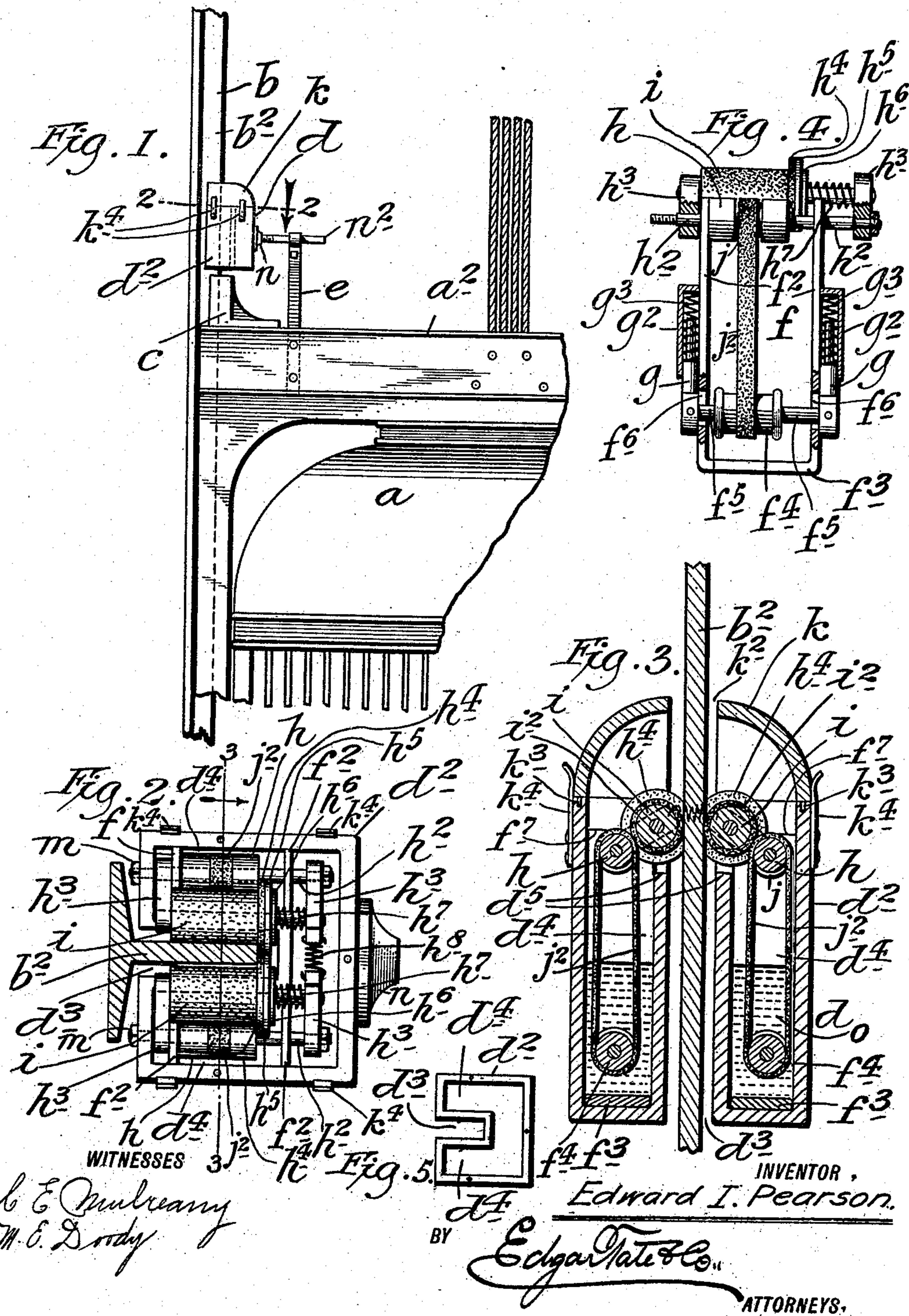


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OILER FOR ELEVATOR GUIDE RAILS.
APPLICATION FILED JUNE 4, 1908.

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Patented Mar. 23, 1909.



UNITED STATES PATENT OFFICE.

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OILER FOR ELEVATOR GUIDE-RAILS.

No. 915,794.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD I. PEARSON, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Oilers for Elevator Guide-Rails, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to lubricator or oiling devices, and the object thereof is to provide an improved device of this class designed to be connected with an elevator car and for use in oiling or lubricating the guide rails at the sides thereof.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which;—

Figure 1 is a side view of one top corner of an elevator car and showing one of the guide rails with my improved oiling or lubricating device in position, Fig. 2 a transverse section on the line 2—2 of Fig. 1, Fig. 3 a vertical section on the line 3—3 of Fig. 2, Fig. 4 a side view of a detail of the invention, part of the construction being in section, and;— Fig. 5 a plan view of the main casing of my improved lubricator on a reduced scale.

