No. 774,969. PATENTED NOV. 15, 1904.

W. W. NUGENT.

OILING DEVICE.

APPLICATION FILED DEC. 2, 1901.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

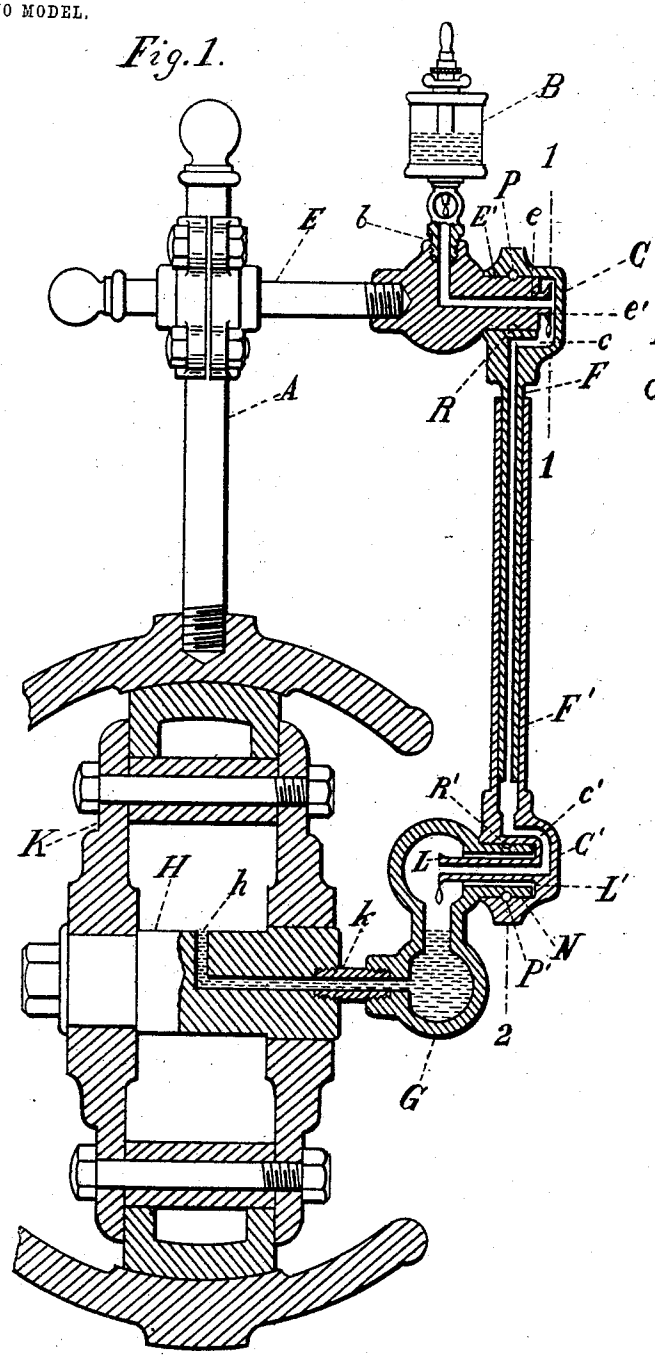
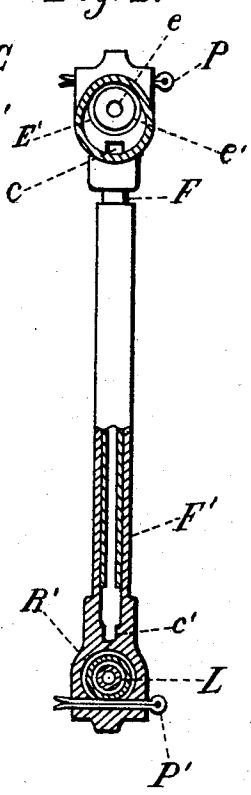


