

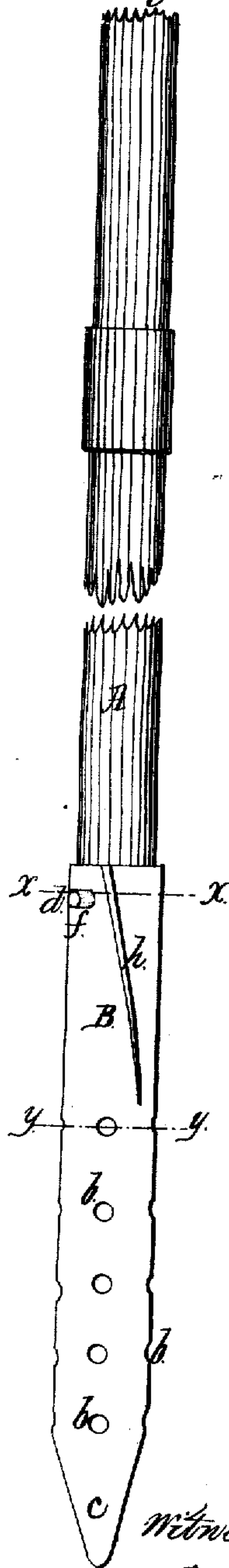
*R. F. Osgood,*

*Well Tubing.*

*Patented Oct. 16, 1866.*

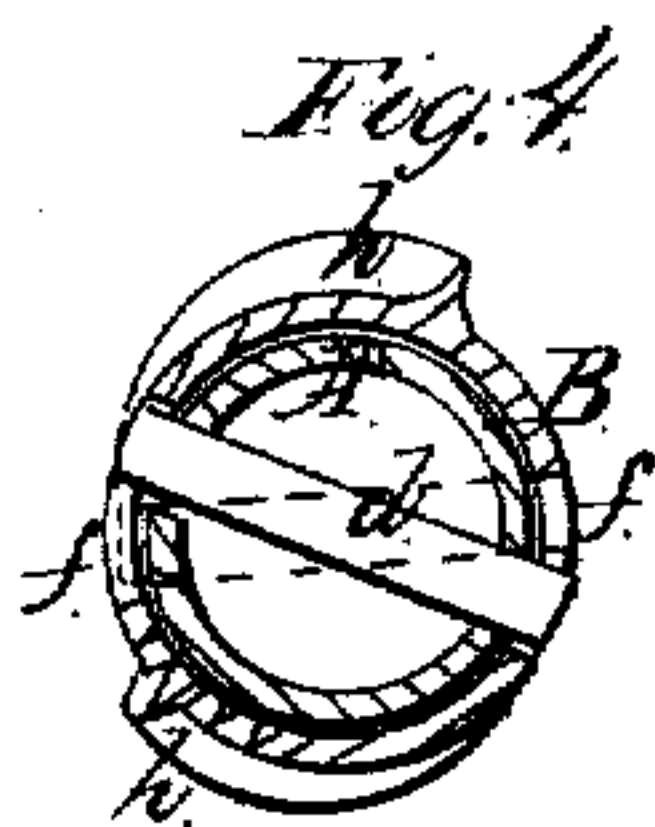
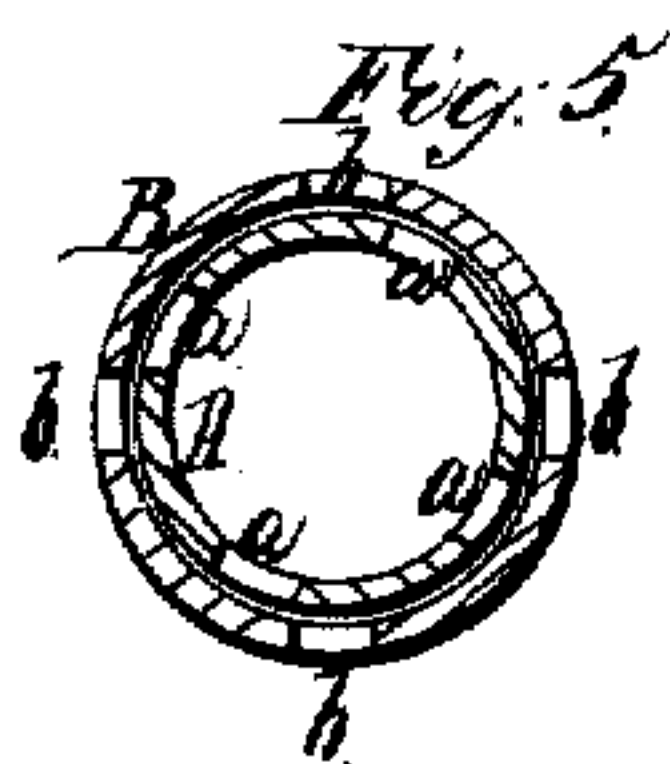
*N<sup>o</sup> 58953.*

