

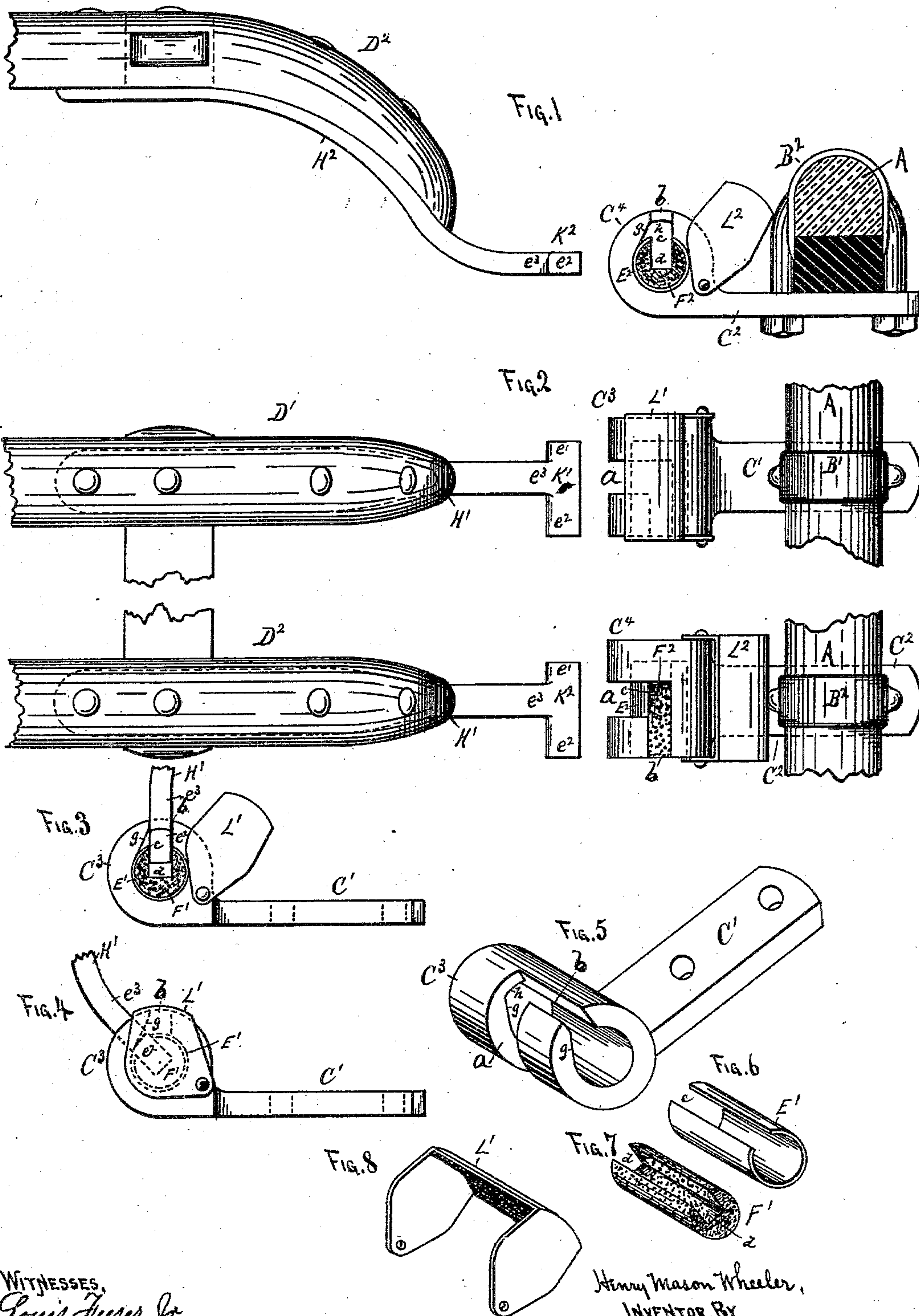
(No Model.)

H. M. WHEELER.

THILL COUPLING.

No. 296,805.

Patented Apr. 15, 1884.



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UNITED STATES PATENT OFFICE.

HENRY MASON WHEELER, OF GRAND FORKS, DAKOTA TERRITORY.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 296,805, dated April 15, 1884.

Application filed December 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY MASON WHEELER, a citizen of the United States, and a resident of Grand Forks, in the county of Grand Forks, in the Territory of Dakota, have invented certain new and useful Improvements in Thill-Couplings, of which the following specification is a full, clear, and exact description, reference being also had to the accompanying drawings, in which—

Figure 1 is a side view of one of the couplings and a portion of the rear end of a thill, and Fig. 2 is a plan view of a pair of the couplings and the rear ends of a pair of thills, the thills being disconnected from the couplings. Fig. 3 is a side view of the coupling and a portion of the thill-iron, showing the latter being inserted into the coupling, and Fig. 4 is a similar view, showing the position of the thill after insertion, and after the latter is partially turned down to a horizontal position. Figs. 5, 6, 7, and 8 are perspective views of the different parts of the coupling detached.

