

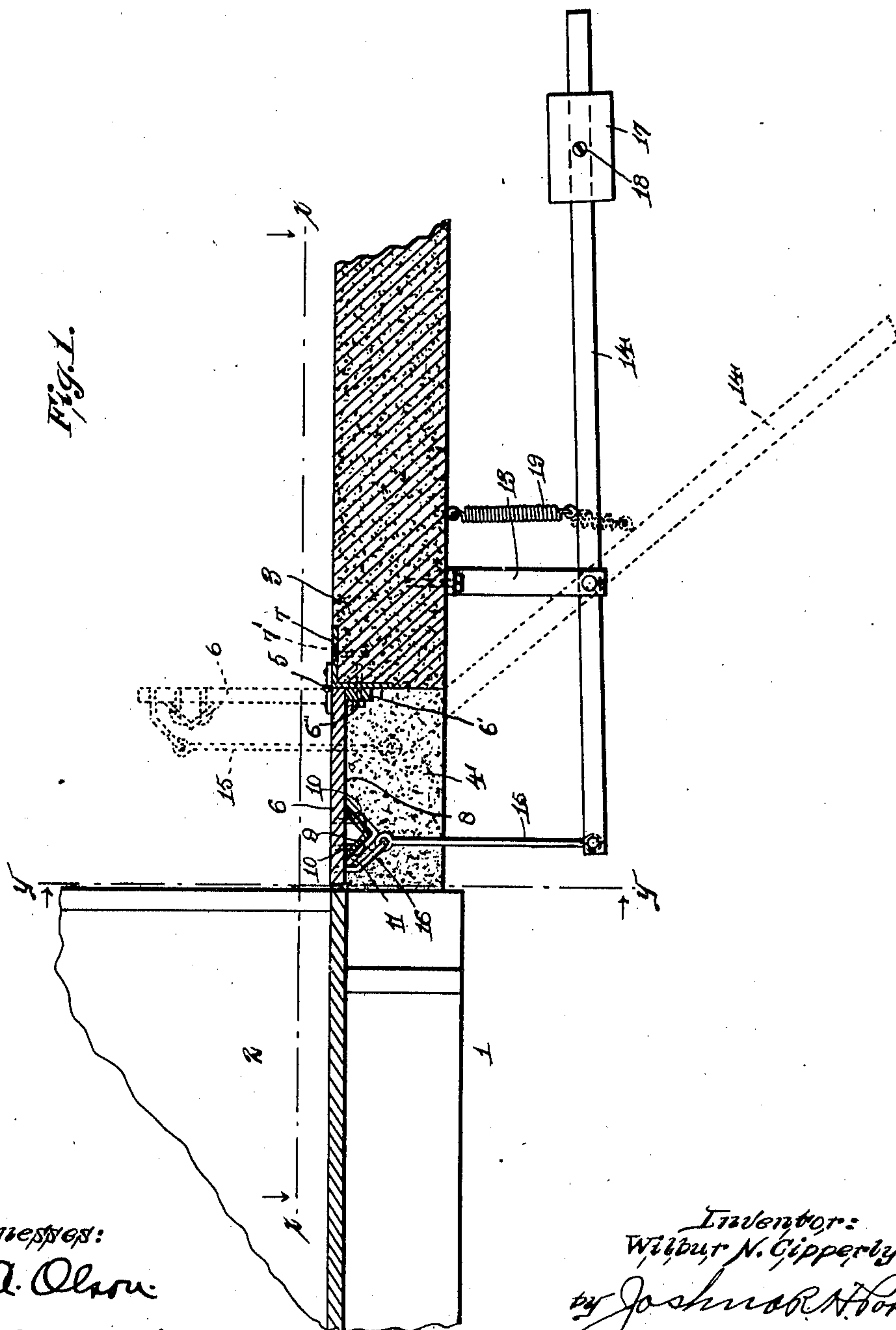
W. N. CIPPERLY.
 PROTECTIVE DEVICE FOR ELEVATORS.
 APPLICATION FILED AUG. 1, 1910.

990,226.

Patented Apr. 25, 1911.

3 SHEETS-SHEET 1.

Fig. 1.



