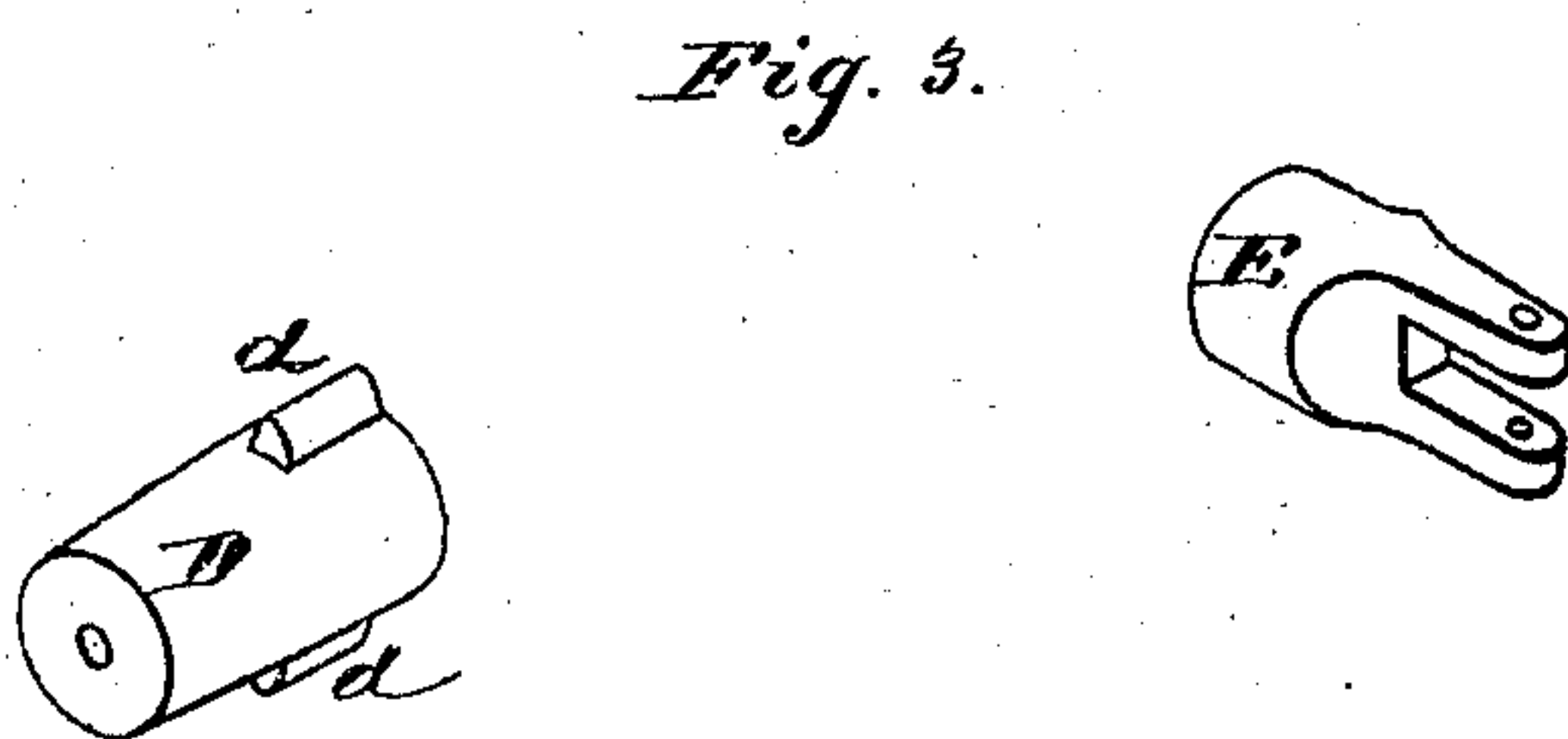
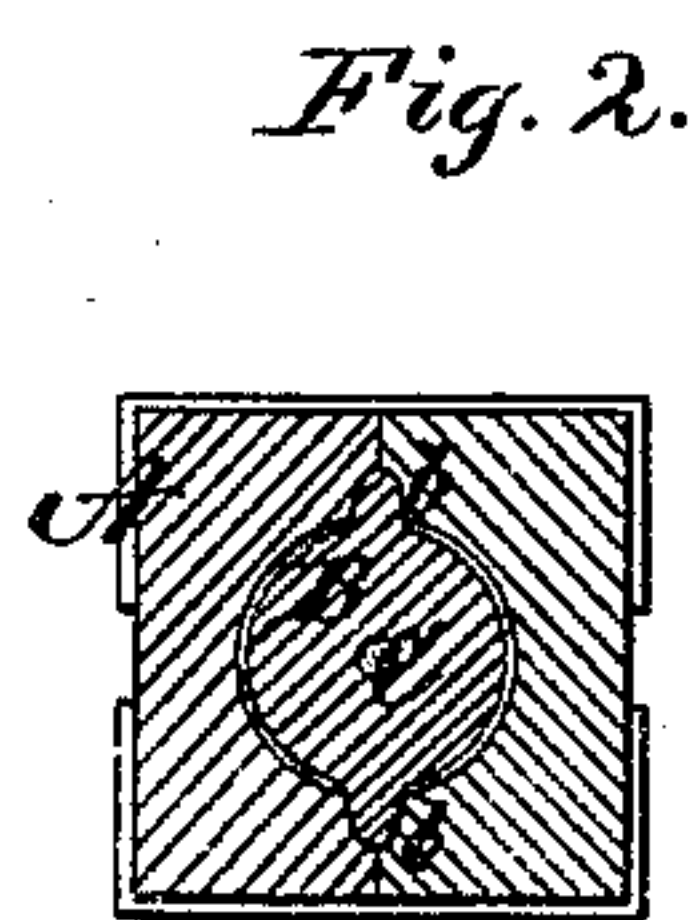
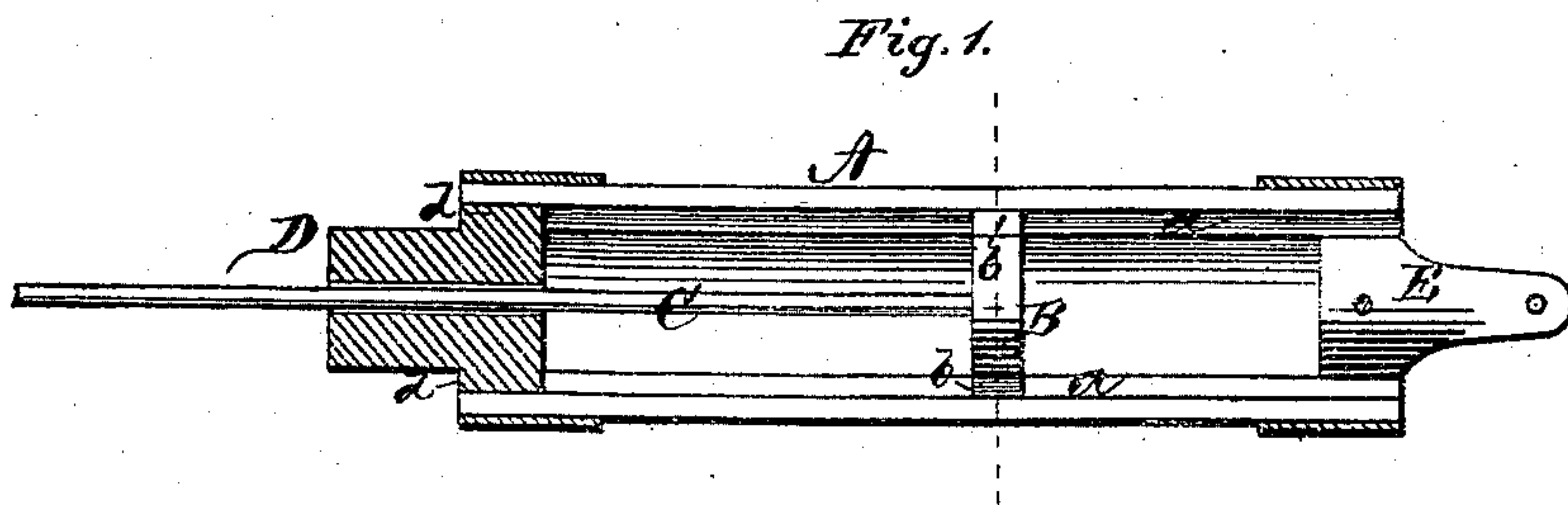


