





# UNITED STATES PATENT OFFICE.

CHARLES D. B. FISK AND WILLIAM W. C. SPENCER, OF BOSTON, MASSACHUSETTS, ASSIGNORS TO SPENCER ELEVATOR SAFETY GUARD COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

## ELEVATOR-GUARD.

SPECIFICATION forming part of Letters Patent No. 734,225, dated July 21, 1903.

Application filed February 7, 1903. Serial No. 142,429. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES D. B. FISK and WILLIAM W. C. SPENCER, both of Boston, county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Elevator-Guards, of which the following is a specification.

In the patent to W. W. C. Spencer, No. 648,309, dated April 24, 1900, is described an elevator-guard which projects downward from the floor of the elevator-car at its door to prevent a person in his anxiety to get into the elevator-car from getting his foot caught under the elevator-car as it descends and is about to stop at a landing. This guard has many advantages; but it has been found that in cases where the elevator-car descends into a shallow pit at the lower story or basement of the building a special excavation has to be made for the guard or else the guard will strike the bottom of the pit and be bent or broken off. Where the well-floor is cemented, it is of course difficult under such circumstances to make a proper excavation, and hence we have invented a sliding elevator-guard, which is preferably self-adjusting and is so constructed that under ordinary circumstances it will afford ample protection to passengers, and yet a portion of it will slide up out of the way and allow the elevator-car to descend into the shallow pit without damage.

Our invention will be understood by reference to the drawings, in which it is shown in the simplest and best form now known to us.

Figure 1 is a front elevation of an elevator-guard embodying our invention and having two sliding sections. Fig. 2 is a vertical section on line 2 2 of Fig. 1. Fig. 3 is a similar section showing a guard of like nature, but differently attached, because of the different construction of the elevator-car. Fig. 4 shows a guard after it has slid out of the way, the section of Fig. 3 being taken at one of the upper floors and the section of Fig. 4 being taken with the elevator-car at the basement of the building.

In all the views the floors and walls of the elevator-well are shown in section.

A represents one of the upper floors of the

building, A' being the basement-floor, and A<sup>2</sup> the floor-supports.

B B are the walls of the elevator-well.

C is the elevator-car floor, C' being the supporting-beams forming part of the elevator-car in the form of elevator-car shown in Figs. 1 and 2.

The guard, as shown, is comprised of a stationary part D and one or two sliding parts D' D<sup>2</sup>. The stationary part D is attached to the edge of the floor of the elevator by screws *d* or in any other suitable way, and in the form of elevator-car shown in Figs. 1 and 2, it rests against the beam C', which prevents it from getting out of line. As shown in Figs. 3 and 4, where the elevator-car floor has no supporting-beam C' angle-irons E are provided, against which the rear of the guard rests, and one or more braces E' are also provided, to which the lower end of each angle-iron E is bolted to stiffen the guard. The sliding part D' of the guard is attached to the stationary part D of the guard in such a way that it will easily slide from the position shown in Fig. 3 to the position shown in Fig. 4, and for this purpose we prefer that the edges of the part D shall be turned over to form ways *d*<sup>4</sup> for the edges of the sliding part D', that the sliding part D' shall be slotted, as shown at *d'*, and that rivets or bolts *d*<sup>2</sup> shall pass through the slots *d'* in the sliding part D' and into the stationary part D of the guard, so that the sliding portion will be free to slide and at the same time will be guided in its movement, so that it will not jam and also so that its extent of movement may be limited. It is of course evident that more than two slots and bolts may be used if the guard is of extreme width.

In use the guard is attached, as in the patented structure referred to, to the edge of the floor of the elevator under its door, so that as the elevator descends a person attempting to step through the door onto the elevator-car before it is quite settled in position cannot get his foot under the elevator-car, his foot instead striking the face of the guard. When the guard reaches the lower story, as shown in Fig. 4, the lower edge of the sliding portion D' strikes the bottom F



of the well or, preferably, a block *f*, located thereon, and is slid up into position by the falling of the elevator-car. The guard is therefore adjustable, and in the form of our invention shown is self-adjusting, according to the depth of the well below the lower floor of the building. When the elevator-car rises again, the weight of the sliding portion of the guard *D'* will cause it to drop again into its open position. We prefer to finish the lower edge of the sliding portion by turning or rolling it back and upward, as shown at *d*<sup>3</sup>, Figs. 2, 3, and 4, and we prefer in most cases to have but one sliding part to our guard, although more than one may be used if thought best. As shown in Fig. 1, there are two sliding parts, one, *D'*, which slides in the part *D*, and the part *D*<sup>2</sup>, which in like manner slides in the part *D'*. In this case the part *D'* has ways *d*<sup>4</sup>, slots *d'*, and rivets *d*<sup>2</sup> to guide the part *D*<sup>2</sup>, and the part *D* has ways *d*<sup>4</sup>, &c., in which the edges of the part *D'*, carrying the part *D*<sup>2</sup>, may slide. These and the exact means of connecting the closing or sliding portions of the guard with the elevator-car are details which may be varied without departing from our invention, and it is of course understood that the guard shall extend downward from the elevator-car in a general vertical direction, though the exact angle of it or any part of it with the floor of the elevator-car is immaterial.

The guard, in fact, comprises two or more leaves. They overlap and are so connected that one may slide over the other, so that if the elevator moves in a shallow well the lower leaf on striking the floor of the well will slide up on those above it and so temporarily shorten the reach of the guard. They are imperforate, (except as they are slotted in the form shown in the drawings,) so as not to allow a person's foot to reach under the

elevator-car as the elevator-car is settling to place on a level with the floor at which it is to stop.

What we claim as our invention is—

1. The elevator-guard above described, comprising two or more leaves, one a stationary leaf adapted to be attached to the floor of the elevator-car, the other leaves sliding vertically thereon, whereby a person's foot will not be allowed to reach under the floor of the elevator-car as the car settles into place, and the guard itself may collapse when striking an obstruction at the well-bottom.

2. The elevator-guard above described, comprising two or more leaves, one a stationary leaf adapted to be attached to the floor of the elevator-car and having ways at each end, the other leaves being slidable in said ways, in combination with stops to limit the sliding movement of said leaves, said guard being imperforate as described.

3. The elevator-guard above described, comprising a series of leaves, one adapted to be attached to the floor of the elevator-car and having ways at each end and bolts projecting from its surface intermediate thereof, and one or more sliding leaves adapted to slide in said ways, and normally depending from the lower edge of said stationary leaf, said sliding leaves having slots adapted to receive said bolts, said guard as a whole being imperforate, as described.

In testimony whereof we hereunto set our names this 3d day of February, 1903.

CHARLES D. B. FISK.

WILLIAM W. C. SPENCER.

Witnesses to C. D. B. F.:

WILLIAM F. FISK,

SUSAN E. FISK.

Witnesses to W. W. C. S.:

GEORGE O. G. COALE,

M. E. FLAHERTY.