(No Model.)

G. W. CANNON.

BRAKE FOR ELEVATORS OR DUMB WAITERS.

No. 269,776. Patented Dec. 26, 1882.

Fig. 1.

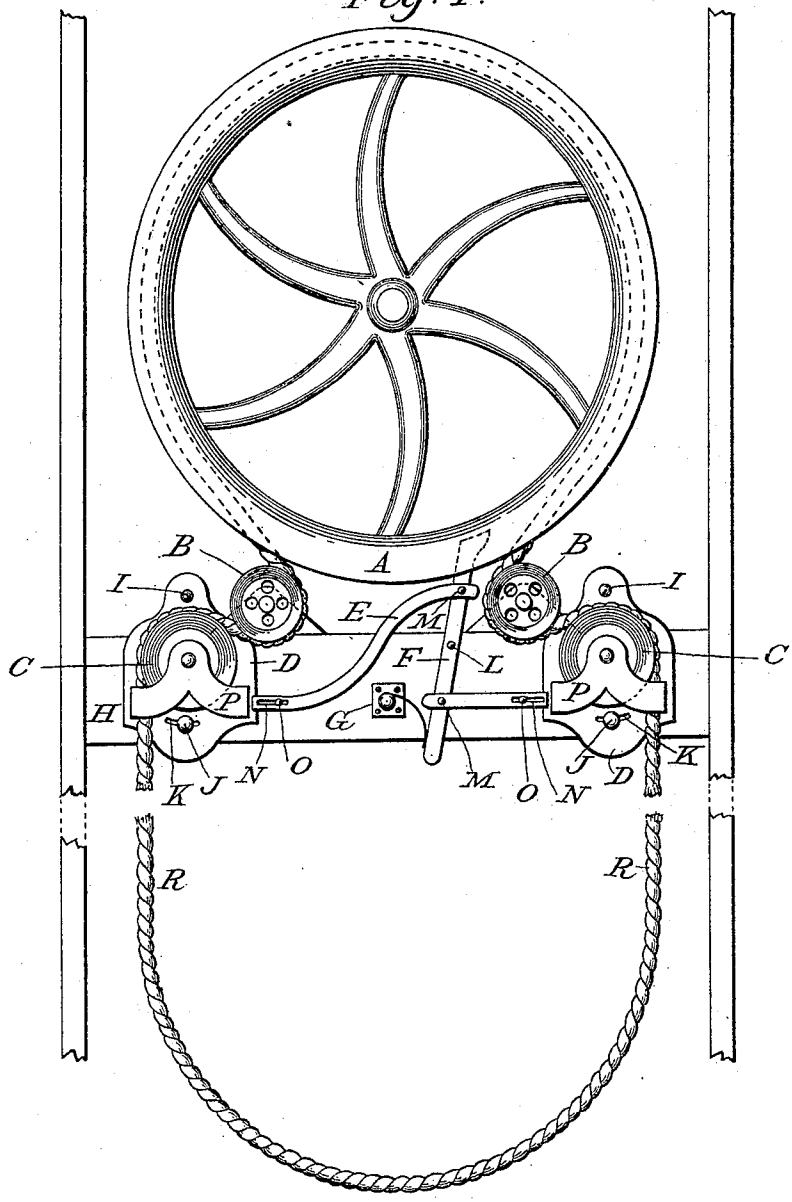
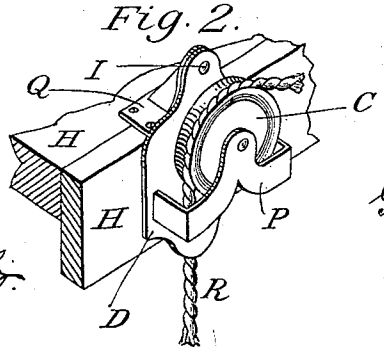


Fig. 2.



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GEORGE W. CANNON, OF POUGHKEEPSIE, NEW YORK.

BRAKE FOR ELEVATORS OR DUMB-WAITERS.

