G. N. COMPTON.

Whiffltree.

No. 90,503. Patented May 25, 1869.

Fig. 1

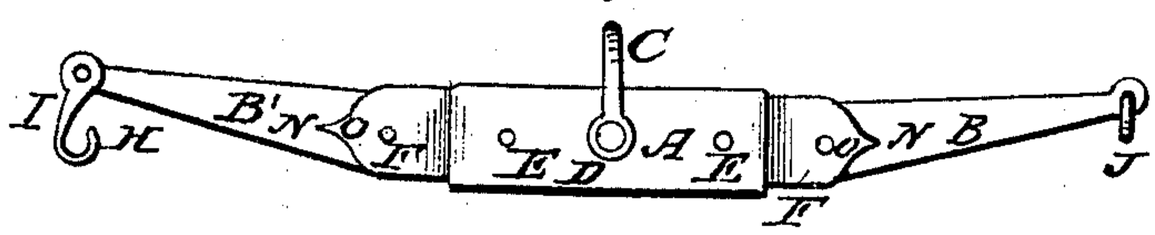


Fig. 2.

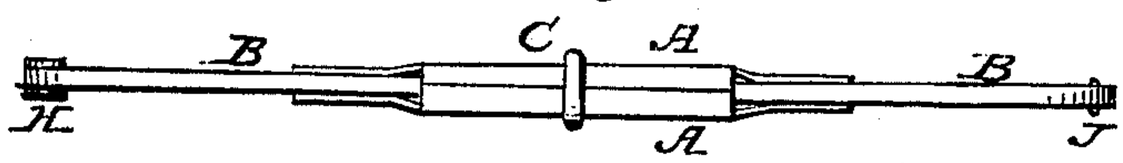


Fig. 3

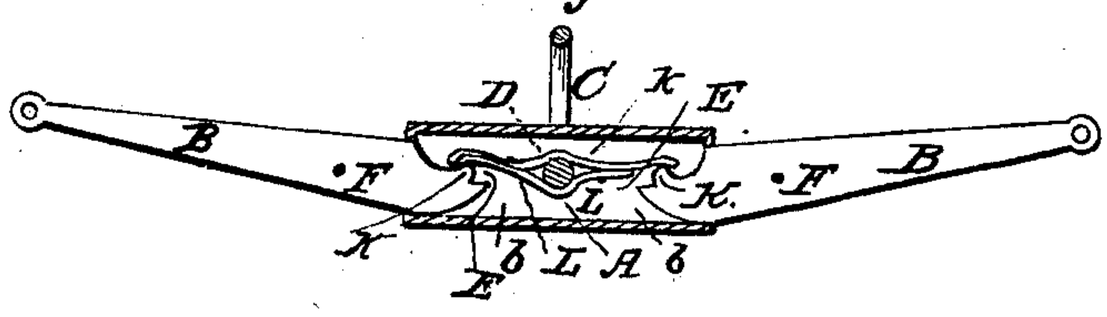


Fig. 5

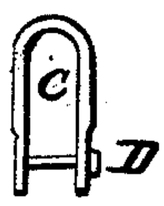


Fig. 4

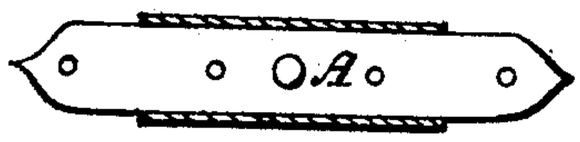
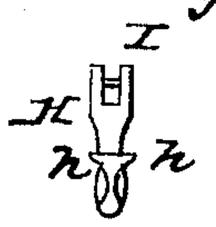


Fig. 6

Fig. 7



WITNESSES

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J. F. Webster

INVENTOR

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BY Fabbott ATTORNEY.

United States Patent Office.

GEORGE N. COMPTON, OF CANTON, OHIO.

Letters Patent No. 90,503, *dated May* 25, 1869.

IMPROVEMENT IN SPRING-WHIFFLETREES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE N. COMPTON, of Canton, in the county of Stark, and State of Ohio, have invented an Improved Spring-Whiffletree; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon, of which drawings—

Figure 1 is a plan of my improved whiffletree;
Figure 2 is an elevation of the same;
Figure 3 is a detail plan of the same;
Figure 4 is a plan of one-half of centre-box;
Figure 5 is an elevation of draught-clevis;
Figure 6 is a sectional view of centre-box; and
Figure 7 is a front view of tug-hook.

The nature of my invention consists, first, in the novel arrangement of the several parts of a spring-whiffletree; said whiffletree being composed of a centre bar, having a lever pivoted at each end, and a flat steel spring secured at its centre to the centre of the centre-bar, in such a manner as to bring the ends of said springs under the ends of the levers, so that said spring shall form an elastic resistant to the draught which is applied to the outer ends of said levers, whereby I obtain a very sensitive and efficient spring-whiffletree, which is easily and cheaply made or repaired, and which allows a great range of spring-motion with a single small and compact spring.

