W. KATON.

Thill-Coupling.

No. 168,160. Patented Sept. 28, 1875.

Fig. 1.

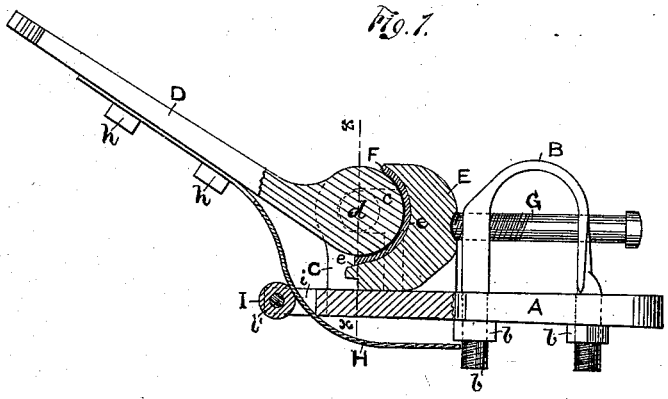
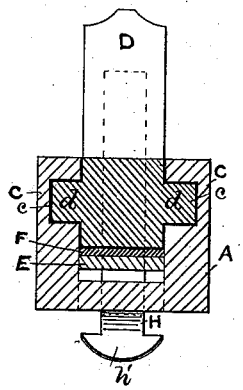


Fig. 2.



Witnesses
D. G. Stuart
L. Van Pisnoff

Inventor:
Walter Katon
by A. McCallum
Atty

UNITED STATES PATENT OFFICE.

WALTER KATON, OF NORTH ATTLEBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **168,160**, dated September 28, 1875; application filed April 5, 1875.

To all whom it may concern:

Be it known that I, WALTER KATON, of North Attleborough, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to thill-couplings or devices for attaching the shafts to the forward axles of vehicles; and the invention consists in a new and improved combination of devices, whereby the coupling is made stronger, the shaft prevented from becoming detached from the axle, and suspended or retained in an elevated position when desired, all as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a side elevation of my improved coupling device, partly in section. Fig. 2 is a sectional view on the line *x x*, Fig. 1.

A represents a plate, the inner end of which is secured to and beneath the axle by means of a clip, B, which is passed around the axle, its ends being formed into screw-bolts, which are passed through the plate A, the whole being then secured by screw-nuts *b*. The forward end of the plate A is formed with upwardly-projecting standards or bearing-plates C, having arc-shaped recesses *c*, open or cut away at one side for the admission of the trunnions or spindles of the thill-plates, as shown by dotted lines in Fig. 1. D is the thill-plate, its rear end being made cylindrical, and so as to fit between the bearing-plates C. It is also provided with trunnions or spindles *d*, which fit and turn in the arc-shaped recesses *c*. E is a block, having an arc-shaped face, *e*, corresponding to the form of the rear end of the thill-plate. F is a similarly-shaped block of rubber or like material interposed between the block E and the pivot of the thill-plate. G is a screw-bolt, which is passed through the clip so that its end rests against the rear side of the block E. H is a spring-bar, the forward end of which is securely bolted to the thill-plate, as shown at *h h*. The bent or spring portion is passed through a groove, *i*, formed in the forward end of the plate A, and its rear end is provided with a projection or arrow-head, *h'*. I is a block or roller of rubber or other suitable elastic material, secured between the forward-projecting ends of the plate A by means of a bolt or screw, *i'*.

With a thill-coupling of this description it will be seen that the thill-plate and its pivot or journal are cast in one piece, and the trunnions operate within the bearing-plates C, so that the coupling cannot be disconnected so long as the block E is held in position. The latter is so formed and held between the clip and the pivot of the thill-plate that it cannot work loose, so as to drop out.

It will also be seen that no bolt or device having a screw-thread, which might become worn and drop out, is used in the coupling itself. The only screw-bolt used is the bolt G, which may be used for tightening up the block E, when necessary or desirable; but the use of this bolt is not essential to the working of my coupling, and may be dispensed with.

The rubber block F prevents noise and unnecessary wear between the pivot of the thill-plate and the block E, and when worn it may be readily renewed.

The spring-bar H, bearing against the rubber block or roller I, will sustain the shaft in an elevated position, when desired, without interfering with the necessary free motion of the shafts when the vehicle is in use. The enlarged head *h'*, coming in contact with the forward projections on the plate A, will also prevent the shaft from becoming detached should the pivotal portion become broken.

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

The spring-bar H, in combination with the block I, plate A C, and thill-plate D, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

WALTER KATON.

Witnesses:

JOHN STANLEY,

SUSAN E. BARDEN.