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

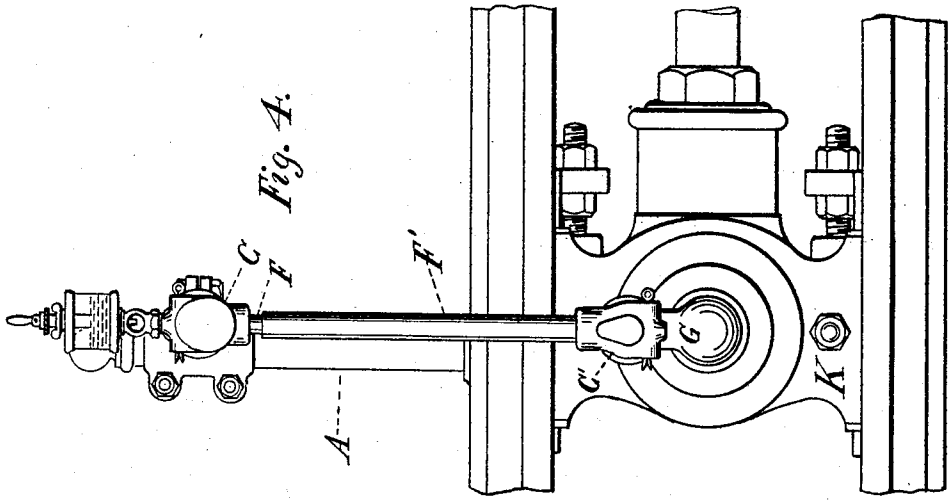
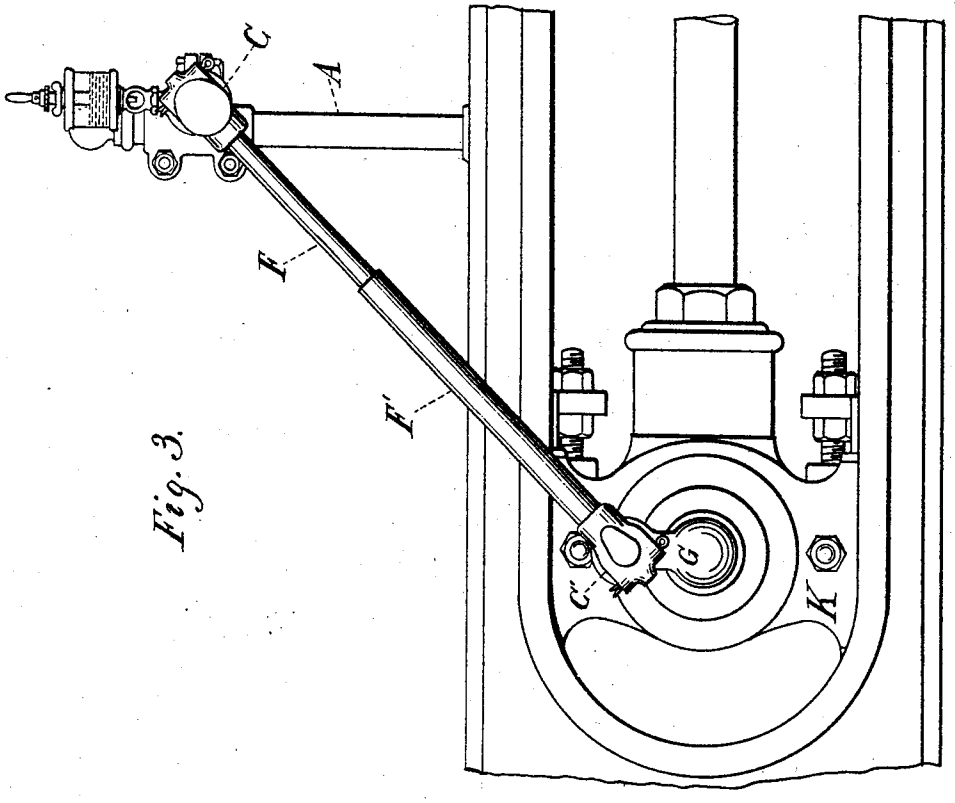


Fig. 3.



WITNESSES:

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No. 774,969. Patented November 15, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM WASHBURN NUGENT, OF CHICAGO, ILLINOIS.

OILING DEVICE.

SPECIFICATION forming part of Letters Patent No. 774,969, dated November 15, 1904.

Application filed December 2, 1901. Serial No. 84,431. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WASHBURN NUGENT, a citizen of the United States, residing in the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Oiling Device, of which the following is a specification.

My invention relates to improvements in an oiling device by which the lubricant is conveyed from a stationary oil-supply to a bearing or journal in a reciprocating or oscillating body—as, for instance, the wrist-pin in the cross-head of an engine.

The objects of my invention are, first, to provide a positive and continuous flow of oil from a stationary supply to the bearing-surface of a journal; second, to avoid stuffing-boxes, packings, gaskets, and friction; third, to prevent leakage and waste of oil; fourth, to provide a durable and conveniently attached or detachable oiling device. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the device shown connected to the wrist-pin of an engine cross-head. Fig. 2 is a view partly in section, the upper part of which is taken on line 1 1 of Fig. 1, showing an end view of bearing-support, drip, and oil-conduits. The lower part of the same figure is taken on line 2 and shows arrangement of cotter-pins and circumferential grooves, also an end view of bearing-support and oil-conduits. Figs. 3 and 4, respectively, show positions of the oiling device at end and half stroke of the cross-head.

Similar letters refer to similar parts throughout the several views.

A represents a stationary support, preferably made hollow, and secured thereon and extending horizontally therefrom is a cross-bar E, provided with a hollow cylindrical bearing-support E′, having a threaded socket *b* for the reception of sight-feed oil-cup B.

