No. 710,184. Patented Sept. 30, 1902.

C. F. CLEMENTS.

LUBRICATOR AND LIQUID DISPENSER.

(Application filed Mar. 11, 1901.)

(No Model.)

Fig. 1.

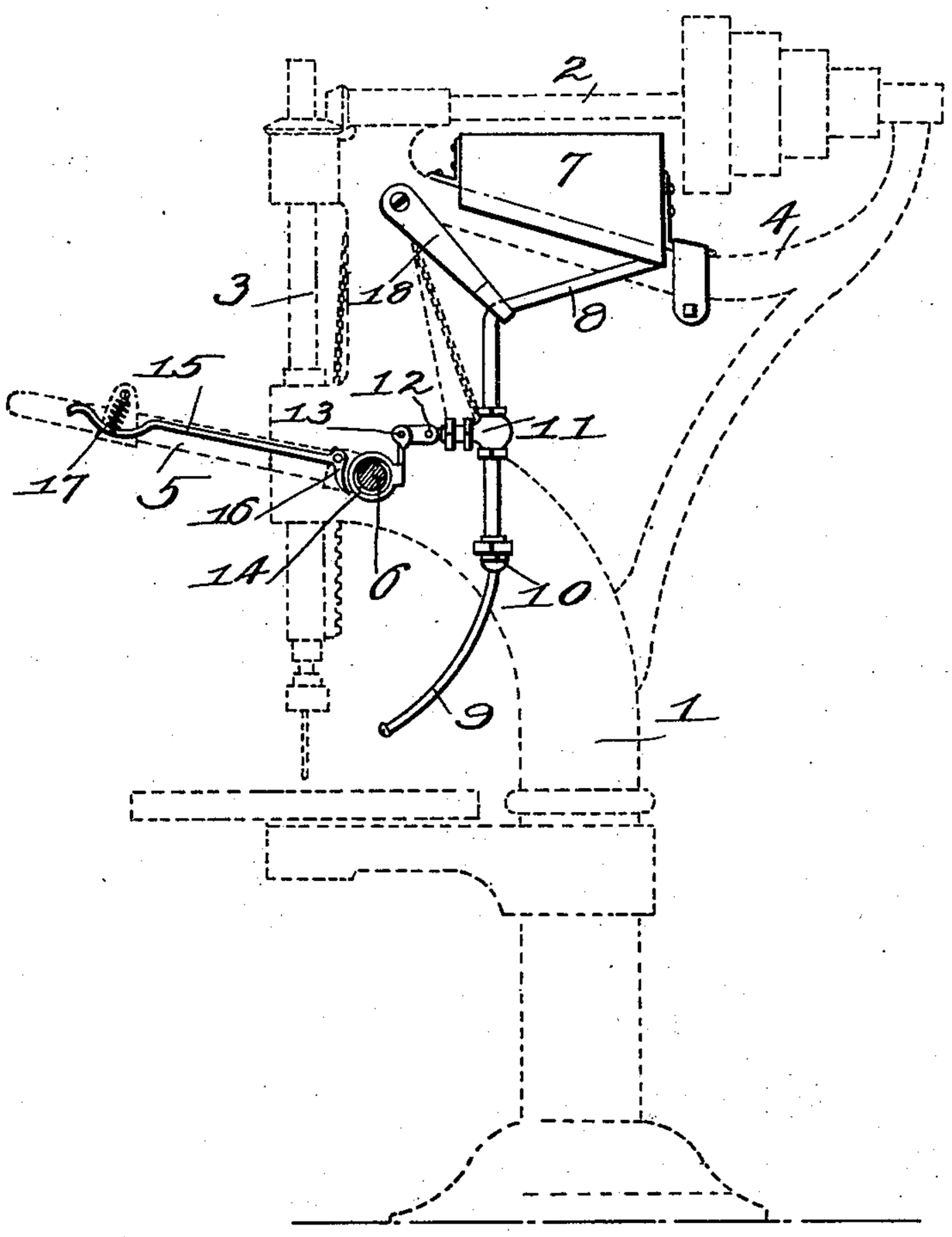
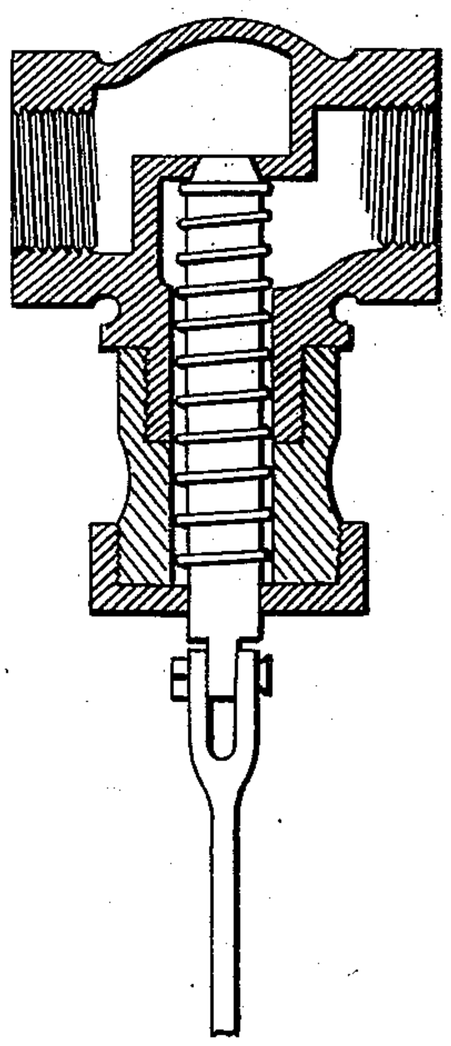


