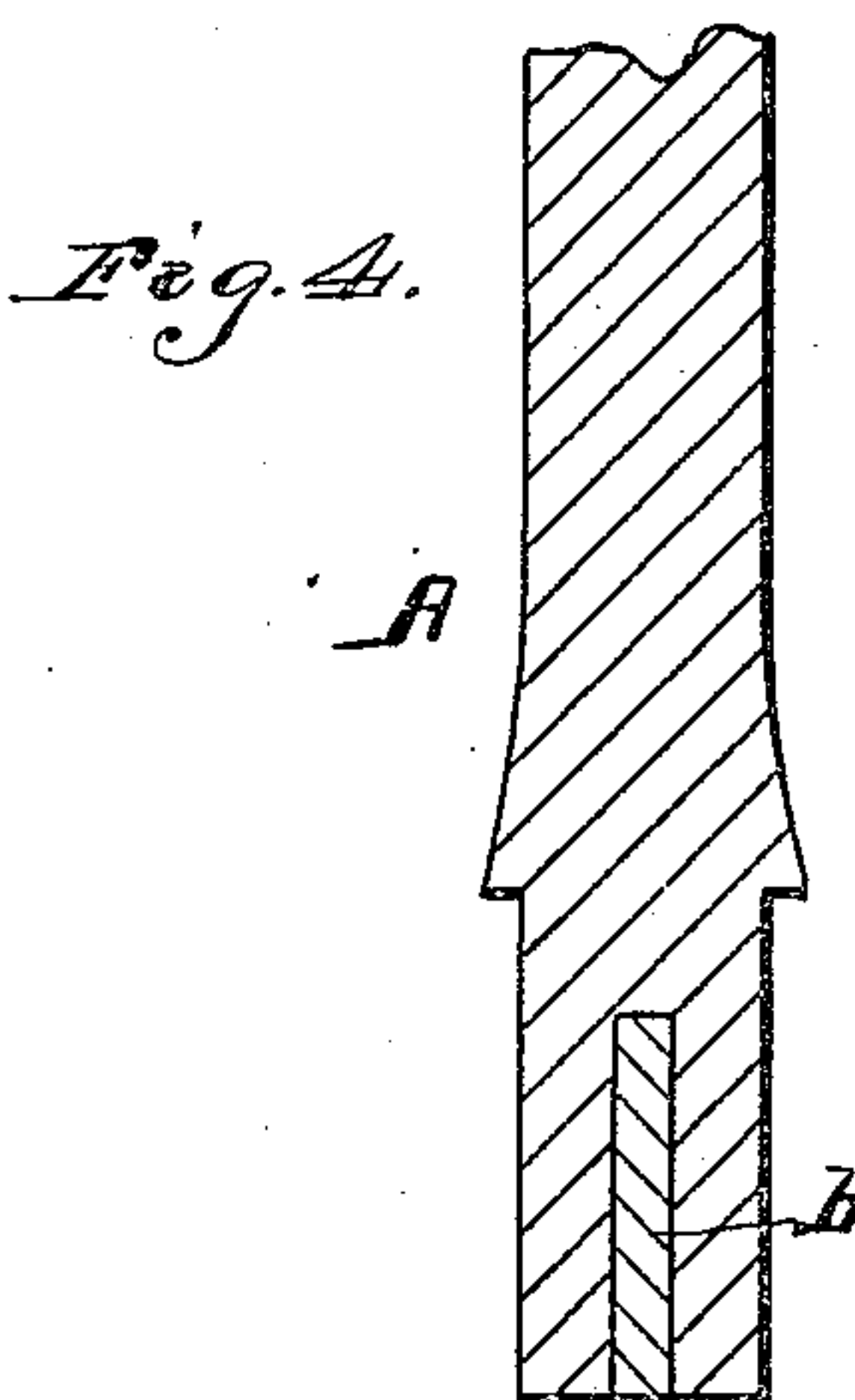
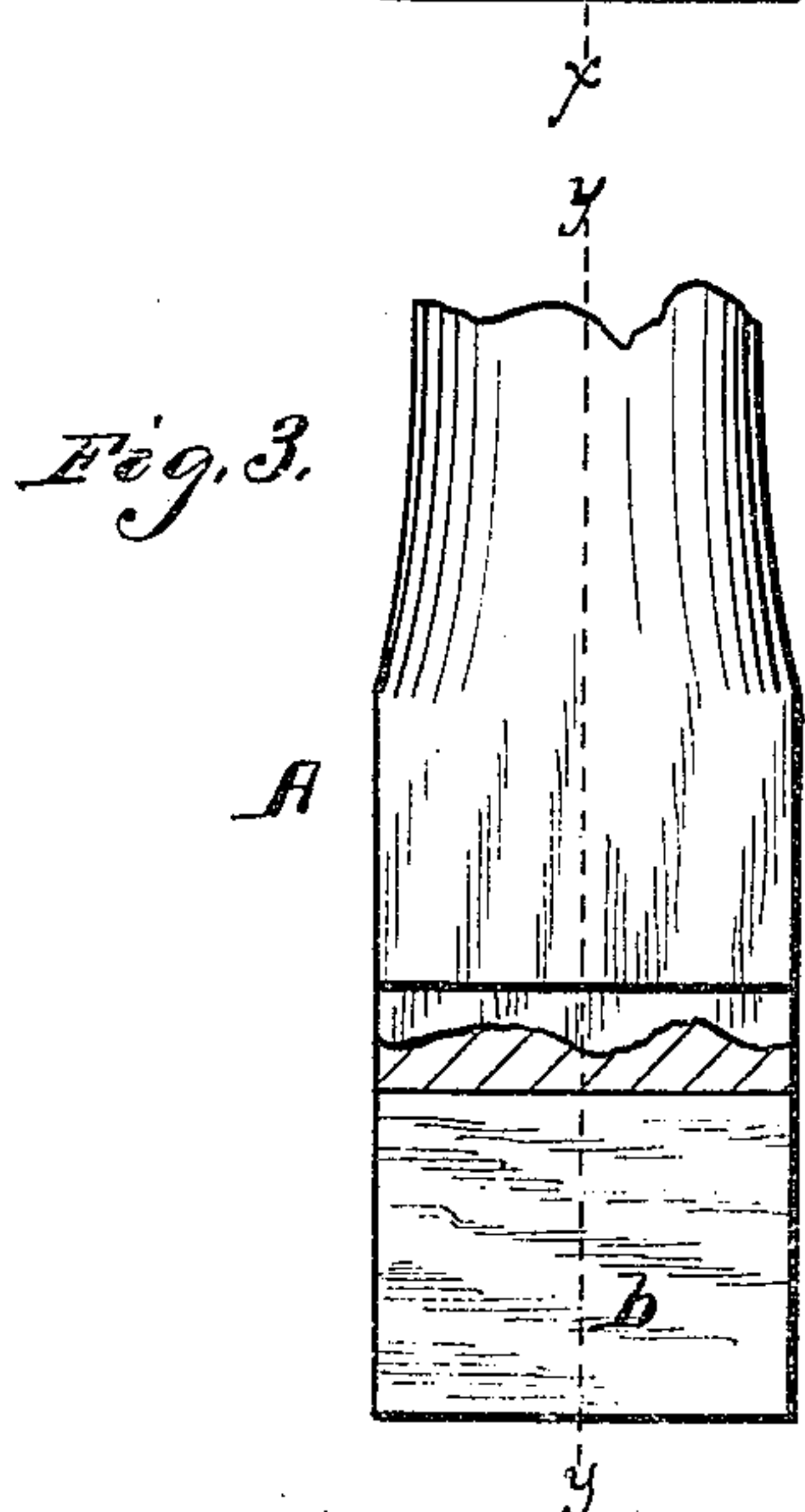
