

No. 711,344.

Patented Oct. 14, 1902.

M. A. PIKE.  
SINGLE TREE ATTACHMENT.

(Application filed Mar. 10, 1902.)

(No Model.)

Fig. 1.

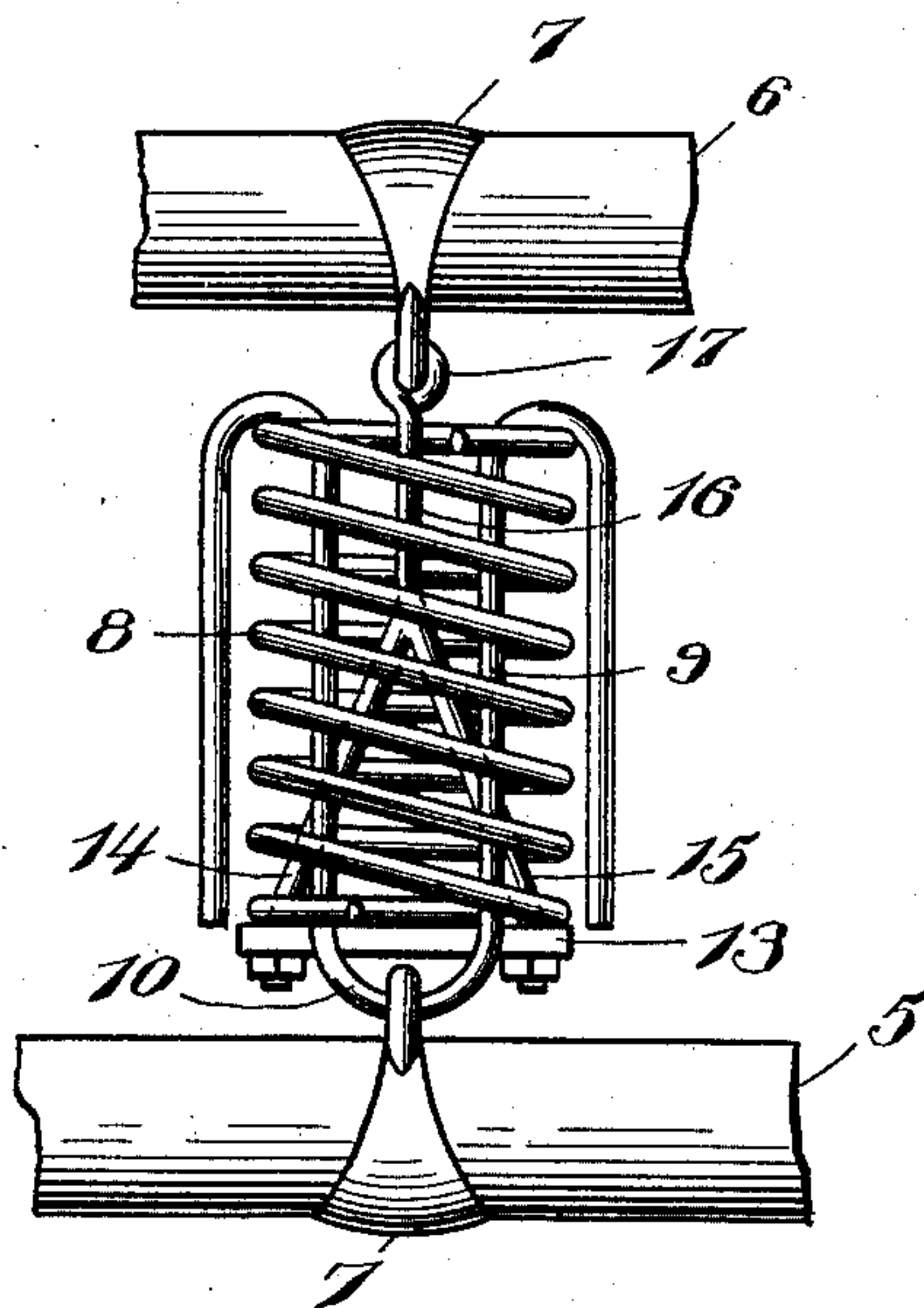


Fig. 2.

