No. 630,488. Patented Aug. 8, 1899.

W. COOPER.

AIR PUMP PISTON ROD OILER.

(Application filed July 21, 1898.)

(No Model.)

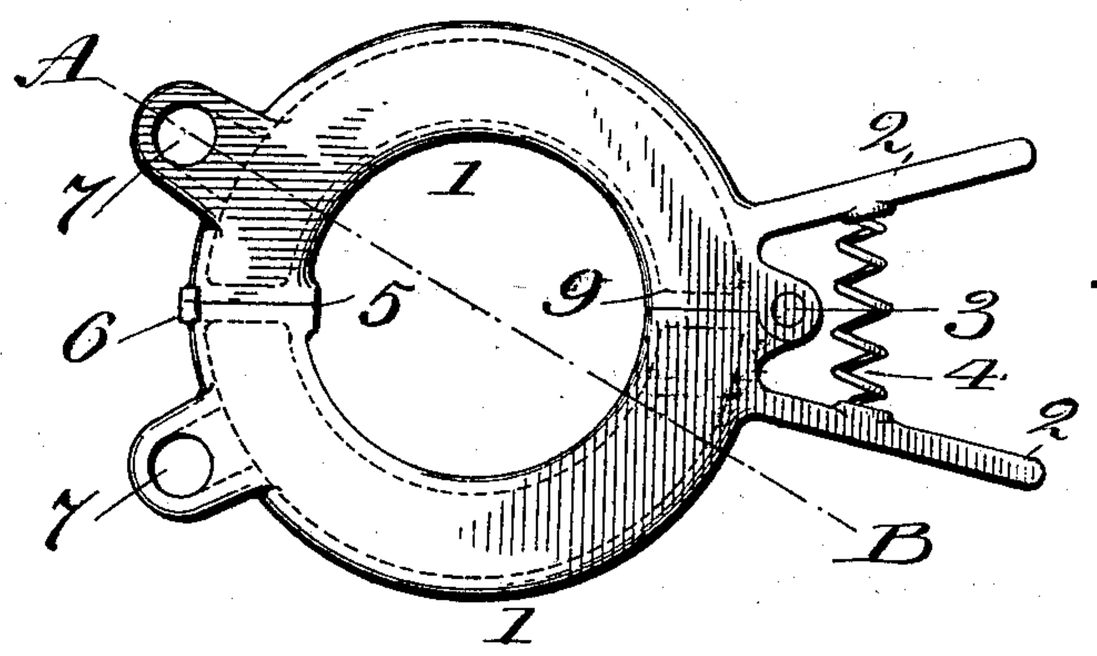

Fig. 1.

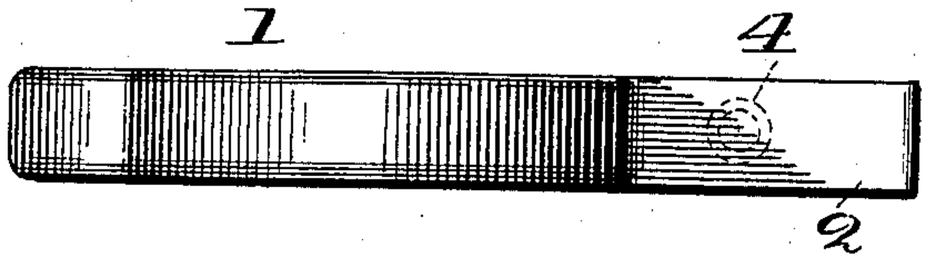

Fig. 2.

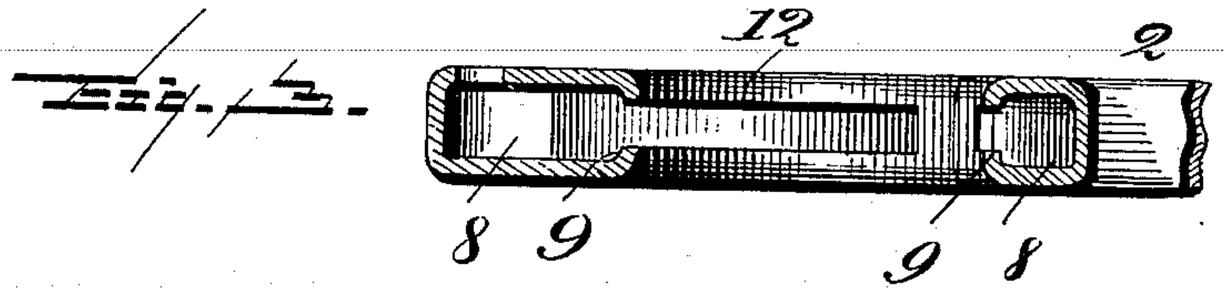

Fig. 3.

