J. ODELL.

HEATERS FOR OIL-WELLS.

No. 185,951. Patented Jan. 2, 1877.

Fig. 1.

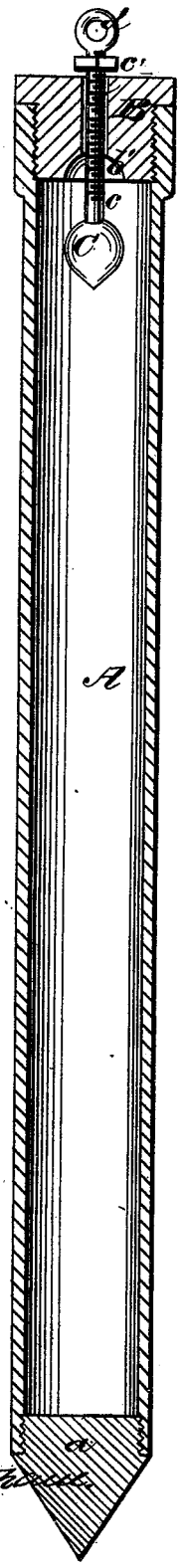
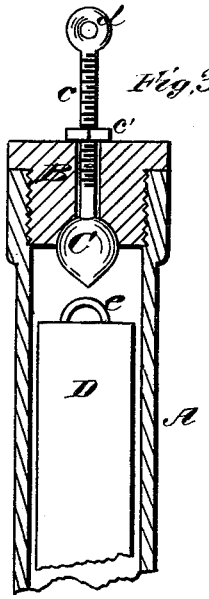


Fig. 2.

Fig. 3.



WITNESSES

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JOSIAH ODELL, OF FRANKLIN, PENNSYLVANIA.

IMPROVEMENT IN HEATERS FOR OIL-WELLS.

Specification forming part of Letters Patent No. **185,951**, dated January 2, 1877; application filed December 9, 1876.

To all whom it may concern:

Be it known that I, JOSIAH ODELL, of city of Franklin, in the county of Venango and State of Pennsylvania, have invented a new and valuable Improvement in Heaters and Agitators for 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 a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a central vertical section, without the rod, of my agitator and heater for oil-wells. Fig. 2 is a front elevation of the rod, and Fig. 3 is a central vertical sectional view of my oil-well heater and agitator having the rod inside.

This invention relates to heaters and agitators for oil-wells; and the novelty consists in removing paraffine or congealed oil from the oil-bearing rock, thereby increasing the production of the oil-well, and at the same time heating and agitating the fluid to such an extent as to cause the well to flow more rapidly, by means hereinafter more fully set forth.

On the annexed drawings, A represents a cylindrical tube, which is provided at its lower end with a suitable point or stopper, *a*, and on its upper end with a thimble, which is adapted to receive the male screw-threaded valve-seat B. In the lower part of the valve-seat B is formed a recess, *b'*, which is adapted to receive the ball or other similarly-constructed valve, C. To this valve is attached a screw-threaded rod, *c*, which is provided with nut *c'* and eye *d*, for the purpose as will be hereinafter fully set forth.

The cylindrical casing A is adapted to receive a solid bar, D, which has a staple or other similar device on one end. This staple *e* is placed on the bar D, so it can be easily handled when heated.

When it is desirable to use this device, the bar D is heated, and placed in the cylindrical casing A. The valve-seat B is then secured in place, and the cord or other lowering device is attached to the eye *d* in rod *c*. The nut *c'* may then be screwed down, so as to secure the valve C against the recess *b'*, and prevent the heat from escaping through the valve. It also prevents the gases and fluids in the well from coming in contact with the heated bar D.

It may be desirable in some cases to place the nut *c'* near the eye *d*, and in this case the valve C will be held in place while lowering, and when the apparatus reaches the bottom of the well the cord or other lowering device will slacken and allow the valve to open. The fluids will then come in contact with the heated bar, thereby causing steam to generate, which will detach the congealed matter and cause the well to flow.

When the valve is kept closed the heat will sometimes produce the same effect.

Guide-rings or thimbles are forged on each end of the bar or rod D, to center it when placed in the cylindrical case A.

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

1. The casing A, closed at its lower end, and provided at its upper end with a removable plug, said plug being provided with a valve, in combination with a heating device, substantially as described, and for the purpose set forth.

2. The casing A, having closed end *a* and removable plug B, which plug is recessed, so as to receive valve C, said valve being provided with screw-threaded rod *c*, nut *c'*, and eye *d*, in combination with heating-rod D, which is provided with staple *e*, substantially as described, and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSIAH ODELL

Witnesses:
D. A. HAYS,
THOS. MCDONOUGH.