R. E. BARRETT.
WHIFFLETREE.
APPLICATION FILED MAY 8, 1911.

1,014,084.

Patented Jan. 9, 1912.

Fig. 1

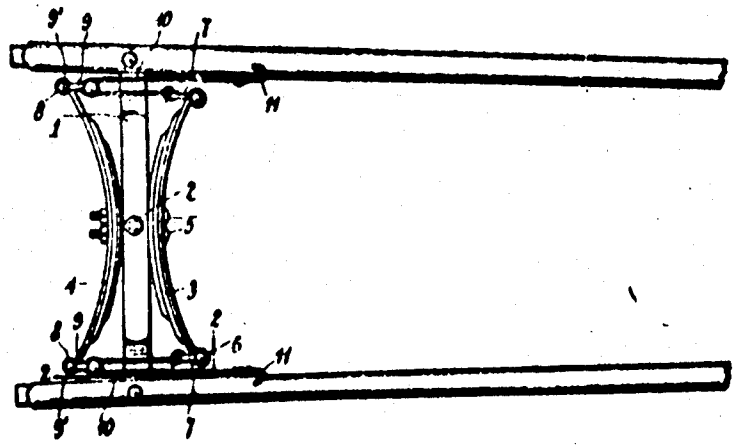
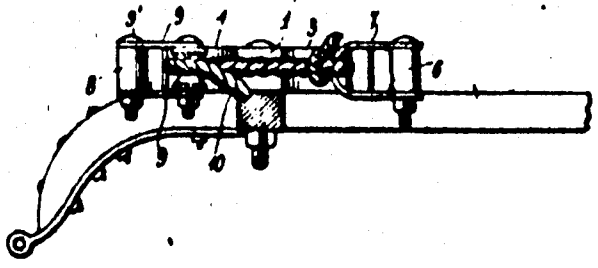


Fig. 2



Witnesses

Inventor
R. E. Barrett,
By
Attorneys

1,014,034. WHIFFLETREE. RICHARD E. BARRETT, Boykins, Va. Filed May 2, 1911. Serial No. 624,591.

To all whom it may concern:

Be it known that I, RICHARD E. BARRETT, a citizen of the United States, residing at Boykins, in the county of Southampton, State of Virginia, have invented certain new and useful Improvements in Whiffletrees; 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 to which it appertains to make and use the same.

My invention relates to new and useful improvements in whiffle-trees, and the object of my invention is to provide a spring whiffle-tree in which all sudden shocks and jars caused by the quick starting of the horse are taken up and absorbed by the springs thereby rendering a much more easy riding vehicle and one much easier on the horse. Whiffle-trees of this character have heretofore been defective in that the springs were either so stiff as to render them useless, or if constructed in sufficiently elastic manner allowed so much freedom of movement of the horse with respect to the shafts as to prohibit their use.

It is a well known fact that a plurality of springs each acting independently of the others, but each in turn reinforcing the others, as is the case in the customary form of elliptical spring built up of a plurality of leaf springs is much more resilient than is a single spring of the same strength, and a further object of my invention is to take advantage of this well-known fact by providing a whiffle-tree composed of a plurality of springs rather than of a single spring as has been the custom heretofore.

With these and other objects in view, my invention will be more fully described, illustrated in the drawings which show a preferred embodiment of my whiffle-tree and then specifically pointed out in the claim which is attached to and forms a part of this application.

In the accompanying drawings, Figure 1 is a top plan view of my improved whiffle-tree, and Fig. 2 is a section on the line 2—2 of Fig. 1 showing the whiffle-tree in end elevation.

Referring more specifically to the drawings in which similar reference numerals designate corresponding parts throughout, 1 indicates a bar of wood provided centrally with a bore 2 by means of which it is adapted to be secured to the running gear of a vehicle in the position customarily occupied by the whiffle-tree. Semi-elliptical leaf springs 3 and 4 are secured one upon either side of this bar adjacent the central portion thereof by means of suitable clamps 5. These springs may each be formed of a single piece of spring metal, or they may each be built up from a plurality of leaf springs, the method of construction being well known to the art and therefore needing no description. The free ends of the spring 3 are bent over upon themselves to form eyes 6 through which are passed rings 7, the purpose of which will be hereinafter more fully explained. The free ends of the spring 4 are provided in the same manner with eyes 8 and pulley blocks 9 are pivotally secured to said spring one at each end by means of bolts 9′ which are passed through the side members of the pulley block and the eyes of the spring, as well shown in Fig. 2 of the drawings. Ropes 10 each have one end firmly secured to one of the rings 7, while the opposite end of each of said ropes is passed through the corresponding pulley 9 and provided with a suitable form of trace connection 11 by means of which the horse may be secured to the whiffle-tree.

As will be readily understood from the foregoing description all strain of the draft upon the whiffle-tree is divided between the two springs 3 and 4 thus giving the whiffle-tree the strength of a whiffle-tree having but one spring equal in strength to the sum of the strength of the two springs, the result being however that the whiffle-tree is much more elastic than would be the case if it was formed of one spring only. As described, the bar 1 is pivotally mounted upon the running gear of the vehicle and the strain upon the opposite sides of the springs is therefore the same at all times.

I have described the bar 1 as being constructed of wood but it may of course, be formed of any suitable material, or may be entirely dispensed with and a spacer block provided in its place, without in any way departing from the spirit of my invention. I prefer however to use the bar as described in that in case of severe strain upon the springs the bar forms a backing or reinforcement for the same thus greatly strengthening the whiffle-tree.

If desired one of the springs, preferably the spring 4 may be made somewhat weaker than the other, whereby the resiliency will be increased to a considerable extent without unduly weakening the whiffle-tree. When so constructed it is desirable that the strength of the two springs be sufficient to take up all strains ordinarily met with. If an unusual strain is placed upon the whiffle-tree the spring 4 which is a weaker spring will be strengthened while the spring 3 is still partially bowed, in this position the bar 1 will reinforce the spring 4 to prevent its breaking, while any further strain will be taken entirely by the spring 3.

What I claim is:—

A spring whiffle-tree, comprising a bar adapted to be pivotally secured to the running gear of a vehicle, semi-elliptical leaf-springs secured one upon either side of said

bar, said springs being bowed in opposite directions, pulleys secured to the free ends of one of said springs, and flexible members secured by one end to the free ends of the other spring, the free ends of said members being extended through the pulleys and then back in parallel spaced relation and terminating in trace connecting means.

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

RICHARD E. BARRETT.

Witnesses:

GYPSEY L. DAVIS,

W. H. WILSON.