W. B. OWEN & E. J. McCLINTOCK.

THILL-COUPLING.

No. 188,663. Patented March 20, 1877.

Fig. 1.

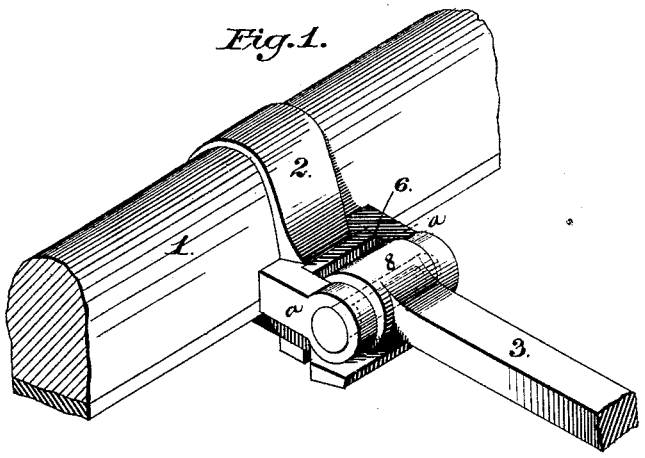


Fig. 2.

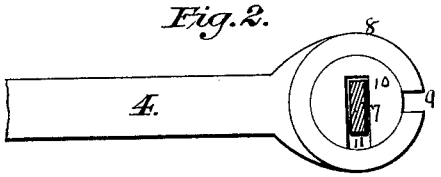


Fig. 3.

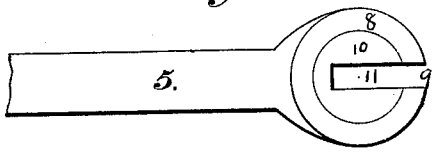
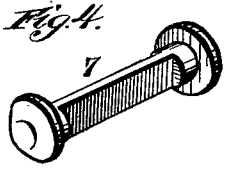


Fig. 4.



Attest:
James He. Conklin
Jos. Hathaway

Inventors:
W. B. Owen,
E. J. McClintock
Gilmore Smith & Co.
Attys

UNITED STATES PATENT OFFICE.

WILLIAM B. OWEN AND ELIAS J. McCLINTOCK, OF EAST SAGINAW, MICHIGAN.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **188,663**, dated March 20, 1877; application filed July 12, 1875.

To all whom it may concern:

Be it known that we, W. B. OWEN and E. J. McCLINTOCK, of the city of East Saginaw, in the county of Saginaw and State of Michigan, have invented a new and useful mode or plan for attaching and detaching the shafts and poles or tongues to and from all kinds of vehicles drawn by horses or other animals, and for launching life or other boats from ship's deck or other places of rest; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a vehicle-axle to which our improved thill-coupling is represented as attached. Figs. 2 and 3 are detail views, and Fig. 4 is a front view of the flat bolt by means of which the parts are attached.

Our invention relates to improvements in thill-couplings; and consists in attaching to the inner end of the shaft a slotted cylinder, which receives a concentric slotted revolving barrel, the slots in the cylinder and barrel registering with each other, when the shaft is vertical, by engaging with a flat stationary cross-bolt in the shaft attachment, the barrel being revolved by the flat cross-bolt as the shaft is brought into a horizontal position, the slots only registering when the shafts are vertical, whereby the shafts are securely coupled to the axle, and can readily be removed from, or attached thereto, as hereinafter more fully set forth.

In the accompanying drawings, the number 1 represents a portion of a vehicle-axle provided with a clip or shackle, 2, of ordinary construction, to the heads *a* of which the stationary flat bolt 7 (seen in Figs. 2 and 4) is securely attached. The number 3 represents a part of a vehicle-shaft, to the rear end of which is attached the hollow cylinder 8, provided with a slot, 9, adapted to receive the upper edge, or one of the smaller faces, of the stationary flat bolt 7. 10 represents a revolving barrel, provided with a slot, 11, which is received in the opening or hollow of the cylinder 8, and freely revolves therein. 6 represents a piece of rubber placed in the opening in the shaft attachment, between the cylinder and rear face of the opening in said attachment, to prevent longitudinal movement of the shaft and rattling.

The operation of the parts, in connecting and disconnecting the shafts, is as follows: In coupling, the shafts are held in a vertical position, the slots 9 and 11 in the cylinder and barrel registering, when the slots are passed over the upper and smaller face of the flat stationary bolt engaging therewith. The shafts are then turned down into a horizontal position, the flat bolt causing the barrel to turn in its seat in the cylinder, whereby the slots are no longer in register, and the coupling is complete. To disconnect the shafts, they are turned upward into a verticalposition, the flat bolt turning the revolving barrel until its slot registers with the slot in the cylinder, when the shafts can readily be disconnected.

It will be seen that as the shafts cannot assume a vertical position when an animal is harnessed thereto, and that the slots in the cylinder and barrel are never in register, excepting when the shafts are vertical, there is no liability of the uncoupling of the shafts in driving.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The shaft 3, provided at its inner end with the slotted cylinder 8, in combination with the revolving slotted barrel 10 and flat bolt 7, substantially as described, and for the purpose set forth.

W. B. OWEN.
E. J. McCLINTOCK.

Witnesses:
JAMES H. CONKLIN,
J. E. HATHAWAY,
L. C. DRIGGS,
R. Z. SMITH.