

B. Mudge,

Well Tubing,

N^o 50,614.

Patented Oct. 24, 1865.

Fig. 1.

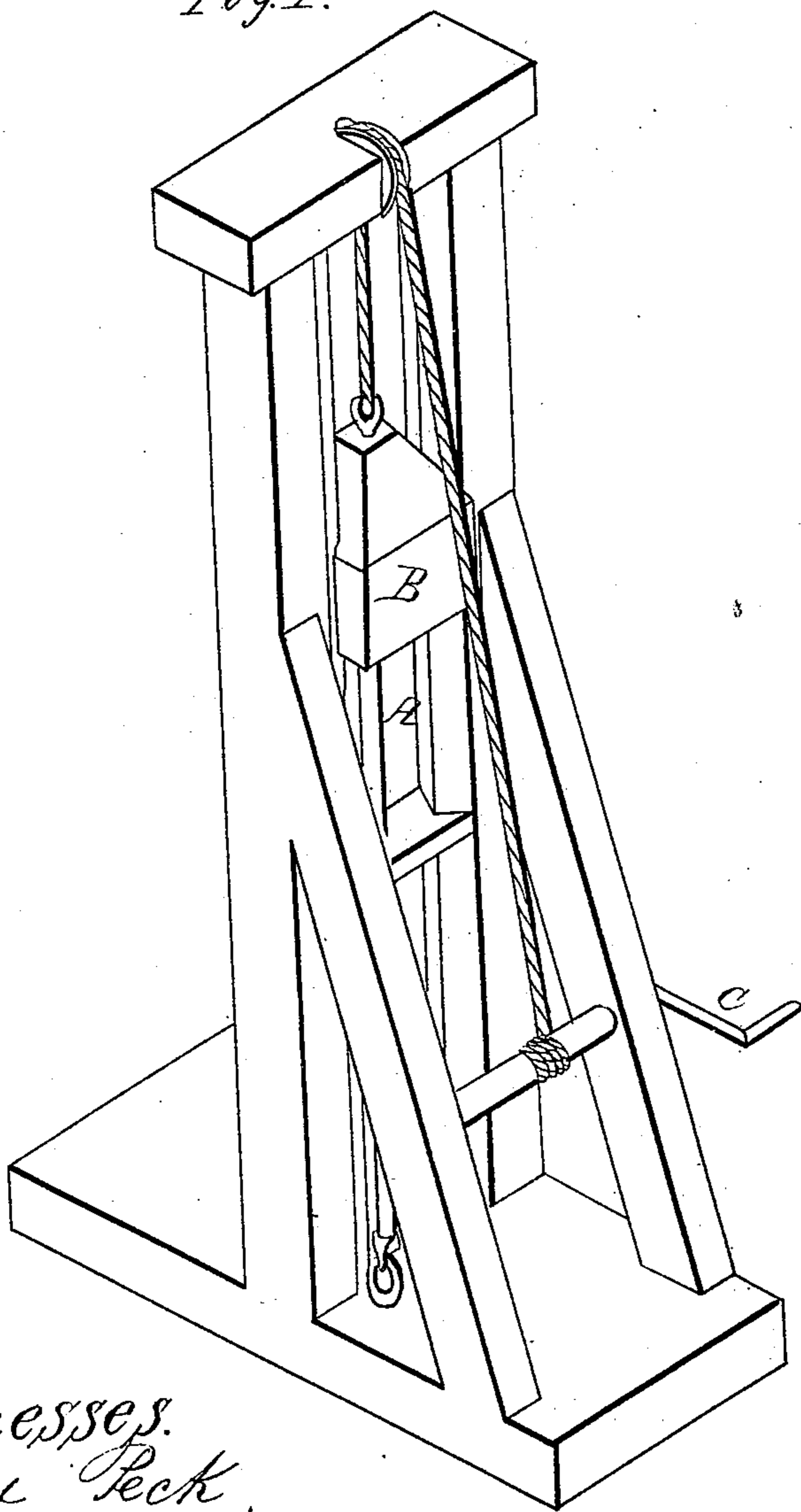


Fig. 2. Fig. 4.

