Vol 2 67

H Searl,

Ejecting Pump.

No. 48,983. Patented July 25, 1865.

Fig. 1.

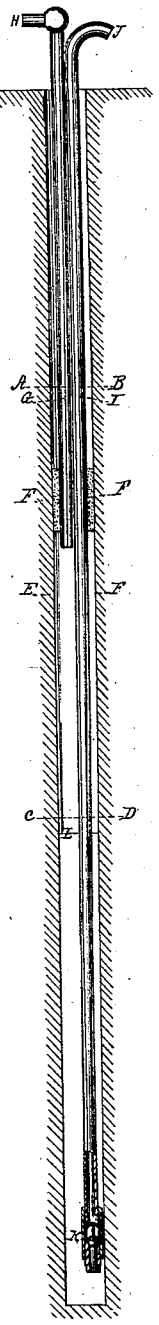

Fig. 2.

Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY SEARL, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN OIL-WELL PUMPS.

Specification forming part of Letters Patent No. **48,983**, dated July 25, 1865.

To all whom it may concern:

Be it known that I, HENRY SEARL, of Rochester, in the county of Monroe and State of New York, have invented a new and Improved Pump for Oil-Wells; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in running a pipe from an air-pump or steam-boiler down through the seed-bag in an oil-well for the purpose of producing a pressure on the oil or water in the well, and extending another pipe from near the bottom of the well to the top, this last pipe having a valve in the bottom, so that when the air or steam is forced down onto the water or oil it is forced up through the valve and out at the top of the well, the valve holding up whatever is forced up through the opening which is closed by said valve. The air, being under sufficient pressure to force the oil up from the bottom of the well, is by that pressure heated to a sufficient degree to melt or hold in solution the paraffine and at the same time rarefy the gas in the well, so as to materially assist the flow of oil, steam, if used, also heating the well and producing the same results.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation by referring to the annexed drawings and letters of reference marked thereon, in which—

Figure 1 represents a section of a well with the pipes placed in it. Fig. 2 is a section at A B, Fig. 1. Fig. 3 is a section at C D, Fig. 1.

E E, Fig. 1, represent a section of the well.

F F, Fig. 1 show a section of the seed-bag, which is put around pipes in an oil-well for the purpose of keeping the surface-water out of the well.

G, Fig. 1, shows the pipe through which air or steam is forced into the well, which is connected with a force-pump at H, Fig. 1, if air is used, and with a boiler if steam is used.

I, Fig. 1, shows the supply-pipe up through which the oil is forced from the well, and which comes out of the pipe at J, Fig. 1.

K, Fig. 1, shows a section of the valve in the lower end of the supply-pipe.

L, Fig. 1, represents the oil as it is supposed to rise in the well.

E E, Fig. 2, represent a section of the well E E, Fig. 1.

F, Fig. 2, shows the top of the seed-bag F F, Fig. 1.

G, Fig. 2, shows a section of the air or steam pipe G, Fig. 1.

I, Fig. 2, shows a section of the supply-pipe I, Fig. 1.

E E, Fig. 3, represent a section of the well E E, Fig. 1.

I, Fig. 3, shows a section of the pipe I, Fig. 1.

Now, it will be seen that by forcing air or steam down on the oil in the well under sufficient pressure, and the seed-bag F being packed sufficiently tight, whatever is in the well must be forced up the pipe I, through the valve K, and out at the top, and the valve K holds up whatever is forced through it, and that when the air is under sufficient pressure to force it to any considerable depth latent heat is generated to a sufficient degree to melt or hold in solution the paraffine which collects in an oil-well, and which is necessary to remove, as it ultimately stops the flow of oil, and also by heating the well the gas is rarefied, so as to materially assist in the flow of oil.

Having thus described the construction and operation of my invention, what I claim, and desire to secure by Letters Patent, is—

The arrangement of the pipes G and I with the valve K and the seed-bag F, or other suitable packing, substantially as herein described, not claiming separately either the seed-bag, the valve, or the pipes, as I am aware that they are in common use for many purposes.

HENRY SEARL.

Witnesses:

W. A. REYNOLDS,

HENRY A. SEARLE.