or half of the rope; and consists in the employment of an eccentric disk or pulley, which disk is pivoted within a contracted recess or pocket formed in or applied to the cross-head or other part of the elevator carriage or platform, the pivot of the disk being below its real center, and the whole being so arranged that upon fracture or undue lengthening of one side or half of the rope the eccentric partially turns upon its pivot, and, by presenting its longer diameter to the adjacent wall of the pocket, clamps the opposite side of the rope between the two with a force sufficiently powerful to sustain the weight of the carriage and its load.

The drawing accompanying this specification represents, in Figure 1, a perspective view of my improvement as applied to an elevator-carriage, the outer plate of the cross-head of the latter being removed. Fig. 2 in said drawing represents a transverse section of the cross-head and eccentric disk with the latter locked in its central or intermediate position, as and for purposes hereinafter stated.

In the drawing, A represents the frame, and B the carriage of an ordinary hoisting-elevator, the cross-head of the latter being composed, in this instance, of two outlying plates, *a b*, and an intermediate central block, *c*, the latter being formed with vertical recess or pocket *d*, open at top and semicircular at bottom in longitudinal vertical section, the re-

cessed block last named being an element of my present improvement, which further consists in disposing within this recess or pocket *d* a circular or substantially circular disk or pulley, *e*, the pivot *f* of which is disposed somewhat below its center and extends horizontally through it and the two plates or sides *a b* of the cross-head, the diameter of the concave or semicircular portion of the pocket *d* being slightly larger than that of the disk in order to allow of passage of the hoisting-rope, which is shown in the drawing at C, one side thereof being shown at *g* and the other at *h*, its two ends being carried upward and attached to the hoisting-drum in the ordinary manner. The rope C is coiled one or more times about the disk *e* and is partially sunken within a helical groove, *i*, extending about the periphery of said disk, the groove being by preference of somewhat less diameter than the rope in order that the latter may hug tightly to it.

It will be at once apparent that upon fracture or undue lengthening of one side of the rope C the weight of the carriage B is upborne by the opposite side of such rope, which thus becomes the sole suspensory, the result of this being that the eccentric *e* is by the weight of the carriage slightly turned upon its pivot and its longest diameter advanced in a direction toward the slackened side of the rope, and the latter is instantly and forcibly seized and clamped between the disk and adjacent inner or curved side or wall of the pocket *d*, by this means enabling the remaining side of the rope to constitute a suspensory of the carriage.

The principle of my invention is not limited to a given number of eccentrics or ropes, as more than one of each may be employed.

In adjusting the rope for use when putting up the elevator, I first dispose the eccentric upon its pivot in such manner that its longest diameter is uppermost and coinciding with the center of the carriage and its frame, and I then insert a pin within a hole bored conjointly in the disk and one side of the cross-head or of the block *c*, as shown in Fig. 2 of the drawing. This maintains the disk in its normal or working position and enables me to attach the ends

of the rope to the hoisting-drum above, and to draw its two ends into their proper positions, the pin being subsequently removed.

Claim.

I claim—

The employment, in combination with the carriage or platform or hoisting element of an elevator and the suspensory of the same, of an eccentric disk disposed within a pocket, which partially surrounds and is concentric or there-

about with its pivot, such disk operating in connection with the pocket and suspensory or rope to gripe the latter under conditions named, the whole being arranged and operating in manner substantially as and for purposes stated.

CHARLES WHITTIER.

Witnesses:

F. CURTIS,

W. E. BOARDMAN.