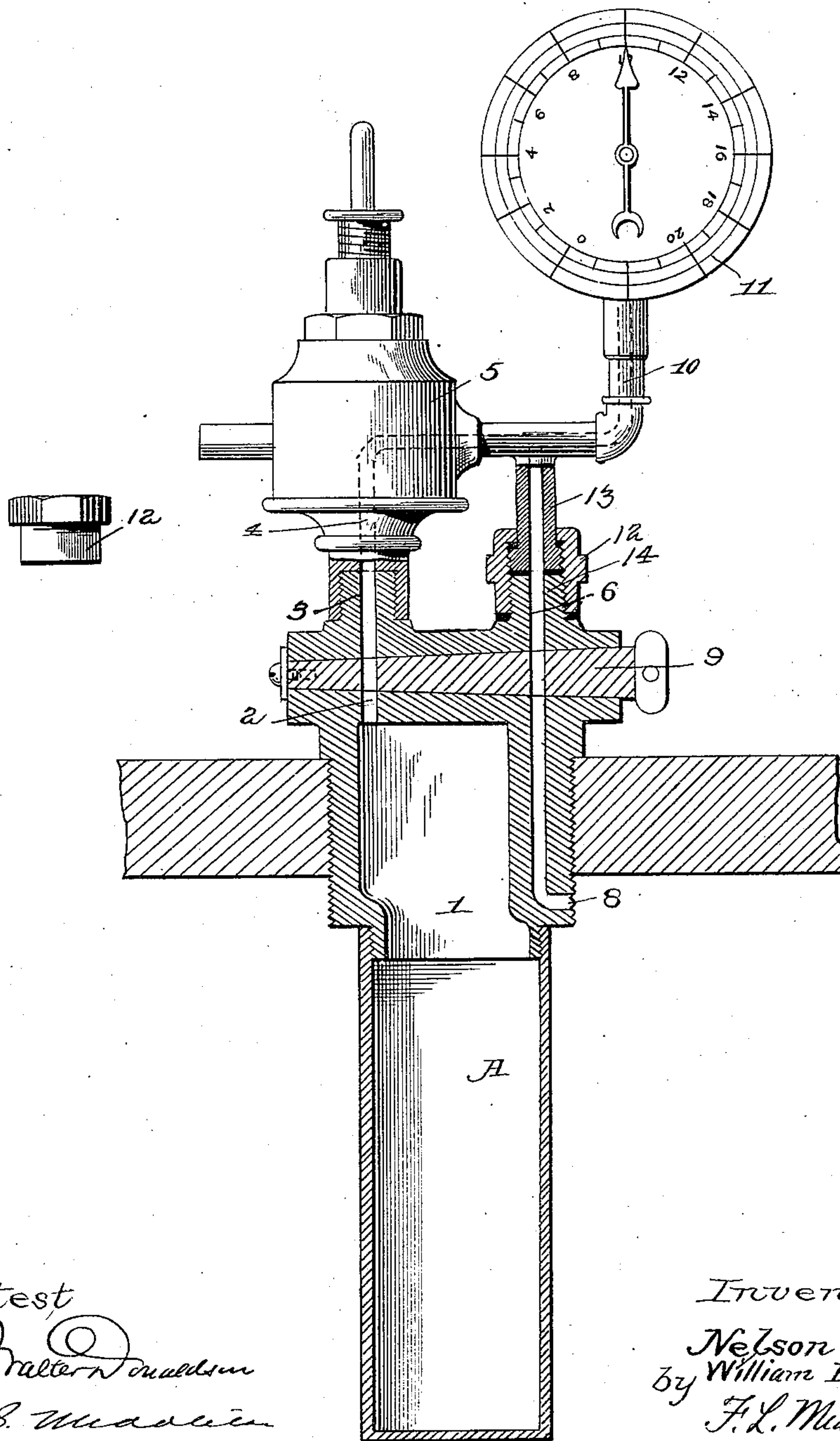


(No Model.)

N. STOW & W. E. DOBBINS.
DEVICE FOR CHARGING LIQUIDS WITH GAS.

No. 574,500.

Patented Jan. 5, 1897.



