(No Model.)

C. KING.

THILL COUPLING.

No. 538,450. Patented Apr. 30, 1895.

Fig. 1.

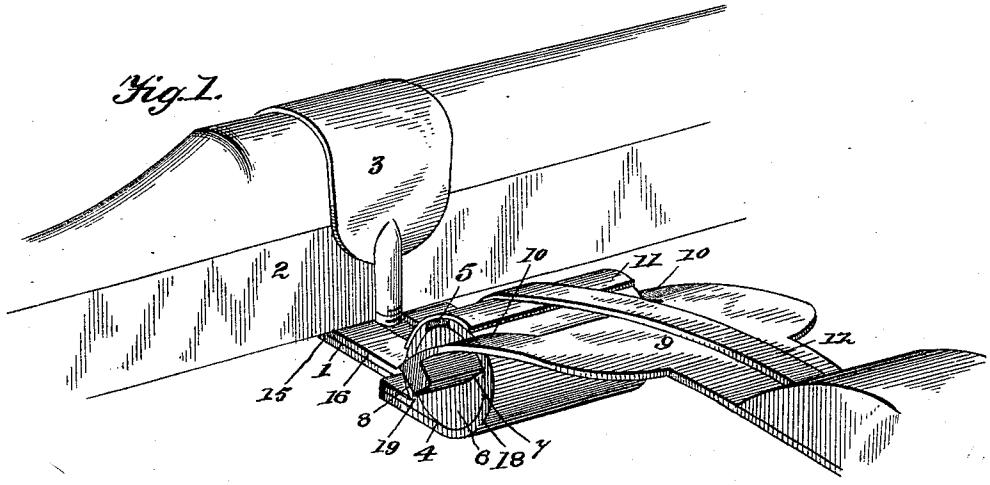


Fig. 2.

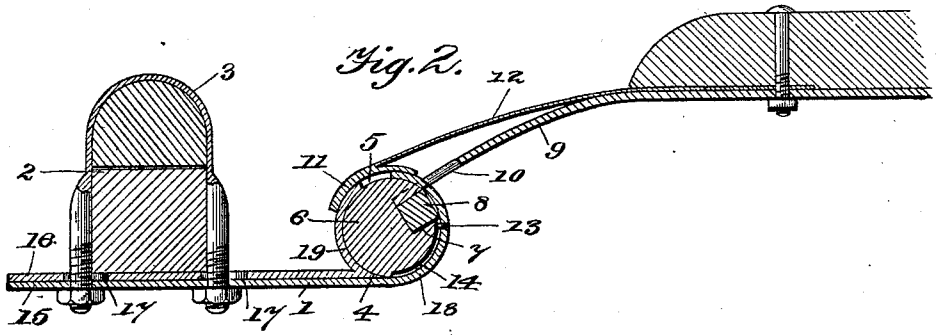


Fig. 3.

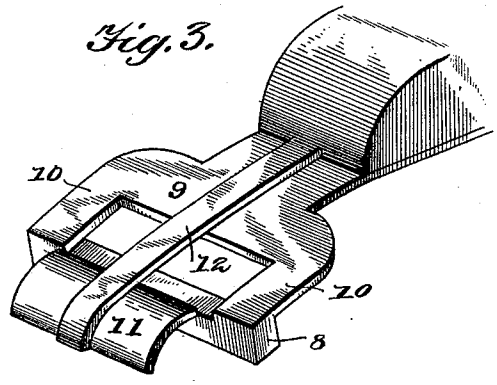
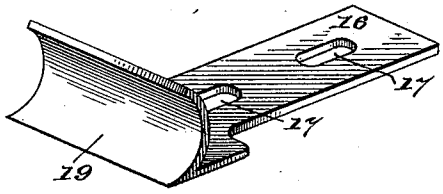


Fig. 4.



Inventor
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Witnesses
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By his Attorneys.
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UNITED STATES PATENT OFFICE.

CHARLES KING, OF GRAND RAPIDS, ASSIGNOR TO MICHAEL McCARTHY, OF CENTRALIA, WISCONSIN.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 538,450, dated April 30, 1895.

Application filed September 12, 1894. Serial No. 522,831. (No model.)

