

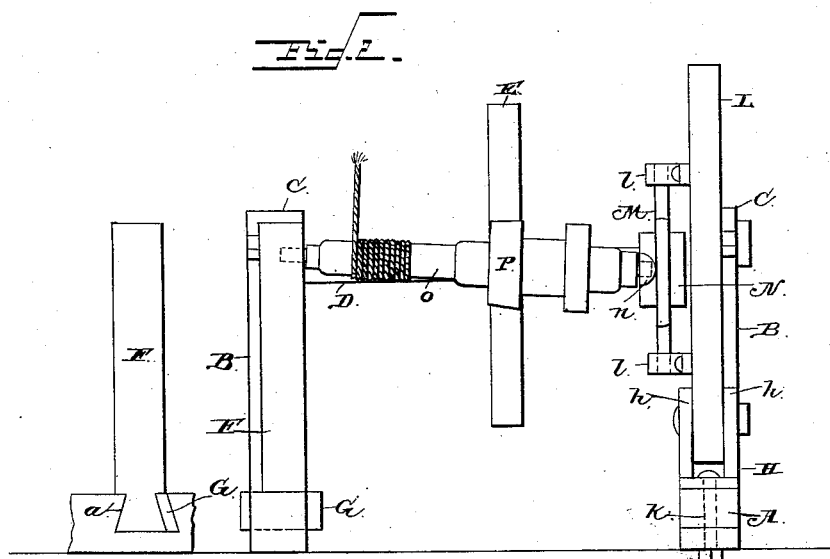
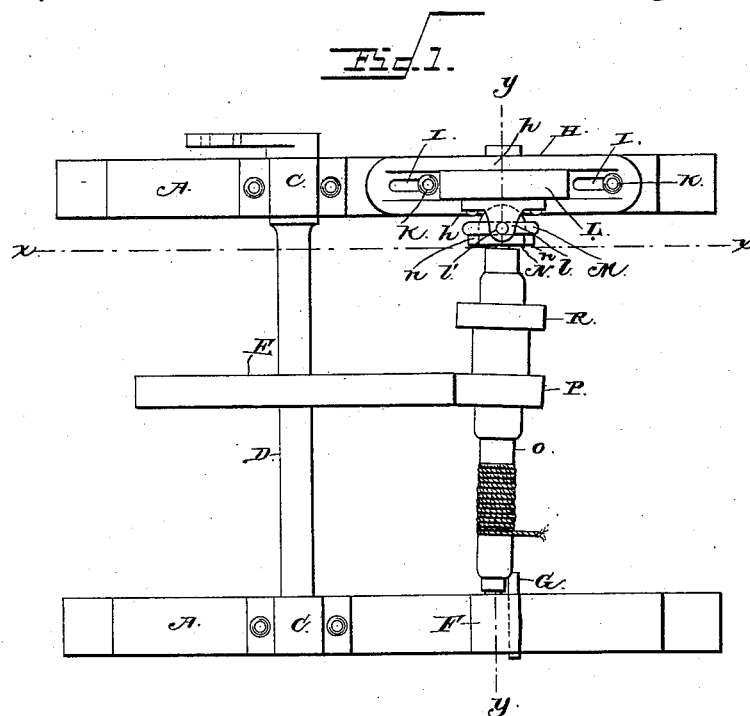
(No Model.)

2 Sheets—Sheet 1.

W. J. PRINGLE.  
WELL DRILLING MACHINE.

No. 347,377.

Patented Aug. 17, 1886.



Witnesses  
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*J. W. Garner*

Inventor  
*Wm. J. Pringle*  
By his Attorneys  
*C. A. Snowdon*

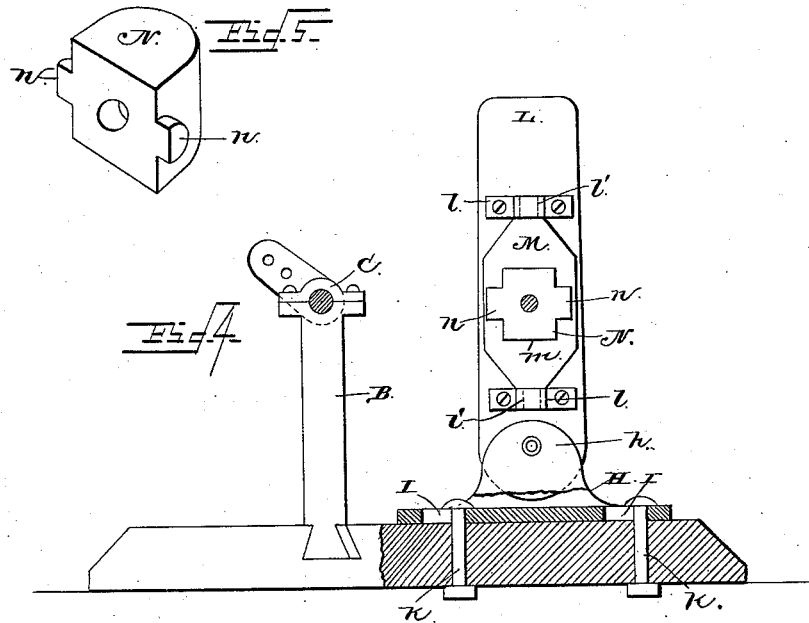
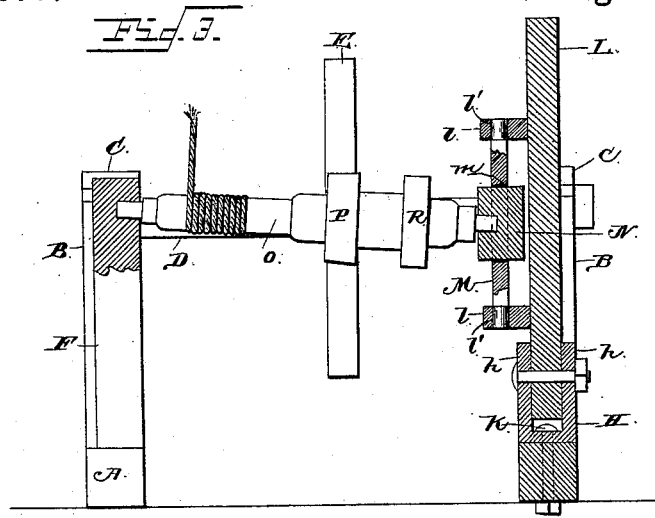
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# UNITED STATES PATENT OFFICE.

