

No. 661,925.

Patented Nov. 13, 1900.

J. H. WOODARD.

TRAVELING OILER FOR ELEVATOR GUIDES.

(Application filed Mar. 8, 1900.)

(No Model.)

Fig. 1.

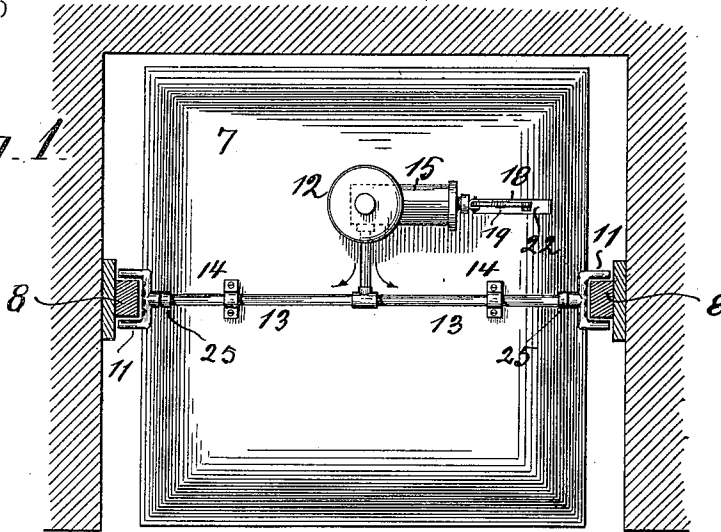


Fig. 2.

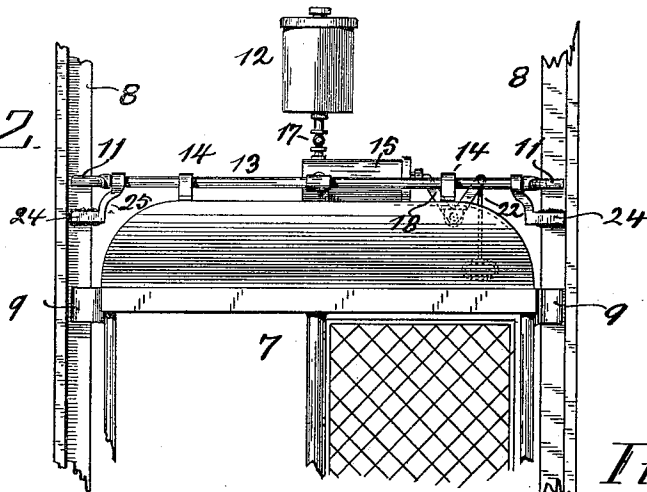


Fig. 3.

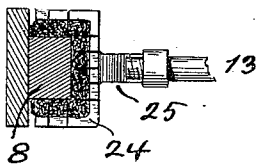


Fig. 4.

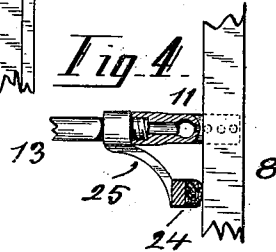
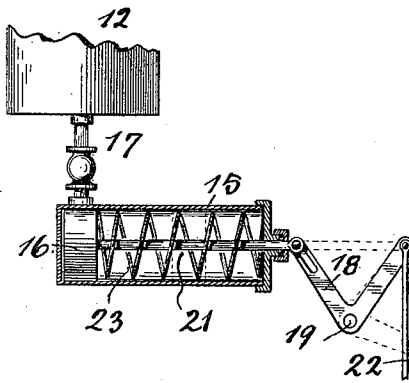


Fig. 5.



Witnesses:
Arthur Kline

Bradford McGregor

Inventor
James H. Woodard
by C. Spengel atty

UNITED STATES PATENT OFFICE.

JAMES H. WOODARD, OF DAYTON, KENTUCKY.

TRAVELING OILER FOR ELEVATOR-GUIDES.