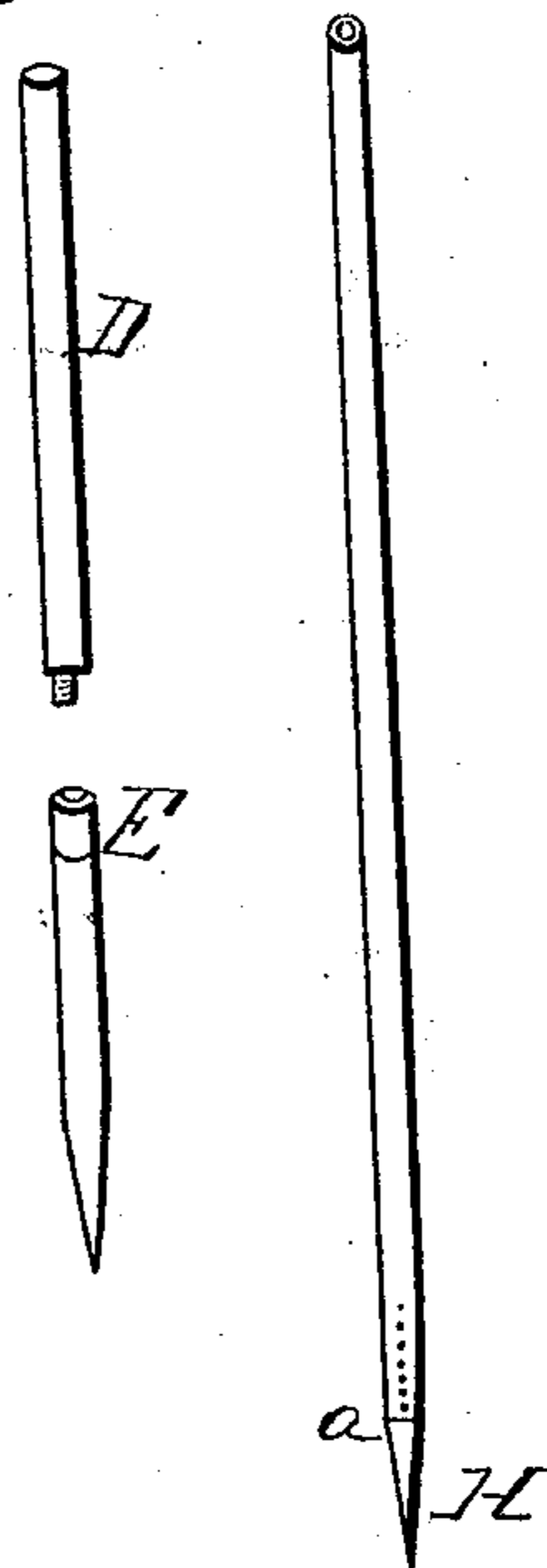


Fig. 3.



Witnesses.
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BYRON MUDGE, OF CORTLANDVILLE, NEW YORK.

IMPROVED MODE OF SINKING WELLS.

Specification forming part of Letters Patent No. 50,614, dated October 24, 1865.

To all whom it may concern:

Be it known that I, BYRON MUDGE, of Cortlandville, in the county of Cortland, in the State of New York, have invented a new and Improved Mode of Sinking or Constructing Wells, by which a supply of water may be readily obtained for family use or for an army on the march or in camp.

The modes for sinking wells heretofore in use are, first, digging and walling up, as is generally practiced in sinking wells for family or farm use; second, boring and drilling, in sinking Artesian wells, salt-wells, and oil-wells, both of which modes make it necessary to remove the dirt by taking it out at the surface of the ground as the work progresses.

My invention consists in driving a pointed rod of iron or steel perpendicularly into the ground till it has penetrated from four to six feet into the water under ground, withdrawing the rod, and inserting a pipe of nearly the same size in its place, which completes the well. By this process there is no dirt removed or brought to the surface. By attaching any of the pumps now in use to the top of the pipe a copious supply of water may be drawn from wells sunk in this manner; and, as far as I have experimented, they prove inexhaustible. With one man to help I have sunk a well by this process to the depth of twenty feet in two hours' time.

To enable others to use my invention, I will proceed to describe my process or mode of sinking wells in connection with the tools adapted thereto; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to letters of reference marked thereon.

Figure 1 is a view of a small pile-driver, with the iron or steel rod shown at A in position to be driven. At B is shown the driver, which should weigh about one hundred pounds. The driver is operated in the usual way or by means of the windlass and cord shown at C. The pointed iron or steel rod A, Fig. 1, I make two inches (more or less) in diameter, and to provide for different depths I make it in sections, as shown in Fig. 2, the connection being made by screwing the upper section, D, into the thimble E, or by any means equivalent thereto.

Fig. 3 is a view of a clamp-ring used for

drawing the rod from the ground, and is operated by any strong lever inserted in the link G.

Fig. 4 is a view of the pipe to be put down after driving and withdrawing the rod. The pipe should be about two inches in diameter and made of some strong metal. Ordinary gas-pipe is, perhaps, most preferable. A plug (shown at H) is inserted in the lower end of the pipe to prevent its getting choked with gravel, and is made pointed for the purpose of guiding the pipe as it is forced down to its place in the well. The small openings, of any shape most convenient to make, shown at A, near the bottom of the pipe, are for the admission of water into the pipe when put into the well.

My process for sinking a well is, first, driving the rod A to the required depth by means of the pile-driver, Fig. 1, or by a heavy sledge where the soil or earth is not too compact; second, withdrawing the rod by means of the clamp, Fig. 3, or by any means that will effect the object; third, the rod being withdrawn, inserting the pipe in its place, driving it down, if necessary.

Where the earth or soil is light and free from stone the pipe may often be driven to a sufficient depth for a well without driving the rod.

Any of the ordinary pumps now in use may be attached to the pipe after it is in place by cutting a thread on the top of the pipe and screwing on the pump, or by any means that will effectually exclude the air.

Drilling and boring wells I do not claim as my invention, as these modes of operation have been long known; nor do I claim the pipe alone as herein described, as that has been used in the device patented to James Suggett, March 29, 1864; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

The process or mode of constructing or sinking wells where no rock is to be drilled, viz: driving a rod down to and into the water under ground, withdrawing it, and inserting a pipe in its place, substantially as herein described.

BYRON MUDGE.

Witnesses:

REED PECK,

EBENEZER MUDGE.