No. 618,025. Patented Jan. 17, 1899.

R. BUTTERWORTH.

SAFETY LOCK FOR ELEVATORS.

(Application filed Sept. 10, 1898.)

(No Model.)

FIGURE 1.

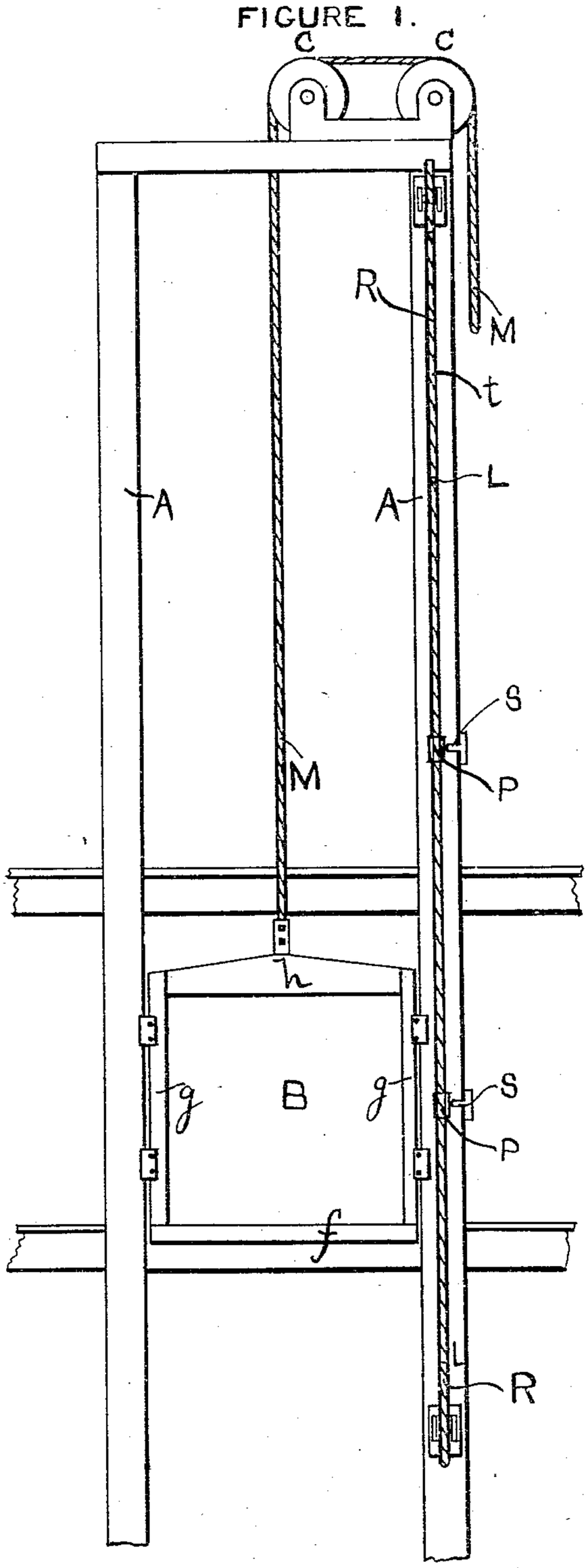
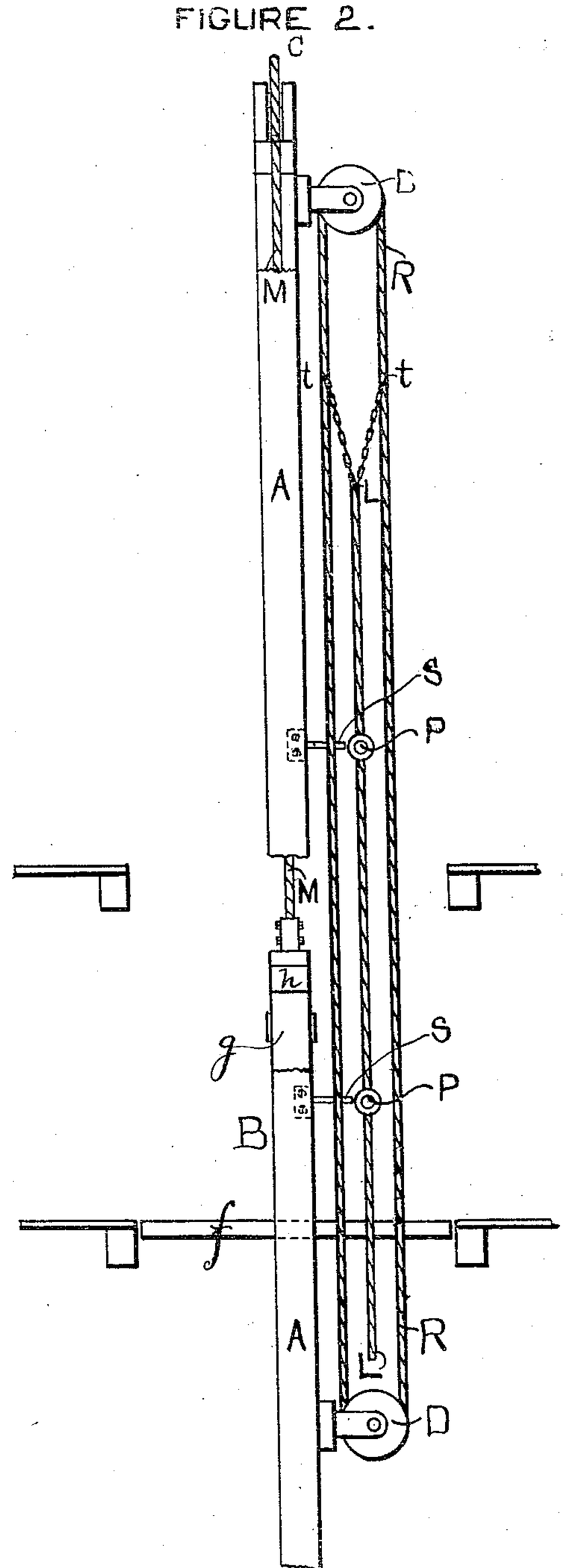


