No. 656,289. Patented Aug. 21, 1900.

W. J. HARVEY.

CROSS HEAD PIN OILER.

(Application filed May 21, 1900.)

(No Model.) 2 Sheets—Sheet 1.

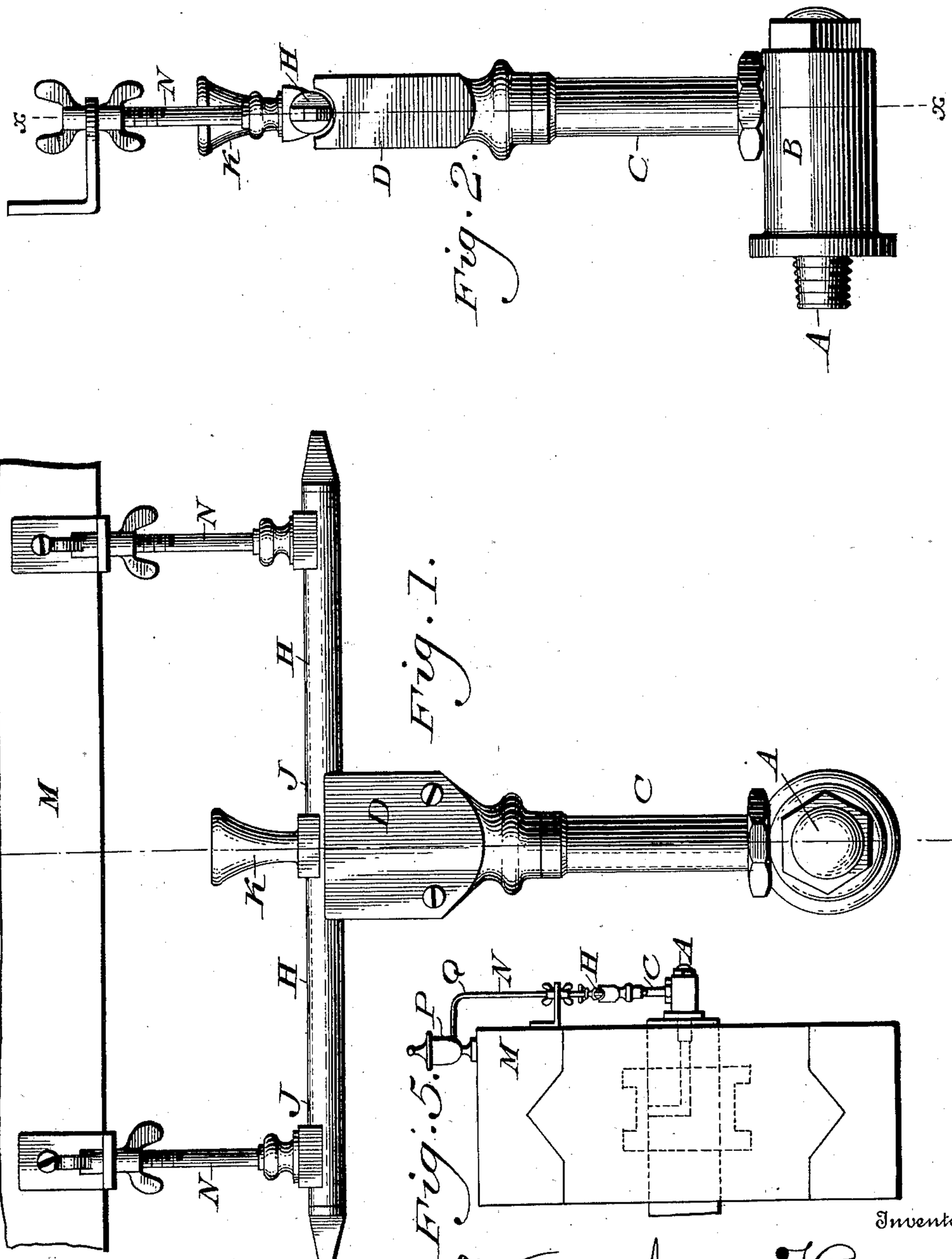

Fig. 1. Fig. 2. Fig. 3. Fig. 4. Fig. 5.

