No. 798,009. PATENTED AUG. 22, 1905.

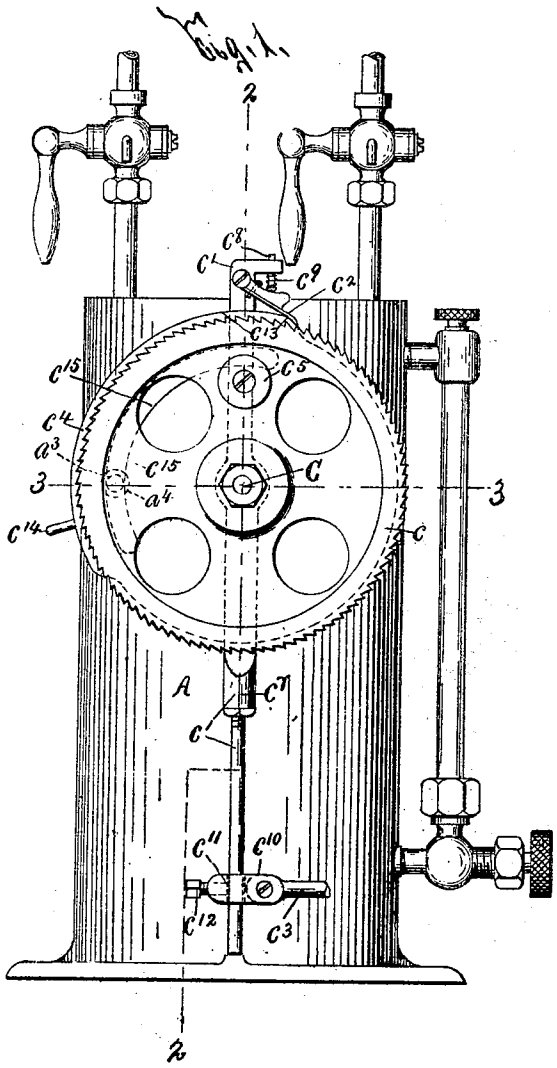
J. BUCKLEY & J. SHERRY.

LUBRICATOR.

APPLICATION FILED NOV. 3, 1899.

3 SHEETS—SHEET 1.

Fig. 1.




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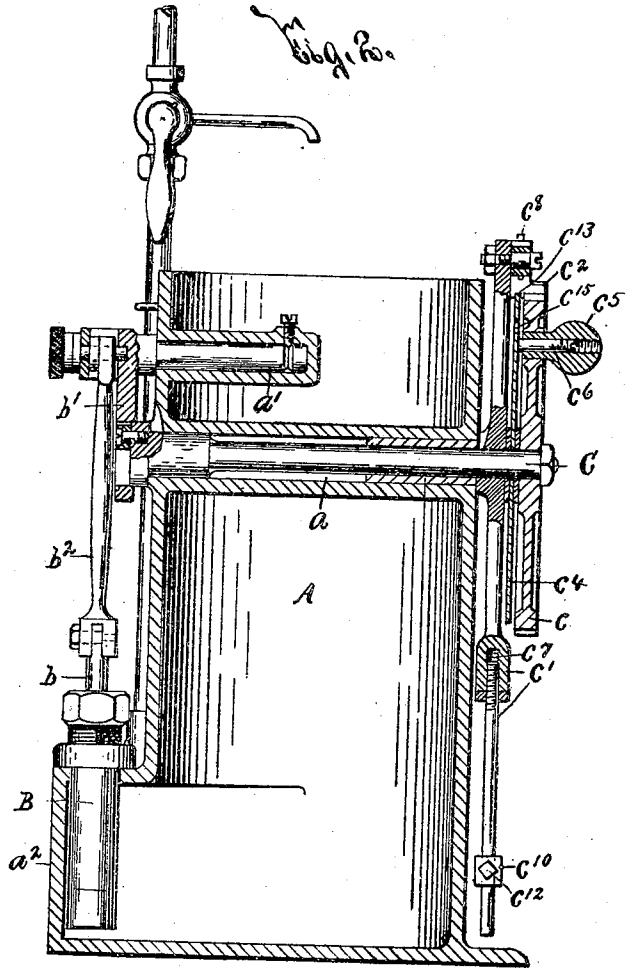
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3 SHEETS—SHEET 3.