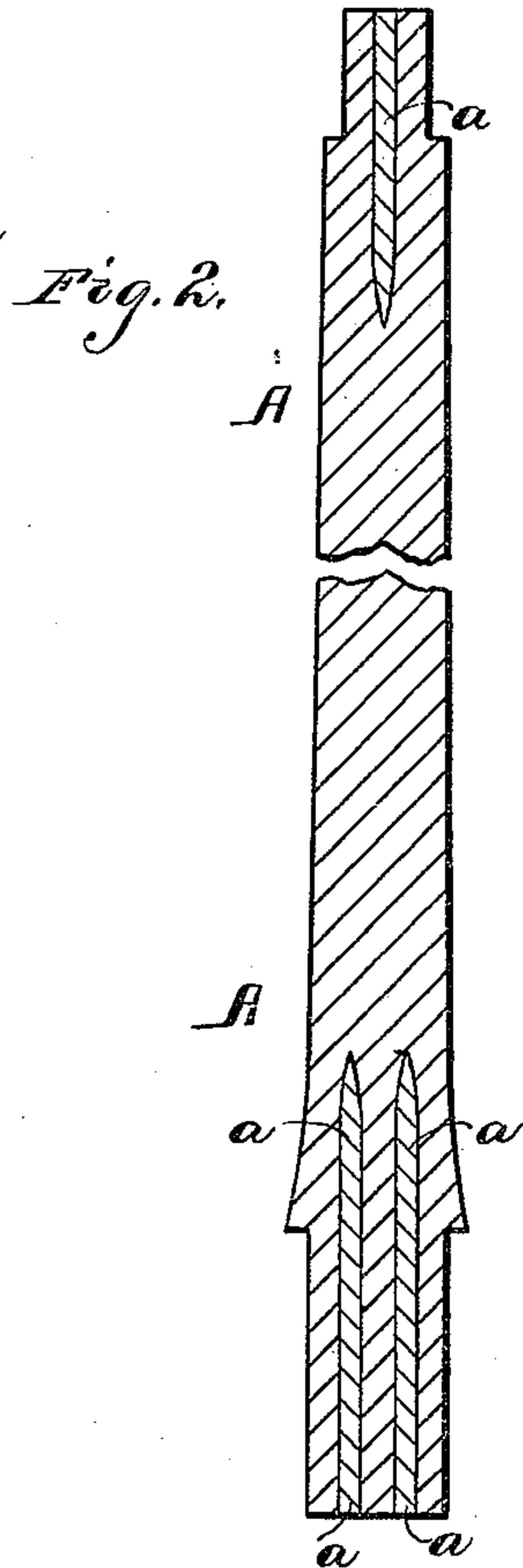
