

NEIL CAMPBELL.

Improvement in Whiffletrees.

No. 124,664.

Patented March 19, 1872.

Fig. 1.

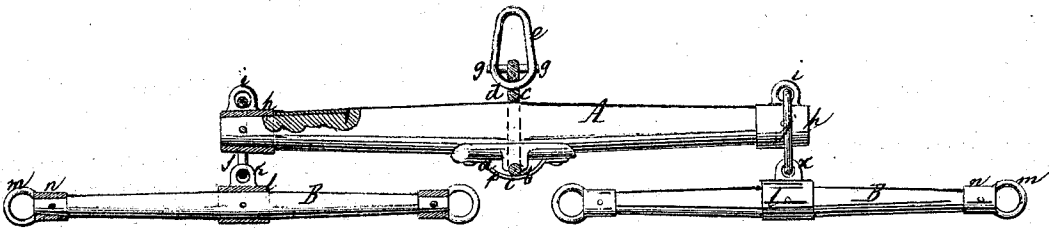


Fig. 2.

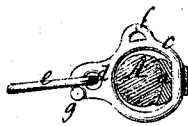
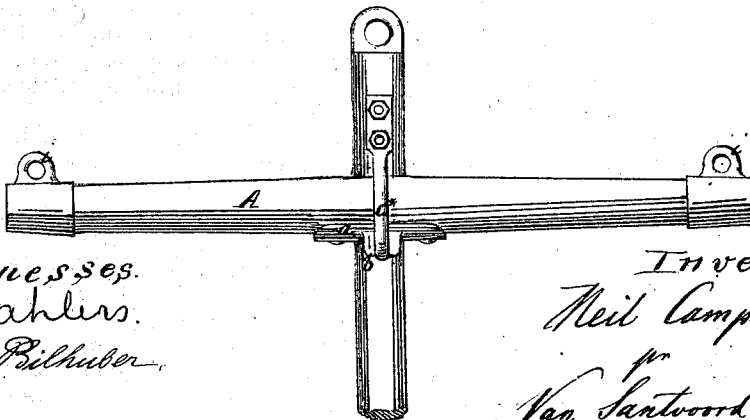


Fig. 3.



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IMPROVEMENT IN WHIFFLETREES.

Specification forming part of Letters Patent No. 124,664, dated March 19, 1872; antedated February 28, 1872.

To all whom it may concern:

Be it known that I, NEIL CAMPBELL, of Brooklyn, E. D., in the county of Kings and State of New York, have invented a new and useful Improvement in Whiffletrees; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a plan or top view of this invention, partly in section. Fig. 2 is a transverse section of the evener. Fig. 3 is a plan of a modification thereof.

Similar letters indicate corresponding parts.

This invention relates to the arrangement of a clevis-plate, secured in the middle of the evener of a whiffletree and on its front side, to receive a clevis, which forms the connection between the evener and the vehicle to which the whiffletree is to be attached. When the whiffletree is made detachable from the vehicle the clevis is provided with a loop to admit a hook, by means of which the clevis-link can be lifted out of the detaining-hook. A cross-bar or stop projecting from the clevis serves to retain the clevis-link in a convenient position to be attached to its detaining-hook. On the ends of the evener are thimbles, provided with eyes on their rear sides to receive the links which form the connection between the evener and the single-trees, so that the strain brought to bear on the evener acts on the front thereof in its center and on its rear at the ends, and thereby the power of resistance of the evener is materially increased. The single-trees are provided with eye-sleeves, which embrace them in the center, the eyes of which are intended to receive the links which connect them with the evener, and by these means the full strength of the single-tree is preserved. On the ends of the single-trees are fitted caps or thimbles, with eyes to receive the trace or draft-chains, and thereby said ends of single-trees are prevented from splitting, and much labor and time in repairing are saved.

In the drawing, the letter A designates the evener of a whiffletree, to the front side of which, in its center, is secured a clevis-plate, *a*, that is provided with a recess, *b*, to receive and retain the clevis *c* in its place. This clevis-plate, be-

ing fastened to the front side of the evener, is drawn up against the same by the strain of the clevis; and it can be retained in position by two thin bolts or rivets, so that the strength of the evener is not impaired. Furthermore, the clevis-plate itself, when placed in front of the evener, materially increases the strength of the same, since the strain acting on said evener, which has a tendency to bend the ends of the same outward or forward, is counteracted by the resistance of the clevis-plate in addition to that of the evener, and the evener cannot be broken without breaking the clevis-plate also; whereas, if the clevis-plate or its equivalent should be connected to the rear side of the evener or center, as generally practiced, very strong bolts or screws are required to fasten the same, since the strain on the evener has a tendency to draw the same away from said plate, and the power of resistance of the evener, instead of being increased by said plate, is materially impaired by the bolt-holes.

If desired, a clip, *p*, may be added, to prevent the clevis from getting out of position.

On common wagons or on street-cars the clevis *c* is provided with an eye, *d*, to receive a link, *e*, which is made to catch over a hook or pin secured to the vehicle. When my whiffletree is to be used on a street-car I provide the clevis with a loop or ring, *f*, to admit a hook, by which the driver disengages the whiffletree from the car; and on the sides of the clevis I provide stops *g*, to retain the link *e* in a convenient position to be attached to the car or vehicle.

When my whiffletree is to be used in connection with the pole of a car or any other vehicle I construct the clevis in the form of a clevis-strap, *c**, as shown in Fig. 3, said clevis-strap being firmly bolted to the pole which connects with the car or vehicle in the ordinary manner, and thereby the evener is retained in position without impairing its strength.

On the ends of the evener are secured thimbles *h*, which are provided with eyes *i*, projecting from their rear sides and intended to receive links *j*, which form the connection between the evener and the single-tree B. By means of the thimbles *h* the full strength of the evener is preserved, and much time and labor in repairs are saved. The links *j* connect with eyes *k* in sleeves *l*, which I term eye-

sleeves, which are fitted on and secured in the middle of the single-trees, and which materially increase the power of resistance of said single-trees. By the thimbles *h* the strain is thrown on the back of the evener, and by the sleeves *l* the strain is thrown on the front of the single-trees; and by these means the strain itself serves to hold said parts in position, and very thin pins passing through the thimbles and sleeves are sufficient to retain them in place. On the ends of the single-trees are secured thimbles *n*, which are provided with eyes *m* to receive the traces. By these thimbles the ends of the single-trees are protected and their full strength is preserved. If desired, however, the eyes *m* may be made detached from the thimbles, and provided with screw-shanks, to screw in the ends of the single-trees.

By these means a whiffletree is obtained which is of great value for all kinds of vehicles, particularly for street-cars, and by which much expense and trouble are saved in repairs.

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

1. The clevis-plate *a*, secured to the front

side of the evener, in combination with the clevis *c* or clevis-strap *c**, substantially as shown and described.

2. An improved evener for whiffletrees, provided with a clevis, *c*, at or about its center, and with rings or links at its ends, whereby the strain on the center of the evener will be in front and the strain on its ends upon its rear, substantially as described.

3. The loop or ring *f* on the clevis *c*, substantially as described.

4. The stop or stops *g* for the clevis-link, substantially as set forth.

5. The single-tree *B*, provided with the central sleeve *l* having eye *k*, and with thimbles *n* having eyes *m*, arranged substantially as and for the purpose set forth.

6. The evener *A*, carrying at each end the ferrules *h* having the eyes *i i*, in combination with the embracing-links *j* and the single-trees *B*, carrying the ferrule *l* having eye *k*, substantially as and for the purpose set forth.

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Witnesses:

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