Fig. 3.

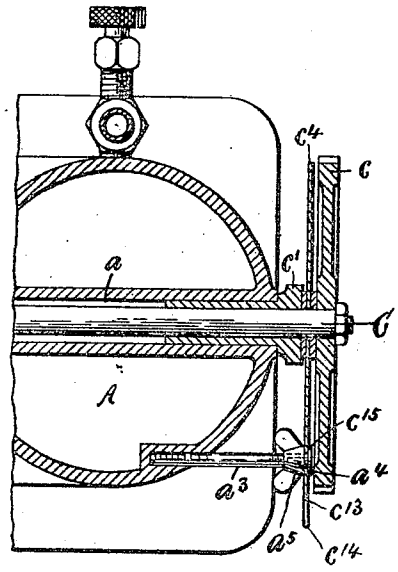
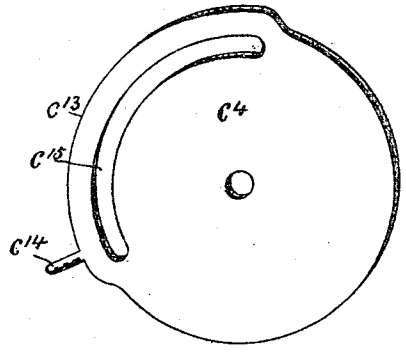



Fig. 4.




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# UNITED STATES PATENT OFFICE.

JOHN BUCKLEY AND JOHN SHERRY, OF ROCHESTER, NEW YORK, ASSIGNORS, BY MESNE ASSIGNMENTS, TO STERLING LUBRICATOR COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

## LUBRICATOR.

No. 798,009. Specification of Letters Patent. Patented Aug. 22, 1905.

Application filed November 3, 1899. Serial No. 735,650.

*To all whom it may concern:*

Be it known that we, JOHN BUCKLEY and JOHN SHERRY, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Lubricators, of which the following is a specification.

Our invention relates to force-feed lubricators, and has for its object the production of a device which is particularly simple in construction, is highly effective in use, and is capable of a maximum adjustment even when in operation; and to this end it consists in the combination, construction, and arrangement of the component parts of a force-feed lubricator, as hereinafter fully set forth, and pointed out in the claims.

In describing this invention reference is had to the accompanying drawings, in which like letters designate corresponding parts in all the views.

Figure 1 is a face view of our force-feed lubricator. Figs. 2 and 3 are sectional views taken, respectively, on lines 2 2 and 3 3, Fig. 1. Fig. 4 is a perspective of the detached governing member of our invention.

Our lubricator preferably comprises in its organization a reservoir A, a pump B, a shaft C, connected to the pump, and means for actuating said shaft and controlling the operation thereof.

The reservoir A is of any desirable form, size, and construction, and is formed with transverse chambers $a$ $a'$, a lateral extension $a^2$, and a projecting arm $a^3$. Said chamber $a$ extends through the upper parts of the opposite walls of the reservoir A, forms a bearing for the shaft C, (presently described,) and braces and unites said upper parts of the opposite walls of the reservoir. The chamber $a'$ is arranged above the chamber $a$ in a plane substantially parallel therewith, extends through the wall of one side of the reservoir A, and is formed with a closed inner end. Said lateral extension $a^2$ projects from the base of the reservoir in alinement with the chambers $a$ $a'$ and is provided with an internal chamber forming a lateral extension of the internal chamber of said reservoir. The arm $a^3$ projects laterally from one side of the reservoir A in a plane substantially parallel with the chambers $a$ $a'$ and eccentric to the shaft C, is adjustable longitudinally in a socket in the wall of said reservoir, and is provided at its outer extremity with a shoulder $a^4$ and a nut $a^5$, screwing on said extremity toward and away from the shoulder $a^4$ for clamping the governing member (presently described) against said shoulder, and thus securing the same in its adjusted position, and for permitting the desired adjustment of said governing member.

The pump B is of any desirable form, size, and construction, is supported on the extension $a^2$ of the reservoir A, is provided with a suitable piston $b$, and communicates with the internal chamber of said extension. The construction of said pump forms no part of our present invention, and hence it is unnecessary to further describe the same herein.

