G. T. HAMBRICK & E. B. PETERS.

THILL COUPLING.

APPLICATION FILED NOV. 15, 1912.

1,065,906. **Patented June 24, 1913.**

Fig. 1.

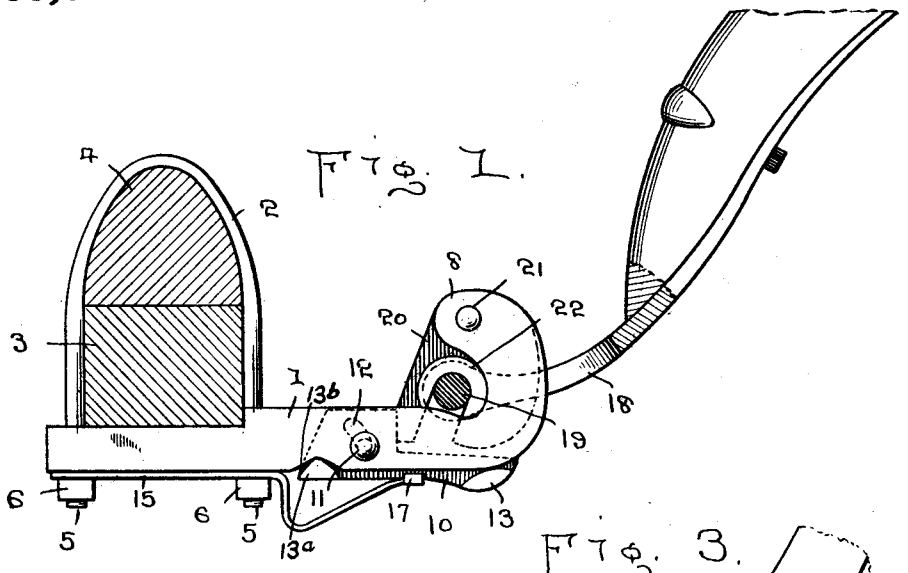


Fig. 2.

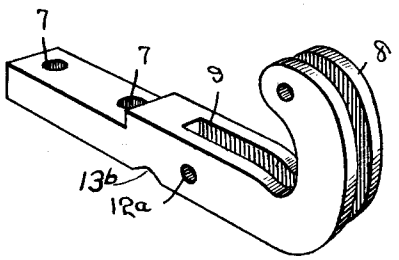


Fig. 3.

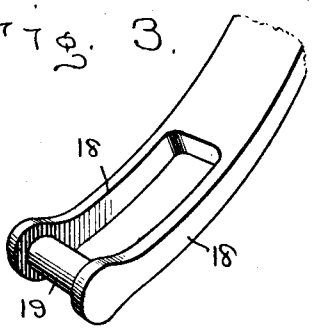


Fig. 4.

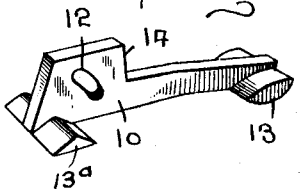


Fig. 5.

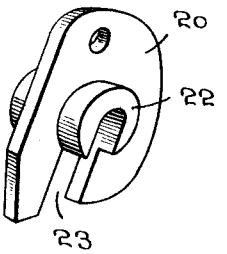
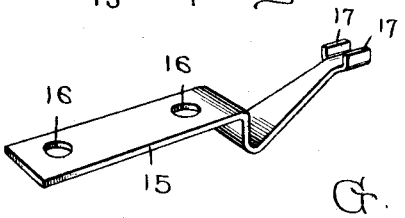


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE T. HAMBRICK AND EMIL B. PETERS, OF GEORGETOWN, KENTUCKY.

THILL-COUPLING.

1,065,906. Specification of Letters Patent. Patented June 24, 1913.

Application filed November 15, 1912. Serial No. 731,544.

To all whom it may concern:

Be it known that we, GEORGE T. HAMBRICK and EMIL B. PETERS, citizens of the United States, residing at Georgetown, in the county of Scott and State of Kentucky, have invented certain new and useful Improvements in Thill-Couplers; and we do hereby 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.

Our invention relates to thill couplers and the prime object of our invention, is to provide a reliably efficient means for connecting the tongue or shaft to the axle of a vehicle, whereby the shaft or tongue may be very quickly disconnected when desired.

A further object of our invention, among others, is to provide a coupling of great simplicity of construction and which shall at the same time possess great strength and reliability, the parts of which may be cheaply constructed and readily assembled in their respective positions.

With these objects in view, the invention consists in the improved construction, arrangement and combination of the parts of a thill coupling which will be hereinafter fully described and afterward specifically claimed.

In order that the construction and operation thereof may be readily comprehended, we will now proceed to fully describe the invention, in connection with the accompanying drawings, which illustrate it in a preferred form, and in which drawings—

Figure 1 represents a view in side elevation of our invention complete, as applied to use, Fig. 2 a perspective detail view of the body portion of our coupler, Fig. 3 the connecting terminal of the shaft or tongue, and Figs. 4, 5, and 6 perspective detail views of the detent, the spring and the latch member of our improved coupler.