SPECIFICATION forming part of Letters Patent No. 661,925, dated November 13, 1900.

Application filed March 8, 1900. Serial No. 7,778. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. WOODARD, a citizen of the United States, and a resident of Dayton, Campbell county, State of Kentucky, have invented a certain new and useful Traveling Oiler for Elevator-Guides; and I do declare the following to be a description thereof sufficiently clear, full, and exact to enable others skilled in the art to which it appertains to make and use the same, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form also a part of this specification.

This invention relates to devices used for applying lubricant to the wearing-surfaces of operating parts while such parts are in motion and where such surfaces are not readily accessible either on account of location or on account of the motion of the parts or on account of both causes combined.

My device is intended for use in connection with elevators to lubricate the guides between which the cab or platform travels up and down. In case of a closed elevator-cab, for instance, it is quite difficult to apply oil to the guides, which is generally done from the outside by some one mounting the roof of the cab. This causes in most cases an interruption of the service, unless it is done at a time when the elevator is not publicly used, when it must, however, be run after use simply to permit applying of the oil.

One object of my invention is, therefore, to provide a device whereby oil may be applied to the guides of an elevator irrespective of difficulties of position, access, or motion.

A secondary object is to permit such application to be performed at any time, particularly while the elevator is in usual operation, without requiring, however, an interruption of service or extra time after service.

With these objects in view my invention provides, first, oiling devices traveling with the cab and fitted so as to be adapted to apply the lubricant directly against the wearing-surfaces of the guides.

It further provides means to supply these oiling devices, and it finally provides means whereby their operation is controlled from the cab, so that lubrication may be performed at any time.

My invention provides means arranged, used, and operating all as described in the annexed specification, and pointed out in the claims following it, the construction of these means being also illustrated in the accompanying drawings, in which—

Figure 1 is a horizontal section through an elevator-shaft, showing elevator-guides in section and top view of the elevator-cab with my oiling device in position. Fig. 2 is a front elevation of the upper part of Fig. 1. Figs. 3 and 4 are enlarged detail views, the first being a top view and the other an elevation, partly in section, of the device applying the lubricant directly against the surfaces to be oiled and distributing the same thereover. Fig. 5 is an enlarged sectional detail view of the ejecting device.

In the drawings, 7 indicates a customary elevator-cab, and 8 indicates the guides whereby it is confined to its position while traveling up and down, it being held thereto by slides 9, projecting laterally from the cab.

My oiling device consists, first, of a fork-shaped discharge-head 11, one for each guide and each shaped as shown, so as to surround, but without contact, the surfaces to be oiled, for which purpose they consist each of three branches joining each other at such angle as the shape of the guides may require. On their inner sides and opposite the surfaces to be oiled they are provided with rows of discharge-orifices, through which the lubricant is expelled. The oil is supplied from a tank 12, which may be filled at suitable intervals and from which it passes to the discharge-heads 11 through pipes 13, the whole being supported on brackets 14 and carried on top of the cab. Interposed between this reservoir and these discharge-heads there is an ejecting device whereby the oil is caused to be expelled from the discharge-heads against the surfaces of the guides to be oiled whenever lubrication is desired. This ejecting device consists, substantially, of a pump, of which 15 is the cylinder and 16 the plunger, fitted to the bore of it. This plunger occupies a normal position at the discharge end of cylinder 15, in which position it prevents discharge of oil by cutting off the supply to pipes 13, since it is not intended that lubrication should proceed constantly. When lubrication

tion is desired, plunger 16 is moved outwardly, causing oil to be drawn into cylinder 15 from tank 12. On the immediately following instroke this oil in front of the plunger is forced through pipes 13 to discharge-heads 11 and ejected through the orifices thereat. A customary check-valve 17 between cylinder 15 and supply-tank 12 prevents at this time the oil from reëntering this latter. For so operating the ejector I provide an angle-lever 18, pivoted at 19 and connected to the plunger-rod 21. This lever is rendered accessible by means of a pull-rod 22, extending into the cab, where it is reached by the attendant, who may thus by a simple pull operate the device and lubricate at any time during or between runs. To insure at all times the return of the plunger to its normal position, in which it prevents escape of oil from cylinder 15 by closing the supply thereto from tank 12, I provide a spring 23, which is compressed on the outward movement of the plunger, and thus performs automatically this function of expelling the oil and returning to its normal position. Instead of using an angle-lever and pull-rod, as shown, an ordinary lever might be used, pivoted between its ends and connected with one of them to the outer end of the plunger-rod and reaching with the other one into the cab.

