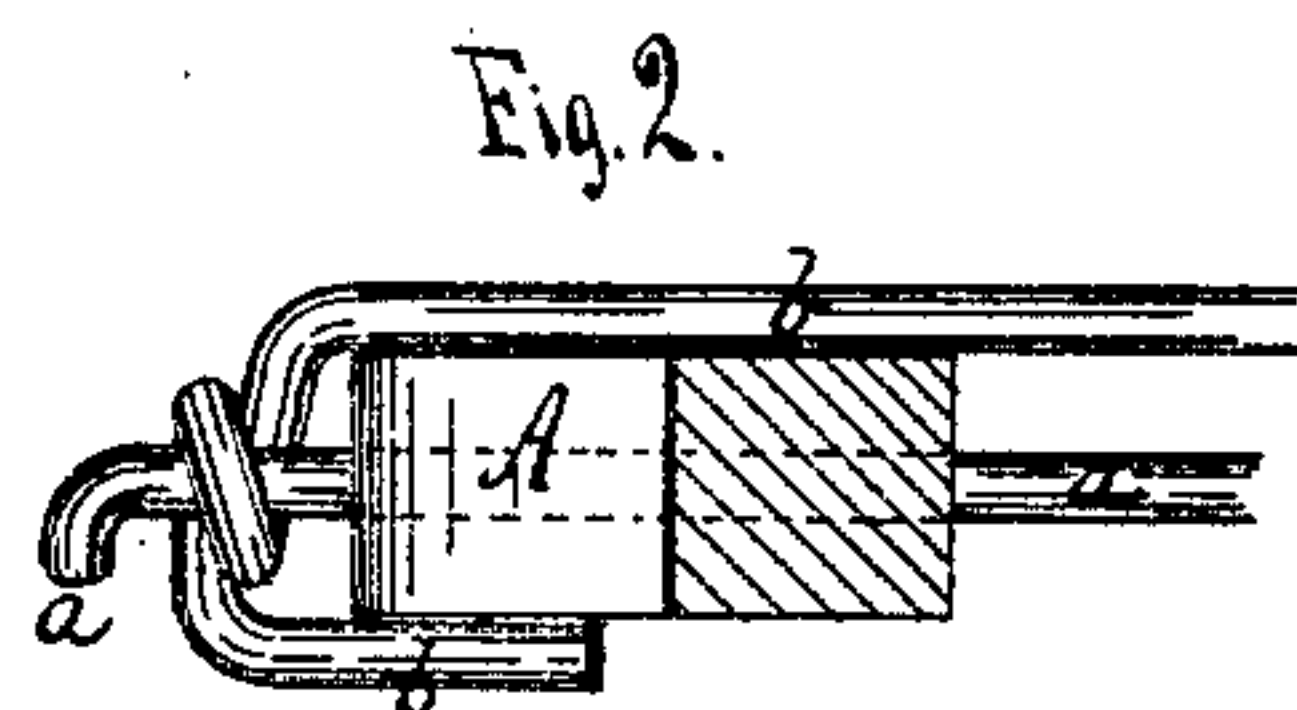
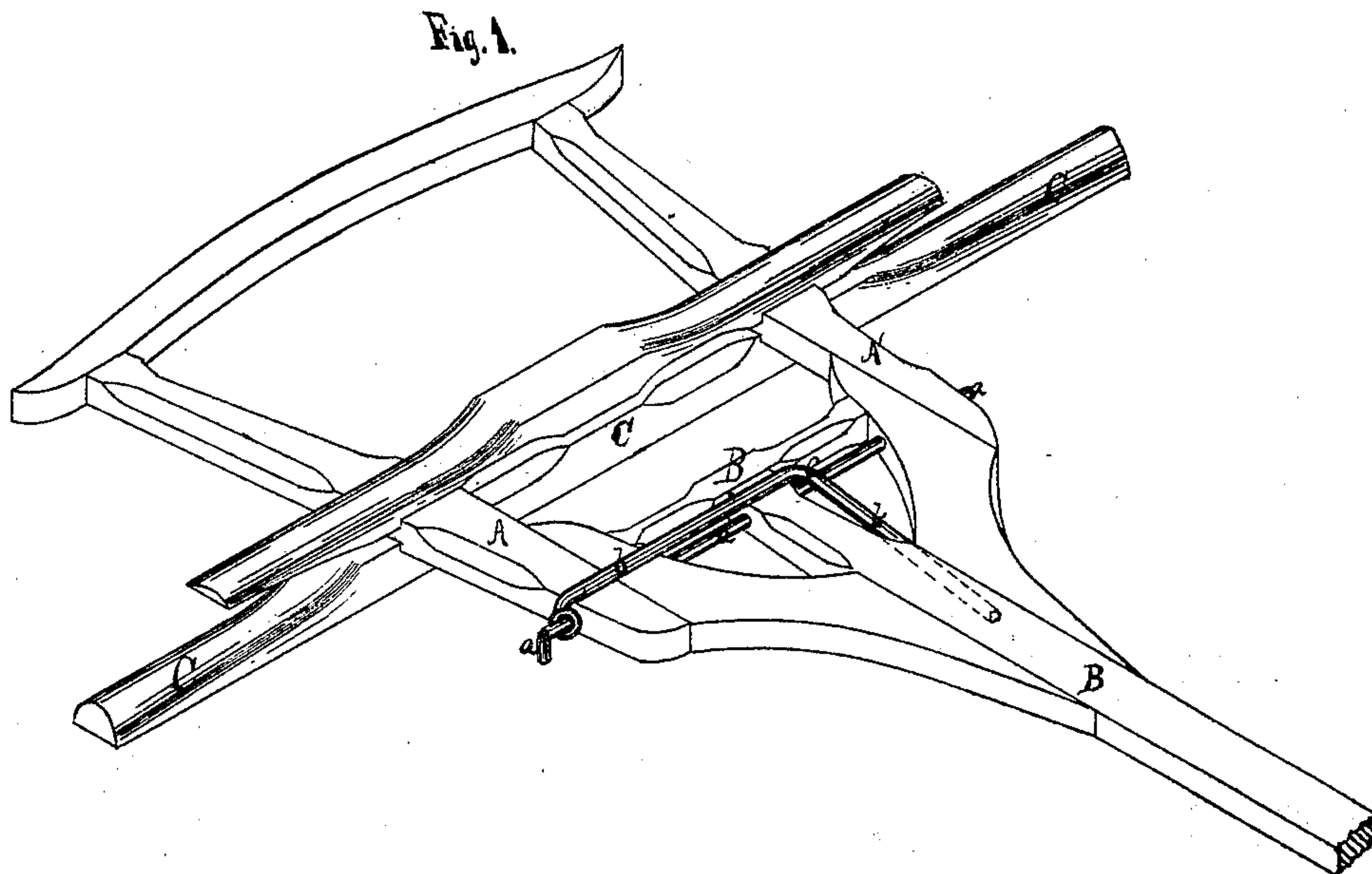


