A. E. KIMBERLY.
Thill-Coupling.

No. 208,400. Patented Sept. 24, 1878.

Fig. 1.

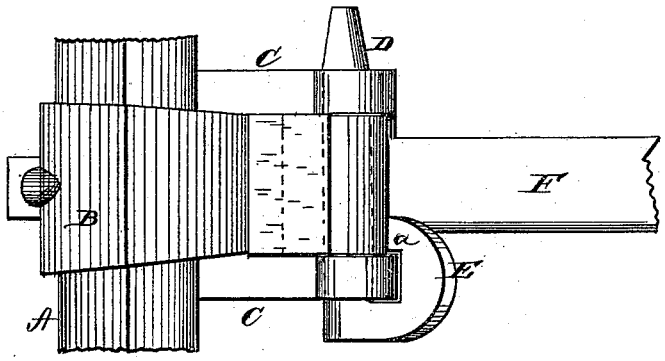


Fig. 2.

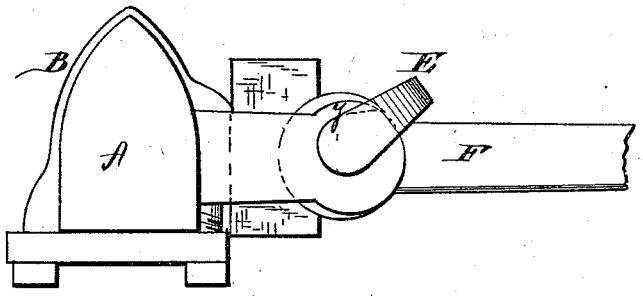
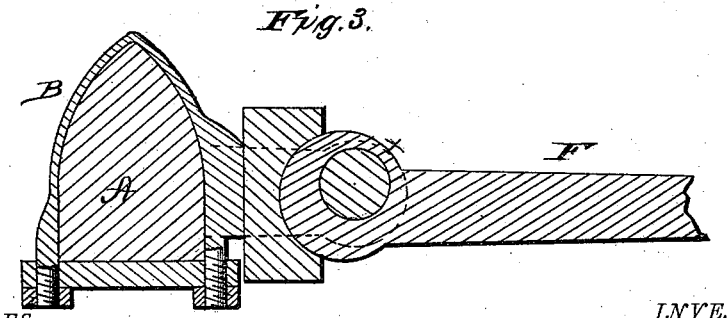


Fig. 3.



WITNESSES
A. L. Durand

By

INVENTOR
A. E. Kimberly
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UNITED STATES PATENT OFFICE.

AMOS E. KIMBERLY, OF WEST LIBERTY, IOWA, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO GUSTAVE BURKART AND Z. N. KING, OF SAME PLACE.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **208,400**, dated September 24, 1878; application filed June 26, 1878.

To all whom it may concern:

Be it known that I, AMOS E. KIMBERLY, of West Liberty, in the county of Muscatine, and in the State of Iowa, have invented certain new and useful Improvements in Thill-Couplings; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction of a clip for securing shaft-irons to vehicles, as also in the construction of the pin or bolt which is used in connection with same, as will be hereinafter more particularly described.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawings, making part of this specification, Figure 1 is a plan view; Fig. 2, a side view, and Fig. 3 a section in line of the shaft-iron.

In the figures, A represents the axle of a vehicle; B, the clip, and C C the arms of said clip; F represents the shaft-iron, and D represents the pin or bolt which connects the shaft-iron to the arms of the clip.

The parts are made in the ordinary manner, except as follows: The bolt is made with a hooked end, E, at its head, having upon it a shoulder, *a*. The end of the shaft-iron has the opening cut through it to receive the bolt in such manner that the metal will be thinner on one side than the other, as seen at *x*, Fig. 3. One arm of the clip is formed in a similar manner, the metal being thinner upon its upper side than upon its lower, at the point where the opening is formed to receive the bolt, as seen at *y*, Fig. 2. The hook upon the bolt is made just long enough so that its shoulder at *a* will catch on the inner face of one of the arms. When the shaft-iron is raised to almost a perpendicular position, the thin side of the shaft-iron and the thin side of the clip-arm are in line or in close proximity. In this position the bolt is inserted, and then, as the shaft is lowered into a horizontal position, the bolt-head catches upon the clip-arm and is there retained.

It will readily be seen that the moment the two thin portions of the arm and the shaft-iron change positions the bolt cannot be removed, and not until they assume the same positions again. This is a cheap and secure fastening.

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

The combination of the shaft-iron F, with reduced portion, *x*, clip B, and arms C C, having the reduced portions *y*, and the bolt D, with hooked head E, having the shoulder *a*, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of May, 1878.

AMOS E. KIMBERLY.

Witnesses:

H. H. MUND,

H. W. HIGGINS.