A is the axle, to which are attached, by clips B' B², two flat bars, C' C², whose centers will be set opposite the centers of the thills D' D², as shown in Fig. 2. Upon the forward ends of these bars C' C² are formed two cylindrical-shaped heads, C³ C⁴, having holes in their centers parallel with the axle and running nearly through them, and left open at one end, as shown in Fig. 5, both of these open ends pointing in the same direction.

a a are slots cut down through the centers of the heads C³ C⁴ at right angles to and forming openings from the central holes out through the front tops and bottoms of the heads, as shown.

b b are slots cut from the tops of the heads C³ C⁴ down into their central holes, and also into the slots a a, as shown in Fig. 5.

E' E' are brass or other non-corrosive tubes fitting the holes in the heads C' C² closely, and having slots c c (see Fig. 6) opening upward opposite the slots b b when the tubes are turned upward, and provided with rubber or other suitable flexible cores, F' F², the latter having cavities d in one side somewhat less in width than the slots b and c, and a little more than one-half the diameter of the rubber cores in depth.

The thills D' D² are provided with metal

straps H' H², secured to their lower ends, each of said straps being formed with T-heads K' K², consisting of a short arm, e', and longer arm e². The front inner sides of the slots b b are cut away in an inclined position, as shown at g, in Figs. 1, 3, 4, and 5, to form inclines to force the T-heads on the thills down into the rubber cushions, as hereinafter explained.

L' L² are metal caps or covers, pivoted by their lower points to the ends of the heads C³ C⁴, and adapted, when turned over the heads, as shown in the upper view of Fig. 2 and in Fig. 4, to cover and protect the slots a b and prevent water, sand, dirt, &c., from coming in contact with the rubber cores, tubes, &c., and also to cover the ends of the heads and prevent the tubes and rubbers from working out endwise. The forms of the caps L' L² will be such as to permit the removal of the T-heads and tubes from the heads C³ C⁴ when the caps are turned back, as shown in the lower view of Fig. 2 and in Figs. 1 and 3. The caps will be lined with rubber or other soft packing, so as to form a water and air tight packing between the heads C³ C⁴ and the covers, as shown in Fig. 8.

When the couplings are to be used, the caps L' L² are turned back, as shown in Figs. 1 and 3, and the tubes E' E², with the rubber cushions or cores F' F² inside of them, inserted into the holes in the heads C³ C⁴, with the slots c and cavities d placed opposite the slots b b, or in an upright position. The T-heads K' K² are then inserted through the slots b and c and forced down into the rubber cushions until the short ends e' of the T-heads are below the lower edge of the inner end of the slots b at h, (see Fig. 5,) when the T-heads may be forced endwise until the short ends e' strike the inner ends of the holes in the heads C³ C⁴. This brings the shanks e² of the straps H' H² opposite the slots a a in the heads, so that by turning the thills downward in a horizontal position, the upper outer corners of the ends e' e² will run down beneath the inclines g, and the T-heads be crowded down into place in the rubber, as shown in Fig. 4, the shanks e² passing down into the slots a a. The covers L' L² are then turned down over the heads and the coupling is complete, the elasticity of the rubber cushions holding the T-heads firmly in place and preventing all rattling or other noise.

I claim a great advantage by the incasing of the rubber cushions within the tubes $E' E^2$, as thereby nearly all the wear comes upon the metal tubes, the friction of the **T**-heads upon the rubber being very slight.

The combined covers and holders $L' L^2$ are also an important feature, as they not only protect the tubes and rubber cores from sand, water, &c., but also serve as stops to prevent the tubes from working out endwise from the heads $C^3 C^4$.

The holes through the heads $C^3 C^4$ might be constructed open at both ends, and with the slots b running entirely across the heads and without the slots a . When thus constructed, the ends of the bars $H' H^2$ would be forked, with the ends of the forks connected by a bar to be forced down into the rubber sleeves in the same manner as the **T**-heads K ; but this would be an equivalent arrangement to the **T**-heads.

Having described my invention and set forth its merits, what I claim is—

1. In a thill-coupling, the combination of hollow heads $C' C^2$, attached to the carriage-axle, and having slots $a b$ and inclined faces $g g$ therein, slotted tubes $E' E^2$ within the hollow heads, grooved rubber cushions $F' F^2$ in the said tubes, and thills having **T**-shaped heads $K' K^2$, substantially as and for the purpose herein specified.

2. In a thill-coupling, the combination of hollow heads $C' C^2$, attached to the carriage-axle, and provided with slots $a b$ therein, thills having **T**-shaped heads $K' K^2$, and pivoted covers $L' L^2$, covering the ends of the heads and adapted to cover and uncover the slots $a b$ therein, and provided with an elastic packing, substantially as and for the purpose herein specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HENRY MASON WHEELER.

Witnesses:

F. W. TUTTLE,

CHARLES H. DYSON.