JOHN KREHBIEL.

Improvement in Wagon-Tongue Supports.

No. 114,448.

Patented May 2, 1871.



Witnesses.

*E. B. Drake*  
*C. H. Woodward.*

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*Atty*

# United States Patent Office.

JOHN KREHBIEL, OF WILLIAMSVILLE, NEW YORK.

Letters Patent No. 114,448, dated May 2, 1871.

## IMPROVEMENT IN WAGON-TONGUE SUPPORTS.

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

I, JOHN KREHBIEL, M. D., of Williamsville, in the county of Erie and State of New York, have invented a certain new and useful Improvement in "Wagon-tongue Springs, of which the following is a specification.

### *Nature of the Invention.*

My invention consists in a torsion-spring, combined with the hounds and tongue of a wagon, for holding said tongue up, arranged in the line of the axial bolt of the tongue, as hereinafter described.

### *General Description*

In the drawing—

Figure 1 is a perspective view of the front axle of a wagon with tongue, &c., having my improvement attached thereto.

Figure 2 is a cross-section, showing the manner of securing the end of the spring.

A A' are the "hounds;"

B, the tongue;

C, the axle; and

a, the ordinary axial pin or bolt which holds the tongue to the hounds.

b represents a steel rod, one end coiled around the end of the tongue-bolt a, or otherwise connected, and passing underneath hound A a short distance, as shown in fig. 2. This holds it in place against turning over.

The main length of the rod sets on top of the hound A and rear end of the tongue, crossing the latter in the line of the axial bolt, when it is bent at right angles, shown at c, and passes through and underneath the tongue a short distance, forming what is known as a torsion-spring by the twisting power or natural spring of the steel rod itself. The weight of the heavy tongue on this bent end of the rod is resisted by the natural spring of the steel. It takes off from the necks of horses or cattle the weight of a heavy tongue, and if it be extra heavy two of the torsion-springs may be employed—one attached on each side.

I am acquainted with tongue-springs formed of a single piece and coiled around the bolt, one end passing underneath the tongue and the other under the axle; but these ends are constantly rubbing and wearing against the wood. Such is not the equivalent of my invention.

The simplicity of my construction and its cheapness will recommend it to all.

A special advantage of my spring is its torsion action, by which it does not change its position, but simply turns in the line of its own axis. In this manner it is less liable to breakage. It is also less liable to being frozen up by water or snow that gathers on it, or if it is frozen up it readily clears by turning in an axial line. Its axis also approximates the axis of the connecting-bolt so as to produce the minimum amount of rubbing and wearing fracture.

It is apparent that the bolt a might be dispensed with and the spring b be made to act the double purpose of a bolt and spring by inserting in its place and securing it in such a manner as to produce the elasticity of the turning movement.

I do not claim a spring for holding up a wagon-tongue, in its abstract sense; but

What I claim is—

The spring b, attached at one end to the hound A, and extending over the rear end of the tongue as an attachment of the same, and a projection of the spring resting forward under said tongue, the whole arranged as described, and operating in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

J. KREHBIEL, M. D.

Witnesses:

J. R. DRAKE,

C. N. WOODWARD.