

(No Model.)

W. P. BROWN.

DRAFT ATTACHMENT FOR VEHICLES.

No. 357,061.

Patented Feb. 1, 1887.

Fig. 1.

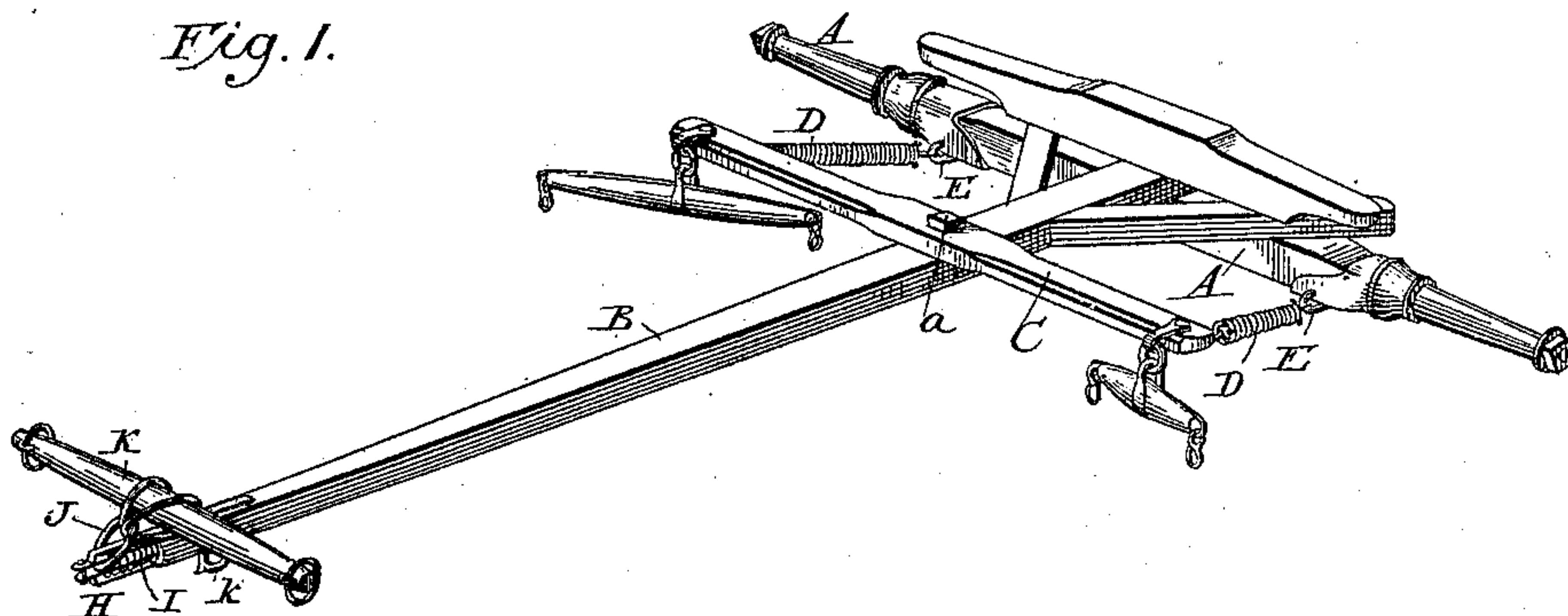


Fig. 2.