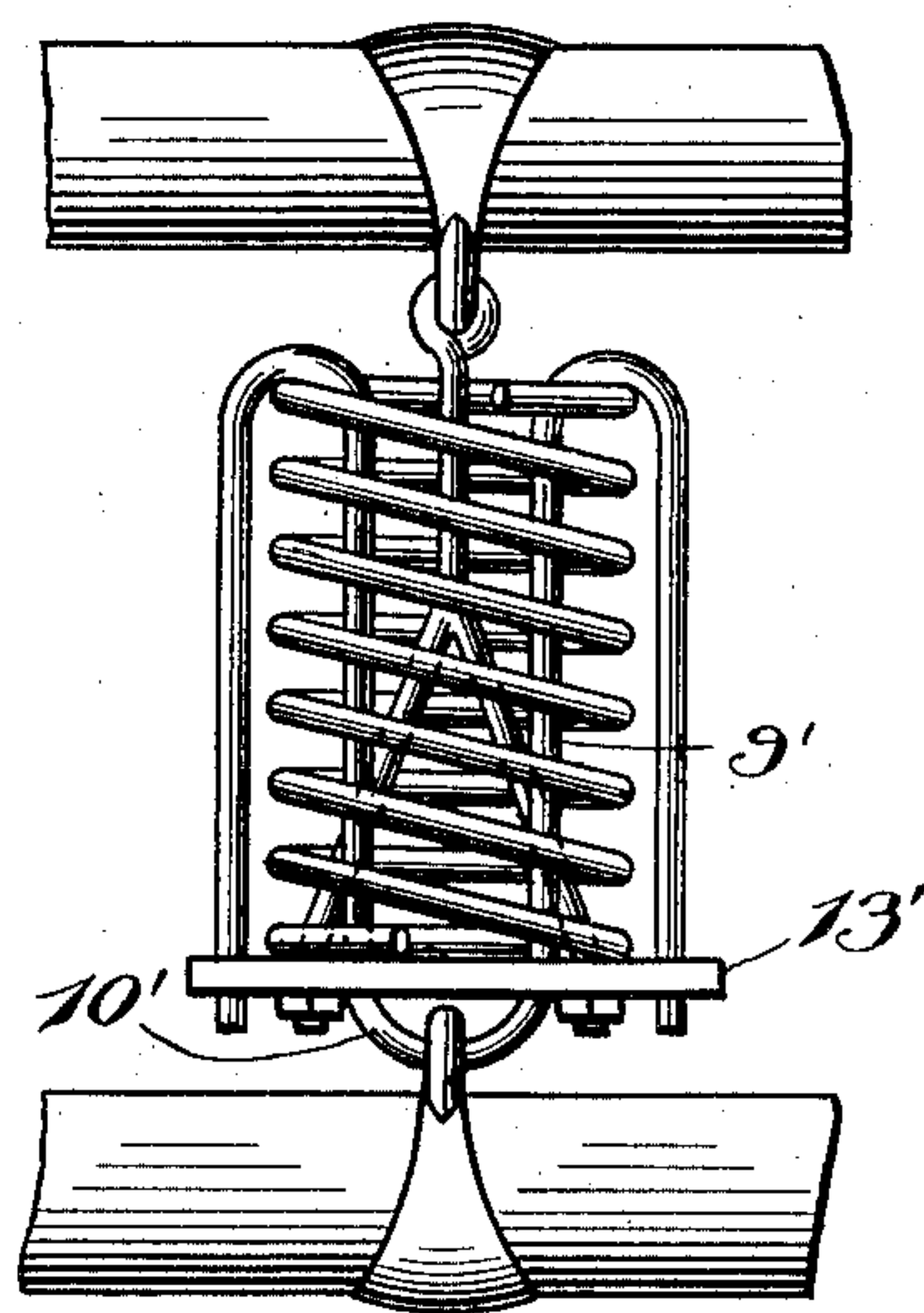
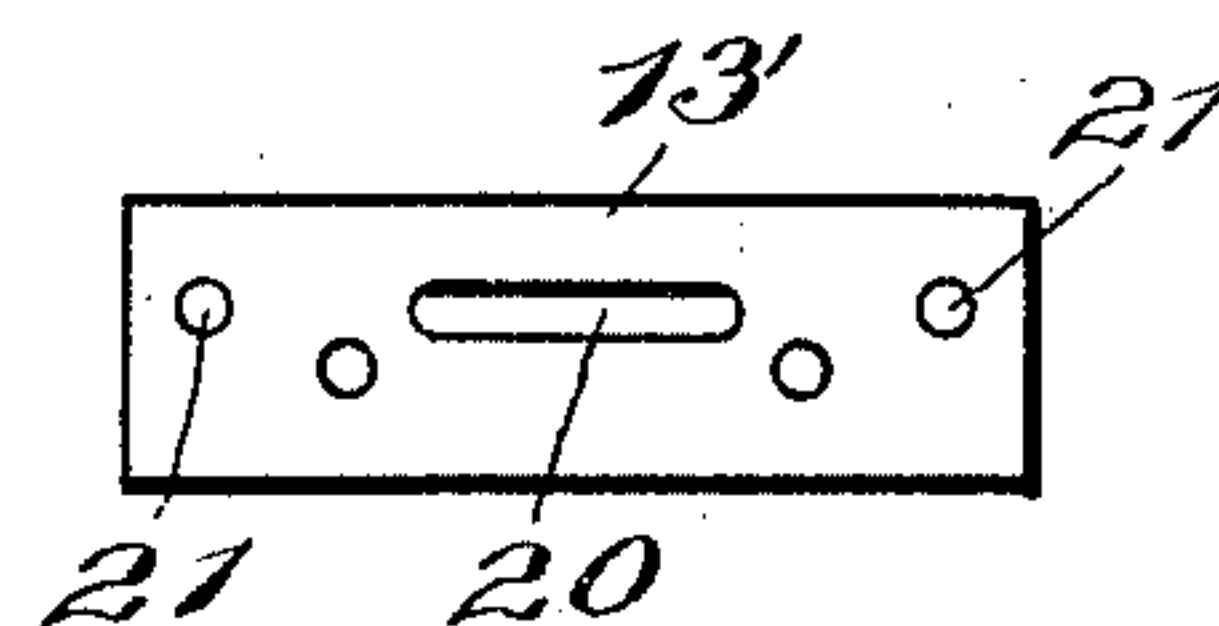


Fig. 3.