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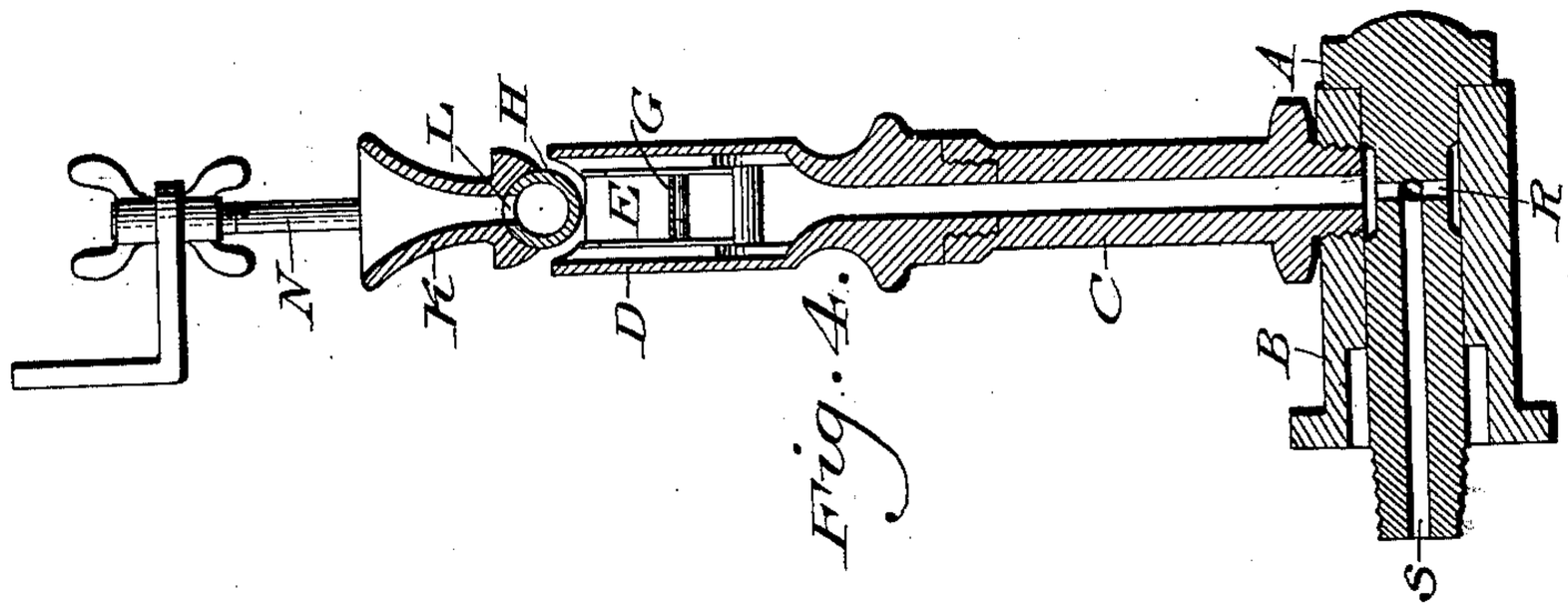

Fig. 4.

