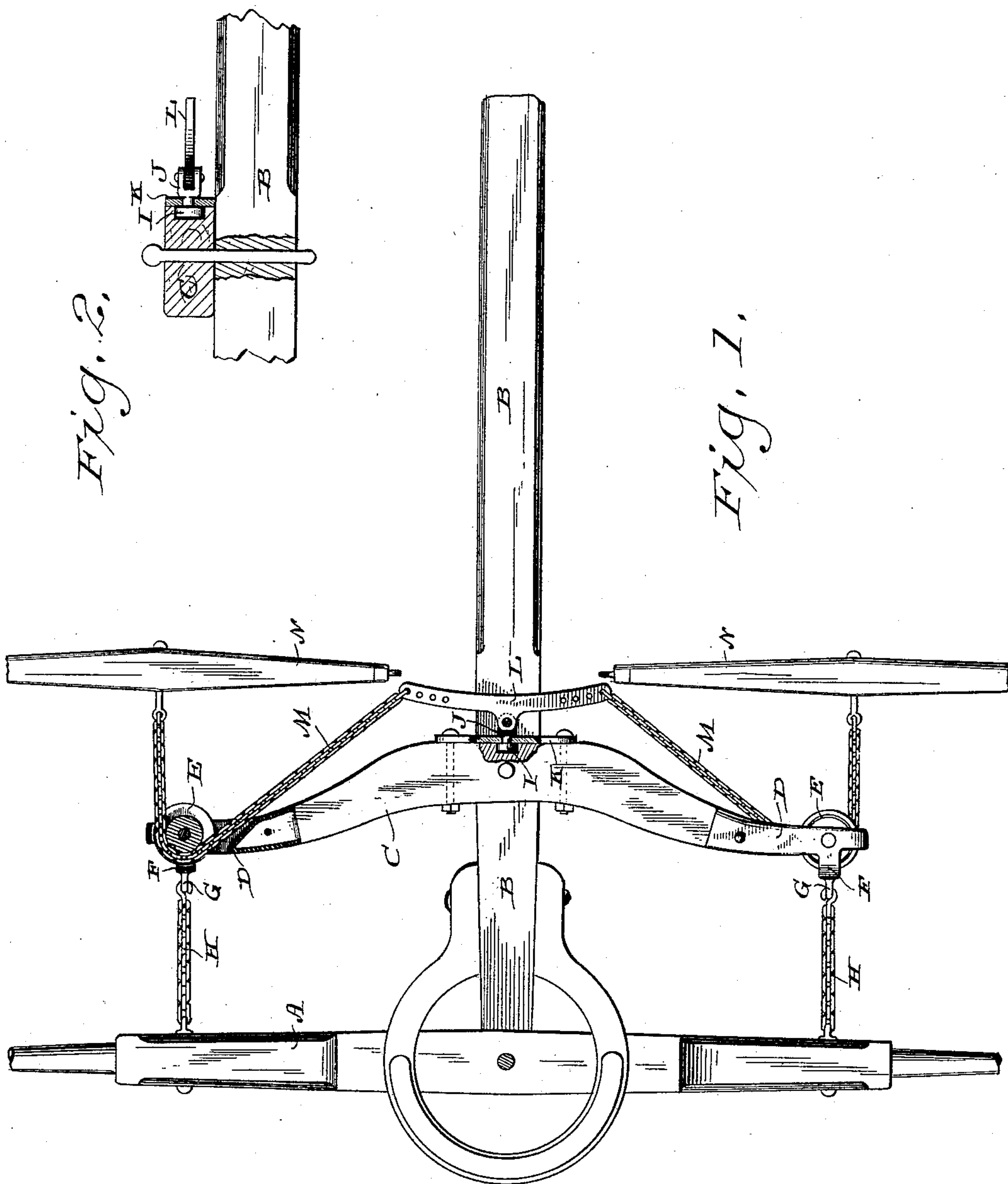


(No Model.)

