

No. 793,915.

PATENTED JULY 4, 1905.

A. B. WRIGHT.

LUBRICATOR.

APPLICATION FILED SEPT. 1, 1904.

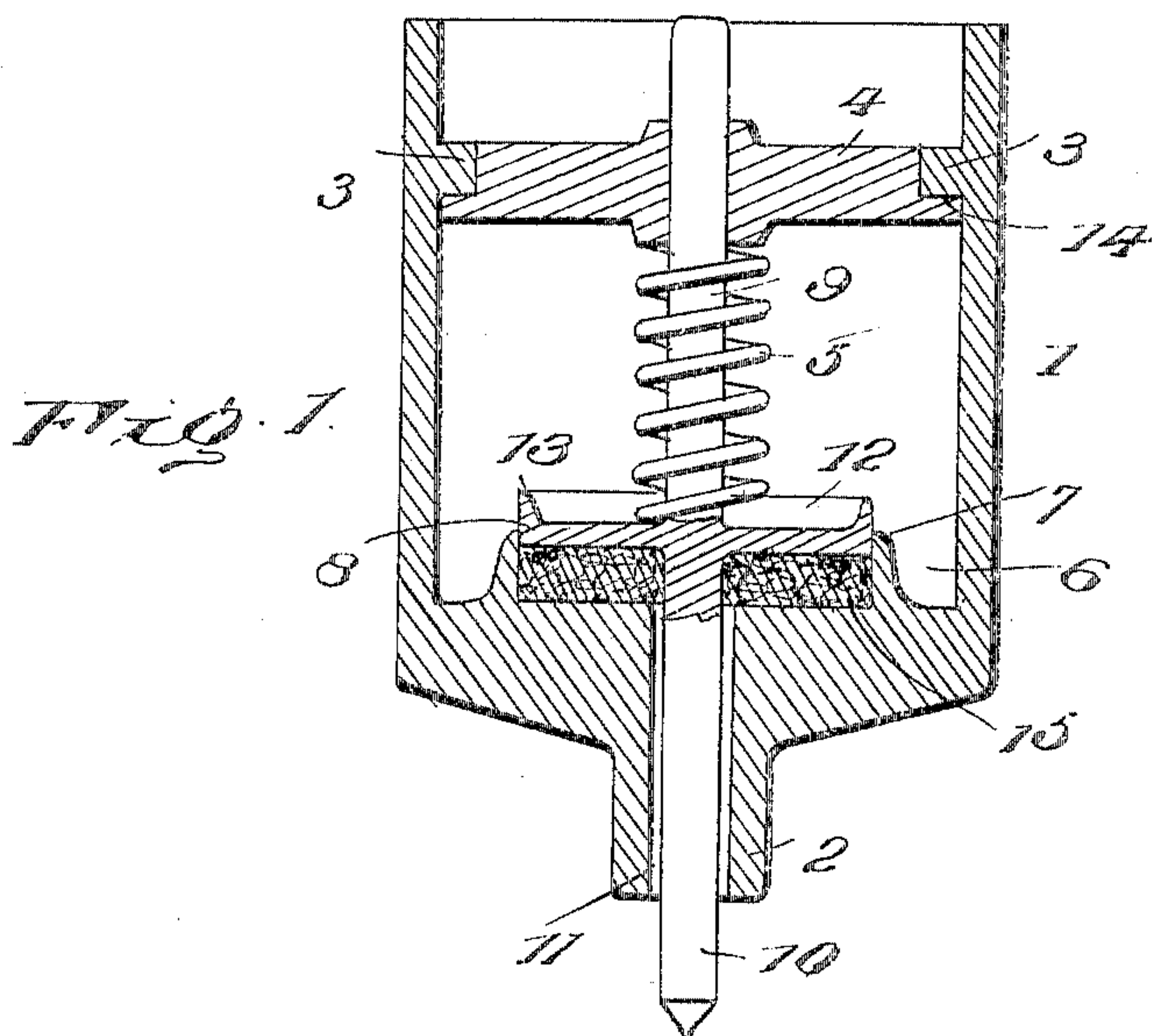


Fig. 2.

