F. G. HENKLE.

ELEVATOR AUTOMATIC SAFETY APPLIANCE.

APPLICATION FILED MAR. 18, 1912.

1,044,174. Patented Nov. 12, 1912.

Fig. 1.

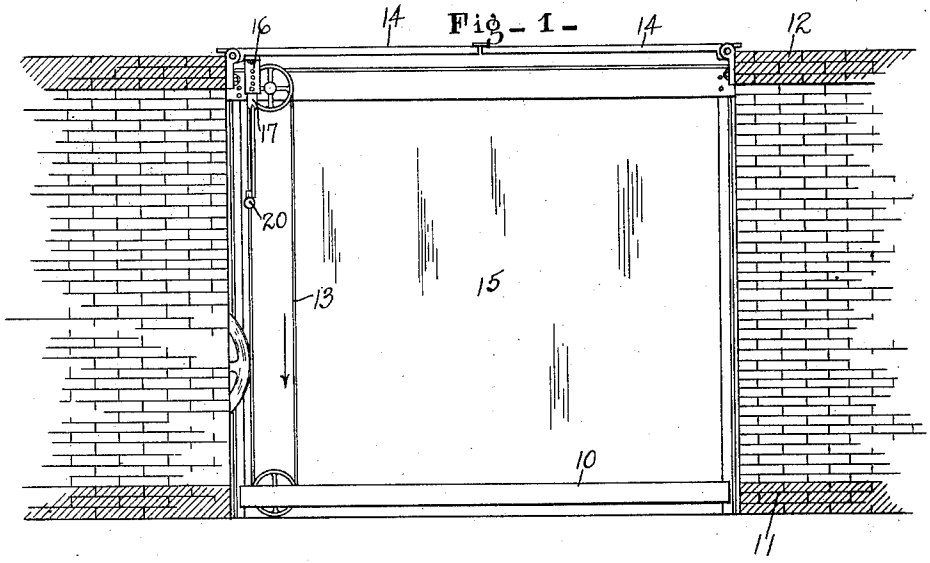


Fig. 2.

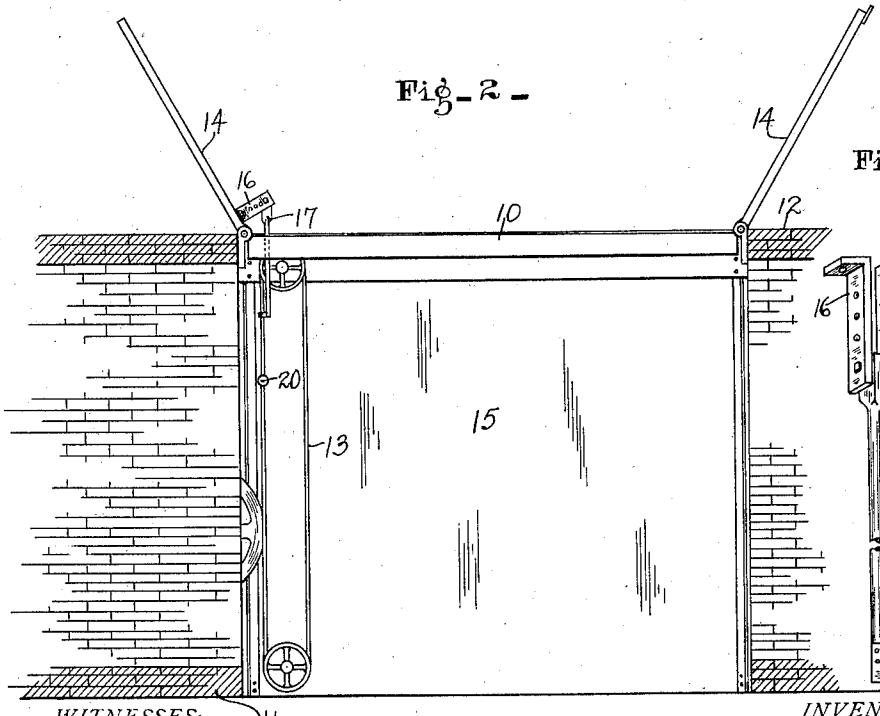
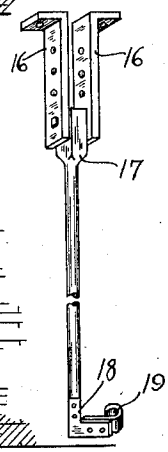


Fig. 3.



