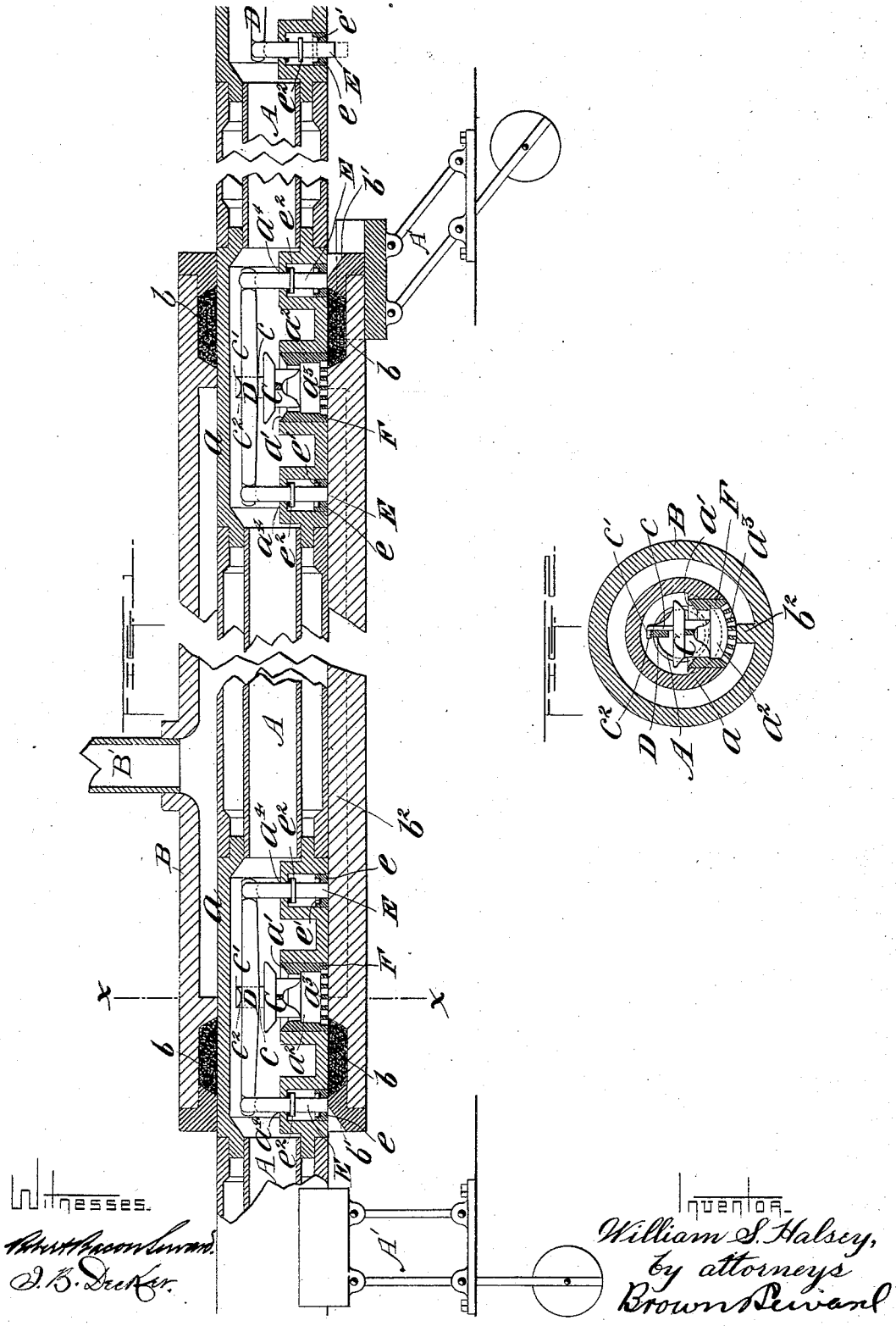
(No Model.)

W. S. HALSEY.

MEANS FOR TRANSMITTING FLUID UNDER PRESSURE.

No. 532,198. Patented Jan. 8, 1895.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM S. HALSEY, OF ALLENTOWN, PENNSYLVANIA.

MEANS FOR TRANSMITTING FLUID UNDER PRESSURE.

SPECIFICATION forming part of Letters Patent No. 532,198, dated January 8, 1895.

Application filed September 7, 1892. Serial No. 445,254. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. HALSEY, of Allentown, in the county of Lehigh and State of Pennsylvania, have invented a new and useful Improvement in Means for Transmitting Fluid Under Pressure, of which the following is a specification.

My invention relates to an improvement in means for transmitting fluid under pressure from a general supply reservoir to be applied as a motive force or otherwise.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of a pipe reservoir and receiver in longitudinal section, and Fig. 2 a transverse section through line x, x of is Fig. 1.

