

No. 662,972.

Patented Dec. 4, 1900.

D. E. RUSSELL.
THILL COUPLING.

(Application filed Apr. 12, 1900.)

(No Model.)

Fig. 1

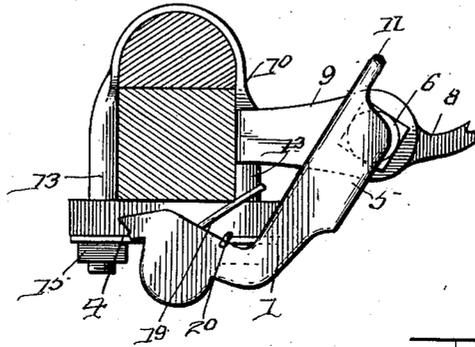


Fig. 2.

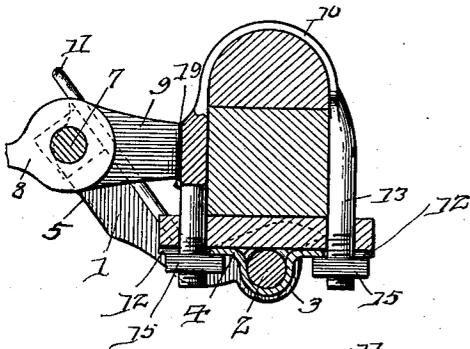


Fig. 3.

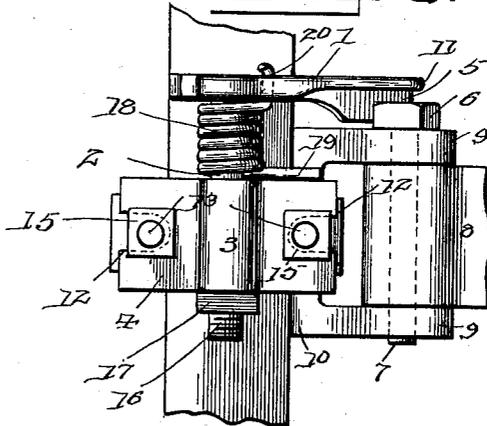
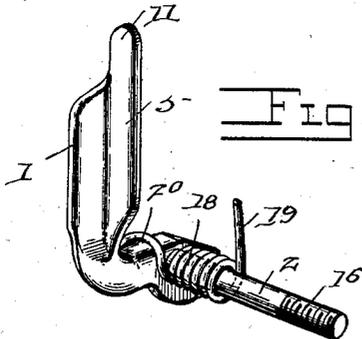


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

DANIEL E. RUSSELL, OF DUNBARTON, WISCONSIN.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 662,972, dated December 4, 1900.

Application filed April 12, 1900. Serial No. 12,612. (No model.)

To all whom it may concern:

Be it known that I, DANIEL E. RUSSELL, a citizen of the United States, residing at Dunbarton, in the county of Lafayette 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-couplings and to provide a simple, inexpensive, and efficient device adapted to be readily applied to vehicles without necessitating any alteration in the construction of the same and capable of dispensing with the nut of the ordinary coupling-bolt and of securely retaining the latter in the perforated ears and the eye of the thill-iron and of enabling the same to be readily removed to change a pair of thills for a pole, or vice versa.

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 claims hereto appended.

In the drawings, Figure 1 is a side elevation of a thill-coupling constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a reverse plan view of the thill-coupling. Fig. 4 is a detail perspective view of the device detached.

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

1 designates a substantially L-shaped locking-arm designed to be arranged at one side of an axle-clip, as illustrated in the accompanying drawings, and preferably provided with an integral pintle 2, which is arranged in a bearing 3 of a plate 4. The L-shaped locking-arm is provided with a flanged front portion 5, substantially L-shaped in cross-section and adapted to fit against the outer face of the head 6 of a pivot bolt or pin 7 and against the rear edge of the head, whereby the bolt or pin is securely retained in the eye 7 of the thill-iron 8 and in the perforations of the ears 9 of an axle-clip 10. One of the flanges of the front portion 5 of the L-shaped locking-arm is extended to form a

thumb-piece 11, which projects above the adjacent perforated ear and is adapted to be readily pushed backward by the operator. 55

