T. E. WILLET.

LUBRICATING APPARATUS.

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1,134,656. Patented Apr. 6, 1915.

Fig. 1.

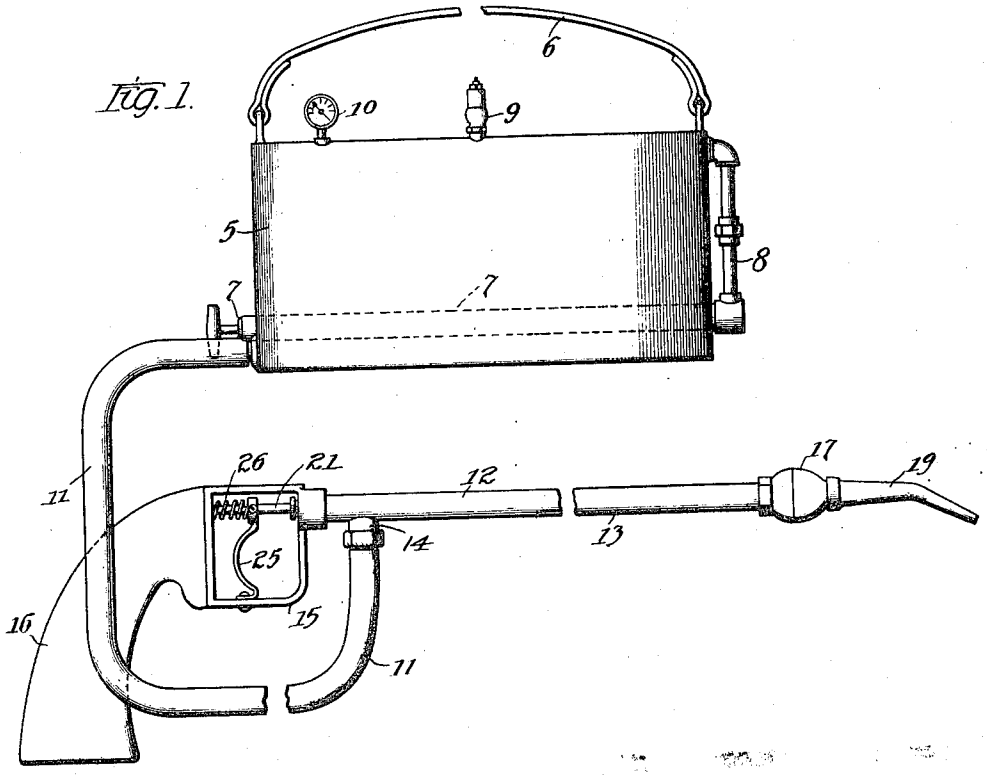
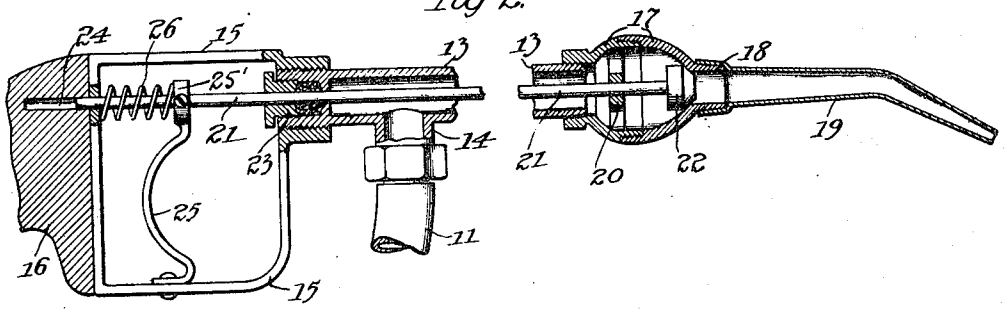


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

TREFLEY E. WILLET, OF MARSEILLES, ILLINOIS.

LUBRICATING APPARATUS.

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Application filed June 16, 1913, Serial No. 773,840. Renewed August 31, 1914. Serial No. 859,576.

To all whom it may concern:

Be it known that I, TREFLEY E. WILLET, a citizen of the United States, residing at Marseilles, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Lubricating Apparatus, of which the following is a specification.

In mills, workshops and factories, the bearings of machinery, which need to be periodically oiled, are oftentimes located in places difficult of access, and sometimes in places which it is dangerous to approach closely enough to oil the bearings with an ordinary oil can.

It is one of the objects of my invention to provide an apparatus by which bearings in such places may be conveniently oiled without the necessity of the operator approaching the bearing too closely. I also aim to provide an oiling device by which bearings located above the operator's head may be conveniently oiled.