The particular construction and arrangement of parts which I have chosen to illustrate my invention are those adapted to use in connection with a traveling crane, the reservoir extending along substantially parallel with the path in which the crane is supposed to travel.

I have represented the distance between two consecutive valves along the reservoir as about equal to the length of the interior of the receiver so that one valve will at all times be open to the interior of the receiver as it travels along the reservoir, but the distance between the valves may be varied so as to bring more than one at all times within the receiver, or they may be placed so far apart that there will be an interval between the closing of one valve as the receiver passes it, and the opening of a succeeding one as the receiver reaches it.

A represents a reservoir for containing a fluid under pressure and consists, in the present instance, of a tube about which the receiver B is fitted and along which the said receiver is adapted to slide. The tube A is intercepted at suitable intervals by sections a for seating valves to permit the passage of the compressed fluid from the reservoir to the receiver, and is here represented as supported by yielding counterbalanced supports A′ adapted to swing out of the way as the receiver moves along the reservoir, and to automatically resume their positions after the receiver has passed. The sections a form at their exterior surface a continuation of the outer casing of the tubular reservoir A and are each provided with a valve seat a' surrounding an opening a^2 leading from the interior of the section a through to the exterior thereof. The exterior end of the opening a^2 is provided with a series of webs a^3 to prevent an extended interruption of the exterior surface of the reservoir and a consequent tendency to wear at the margin of the opening.

The valve is denoted by C and its stem c is provided with an offset c' with which a valve operating lever D is adapted to engage to open the valve.

The lever D is supported at its ends upon opposite sides of the valve stem c by tappets E which extend through recesses a^4 in the wall of the reservoir to its exterior. In practice, I provide the recesses a^4 with hollow screw plugs e in which the tappets slide, and locate packing e' around the tappet between the plug e and the bottom of the recess a^4. A shoulder or collar e^2 on the tappet serves to limit its reciprocating movement by engagement with the plug or packing adjacent thereto and the bottom of the recess a^4 or packing adjacent thereto, a space between the plug e and the bottom of the recess a^4 being left for the limited movement of the shoulder or collar e^2. I also find it preferable to form the valve seat a' and the webs a^3 as part of a hollow plug F which may be screwed into a hollow boss in the wall of the reservoir.

The receiver B which receives the compressed fluid from the reservoir to transmit it to the point where it is to be employed as a motive force or other use, is provided with packing b at or near its ends, to close the joint between the exterior wall of the reservoir and the interior of the receiver against communication with the outside air. The transmitting pipe is denoted by B′. An inclined faced operating nose b' is located at the end of the receiver in position to engage the tappets to operate the valve and an internally projecting rib b^2 extends from the packing b at one end to similar packing at the opposite end of the receiver to hold the tappets elevated while the receiver is passing the valve. When the valve is in its closed

position and before the receiver has reached either of the tappets, the latter project beyond the wall of the receiver in the path of the operating nose b'. As the latter engages the first tappet during the sliding movement of the receiver along the reservoir, it will elevate one end of the lever D which, however, owing to a movement of the other tappet outwardly and to the curved bearing face c^2 of the offset on the stem and the curved bearing on the tappet, will not elevate the valve C but will place the lever D with its fulcrum elevated into such position that when the nose b' reaches the companion tappet, it will throw that end of the lever D up and with it the valve C to a full opening. The valve will then remain open so long as the rib b^2 is in contact with the tappets, and will fully close when its end has passed the tappet first lifted and permitted it to resume its position projecting beyond the wall of the reservoir.

It will be observed, that the valve is not opened in the slightest degree until the packed end of the receiver has passed the valve and thereby closed all escape between the receiver and reservoir and that the valve will fully close before the opposite packed end of the receiver reaches it so that no escape of the compressed fluid can take place at the moment of closing.

What I claim is—

1. In combination, a reservoir for supplying a fluid under pressure, a receiver surrounding the reservoir and constructed to move along it, the said receiver having fluid tight joints with the reservoir which it surrounds, and means for transmitting the fluid under pressure from the reservoir to the receiver at suitable intervals and intermediate of the fluid tight joints, substantially as set forth.

2. The combination with a reservoir and a receiver adapted to move along the reservoir, of a valve for opening and closing communication between the reservoir and receiver, a valve operating lever and lever operating tappets upon opposite sides of the valve and projecting into the path of the receiver, substantially as set forth.

3. In combination, the reservoir, the receiver, the valve, the valve operating lever having a loose connection with the valve, and tappets loosely connected with the valve operating lever upon opposite sides of the valve and under the control of the receiver, the connections between the valve and lever, and tappets and lever being such that one tappet may be operated without opening or closing the valve while the other tappet retains its previous adjustment, substantially as set forth.

WILLIAM S. HALSEY.

Witnesses:
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