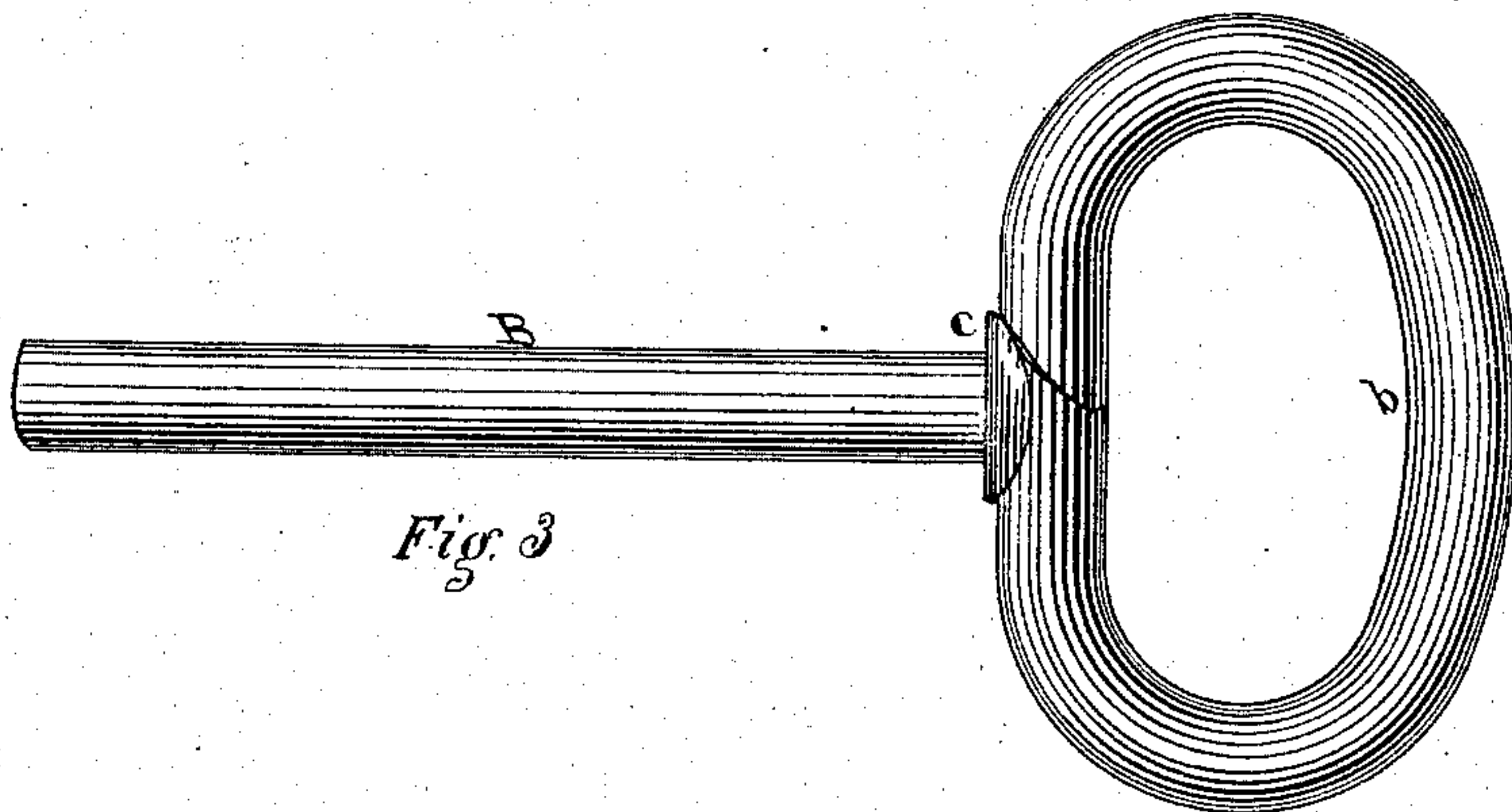
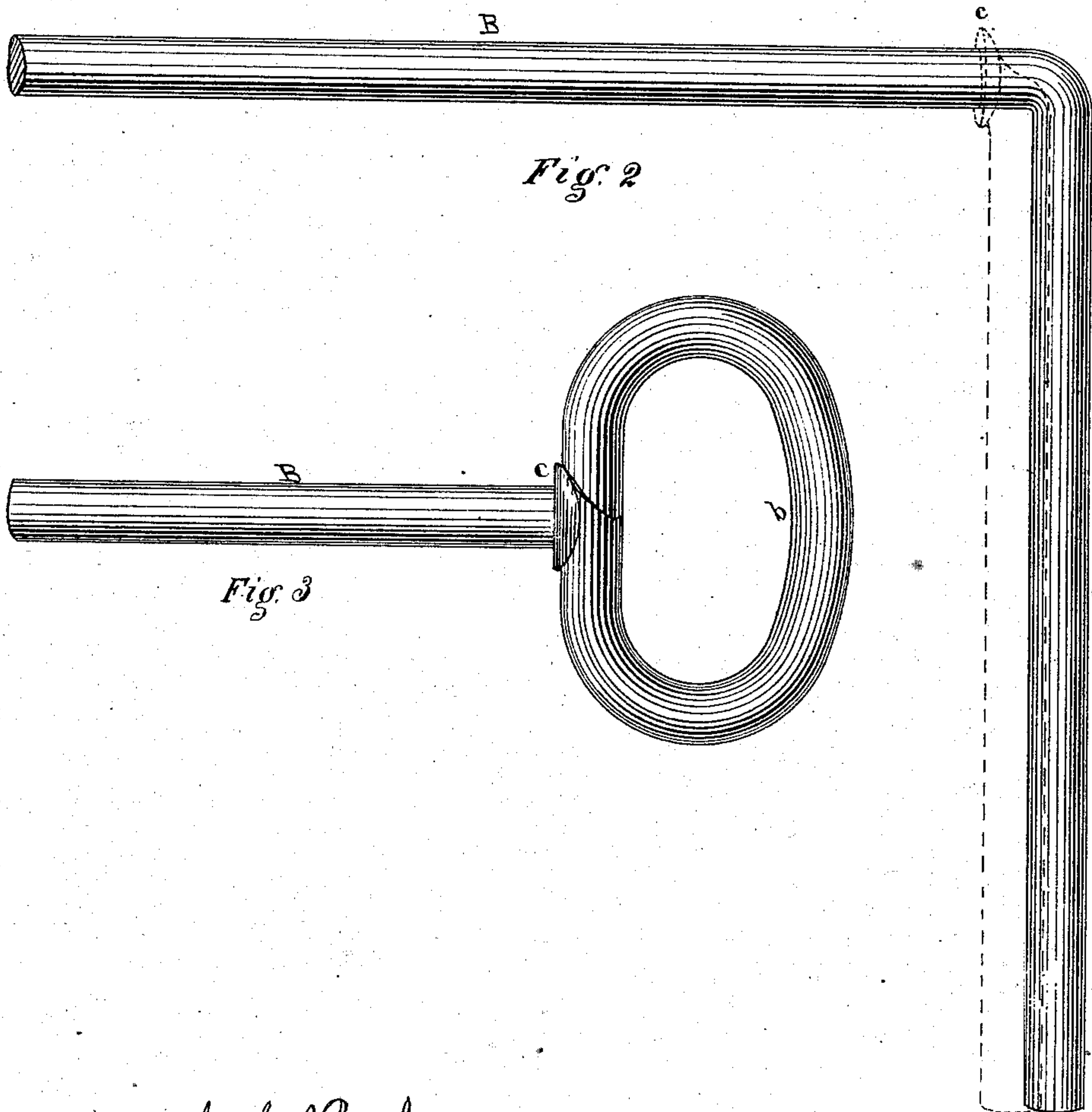
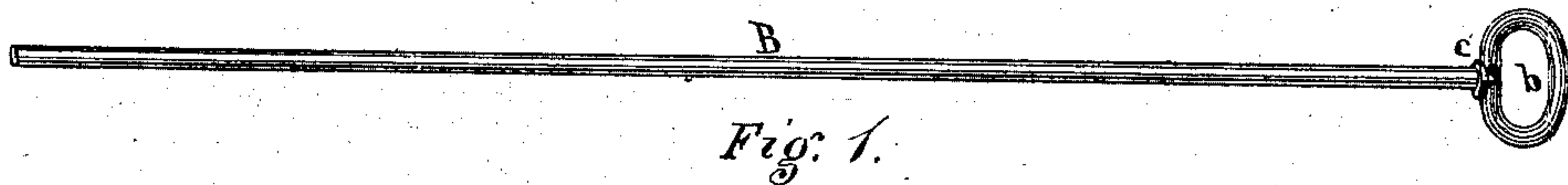