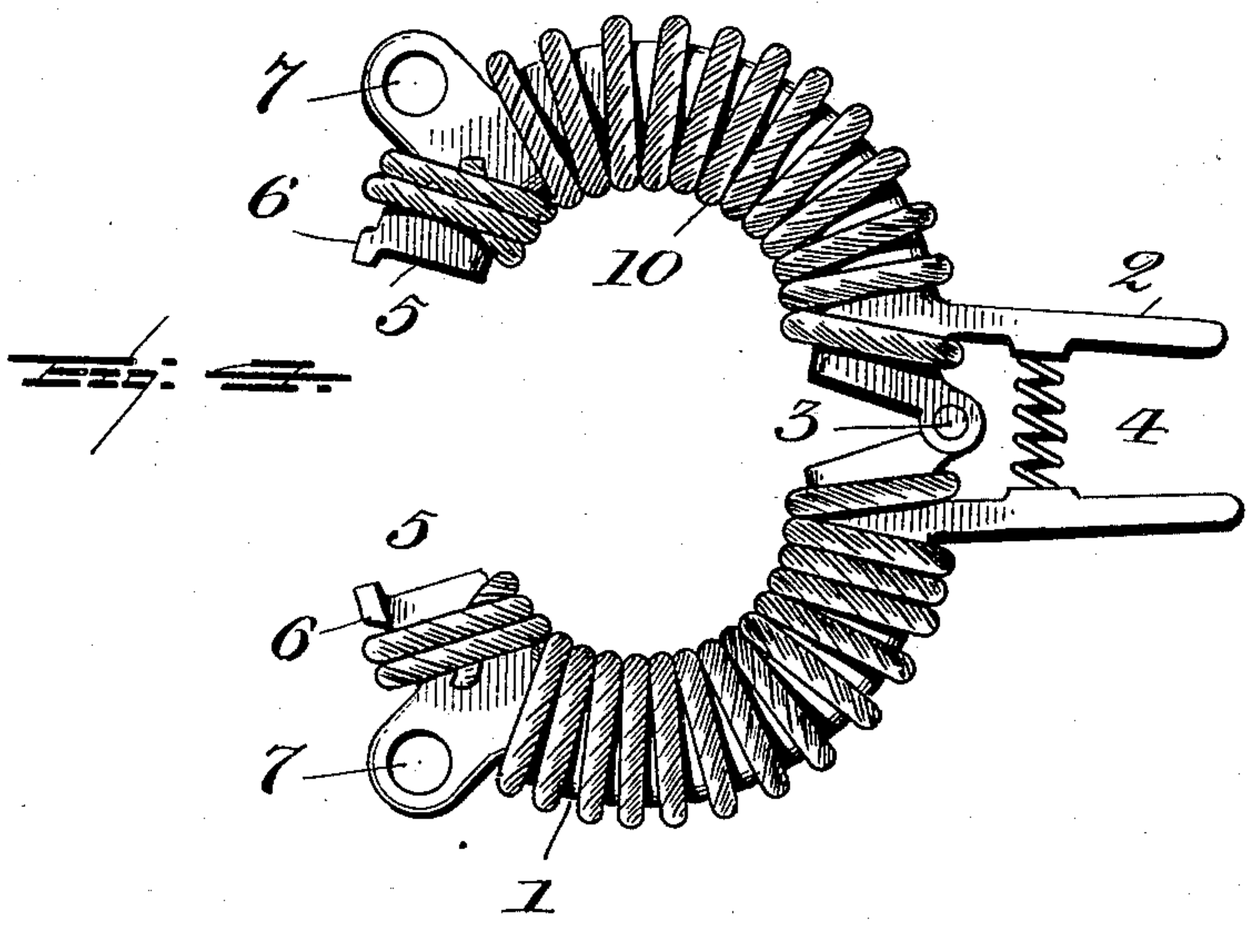

Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

WALTER COOPER, OF SEATTLE, WASHINGTON.

