

(No Model.)

M. G. HAWKE.
THILL COUPLING.

No. 419,016.

Patented Jan. 7, 1890.

Fig. 1.

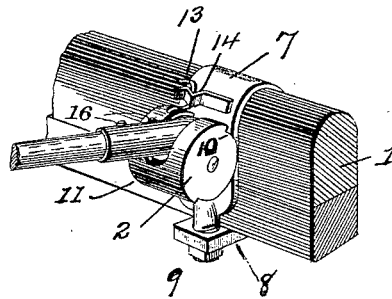


Fig. 2.

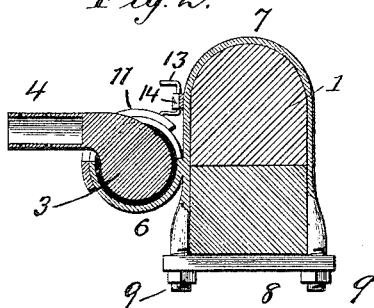


Fig. 3.

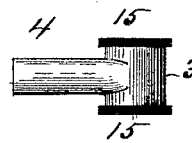


Fig. 5.

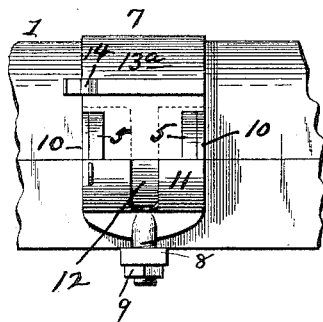
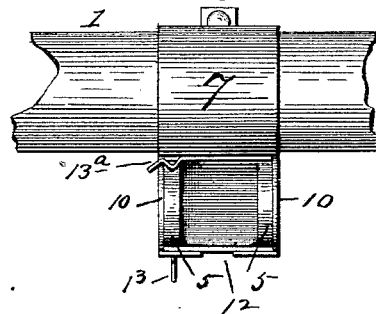


Fig. 4.



Witnesses

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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 419,016, dated January 7, 1890.

Application filed November 18, 1889. Serial No. 330,703. (No model.)

To all whom it may concern:

Be it known that I, MADISON G. HAWKE, a citizen of the United States, residing at Saratoga Springs, in the county of Saratoga and State of New York, have invented certain new and useful Improvements in Thill-Couplings; and I 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.

My invention relates to improvements in thill-couplings, whereby I am enabled to dispense with the ordinary bolts, nuts, and joints now generally employed for fastening shafts to the axles of carriages, wagons, and similar vehicles.

Many attempts have heretofore been made to produce a thill-coupling of the character above set forth, but all have proved more or less unsuccessful owing to inherent defects in the construction and mode of operation, so that they have not superseded the old style of fastenings and been introduced into general public use.

The object of my invention is to provide a thill-coupling which shall be simple in construction, durable in use, reliable in operation, and economical in manufacture, and which can be easily and readily manipulated to connect the shafts to an axle, and enable the same to be disconnected with equal facility. There is also no danger of the parts becoming accidentally detached or disengaged from each other, thus avoiding all danger from that source.

The invention consists in the several novel features of construction and new combinations of parts hereinafter fully described, and definitely pointed out in the appended claims.

In the accompanying drawings, illustrating the invention, and in which similar reference-numerals indicate corresponding parts in all the figures, Figure 1 is a perspective view of a thill-coupling constructed according to my invention applied to a carriage or wagon axle. Fig. 2 is a sectional view of the same. Fig. 3 is a view of the shaft-iron and its cylindrical head or block detached. Fig. 4 is a plan view of the coupling with the shaft-iron removed. Fig. 5 is a front view of the same.

In the said drawings, the reference-numeral

1 designates an ordinary wagon or carriage axle.

2 designates a box for the reception of the cylindrical block 3, secured to the shaft-iron 4. This box 2 consists of two circular disks or plates 5 5, connected together by the semi-cylindrical sheet 6, connected to the lower half of the peripheries of said disks. This box is secured to the clip, by which it is connected to the axle in any suitable manner, said clip consisting of a metal strap 7, passing over the axle, and having its lower ends formed into screw-threaded lugs, which pass through the connecting bar or plate 8, which is secured in place by the binding-nuts 9.

To each of the disks 5 are pivoted the disks 10, having secured thereto or formed therewith a semicircular wall or casing 11, provided at one edge with a slot 12. The disks 10 can revolve freely on their pivots, so as to cover and uncover the top of box 2, as desired. Upon one side of the casing 11, near its front edge, is secured a wire 13, projecting rearwardly and then upwardly and forwardly, as seen in Fig. 2, forming, in connection with the spring-catch 13^a on the clip, a fastening device for holding the casing 11 in position after the shaft-irons have been inserted in the box 2. This catch consists of a plate of spring metal secured at one end to the clip, and near its other end is formed with an upward bend 14, to receive and hold the wire 13, its free end being bent outwardly, so as to enable the wire to be easily passed between it and the clip.

The shaft-iron consists of a metallic shank 4, recessed to form a socket to receive the end of the shafts, and provided with a cylindrical head or block 3, having the rubber end disks 15, and is of a size to fit snugly within the box 2. In Fig. 1 the shaft is shown inserted in the socket of shank 4, and secured therein by rivets 16.

The operation of the device is as follows: When it is desired to insert the head or block 3 of the shaft-iron within the box, and thus connect the shafts and axle, the disks 10 are revolved and the casing 11 turned down, fully uncovering the top of the box 2, as seen in Figs. 4 and 5. The block 3 can now be readily inserted in the box. Casing 11 is then turned upward to close the top of the box, the shank

4 of the shaft-iron entering the slot 12, as
seen in Fig. 1, and the casing secured in
place by turning the wire 13 under the free
end of catch 13^a. A reversal of the operation
5 will allow the shafts to be disengaged from
the axle.

From the above description the advantages
of my invention will be apparent to those
skilled in the art to which the invention per-
10 tains. In addition to providing a strong, sim-
ple, and durable coupling by which the shafts
can be easily and securely connected to an
axle, all rattling of the parts is avoided, which
is a very disagreeable feature of the ordinary
15 bolt and nut fastenings, and which often
causes the animal to take fright and run away,
resulting in great damage and injury.

Having thus described my invention, what
I claim is—

20 1. The combination, with the box having a
semi-cylindrical casing forming the bottom
thereof and stationary circular disks to which
said casing is secured, of the disks pivoted to
said stationary disks and having a semi-cy-
25 lindrical casing provided with a slot to re-
ceive the shaft-iron, substantially as de-
scribed

2. The combination, with the box 2, having
a semi-cylindrical casing forming the bottom
thereof and stationary circular disks to which 30
said casing is secured, of the rotating disks
pivoted to the stationary disks and having a
semi-cylindrical casing provided with a slot,
and the shaft-iron having a cylindrical head
or block adapted to fit in said box, substan- 35
tially as described.

3. The combination, with the box 2, disks 5,
and casing 6, of the rotating disks 10, casing
11, having slot 12, and the shaft-iron consist-
ing of shank 4, cylindrical head 3, and end 40
disks of rubber 15, substantially as described.

4. The combination of the box 2, disks 5,
casing 6, rotating disks 10, casing 11, having
slot 12, the shaft-iron 4, having cylindrical
head 3, the clip having catch 13^a, and the 45
wire 13, secured to casing 11, substantially
as described.

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

MADISON G. HAWKE.

Witnesses:

EDWARD H. HAWKE,
WM. HAY BOCKES.