D. SNELL.  
Tumbling Shafts.

No. 143,191.

Patented September 23, 1873.



Witnesses:

Henry N. Miller  
C. L. Everett

Inventor.

Samuel Snell,  
per. Alexander Mason

Attorneys.

# UNITED STATES PATENT OFFICE.

DANIEL SNELL, OF SPRINGFIELD, OHIO.

## IMPROVEMENT IN TUMBLING-SHAFTS.

Specification forming part of Letters Patent No. **143,191**, dated September 23, 1873; application filed March 25, 1873.

*To all whom it may concern:*

Be it known that I, DANIEL SNELL, of Springfield, in the county of Clarke and in the State of Ohio, have invented certain new and useful Improvements in Tumbling-Shaft; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings 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 tumbling-shaft, as will be hereinafter more 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 longitudinal section, and Fig. 2 a transverse section, of my tumbling-shaft. Fig. 3 shows detached parts thereof.

A represents a rectangular box, made of one piece of wood, of suitable dimensions, and bored out longitudinally, with two longitudinal grooves, *a a*, opposite each other. In the central bore of the box A is placed a round head, B, provided with lugs or ribs *b b*, fitting in the grooves *a a*. In the center of the head

B is secured a rod, C, which passes out through a bearing-box, D, placed in the end of the box A. This bearing-box is made to fit the end of the main box A, and provided with lugs or ribs *d d* to fit in the grooves *a a*. In the other end of the main box A is secured a forked coupling, E, to connect with the shaft of the power.

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

1. The box A, provided with central bore having grooves *a a*, substantially as and for the purposes herein set forth.

2. The combination of the longitudinally-bored box A, having grooves *a a*, the head B, with ribs *b b* and rod C, the bearing-box D, with ribs *d d*, and the coupling E, all constructed and arranged substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of March, 1873.

DANIEL SNELL.

Witnesses:

GEO. ARTHUR,  
J. W. JARRETT.