May 1, 1951 O. FELIX ET AL 2,550,918

ESCALATOR RAIL GUARD

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Fig. 1.

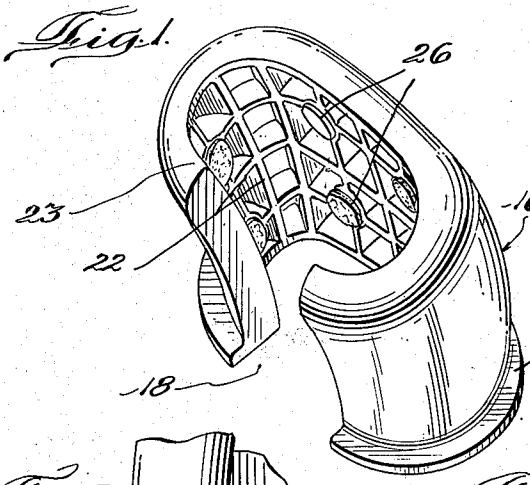


Fig. 4.

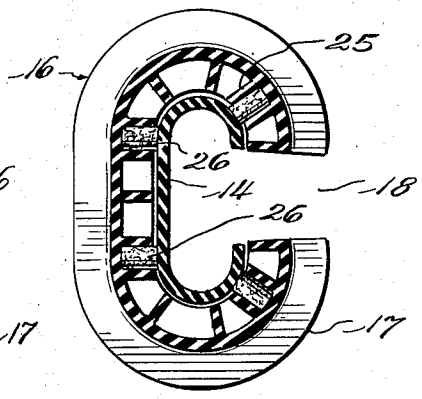


Fig. 2.



Fig. 6.

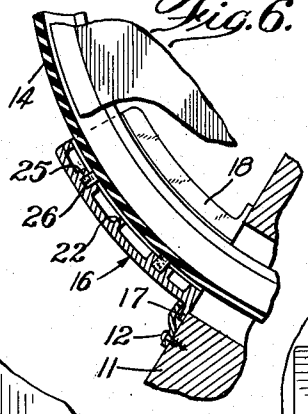


Fig. 3.

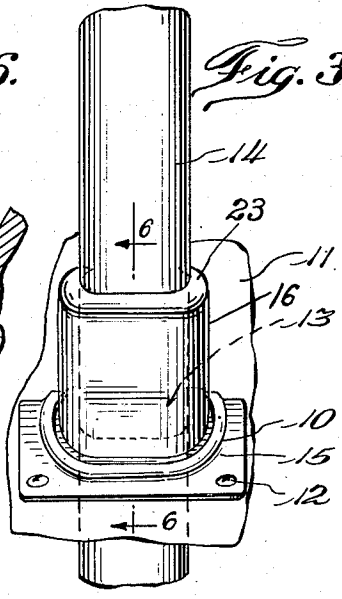


Fig. 5.

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ESCALATOR RAIL GUARD

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9 Claims. (Cl. 198—16)

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Our invention relates to guards for escalators and is particularly concerned with devices for preventing injury to careless individuals who keep their hands on the travelling rail of an escalator after reaching the end of the escalator path.

It is not uncommon for small children when riding in an escalator to hold their hands on the rail after reaching the end of the trip, and out of childish curiosity to retain their hands on the rail down to the point where the rail disappears. Unless a suitable guard is arranged at this point the hand may be painfully pinched or even seriously injured.

It is accordingly necessary to provide a guard at this point which will permit free passage of the rail in its normal travel, while effectively preventing admission for a foreign object, such as a person's hand.

The principal object of my invention, therefore, is to provide such a guard which will effectively accomplish the purposes outlined and at the same time will be inexpensive to fabricate.

A further object of my invention is to provide a guard of the type referred to which will be formed of a material which is slightly resilient, but at the same time will provide sufficient resistance to prevent admission of foreign objects.

Still another object is to provide such a guard mounted loosely enough to permit automatic self adjustment to variations in movement of the rail, thus reducing friction and wear.

Various other objects and advantages will suggest themselves to those skilled in the art as the description proceeds.

Referring now to the drawings forming a part of this specification and illustrating a preferred embodiment of my invention:

Fig. 1 is a perspective view of a guard embodying my invention;

Fig. 2 is a fragmentary side elevational view, partly in section, showing such a guard applied to an escalator rail installation;

Fig. 3 is a front elevational view of the same;

Fig. 4 is a sectional view taken substantially along the line 4—4 of Fig. 2; and

Fig. 5 is a fragmentary elevation of the inside of the guard.