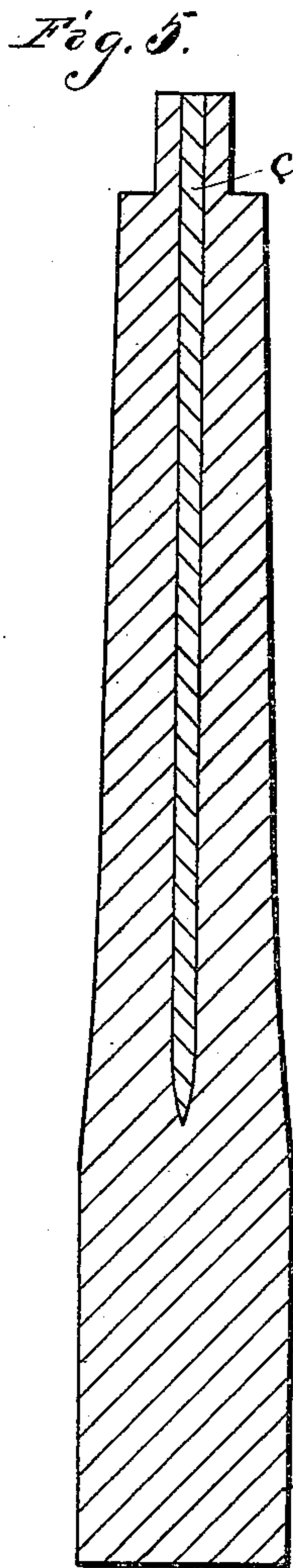
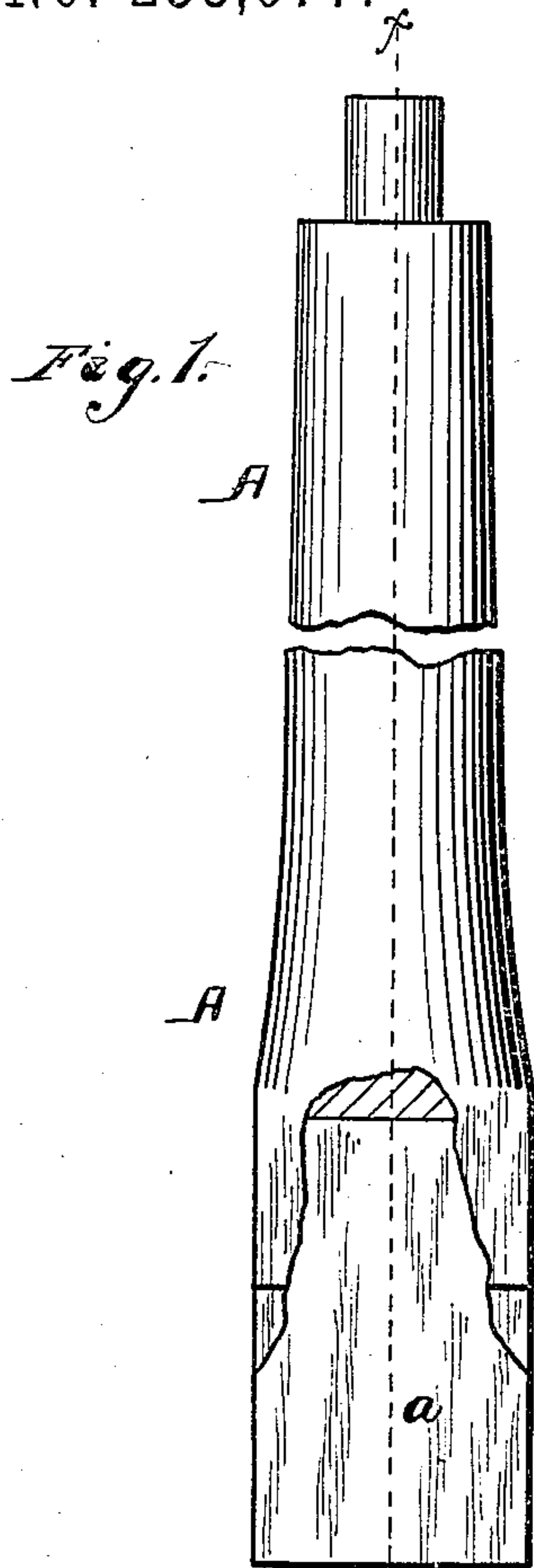