Witnesses:

A. A. Olson

B. G. Richards

Inventor:

Wilbur N. Cipperly

by Joshua A. Dorn

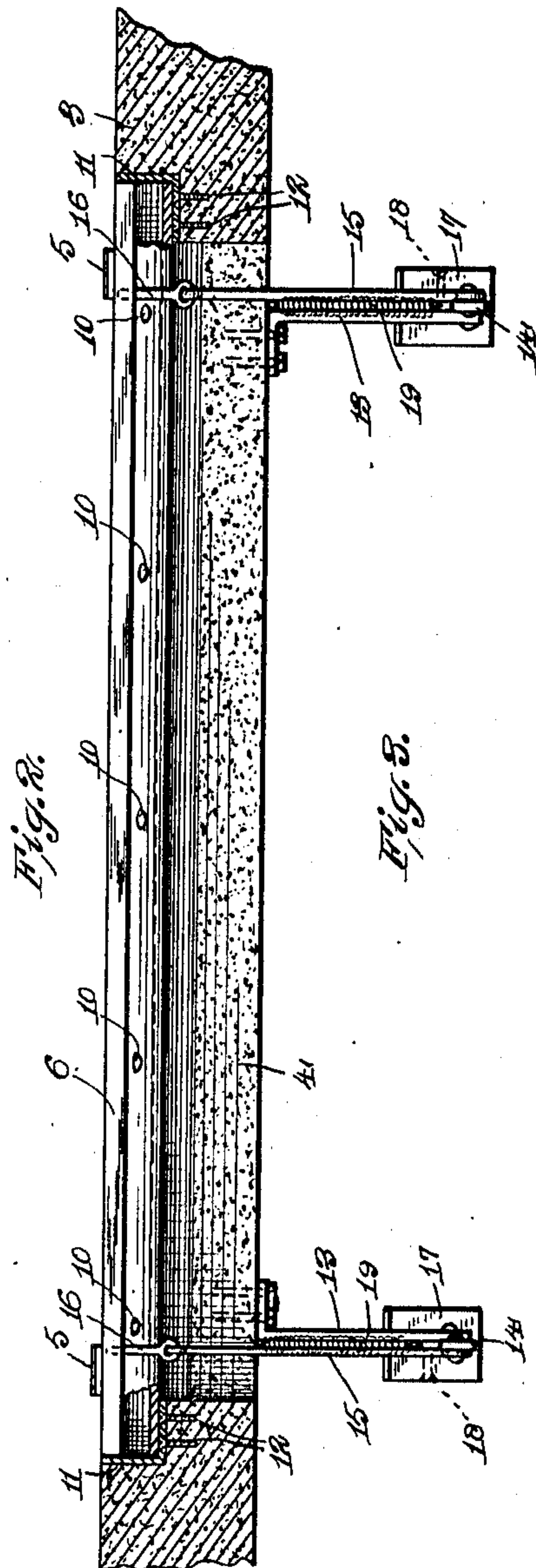
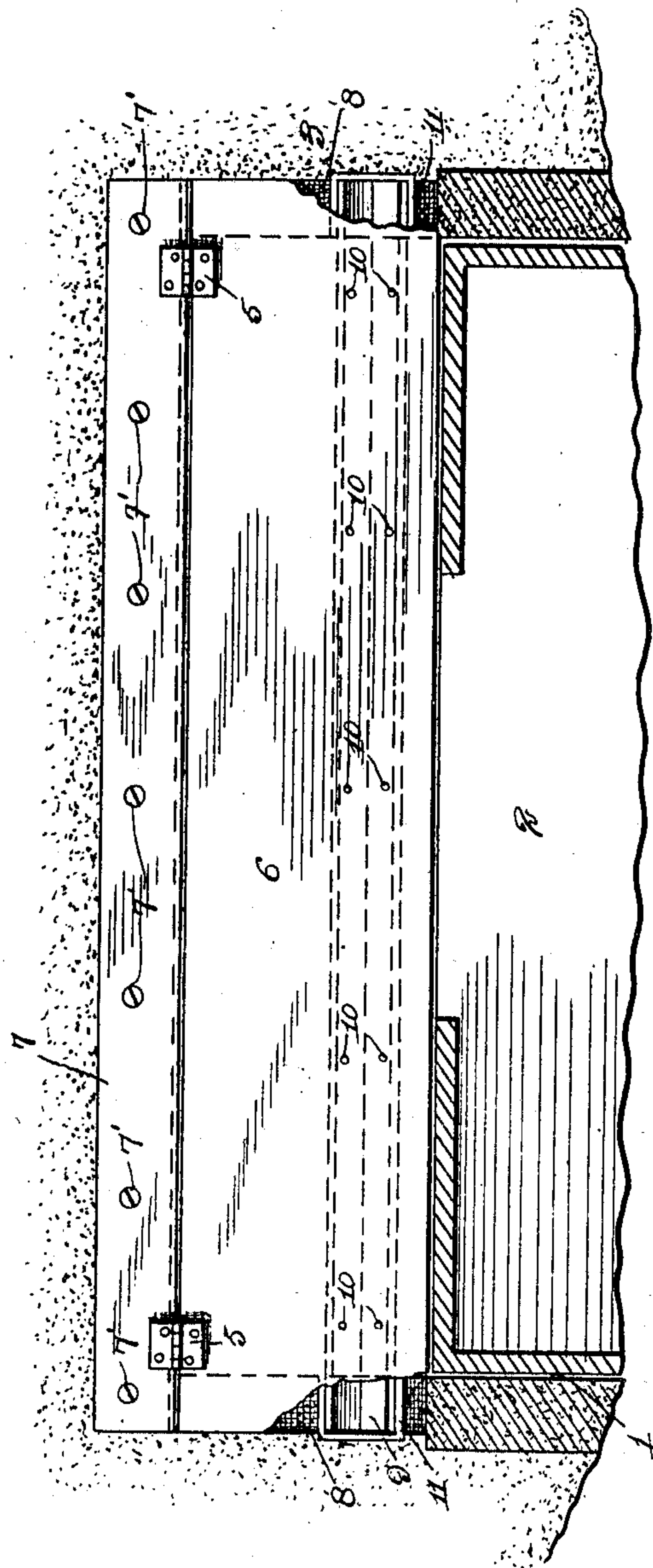
his Attorney.