In the accompanying drawings, Figure 1 is an elevation of an apparatus embodying the features of my invention. Fig. 2 is a longitudinal section through the gun, parts being broken away.

The preferred embodiment of my invention which I have illustrated in the drawings comprises a tank 5 adapted to contain oil, and further adapted to contain compressed air by which the oil is forced from the tank to a "gun" which controls the discharge of the oil. The tank 5 may be carried by the operator in any suitable manner, but it is preferably supported by means of a strap 6 of sufficient length to pass over the shoulder of the operator with the tank hanging at his side. An air pump 7 is mounted on the tank 5 and has its discharge end connected with said tank by means of a suitable pipe 8. 9 indicates a relief valve on the tank, and 10 is a pressure gage.

The oil flows from the tank 5 through a flexible tube 11 of rubber or other suitable material to the gun 12. This gun comprises a barrel 13 having a nipple 14 to which one end of the tube 11 is secured. Fixed to one end of the barrel 13 is a member 15 which, in the present instance, is in the form of an open frame, and secured to this frame is a handle 16 by which the operator carries the gun.

At the opposite or forward end of the barrel 13 is an enlarged casing 17 formed in two halves, one of which is threaded on the end of the barrel 13 and the other of which has a tapered neck 18 upon which fits the flared end of a nozzle 19. Within the rear half of the casing 17 is mounted a spider 20 having a bearing at its center through which a valve stem 21 slides. A valve head 22 is fixed on one end of this stem and engages a valve seat in the forward portion of the casing 17 to control the flow of oil through the barrel 13, casing 17 and nozzle 19. The valve stem 21 extends rearwardly through the barrel 13 and through a stuffing-box 23 at the rear end of said barrel, the rear end of said valve stem being slidably mounted in an opening 24 in the frame 15 and handle 16. A trigger 25 is mounted at one end in the frame 15, the other end of said trigger engaging the valve stem 21 by means of the collar 25'. A coil compression spring 26 tends to move the valve stem forwardly to maintain the valve head 22 in contact with its seat. The casing 17, the opening through spider 20, and the neck 18 are so proportioned that when the valve head 22 is moved rearwardly or unseated, the oil will flow freely through the passageway. The interior area of the neck 18 is substantially equal to the interior of the barrel 13 less the cross sectional area of the stem 21, and the openings through the spider 20 and the space around the valve head 22 when unseated is also approximately equal to the effective space in the barrel 13. This construction permits a free flow of the oil.

In using this apparatus, a sufficient quantity of oil is placed in the tank 5 and the pump 7 operated to place the desired amount of pressure on the oil, which pressure will be indicated by the gage 10. The pressure may be lowered at will by operating the relief valve 9. The operator holds the gun 12 by the handle 16 and places his index finger on the trigger 25. The nozzle 19 is placed at the point to be oiled, and the trigger 25 is then pulled back to unseat the valve head 22. The pressure in the tank will now force the oil through the flexible tube 11, barrel 13, casing 17 and nozzle 19 to the bearing to be oiled. When the operator is oiling bearings above his head, a greater pressure will be needed in the tank than when low bearings are being oiled. This pressure may be regulated at will by the pump 7 and the relief valve 9. By providing a flexible tube to conduct the oil from the tank to the gun,

the utility of the apparatus is greatly increased because the operator may stand in one position with the tank carried stationarily on his body and may move the gun 12 around to various bearings. The flexible connection obviates the necessity for moving the tank into exact positions in oiling any part.

I claim as my invention:

1. An apparatus for lubricating overhead and remote bearings, comprising a tank adapted to contain oil under pressure, an oiling device comprising a relatively long barrel, a nozzle at the forward end of said barrel, a valve comprising a head adjacent to said nozzle and a stem extending rearwardly through said barrel, means at the rear end of said barrel for moving said valve stem to unseat said head and permit the flow of oil, and a flexible tube adapted to conduct oil from said tank to said barrel.

2. The combination of a portable tank adapted to contain oil under pressure, a gun comprising a barrel, a nozzle at the forward end of said barrel, a pistol-like handle at the rear end of said barrel, a valve in said barrel adjacent to said nozzle, a valve-stem attached to said valve and extending rearwardly through said barrel to said handle, a trigger mounted adjacent to said handle and engaging said stem for moving the latter rearwardly to unseat said valve, a collar on said stem between said barrel and said handle, a spring on said stem between said collar and said handle, said spring tending to seat said valve, and a flexible tube connecting said tank with said barrel.

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

TREFLEY E. WILLET.

Witnesses:
EARL SHEETS,
BURR G. COFFEEN.