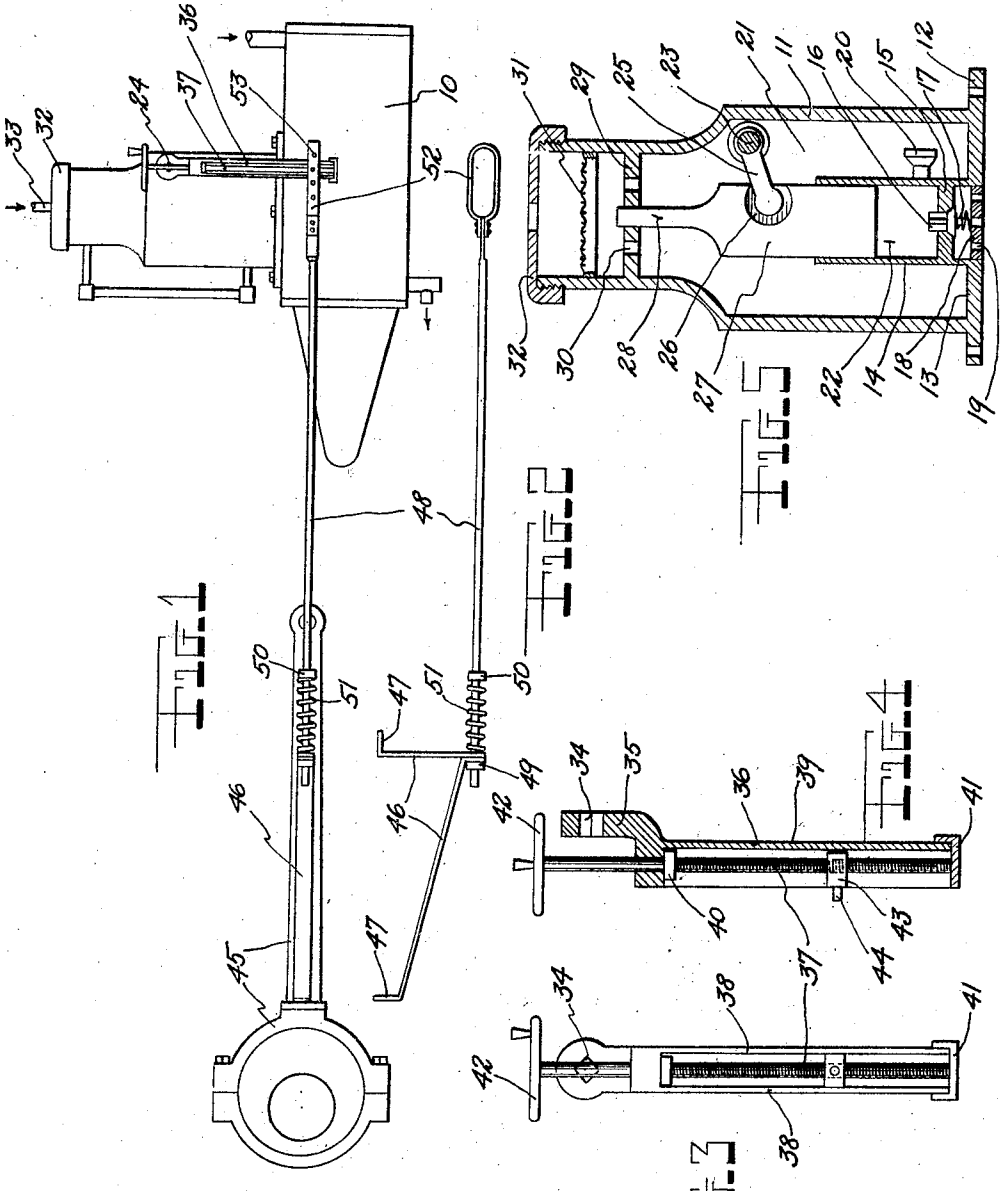
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A. CORREA

OIL PUMP

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OIL PUMP.

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To all whom it may concern:

Be it known that I, ANTONIO CORREA, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Oil Pumps, of which the following is a specification.

This invention relates to oil pumps, particularly to actuating means for the same, the main object being to provide a lubricating pump by means of which oil is forced to various lubricating members of a power plant, the pump having a crank handle actuated thru means of an eccentric rod.

Another object is to provide a novel type of crank handle for the pump heretofore mentioned, by means of which the throw of the plunger in the pump may be varied as the speed of the eccentric rod remains constant.

These and other objects will become apparent in the description below, in which characters of reference refer to like-named parts in the drawing.

Referring briefly to the drawing, Figure 1 is an elevational view of the pump and eccentric rod in their direct relation to each other, the eccentric rod being connected to the crank handle of the pump by novel means.

Figure 2 is a top plan view of the connecting element between the eccentric rod and the crank handle.

Figure 3 is a front elevational view of the crank handle per se.

Figure 4 is a sectional side elevational view of the same.

Figure 5 is a sectional elevational view thru the upper portion of the pump.

