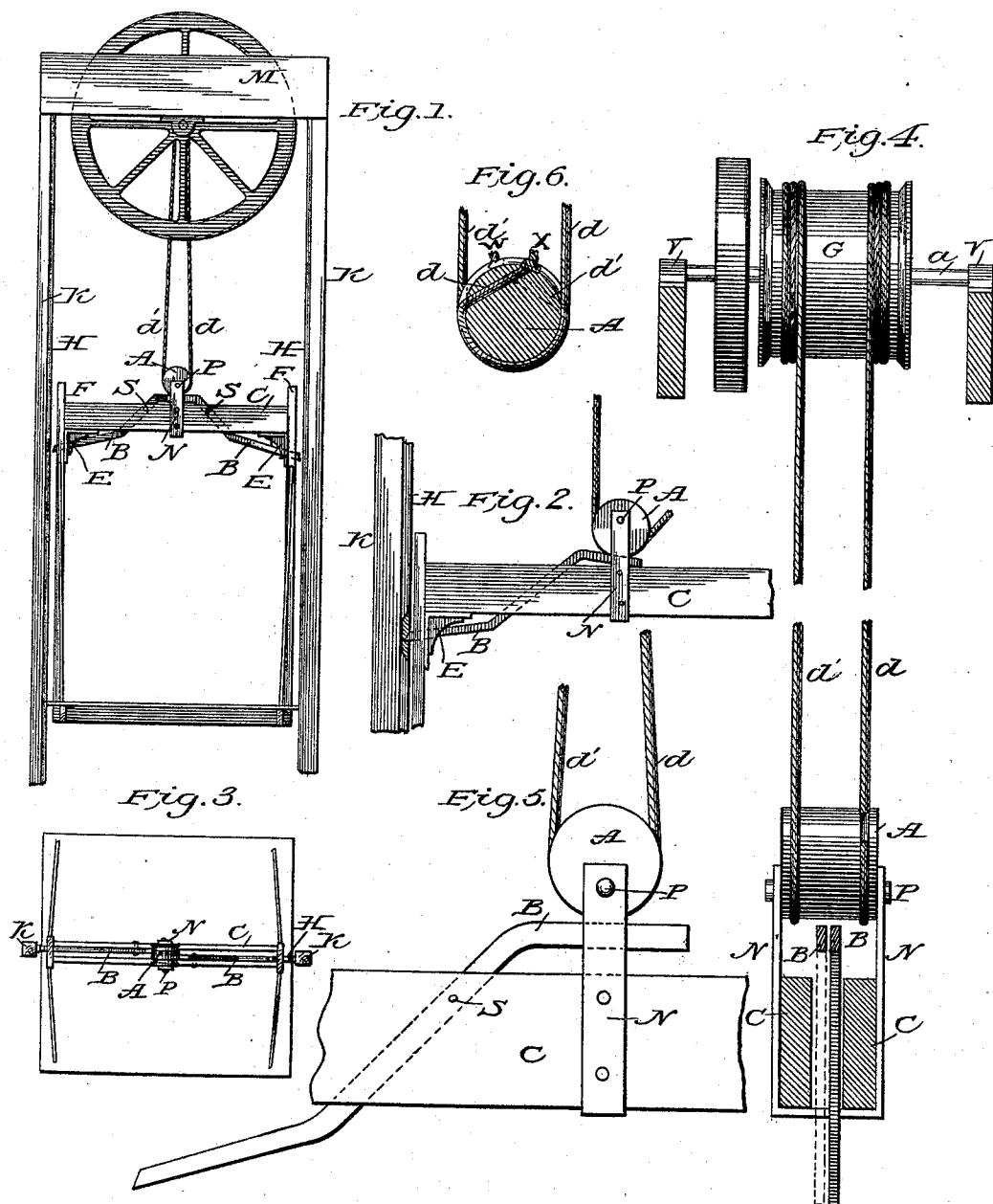


(Model.)

