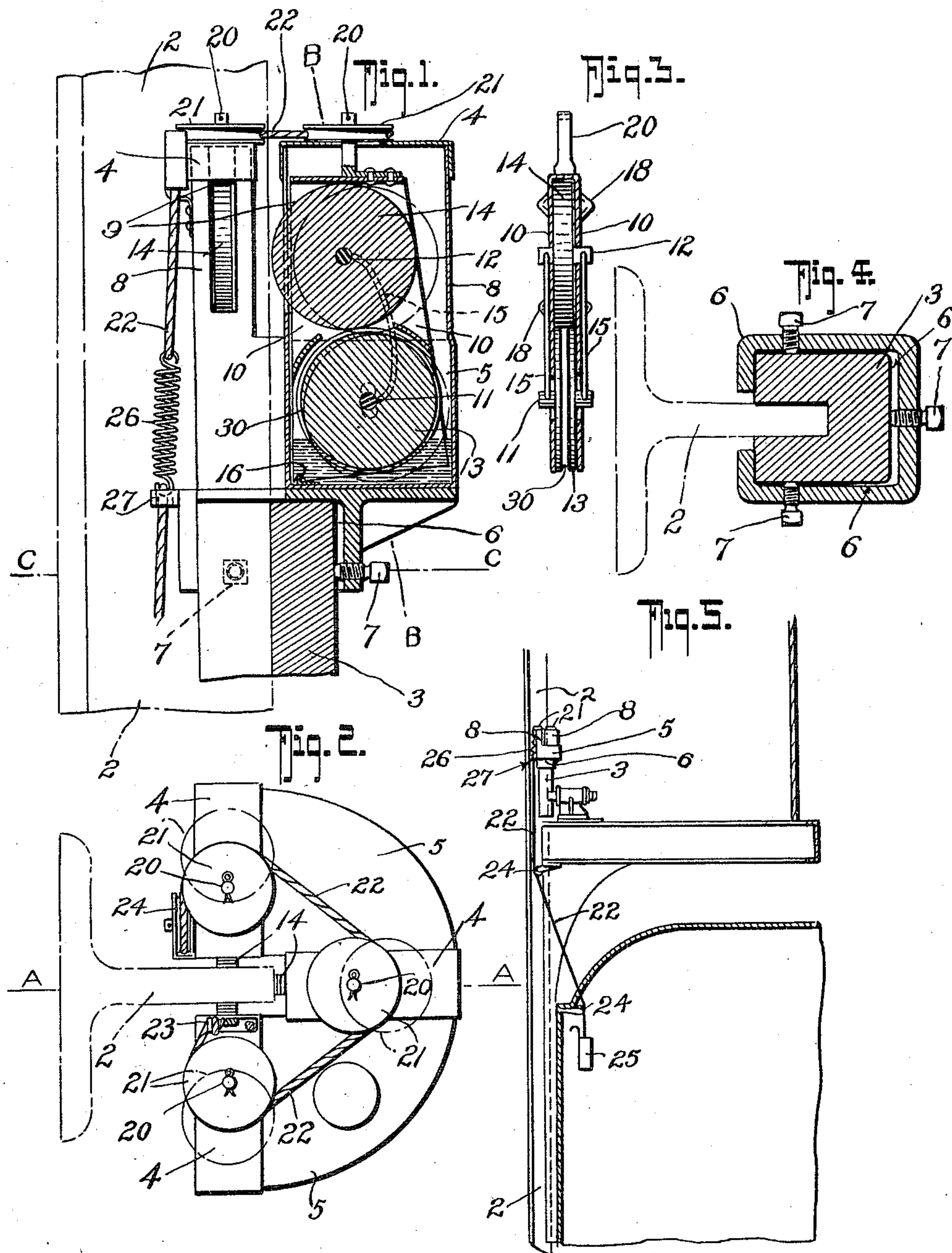


F. G. PHILLIPS.
LUBRICATOR FOR ELEVATOR GUIDES.
APPLICATION FILED MAY 31, 1910.

998,633.

Patented July 25, 1911.



WITNESSES:
Charles H. Wagner.
John E. Schrott.

INVENTOR
Frank G. Phillips.
BY
Fred J. Dietrich & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK G. PHILLIPS, OF VANCOUVER, BRITISH COLUMBIA, CANADA.

LUBRICATOR FOR ELEVATOR-GUIDES.

998,633.

Specification of Letters Patent.

Patented July 25, 1911.

Application filed May 31, 1910. Serial No. 564,280.

To all whom it may concern.

Be it known that I, FRANK G. PHILLIPS, citizen of the Dominion of Canada, residing at Vancouver, in the Province of British Columbia, Canada, have invented a new and useful Lubricator for Elevator-Guides, of which the following is a specification.

This invention relates to a device for oiling the guides of an elevator and is designed to insure the uniform distribution of a small but sufficient quantity of oil on the bearing surfaces of such guides, the same to be applied under manual control when desired. Having this object in view, I provide a group of three lubricating wheels for each guide which wheels are normally clear of the guides and travel with the elevator, and may at will, when the guides require lubrication be brought in contact with the bearing surfaces of the guides, and will distribute on these surfaces oil or other lubricant lifted from the receptacle forming the base of the device.