The shaft C is passed through the chamber $a$ and generally projects beyond both ends thereof. One end of the shaft C is connected to an actuating member $b'$, which is journaled in the chamber $a'$ and is connected by suitable means $b^2$ to the piston $b$ of the pump B. The construction of said actuating member and of the means $b^2$ between the same and the pump B also forms no part of our present invention, and hence it is unnecessary to describe the same herein.

The means for actuating the shaft C and controlling the operation thereof consists of a power-transmitting wheel $c$, a rocking lever $c'$, an actuating member $c^2$, a connecting member $c^3$, a governing member $c^4$, a handpiece $c^5$, and a friction-piece $c^6$. Said power-transmitting wheel is suitably connected to the shaft C, being preferably fixed to the adjacent end thereof, and is usually provided with a toothed periphery. The lever $c'$ is interposed between the reservoir A, and the adjacent or inner face of the wheel $c$ is loosely mounted on the shaft C and generally consists of upper and lower separable sections, one being provided with a threaded socket $c^7$ and the other having one end threaded and movable longitudinally in the socket $c^7$. Said actuating member $c^2$ usually consists of a pawl which is mounted on the upper end of the lever $c'$ and engages the toothed periphery of the wheel $c$ for advancing the same step by step as the lever $c'$ is rocked to and fro. The actuating member $c^2$ may be forced into its operative position by

a reciprocating plunger $c^8$, supported by the lever $c'$ above a portion of the actuating member and engaged by a spring $c^9$ for forcing said plunger toward the actuating member. The connecting member $c^3$ consists of a reciprocating rod having one end provided with a hinged section $c^{10}$ and its opposite end suitably connected to any desirable movable part (not illustrated) of the engine or other mechanism to be lubricated. Said hinged section is provided with a suitable eye or guide $c^{11}$ and a clamping member $c^{12}$, which respectively receive the free end of the lever $c'$ and secure the same to the connecting member $c^3$.

The governing member $c^4$ consists of a flat disk which is interposed between the wheel $c$ and the lever $c'$, is loosely mounted on the shaft C, and is provided with a peripheral engaging face $c^{13}$, a handpiece $c^{14}$, and a slot $c^{15}$. The peripheral face $c^{13}$ forces the actuating member $c^2$ out of operative position as the lever $c'$ is rocked in one direction. The handpiece $c^{14}$ preferably projects beyond the periphery of the power-transmitting wheel $c$, facilitates adjustment of the governing member, and reduces the liability of injury to the operator during said adjustment, and the slot $c^{15}$ is concentric with the shaft C and receives a portion of the arm $a^3$ at the inner side of the shoulder $a^4$ for enabling the governing member to be interposed between the shoulder $a^4$ and the nut $a^5$, which hold said governing member in it adjusted position and are arranged eccentric to the axis of the power-transmitting wheel $c$ and out of the path of movement of the lever $c'$. The governing member is thus supported upon the reservoir A by the shaft C, and the arm $a^3$ is readily rotated on the shaft C when the nut $a^5$ is withdrawn from its operative position and is firmly held in its adjusted position by said nut. As the governing member $c^4$ is rotated on the shaft C the peripheral face $c^{13}$ thereof is moved relatively to the actuating member $c^2$ for varying the length of the part of the movement of said member $c^2$, during which the member $c^2$ is held in an inoperative position by the face $c^{13}$, and thus adjusting the length of the step-by-step movements of the power-transmitting wheel $c$ and the speed of rotation of the shaft C independently of the lever $c'$.

The handpiece $c^5$ is connected to the outer face of the power-transmitting wheel $c$ and may be readily and safely actuated during the operation of the lever $c'$ to effect the operation of the power-transmitting wheel $c$ by hand independently of the lever $c'$ and preferably at a greater speed than the same would be operated by said lever. The friction-piece $c^6$ is adjustable longitudinally in an internal chamber in the handpiece $c^5$ and projects beyond the inner face of the power-transmitting wheel into engagement with the adjacent face of the governing member for preventing undue movement of the wheel $c$. The described means for actuating the shaft C and controlling the operation thereof is particularly practical, as it permits any desired adjustment of the amount of effective movement of the actuating member $c^2$ without adjusting the position of said actuating member and also permits any desired adjustment of the operation of the lever $c'$ without varying the throw of said lever and enables the operator to actuate the shaft C by the handpiece $c^5$ independently of the lever $c'$ and during the operation thereof without adjustment or manipulation of the means connecting the wheel $c$ and the lever $c'$.

