

(No Model.)

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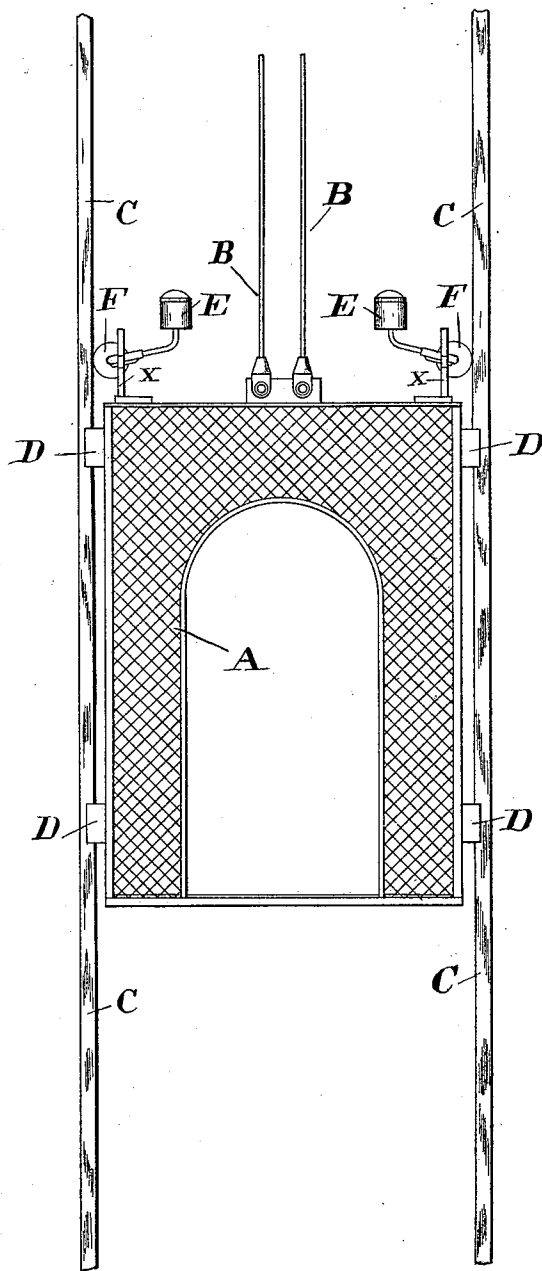
W. J. FERGUSON.

AUTOMATIC OILER FOR ELEVATOR GUIDES.

No. 517,272.

Patented Mar. 27, 1894.

Fig. 1.



WITNESSES:—

L. I. Van Dorn.

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INVENTOR:—

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(No Model.)