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2 SHEETS—SHEET 2.



Witnesses:
A. A. Olson.
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UNITED STATES PATENT OFFICE.

WILBUR N. CIPPERLY, OF ROCKFORD, ILLINOIS.

PROTECTIVE DEVICE FOR ELEVATORS.

990,226.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed August 1, 1910. Serial No. 575,008.

To all whom it may concern:

Be it known that I, WILBUR N. CIPPERLY, a citizen of the United States, residing at Rockford, county of Winnebago, and State of Illinois, have invented certain new and useful Improvements in Protective Devices for Elevators, of which the following is a specification.

My invention relates to elevators, and more specifically to protective devices therefor.

The object of my invention is the provision of a protective device for elevators adapted for arrangement at the elevator landing, the same being designed to prevent injury to a person whose body might accidentally, or for any other reason, project beyond the platform of the elevator car during ascent of the latter.

A further object of my invention is the provision of a protective device of the character mentioned which will be of durable and economical construction and efficient in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in a protective device for elevators characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which,

Figure 1 is a fragmentary transverse section of a floor or landing intersected by an elevator shaft, an elevator being indicated in the latter, to which is applied a protective device embodying the preferred form of my invention, Fig. 2 is a horizontal section on line $x-x$ of Fig. 1, portions of the structure therein shown being broken away to better illustrate the construction, and Fig. 3 is a vertical section on line $y-y$ of Fig. 1, portions of the device being in this figure also broken away to expose underlying parts.

Referring now to the drawings 1 indicates an ordinary elevator shaft in which is arranged for operation an elevator car 2, 3 indicating a landing or floor intersected

by the shaft 1. The landing or floor 3 together with the walls of the elevator shaft are shown as being constructed of concrete, this being the material preferably used in conjunction with my device. However, said landing and walls, it is understood, may be constructed of any other suitable material desired.

The landing 3 immediately adjacent the elevator shaft is cut away forming a rectangular opening 4, the opening being of a length equal to the width of the elevator shaft and of a width such as to permit of the passage of the body of a person there-through. Secured by hinges 5 to the edge of the landing 3 at the opening 4 is a door 6 adapted when in lowered position to completely cover the opening 4, said door being of a width equal to that of said opening but of a length slightly greater than that of the latter, the same being so arranged that the outer or free end thereof is adapted to swing only upwardly from a horizontal position, the latter being the normal position thereof. The edge of the landing at the place of connection therewith of the door 6 is reinforced by an angle iron 7 embedded therein and additionally secured thereto by screws 7'; a strip 6' secured to the member 7 by screws 6'' adjacent the attached edge of the door serving to support said edge of the latter when in lowered position. Said door is so arranged that when in lowered or horizontal position the upper surface thereof is flush or coplanar with the upper surface of the landing, the respective ends thereof, when the door is in lowered position, resting in recesses 8 provided for the reception thereof in the upper surfaces of the landing adjacent the ends of the opening 4. Said door is reinforced adjacent its outer end by means of a longitudinally extending angle iron 9 arranged upon the under side thereof and rigidly secured thereto by means of rivets 10. The ends of said iron, when the door is in lowered position, rest in angular metallic pockets 11 arranged in the recesses 8 and secured to the landing by screw bolts 12.

