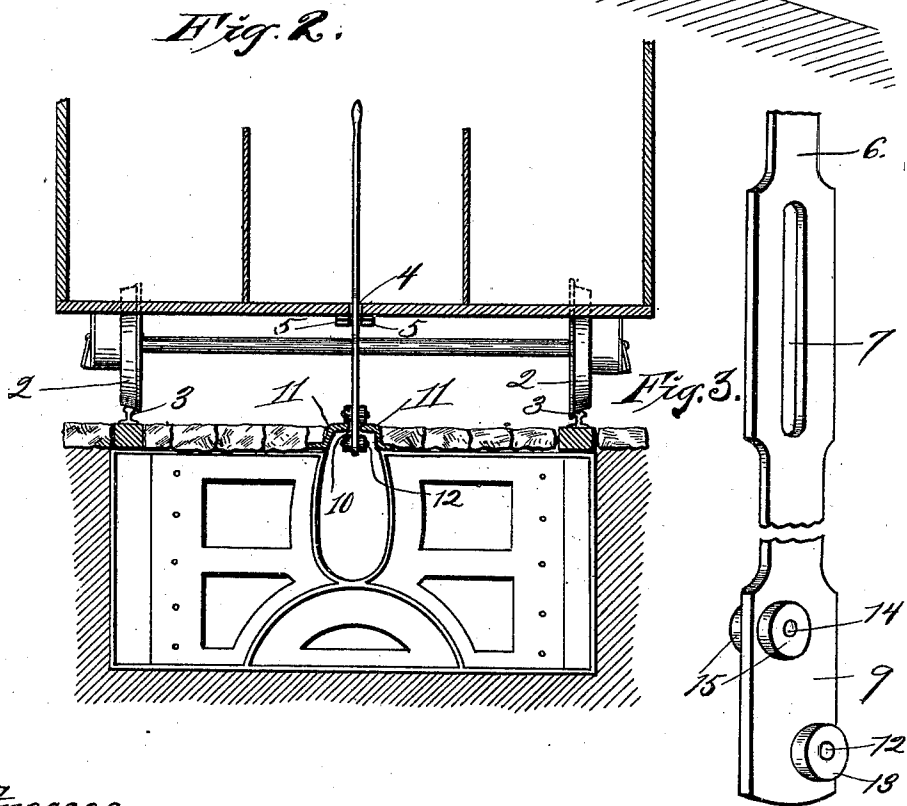
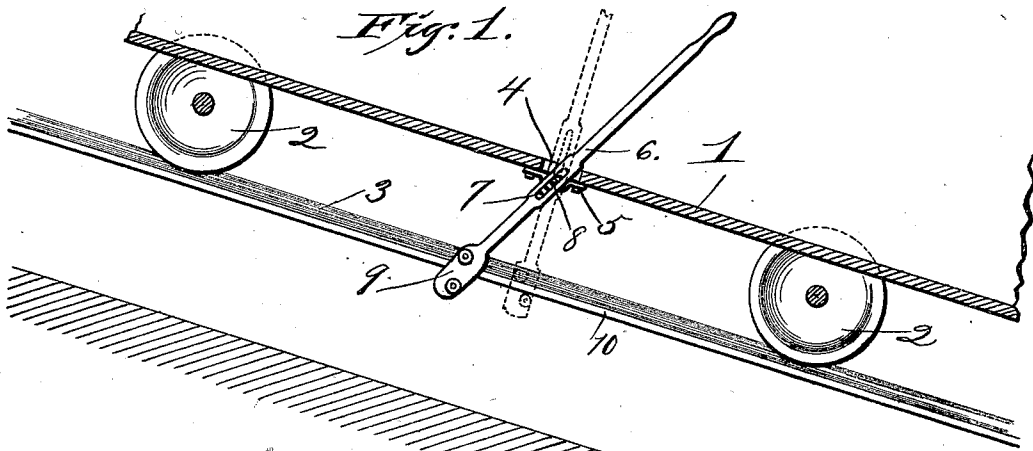


(No Model.)

K. A. MAYNARD.
SAFETY BRAKE.

No. 513,432.