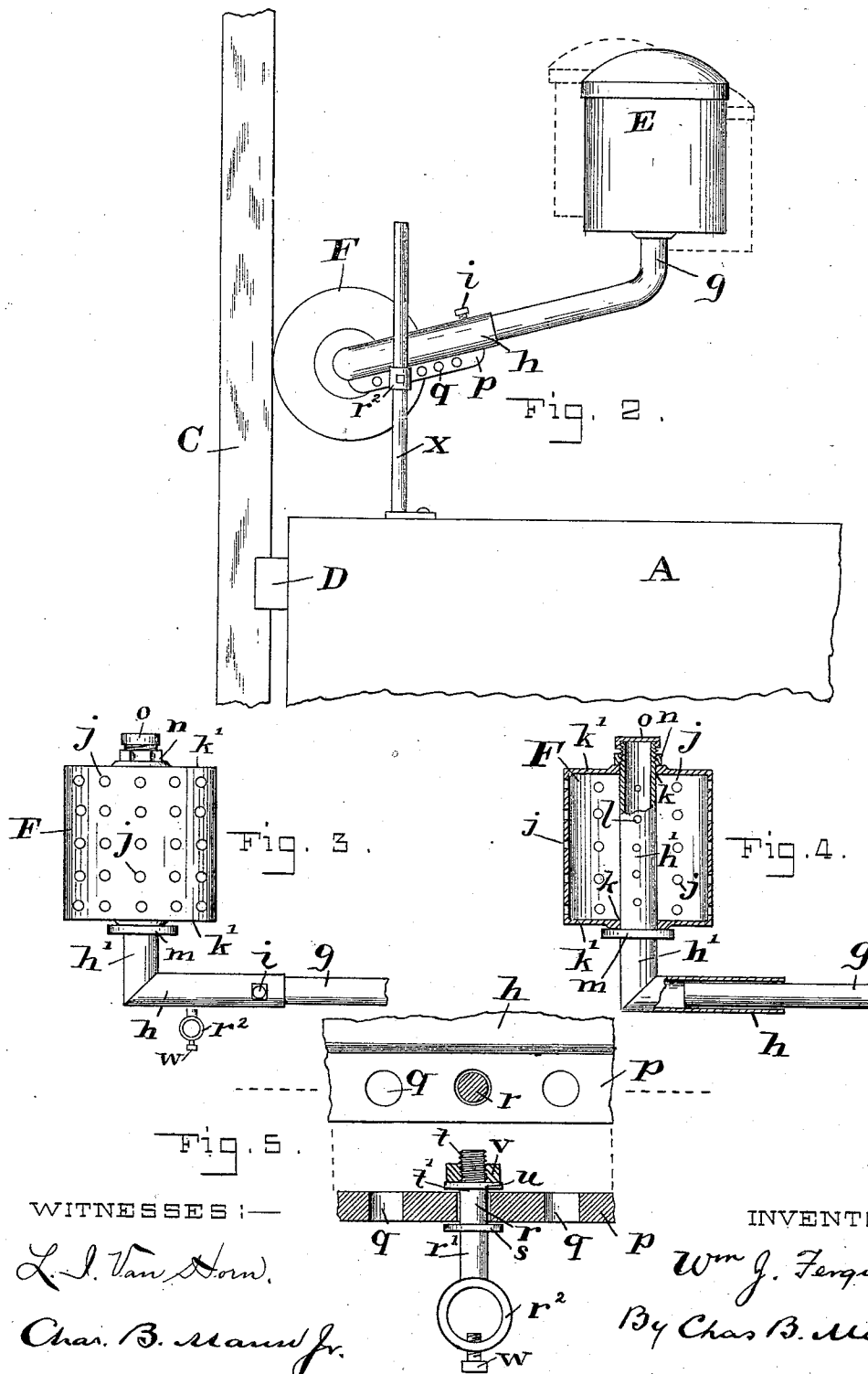
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L. I. Van Horn.

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UNITED STATES PATENT OFFICE.

WILLIAM J. FERGUSON, OF BALTIMORE, MARYLAND.

AUTOMATIC OILER FOR ELEVATOR-GUIDES.

SPECIFICATION forming part of Letters Patent No. 517,272, dated March 27, 1894.

Application filed December 29, 1893. Serial No. 495,053. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. FERGUSON, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Automatic Oilers for Elevator-Guides, of which the following is a specification.

This invention relates to an automatic oiler for elevator guides.

The object of the invention is to provide a simple device for attachment to the elevator-car, by means of which the vertical guides of the elevator may be kept oiled, or greased.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a view of an elevator-car, the vertical guides, and the improved oiler device. Fig. 2 is a view on a larger scale, showing the oiler device in position. Fig. 3 is a top view of the roller part of the oiler device. Fig. 4 is a view in which the roller part of the oiler device is shown partly in section. Fig. 5 shows two detail views of the pivot which supports the roller part.

The letter, A, designates the elevator-car; B, the cables which raise and lower it; C, the two vertical guides between which the car travels, and, D, the plates or blocks on the car which slide along the guides.

The oil-cup, E, may be of any approved form, or it may be a simple receptacle to hold grease; a pipe, *g*, is attached to and opens into the bottom of the cup and from the bottom this pipe inclines downward and laterally and its lower end enters into a conductor-tube, *h*, wherein it may be adjusted telescope-fashion; a set-screw, *i*, on the conductor-tube serves to hold the two tubes rigidly together.

The roller, F, is a hollow cylinder having perforations, *j*, in its cylindric portion, and a central hole, *k*, in each of its heads, *k'*. A tubular arm, or fixed spindle, *h'*, has a right-angled position on the conductor-tube, *h'*, and this tubular arm passes through the central holes, *k*, in the two heads of the cylinder, so that the latter is free to revolve thereon. That portion of the tubular arm, *h'*, within the cylinder is provided with small apertures, *l*, see Fig. 4. The tubular arm has a fixed collar, *m*, and also a nut, *n*, and between these the roller or cylinder, F, revolves. The end of the tubular arm must be closed or plugged

up in some suitable way to prevent the oil or grease from escaping; in the present instance a cap, *o*, is employed to close it.