WITNESSES:

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ELEVATOR AUTOMATIC SAFETY APPLIANCE.

1,044,174. Specification of Letters Patent. Patented Nov. 12, 1912.

Application filed March 18, 1912. Serial No. 684,533.

To all whom it may concern:

Be it known that I, FRANK G. HENKLE, a citizen of the United States, and a resident of Indianapolis, county of Marion, and State of Indiana, have invented a certain useful Elevator Automatic Safety Appliance; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

The object of this invention is to provide an improved safety device for use in connection with the controlling cable of an elevator, whereby it will be impossible to start the same until the door or other covering has been opened at the upper end of the shaft or well.

The invention is particularly adapted for use with side walk freight elevators and by its use will prevent the frequent accidents which have resulted from starting the elevator car without first raising the side walk doors above the elevator shaft and afterward attempting to lift the doors and open them from beneath as the elevator car is ascending.

The feature of the invention lies in providing a stop upon the underside of the door or shaft covering which will have engagement with a block secured to the shift cable when the car is stopped and will prevent the car from being started upward until the shaft covering has been raised.

The nature of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is an elevation of a side walk elevator with the overhead doors closed and with my invention installed thereon and showing the car in its lowest position. Fig. 2 is the same as Fig. 1, but with the doors opened and with the car in its upper position. Fig. 3 is a perspective of the device with portions broken away.

There is shown in the drawings an elevator 10 operating between the level of the basement floor 11 and the level of the side walk 12 and which is operated by means of the well known shift cable 13. Doors 14 hinged at the side walk serve to cover the shaft 15 of the elevator. Secured to the left hand door 14, as shown in Fig. 1, there are two L-shaped straps 16 which project at right angles from the door and are spaced apart a short distance and between them one end of a rod 17 is pivoted, the lower end 18 of which is bent at right angles and upon the end of the bent portion a hook or loop 19 is secured, through which one side of the shift cable 13 may operate. When the elevator is stopped and when the doors are closed the strap 16 and the rod 17 will assume the position shown in Fig. 1 and the stop block 20 is secured upon the shift cable 13 in such a position as to engage the underside of the loop 19 upon the bent end of the rod 17. To start the elevator and cause it to ascend the right hand cable is given a downward pull, as shown by the arrow in Fig. 1, but should the doors be closed, the block 20 engaging the underside of the loop 19 will prevent its movement of the cable, and the elevator car cannot be started until the overhead doors 14 have been raised. This will move the straps 16 and rod 17 to the position shown in Fig. 2, and the shift cable can then be operated to cause the car to ascend.

The utility of this device is self evident and it will be readily seen that it will be impossible for the operator to be injured by being crushed between the elevator car and the overhead door by having failed to open them before he started the car as it would be impossible to start until after he had opened the doors.

I claim as my invention:

1. The combination with an elevator, an elevator car, a shaft covering, and means for causing the operation of the elevator car, of a stop secured to said operating means, and means intermediate said stop and said shaft covering whereby when the elevator shaft is closed by said covering said operating means will be held and the elevator car will be kept from moving.

2. The combination with an elevator, an elevator car, a shaft covering, and means for causing the operation of the elevator car, of a stop secured to said operating means, and means intermediate said stop and said shaft covering and in engagement therewith when the elevator shaft is closed by said covering for holding said operating means whereby the elevator will be kept idle.

3. The combination with an elevator, an elevator car, a covering for the elevator shaft, and flexible means for causing the operation of the elevator car, of a stop block secured to said operating means, and means intermediate said stop and said shaft cover-

ing and in engagement therewith when the elevator shaft is closed by said covering for holding said operating means whereby the elevator will be kept idle.

4. The combination with an elevator, an elevator car, a door for closing the elevator shaft, and flexible means for causing the operation of the car, of a stop secured to said operating means, and means secured to said door and extending into engagement with said operating means and with said stop when said door is closed for holding said operating means whereby the elevator car will be kept idle.

5. The combination with an elevator, an elevator car, a door for closing the elevator shaft, and flexible means for causing the operation of the car, of a stop secured to said operating means, a rod pivotally secured to said door and movable therewith and with one end surrounding said operating means above said stop and in engagement with said stop when said door is closed, and means secured to said door and extending into engagement with said operating means and with said stop when said door is closed for holding said operating means whereby the elevator car will be kept idle.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

FRANK G. HENKLE.

Witnesses:
G. H. BOINK,
E. H. MAYO.