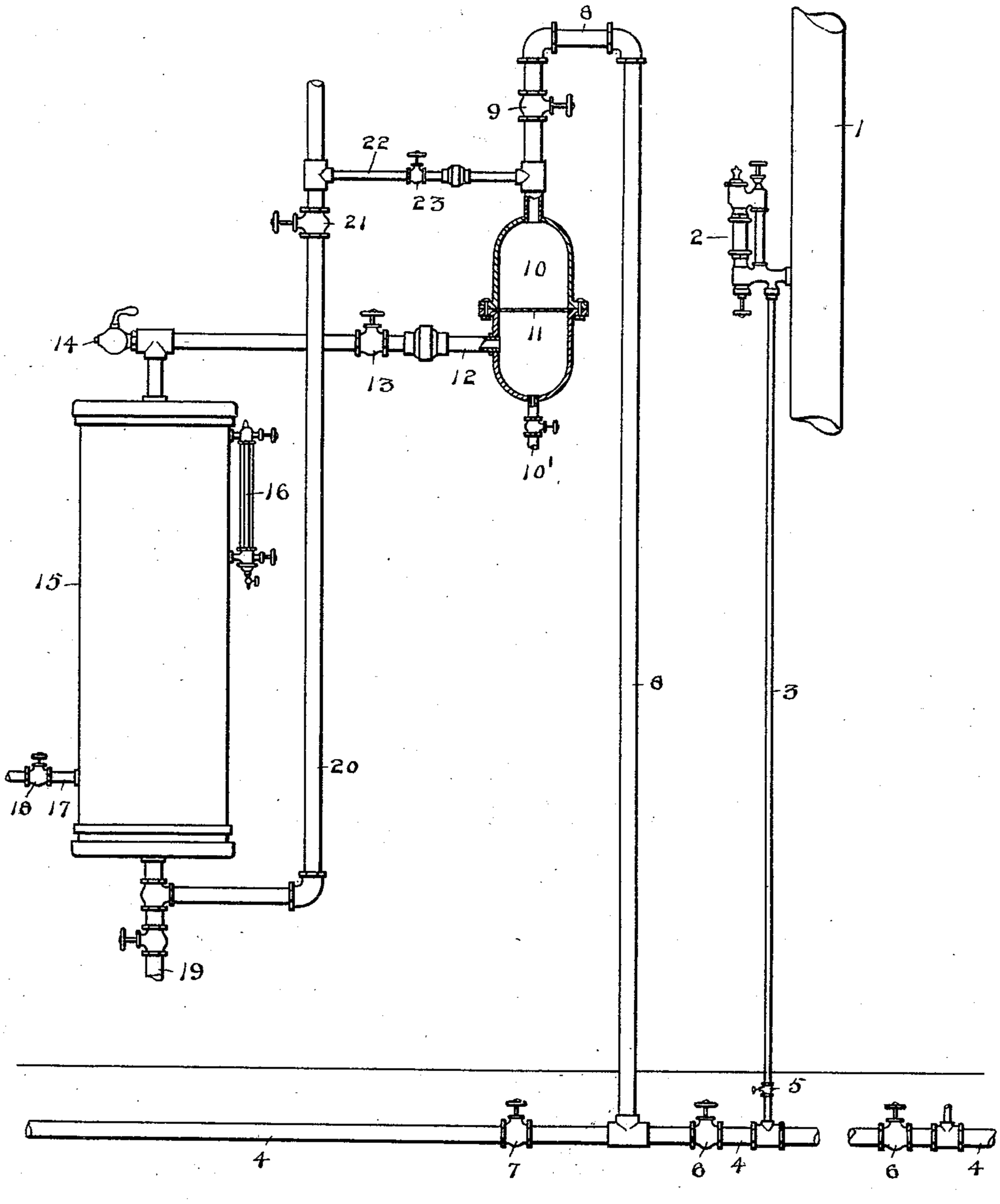
(No Model.)

C. HEROLD.

LUBRICATOR.

No. 542,826. Patented July 16, 1895.



Witnesses
Arch. M. Cattin.
Oliver Manning

Inventor
Charles Herold
by Benj. R. Catlin Attorney

UNITED STATES PATENT OFFICE.

CHARLES HEROLD, OF FORT WORTH, TEXAS.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 542,826, dated July 16, 1895.

Application filed October 17, 1894. Serial No. 526,141. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HEROLD, a resident of Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Lubricating Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The invention relates to lubricating apparatus, and has for its object to increase the efficiency of such devices; and it consists in the construction hereinafter described and particularly pointed out.

The accompanying drawing is a side elevation, partly in section.