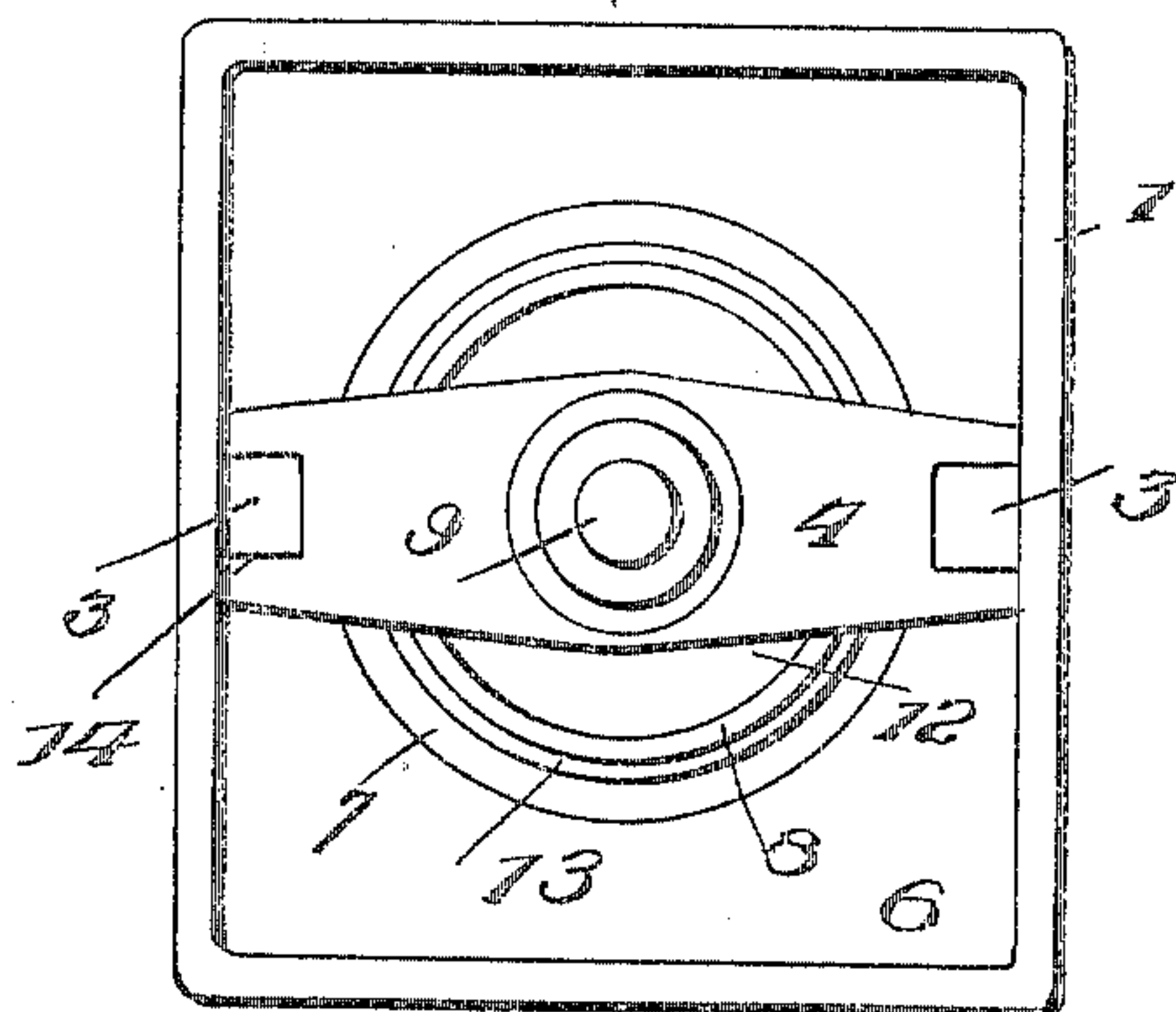
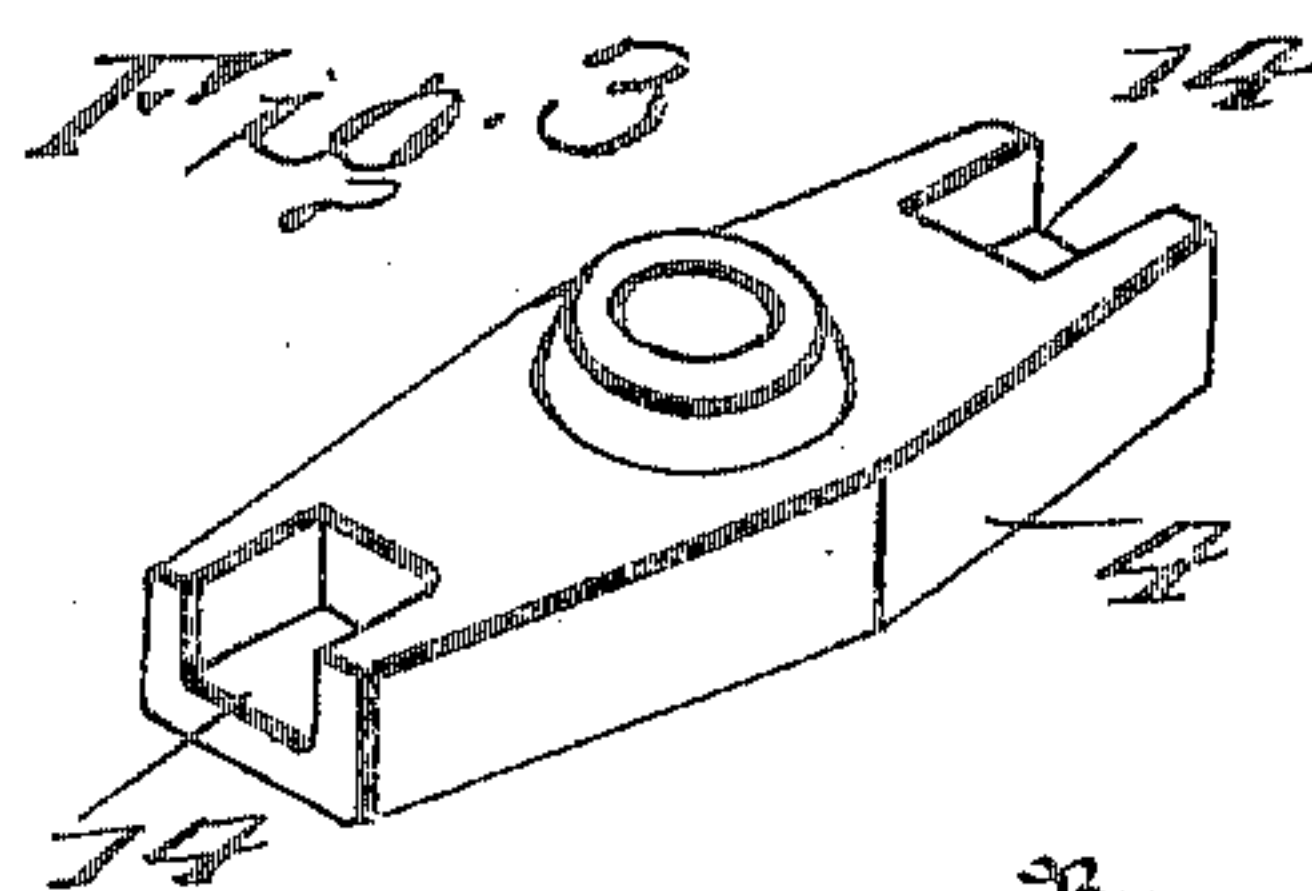