To obtain a thorough and uniform distribution of the oil all over the surfaces to be lubricated, I provide wipers of absorbent material below the discharge-heads on each side. This material, which may be felt or cotton-waste, is carried in a suitable cage 24, supported on brackets 25, which are connected so as to travel with the discharge-heads, but below the same.

The absorbent material is applied to a thickness sufficient to reach and contact with the surfaces to be lubricated and retards the oil, preventing it from running at once off from the surfaces to which it has been applied. The oil so retained is thus repeatedly carried over the surfaces, thoroughly lubricating them. The whole device might also be carried below the floor of the cab, in which case, the oil-tank being lower than the discharge-heads, the circumstance of having said tank normally closed would not enter into consideration.

Having described my invention, I claim as new—

1. In a traveling oiling device to lubricate elevator-guides, the combination of discharge-heads shaped to surround, but without contact, the wearing-surfaces of each elevator-guide, normally open discharge-orifices in these heads directed against these surfaces, a supply-pipe on which each head is carried, a normally open oil-tank in communication with these supply-pipes, an interposed ejecting device which controls and normally prevents such communication, and means manually controlled for operating this ejecting device to cause oil to be discharged against

the wearing-surfaces of the elevator-guides, the whole connected to and traveling with the elevator-cab, so that oil may be discharged in any position of the cab and against any point of the traversed guide-surfaces.

2. In a traveling oiling device to lubricate elevator-guides, the combination of discharge-heads shaped to surround, but without contact, the wearing-surfaces of each elevator-guide, normally open discharge-orifices in these heads directed against these surfaces, a supply-pipe on which each head is carried, an oil-tank to feed these supply-pipes manually-controlled means operating to cause oil to be ejected against the wearing-surfaces of the elevator-guides, the whole connected to and traveling with the elevator-cab, so that oil may be discharged in any position of the cab and against any point of the traversed guide-surfaces, and devices below each discharge-head traveling also therewith, but in contact with the wearing-surfaces of the guides so as to take up and retain the oil discharged against these surfaces from the discharge-heads and distribute the same thereover while traveling with the cab.

3. In a traveling oiling device to lubricate elevator-guides, the combination of discharge-heads shaped to surround, but without contact, the wearing-surfaces of each elevator-guide, normally open discharge-orifices in these heads directed against these surfaces, a supply-pipe on which each head is carried, a normally open oil-tank in communication with these supply-pipes, an interposed ejecting device which controls and normally prevents such communication, the whole connected to and traveling with the elevator-cab and an operating-lever extending into this latter for operating the ejecting device, in a manner to permit lubrication of the elevator-guides at any point and from any position of the cab.

4. In a traveling oiling device to lubricate elevator-guides, the combination of discharge-heads shaped to surround, but without contact, the bearing-surfaces of each elevator-guide, normally open discharge-orifices in these heads directed against these surfaces, a supply-pipe for these heads, an oil-tank to feed this pipe, a pump-cylinder interposed between the two and in open communication with each, a plunger therein, a spring to keep the same normally in a position where it prevents the oil from passing from the tank through the supply-pipes and out of the discharge-heads, the whole connected to and traveling with the elevator-cab and operating means for operating this plunger, so as to permit lubrication of the elevator-guides at any point and from any position of the cab.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

JAMES H. WOODARD.

Witnesses:

C. SPENGLER,
L. B. GRIMES.