FIGURE 2.



WITNESSES,

Waldo I. Getchell.

Elwell P Butterworth.

INVENTOR.

Robert Butterworth

UNITED STATES PATENT OFFICE.

ROBERT BUTTERWORTH, OF SOMERVILLE, MASSACHUSETTS.

SAFETY-LOCK FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 618,025, dated January 17, 1899.

Application filed September 10, 1898. Serial No. 690,646. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BUTTERWORTH, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Safety-Locks for Elevators, of which the following is a specification.

In the more common elevator practice the starting and stopping of the car are controlled by means of a shipper-rope running over sheaves at the top and bottom of the elevator-well. Generally from one of these sheaves the valves or belt-shippers are worked for starting or stopping the mechanism for driving the elevator.

As generally installed there is no means of securing this controlling-rope against the manipulations of persons at floors different from that at which the elevator-car happens to be stationed; also, there is no means of securing a locked position at any desired point in the elevator-well, whether at landings or at a position between landings. These positions between landings are determined by the different heights of trucks or wagons which unload from or load onto the elevator.

My invention is directed to securely lock the elevator-car at any position in the elevator-well, and this locking may be done by any person at any position in the well, whether on the car or at one of the landings. The mechanism which I have devised is adapted to do this.

The following description is sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation. Fig. 2 is a side elevation, with elevator-guide partly broken away, of an elevator-well provided with my invention.

Like letters of reference indicate corresponding parts in both figures of the drawings.

A A represents the elevator-well; B, the elevator-car, considered as a whole. The car is of the ordinary form of freight-elevator and consists of a floor *f* and two vertical standards *g g*, connected by a cross-bar *h*, to which the rope M M for lifting is attached in the usual manner. The shipping or controlling rope R R runs over the sheaves D D and is situated on one side of the elevator-well. At two points *t t* in this controlling-rope the auxiliary rope L L is connected by means of chain or other suitable material, as shown. This auxiliary rope has at certain distances loops or thimbles P, which when the elevator-car is at rest at any height in the well may be slipped over projecting pins or hooks S. By so doing the controlling-rope is fixed, or at least what little slack there is in the controlling-rope will not be enough to allow the elevator-car to start. The object in using the auxiliary rope L L for the position of the loops or thimbles instead of putting them in the controlling-rope itself is due to the controlling-rope being generally tight on the sheaves, thus not allowing sufficient looseness to slip the loop over the projecting hook. These loops or thimbles should be provided in the auxiliary rope for all such positions in the well that it is probable that a person will desire to do the act of locking.

It is seen that no matter at what height the elevator-car is or upon what position the person is who wishes to do the locking, as long as there is a loop or thimble and its accompanying hook in the reach of that person the elevator-car can be locked at this position and by this person.

Having explained my invention, what I claim is—

In an elevator locking device, the combination, with a series of pins or hooks, one at each floor, of a controlling-rope, and a series of loops or thimbles connected with the controlling-rope and adapted to be engaged by said pins or hooks, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

ROBERT BUTTERWORTH.

Witnesses:

WALDO I. GETCHELL,

ELWELL R. BUTTERWORTH.