R. H. St. John,

Well Tubing.

No. 50,967. Patented Nov. 14, 1865.

Fig. 1.

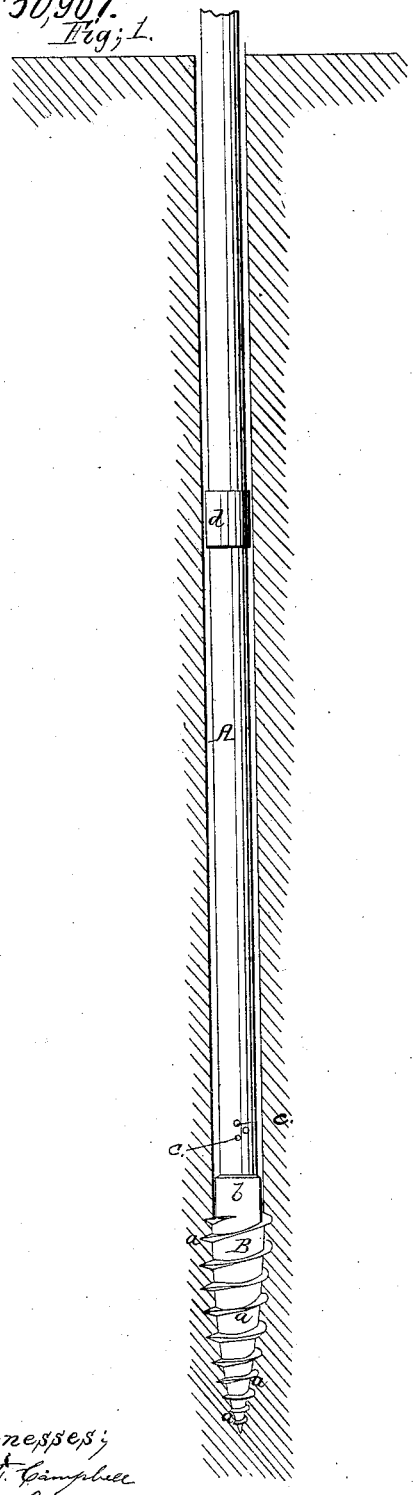
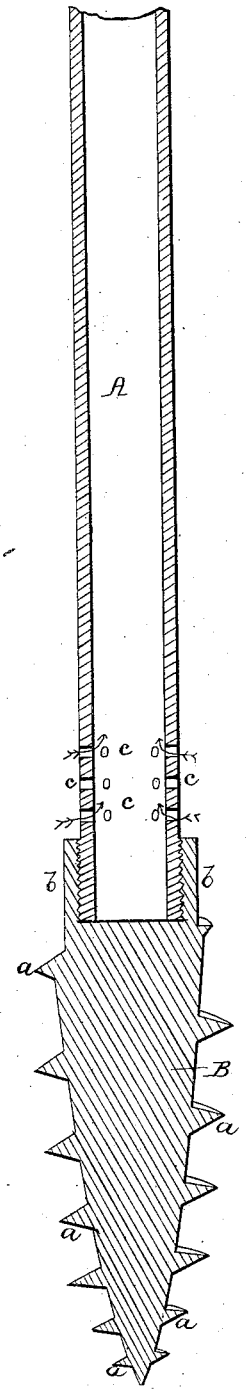


Fig. 2.



Witnesses;
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Edw Shepherd

Inventor;
R. H. St. John
by his Atty's
Mason, Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

R. H. ST. JOHN, OF BELLEFONTAINE, OHIO.

IMPROVED METHOD OF SINKING WELLS.

Specification forming part of Letters Patent No. **50,967**, dated November 14, 1865.

To all whom it may concern:

Be it known that I, R. H. ST. JOHN, of Bellefontaine, in the county of Logan and State of Ohio, have invented a new and Improved Mode of Sinking Wells; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a view representing a section of a well which is in process of formation by my improved device. Fig. 2 is an enlarged sectional view of the device for forming a well.

Similar letters of reference indicate corresponding parts in both figures.

The object of my invention is to obtain water from beneath the surface of the earth by means of an auger of a peculiar construction, which is applied to a perforated tube, and which will readily penetrate the earth and pack the walls of the well so as to leave a space surrounding the said tube, and thus admit of the free entrance of water into the tube, from which it can be obtained by any of the well-known lifting or force pumps, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents a hollow shaft, which has a conical auger, B, suitably secured on one end, which has a spiral flange or thread, *a*, formed on it, as shown in Fig. 1. This spiral flange *a* increases in size as it leaves the point of the auger-cone, and it terminates at a cylindrical head, *b*, which is larger in diameter than the tube or shaft A.

The lower end of the hollow shaft A may be screwed into the upper end of the enlarged head, *b*, as shown in Fig. 2, or it may be otherwise permanently secured to the auger; and just above this head the shaft A is perforated, as shown at *c c*, for the admission of water into it from the earth. The upper end of this shaft A may have a male screw-thread formed on it to receive a coupling, *a*, which may be applied on the end of another section of tubing, as shown in Fig. 1. By this means the shafts or sections of shafts need not be very long, as they can be coupled together and any required number used, according to the distance which it is necessary to go for water.

The object of employing a spirally-flanged cone, as above described, and terminating the upper end of such an auger with a cylindrical head, *b*, is to make an opening in the earth larger in its diameter than the tubular shaft to which the cone is applied, thus avoiding the friction of the sides of the well and said shaft if it fitted tightly in the well; also, for the purpose of penetrating the earth with the expenditure of as little manual labor as possible, and at the same time to compress or pack the sides or walls of the well, and thus prevent the earth from falling in and filling up the space which is left around the hollow shaft for water. The spirally-flanged cone will operate like a circular wedge; and while it will penetrate the earth very rapidly by rotating the shaft A, it will also compress the earth and form a free passage for this shaft, and also for the entrance of water into the well above the perforations in the shaft.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The construction of the boring device B *a b* and tube A *c*, substantially as described, and also in such manner that the two parts are permanently connected together, and the tube constitutes both the penstock and the stem, substantially in the manner and for the purpose set forth.

R. H. ST. JOHN.

Witnesses:

SAM H. APPLE,

PHILANDER JONES.