The same reference numerals are applied to the corresponding parts throughout the several views.

Referring specifically to the drawings 1, indicates the body portion of the coupling the rear part whereof is provided with apertures to receive the usual form of clip 2, which embraces the axle 3 and the usual wooden member 4 resting on the axle, the said clip 2 having the usual threaded terminals 5 and the retaining nuts 6.

The threaded terminals 5 are extended through the apertures 7 in the rear end of the body portion 1, while upon the forward end of said body portion we provide the hook, terminal coupling members 8, which are separated by a slot 9 and within said slot is mounted the detent 10 by means of the bolt or pin 11 passing through a curved slotted aperture 12, as clearly shown in Fig. 1. A correspondingly located aperture 12^a is formed in the body portion to receive the pin 11. The forward end of the detent 10 is provided with a cross head 13, the upper edge of which rests against the lower edge of the body portion, as shown in Fig. 1, and the rear end with a cross head 13^a, which engages in notches 13^b in the body portion. The said detent is also provided with the shoulder or offset 14 and is held normally upward within the slot 9 by any suitable form of spring, preferably by that form shown in Fig. 6, and consisting of the body portion 15 having the apertures 16 designed to register with the apertures 7 in the body portion and receive the threaded terminals 5 of the clip 2, by means of which the said spring is held in its operative position. The forward end of the spring is provided with a special form of seat, formed by the ears 17 and between said ears the forward portion of the detent 10 is designed to rest, thereby assuring that the said detent will be held normally in a substantially horizontal plane.

The end of the shaft or tongue coöperating with the hook members 8 is provided with a stirrup-like terminal comprising the side members 18 and the cross bar 19, and designed to coöperate with the cross bar 19 is a pivoted latch member 20 operatively mounted in the upper end of the hook members 8, as by the rivet or bolt 21, the lower end of the latch member being left free to swing downward between the said hook member and in coöperation with the shoulder 14 of the detent 10. A bearing 22 is formed in the latch member 20 and a slotted opening or way 23 is formed in the lower end of said latch member leading out from the bearing 22 whereby when said latch member is swung rearward and upward upon its pivot 21, the cross bar 19 may be readily entered in the slotted opening so that it will reach and rest within the bearing proper 22 in its operative position.

As may be seen by reference to Fig. 1 of the drawings, the detent 10 may be caused

to move downward at its forward end by pressing the cross head 13 down, the cross head 13[a] serving as a fulcrum, the slotted aperture 12 being curved on an arc having said fulcrum as a center. The shoulder 14 will thus be moved downward entirely out of the path of the upward swing of the lower end of the latch member 20, thereby bringing said slotted opening 23 into position to readily receive or discharge the cross bar 19.

It will be seen from the foregoing description that we have provided a very simple, strong form of thill coupling of which the parts may be very quickly assembled and as readily disconnected and which may be cheaply and expeditiously manufactured of any desirable material deemed suitable for the purpose and of all the varying sizes required.

When the lower end of the latch member 20 is swung downward in its operative position it will be clear that the shoulder 14 of the detent 10, held up by the spring 15, will prevent said latch member from casually moving out of its adjusted position.

It is obvious that the stronger the pull placed upon the shaft or tongue, the more secure will be its coöperation with the hook members 8.

While we have specifically described the construction of the various parts, we desire it to be understood that changes may be made therein, without departing from the spirit and scope of the invention, as hereinafter claimed.

What we claim as new is:

1. A thill coupling comprising a thill iron having a cross bar, a body portion provided with parallel hook terminals spaced apart, a latch member pivotally supported between said hook terminals having a bearing opening and an open slot leading therefrom to receive the cross bar of the thill iron, a detent pivotally mounted in the space between the lower edges of said terminals and having a shoulder to engage the latch member, and a spring bearing on the detent to maintain said engagement.

2. A thill coupling comprising a thill iron having a cross bar, a body portion provided with parallel hook terminals spaced apart and having notches in their bottom edges and transverse pin openings, a latch pivoted between the hook terminals provided with a transverse opening and laterally projecting bearings to fit in the hooks of the terminals and having a slot leading outwardly from the transverse opening to receive the cross bar, a detent between the hook terminals having a curved slot, a forward cross head bearing under the terminals, a rear cross head bearing in the notches of the terminals and a shoulder to engage behind the latch member, a pin passing through the pin opening in the terminals and the curved slot in the detent, and a spring bearing under the detent and maintaining the shoulder in engagement with the latch member and the rear cross head in the notches in the bottom edges of the terminals.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GEORGE T. HAMBRICK.
EMIL B. PETERS.

Witnesses:
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J. WILLIE HALL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."