

(No Model.)

A. H. FLETCHER.
THILL SUPPORT.

No. 472,476.

Patented Apr. 5, 1892.

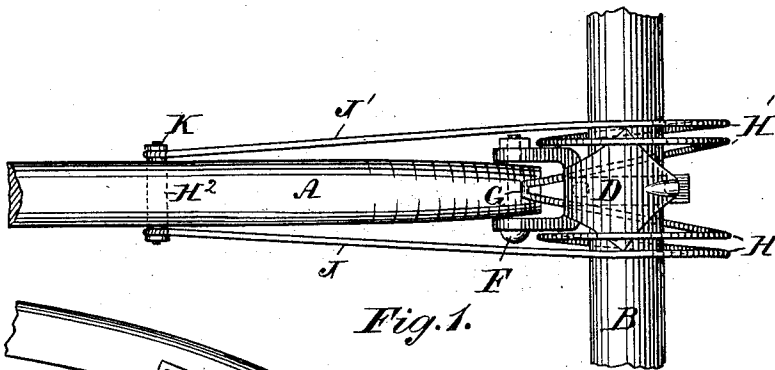


Fig. 1.

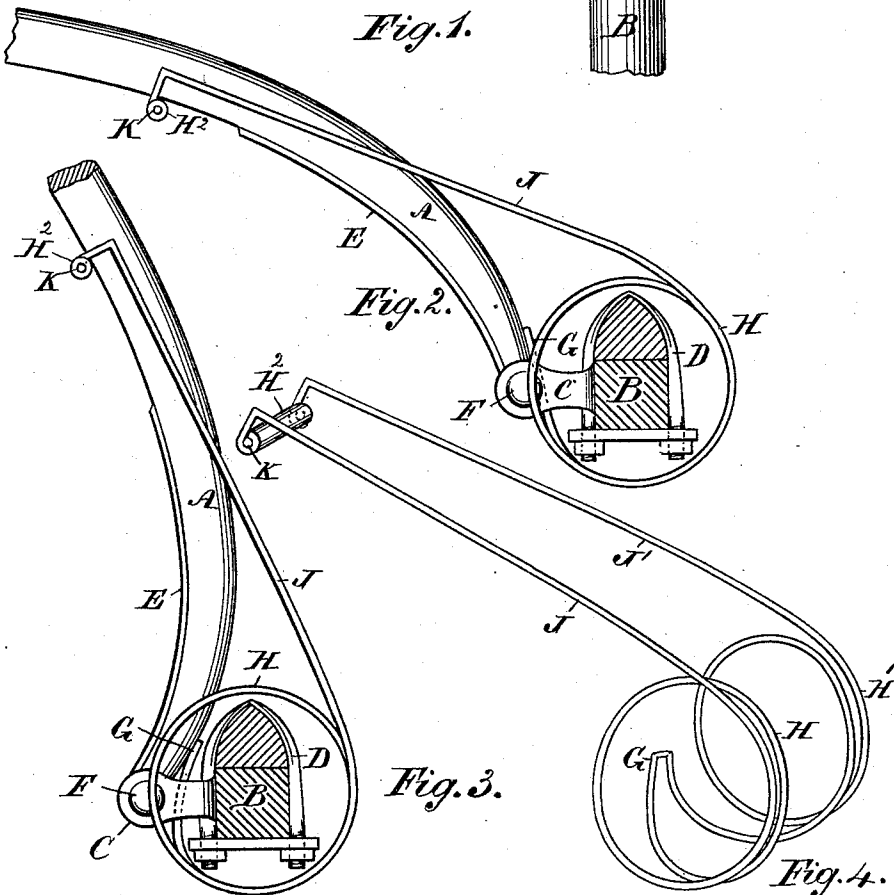


Fig. 2.

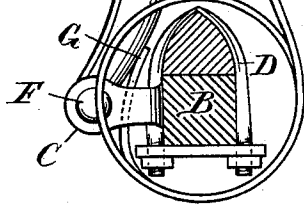


Fig. 3.