Fig. 2.



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UNITED STATES PATENT OFFICE.

CHARLES F. CLEMENTS, OF PEORIA, ILLINOIS.

LUBRICATOR AND LIQUID-DISPENSER.

SPECIFICATION forming part of Letters Patent No. 710,184, dated September 30, 1902.

Application filed March 11, 1901. Serial No. 50,750. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. CLEMENTS, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Lubricators and Liquid-Dispensers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in liquid-dispensers or lubricators for drilling-machines, by means of which a simple and efficient device is provided for that purpose.

More particularly my invention relates to a liquid-dispenser or lubricator adapted to be applied to a drilling-machine and so operated as to feed the lubricant or liquid upon the drilling-tool at the will of the operator. By means of my device so provided the operator is enabled to operate the drill-pressure lever and the lubricating or liquid-dispensing device with one hand, leaving the other hand free to control the object being operated upon by the drill.

There is provided in the device of my invention a reservoir suitably mounted on a drilling-machine and combined therewith a supply-duct leading to the drilling-tool, the same being made, preferably, of two sections, one connecting with the reservoir and the other swiveled to the first-mentioned section, whereby the same may be swung adjacent to or from the tool.

My invention further consists of a valve in the upper tube held under tension of a spring to close the same, a lever adapted for frictional engagement with a collar on the shaft carrying the main pressure-lever and a suitable arm on the collar, and suitable connection between said arm and the valve-stem, whereby pressure on the said friction-lever will cause frictional engagement with the collar and with the proper movement of the pressure-lever said collar will be turned, thereby causing the valve to be opened to permit the dispensing of the lubricant or liquid.

That my invention may be more fully understood, reference is had to the accompanying drawings, in which—

Figure 1 shows in dotted lines the framework and operative parts of the drilling-machine of the usual and ordinary type of its particular kind and in solid lines the assembled parts of my device in operative position. Fig. 2 is a detailed view of a spring-valve.

In the drawings, 1 refers to the main drill-frame; 2, to the power-shaft; 3, to the upright drill-shaft; 4, to an upper frame part; 5, to a pressure-lever adapted to be fixed upon shaft 6, which said shaft is suitably journaled in the machine-frame and is turned by lever 5 for the purpose of imparting pressure to drill-shaft 3.

7 is a reservoir suitably mounted upon the frame part 4. 8 is a duct or tube leading therefrom.

9 is a supplementary duct swiveled to the lower end of duct 8, as at 10. 11 is a valve of the ordinary and usual form adapted to be applied to tubes of this character.

12 is a link pivoted at one end of the valve-stem, as shown, and at the other end to the arm 13, which is integrally connected with the collar 14, adapted normally to be carried loosely on shaft 6.