My invention consists, secondly, in the peculiar manner of constructing the centre-bar for a spring-whiffletree, of the construction just described, whereby I protect the spring from injury, and render the whole whiffletree very neat and ornamental in appearance.

My invention consists, thirdly, in providing the end levers of my whiffletree with a scale, which acts in combination with a point on the centre-bar, and serves to show the amount of draught that is being applied by the team.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The centre-bar of my whiffletree is composed of the two parts A A, which are of the general form shown, and which can be made of wrought or malleable cast-iron, or of steel, as may be found most desirable.

These pieces fit togther, as shown in figs. 2 and 6, and are secured to each other by the bolts or rivets F E D, arranged as shown in figs. 1 and 3.

The levers B B are of the general form shown, and are constructed of wood or metal, as desired, malleable cast-iron being a desirable material for this purpose.

These levers are pivoted between the parts A A of the centre-bar, by means of the bolts or pins F F, which pass through holes in said levers, as shown in fig. 3.

The spring K is composed of two or more leaves of flat steel, which are united by rivets L L, in such a manner as to leave an eye in the spring, through which passes the centre-bolt D, by which the spring is secured in the centre-bar A A.

The ends of the spring K bear on the ends *k k* of the levers B B, and the pins E E are so arranged as to act as bearings for the spring K when not under tension, as well as to serve as stops to the movement of the levers B, the ends *b b* of which strike on the pins E when the other ends of the levers B have advanced a certain distance, which distance depends on the amount of spring-play required for said levers, which is usually about three inches.

The clevis C clasps the centre-bar A A, and is secured thereto by the pin or bolt D, as shown in figs. 1, 2, and 5, and serves as a mode of fastening the whiffletree to the load to be drawn.

The trace-hook H is of the form shown in figs. 1 and 7, and has the arms *h h* made at its end to prevent the trace from coming off the hook, except when turned into line with said arms.

The hook is pivoted to the end of the lever B by the pin I, arranged as shown, and is free to turn around said pin as an axis, so that the line of draught is always in line with the pin I, which prevents any bending-strain at the connection of hook and lever; and a further advantage being that the hook can easily be turned at any desired angle with the lever B, for convenience in hitching or unhitching the trace.

The scale N is formed on the levers B B, directly under the points O O of the upper part A of the centre-bar, and is so constructed, with reference to the spring K, as that each of its spaces shall indicate a certain unit of draught at the end of the levers B, thus affording a means of ascertaining the draught of the team, as is readily seen.

From the foregoing description it is readily seen that when this whiffletree is secured to the load by the clevis C, and the draught is applied to the end of the levers B, the spring K serves to prevent any sudden obstruction to the movement of the load, giving a violent shock to the team, or to prevent the sudden start of the team from breaking the draught-mechanism, or from giving a violent jerk to the wagon and occupants.

It is also evident that the same general plan of construction, here described for a whiffletree, is equally applicable to the construction of a double-tree, the single-trees, in this last case, being attached to the ends of the levers B, by means of a clevis, J, or in any other suitable manner.

Instead of the boxed centre-bar A A, a single piece, A, or a flat bar, could be used, the levers B B and

spring K being secured on the surface of said bar by bolts or pins in an obvious manner, but this construction would be objectionable, both from its poor appearance and the exposure of the moving and wearing surfaces to the action of dirt and moisture.

Where the levers B are made of wood, the ends *k k*, on which the spring K bears, should have their bearing-surfaces covered with metal, to prevent the spring from wearing into the wood.

Having thus fully described my invention,

What I claim therein as new, and desire to secure by Letters Patent, is—

1. The peculiar arrangement of the centre-bar A A, end levers B B, and spring K, the several parts being combined substantially as and for the purpose specified.

2. The centre-bar A A, composed of the two parts A A, constructed and united as shown, when said parts form both the centre-bar of the whiffletree and a box which encloses the draught-spring K and inner ends of levers B B, substantially as and for the purpose specified.

3. The scales N N, on the levers B B, when used in combination with pointers O O on the centre-bar A A, for the purpose of indicating the amount of draught applied to the whiffletree, substantially as and for the purpose herein specified.

4. The stop-pins E E, when used in combination with the levers B B and spring K, substantially as and for the purpose herein specified.

5. The improved spring-whiffletree herein described, composed of the centre-bar A A, with centre-pin D, stop-pins E E, axial pins F F, points O O, and spring K, clevis C, draught-levers B B, with scales N N, and trace-hooks H H, the several parts being constructed, combined, and arranged substantially as and for the purpose specified.

As evidence that I claim the foregoing, I have hereunto set my hand, in the presence of two witnesses, this 18th day of March, 1869.

GEORGE N. COMPTON.

Witnesses:

A. J. VANDRACH,

JOB ABBOTT.