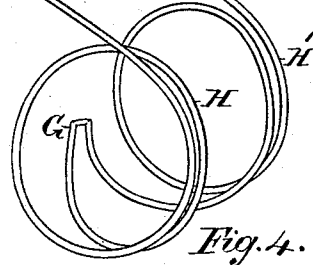


Fig. 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

ANDREW HENRY FLETCHER, OF KINGSVILLE, CANADA, ASSIGNOR OF ONE
HALF TO EDWIN EZRA HARRIS, OF SAME PLACE.

THILL-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 472,476, dated April 5, 1892.

Application filed February 20, 1892. Serial No. 422,180. (No model.) Patented in Canada January 2, 1892, No. 38,048.

To all whom it may concern:

Be it known that I, ANDREW HENRY FLETCHER, of Kingsville, in the county of Essex, in the Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Thill-Supports, (for which I have obtained a patent of the Dominion of Canada, No. 38,048, dated January 2, 1892;) and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of my improved thill-support as in use. Fig. 2 is a side elevation of the same. Fig. 3 is a like view as when supporting the thills when not in use; and Fig. 4 is a perspective view of my thill-support detached from the thills.

My invention has for its object to provide thills with a support which shall be inexpensive, convenient of attachment, and applicable by unskilled labor.

My invention consists of a thill-support made of a single piece of steel wire bent double at the middle to form a tongue for insertion between two members of a thill-coupling, the wire then bent spirally on opposite sides of said tongue to constitute springs to surround the axle of the vehicle, and continued tangentially from the coils to produce an arm or bearing for the thill by connecting the ends of the wire by a bolt carrying a friction-roller to have contact with the under side of the thill.

A is the thill; B, the axle of a vehicle; C, the thill-coupling secured to the axle by a clip D, and E the thill-iron connected to the thill-coupling by the coupling-bolt F, all constructed and combined as in ordinary use.

My improved thill-supporting spring is made of a single piece of steel wire, bent doubled or returned upon itself at the middle to form a tongue G, and then continued in the form of two spiral coils H H', one on opposite sides of the tongue, and then projected in a somewhat straight direction tangentially from the coils to make arms J J' of sufficient length to catch under the thill beyond the thill-iron. The ends of the arms J J' may be connected in any suitable manner, preference for neatness being given to bending the wire to make an eye and connecting the eyes by a bolt K, riveted at the ends, said

bolt having sleeved thereon a friction-roller H², whereby said roller will travel against the under side of the thill when the spring-coils contract and expand. The resiliency of the coils keep the roller firmly pressed against the thill when the thill is either horizontal or vertical, and in the latter case prevent the thills from falling when not in use.

My thill-supporting spring is applied by taking off a fore-wheel of the vehicle and slipping the spiral coils on the axle, then removing the thill-coupling and replacing it between the coils, whereby the tongue G will enter the space between the member of the thill-coupling clipped to the axle, and the other member secured to the thill when both members are connected by the coupling-bolt. The thill-coupling is then again clipped to the axle. The tongue G of the thill-support will, by spring-pressure on the thill-iron, prevent rattling of the thill-coupling, and the spring spirals or coils surrounding the axle will take the weight of the thills from the horse.

If desired, the tongue, instead of being a doubled wire, may be a single wire, and one coil and one arm may be dispensed with, thereby making the spring single instead of double and therefore less costly.

I claim as my invention—

1. The combination, with a thill-coupling connecting the thills and axle of a vehicle, of a bent-wire thill-supporting spring having a tongue G, inserted between the thill-coupling and thill-iron, said spring having spiral coils H H' surrounding the vehicle-axle B, and arms J J', connected at their extremities and extending forwardly of the coupling and supporting the thills A, as set forth.

2. The combination, with a thill-coupling connecting the thills and axle of a vehicle, of a bent-wire thill-supporting coiled spring having one end inserted between two members of said coupling, a spiral coil surrounding the vehicle-axle, and the other end of said spring extending in the direction of the thills and bent laterally under the thill to support the thills, as set forth.

ANDREW HENRY FLETCHER.

Witnesses:

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