M. J. CUNNINGHAM.
SAFETY DEVICE FOR ELEVATORS.

No. 537,677.

Patented Apr. 16, 1895.



Witnesses.

J. A. Daniel.
C. L. Dalrymple.

Inventor.

Martin John Cunningham.
for
John A. Patterson
Attorney.

UNITED STATES PATENT OFFICE.

MARTIN JOHN CUNNINGHAM, OF SPRINGFIELD, MISSOURI, ASSIGNOR OF
ONE-HALF TO THEODORE F. GRAY, OF SAME PLACE.

SAFETY DEVICE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 537,677, dated April 16, 1895.

Application filed April 14, 1893. Serial No. 470,344. (Model.)

To all whom it may concern:

Be it known that I, MARTIN JOHN CUNNINGHAM, a citizen of the United States, residing at Springfield, in the county of Greene, State of Missouri, have invented a new and useful Safety Device for Elevators, of which the following is a specification.

My invention relates to improvements in elevators, in which dogs operate in conjunction with an eccentric; and the object of my improvement is to provide an appliance attached to the "cage" or car whereby if one of the hauling ropes or chains break the "cage" is caught immediately and locked in whatever position it may be in at the time of the breakage. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view showing the car, guide posts, and hoisting mechanism, the dogs being disengaged from the guides. Fig. 2 is fragmentary view illustrating the action of the dogs when one of the hoisting ropes breaks. Fig. 3 is a plan view of the car showing also the guide posts. Fig. 4 is a vertical section. Fig. 5 is a fragmentary view on an enlarged scale indicating the position of the dogs when the hoisting ropes are intact. Fig. 6 is a sectional view showing the way in which the hoisting ropes are connected to the eccentric, cam or oblong drum.

In the annexed drawings A, designates the eccentric, cam, or oblong drum, the length of which being equal to the width of the timbers on top of car or "cage," the center of said eccentric coming in contact with dogs being a smooth surface, and having cut near each end thereof, grooves, equal in depth to diameter of ropes, said ropes working in said grooves and on opposite sides of said eccentric, and the ends of said ropes being fastened to said eccentric, by means of holes or eyes, the outer ends of said holes or eyes being made tapering or flaring so that strands of the ends of the ropes can be doubled back and leaded or fastened in the usual manner, said ropes giving equal support to said car in moving the same up or down the guides, but should a breakage of one of the ropes occur, the weight of car then being thrown on the other rope, pulls and forces the eccentric

and cam down on the dogs and drives them in the guides, thereby locking the "cage" or car.

B B, designate the dogs.

C, shows the yoke or top timbers of elevator in which, or to which the safety device is attached.

The ropes or lifting cables are designated by *d d'*.

E, designates brackets through which dogs work through ordinary slots therein.

F, represents side timbers connecting yoke with platform of car.

G, represents the winding drum, both ropes, chains or cables being attached on same side of drum by means of holes or eyes, and at either end thereof; said ropes winding toward the center, or toward each other as the car is elevated.

H H, represent guides and K K, represent posts.

M, represents top timber of elevator on which the lifting drum and operating machinery of elevator is fixed.

N N, represent upright irons or supports, which are attached (by bolts), one to either side of yoke, and serve to hold eccentric in position.

P, represents axle or pin on which eccentric turns.

S, represents fulcrum or pin which supports and holds dogs in position.

a, represents journal axle, and *v* journal box for drum G.

w, and *x*, in Fig. 6 indicate the manner in which the lifting ropes are attached to eccentric.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the elevator car, of the dogs B B pivoted to the car, the eccentric pivoted to the car directly above the upper ends of the dogs, and the ropes or cables *d d'* wound in opposite directions on said eccentric, and secured thereto, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MARTIN JOHN CUNNINGHAM.

Witnesses:

JOHN F. GIBSON,
GEORGE HODSON.