(No Model.)

S. ZIMMERMAN.

SHAFTS FOR VEHICLES.

No. 379,843. Patented Mar. 20, 1888.

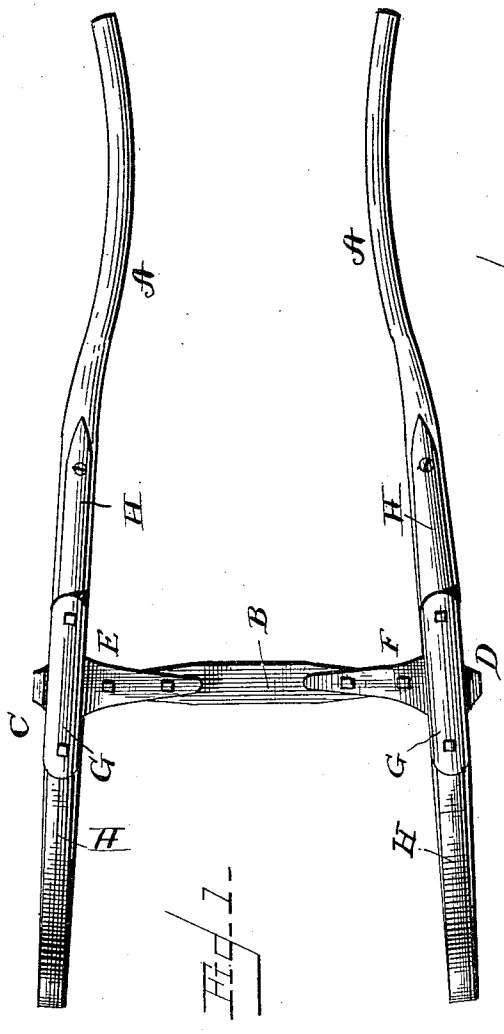


Fig. 1.

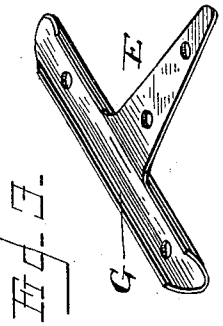


Fig. 3.

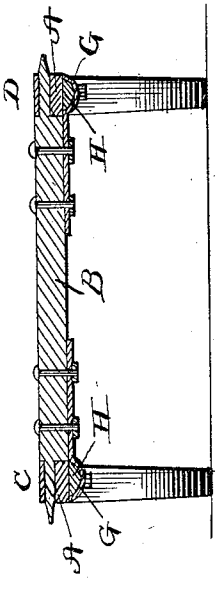


Fig. 2.

WITNESSES.
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UNITED STATES PATENT OFFICE.

SAMUEL ZIMMERMAN, OF MARTINSBURG, PENNSYLVANIA.

SHAFTS FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 379,843, dated March 20, 1888.

Application filed August 17, 1885. Serial No. 174,627. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL ZIMMERMAN, a citizen of the United States, residing at Martinsburg, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Shafts; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a bottom view of my shafts. Fig. 2 is a sectional view of the same. Fig. 3 is a detail perspective of one of the T-irons.

My invention relates to shafts for vehicles; and it consists in the construction and novel combination of parts, as will be hereinafter fully described, and particularly pointed out in the claim.

Referring by letter to the accompanying drawings, A designates the shafts, and B the cross-bar to which the singletree is attached. The shafts A and the cross-bar B are connected together by the usual mortises and tenons. At the joints C D the shafts A are strengthened by T-irons E and F, the heads G of which are curved in cross-section to fit over the thill-irons H, which are preferably oval in cross-section. The T-irons are secured in place by bolts. However, where the thill-irons are already in use and are flat, the T-heads may be made to correspond thereto and will serve the purpose of greatly strengthening the shafts at their junction with the cross-bar.

This device is exceedingly simple in construction and may be cheaply and quickly applied, yet it adds greatly to the value and usefulness of the shafts.

The T-irons E and F are placed below the thills, because in that position they are less likely to be accidentally detached than if placed over the thills. They are also less liable to be broken, as they are secured below and in immediate contact with the thill-irons.

In the described construction the thill-irons are longer than ordinary, being extended some distance in front of the cross-bar B.

Having thus fully described this invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination, with the thill A, the cross-bar B, and the extended thill-irons H, of the T-shaped coupling-irons E and F, having their tongues secured upon the cross-bar B by bolts or otherwise and their arms on each side of their tongues bolted to the under side of the thills on the outer surface of the thill-irons, substantially as specified.

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

SAMUEL ZIMMERMAN.

Witnesses:
FRED. HYLE,
C. L. ZIMMERMAN.