H represents a wrist-pin in a cross-head K, which said wrist-pin is at one of its ends provided with a threaded socket *k* for the reception of the chambered extension G.

h is a passage in wrist-pin H for the purpose of conveying the oil to the bearing-surface of the pin. The chambered extension G is provided with a bearing-support N, similar to bearing-support E′.

C and C′ represent heads or sockets loosely mounted and free to rotate or oscillate on their respective bearing-supports E′ and N. Secured in socket C′ is a tube F′, and secured in socket C is another tube F, arranged to slide within tube F′.

In sockets C and C′ are oil-conduits *c* and *c′*, passing longitudinally outside of bearing-supports E′ and N. Extending from socket C′ is a tube L, made to project loosely into the aperture L′ provided in bearing-support N. The interior of said tube L forms a communication between conduit *c′* and interior of chambered extension G. Extending through bearing E′ is a central aperture *e*, forming communication between oil-feeding cup B and conduit *c*.

e′ is a neck-formed drip extending from bearing-support E′ for the purpose of preventing the oil from entering and leaking out between socket C and its bearing-support E′.

P and P′ are cotter-pins secured in sockets C and C′ and by extending into circumferential grooves R and R′ on the outsides of bearings E′ and N serving to keep the sockets in proper longitudinal position.

The oiling device operates as follows: The oil-cup having been provided with oil and its feed adjusted so as to allow the oil to flow at the required rate, the oil, acted on by gravity, will flow to the journal to be lubricated through the central aperture *e*, drip *e′*, conduit *c*, tubes F and F′, conduit *c′*, around end of bearing-support N, thence through tube L to the interior of chambered extension G. The oil will accumulate within said extension and in passage *h* until it attains sufficient height to cause the inflowing oil to be delivered to the bearing-surface of wrist-pin H. By the reciprocating motion of the cross-head the distance between the bearing-supports E′ and N varies. The telescoping tubes by sliding one within the other serve to compensate for this variation.

For the convenience of illustrating my device I have shown it in connection with the wrist-pin of an engine cross-head. It may,

however, be used for lubricating any reciprocating or oscillating parts of machinery or to convey a fluid from any stationary supply to any reciprocating or oscillating receptacle.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an oiling device, the combination of hollow bearing-supports arranged at different levels, a pair of sockets with oil-cavities therein, loosely mounted upon said bearing-supports and journaled to rotate thereon, a pair of telescoping tubes respectively secured to said sockets and forming a continuous communication therebetween, said lower bearing-support having a chambered intermediate member with delivery-duct which discharges at a level below the level of the interior of the socket mounted thereon, and projecting tubular members with lips formed upon the ends thereof, projecting freely into the upper socket and chambered member, respectively, whereby the oil is kept free from the joints of rotation, substantially as shown and described.

2. In an oiling device, the combination of a pair of hollow bearing-supports arranged at different levels, a pair of sockets journaled to oscillate on said bearing-supports and provided with passages, a pair of telescoping tubes respectively secured to said sockets and forming in conjunction with the latter a continuous duct extending from one bearing-support to the other, an axially-disposed tube of less external diameter than the interior of the bearing-support, extending therethrough, connected with and forming an extension of the passage in the lower socket, the end whereof projects freely into a cavity of the bearing-support, the discharge-passage of said lower bearing-support leading downwardly from said cavity and discharging at a point below the level of the cavity, as and for the purposes set forth.

3. In an oiling device, the combination of a hollow bearing-support with a chambered intermediate member, a socket member with an oil-cavity therein, journaled upon said bearing-support and having a communicating oil-duct portion extending therethrough into said chambered member concentrically with the axis of rotation of the socket, and a lip formed upon the extremity of said oil-duct portion, substantially as described.

4. In an oiling device, the combination of a hollow bearing-support having a chambered intermediate portion, a socket member journaled upon and forming an end closure for the end of said hollow bearing-support, said socket member being provided with an oil-duct therethrough and with a tubular extension extending axially through said bearing-support into said chambered portion, a circumferentially-extending flange upon the extremity of said tubular extension, and means for supplying oil to the oil-duct in said socket member, whereby it is conveyed to the chamber of said chambered portion without engagement with the joints of said device, for the purpose described.

5. In an oiling device the combination of a hollow stationary bearing-support and a hollow reciprocating bearing-support, sockets loosely mounted and free to rotate on said bearing-supports, oil-conducts in said sockets, communicating with each other by means of a pair of telescoping tubes and also communicating with the hollow of their respective bearing-supports, and means to secure said sockets on their bearing-supports embracing circumferential grooves on the outside of said bearing-supports, substantially as and for the purpose set forth.

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

WILLIAM WASHBURN NUGENT.

Witnesses:
CHAS. A. ANDERSON,
JOHN WICKSTROM.