The bearing-plate 4 is provided at its ends with longitudinal slots or bifurcations 12 to receive the depending portions 13 of the axle-clip, and the said plate 4 is secured to the lower face of the clip-plate 14 by the nuts 15 of the axle-clip. The slots of the bearing-plate permit the latter to be readily applied to axles of different widths. 60

The pintle 2, which extends through the bearing 3 of the plate 4, has its outer end 16 threaded for the reception of a nut 17, and its inner portion projects beyond the bearing-plate to offset the locking-arm therefrom to arrange the same in the plane of the head of the bolt or pin 7. The inner portion of the pintle receives a coiled spring 18, which is adapted to hold the locking-arm in engagement with the head of the bolt or pin and which is adapted to throw the locking-arm forward when it is released by the operator after having been drawn backward. The inner end of the coiled spring is extended to form an arm 19, which engages the lower face of the axle at the front edge thereof, and the outer end of the spring is extended and bent to form a hook-shaped arm 20, which engages the locking-arm 1 at a point in advance of the pintle, as clearly illustrated in Figs. 1 and 3 of the drawings. When the locking-arm is swung backward against the action of the coiled spring, the pivot bolt or pin is released and may be readily removed to permit the thill or coupling-arm to be readily connected to or detached from the axle-clip. By this construction a pair of thills or a pole may be readily coupled to and uncoupled from a vehicle, and there is no liability of the locking-arm accidentally releasing the coupling bolt or pin. The L-shaped locking-arm extends rearward beyond the pintle 2, as clearly illustrated in Fig. 2, and it is adapted to engage the lower face of the axle to limit the forward or downward swing of the front portion of the L-shaped arm when the thill or coupling iron is removed. 100

It will be seen that the device is exceedingly simple and inexpensive in construction, that it is strong and durable and adapted to be readily applied to a vehicle without

changing the axle-clip or the thill-iron, and that it obviates the necessity of employing a nut for the coupling-bolt. It will also be apparent that the slotted bearing-plate is adapted to be readily secured to an axle by the nuts of the axle-clip and that the slots permit it to be applied to axles of different widths.

What is claimed is—

1. A device of the class described comprising a bearing-plate designed to be arranged beneath the axle-clip of an axle and provided at its ends with openings to receive the sides of the said axle-clip, and a spring-actuated locking-arm located at one side of the axle-clip and arranged to engage the head of a bolt or pin and provided with a pintle disposed transversely of the bearing-plate and arranged in the bearing of the same, substantially as described.

2. A device of the class described comprising a bearing-plate provided at its ends with openings to receive the sides of an axle-clip and having a bearing between the same, and the approximately L-shaped locking-arm, arranged to engage the adjacent end of a bolt or pin and provided with a pintle arranged in the bearing of the bearing-plate, substantially as described.

3. A device of the class described comprising a bearing-plate provided at its ends with slots to receive the sides of an axle-clip and having an intermediate bearing portion, and a spring-actuated locking-arm located at one side of the axle-clip and provided with a transverse pintle extending through the intermediate bearing of the said plate and having a nut, substantially as described.

4. A device of the class described comprising a bearing-plate designed to be arranged

beneath the clip-plate of an axle-clip, the locking-arm located at one side of the axle-clip and adapted to engage the head of a bolt or pin and provided with a pintle arranged in the bearing of the said plate, and a coiled spring disposed on the pintle and provided at its inner and outer ends with arms, the inner arm being arranged to engage the axle, and the outer arm being hook-shaped and engaging the said locking-arm, substantially as described.

5. A device of the class described comprising a substantially L-shaped locking-arm having a flanged outer portion and provided with an extension, a pintle extending from the inner portion of the locking-arm, a bearing-plate adapted to receive the pintle and provided with openings for the reception of the sides of an axle-clip, and a coiled spring disposed on the pintle and engaging the locking-arm, substantially as described.

6. In a device of the class described, the combination with an axle, an axle-clip, a bearing-plate secured to the lower face of the clip-plate of the axle-clip, a locking-arm located at one side of the axle-clip and provided at its rear portion with a transverse pintle mounted on the bearing-plate, the rear end of the locking-arm being arranged to engage the lower face of the axle, and a spring mounted on the pintle and adapted to throw the front portion of the locking-arm forward, 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.

DANIEL E. RUSSELL.

Witnesses:

G. A. MARSHALL,
ROBT. L. WOOD.