W. J. LEWIS.  
End-Gate Rod for Vehicles.

No. 160,531.

Patented March 9, 1875.



Witnesses } C. L. Parker Inventor: William J. Lewis,  
Chas G Page by George H. Christy,  
his atty.

# UNITED STATES PATENT OFFICE.

WILLIAM J. LEWIS, OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN END-GATE RODS FOR VEHICLES.

Specification forming part of Letters Patent No. **160,531**, dated March 9, 1875; application filed December 17, 1874.

*To all whom it may concern:*

Be it known that I, WILLIAM J. LEWIS, of Pittsburg, county of Allegheny, State of Pennsylvania, have invented or discovered a new and useful Improvement in Wagon-Box Rod; and I do hereby declare the following to be a full, clear, concise, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—like letters indicating like parts—

Figure 1 is a side view of my improved rod. Fig. 2 is an enlarged view of the bent and upset end, and Fig. 3 is a like enlarged view of the same complete.

In wagon-box rods employed to hold the tail or end gates in place a ring or eye is commonly bent on the end of the rod, a separate washer is fastened onto the box, and the rod passes through it. By my improvement I provide a rod for such uses with a flange or collar upset thereon, at the base of the eye or ring, by means of which a more even bearing or joint of rod and washer is secured.

In making the rod referred to I take an iron rod, B, of the proper length and diameter, and bend the end at right angles, so that the bent

end *a* shall have material enough for the ring *b*. The rod B is then inserted between a pair of griping-dies, each with a semi-cylindrical cavity of proper diameter, so that the same shall be griped firmly, and enough material be left between the ends of the dies and the angle of the bend to form the upset flange *c*. Then, by a beading-die, with a suitably-shaped cavity, striking against the angle of the rod, in the direction of the length of the part B, I upset on the rod and against the ends of the griping-dies a flange or collar, *c*, flat or nearly so on its inner face. The rod is then removed and the ring *b* bent in the usual way. The opposite end of the rod is pointed or threaded, or otherwise finished in the usual way.

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

A wagon-box rod having an upset flange or collar, *c*, at the base of the ring, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM J. LEWIS.

Witnesses:

W. A. DUNSHEE,

GEORGE H. CHRISTY.