The invention is particularly described in the following specification, reference being made to the drawings by which it is accompanied, in which:

Figure 1 is a vertical section on the line A A in Fig. 2 showing the relation of the oiling device to the guide shoe of the elevator cage and to the guide, Fig. 2 is a plan of the same, Fig. 3, a front elevation of one pair of the lubricating wheels removed, and Fig. 4, a cross section on the line C C of Fig. 1 showing the attachment of the lubricating device to the upper end of the guide shoe of the elevator cage, and Fig. 5 is a general view showing the head of the elevator cage and the application of my oiling device thereto.

In these drawings 2 represents the vertical guide which extends up each side of the elevator shaft and on which the elevator is guided by shoes 3 secured to the top and bottom of the cage. The oiling device comprises an oil receptacle 5 which, as shown in Fig. 2, is shaped to conform approximately to the contact surfaces of the shoe 3 on the guide 2. The base of this oil receptacle 5 is formed with an open socket 6 to seat upon the top guide shoe 3 on which it is secured by set screws 7.

Projecting upward from the oil receptacle 5 are casings 8, each having an opening 9 toward the adjacent surface of the guide 2. Removably fitted within each casing 8 is a

small plate frame 10, see Fig. 3, between the sides of which wheels 13 and 14 are rotatably mounted on axles 11 and 12, the axle of the lower one 11 having an elongated hole in the side plates of the frame 10 to insure that the wheels are in contact with one another and on each side of the frame 10 a spring 15 is secured through each axle to hold the two wheels in contact, which springs incidentally hold the sides of the frame 10 together. Projections 18 on the sides of the frame 10 insure that the frame fits the casing 8 without shaking.

At the front lower corner the plate frame 10 is notched to fit upon a projection 16 secured in the bottom of the oil receptacle 5 and resting on this projection 16 (a pivotal point for the frame 10) each frame is normally tilted backward with its upper wheel 14 out of contact with the guide 2 but susceptible of being drawn into contact with the guide when required. The upper end of each casing is closed with a cover 4, through an elongated aperture in which passes a small stud 20 secured to the upper end of each casing 8. On each stud is mounted a small sheave 21 and around these sheaves, as shown in Fig. 2, a cord 22 passes, one end of which is secured at 23 and the other end is passed around guide pulleys 24 to a position within the elevator cage where a weight 25 is suspended from it. A spring 26 is interposed in the connection to maintain a uniform pressure and absorb shock. This spring should be so arranged that when drawn into action it will bring up against an eye 27 so that no pressure greater than a moderate tension of the spring can be brought to bear on the lubricating rollers.

Normally the weight 25 is hooked up and owing to the location of the supports 16 on which the lubricating wheel frames 10 rest the wheels 13 and 14 are in the position indicated by dot and dash lines in Fig. 1 with the wheels 14 clear of the guides. When it is required to lubricate the guides, the cage being in motion, the weight 25 is lifted off its hook and its weight acting through the cord 22 and spring 26 draws the three upper lubricating wheels into contact with the bearing surfaces of the guide 2.

The frictional contact of the wheels 14 with the guide 2 causes them to rotate and being in peripheral contact with those 13 which are immersed in the oil, they are also rotated and, largely owing to a circumfer-

ential groove 30 in the wheels 13 the oil or grease lifted by these rotating wheels is deposited on the periphery of the wheel 14 to be transferred from it to the bearing surfaces of the guide 2 and is spread thereon as the several wheels 14 roll over them. When this lubrication has been effected the weight 25 is again hung up and the wheels 14 owing to the preponderating weight behind the supports 16 of their frames 10 fall back out of contact with the guide 2 and out of use. A simple means is thus provided by which the guides of an elevator may be rapidly and efficiently lubricated, the only requirement being to lift the weight 25 off its hook and allow it to hang on the cord 22 while the elevator is in motion.

Having now particularly described my invention and the manner of its operation, I hereby declare that what I claim as new and desire to be protected in by Letters Patent, is:

As a means for lubricating the guides of an elevator cage, the combination with the cage, of an oil receptacle approxi-

mately conforming in plan with the surfaces of the guides to be lubricated, a casing secured to and projecting upward from the oil receptacle opposite each face of the guide to be lubricated toward which surface each casing is provided with an aperture, within each casing a pair of wheels rotatable in peripheral contact with one another the lower wheel dipping into the oil in the receptacle and the upper one opposite to the aperture, a pivotal support for the frame of each pair of wheels that will normally tilt the frame back clear of contact with the guide, a flexible connection passing around a projection secured to each wheel frame, and means for imposing a tension on said connection that will draw the upper wheel of each pair into contact with the guide to be lubricated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK G. PHILLIPS.

Witnesses:

ROWLAND BRITAIN,
ALEXANDER SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