Fig. 6 is a sectional view on the line 6—6 of Fig. 3.

The numeral 10 represents a supporting plate provided with means for attaching it to a base 11 or other support, as for example screws 12 or the like. The plate may be generally rectangular with a portion cut out as at 13, to provide a passage for an escalator rail 14. The plate 10 may also be deformed as at 15 to movably engage a flange 17 of a guard 16.

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The guard 16 is preferably formed of a thermoplastic and moldable material such as rubber or a synthetic resin having the requisite properties. This guard should be flexible and resilient, but stiff enough so that it will not yield around the edges more than a minor fraction of an inch from manual pressure when formed in the proportions illustrated herein. As shown in Figs. 1 and 4, the guard 16 is essentially in the form of a flattened or approximately elliptical tube, a portion of one major side thereof being cut out as at 18 to permit passage of the escalator rail.

It will be noted that the guard is loosely mounted in the plate 10, thus permitting its limited movement to accommodate irregularities in the rail's movement and reducing wear.

The guard 16 is smooth on the outside thereof, but on the inside is provided with waffle-like reinforcing ribs 22, crisscrossed in any suitable formation so as to provide a sort of honeycomb configuration. While I have shown the ribs 22 in rectangular arrangement, they could obviously be formed hexagonally, octagonally, or in a wide variety of other designs. Thus, the ribs reinforce each other, so that the guard, while essentially a thin shell, is greatly stiffened against deformation from external pressure. At spaced intervals of the web formed by ribs 22 are hollow bosses 25 seating pads 26 of felt or other low friction material which serve as bearing elements engaging the rail, thus reducing wear on the guard itself.

It will be seen that the free edge 23, which normally lies adjacent the escalator rail, while tapered sufficiently to permit a slight yielding, if a person's fingers should apply pressure to the outside thereof, is nevertheless stiff enough to offer substantial resistance against such pressure. Thus, if a person, and especially a child, should attempt to insert one's fingers between the guard and the moving rail, sufficient yielding resistance will be offered to prevent such admission. If, however, the fingers should be small enough to be admissible between the guard and rail, the guard will yield enough to avoid painfully pinching the fingers.

Various changes coming within the spirit of our invention may suggest themselves to those skilled in the art, and hence we do not wish to be limited to the specific form shown or uses mentioned, except to the extent indicated in the appended claims, which are to be interpreted as broadly as the state of the art will permit.

We claim:

1. A guard for an escalator rail comprising a supporting member adapted to be attached to a fixed element, and an element carried by said supporting member adapted to embrace an escalator rail, said last mentioned element being formed of stiff but yieldable material in the form of a molded shell having an integral interior honeycomb reinforcing web.

2. An article as defined in claim 1, having a plurality of antifriction bearing members disposed in said web, said bearing members normally extending beyond the plane of said web so as to be engageable with an escalator rail.

3. An article as defined in claim 1, having a plurality of hollow bosses formed integrally with said guard and relatively uniformly spaced on the interior of said guard, and a plurality of bearing members having a low friction co-efficient removably disposed in said bosses and normally extending a slight distance beyond the surface of said web.

4. A guard for an escalator rail comprising a member of substantially C-shaped cross-section and substantially elongated in the longitudinal direction of an escalator rail, said guard having foraminous means on the interior thereof whereby the exposed end portion of said guard will yield to a limited degree insufficient to permit entrance of fingers or other foreign objects between the guard and an escalator rail.

5. A guard as defined in claim 4 having a plurality of spaced low-friction bearing members projecting inwardly from said foraminous means so as to be engageable with an escalator rail.

6. A guard for an escalator rail comprising a yieldable member of approximately C-shaped cross-sectional formation to embrace an escalator rail to prevent entrance of foreign objects between the rail and guard and elongated in a direction perpendicular to said C-shaped section, and integral means on the inside of said yieldable member and forming a plurality of interconnecting webs for yieldably restricting the position of said guard in relation to said rail.

7. An article as defined in claim 6, wherein said webs define cells which are open toward the escalator rail.

8. An article as defined in claim 6, wherein the guard is flanged at the edges thereof so as to form a shell-like enclosure for said webs.

9. An article as defined in claim 7, wherein the guard is flanged at the edges thereof so as to form a shell-like enclosure for said webs.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,628,090	Weiss	May 10, 1927
2,080,980	Fiedler	May 18, 1937