J. H. VAN SINDEREN.

LUBRICATING DEVICE.

APPLICATION FILED MAY 18, 1915.

1,166,795.

Patented Jan. 4, 1916.

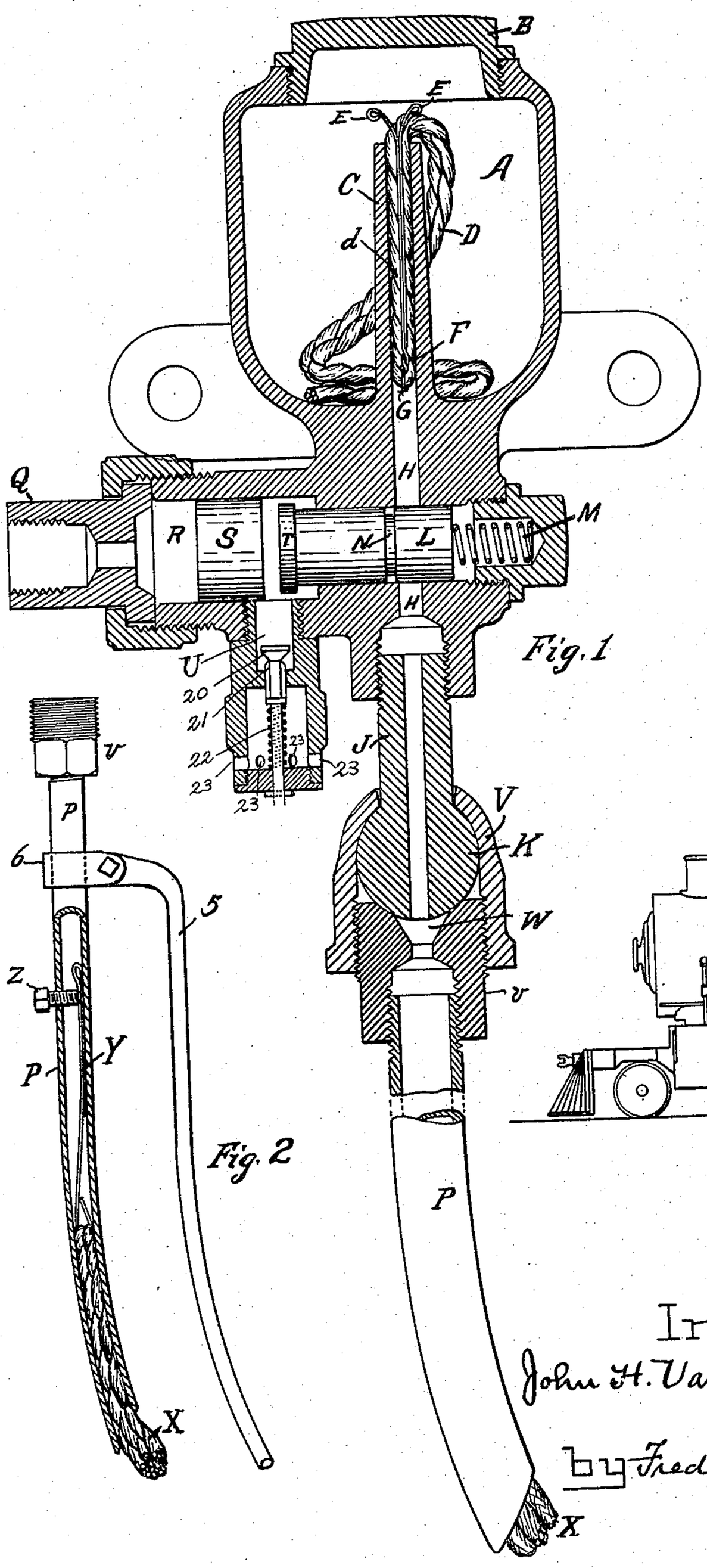

Fig. 1

Fig. 2

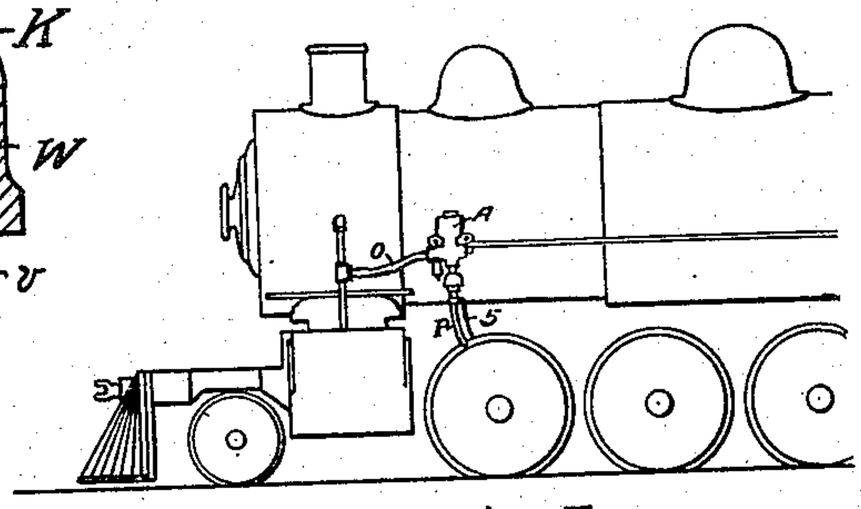

Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN H. VAN SINDEREN, OF ALBANY, NEW YORK.

LUBRICATING DEVICE.

1,166,795. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed May 18, 1915. Serial No. 28,850.

To all whom it may concern:

Be it known that I, JOHN H. VAN SINDEREN, a citizen of the United States of America, residing at the city of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Lubricating Devices, of which the following is a specification.

My invention relates to lubricating devices, and the object of my invention is to provide a lubricating mechanism especially adapted for use on a locomotive engine for applying a lubricant to the flange of a wheel; together with such other elements and combinations as are hereinafter more particularly set forth and claimed. I accomplish these objects by means of the mechanism illustrated in the accompanying drawing, in which:

Figure 1 is a longitudinal section partly in elevation. Fig. 2 is a section of the pipe, P, shown partly in elevation in Fig. 1. Fig. 3 is a sketch of the side elevation of the forward part of a locomotive engine, showing the position of the lubricator thereon.

Similar letters refer to similar parts throughout the several views.

It has of late been found that lubricating the flange of the drive wheels of locomotives will reduce the friction and thus save the expenditure of power.

I have devised an apparatus by the operation of which a lubricant will be delivered to the flange of the wheel constantly while the wheel is moving, but when the locomotive is at rest the flow of the lubricating fluid will be automatically stopped.