(No Model.)

J. MARIS.  
WAGON SPOKE.

No. 253,077.

Patented Jan. 31, 1882.



Witnesses.  
Henry Frankfurter,  
F. F. Warner

Inventor.  
Jared Maris

# UNITED STATES PATENT OFFICE.

JARED MARIS, OF WILKESVILLE, OHIO.

## WAGON-SPOKE.

SPECIFICATION forming part of Letters Patent No. 253,077, dated January 31, 1882.

Application filed August 4, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JARED MARIS, a citizen of the United States, residing at Wilkesville, county of Vinton and State of Ohio, have invented a new and useful Manner of Constructing Carriage and Wagon Spokes, of which the following is a specification.

My invention relates to improvements in carriage and wagon spokes, in which separate pieces of wood are combined together with glue or cement.

The objects of my improvements are, first, to gain increased stiffness, secured by combining separate layers of wood; second, to provide additional strength by inserting pins or tongues, of superior wood, at the weak or exposed points in the spoke; third, to secure a harder bearing-surface of wood against the ends of mortise. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a wagon-spoke with a part broken away, showing the inserted tongue. Fig. 2 is a section on the line *x x*, Fig. 1. Fig. 3 is a side elevation of a wagon-spoke with a part broken away, showing the tongue with grain crossed. Fig. 4 is a section on the line *y y*, Fig. 3. Fig. 5 is a vertical section.

In the ends of the spokes are in any convenient manner formed slots or pin-holes, which extend beyond the shoulders of the tenons. Into these slots or holes are inserted tongues, of superior wood, and secured therein by cement, glue, or otherwise.

In the drawings, *A* represents an ordinary vehicle-wheel spoke, and *a a* the tongues inserted therein. *b*, Figs. 3 and 4, shows a tongue inserted in the bottom of tenon, having the grain of the wood running across the spoke. *c*, Fig. 5, shows in section a round tongue or pin. By this construction I am enabled to get a spoke of great strength where the greatest strain occurs, and at the same time make use, for the most part, of ordinary or cheap wood, thereby making a great saving in the cost of manufacture.

What I claim is—

A wood spoke having a strengthening tongue or tongues, pin or pins, of superior wood, inserted in or combined with the end or ends thereof, substantially as specified.

JARED MARIS.

Witnesses:

I. F. MARIS,  
M. M. MARIS.