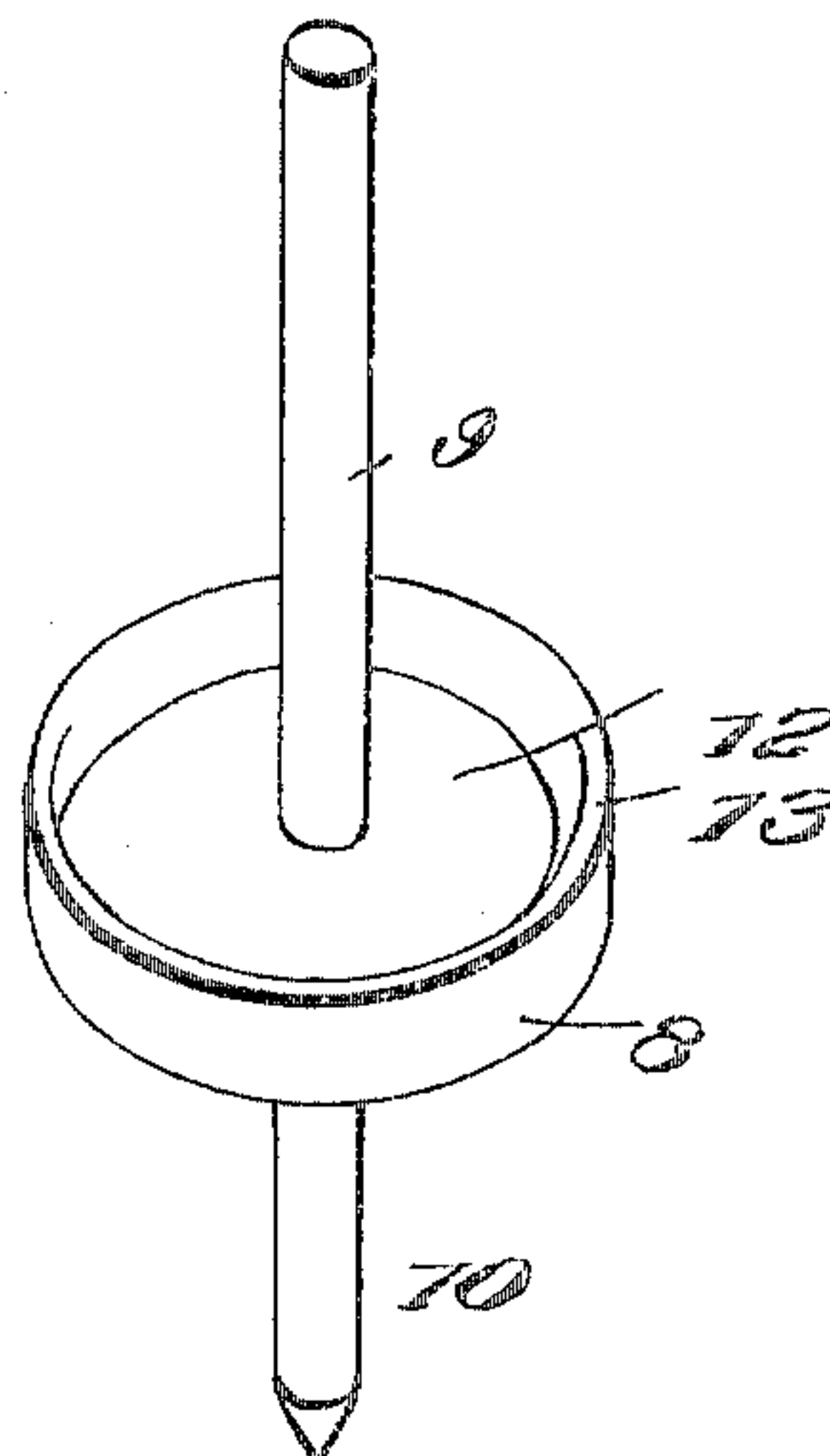


