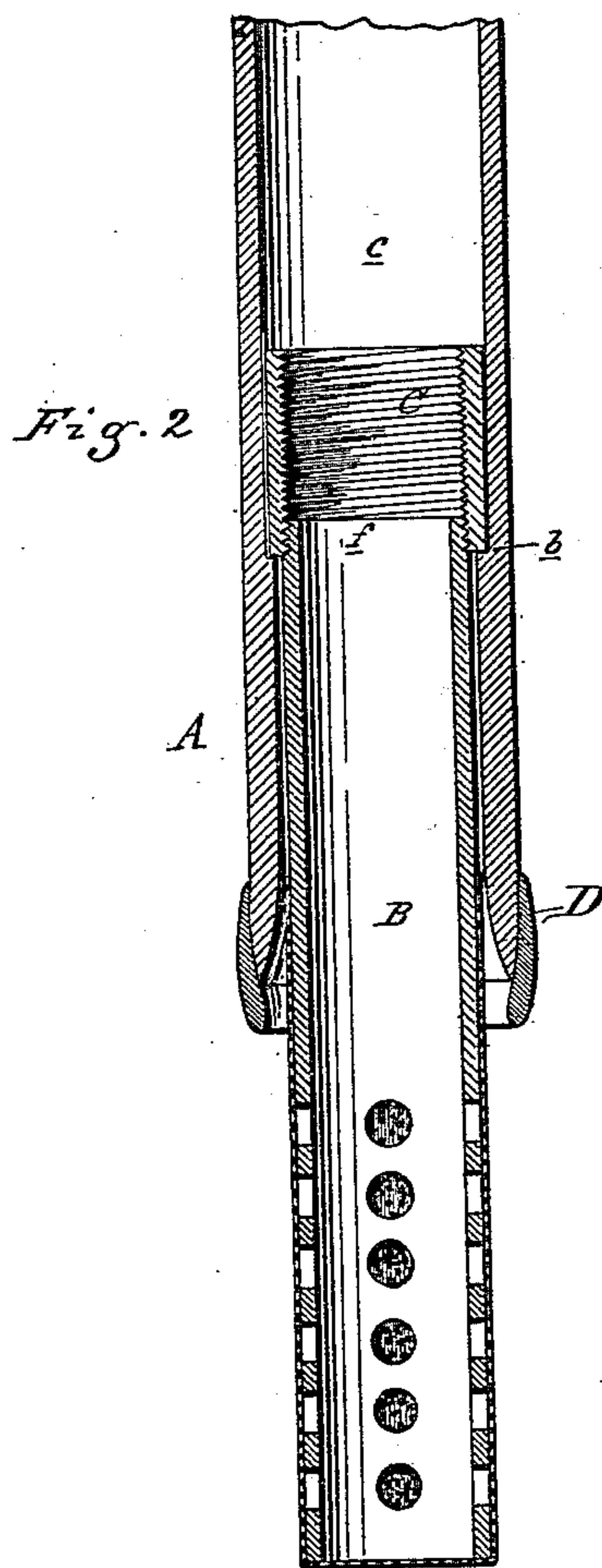
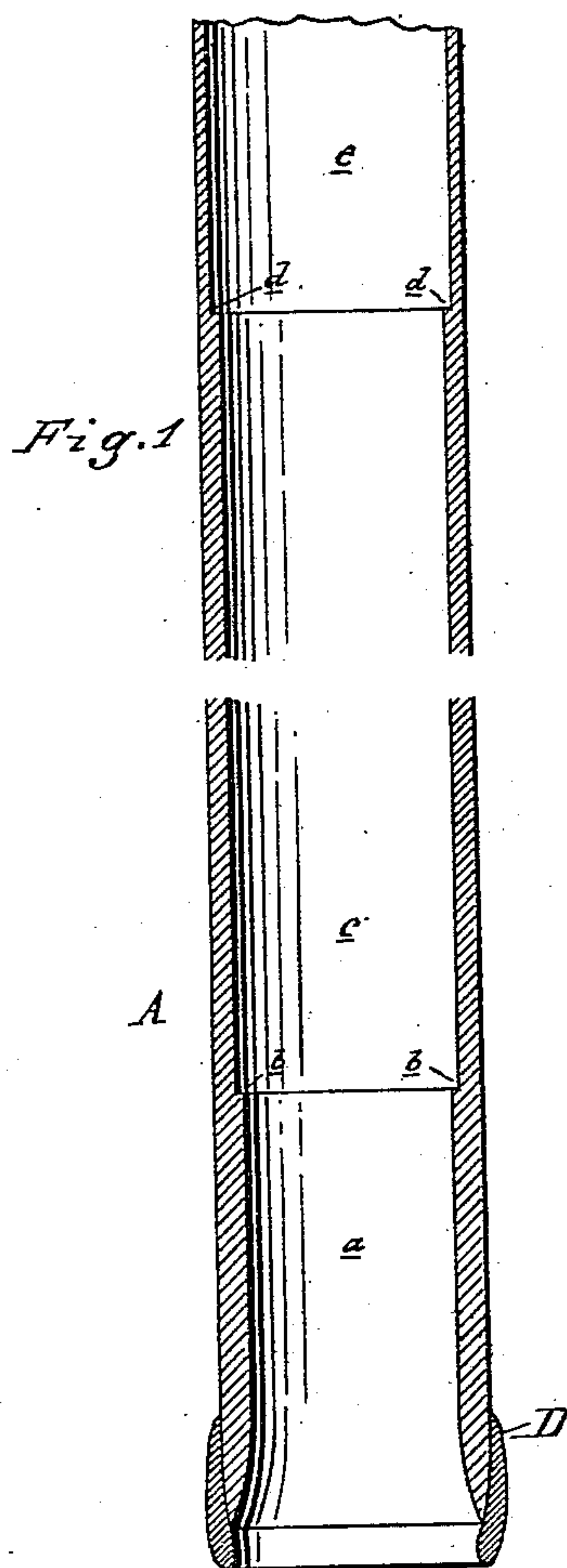