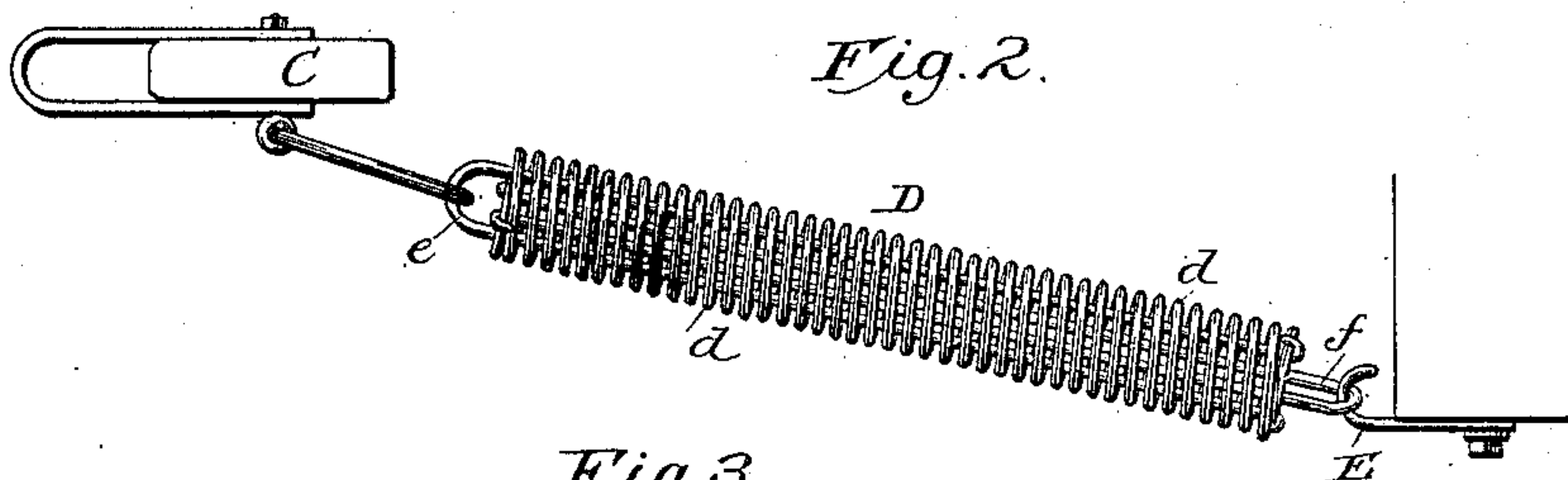


Fig. 3.

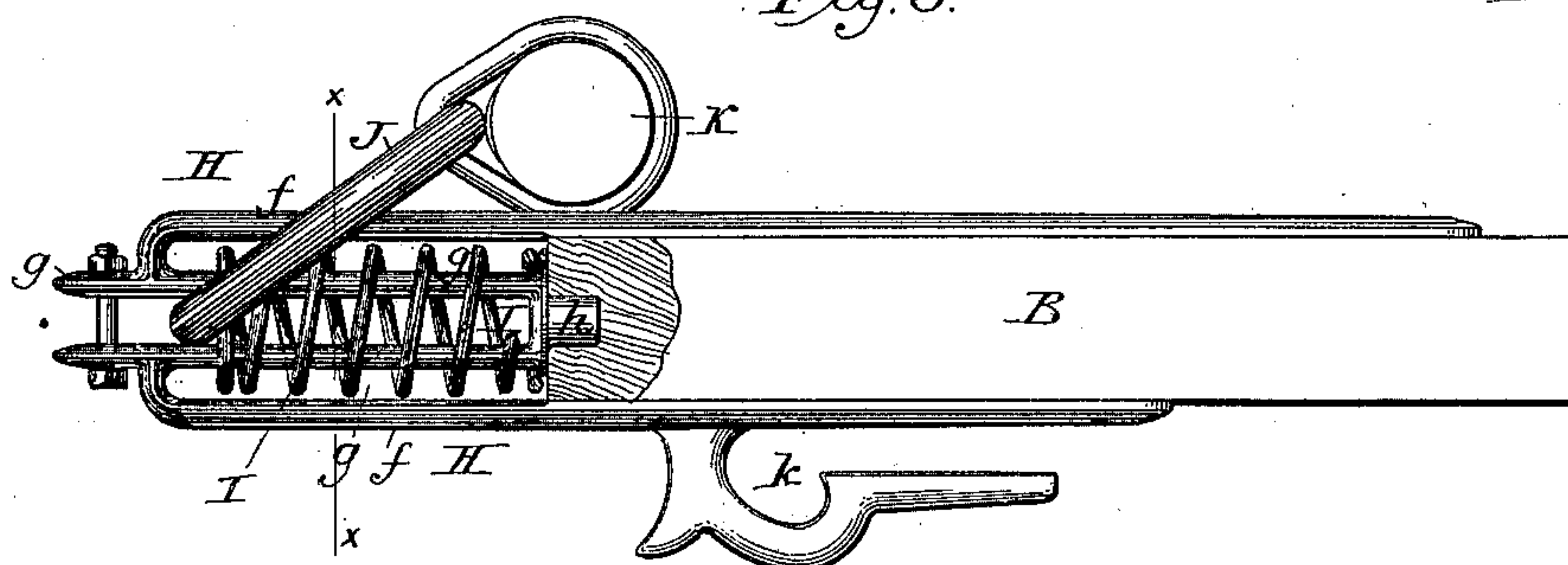
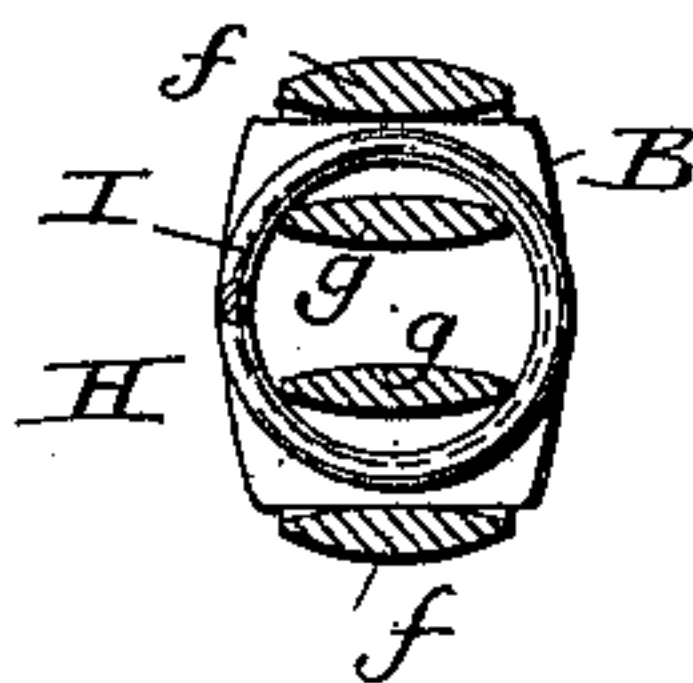


Fig. 4.