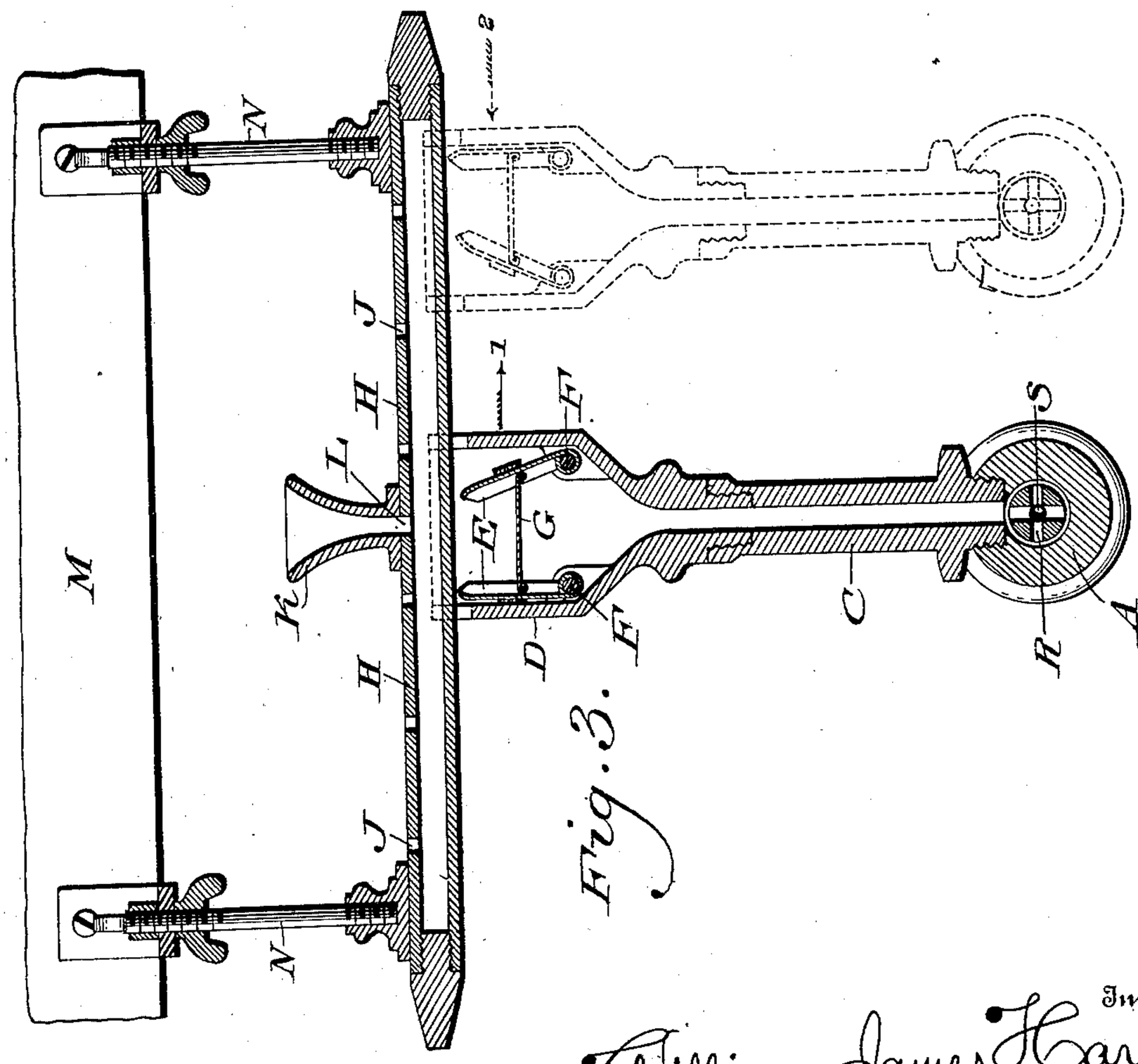

Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM JAMES HARVEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO WILLIAM H. WHEATON, OF SAME PLACE.

CROSS-HEAD-PIN OILER.

SPECIFICATION forming part of Letters Patent No. 656,289, dated August 21, 1900.

Application filed May 21, 1900. Serial No. 17,351. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JAMES HARVEY, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Cross-Head-Pin Oilers, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a lubricator or oiler for a cross-head pin embodying a novel distributer for the oil or lubricant and a novel wiper therefor, the same providing a perfect sight-feed and adaptable to be adjusted when an engine is running, is economical in the use of oil, is positive and reliable in operation, and saves time, trouble, and expense in repairing, and the pin may be supplied until the cup is repaired.

Figure 1 represents a side elevation of a lubricator or oiler for a cross-head pin embodying my invention. Fig. 2 represents an end elevation thereof. Fig. 3 represents a vertical section on line *x x*, Fig. 2. Fig. 4 represents a vertical section on line *y y*, Fig. 1. Fig. 5 represents a view of the device on a small scale, including a portion of a cross-head to which the same is applied.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a pin of a cross-head which is inclosed in the sleeve B, from which latter rises the tubular body, column, or duct C. On the top of said column is the enlarged chamber D, within which rise the tongues or wipers E, each of which has an axis F on the lower end, said wipers being connected above the axes by the link G, whereby they may oscillate, said chamber and appurtenances being adapted to travel with the cross-head. The upper portion of the walls of the chamber D are channeled or bifurcated, so as to freely embrace the oil-distributer H, which consists of a horizontally-arranged tube having in its upper side the discharge-ports J, the end of said distributer being closed in any suitable manner.

K designates a funnel for supplying the distributer H, the same being in communication with the latter by means of the port L. The distributer is suspended from the guide M of the cross-head by means of the hangers N, which are vertically adjustable, so that said distributer may be set with nicety.