L. W. SMITH.  
WHIFFLETREE.

No. 410,861.

Patented Sept. 10, 1889.



Witnesses  
Geo. W. Young.  
N. E. Oliphant

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# UNITED STATES PATENT OFFICE.

LEVI W. SMITH, OF EAST TROY, WISCONSIN.

## WHIFFLETREE.

SPECIFICATION forming part of Letters Patent No. 410,861, dated September 10, 1889.

Application filed May 7, 1889. Serial No. 309,905. (No model.)

*To all whom it may concern:*

Be it known that I, LEVI W. SMITH, of East Troy, in the county of Walworth, and in the State of Wisconsin, have invented certain  
5 new and useful Improvements in Whiffletrees; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to whiffletrees; and it consists in certain peculiarities of construction and combination of parts, to be herein-  
10 after described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a plan view of my device with parts broken away, and illustrates its application to a wagon.  
15 Fig. 2 is a detail sectional view of the whiffletree and a portion of a wagon-tongue.

Referring by letter to the drawings, A represents the front axle of a wagon, and B the  
20 wagon-tongue.

Connected to the tongue B, in the ordinary manner, is my improved whiffletree, the latter being curved in such a manner as to bring its extremities as near as possible to the axle A,  
25 as shown in Fig. 1.

The main portion C of the whiffletree is preferably made of wood, and, as shown in the drawings, its extremities in such an instance are castings D, that fit over and are  
30 bolted to the ends of the wooden portion of said whiffletree. The castings D are provided with bearings for sheaves E, and said castings have rearwardly-extended guard-loops F, terminating in eyes G, for engagement with  
35 stay-chains H, connected to the axle A of the wagon.

At the center the front edge of the whiffletree is recessed to receive the head I of a swivel J, that has its bearing in a stay-plate  
40 K, secured to said whiffletree by bolts or other suitable means.

Pivotally connected to the swivel J is a plate L, perforated at its ends for engagement with chains M, or other suitable flexible  
45 devices, that pass around the sheaves E within the guard-loops F, and connect with singletrees N, as illustrated in Fig. 1.

By the construction above described, it will be seen that the draft is directly upon the  
50 front axle near its extremities, and in case the wheels on either side of said wagon meet with an obstruction the strain is equally divided between the horses, and the draft concentrated against the resistance without caus-

ing any whipping about of the wagon-tongue, 55 this result being the main object of my invention.

By having the plate L swiveled to the whiffletree it will readily yield to any weight that may come thereon, and thereby prevent break- 60 ing of the connection between said plate and whiffletree.

By adjusting the chains M with relation to the perforations in the plate L the draft may be primarily adjusted to suit horses of vary- 65 ing size and strength.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A whiffletree provided with means for 70 attachment to the stay-chains of a wagon, sheaves journaled to the whiffletree, a swivel connected to said whiffletree, a plate pivoted to the swivel, and chains or analogous means connected to the plate and passed around the 75 sheaves for attachment to singletrees, substantially as set forth.

2. A wooden whiffletree, castings fitted on the ends thereof and provided with rearwardly-extended guard-loops having eyes for con- 80 nection with the stay-chains of a wagon, sheaves having their bearings in the castings, a plate pivotally connected to said whiffletree, and chains or analogous devices passed around the sheaves within the guard-loops 85 for attachment to singletrees, substantially as set forth.

3. A whiffletree provided with means for attachment to the stay-chains of a wagon and having its front edge provided with a central 90 recess, sheaves journaled to the whiffletree, a swivel having a head fitted in said recess, a stay-plate secured to said whiffletree and provided with a bearing for said swivel, a plate pivotally connected to the swivel, and 95 chains or analogous means connected to the plate and passed around the sheaves for attachment to singletrees, substantially as set forth.

In testimony that I claim the foregoing I 100 have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

LEVI W. SMITH.

Witnesses:

N. E. OLIPHANT,  
WILLIAM KLUG.