The conductor-tube has a bar or flange, *p*, extending longitudinally, and it is provided with pivot-holes, *q*; this bar or flange is between the spindle or axis, *h'*, of the roller and the oil-cup. A pivot-pin, *r*, has a fixed collar, *s*, and at its end a screw-thread, *t*; at the termination of the thread is a shoulder, *t'*; the smooth part, *r*, between the fixed collar, *s*, and the shoulder, *t'*, constitutes the pivot. This pivot loosely occupies one of the holes, *q*, on the bar or flange, *p*; and thus the pivotal point of connection is between the axis of the cylinder and the oil-cup. A washer, *u*, is on the screw-thread and abuts against the shoulder, *t'*, and a nut, *v*, on the thread is tightened against the washer and thereby the pivot is kept in place. By this construction of mounting the oil-cup, roller and conductor-tube on a pivot which is between the axis of the roller and the oil cup and which supports them so that there may be freedom for these parts to tilt or oscillate vertically, it will be seen that the weight of the oil-cup will serve as a counter-balance to keep the roller, F, in traversing the vertical guide, C, always in contact therewith notwithstanding any undulations or irregularities the said guide may have. The end, *r'*, of the pivot-pin has an open ring or collar, *r²*, provided with a set-screw, *w*; a vertical rod or standard, *x*, is secured on top of the elevator-car and the ring or collar, *r²*, takes about said rod and is vertically adjustable up or down thereon, being retained wherever desired by the set-screw, *w*. It will be seen that the collar, *r²*, and set-screw, *w*, make provision for the vertical adjustment of the device, and the nut, *v*, on the pivot-pin and the holes, *q*, in the bar or flange make provision for the lateral adjustment of the device, so that while the roller, F, will always bear against the vertical guide, C, the oil-cup may be tilted a little higher up or a little lower down, as indicated by broken lines in Fig. 2. It will also be seen that though the standard, *x*, may be moved farther from or nearer to the vertical guide, wherever it is most convenient to place it, the pivotal point of attachment on the bar or flange may be laterally adjusted by the holes therein so that

the roller may always be kept in contact with the vertical guide, C; and that by the lateral adjustability of the oil-cup discharge-pipe within the conductor-tube, the position of the oil-cup relative to the cylinder, for the purpose of counterbalancing the latter, may be changed to suit the variations in the lateral adjustment of the pivot-point.

The operation of the device is as follows: The cup, E, is charged with grease or oil which is conducted through the tubes, *g*, *h*, to the interior of the rolling cylinder, F; as the elevator car moves up and down this roller travels along the surface of the vertical guide, C, and the grease or oil passing from the interior of the roller through the openings, *j*, is delivered onto the guide, C. By this means the said elevator guides will be kept oiled.

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

1. The combination of the elevator guides; a car vertically-movable thereon; a standard on top of the car; a revoluble cylinder to traverse the said guides; an oil-cup; and a conductor-tube connecting the said cylinder and oil-cup and pivoted to the standard between the axis of said cylinder and the oil-cup, whereby the weight of the oil-cup will act as a counterbalance to keep the cylinder in contact with the vertical guides notwithstanding any irregularities or undulations said vertical guides may have.

2. The combination of the elevator guides;

a car vertically-movable thereon; a standard on top of the car and having a pivot-pin; a cylinder mounted so as to revolve and provided with an attached conductor-tube having a bar or flange, *p*, extending along the conductor-tube and rigidly attached thereto and which is adjustable laterally on the said pivot-pin, whereby the pivotal point of attachment of the conductor-tube may be varied with respect to the axis of said cylinder; and an oil-cup having a discharge-pipe one end of which enters and is extensibly adjustable in said conductor-tube, whereby the position of the oil-cup relative to the cylinder, for the purpose of counterbalancing the latter, may be changed to suit variations in the lateral adjustment of the pivotal point.

3. The combination of an oil-cup; a perforated hollow cylinder, F, having its two heads, *k*, each provided with a central hole, *k*; a spindle passing through the central holes in the heads of the cylinder and having apertures, *l*, through which the oil enters said cylinder; a supporting standard; and a conductor-tube leading from the oil-cup to the said spindle and pivoted to the supporting standard between the said oil-cup and spindle.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM J. FERGUSON.

Witnesses:

C. CALVERT HINES,
CHAS. B. MANN, Jr.