Fig. 4.



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LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 793,915, dated July 4, 1905.

Application filed September 1, 1904. Serial No. 222,976.

To all whom it may concern:

Be it known that I, ANSON B. WRIGHT, a citizen of the United States, residing at Newport, in the county of Perry and State of Pennsylvania, have invented certain new and useful Improvements in Lubricators, of which the following is a specification.

This invention provides a lubricator of novel construction for automatically supplying oil to moving parts of machinery while the same are in operation and completely shutting off the flow when the machine is at rest.

The lubricator comprises a cup or reservoir for containing the oil and a piston or plunger of sufficient weight to be automatically operated by the vibration or jar of the machine to which the device is attached, said piston serving to shut off the flow when the machine is inactive. A washer is interposed between the piston and the bottom of the cup or reservoir and is preferably constructed of absorbent material, through which the oil is expressed by the pounding action of the piston in the operation of the device.

The invention further contemplates means for collecting sediment or precipitate that may be contained in the oil when supplied to the cup, thereby preventing gumming or choking of the oil-outlet or otherwise impairing the free discharge of the lubricant in predetermined quantity.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical central section of a lubricator embodying the invention. Fig. 2 is a top plan view thereof. Fig. 3 is a detail perspective view of the bar cooperating with the stem and spring of the piston. Fig. 4 is a detail perspective view of the piston.

Corresponding and like parts are referred

to in the following description and indicated in all the views of the drawings by the same reference characters.

