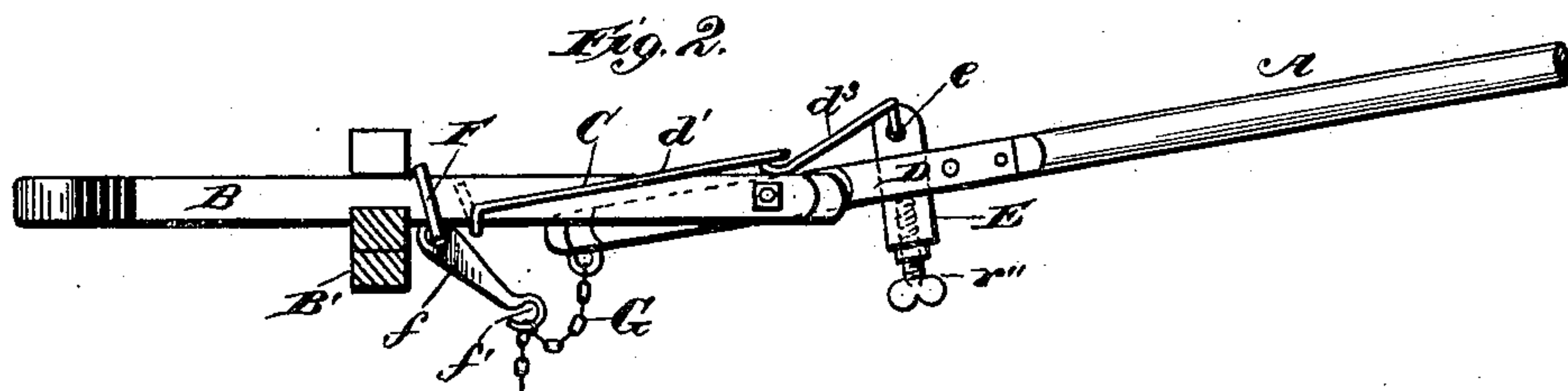
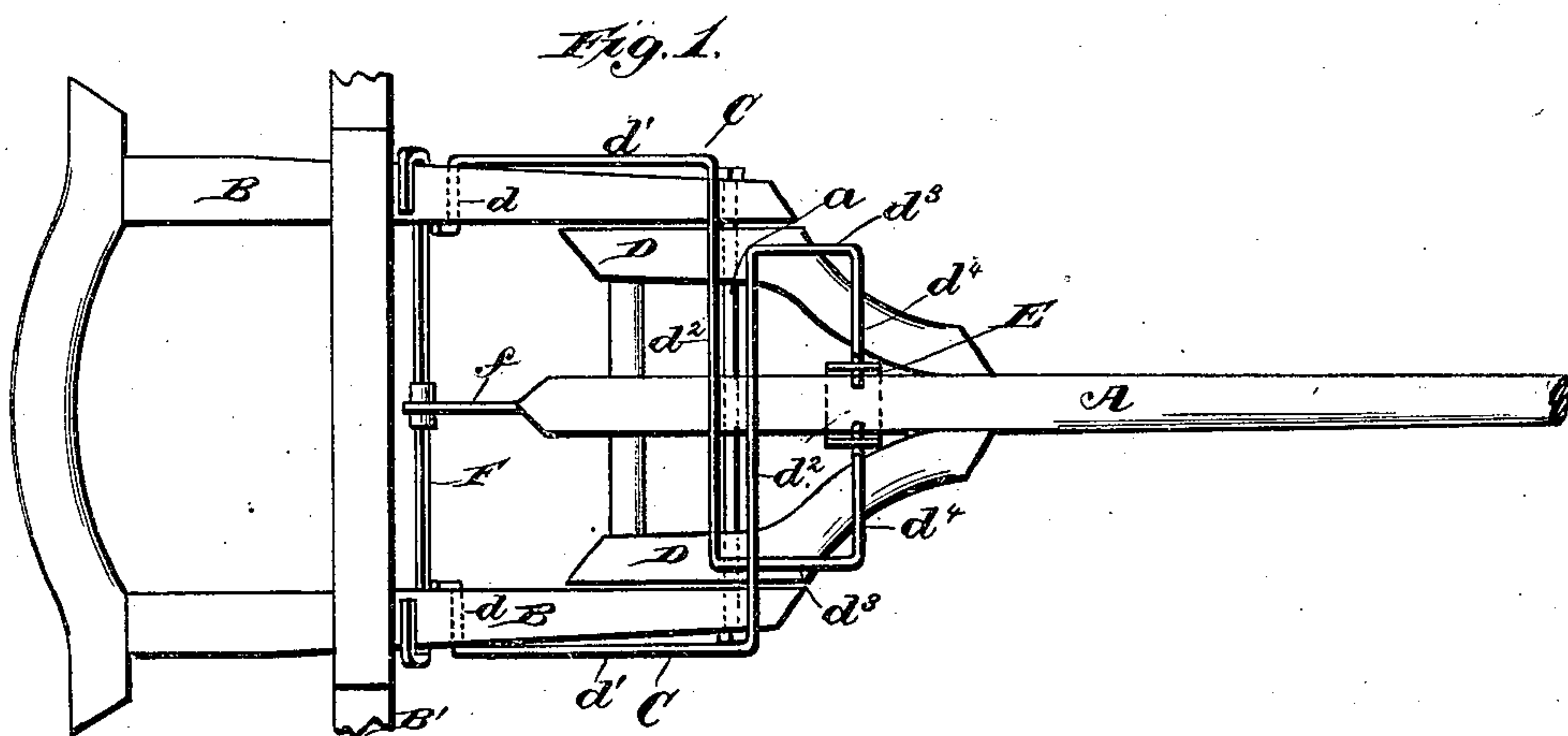


(Model.)