In the drawing forming part of this specification, I have shown at *a* a part of the top of an ordinary elevator car, and at *b* one of the guide rails which in practice are placed at the sides of the car. The elevator car is provided with the usual top cross head *a*² with which is connected a guide shoe *c* which is movable on the guide rail *b* in the usual manner, and it will be understood that while only one of the guide shoes *c* is shown, one of these shoes is used in connection with each of the guide rails. I also provide a lubricator or lubricating or oiling device *d* which is connected with a support *e* secured to the top frame work or cross head *a*² of the car, and in practice one of these lubricating or oiling devices is employed in connection with each of the guide rails.

In the construction of my improved lubricating device I provide a casing *d*², a plan view of which is given in Fig. 5, and this casing is preferably rectangular in cross section and is provided in one side with a vertical

recess *d*³ in which the guide rail *b* or the inwardly directed web *b*² thereof is movable. The casing *d*² is provided with two side chambers or portions *d*⁴ formed by the vertically arranged recess *d*³ and in each of which is placed a yoke-shaped frame *f* comprising parallel side members *f*² connected by a cross head bottom portion *f*³, and in the bottom of each of the yoke-shaped frames *f* is mounted a roller *f*⁴ provided with trunnions *f*⁵ which pass through and are movable in vertically arranged slots or openings *f*⁶ in the sides *f*² of the frames *f*, and connected with the ends of the trunnions *f*⁵ are plungers *g* movable in casings *g*² on the sides *f*² of the yoke-shaped frames *f*, and in which are placed springs *g*³ which normally serve to depress the plungers *g* and the rollers *f*⁴.

In the tops of the side portions *f*² of the frames *f* are mounted rollers *h* having trunnions *h*² on which are mounted side links *h*³, and in which are mounted rollers *i* having felt or other fibrous coverings *i*², and the rollers *i* are provided with trunnions which pass through the links *h*³, and at the inner ends of said rollers are placed felt washers *h*⁴ adjacent to which are washers *h*⁵ preferably composed of fiber and adjacent to which are placed washers *h*⁶ preferably composed of metal, and between the washers *h*⁶ and the corresponding links *h*³ are placed spiral springs *h*⁷ which normally serve to force the rollers *i* outwardly into the position shown in Fig. 2, and the top portions of the links *h*³ are connected at the inner sides of the frames *f* by a spiral spring *h*⁸, and these springs cause the rollers *i* to bear on the web *b*² of the guide rail *b*.

The frames *f* do not come entirely to the top of the casing *d*² of the lubricating device, the relative position of the tops of said frames being shown at *f*⁷ in Fig. 3, and the top walls of the recess *d*³ in the outer side of the casing *d*² are lower than the other top walls of said casing, as shown at *d*⁵ in Fig. 3, and the rollers *i* are so placed or supported that they normally rest inwardly of and above the rollers *h* and bear on the web *b*² of the rail *b* as clearly shown in Figs. 2 and 3.

The rollers *h* are provided centrally with an annular groove *j*, and mounted on the rollers *f*⁴ and *h* in each of the frames *f* is a fibrous belt or band *j*², and the outer surfaces of the band *j*² are flush with the surfaces of the roller *h*.

In practice the casing d^2 is partially filled with suitable lubricating oil as shown at o in Fig. 3, and the rollers f^4 are always covered with this oil, and the endless belts or bands j^2 which are preferably composed of fibrous material carry this oil up to and supply it to the rollers i or to the fibrous covering of these rollers, the said rollers i or the fibrous covering thereof and the rollers h being normally in contact.

As the elevator moves up and down in the operation thereof, the rollers i constantly bear on the opposite sides of the web b^2 of the rail b , and the opposite sides of said web are thus kept constantly lubricated at all times. In this operation the washers h^4 are also lubricated and the inner face of the web b^2 of the rail b is lubricated by said washer.

The casing d^2 of the lubricating device is provided with a cover k having a slot or opening k^2 in one side thereof which corresponds with the recess d^3 in the casing d and through which the web b^2 of the rail b is movable, and said cover k is provided, in the form of construction shown, with dowel pins k^3 adapted to enter corresponding recesses in the top of the casing d^2 , and the top portion of said casing is also provided with springs k^4 which bear on the cover k when it is placed in position and normally hold it in place on the casing d^2 .

It will be observed that the outer trunnions of the rollers h pass through the outer walls of the casing d^2 and are provided with nuts m , and this construction holds the frames f in proper position at all times, and the said nuts may be detached when necessary and the frames f may be moved inwardly and removed from the casing d^2 whenever desired for cleansing, repair or other purposes.