Attest
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UNITED STATES PATENT OFFICE.

NELSON STOW AND WILLIAM E. DOBBINS, OF BINGHAMTON, NEW YORK.

DEVICE FOR CHARGING LIQUIDS WITH GAS.

SPECIFICATION forming part of Letters Patent No. 574,500, dated January 5, 1897.

Application filed January 30, 1896. Serial No. 577,474. (No model.)

To all whom it may concern:

Be it known that we, NELSON STOW and WILLIAM E. DOBBINS, citizens of the United States, residing at Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Means for Charging Liquids with Gas; and we do 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 appertains to make and use the same, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon, which forms a part of this specification.

The object of our invention is to provide means for charging liquids, as, for instance, beer, with carbonic-acid gas; and in carrying out our invention we provide a storage-tank directly attached to the head of the barrel or cask containing the beer, said tank having a conduit communicating with the barrel and controlled by a cock, so that when desired the carbonic-acid gas may be allowed to flow into the barrel when the same is tapped, and thus charge and energize the same. It is our intention to provide means whereby the storage-tank will be sealed in addition to being provided with a valve or cock, and thus the carbonic-acid gas will be retained against escape until it is desired to tap the barrel, each barrel carrying its own tank.

Our invention also includes means whereby a pressure-gage may be interposed in the conduit between the gas-tank and barrel to indicate the pressure of the gas acting on the beer.

In the accompanying drawing the figure represents a sectional view of the tank with parts in elevation, indicating also the head of the barrel.

The tank A is of metal, and it is screw-threaded upon a head portion 1, having an exterior screw-thread engaging the head of the barrel and ports through the same, so that the tank depends within the barrel. A discharge-conduit 2 leads upward through the head portion and through the nipple 3 and connects with a channel 4, extending upwardly and thence horizontally and downwardly through the gage-bracket 5 to connect with a second gas-duct 6, extending downward

through the thickened portion of the head-piece to open laterally at 8 into the barrel. The head-piece thus carries the discharge-port of the tank and the inlet port or duct to the barrel, and both of these ports are controlled by the cock 9. The gage-bracket is secured by screw-threaded extension through the nipples of the head-piece, and said bracket has a laterally-upward extension 10, connecting with the gage 11.

When the gas-tank has been charged and before the barrel is tapped, the gage-bracket, it will be understood, is not attached, and in order to seal the tank against the escape of gas and also to close the barrel against the escape of the liquid through the head-piece the cock is given a quarter-turn to close both the outlet-port over the tank and the inlet 6 to the barrel, and in addition to this the outlet-port from the tank is closed by the cap 12, screwed upon the nipple of the head-piece. When the barrel is tapped and it is intended to charge the barrel with gas, the cap 12 is removed, the cock now holding the gas in confinement, and the gage-block is screwed upon the head-piece, thus connecting the outlet-port of the tank with the inlet-port to the barrel and at the same time placing the gage in communication with the tank, and upon turning the valve the gas is free to pass through the outlet and inlet and the interposed channel of the gage-bracket into the barrel.

The detachable connection between the gage-bracket and head-piece may be of any suitable kind. We have shown one form consisting of a hollow nut 12, engaging the threads of the abutting nipples 13 14, and when this nut is screwed back upon the nipple 13 the gage-bracket can be unscrewed from the nipple 3.

We claim as our invention—

1. In combination with the containing vessel and gas-tank, having a discharge-port therefrom and an inlet-port to the barrel, a valve controlling said ports and a bracket detachably secured to the head-piece and having a channel connecting the said ports, substantially as described.

2. In combination, the barrel, the tank having the head-piece with the discharge and in-

let ports in the same, a valve controlling the same, a cap 12 for closing the discharge-port and means adapted to be attached to the head-piece and having a channel to connect
5 the outlet and inlet ports, substantially as described.

3. In combination, the barrel, the tank attached thereto, and having the outlet and inlet ports, the gage-bracket having a channel
10 connecting said ports and having also a chan-

nel leading to the gage and a valve controlling the said ports, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

NELSON STOW.

WILLIAM E. DOBBINS.

Witnesses:

CHARLES H. WICKHAM,

ALMIRON M. SPERRY.