Patented Jan. 23, 1894.



Witnesses:-
M. P. Smith:
Maud Fitzpatrick: By *Kitchell A. Maynard*
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Attys.

UNITED STATES PATENT OFFICE.

KITCHELL A. MAYNARD, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF TO WILLIAM M. RANDALL AND GEORGE M. RANDALL, OF SAME PLACE.

SAFETY-BRAKE.

SPECIFICATION forming part of Letters Patent No. 513,432, dated January 23, 1894.

Application filed May 1, 1893. Serial No. 472,514. (No model.)

To all whom it may concern:

Be it known that I, KITCHELL A. MAYNARD, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Safety-Brakes for Cable-Cars on Inclines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in braking appliances; and the object of my invention is to produce a simple, strong, durable and inexpensive brake, to be applied to cable and other cars, and especially for use in case a cable should break or other accident happen by which the gripman would lose control of the car, and where he would be unable to check the car with the usual brakes.

With this object in view, my invention consists in certain peculiar and novel features of construction and arrangement as will be hereinafter described and pointed out in the claims.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, is a vertical longitudinal section of a portion of a car, and showing my improved brake applied thereto, and passing between the slot rails. Fig. 2, is a vertical cross section of the same. Fig. 3, is a detail perspective view of a portion of the brake-lever carrying the friction rollers at its lower end.

In the drawings, 1 designates a portion of a cable car, mounted upon wheels 2, which ride upon the track rails 3. The car is formed conveniently to the gripman, with a longitudinally extending slot 4, and secured to the bottom of the car and at each longitudinal side of said slot is a bearing 5. The brake-lever 6, is formed with an elongated slot 7 engaging the cross bolt 8 connecting the bearings 5, and is also formed in its lower end with the enlargement 9. This enlargement 9 passes through and is adapted to travel in the slot 10, formed by the slot rails 11—11. Revolvably mounted upon opposite ends of the bolt or pin 12 passing transversely and horizontally through the lower portion of the en-

largement 9 of said lever and near one corner thereof, are the friction rollers 13; one of said rollers being located upon each side of the enlargement 9. A similar cross bolt 14 passes through said enlargement 9 near its upper end, and adjacent to the corner diagonally opposite from the lower corner through which the bolt 12 passes, and revolvably mounted upon each end of said cross bolt 14 is a friction roller 15. This lever in its normal position or when at rest, assumes the inclined position shown in full lines Fig. 1, and the upper rollers 15 run upon the upper sides of the slot rails 11, and are also located vertically above the lower rollers 12, which are a suitable distance below and out of contact with the under side of said slot rails.

To apply this brake the gripman grasps the handle at the upper end of the lever 6 and pulls it in the direction of the arrow Fig. 1, this operation causing said lever to assume a vertical position and throwing the friction rollers 13 and 15 out of vertical alignment, so that said rollers will bear frictionally against the lower and upper sides of the slot rails 11, and arrest the car; the elongated slot 7, traveling upward upon the cross bolt 8.

It will thus be seen that I have produced a simple, strong, durable and inexpensive brake, which can be applied cheaply and easily to the cable cars now in use, and which is positive and reliable in action.

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

1. The combination with a cable car, of a brake pivotally carried thereby, and having its lower end passing into the grip slot, and friction rollers carried by said lever at the upper and lower sides of said grip slot and adapted to bear upon the upper and lower sides of the slot-rails, when the lever is operated, substantially as set forth.

2. The combination with a cable car, of a lever having an elongated slot therein, and a cross bolt carried by said car and engaging said slot, an enlargement at the lower end of said lever passing through the grip slot, and a friction roller journaled near one lower corner of said enlargement, and a friction roller

journalled near the upper corner of said enlargement diagonally opposite to the first mentioned corner, substantially as set forth.

3. A brake, comprising a lever having elongated opening, and formed at its lower end with an enlargement, cross bars passing through the diagonally opposite lower and upper corners of said enlargement, and fric-

tion rollers carried revolubly at each end of said cross bolts, substantially as described. 10

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

KITCHELL A. MAYNARD.

Witnesses:

M. P. SMITH,

G. Y. THORPE.