J. A. NEWELL & A. LUCASSE.  
Tubular-Well.

No. 226,185

Patented April 6, 1880.



*Attest:*  
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# UNITED STATES PATENT OFFICE.

JOHN A. NEWELL AND ARY LUCASSE, OF KALAMAZOO, MICHIGAN.

## TUBULAR WELL.

SPECIFICATION forming part of Letters Patent No. 226,185, dated April 6, 1880.

Application filed November 3, 1879.

*To all whom it may concern:*

Be it known that we, JOHN A. NEWELL and ARY LUCASSE, of the village and county of Kalamazoo, and State of Michigan, have invented an Improvement in Tubular Wells, of which the following is a specification.

The nature of our invention relates to new and useful improvements in tubular wells; and the invention consists in the peculiar construction and arrangement of parts, as more fully hereinafter described.

In the accompanying drawings, which form a part of this specification, Figure 1 represents a vertical section, and Fig. 2 a vertical section with the strainer attached.

A represents the lower end of a tube or pipe employed in tubular or driven wells, said pipe being externally the same diameter, but internally of three different diameters, the bore of lower section, *a*, being the smallest, and terminating in a shoulder, *b*; the bore of next section, *c*, being larger, and terminating in the shoulder *d*; the bore of upper section, *e*, being the largest, as shown in the drawings. The shoulder *d* forms a seat for a foot-valve and

spider, or for a valve-box, the enlarged chamber above forming a valve and water-chamber. The shoulder *b* forms a shoulder to support the strainer-pipe B, which fits the bore of the section *a*, and is screwed at *f* into the ring C, which is seated upon the shoulder *b*.

The lower end of the section *a* is provided with an annular and sharpened steel ring, D, to facilitate driving.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In tubes or pipes for tubular wells, the sections *a*, *c*, and *e*, provided with shoulders *b* and *d*, substantially as described, and for the purposes set forth.

2. The drive-tube described, having the sections *a*, *c*, and *e*, the ring C, strainer-pipe B, and sharpened ring D, substantially as described.

JOHN A. NEWELL.  
ARY LUCASSE.

Witnesses:

JAMES M. DAVIS,  
E. H. RANNEY.