The oil cup or reservoir 1 may be of any design and capacity and is preferably open at its top and provided at its bottom with a tubular extension 2, forming an outlet. Lugs 3 project inwardly from opposite sides of the cup and serve to retain in place a bar 4, which assists in directing the piston in its vertical movements and to form a point of resistance of the upper end of the spring 5, arranged to exert a downward pressure upon the piston, so as to hold it seated. An annular chamber 6 is provided at the lower end of the cup or reservoir and is designed to receive sediment or other matter that may be precipitated from the oil. The sediment-chamber is formed between the outer wall of the cup and a vertical extension 7, the latter being of annular formation and preferably sharpened at its upper edge, so as to prevent the lodgment of sediment thereon and insure direction of the same into the chamber 6. The piston or plunger 8 is of a diameter to snugly fit within the space circumscribed by the extension 7 and is provided with an upper stem 9 and a lower stem 10, the latter passing through the outlet 11, leading through the bottom of the cup and forming an opening through the extension 2. The stem 10 is of a length so that its lower end may approach close to the journal or other moving part of the machinery to be lubricated, so as to transmit the heat thereof by conduction to the piston 8, thence by convection to the lubricant contained in the cup 1, whereby the same is liquefied irrespective of the atmospheric temperature to insure a positive flow of the lubricant to the part to be oiled. The top side of the piston or plunger is depressed to form a sediment-chamber 12, in which impurities contained in the oil may collect. A rim 13 projects upward from the outer edge of the piston 8 and terminates in an edge for a purpose similar to the provision of the sharpened edge of the extension 7. The bar 4 is centrally apertured to receive the upper end of the stem 9, and its end portions are formed with recesses 14 to

receive the lugs 3. The spring 5, mounted upon the stem 9, exerts a downward pressure upon the piston 8 and a corresponding upward pressure on the bar 4, thereby holding the latter in engagement with the lugs 3. To remove the parts from the oil cup or reservoir, the bar 4 is pressed downward a distance to enable the recesses 14 to clear the lugs 3, after which said bar is turned so as to clear the lugs, when the parts may be lifted from the cup, as will be readily comprehended.

The oil cup or reservoir is designed to be fitted into a box (not shown) commonly employed for receiving the lubricant. However, it may be attached to the journal-bearing or other moving part of machinery by means of the extension 2 or in any manner found most convenient, the stem 10 coming in contact with the part to be lubricated, so as to transmit the heat by conduction and convection in the manner well understood. When the machinery is at rest, the weight of the piston and the tension of the spring 5 hold the piston securely upon the bottom of the cup, so as to prevent the escape or waste of any oil. However, when the machine is in motion the jar and vibration are sufficient to unseat the piston and permit a small quantity of oil to escape, which may be determined at the outset so as to regulate the supply to the part as may be required. In the preferable construction a washer of absorbent material 15 is interposed between the piston 8 and the bottom of the cup, and upon the upward movement of the piston said washer receives a quantity of oil, and upon the descent of the piston a portion of the oil is expressed from the part 15 and finds its way to the part to be lubricated, either by means of the stem 10 or outlet 11, or both.

Having thus described the invention, what is claimed as new is—

1. A lubricator comprising a cup having an outlet in its bottom, a piston arranged within the cup and normally seated upon the bottom thereof to shut off the outflow of oil and adapted to be actuated by jar or vibration of the machine to be lubricated, a spring exerting a downward pressure upon the piston, and a stem extended from the piston and passing through said outlet and adapted to come close to the moving part to be lubricated to transmit the heat thereof to the lubricant contained in the cup, substantially as described.

2. In a lubricator, the combination of an oil-cup having an outlet in its bottom, an extension projected upwardly from the bottom and spaced from the walls of the cup to form a sediment-chamber, the upper portion of said extension terminating in an edge to prevent the lodgment of sediment thereon, and a piston normally seated upon the bottom of the cup within the extension thereof and adapted to control the feed of the lubricant, substantially as described.

3. In combination, an oil-cup having an outlet in its bottom and a sediment-chamber adjacent to the walls of the cup and a piston arranged within the cup for controlling the feed of the lubricant and having a sediment-chamber in its top side, adjacent walls of the sediment-chamber terminating in sharpened edges, substantially as described.

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

ANSON B. WRIGHT. [L. s.]

Witnesses:

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