The operation is as follows: On the guide M is supported the lubricator or oil-cup P, from which leads the discharge-pipe Q, the latter opening into the funnel K, whereby the oil or lubricator enters the distributer H. The latter overflows through the ports J and trickles or rolls down the side of the distributer to the bottom thereof, quantities of the oil thus hanging in drops or lengths from said distributer without liability to run away and waste or cause the wipers to force back the oil into the tube and clog the openings of the same. Consequently as the chamber D and connected parts move with the cross-head the wiper E, that stands perpendicularly in said chamber, touches the oil or lubricant and removes a sufficient quantity of the same, so as to direct it into the chamber D, from whence it flows into the column C and escapes at the bottom of the latter to the ports R in said pin, so that the exterior of the pin is lubricated, and some of the oil or lubricant is directed by the central port S in said pin to the cross-head, thus lubricating the latter. It will here be noticed that the link G, which connects the wipers E, is of length less than the space between said wipers if both were placed in upright position. One of said wipers occupies an inclined or oblique position, while the other stands perpendicular. By this provision as the cross-head makes its throw in one direction—say in the direction of the arrow 1—said wipers assume the position shown in Fig. 3, the top of the wiper on the right-hand side being lower than that on the left. Consequently the perpendicularly-arranged wiper takes the oil from the outside of the distributer H, the cross-head moving in the direction of the arrow 1. Then when the cross-head makes its return motion or in the direction of arrow 2 the wipers assume the position shown in Fig. 3, the right-hand wiper being perpendicular and the left-hand one being carried over by said perpendicular wiper and inclined or oblique, and thus the right-hand wiper only takes the amount of oil required from

the distributer and directs it into the head D, and consequently to the parts to be lubricated. In either case the oil flows down on the inner side of the wiper that is perpendicular and so positively directed into the chamber D, from whence it enters the column or duct C. In these motions of the cross-head the top of the wiper does not engage the surface of the distributer H and scrape or grind thereagainst, but is, on the contrary, sufficiently removed therefrom so that when the proper depth of the drops or lengths of oil are suspended from said distributer the perpendicular wiper will then engage said oil or lubricant and remove a desired quantity, causing a uniformity of action in the oiling or lubricating.

The tongues or wipers may be formed of metal or other suitable material.

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

1. A lubricator or oiler for a cross-head pin consisting of a body provided with a chamber, wipers movably mounted therein and means for conveying the lubricant or oil from said chamber to said pin, said wipers being connected by a short member, whereby one of the wipers is maintained close to an oil-distributing device and the other one is lowered therefrom.

2. A lubricator for a cross-head pin having an oil-distributing device, a traveling chamber adapted to receive a supply or oil therefrom and provided with a discharge-duct and oscillating wipers mounted on said chamber, which latter is movable with a cross-head.

3. In a lubricator or oiler for a cross-head pin, a body provided with a chamber having movable wipers mounted therein and an oil-distributing device above said wipers, the latter being connected by a link which permits one wiper to assume a perpendicular position and the other wiper to assume an inclined position relative to the direction of throw of the cross-head.

4. In a lubricator or oiler for a cross-head pin, a distributer having ports therein, a pair of movable wipers carried by the cross-head and movable therewith, said wipers being connected by a member, whereby by the throw of the cross-head one wiper is placed in perpendicular position and the other wiper is placed in inclined position relatively to the direction of motion of said cross-head.

5. A pin for a cross-head, a sleeve or bearing in which the same is mounted, a tubular column rising from said sleeve, a plurality of movable wipers mounted in the upper part of said column, a connection for said wipers, a distributer for oil having an outlet-port to the side thereof, means for supplying said distributer and means for supporting said distributer above the cross-head, said connection being of such length that one wiper is adapted to be placed in perpendicular position to sweep the oil or lubricant from the surface of the distributer without necessarily contacting with the surface of said distributer, and the other wiper is placed in an inoperative position, said wipers being influenced in their positions by the throw of the cross-head.

6. In a lubricator or oiler for a cross-head pin, an oil-distributing device consisting of a tube having openings in its top, whereby the oil overflows from said tube at said top and runs over the side of the tube to the bottom, the bottom of the tube being closed, a traveling oil-receiving chamber provided with a discharge-duct, and a wiping device, the latter being mounted on said chamber adjacent to the closed bottom of said oil-distributing device.

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