

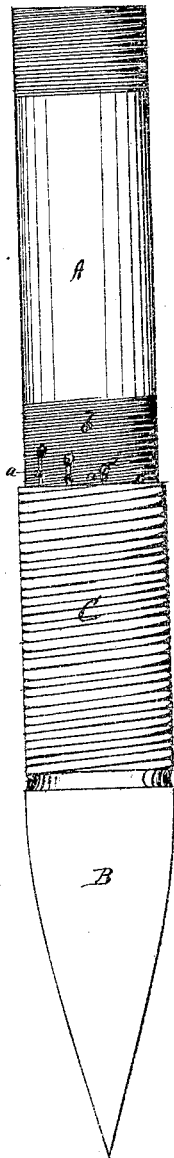
*A. J. Shirley,*

*Well Tube.*

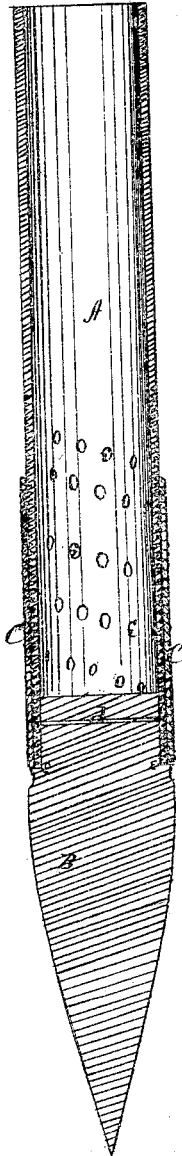
*No. 108,301.*

*Patented Oct. 11, 1870.*

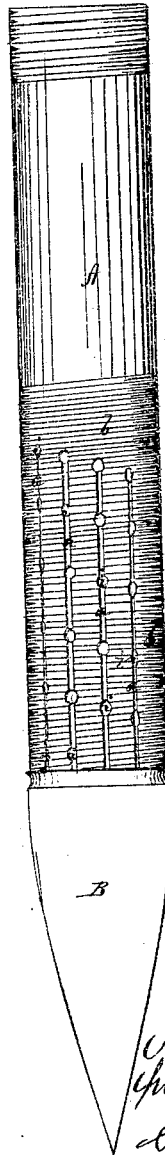
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses,  
C. L. Quirk  
A. H. Mann*

*Inventor,  
Andrew J. Shirley,  
per  
Alexander Thomson  
Attys*

# United States Patent Office.

ANDREW J. SHIRLEY, OF PLYMOUTH, INDIANA.

Letters Patent No. 108,301, dated October 11, 1870.

## IMPROVEMENT IN WELL-TUBES.

The Schedule referred to in these Letters Patent and making part of the same

### *To all whom it may concern :*

Be it known that I, ANDREW J. SHIRLEY, of Plymouth, in the county of Marshall and in the State of Indiana, have invented certain new and useful Improvements in Well-Tubes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a well-tube, with an improved sand-screen or filter, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, and

Figure 2, a vertical section of my well-tube.

Figure 3 is a side view of the tube, with the wire wrapping removed.

A represents the tube, of any suitable dimensions, in the lower end of which the point B is inserted, and secured by means of a pin, *d*, passing through, as shown in fig. 2.

The point B has a shoulder or offset at *e*, upon which is the tube A, the part of the point above said

shoulder being inserted into the tube, and the pin *d* passing through said part and the tube.

At the upper end of the tube A are screw-threads, to form suitable connection with the pipe above.

The tube A is corrugated or grooved longitudinally with grooves *a a*, a suitable distance apart, as shown in fig. 3.

In the grooves or corrugations *a a* are holes or perforations *i i* through the tube.

On the outside of the tube A are also formed screw-threads *b b*, extending the entire distance over and above the corrugations *a* and perforations *i*.

In these screw-threads is wrapped a wire, C, all around, as shown in fig. 1, forming a sand-screen or filter.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letter Patent, is—

The arrangement of the pipe A, provided with longitudinal grooves *a a*, perforations *i i*, and screw-threads *b b*, the point B, with shoulder or offset *e*, the pin *d*, and wire C, all substantially as shown and described.

In testimony that I claim the foregoing, I have hereunto set my hand this 12th day of April, 1870.

Witnesses: ANDREW J. SHIRLEY.

A. B. CAPRON,  
W. M. KENDALL.