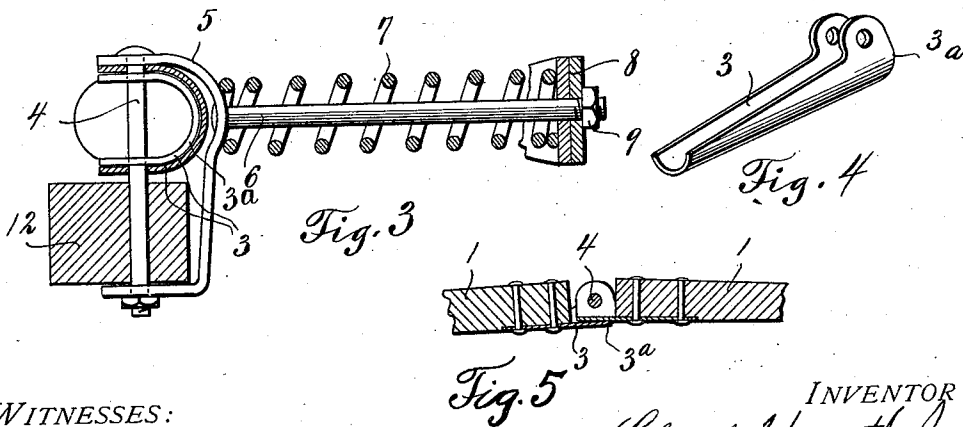
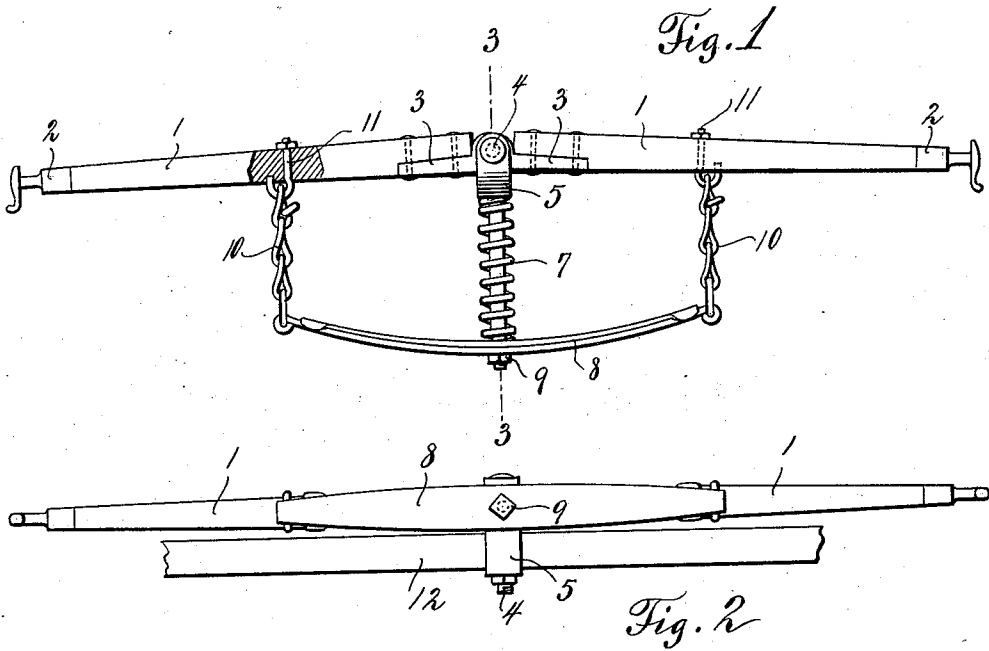


C. HAGESETH, JR.
WHIFFLETREE.
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1,008,903.

Patented Nov. 14, 1911.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRIST HAGESETH, JR., OF NEAR BERWICK, NORTH DAKOTA.

WHIFFLETREE.

1,008,903.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHRIST HAGESETH, Jr., a citizen of the United States, residing near Berwick, in the county of Pierce and State of North Dakota, have invented certain new and useful Improvements in Whiffletrees, of which the following is a specification.

This invention relates to improvements in whiffletrees and pertains particularly to those comprising spring controlled sections.

