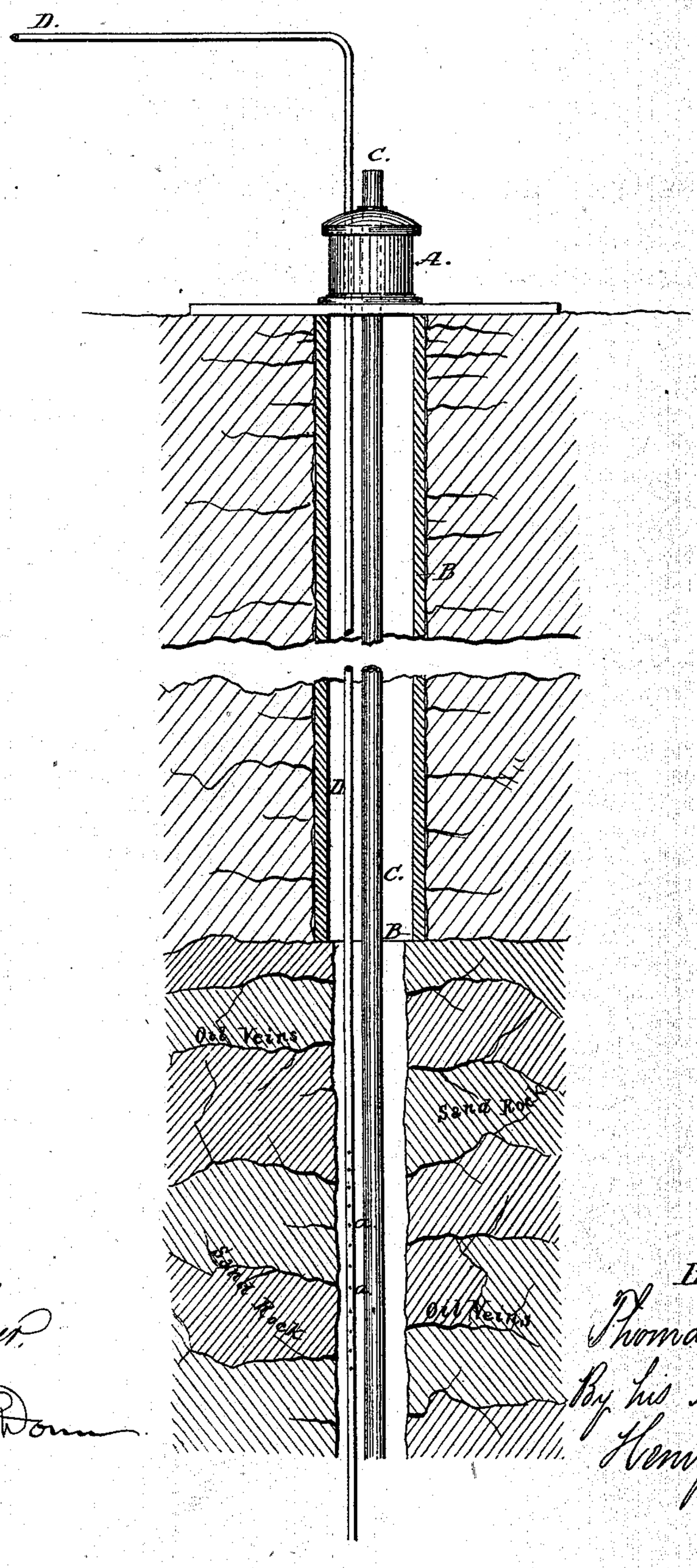
T. B. CAROTHERS.

Devices for Steaming Oil-Wells.

No. 139,656. Patented June 10, 1873.



Witnesses.
M. Gardner.
Edw. W. Down.

Inventor.
Thomas B. Carothers
By his Attorney
Henry R. Walton.

UNITED STATES PATENT OFFICE.

THOMAS B. CAROTHERS, OF OIL CITY, PENNSYLVANIA.

IMPROVEMENT IN DEVICES FOR STEAMING OIL-WELLS.

Specification forming part of Letters Patent No. **139,656**, dated June 10, 1873; application filed August 27, 1872.

To all whom it may concern:

Be it known that I, THOMAS B. CAROTHERS, of Oil City, County of Venango and State of Pennsylvania, have invented a new and useful Improvement in Device for Steaming Oil-Wells; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making part of this specification, and to the letters and figures of reference marked thereon.

The figure on the drawing represents a vertical section of the invention.

My invention relates to an improved device for steaming oil-wells, and consists in introducing, within the casing and outside of the tubing, an additional pipe to extend below the tubing, said pipe being perforated about two or three feet above the bottom of the well, the perforations continuing up to near the top of the "sand-rock." Steam from a steam-chest is forced down through the perforated pipe, thereby melting and clearing out from the oil veins or crevices all the paraffine and other extraneous matter clogging them, thus increasing the yield of oil from an eight-barrel well a day to fifteen barrels.

Letter A represents the casing-head, through which the tubing C (containing the sucker-rod) passes, and extending down to near the bottom of the well. B represents the casing, which extends down to the sand-rock. D represents the perforated steam-pipe, which is supplied with steam from a steam-chest; the supply can be regulated at the will of an attendant by means of a cock in the pipe. *a a a a* represent perforations in said pipe.

Steam from the boiler passes through a supply-pipe to a steam-chest; from thence to the pipe for steaming the well, said pipe extending down through casing-head to the bottom of the well, the steam-pipe being perforated about two or three feet above the bottom, said perforations extending upwardly to near the top of the sand-rock. Jets of steam escaping through perforations in the pipe tend to melt and clear the oil veins or crevices from paraffine or other extraneous matter, thereby reducing them to a liquid state, and allowing the oil to be forced up through the tubing by any of the well-known means, thus increasing the flow of oil.

What I claim, and desire to secure by Letters Patent, is—

The steam-pipe D having perforations *a a a a*, in combination with the casing-head A, casing B, and tubing C, all constructed and arranged to operate substantially in the manner set forth.

his
THOMAS B. × CAROTHERS.
mark.

Witnesses:
N. PETERS,
ALLEN LEPREUX.