R. DUDLEY.
WAGON TONGUE SUPPORT.

No. 245,460.

Patented Aug. 9, 1881.



Witnesses.
Robert Emmett.
J. A. Rutherford

Inventor.
Richard Dudley.
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UNITED STATES PATENT OFFICE.

RICHARD DUDLEY, OF ERIE, PENNSYLVANIA.

WAGON-TONGUE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 245,460, dated August 9, 1881.

Application filed May 14, 1881. (Model.)

To all whom it may concern:

Be it known that I, RICHARD DUDLEY, of the city of Erie, and county of Erie, and State of Pennsylvania, have invented an Improved Wagon-Tongue Support, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to an improvement upon the wagon-tongue support secured to me by Letters Patent No. 189,344, bearing date April 10, 1877.

The object of my improvement is to so construct the pair of springs for supporting the wagon-tongue that a greater torsional action will be attained than heretofore; also, to provide means for adjusting the tongue at the required degree of elevation; also, to provide an auxiliary spring adapted to be brought into action after a part of the vibration of the said pair of supporting-springs has been taken up. These objects I attain by means of the devices hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view, and Fig 2 a side view, of the wagon-tongue and hounds provided with my improved arrangement of springs and adjusting device.

A indicates the wagon tongue or pole, which is pivoted between the hounds by means of the tongue-bolt *a* passing laterally through the hounds, the tongue, and the tongue-jaws D, which latter are secured to the sides of the tongue in the usual way. The hounds B and the axle B', herein shown, are also constructed in the ordinary manner.

The pair of main or primary torsional springs C which I employ for supporting the forward end of the tongue are each formed and applied as follows: The rear end of the spring-rod of which the spring is composed is connected with the hounds at a point near the axle, and for such purpose it is bent inward and extended laterally across the under side of the hounds, as at *d*, and then bent upward so as to clamp the inner side of the hound. The spring-rod extends from the commencement of its bend at the outer side of the hound forward and along-side of the same, with an inclination which will bring it to a point about over the tongue-bolt. At this point it is bent inward at right angles to its said inclined outer portion, *d'*, and is ex-

tended transversely over the hound and the tongue to that one of the pair of tongue-jaws which is next to the opposite hound. At this point it is bent at right angles to the transverse portion *d''* crossing the tongue, and is extended slightly upward and forward in a line nearly parallel with the tongue, as at *d'''*, after which it is again bent inward at right angles to the longitudinal part *d'''*, so as to form a short arm, *d''''*, which is provided at its inner end with a hook, which is connected with a strap or loop, E, provided with holes *e* for receiving said hook end, and arranged to pass under the tongue for the purpose of supporting the same. The two springs which are constructed and applied in this manner cross each other, as illustrated in Fig. 1, and at their bends or angles between the parts *d''* *d'''* have their bearings upon the tongue-jaws. It will be seen that by this arrangement the springs will effectively support the tongue, and at the same time will be maintained in position without the necessity of employing staples, which, if driven into either the tongue or its jaws, will tend to weaken the same, and also diminish the development of the torsional action of the springs, which, in the present instance, is greatly increased by reason of the longitudinal extensions *d'''*, formed at right angles to the transverse parts *d''*, and the lateral arms *d''''*, bent at right angles to the said extensions *d'''*, and also by reason of the springs being connected with the hounds near the axle, and at their forward ends connected with the pole-supporting strap in front of the tongue-bolt on which the tongue is pivoted.

In order to adjust the tongue in the required elevation, I arrange in the lower portion of the tongue-supporting loop a set-screw, *r''*, adapted to bear against the under side of the tongue, whereby, by adjusting the said set-screw, the tongue can be raised or lowered in its supporting-loop.

F represents the rear, secondary, or auxiliary spring, which consists of a transversely-arranged spring-bar having its ends bent and clasped over the hounds at points adjacent to the axle. To the middle of this bar is secured an arm, *f*, having at its forward end a hook, *f'*, that engages with a chain, G, upon the rear end of the tongue. This spring is employed as

an auxiliary to the upper forward pair of springs in taking up any extra or undue strain that may be brought to bear upon the said upper pair of springs, and is also available in case of the neck-yoke and wagon-tongue being of more than ordinary weight. For this purpose it is set by connecting its hook-arm with one of the links of the chain, so that it will be brought into action after a part of the vibratory movement of the upper pair of springs has been taken up.

Having thus described my invention, what I claim is—

1. In a wagon-tongue support, the torsional spring connected at its rear end with the hound at a point near the axle, and at its forward end connected with the tongue-supporting loop, said spring being formed with an inclined portion extending alongside of the hound, a transverse portion extending laterally across the hound and tongue and bearing upon the tongue-jaw adjacent to the opposite hound, then extended forward and upward in line nearly parallel with the tongue, and then

bent inwardly at right angles to said last-specified extension, substantially as described. 25

2. The combination, in a wagon-tongue support, of the torsional springs with the tongue-supporting loop provided with a set-screw arranged to bear against the under side of the tongue in order to raise or lower the latter, substantially as described. 30

3. The combination, in a wagon-tongue support, of the torsional springs with an auxiliary spring, F, provided with an arm adjustably connected with the rear end of the tongue, said spring being arranged to be brought into action after a portion of the vibration of the torsional springs has been taken up, substantially as and for the purpose described. 35 40

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of May, 1881.

RICHARD DUDLEY.

Witnesses:

CHAS. DUDLEY,
CYRUS F. DEAN.