*Fig. 1*

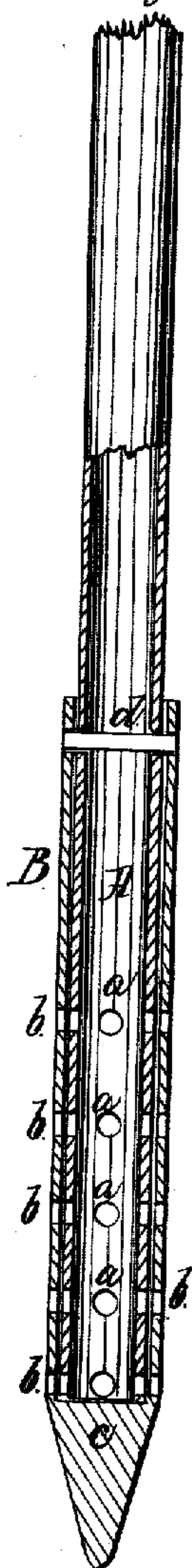


*Witnesses:*

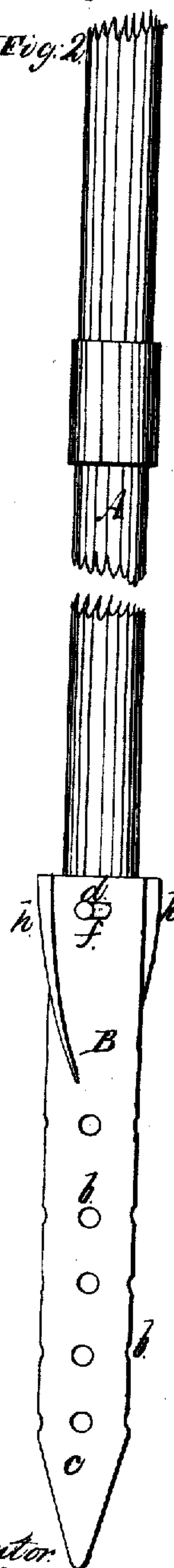
*J. A. Davis.  
D. A. S. A. S. S.*



*Fig. 3*



*Fig. 2*



*Inventor:*

*R. F. Osgood.*

# UNITED STATES PATENT OFFICE.

R. F. OSGOOD, OF ROCHESTER, ASSIGNOR TO C. W. KINNE, OF CORTLAND,  
NEW YORK.

## IMPROVED MODE OF SINKING WELL-TUBING.

Specification forming part of Letters Patent No. 58,953, dated October 16, 1866.

*To all whom it may concern:*

Be it known that I, R. F. OSGOOD, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Sinking Well-Tubing; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is an elevation of the lower end of a section of well-tubing provided with my improvement; Fig. 2, a similar view, but looking at right angles to Fig. 1; Fig. 3, a vertical section of the same; Fig. 4, cross-section in plane *x x*, Fig. 1; Fig. 5, cross-section in plane *y y*, Fig. 1.

Like letters of reference indicate corresponding parts in all the figures.

My improvement belongs to that class in which the tubing is driven into the earth by positive force. In some of these devices the end of the main tubing is inclosed in a hollow shank, with a solid point for opening the way. My arrangement involves this feature; but my invention consists in the employment of a spiral wing or wings in combination with the shank and tubing, in such a manner that in the act of driving a tendency is imparted to the said shank to turn around, and thus keep the induction-holes always closed, but when in place the said wing or wings have a tendency to hold the shank in place while the tubing is turned to open the holes.

As represented in the drawings, A is the main tubing, provided with induction-holes *a a* for the admission of water, and B is the hollow shank in which it rests, which is provided with induction holes *b b*, corresponding in position with those of the main tubing, and also with a solid point, *c*, for opening the way. These two main parts are held in connection by a pin, *d*, passing through the main tubing and holding in transverse slots *f f* of the shank. These slots are of just such length that the pin turning therein will close or unclose the induction-holes.

At a suitable position the shank B is provided longitudinally with a spiral wing or

wings, *h*, of slight inclination, pointing in that direction to insure the closing of the induction-holes as the tubing is being driven.

The operation of the device will be at once understood. As the tubing is driven downward the spiral wing or wings *h* will give a slight turning movement to the shank in that direction that will keep the induction-holes *a b* closed, as shown in Fig. 5. When driven in place, the main tubing is turned around in the shank till the pin *d* strikes the opposite ends of the slots *f f*, in which position the induction-holes are brought in coincidence, as shown in Fig. 3, and the water is allowed to enter to be raised by the pump.

Were it not for the wing or wings, the induction-holes could not be kept closed to exclude earth. The employment of this device enables me to connect the main tubing with the shank in such a manner that the simple turning of the tubing when in place will open the holes. A device is already in use in which the end of the main tubing rests in a hollow shank that covers the induction-holes in driving; but when the tubing is driven in place, it must be drawn up nearly the length of the shank to uncover the holes, which is not only difficult, owing to the great friction, but elevates the tubing at the surface, so that the pump cannot be easily attached.

In my device it will be seen that the main tubing has to be turned only the diameter of the induction-holes, and it is not elevated at all. This arrangement is also more effective than where a cylinder or short section of tube is used inside the main tubing to cover the holes, as in my patent of February 20, 1866, in which case, unless the tubing is of large size, the water passage is contracted.

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

The combination of the spiral wing or wings *h* with the shank B and tubing A, operating substantially as and for the purpose herein set forth.

R. F. OSGOOD.

Witnesses:

J. A. DAVIS,

QUINCY VAN VOORHIS.