Witnesses

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## SINGLETREE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 711,344, dated October 14, 1902.

Application filed March 10, 1902. Serial No. 97,580. (No model.)

*To all whom it may concern:*

Be it known that I, MURRAY A. PIKE, a citizen of the United States, residing at Ava, in the county of Jackson, State of Illinois, have  
5 invented certain new and useful Improvements in Singletree Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art  
10 to which it appertains to make and use the same.

This invention relates to draft appliances for vehicles, and more particularly to the connection between the singletree and double-  
15 tree; and it has for its object to provide a simple and efficient construction which will preclude sudden unyielding strains upon the draft-animals and which will absorb in part the vibrations when drawing a load over a  
20 rough road.

A further object of the invention is to provide a construction wherein the parts while working easily will be held securely against displacement from their operative positions.

25 In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation showing a portion of a doubletree having a singletree connected thereto by means of the  
30 present invention. Fig. 2 is a view similar to Fig. 1 and showing a modification. Fig. 3 is a plan view of a plate used in the construction shown in Fig. 2.

35 Referring now to the drawings, and more particularly to Fig. 1 thereof, there is shown a doubletree 5, to which is connected a singletree 6, said doubletree and singletree being provided each with a clip 7, with which  
40 the present invention is engaged. The connecting device between the two clips consists of a helical spring 8, within which is disposed a U-shaped bar 9, having a web portion 10, which projects from one end of the  
45 spring, while the free ends of the arms of the bar project from the opposite end of the spring and are then bent outwardly and rearwardly upon themselves, so that the convolutions of the spring are inclosed at diamet-  
50 rically opposite points by the arms and their rearwardly-bent portions. Against the end

of the helical spring, adjacent to the web 10, is disposed a transverse plate 13, in the end portions of which are perforations in which are engaged the space members 14 and 15 of  
55 the bifurcated end of the stem 16 of a hook 17. The stem of the hook is passed through the helical spring and the hook proper projects from the end of the spring opposite to the transverse plate. In the present construc-  
60 tion the web 10 is shown engaged with the clip of the doubletree, while the hook is engaged with the clip of the singletree, so that when a pulling strain is put upon the singletree to start a load the helical spring is first  
65 compressed and the load is subsequently moved, thus preventing sudden jerking and injury to the draft-animal incident thereto. It will be noted that in this construction the inclosure of the spring between the sides of  
70 the bar insures the proper position of the spring by preventing buckling thereof.

Referring now to Figs. 2 and 3 of the drawings, in this form of the invention the plate  
75 13', corresponding to the plate 13 above described, has a central opening 20, through which the web 10' of the bar 9' is passed and in which it is slidable. At the outer ends of the plate 13' are perforations 21, in which are  
80 slidably engaged the free ends of the bar, this arrangement giving an added rigidity or security to the structure. It will be understood that the free ends of the members of the bifurcated stem of the hook are provided  
85 with nuts 23, which prevent said members from pulling out of the perforations in the cross-plate.

In practice other modifications of the invention may be made and any suitable materials and proportions may be used for the  
90 several parts without departing from the spirit of the invention.

What is claimed is—

1. The combination with a singletree and a doubletree having clips, of a connecting device comprising a helical spring, a U-shaped  
95 bar having its web engaged with one of the clips and having its arms passed through the spring and bent upon themselves exteriorly of the spring, a plate disposed against the  
100 end of the spring adjacent to the web of the bar, and a hook engaged with the second clip



and having a bifurcated stem passed through the spring with the members of the stem engaged with the plate.

2. The combination with a singletree and a  
5 doubletree having clips, of a connecting device comprising a helical spring, a hook engaged with one of the clips and having a bifurcated stem passed through the spring, a plate disposed against the end of the spring  
10 opposite to the hook and having perforations through which the members of the bifurcated stem are engaged, said plate having also an opening between said perforations, and a U-shaped bar passed through the spring and

through the opening of the plate and having 15 its web engaged with the second clip, the arms of the U-shaped bar extending through the opposite end of the spring and being bent outwardly and upon themselves and having their free ends slidably engaged with the 20 plate.

In testimony whereof I affix my signature in presence of two witnesses.

MURRAY A. PIKE.

Witnesses:

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