WILLIAM JOHN PRINGLE, OF BALLTOWN, PENNSYLVANIA.

## WELL-DRILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 347,377, dated August 17, 1886.

Application filed May 15, 1886. Serial No. 202,940. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM JOHN PRINGLE, a citizen of the United States, residing at Balltown, in the county of Forest and State of Pennsylvania, have invented a new and useful Improvement in Well-Drilling Machines, of which the following is a specification.

My invention relates to an improvement in machines for drilling Artesian and oil wells; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a plan view of a portion of a well-drilling machine provided with my improvements. Fig. 2 is an end view. Fig. 3 is a transverse sectional view of the same on line *y y* of Fig. 1. Fig. 4 is a vertical longitudinal sectional view on line *x x* of Fig. 1. Fig. 5 is a detail view.

A represents the sills of a drilling-machine, and B represents vertical standards, which are secured to the frame of the machine, and have bearing-blocks C at their upper ends, in which is journaled the usual shaft, D, having the usual friction-wheel, E, for actuating the sand-pump reel.

F represents a vertical standard having its lower end dovetailed to a dovetailed groove, *a*, made in one of the sills, and G represents a key or wedge, which is inserted between one side of the groove *a* and the depending dovetailed foot of the standard F, so as to secure the said standard firmly to the sill A.

H represents a shoe, which is provided with longitudinal slots I in its lower sides, and is secured to one of the sills A opposite the standard F by means of bolts K, which pass down through the slots I and enter the sill. The shoe is thus made longitudinally adjustable on its sill, as will be very readily understood.

L represents a lever-arm or standard, the lower end of which is pivoted between upwardly-extending ears *h*, with which the shoe is provided. From the inner side of the said pivoted lever or standard project horizontal brackets *l*, having vertical openings *l'* at their inner ends.

M represents a vertical plate, the ends of which are reduced to form spindles, and are journaled in the openings *l'* of the brackets *l*. In the center of the plate M is made a rectangular opening, *m*, in which is fitted a block, N, the inner side of which is provided with

projecting lugs *n*, that bear against the sides of the openings *m*. The said opening is of a sufficient size to permit the block N to freely move therein.

O represents the shaft of the sand-pump reel, one end of which is journaled in an opening made in the upper end of the standard F, and the opposite extremity of the said shaft is journaled in the block N. The sand-pump-reel shaft has the usual friction-pulley, P, to bear against the friction-wheel E when the lever L is moved rearwardly, so as to impart the motion of the said friction-wheel E to the sand-pump reel in the usual way. The sand-pump reel is also provided with the usual brake-pulley, R, for stopping the motion of the reel.

By pivoting the plate M to the inner side of the lever L, and locating the block N in an opening made in the said plate, and journaling one end of the sand-pump-reel shaft in the said block N, it will be readily understood that a universal joint is formed between the said pump-reel shaft and the lever L, whereby the said lever may be moved to shift the sand-pump reel to any desired angle without unshipping the said reel from the said lever. The shoe H is made movable, as before described, in order to permit the friction-pulley P to be adjusted, and thereby caused to bear against the friction-wheel E when the lever L is in a vertical position.

Having thus described my invention, I claim—

1. The combination of the pivoted lever L, having the bracket *l*, the vertical plate M, journaled in the said bracket and having the opening *m*, the block N, secured in the said opening and free to turn therein, and the sand-pump reel having one end journaled in the said block, substantially as described.

2. The combination of the pivoted lever L, and the sand-pump reel, and the universal joint connecting one end of the said sand-pump reel to the said pivoted lever, for the purpose set forth, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM JOHN PRINGLE.

Witnesses:

JAMES CABLE,  
CHAS. DINSMOOR.