The construction and operation of our lubricator will now be readily understood upon reference to the foregoing description and the accompanying drawings.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A lubricator comprising a reservoir, a pump communicating with the reservoir, actuating mechanism for the pump comprising a shaft supported by and extending transversely of the reservoir, a power-transmitting wheel mounted on the shaft, a lever pivoted on the shaft between said wheel and the reservoir, a member for connecting the lever and power-transmitting wheel together, said member being carried by the lever, an adjustable governing device for said member carried by said shaft and disposed between the lever and said wheel, said governing member being formed with an arc-shaped slot, the center of the arc of said slot being concentric with the axis of the shaft, an arm projecting from the reservoir parallel to the shaft and extending through the slot in the governing member, and clamping means provided on said arm, substantially as and for the purpose specified.

2. A lubricator comprising a reservoir, a pump communicating with the reservoir, a power-transmitting wheel connected to the pump, a lever movable about the axis of said wheel, an actuating member for the power-transmitting wheel operated by the lever, an adjustable governing member for the actuating member movable about the axis of the power-transmitting wheel, and means for holding the governing member in its adjusted position and permitting adjustment of said member during the operation of the lever, said means being arranged eccentric to the axis of the power-transmitting wheel, and out of the path of the lever, substantially as and for the purpose described.

3. A lubricator comprising a reservoir provided with a projecting arm, a pump communicating with the reservoir, a power-transmitting wheel connected to the pump, a movable lever interposed between the reservoir and

the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever and movable on an axis eccentric to the projecting arm, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel, and means for securing the governing member to the projecting arm and permitting adjustment of said governing member during the operation of the lever, substantially as and for the purpose set forth.

4. A lubricator comprising a reservoir provided with a projecting arm having a shoulder, a pump communicating with the reservoir, a power-transmitting wheel connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel and formed with a slot for receiving the arm, said governing member having one of its faces engaged with the shoulder of the arm, and a nut adjustable lengthwise of the arm toward and away from the opposite face of the governing member, substantially as and for the purpose specified.

5. A lubricator comprising a reservoir provided with a projecting arm, a pump communicating with the reservoir, a power-transmitting wheel, a shaft for actuation by the power-transmitting wheel, said shaft being supported by the reservoir eccentric to the projecting arm and connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel and loosely mounted on the shaft, and means for securing the governing member to the projecting arm and permitting adjustment of said governing member during the operation of the lever, substantially as and for the purpose set forth.

6. A lubricator comprising a reservoir provided with a projecting arm, a pump communicating with the reservoir, a power-transmitting wheel, a shaft for actuation by the power-transmitting wheel, said shaft being supported by the reservoir and connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel and loosely mounted on the shaft, said governing member being formed with a slot arranged concentric with the shaft for receiving the arm, and means for securing the governing member to the projecting arm and permitting adjustment of said governing member during the operation of the lever, substantially as and for the purpose described.

7. A lubricator comprising a reservoir, a pump communicating with the reservoir, a power-transmitting wheel connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel and provided with a handpiece projecting beyond the periphery of the power-transmitting wheel, and means for securing the governing member in its adjusted position and permitting adjustment thereof during the operation of the lever, substantially as and for the purpose set forth.

8. A lubricator comprising a reservoir, a pump communicating with the reservoir, a power-transmitting wheel, a shaft for actuation by the power-transmitting wheel, said shaft being supported by the reservoir and connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel and loosely mounted on the shaft, said governing member being provided with a handpiece projecting beyond the periphery of the power-transmitting member, and means for securing the governing member in its adjusted position and permitting adjustment of said governing member during the operation of the lever, substantially as and for the purpose specified.

9. A lubricator comprising a reservoir provided with a projecting arm having a shoulder, a pump communicating with the reservoir, a power-transmitting wheel, a shaft for actuation by the power-transmitting wheel, said shaft being supported by the reservoir and connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel and loosely mounted on the shaft, said governing member being formed with a handpiece projecting beyond the periphery of the power-transmitting wheel and with a slot arranged concentric with the shaft for receiving the arm and having one of

its faces engaged with the shoulder of the arm, and a nut adjustable lengthwise of the arm toward and away from the opposite face of the governing member, substantially as and for the purpose described.

