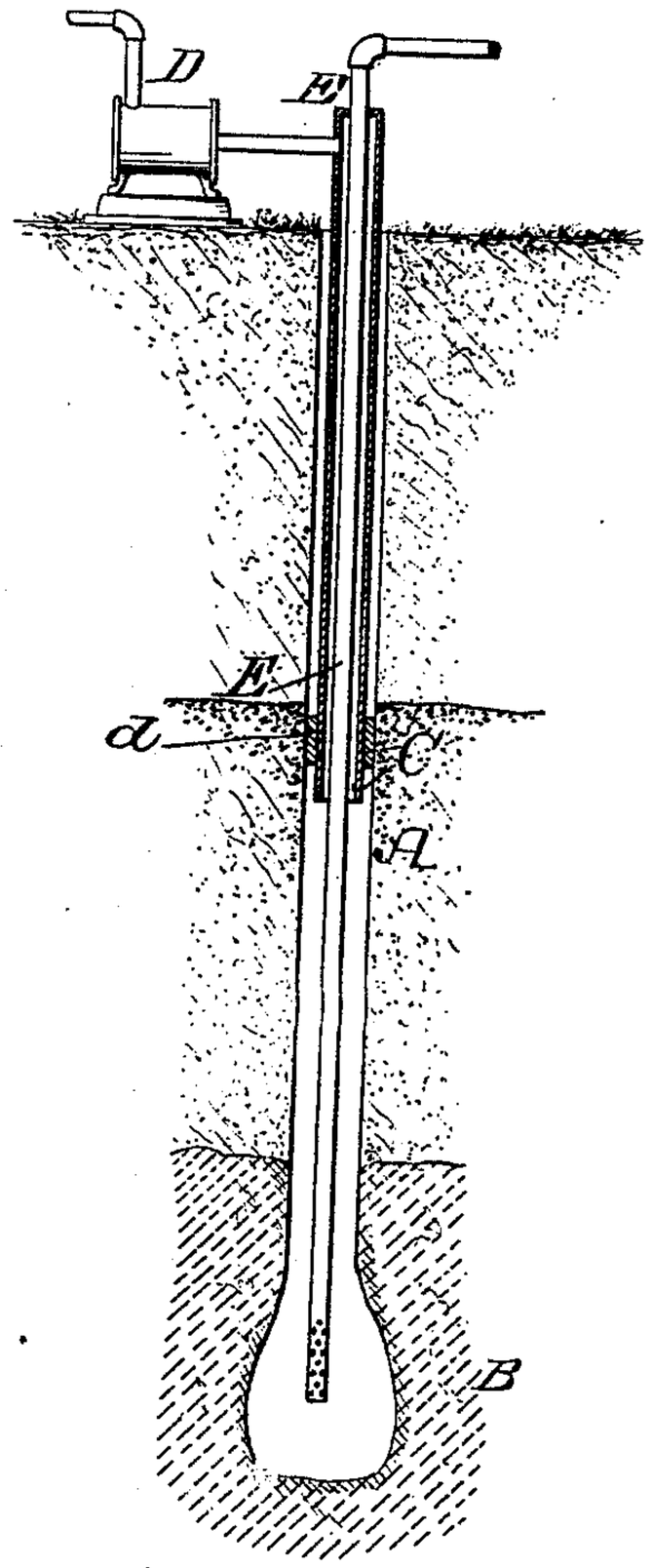
(No Model.)

J. PETERS.

METHOD OF MAKING AND RAISING SALT BRINE FROM DEEP VEINS.

No. 327,307. Patented Sept. 29, 1885.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN PETERS, OF HAVERSTRAW, NEW YORK, ASSIGNOR TO THE HYDRAUI SALT FORCING COMPANY.

METHOD OF MAKING AND RAISING SALT-BRINE FROM DEEP VEINS.

SPECIFICATION forming part of Letters Patent No. 327,307, dated September 29, 1885.

Application filed June 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN PETERS, of Haverstraw, Rockland county, New York, have invented a new and Improved Method of Making and Raising Salt-Brine from Deep Veins, of which the following is a full, clear, and exact description.

In obtaining the salt from deep strata of salt-rock, where it is impracticable to mine by shafts and drifts, it has been the practice to sink wells down into the salt deposit, and to supply them with outside and inside pumping machinery arranged for pumping fresh water into the well, and then pumping it out again after it shall have become saturated with salt.

My new method of forming the brine and raising the same consists in forcing the fresh water into the well under pressure, permitting it to dissolve salt by contact with the underground deposit, and then expelling the same from the well by pressure, thus doing away with expensive machinery, and increasing the rapidity with which the water dissolves the salt and becomes brine.

The machinery that I employ for carrying out my new process consists, by preference, of a force-pump combined with suitable inflow and outflow pipes arranged in the well, all as hereinafter fully described and claimed.

Reference is to be had to the accompanying drawing, forming part of this specification, which represents in sectional elevation a salt-well and one form of apparatus arranged for carrying out my pressure method of obtaining the salt.

A represents a deep well, which extends down into the salt stratum illustrated at B. In the well is placed the inflow pipe or casing C, which reaches down below the fresh-water veins, where it is suitably packed, as at *d*, for excluding drainage and for confining the water below it, so that the brine may be expelled from the well through the outflow-pipe E by pressure.

D is a force-pump, by which fresh water m be pumped from a spring or other supply ir the well through inflow-pipe C, and by whi pressure may be applied to the water alrea in the well for forcing it out of the w through outflow-pipe E. This pressure up the water not only serves to elevate the bri from the well without the aid of separa pumping machinery, but also forces the wat in the well into the small crevices of the s deposit, and causes the water to dissolve t salt and become brine much more rapidly th by the old method.

The outflow-pipe E might be arranged ou side of the inflow pipe or casing C; but I pr fer to arrange it as shown; and it is obvio that where there is a natural or artificial he or pressure of water near the mouth of the w the force-pump might be dispensed with.

The brine, after being forced out of the we is concentrated in the usual manner for o taining the salt.

The apparatus employed by me in my abo method of raising brine from salt-wells is t subject of a divisional application hereof, fil by me March 3, 1885, and I do not therefo claim it herein.

I am aware that it is not broadly new raise oil or other liquids from deep wells b hydraulic or pneumatic pressure, and I do n broadly claim such devices.

What I claim is—

The method of obtaining brine from sal wells, consisting in forcing water into the we under pressure, permitting it to absorb sa by contact with the salt deposit, and then e pelling the same from the well by pressur substantially as described.

JOHN PETERS.

Witnesses:
H. A. WEST,
C. SEDGWICK.