15 is a friction-lever pivoted upon the pressure-lever 5 near to its juncture with shaft 6.

16 is an arm or finger projecting normally into close proximity to the surface of collar 14.

17 is a coil-spring secured at one end to a plate on pressure-lever 5 and at the other end to friction-lever 15, as shown.

18 is an arm secured at one end to the frame of the machine and the other end thereof looped to support the duct or tube 8.

In operation the parts of the device being assembled in normal position, as shown in the drawings, the pressure-lever 5 may be operated to cause the drill to be fed to its work without interfering with the lubricating or liquid-dispensing device; but as the lubricant or liquid is desired to be fed upon the drilling-tool, the swivel-arm 9 having been turned so that its lower end is in approximate contact with the tool, by applying pressure to friction-lever 15 with the same hand that controls pressure-lever 5 (the said pressure-lever having been first raised slightly from its work and then depressed) clutch-finger 16 will be caused to engage the friction-collar 14 and

will be turned with the movement of shaft 6, causing the arm 13 to be thrown forwardly, which operation will cause the valve to be open to allow the lubricant or liquid to be fed upon the drilling-tool, and by releasing the said friction-lever 15 the spring 17 will automatically throw the clutch-finger 16 out of engagement with the friction-collar, and the spring in valve 11 will operate to close the valve, thus cutting off the supply of lubricant or liquid.

I have shown substantially the construction and arrangement of parts which I prefer to employ; but parts differently formed may be employed, and the parts may be differently arranged and applied without altering the principle of my invention.

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

1. In a lubricator or liquid-dispenser, a reservoir suitably supported, a shaft, a suitable duct leading from the supply to a drilling-tool, a spring-valve in said duct, a shiftable collar adapted to be mounted on said shaft and connected with said valve, a lever adapted intermittingly to engage said shiftable collar and means for turning said shaft, substantially for the purposes set forth.

2. In a lubricator a reservoir suitably supported, a duct or tube leading therefrom and to a tool operatively mounted on a drill-machine, a suitable spring-valve in said tube, a shiftable collar having connection with said spring-valve and adapted to be mounted on a shaft and connections between said collar and the operating mechanism of the tool whereby intermittent friction-pressure may be applied to said collar to open the valve substantially as described and shown.

3. In a lubricator or liquid-dispenser a reservoir suitably supported, a duct or tube leading therefrom and to a drilling-tool operatively mounted in a drilling-machine, the said duct or tube being formed in two sections, the lower section being swiveled to the upper section, a suitable spring-valve in the duct or tube and means connected with the pressure-lever of the drilling-machine having suitable connection with said valve adapted to intermittingly open and close the valve.

4. A lubricator for drilling-machines, comprising a reservoir suitably mounted thereon, a tube or duct leading therefrom and to the drill-tool, said tube being formed in two sections, the lower one swiveled to the upper section, a spring-valve in the tube or duct, a shiftable collar connected with said valve and a lever arranged to engage said collar frictionally and thereby operate said valve, substantially as described.

5. A lubricator for drilling-machines, comprising a reservoir, the duct 8 having the lower swiveled section 9 attached thereto and provided with the valve 11 therein, the collar 14 shiftably mounted on shaft 6 and connected with the valve by means of arm 13 thereon and the link 12, the friction-lever 15, pivoted to the lever of the machine and provided with the clutch-finger 16, the said lever being held normally from engagement with the collar by means of spring 17, all substantially as described and shown.

6. In a lubricator or liquid-dispenser, a fluid-supply pipe or duct leading to a drilling-tool, a spring-valve in said duct, a shiftable collar suitably connected with said valve, a shiftable lever adapted to frictionally engage said shiftable collar and means for turning the collar.

7. In a lubricator or liquid-dispenser, a suitable duct leading from a source of supply to a drilling-tool, a valve in said duct, a shaft, a shiftable collar mounted on said shaft and connected with said valve, a shiftable lever supported from said shaft and adapted intermittingly to frictionally engage said shiftable collar, and means for turning said shaft, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES F. CLEMENTS.

Witnesses:
W. V. TEFFT,
A. DIXON.