10. A lubricator comprising a reservoir, a pump communicating with the reservoir, a power-transmitting wheel connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, means connected to the outer side of the power-transmitting wheel for actuating the same during the operation of the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel, and means for holding the governing member in its adjusted position and permitting adjustment thereof during the operation of the lever, said means being supported by the reservoir and arranged out of the path of the lever, substantially as and for the purpose specified.

11. A lubricator comprising a reservoir, a pump communicating with the reservoir, a power-transmitting wheel connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, means connected to the outer side of the power-transmitting wheel for actuating the same during the operation of the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel, means for holding the governing member in its adjusted position and permitting adjustment thereof during the operation of the lever, said means being supported by the reservoir and arranged out of the path of the lever, and a friction-piece supported by the power-transmitting wheel and engaged with the governing member for preventing undue movement of the power-transmitting wheel, substantially as and for the purpose described.

12. A lubricator comprising a reservoir, a pump communicating with the reservoir, a power-transmitting wheel connected to the pump, a movable lever interposed between the reservoir and the adjacent or inner face of the power-transmitting wheel, an actuating member for the power-transmitting wheel operated by the lever, a handpiece secured to the outer side of the power-transmitting wheel for actuating the same during the operation of the lever, said handpiece being provided with an internal chamber, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel, means for holding the governing member in its adjusted position and permitting adjustment thereof during the operation of the lever, said means being supported by the reservoir and arranged out of the path of the lever, and a friction-piece arranged in the internal chamber of the handpiece and projecting beyond the inner face of the power-transmitting wheel into engagement with the adjacent face of the governing member for preventing undue movement of the power-transmitting wheel, substantially as and for the purpose set forth.

13. A lubricator comprising a reservoir provided with a transverse chamber connecting opposite walls thereof and opening through said walls, a pump communicating with the reservoir, a power-transmitting wheel, a shaft passed through the transverse chamber and having one end connected to the pump and its opposite end connected to the power-transmitting wheel, a movable lever, an actuating member for the power-transmitting wheel operated by the lever, an adjustable governing member for the actuating member interposed between the reservoir and the power-transmitting wheel, and means for holding the governing member in its adjusted position and permitting adjustment thereof during the operation of the lever, said means being supported by the reservoir and arranged out of the path of the lever, substantially as and for the purpose described.

14. A lubricator comprising a reservoir, a shaft extending transversely relatively to the reservoir, a pump communicating with the reservoir, power-transmitting means arranged at one side of the reservoir, and between one end of the shaft and the piston of the pump for actuating the pump, a power-transmitting wheel at the other side of the reservoir for transmitting motion to the other end of the shaft, and a lever for advancing the power-transmitting wheel intermittently, substantially as and for the purpose specified.

15. A lubricator comprising a reservoir formed with transverse chambers one above the other, and with a lateral extension arranged beneath the chambers in alinement therewith, one of the chambers opening through opposite walls of the reservoir, and the extension having an internal chamber forming a lateral extension of the internal chamber of the reservoir, a pump supported by the extension and communicating with the internal chamber thereof, a shaft journaled in the transverse chamber opening through opposite walls of the reservoir, an actuating member at one side of the reservoir journaled in the other transverse chamber and connected to one end of the shaft and to the piston of the pump, a power-transmitting wheel at the other side of the reservoir for transmitting motion to the other end of the shaft, a lever for advancing the power-transmitting wheel intermittently, means arranged out of the throw of the lever for varying the length of

the advance steps of the power-transmitting wheel independently of the movement of the lever and during said movement, and means for actuating said power-transmitting wheel by hand independently of the lever, substantially as and for the purpose set forth.

In testimony whereof we have hereunto signed our names, in the presence of two attesting witnesses, at Rochester, in the county of Monroe, in the State of New York, this 5th day of October, 1899.

JOHN BUCKLEY.
JOHN SHERRY.

Witnesses:
HAMPDEN HYDE,
K. H. THEOBALD.