Referring in detail to the drawing, the numeral 10 indicates the lower cylinder of the pump, said cylinder being used as a reservoir for oil preparatory to distribution of the latter to various lubricating centers. An upright cylinder is permanently secured to cylinder 10 by passing bolts thru the flange 12, the latter being integral with the cylinder 11. The cylinder 11 is provided with a bottom 13 from which an annular sleeve 14 extends upwardly, the sleeve being open at its upper end and having a bottom 15 near its lower end. The bottom 15 of the sleeve has an opening therein in which a slide valve 16 is seated, the slide valve being normally urged upwardly by a spring 17, said spring being retained in place beneath the valve by a fixed flange 18 in which a plurality of holes 19 are formed. A suction valve 20 is mounted on the periphery of the sleeve 14 above member 15 and provides the line of communication between the outer chamber 21 of the cylinder and the inner chamber 22 of the sleeve. A shaft 23 is rotatably mounted in the cylinder intermediate its height and is provided with a square end, the latter projecting externally from the cylinder at one side. A rocker arm 25 is rigidly secured to the shaft 23 and the outer end of said arm is engaged in the depression 26 of a vertical slide plunger 27, the latter having a stud 28 projecting upwardly from its upper end and being slidably mounted in an opening formed in a flange 29, said flange having additional openings 30 thru which lubricating oil passes into the lower chamber 21 after passing over a strainer 31. The upper end of the cylinder has a cap 32 screwed thereon in which an opening is provided, this opening receiving an oil inlet pipe 33 thru which oil passes from a supply tank into the confines of the pump.

The extending square end 24 of the shaft 23 is received in a similar opening 34 of the upper end 35 of crank arm 36, the lower end of the crank arm being hollow in order to receive the spindle 37. The hollow portion of the crank arm is provided with sizes 38 and a back wall 39 and is open on one side. The spindle is threaded thruout the major portion of its length and has a collar 40 at its upper end which rotatably retains the spindle in the crank arm. A cap 41 is provided at the lower end of the crank arm so that no shifting of the spindle is introduced. The upper end of the spindle has a hand wheel 42 rigid therewith by means of which said spindle is rotated. As previously stated, the spindle is threaded thru the greater portion of its length and on this threaded portion a follower dog 43 is engaged, the follower dog having a threaded hole and a pin 44 projecting from its face. The pump and crank arm herein described is preferably used in direct relation to an eccentric rod 45 or some reciprocating member. In Figure 2, the means for connecting the eccentric rod to the crank arm is shown and comprises leg brackets 46 having angular feet 47, the latter being secured to the face of the eccentric rod. The extending extremities of the legs have aligned openings

therein in which a rod 48 is slidable. One of the ends of the rod has a collar 49 fixed thereto, and a similar collar 50 fixed to the rod on the opposite side of the legs 46 retains a stiff spring 51 in place adjacent one side of one of the legs 46. The opposite end of the rod 48 is flattened and has secured thereto a double-sided strap 52 in which a number of openings 53 are provided, the openings being of the same caliber as the pin 44 of the crank arm and thru one of which the crank arm pin is inserted.

In use, the oil pump is operated as follows. Oil is permitted to enter the outer chamber 21 of the cylinder 11 thru the pipe 33. Before passing into the chamber 21, it is strained over a strainer 31 and thereafter passes thru the openings 30, the suction valve 20 being at all times submerged. As the plunger is on the upward stroke, a suction is created in the inner chamber 22 whereby the valve 20 is opened and a quantity of oil permitted to enter the inner chamber 22. As the piston takes a downward stroke in the sleeve 14, the oil captured therein will open the slide valve 16 and permit the oil to escape from the chamber 22 thru the openings 19 and into the reservoir cylinder 10. The plunger 27 has a reciprocating motion imparted to it by the rocker arm 25. This rocker arm is actuated by the arcuate rotation of the shaft 23. As previously stated, the outer end of said shaft is square in cross section in order to receive the upper end of the crank arm 36. The spindle 37, rotatable by means of the hand wheel 42, is anchored in said crank arm and has a dog 43 to which the strap 52 is secured. The eccentric rod 45 has the legs 46 rigidly secured thereto. These legs and the crank arm are connected by the rod 48 thru the medium of the strap 52. As the eccentric rod reciprocates, the legs 46 will be correspondingly moved, which in turn causes reciprocal action to be imparted to the rod 48 thru the medium of the spring 51 which backs against the fixed collar 50, thus transmitting a reciprocating motion to the crank arm 36. It is obvious that with the use of the spring 51 and the collar 50, the lower cylinder reservoir 10 may be filled and the crank arm may resist the tendency to move without damage to the working parts, and as the eccentric rod has freedom of movement this movement is taken up by the tension of the spring 51.

I claim:—

1. A transmission mechanism between an eccentric rod imparting reciprocal motion and a crank operated lubricating pump comprising a crank arm secured to said pump crank, legs mounted on the eccentric rod, a rod connecting said crank arm and said legs, and means for varying the effective length of said crank arm.

2. A transmission mechanism between an eccentric rod imparting reciprocal motion and a crank operated lubricating pump comprising a crank arm engaging the end of the pump crank, legs mounted on the eccentric rod and a rod connecting said crank arm and said legs, one end of said rod being slidable in said legs, a fixed collar on said rod between the legs and the crank arm, a spring retained between said collar and legs and a semi-circular strap at the opposite end of said rod for securing said rod to said crank arm.

3. A transmission mechanism between an eccentric rod and a crank operated oil pump, a crank arm having an upper off-set end, said end having a square opening therein engaging the pump crank, a hollow shank on said crank arm, the shank of said crank arm having three sides and an open side, a threaded spindle rotatably mounted in the hollow portion of the crank arm, a follower dog engaging said spindle, a pin on said dog, a hand wheel at the upper end of said spindle for rotating the same, and means for connecting the follower dog to the eccentric rod.

In testimony whereof I affix my signature.

ANTONIO CORREA.