My device consists of an oil receptacle, A, preferably provided with a screw cover, B, and within which receptacle is a projecting nozzle, C, the top of which is a short distance below the cover, B, and into which I place one end of a wick feed, D, the greater part of the wick lying in the receptacle, A, in contact with the oil or other lubricating fluid placed therein. For the purpose of removing the end, *d*, of the wick, D, which is inserted in the nozzle, C, I may use a wire, E, E, bent upon itself and carrying at its end a hook, F, which may engage with the ring, G, passed around the wick feed, D. This is not only for withdrawing the wick from the nozzle, but also for pushing it into the nozzle. The passageway, H, through the nozzle permits the oil in the receptacle, which will pass into the nozzle through the wick feed, to be delivered to the pipe, J, which pipe is provided with a spherical end, K, except when its passage through the passageway, H, is stopped by the valve, L, under the influence of the spring, M, as shown in Fig. 1. The valve, L, is provided with an annular recess, N, thereabout, which, when it registers with the passageway, H, allows the oil to pass into the pipe, J, and this will occur when the drive wheels of the locomotive are in rotation, because the steam which operates the piston is by the pipe, O, connected with the fitting, Q, by means of which it enters the chamber, R, impinges against the piston, S, which presses against the end, T, of the valve, L, and causes the valve, L, to contract the spring, M, and bring the recess, N, in alinement and register with the passageway, H.