Numeral 1 denotes a steam-pipe, and 2 a "sight-feed" communicating with said pipe. 3 denotes an oil-pipe to supply oil to the said lubricator and adapted to receive oil from a larger pipe or main 4.

5, 6, and 7 are cut-off valves or cocks.

Communicating with pipe 4, between valves 6 and 7, is an oil-pipe 8, having a valve 9, said pipe 8 communicating at its end remote from pipe 4 with a sediment-receptacle 10. This sediment-receptacle is furnished with a filter 11, of suitable character, and oil is supplied thereto below the filter by a pipe 12, having a valve 13.

10′ denotes a discharge-pipe having a suitable cock or valve.

Said pipe 12 has an air-vent cock 14 and communicates with an oil-reservoir 15, provided with a gage 16. In practice said reservoir may hold twenty gallons or more, and the sediment-receptacle may have several gallons' capacity, if desired.

17 denotes an oil-supply pipe, and 18 a valve therein. 19 is a discharge-pipe for the oil-holder, and 20 a pipe having connections (not shown) whereby it is adapted to receive condensed steam and convey it to the oil-reservoir to float the oil therein. This pipe has a valve 21, and 22 is a branch provided with a valve 23, whereby it may be made to communicate with the sediment-receptacle 10.

The apparatus operates as follows: The valves being suitably manipulated and oil and water supplied to the reservoir in any desired or suitable proportion the valve 18 in the oil-supply pipe 17 is closed. The water-supply pipe will contain a hydrostatic column sufficient to force the oil out of the top of reservoir 15 and through the pipe 12 and the sediment-receptacle 10 and its contained filter and through pipes 8, 4, and 3 to the sight-feed.

The impurities contained in lubricating-oil are very liable to clog the pipes, and the latter consequently require to be cleaned frequently, which is a troublesome and dilatory operation. To obviate this evil and provide cleansing devices adapted for easy, speedy, and efficient work, a sediment-receptacle 10, having considerable space, preferably a quart or more, below the oil-inlet pipe thereto, is provided, and a filter 11 placed therein above said oil-inlet. The impurities of the oil arrested by the filter can be discharged through pipe 10′, its valve being opened when desired, and they may be blown out and the filter cleansed by simply closing valves 9, 13, and 21 and opening valve 23, thus admitting water or steam pressure through pipe 22. As the oil is forced to the lubricator by the hydrostatic column in pipe 20, it is only necessary to extend it to the height of the lubricator, and the oil-reservoir may be placed on a lower level and in any convenient situation. The cock 21 is placed close to the filter-cleansing pipe and approximately on the level of the lubricator in order to preserve the hydrostatic column or a large part of it during the filter-cleansing operation, the cocks 21 and 13 being closed at such time to cut out the oil-reservoir. It is also of practical importance that the cleansing-pipe communicate with the filter-chamber above the filter and that an outlet be provided below, so that gravity as well as steam-pressure may be utilized in discharging sediment.

Several oil-pipes 3, provided with lubricators 2, may be connected with the main 4, and suitable valves provided therein, substantially such as shown, whereby one oil-reservoir and one sediment-receptacle and filter can be utilized for the lubrication of the steam in said pipes, communicating each with a separate cylinder. It is obvious that steam may be forced through pipes 22, 8, 4, and 3, with the effect to clear out their interiors.

I am aware that an oil-reservoir and a sight-feed lubricator have been combined with

steam-pipes and the steam-chest of an engine in such manner that equal steam-pressure was maintained throughout the system, both the top and the bottom of the reservoir being connected to the live-steam pipe and the lubricator situated in the pipe, by which the top of the reservoir communicated with the said steam-pipe, and also that it has been proposed to cleanse a filter in a water-supply system by forcing water through it. Such constructions and arrangements are not broadly claimed by me.

Having thus described my invention, what I claim is—

In a lubricator, a reservoir for lubricating oil having an oil discharge pipe, a pipe adapted to feed water or condensed steam thereto to displace the oil, a sediment receptacle provided with a valved discharge outlet in its bottom and with a filtering medium and adapted to receive oil from said discharge pipe below said filtering medium, a pipe 22 communicating with said sediment receptacle above the filtering medium to admit a fluid under pressure to cleanse the same and blow out the sediment from the bottom of the sediment receptacle said latter pipe communicating with the steam pipe above the level of the oil reservoir and cocks 21 and 23 whereby the oil reservoir and the hydrostatic column in pipe 20 may be cut out during the cleansing operation, substantially as set forth.

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

CHARLES HEROLD.

Witnesses:
ROGER HANSON WILSON,
JOHN SANTO STAITI.