AIR-PUMP PISTON-ROD OILER.

SPECIFICATION forming part of Letters Patent No. 630,488, dated August 8, 1899.

Application filed July 21, 1898. Serial No. 686,526. (No model.)

To all whom it may concern:

Be it known that I, WALTER COOPER, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented new and useful Improvements in Air-Pump Piston-Rod Oilers; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of my invention is to provide a piston-rod oiler directly to said piston-rod that can be readily attached or disconnected therefrom and automatically supply the lubricating-oil in quantities as required. I attain these results in the device illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the device with the wick-wrapping removed; Fig. 2, a side elevation of the same; Fig. 3, a sectional elevation through the line A B, Fig. 1; and Fig. 4, a plan view of the device complete with jaws opened prepared to be applied to the piston-rod.

Similar numbers refer to similar parts throughout the several views.

The oiler consists of the chambered jaws 1 1, opening on the hinge or fulcrum 3, the guide-lugs 6 for the purpose of preventing any transverse movement between the ends 5 when together and to lessen the strain on the hinge or fulcrum 3, and a cell or chamber 8 in each jaw for oil-reservoir, closed except on the inner side of the jaws. Around this opening I flange the edges 9 to better hold the oil and limit the surface of contact of the absorbent wrapping 10.

7 7 are holes or apertures for supplying oil to the reservoir.

2 2 are lever-handles for opening the device.

4 is a spring to keep the ends 5 of the jaws together by a constantly-maintained pressure under the handles 2.

The jaws 1 1 of the oiler after being wrapped with the wicking 10 are opened by drawing the handles 2 2 together, which being released the power in the spring 4 asserting itself forces the ends 5 5 of the jaws 1 1 together, compressing the wrapping-wick 10 against the piston-rod, to which the device is applied, the reservoirs being supplied with oil which is absorbed by the wicking through the slot 12 and delivered in regular quantities to the piston-rod to be lubricated. Should the oil not be delivered sufficiently fast to properly lubricate the rod, the rod becomes warm and rarefies the oil, which, flowing more rapidly upon the piston-rod, cools the rod, lowers the temperature of the wick, and causes the oil to flow more sluggishly, keeping the rod well lubricated whatever may be the duty required.

This oiler is mainly adapted for use on the air-pumps of locomotive-engines, where it is readily clasped around the piston-rod or removed therefrom by manipulating the handles with one hand, thus permitting the oil-can being held in the other instead of having to place it down to open the oiler with both hands, as is necessary with the oilers now in general use. This is found to be of utmost importance where a hasty inspection is desired during a short stop.

The pressure of the jaws causes the oiler to travel with the piston-rod until said oiler strikes the glands of the air-pump or the steam-cylinder, where it is held stationary during the remainder of the stroke, exuding its lubricant onto the piston-rod sliding therethrough. The inwardly-extending flanges form bearing-surfaces on both sides of the slot to press the interposed wrapping against the piston-rod with sufficient force to accomplish the above result without cutting through said wrapping.

The method of surrounding the jaws with absorbent wrapping not only forms a cushion between the piston-rod and the jaws to prevent their coming in contact, but also leaves the reservoirs clear of obstruction and permits their receiving a greater quantity of oil than if the absorbent material were located therein.

From this brief description of my invention it will be seen that both the operation and construction are extremely simple and are perfectly adapted to accomplish the purpose for which it is intended, and it is apparent that changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

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

1. In an oiler of the character described, two hollow jaws pivoted together, flanges on

the inner side of each jaw extending toward each other with a slot therebetween, and absorbent wrapping wound about the jaws and covering the slot, substantially as described.

2. In an oiler of the character described, two hollow jaws pivoted together, a handle projecting from each jaw at the pivot end, a spring located between the handles, guide-lugs and feed-holes on the opposite ends of the jaws, flanges on the inner side of each jaw extending toward each other with a slot therebetween, and absorbent wrapping wound about the jaws and covering the slot, substantially as described.

WALTER COOPER.

Witnesses:
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JAMES SHANNON.