SPECIFICATION forming part of Letters Patent No. 269,776, dated December 26, 1882.

Application filed September 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. CANNON, a citizen of the United States, residing at Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and useful Brake for Elevators or Dumb-Waiters which are operated by an endless rope and wheel, (and for which no patent has been granted in any other country, nor has the same been in use in this or any other country, to the knowledge of applicant,) of which the following is a specification.

Figure 1 on the drawings represents a sectional view, and Fig. 2 the manner of hanging the pulleys P.

My invention relates to improvements in brakes applicable to dumb-waiters and all elevators that are operated by an endless rope and wheel. The object that I attain is the holding of the hoisting-wheel firm by a brake-lever, which is shown in Fig. 1 of drawings at F. This rod or lever is hung upon the pivot L, and is so arranged as to impinge in the groove of the hoisting-wheel A at a point distant about one-sixth the diameter of the hoisting-wheel from the foot of its perpendicular diameter on the side thereof that enables the brake to resist the descending motion of the wheel to best advantage.

The brake F swings on the strong pivotal bolt L, and is forced against the rim of the wheel A by the spring G bearing against the lower arm of the brake, and the hoisting-wheel by such application is held firmly in its position, though the waiter or elevator may be overloaded; or I can attain the same action of the brake-lever F and dispense with the spring G by attaching a weight to the lower end of the lever-brake, thus making its action automatic. I attain this object without any additional brake-rope by the arrangements shown in the accompanying drawings.

Like letters indicate like parts.

For this purpose I place directly below the hoisting-wheel a plank or board as a platform, fastened firmly to the sides of frame of the waiter or elevator, sufficiently wide to sustain the mechanism hereinafter described, which board is shown at H H in the said drawings. On this platform I place two pulleys, B B, which are about four to six inches in diameter, and whose grooves are in the same plane as that of the hoisting-wheel A, and so placed as to deflect inward the hoisting-ropes by passing inside of them a distance equal to the diameter of the pulleys C C on each side, as shown, Fig. 1. The pulleys C C are slightly larger than the others, and have an oblong plate, D, for the back, and the plate P P broken around the pulley and secured to the plate D, and forming on one side a slot for the hoisting-rope and on the other presenting a square face to the ends of the levers E E, and these pulleys are hung upon the flange Q, as shown at Q, Fig. 2, at the point I I, which is located horizontally a little outside of the center of the upper part of the plate D and flange Q, so as to sustain the weight of the rope without deflecting the pulleys against the levers E E, and the height of the flange Q and disk D is such as to raise the rope slightly above the horizontal line in passing from beneath the pulleys B B over the pulleys C C. The pulleys C C are sustained by the bolts I I, on which they swing easily in the plane of the hoisting-rope, and by the bolts J J, passing through the curved slots K K, so that when they swing inward they impinge upon the ends of the levers E E.

E E, Fig. 1, are levers attached at one end by rivet M M to the brake F above and below the fulcrum of the brake, and operating in different directions to produce the same motion in the brake, and at the other ends fastened to the plank H H by rivets O O passing through the slots N N, so as to permit a horizontal motion of the levers when impinged by the swinging pulleys C C. When there is no force applied to the hoisting-rope R the brake F holds the hoisting-wheel firmly; but when either rope is pulled downward the swinging pulley C is deflected inward, and at the point P impinges against and moves the levers E E and moves the brake out of contact with the hoisting-wheel, and thereby allows the wheel A to move freely, and the wheel A will revolve in either direction while such force is applied, and the instant such force ceases the brake is set again by the spring G or by the weight on the lower end of the lever.

In elevators or dumb-waiters where the hoisting-wheel is made of a series of arms with

V-shaped guards to catch the rope the upper end of the brake can be furnished with a shoe long enough to impinge upon at least two of such arms of the wheel.

Having thus described my invention and the manner of constructing and operating the same, what I claim, and desire to secure a patent for, is—

The combination and arrangement of the pulleys B B and C C and the levers E E and the brake F, the spring G, with the hoisting-wheel A, and endless rope R, all substantially as set forth.

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