I have provided a drain valve, U, registering with the chamber, R, by means of which the contents of chamber, R, will escape when the steam delivered thereto is cut off, because the valve, 20, which when the steam is on will be seated in 21, when the steam is cut off will be raised by the spring, 22, permitting the water of condensation to escape through the openings, 23. This is important to prevent freezing.

The spherical end of the pipe, J, rests loosely in the bell-shaped coupling, V, which permits of the movement of the bell-shaped coupling on the pipe, J. The coupling, V, is interiorly threaded to engage with the threads on the short coupling pipe, *v*, which coupling pipe is provided with a funnel-shaped mouth, W, which connects with the delivery pipe, P.

The delivery pipe, P, is slightly curved as shown in Figs. 1 and 2. It has an opening at its end oblique to the axis of the major portion of the pipe. In the end of the pipe, P, I insert a wick feed, X, allowing a portion thereof to project out of the pipe and hold the wick, X, in the pipe by means of a wire, Y, engaging the wick and held in position in the pipe by means of a screw, Z, as shown in Fig. 2. The position of the wick protruding from the pipe is such that it will engage the flange of the wheel to be lubricated.

For the purpose of maintaining the pipe, P, in its proper relation to the flange of the wheel so that the wick protruding therefrom will engage the flange, I secure the curved arm, 5, to a suitable collar, 6, sur-

rounding the pipe, P, in such position that the arm will rest against the inner side of the flange. The oil will saturate the wick, X, after passing through the passageway, H, and pipe, J, and be delivered to the flange of the wheel.

What I claim as my invention and desire to secure by Letters Patent is:

1. In a lubricating device, a receptacle adapted to hold a lubricant; a passageway leading from the upper portion of said receptacle; a pipe registering with said passageway; a delivery pipe; a universal coupling uniting said pipes; a valve adapted to close said passageway; means for operating said valve by the pressure of steam; a spring adapted to operate said valve when the pressure of the steam is reduced; means for causing the lubricant to enter said passageway from said receptacle; with means for delivering the lubricant from said delivery pipe to the part to be lubricated.

2. A lubricating device comprising a casting in which is an oil receptacle, a passageway leading therefrom, a steam operated valve for opening said passageway, means for closing said passageway by the operation of said valve when steam is shut off; with a delivery pipe; a universal coupling connecting said delivery pipe to said casting; and means for delivering the lubricant from said delivery pipe to the part to be lubricated.

3. A lubricating device comprising a casting in which is an oil receptacle, a passageway leading therefrom, a steam actuated valve adapted to close said passageway, a steam chamber into which said valve projects, a spring impinging on the end of said valve opposite that projecting into the steam chamber, a drain valve connected with said steam chamber; with a delivery pipe; and a universal coupling between said delivery pipe and said casting.

4. A device adapted to lubricate the flange of a wheel, comprising a receptacle for holding a lubricant; a passageway leading therefrom; a steam actuated valve for closing said passageway; a drain valve; means for causing said drain valve to be closed when the passageway is open and to be opened when the passageway is closed; a delivery pipe; a rope of wick contained in and having one end projecting from said delivery pipe; means for holding said wick in the delivery pipe, and means for supporting said delivery pipe in position to have the wick projecting therefrom engage the flange of the wheel.

5. A lubricating device for oiling the flange of a wheel, comprising a casting containing an oil cup, a passageway leading therefrom, a steam actuated valve for opening said passageway, means for closing said passageway by the operation of said valve when the steam is reduced in pressure, a drain valve for removing the condensation of steam; with a delivery pipe; a universal coupling connecting said delivery pipe to said casting; a rope of wick in said delivery pipe; means for holding said wick in place in said pipe, comprising a wire bent about the wick and extending into the pipe beyond the wick; and a screw passing through said delivery pipe and engaging the wire for holding it in the desired position therein.

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

JOHN H. VAN SINDEREN.

Witnesses:
BEULAH CARLE,
FREDERICK W. CAMERON.