The casing d^2 is provided at its inner side with a boss n with which is connected a threaded arm n^2 which is mounted in or secured to the support e , and this forms a support for the casing d^2 , but my invention is not limited to any particular means for supporting the lubricating device over the elevator car, and any suitable device or devices may be employed for this purpose. My invention is also not limited to the particular construction of the rollers i , the rollers h or the rollers f^4 , nor to the material used therein, or in the belts j^2 , and any suitable material may be used in the construction of said rollers and belts, and various other changes in and modifications of the construction herein described may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

With my improvement the amount of oil or lubricating material applied to the guide rails is just sufficient to accomplish the desired result, and there is no waste or leakage,

and no surplus oil or other lubricating material collects on the guide rail.

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

1. A lubricating device for a guide rail of an elevator car, said device being adapted to be secured to the top of the car and comprising a casing having a vertical recess in the outer side thereof through which the web of the guide rail passes, removable frames mounted in the opposite sides of said casing, rollers mounted in the top and bottom portions of said frames, oil carrying belts mounted on said rollers, and lubricating rollers also mounted in the top portions of said frames and movable toward and from the web of the rail and adapted to bear thereon and on the rollers in the top portions of said frames.

2. A lubricating device for a guide rail of an elevator car, said device being adapted to be secured to the top of the car and comprising a casing having a vertical recess in the outer side thereof through which the web of the guide rail passes, removable frames mounted in the opposite sides of said casing, rollers mounted in the top and bottom portions of said frames, oil carrying belts mounted on said rollers, and lubricating rollers also mounted in the top portions of said frames and movable toward and from the web of the rail and adapted to bear thereon and on the rollers in the top portions of said frames, said casing being also provided with a removable cover having a recess through which the web of the rail passes.

3. The herein described lubricating device for a guide rail of an elevator car adapted to be connected with the top portion of said car, said device comprising a casing having a vertically arranged recess in its outer side through which the web of the guide rail passes, rollers mounted in the top and bottom portions of the opposite sides of said casing, oil feeding belts mounted on said rollers, lubricating rollers also mounted in the opposite sides of the top portion of said casing and movable toward and from the web of the rail and adapted to bear thereon and on the top rollers around which the oil feeding belts pass, and means for holding said lubricating rollers in contact with the web of the rail.

4. The herein described lubricating device for a guide rail of an elevator car adapted to be connected with the top portion of said car, said device comprising a casing having vertically arranged recesses in its outer side through which the web of the guide rail passes, rollers mounted in the top and bottom portions of the opposite sides of said casing, oil feeding belts mounted on said rollers, lubricating rollers also mounted in the opposite sides of the top portion of said casing and movable toward and from the web of the rail

and adapted to bear thereon and on the top rollers around which the oil feeding belts pass, and means for holding said lubricating rollers in contact with the web of the rail, said casing being also provided with a removable cover having a recess through which the web of the rail passes.

5. The herein described lubricating device for a guide rail of an elevator car comprising a casing adapted to be supported on the top of the car and provided in the outer side thereof with a vertically arranged recess through which the web of the rail passes, rollers mounted in the top and bottom portions of the opposite sides of said casing, oil feeding belts mounted on said rollers, and lubricating rollers also mounted in the top part of the opposite sides of said casing and movable toward and from the web of the rail and adapted to bear thereon and on the top rollers on which said oil feeding belts are mounted.

6. The herein described lubricating device for a guide rail of an elevator car comprising a casing adapted to be supported on the top of the car and provided in the outer side thereof with a vertically arranged recess through which the web of the rail passes, rollers mounted in the top and bottom portions of the opposite sides of said casing, oil feeding belts mounted on said rollers, and lubricating rollers also mounted in the top part of the opposite sides of said casing and movable toward and from the web of the rail and

adapted to bear thereon and on the top rollers on which said oil feeding belts are mounted, said lubricating rollers being provided at their inner ends with lubricating disks adapted to bear on the inner faces of the web of said rail.

7. The herein described lubricating device for the guide rail of an elevator car comprising a casing adapted to be supported on the top of the car and provided in the outer side thereof with a vertically arranged recess through which the web of the rail passes, rollers mounted in the top and bottom portions of the opposite sides of said casing, oil feeding belts mounted on said rollers, and lubricating rollers also mounted in the top part of the opposite sides of said casing and movable toward and from the web of the rail and adapted to bear thereon and on the top rollers on which said oil feeding belts are mounted, said lubricating rollers being provided at their inner ends with lubricating disks adapted to bear on the inner face of the web of said rail, and a tensional device for holding the lubricating rollers in connection with said web.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of the subscribing witnesses this 2d day of June, 1908.

EDWARD I. PEARSON.

Witnesses:

A. R. APPLEMAN,
C. E. MULREANY.