H. H. DANIELS.

BORING TOOL FOR ARTESIAN WELLS.

No. 47,804. Patented May 23, 1865.

Fig. 1.

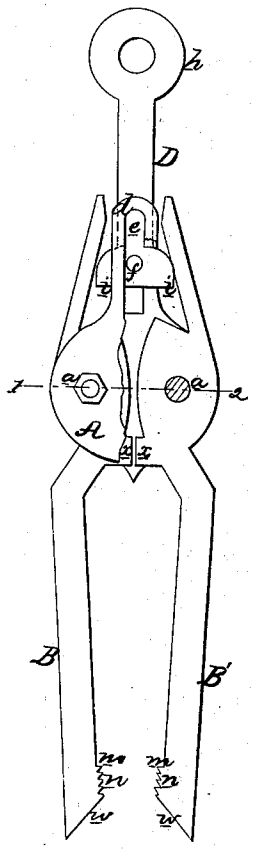



Fig. 2.

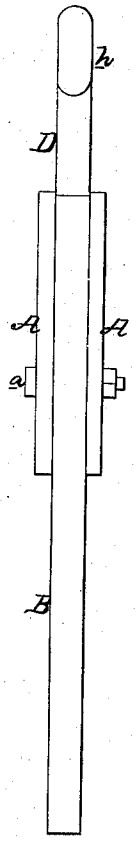



Fig. 4.

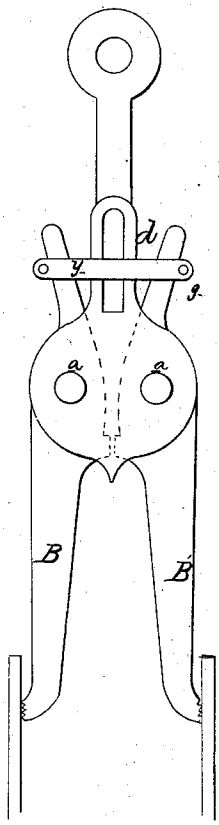
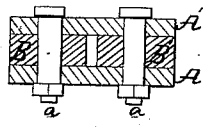



Fig. 3.




Witnesses.

Wm. Albert Spee

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

HENRY H. DANIELS, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN BORING-TOOLS FOR ARTESIAN WELLS.

Specification forming part of Letters Patent No. **47,804**, dated May 23, 1865.

*To all whom it may concern:*

Be it known that I, HENRY H. DANIELS, of Philadelphia, Pennsylvania, have invented an instrument for withdrawing boring-tools, pipes, and other articles from Artesian wells; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of certain plates, levers, and a guided bar with projections, the whole being constructed and arranged for joint action in the manner described hereafter, and forming an instrument whereby detached boring tools or implements jammed in Artesian wells may be withdrawn therefrom.

My invention further consists of a modification of the said instruments to be used for withdrawing pipes from wells.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a front view, partly in section, of my instrument for withdrawing boring-tools and other objects from Artesian wells; Fig. 2, an edge view of the instrument; Fig. 3, a transverse section on the line 1 2, Fig. 1; and Fig. 4 a front view of a modified instrument as arranged for withdrawing pipes from wells.

On reference to Figs. 1 and 2, A and A′ are two plates, connected together by bolts *a a*, to which are hung the two levers B B. Each of the two plates A and A′ has a projection, *d*, and in each projection is an elongated slot, *e*. A bar, D, is situated between the two projections, and this bar is provided with two pins, *f*—one on each side—one pin passing through the slot *e* of the projection *d* of the plate A and the other through the slot of the projection of the other plate, A′. The lower end of the bar D has two projections, *i*, one bearing against the inside of the short arm of the lever B and the other against the short arm of the lever B′, these arms being inclined upward toward each other, as seen in Fig. 1. The long arms of the levers are inclined downward toward each other, and the extreme end *w* of each is beveled, the inside of the arm above the beveled end being serrated as far as the shoulder *m*. The movement of the arms B and B′ toward each other is limited by projections *x* on each arm, the two projections meeting each other.

When any one of the boring-tools or other articles used in sinking Artesian wells has become detached from the boring bar or rope or has become jammed, the above-described instrument is lowered into the well by means of a rope attached to the eye *h* at the upper end of the bar D. While being thus lowered the long arms of the levers B and B′ will be moved toward each other to the full extent permitted by the projections *x x*, owing to the weight of the levers and plates and to the inclined short arms acting on the projections *i i* at the lower end of the rod D, but when the downward movement of the levers is arrested by the lower ends of the long arms coming in contact with the boring-tool or other article to be withdrawn the bar D will continue to descend and will permit the long arms to be opened, their beveled ends *w w* sliding over the head or end of the boring-tool. The rope to which the instrument is suspended is then raised, in doing which the first effort will be to raise the bar D while the levers remain stationary. This raising of the bar causes the projections *i i* to act against and open the short arms of the levers and to close the long arms which grasp the boring-tool and hold it with their serrations *n* or shoulders *m m*, so that on the continued elevation of the rope the entire instrument, with the boring-tool or other detached implement in the well, will be raised therefrom.

In the instrument illustrated in Fig. 4 the action of the levers is reversed, so as to enable them to seize a pipe. In this case the lower end of the bar D has two cross-beams, *y*, situated on the outside of the plates B and B′, and connected together at the ends by pins *g*, which are arranged to act against the outward inclined arms of the levers B and B′ when the bar is elevated, thereby causing the pointed ends of the long arms to bear against the interior of the pipe, which is withdrawn with the instrument.

I do not desire to claim, broadly, the use of the jaws or levers B B′ caused to contract by pulling a rope connected to them; but

I claim as my invention and desire to secure by Letters Patent—

1. The instrument composed of the plates A and A′, levers B and B′, and guided bar D with its projections *i i*, the whole being constructed and arranged in the manner and for the purposes herein described and illustrated in Figs. 1, 2, and 3.

8. The modified instrument composed of the plates A and A′, levers B and B′, guided bar D with its pins *g g*, or their equivalents, the whole being arranged and operating substantially as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY H. DANIELS.

Witnesses:

CHARLES E. FOSTER,

JOHN WHITE.