Secured to the landing at the underside thereof and adjacent the respective ends of the door 6 are depending brackets 13. Fulcrumed to the lower ends of said brackets

intermediate their extremities are elongated levers or bars 14. The forward ends of said levers are connected by means of links 15 to eyes 16 secured to the underside of the door 6 adjacent the free edge thereof and at the respective ends thereof. Upon the opposite ends of said levers are mounted for slidable adjustment weight blocks 17 which counterbalance the door 6 so that opening movement or upward swinging of the latter may be effected by the slightest force exerted upon the underside of the door. Set screws 18 threaded into the blocks 17 and engaging the levers 14 in their inner extremities serve to lock said blocks in positions of adjustment upon said levers. Light tension springs 19 engaging the rearward ends of the levers 14 serve to normally hold the door 6 in lowered or horizontal position.

With the provision of a structure of the construction as set forth at each landing or floor intersected by an elevator shaft it will be seen that, in the upward movement of the elevator car, should the body of a passenger accidentally or for any reason, be projected from the doorway of the elevator car beyond the platform thereof, the same will abut the door 6 and in which event the latter will be swung upwardly thereby to permit of the passage of the body uninjured. Hence said door under normal conditions will remain in horizontal position to permit of the passage of passengers thereover to and from the elevator car, but when exigencies as above described, demand, the same will swing upwardly to prevent injury.

The device is of simple construction, the same is positive in operation, is not susceptible to readily become inoperative, and may be installed at a comparatively low cost.

While I have shown what I deem to be the preferable form of my device, I do not wish to be limited thereto, as there might be various changes made in the details of construction and arrangement of parts described without departing from the spirit of my invention comprehended within the scope of the appended claims.

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

1. The combination with an elevator shaft, a landing intersected thereby, and an elevator operating in said shaft, said landing adjacent the doorway of said elevator being cut away forming a narrow elongated opening, of a door hinged to said landing and adapted, when in horizontal position, to traverse said opening, the free end of said door being positioned adjacent the elevator shaft, the same being adapted for swinging only upwardly from said horizontal position, a lever and a counterweight adjustable

upon said lever cooperating with said door, and a spring for normally holding said door in horizontal position, substantially as described.

2. The combination with an elevator shaft, a landing intersected thereby, and an elevator operating in said shaft, said landing adjacent the doorway of said elevator being cut away forming a narrow elongated opening, said opening being of a length substantially equal to the length of the elevator shaft and of a width such as to adapt the passage of the body of a person therethrough, of a door hinged to said landing and adapted, when in horizontal position, to traverse said opening, the ends of said door extending beyond the extremities of said opening and being adapted when said door is in a horizontal position to rest upon the upper side of said landing so as to prevent downward movement of the free end of said door beyond horizontal position, a V-shaped reinforcing brace secured to the bottom of said door near its free edge and resting in V-shaped depressions provided in the top of said landing at either side of said door, a pivotal lever arranged beneath said door, a counterweight adjustable upon said lever, an operative connection between said lever and said door, and a spring adapted to normally hold said lever in position to hold said door in horizontal position, substantially as described.

3. The combination with an elevator shaft, a landing intersected thereby, and an elevator operating in said shaft, said landing adjacent the doorway of said elevator being cut away forming a narrow elongated opening, of a door hinged to said landing and adapted when in horizontal position to traverse said opening, the free end of said door being positioned adjacent the elevator shaft, the same being adapted for swinging only upwardly from said horizontal position, a lever and a counterweight adjustable upon said lever cooperating with said door, and readily yieldable means for normally holding said door in horizontal position, substantially as described.

4. The combination with an elevator shaft, a landing intersected thereby, and an elevator operating in said shaft, said landing adjacent the doorway of said elevator being cut away forming a narrow elongated opening, said opening being of a length substantially equal to the width of the elevator shaft and of a width such as to adapt the same to permit of the passage of the body of a person therethrough, of a door hinged to said landing and adapted, when in horizontal position, to traverse said opening, the ends of said door extending beyond the extremities of said opening and being adapted

when said door is in horizontal position to rest upon the upper side of said landing so as to prevent downward movement of the free end of said door beyond horizontal position, a pivoted lever arranged beneath said door, a counter-weight adjustable upon said lever, an operative connection between said lever and said door and readily yieldable means for normally holding said door in horizontal position, substantially as described. 10

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILBUR N. CIPPERLY.

Witnesses:

ROSS E. WATSON,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