ON LINE X-X



WITNESSES

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DRAFT ATTACHMENT FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 357,061, dated February 1, 1887.

Application filed July 30, 1886. Serial No. 209,552. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. BROWN, of Zanesville, in the county of Muskingum and State of Ohio, have invented certain Improvements in Draft-Connections for Wagons, &c., of which the following is a specification.

The aim of my invention relates particularly to wagons and similar vehicles which are provided with a draft-pole or tongue and adapted to be used with two draft-animals, and the aims of the invention are to relieve the team from sudden strains and shocks and to prevent the lateral play of the tongue.

To this end it consists in combining with the usual double-tree springs extending from its opposite ends to the axle or other stationary part of the wagon, and also in providing the forward end of the tongue with a spring adapted to resist the backward movement of the neck-yoke or its equivalent.

Referring to the accompanying drawings, Figure 1 is a perspective view of the forward axle and tongue of a wagon provided with my improvements. Fig. 2 is a side elevation showing one of the double-tree springs. Fig. 3 is a side elevation of the spring attachment at the forward end of the tongue; Fig. 4, a cross-section of the same on the line *x x*.

Referring to the drawings, A represents the forward axle, and B the tongue or draft-pole, extending forward from the axle and connected thereto by the usual hounds or equivalent connection.

C represents the ordinary double-tree, pivoted midway of its length at *a* to the tongue and adapted at its ends to receive the single-trees, as usual.

In applying my improvement I connect to each end of the double-tree C a strong spring, D, which extends thence backward to a hook, E, or equivalent fastening device attached to the axle. The two springs are of equal strength, and are normally under more or less tension, so that in counteracting each other they hold the double-tree normally at right angles to the tongue. When, however, either draft-animal advances faster than the other, the forward motion of the double-tree at that end will be resisted by the spring. The spring-connection may be of the form shown in the drawings or other equivalent form. As shown, it consists of a spiral compression-spring, *d*, and of two

links or straps, *e* and *f*, passed through the spring in opposite directions, so that as their outer ends are drawn apart their inner ends, which are seated against the spring, will effect the compression of the latter. I lay no claim to the construction of these parts separately considered.

At the forward end of the tongue I attach thereto a metallic tip, H, of the form shown, containing a spiral spring, I, and a ring, J, which is free to slide endwise in the tip, and which is urged constantly forward by the spring against which it bears. To this spring-supported ring I attach the neck-yoke K, the backward motion of which is thus resisted by the spring. The forward spring may be applied in any appropriate manner to resist the backward movement of the neck-yoke; but I prefer to employ the tip H in the particular form shown. It is forged or cast in one piece with the outside straps, *f*, to embrace the tongue and the inside arms, *g*, which serve on their inner surfaces as a guide for the ring and on their outer surfaces as a support for the spring. The rear ends of these arms *g* are joined and provided with a stud, *h*, to enter the forward end of the pole and assist in keeping the parts in position. The ring is introduced from the front and confined by the insertion of a bolt.

I propose to provide the casting on the under side with a back hook, *k*, which serves as a means of attaching an additional team when desired.

The essence of my invention consists in providing a spring to resist the backward movement of the neck-yoke and springs to resist the vibration of the double-tree, and it is manifest that the details may be modified within the range of mechanical skill.

The rear springs are specially advantageous in that they prevent the lateral vibration or sweeping action of the tongue in traveling over rough ground.

Having thus described my invention, what I claim is—

1. The combination, with the axle, of the tongue attached rigidly thereto, the double-tree pivoted upon the tongue, and the springs connecting the ends of the double-tree with the axle.

2. The combination of the draft-pole or

tongue, the neck-yoke attached thereto, and the intermediate spring applied, substantially as described, to resist the backward movement of the yoke in relation to the tongue.

5 3. In combination with the draft-pole or tongue, the plate having the longitudinal slot therein, the spiral spring, and the ring seated in said slot and supported by the spring.

10 4. The combination, with the draft-pole, the tip I, having the outside straps, *f*, and the in-

side arms, *g*, of the spring encircling the inner arms, the ring, and the pole, to prevent the escape of the ring.

In testimony whereof I hereunto set my hand, this 25th day of May, 1886, in the presence of 15 two attesting witnesses.

WILLIAM P. BROWN.

Witnesses:

EDGAR W. ALLEN,

C. M. VANDENBARK.