

J. K. Hill,

Drilling Oil Wells.

No. 112,596.

Patented Mar. 14. 1871.

Fig. 1

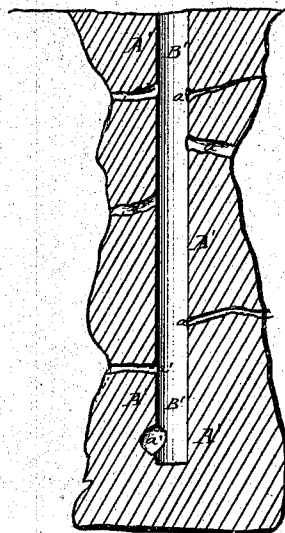
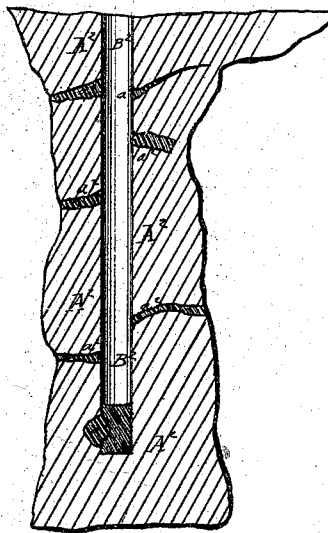


Fig. 2



Witnesses:

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JOHN R. HILL, OF ROUSEVILLE, PENNSYLVANIA.

Letters Patent No. 112,596, dated March 14, 1871.

IMPROVEMENT IN OIL-WELL DRILLING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN R. HILL, of Rouseville, in the county of Venango and State of Pennsylvania, have invented a new and improved Mode of Closing the Water-courses Encountered in Drilling Oil-Wells; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents the bore of a well with the water-courses open.

Figure 2 represents the same bore with the water-courses closed.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish a simple, convenient, and effective mode of closing the water-courses encountered in drilling oil-wells and other artesian wells, to enable the well to be drilled "dry;" and

It consists—

In the mode of closing the water-courses, hereinafter more fully described and set forth.

A¹ represents the strata of rock through which the well B¹ has been drilled, the water-courses *a*¹ being represented as open.

A² represents the same strata of rock through which the same well B² has been drilled; and *a*² represents the water-courses closed.

In drilling a well, as soon as a water-course has been struck the water flows into the bore of the well and rises to the water level; as soon as the drill has passed the water-course the drill is withdrawn, and a sufficient quantity of hydraulic cement, or other suitable material that will harden under water, to fill the bore B¹ to above the level of the water-course, is poured into the said bore. When the cement or

other material is fully set, the water is pumped out of the well-bore and the drill inserted. The drill cuts out the cement from the bore of the well, but leaves the water-courses closed with said cement. When another water-course is struck the same operation is repeated, and so on until the well has been sunk to the required depth, or until oil has been struck.

The use of this invention entirely removes the necessity of using a casing, and the consequent annoyances and expense arising from its use, which casing frequently becomes locked, and cannot be removed, or parts at one of its joints and falls to the bottom of the well, which causes serious delay, and may injure a well permanently.

This invention also does away with the old-fashioned seed-bags and water-packing, which are often a source of annoyance and expense. It also enables the same tools to be used for cleaning the well that were used for drilling it, which cannot be done when a casing is used. The invention thus secures in a simple, convenient, and inexpensive manner all the benefits arising from the use of casings, such as drilling a well dry, &c., while, at the same time, securing other and greater advantages peculiar to itself.

I am aware that wells have been drilled dry by means of casings, seed-bags, &c. These modes of separating the superfluous water from the oil, &c., below, I do not claim;

But what I do claim, and desire to secure by Letters Patent, is—

The mode of closing the water-courses encountered in drilling oil and other artesian wells, herein set forth and described.

JOHN R. HILL.

Witnesses:

W. F. GROVES,
C. THOMPSON.