An object of the invention is the provision of a simple and effective whiffletree embodying the use of flat and coiled springs for the purpose of relieving the jerking motion or strain on the shoulders of a horse and also to permit the vehicle to yield gradually and without jar to the forward draft, the coöperation of the two spring members being such that on light loads only one is adapted to yield, while on heavier loads both springs are brought into action.

Another object of this device is to provide a simple means of adjustment of the tension of the springs to accommodate the whiffletree for use on different classes of vehicles or for different characters of loads.

With the above and other objects in view, this invention consists in the combination, arrangement, and construction of parts, all as hereinafter more fully described, claimed, and illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of a whiffletree embodying the invention, one section being shown in section to more clearly show the attachment of the hook bolt; Fig. 2 is a rear elevation showing the whiffletree as attached to the cross-bar of a pair of thills, the cross-bar being broken away; Fig. 3 is a sectional view on the line 3—3 of Fig. 1; Fig. 4 is a perspective of one of the hinge members; and Fig. 5 is a fragmentary sectional view showing the coöperation of the hinge members.

Referring to the drawings, 1 designates the sections of a whiffletree provided at their outer extremities with conventional means 2 for the purpose of attaching traces and having at their inner ends the hinge members 3 secured to the sections by means of bolts or rivets and pivoted on the pivot bolt 4. The sections 1 are limited in their pivotal movement by the hinge members 3, the pivotal points of one of the members being mounted on the bolt 4 between the

pivotal points of the other hinge member so that the point 3^a of the outer member will abut on the inner member and prevent further movement in that direction, as clearly shown in Fig. 5 of the drawings. Mounted also on the pivot bolt is a yoke 5 having secured thereto a bolt 6. Mounted on the bolt 6 is a coiled spring 7 normally bearing against the flat spring 8 having an opening in its central portion and movably secured on said bolt by means of a nut 9.

The spring 8 is bent upon itself at its outer extremities to form means for attaching flexible connections, such as chains 10. The inner ends of the connections 10 are attached to the hook bolts 11 mounted in the sections 1 at points intermediate their ends. It is contemplated that the coiled spring 7 should be somewhat weaker in tension than the flat spring 8 for reasons which will appear more obviously hereinafter. The whiffletree thus described may then be mounted on the cross-bar 12 of a vehicle in the ordinary manner, as shown in Fig. 2.

In the operation of the device as thus described, the spring 7 is of such a tension as to normally hold the sections 1 of the whiffletree so that their hinged portions abut at their adjacent ends and thereby limit further pivotal movement. In using the device upon a light load, it will be obvious that the jerking motion or forward movement of a draft animal will be compensated and overcome by the cushioning of the spring 7. When applied to a vehicle having thereon a heavier load, the spring 7 will be compressed to the limit of action whereupon the spring 8 through the flexible connections 10 will be placed under tension and perform the cushioning action desired.

The tension of the spring 8 may readily be regulated by shortening or lengthening the flexible connections 10 in accordance with the desire to increase or decrease the amount of tension proportionate to the character of draft.

Having thus fully described my invention, what is claimed as new is:—

1. A whiffletree comprising sections, hinge members secured to the sections, a pivot bolt on which said sections are mounted, said hinge members being adapted to abut at their adjacent ends to limit the pivotal movement of the sections, a yoke mounted on the pivot bolt, a bolt secured to said yoke, a coiled spring mounted on the last named

bolt and normally tending to hold the sections at their limit of pivotal movement, a flat spring mounted intermediate its ends on the outer end of the bolt normally held
5 in position by the tension of the coiled spring, and flexible connections connecting the outer extremities of the flat spring to the sections intermediate their ends.

2. A whiffletree comprising sections, hinge
10 members secured to the sections, a pivot bolt on which said sections are mounted, said hinge members being adapted to abut at their adjacent ends to limit the pivotal movement of the sections, a yoke mounted
15 on the pivot bolt, a bolt secured to said yoke, a coiled spring mounted on the last named bolt and normally tending to hold the sec-

tions at their limit of pivotal movement, a flat spring mounted intermediate its ends on the outer end of the bolt normally held
20 in position by the tension of the coiled spring, hook bolts secured to the sections aforesaid intermediate their ends, and flexible connections between the outer extremities of the flat spring and hook bolts to per-
25 mit the tension of the former to be regulated.

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

CHRIST HAGESETH, JUNIOR.

Witnesses:

CHRIST. O. HAGESETH,
HERMAN H. HAUGEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."