To all whom it may concern:

Be it known that I, CHARLES KING, a citizen of the United States, residing at Grand Rapids, in the county of Wood and State of Wisconsin, have invented a new and useful Thill-Coupling, of which the following is a specification.

The invention relates to improvements in thill couplings.

The objects of the present invention are to improve the construction of thill and pole couplings, to prevent any liability of thills or poles becoming accidentally disconnected from the axle, to eliminate noise and rattling, and to enable wear to be readily taken up.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a thill-coupling constructed in accordance with this invention. Fig. 2 is a central longitudinal sectional view of the same. Fig. 3 is a detail perspective view of the thill-iron. Fig. 4 is a similar view of the adjustable section of the clip-plate.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a clip plate, secured to an axle 2, by a clip 3, and provided at its front end with an eye 4. The eye is provided at its top with a transverse entrance opening 5, and has mounted within it a roll 6; and the roll is provided with a transverse recess 7, adapted to register with the opening 5 of the eye of the clip plate, whereby a transverse bar 8 of a thill iron 9, may be inserted through the opening 5, and introduced into the recess of the roller.

The thill iron is connected to a thill in any suitable manner, by bolts or the like; and it is provided with rearward extending arms 10, which carry the transverse bar 8, the latter being located at their rear terminals.

The transverse bar 8 of the thill iron is introduced into the opening of the eye 4 and the recess of the roller, when the thill is in an elevated position; and when the thill is lowered to its normal position for use, the transverse bar 8 is carried away from the opening 5 of the eye, whereby the parts are securely locked when coupled, and are absolutely prevented from becoming accidentally disconnected, when the vehicle is in use.

In order to exclude dust from the eye or bearing of the clip plate, a curved shield 11 is provided, and is connected with the clip plate and the thill by a longitudinally disposed spring 12, which has its rear end attached to the plate or shield, and its front end secured to the thill iron between the same and the thill.

When the parts are in position for use, and the transverse bar has been carried away from the entrance opening 5 of the eye, the shield is located above the opening 5, and forms a cap or covering for the same, and excludes dust therefrom, thereby greatly lessening the friction.

The roller 6 is retained in the eye of the clip plate, and held against longitudinal movement by a projection 13, extending rearward from the front of the eye 4, and located on the interior of the same, and engaging a groove 14 of the roller. The projection may be formed by a pin, or may be integral with the front portion of the eye, as desired, and the groove, which extends only a portion of the distance around the circumference of the roller, limits the rotation of the same.

The clip plate is composed of a stationary section 15, and an adjustable section 16. Each section has a horizontal shank or plate, which is located beneath the axle, and which receives the clip; and the upper section is provided with longitudinal slots 17, which permits it to be adjusted longitudinally of the lower section. The slots receive the sides of the axle clip, and by loosening the nuts of the clip, it may be moved forward to take up the wear; and the clip serves for securing the clip plate to the axle, and also for holding the upper section 16 in its adjustment.

The stationary section is provided with a rearwardly curved hook-shaped portion 18, extending upward and forming the front portion of the eye, and the upper adjustable section 16 is provided with an upward extending forwardly curved portion 19, forming the rear of the eye, and being separated from the

terminal of the portion 18 to provide the transverse entrance opening.

It will be seen that the adjustable section of the clip plate may be readily moved forward as the roller becomes worn to take up the wear, and to prevent any rattling of the parts, and that the entrance opening of the eye is closed or covered, when the parts are in use, by a shield, which excludes dust from the eye, and thereby decreases the friction, and increases the durability of the coupling.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, such as applying the improvements to poles.

What I claim is—

The combination with an axle, of a clip plate comprising a lower section provided at its front end with an upwardly extending curved portion, and an adjustable section arranged on the upper face of the lower section and having a curved front portion co-operating with that of the lower section to form an eye, the upper edges of the curved portions being separated, a curved plate or shield arranged over the space between the upper edges of the curved portions of the sections, and a spring 12 having its rear end connected with the plate or shield and extending forward and designed to be secured to the adjacent thill, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

his
CHARLES × KING.
mark

Witnesses:
HELEN E. KROMER,
P. MCCAMLEY.