E. J. WATSON.

Thill Coupling.

No. 87,311. Patented Feb. 23, 1869.

Fig. 1.

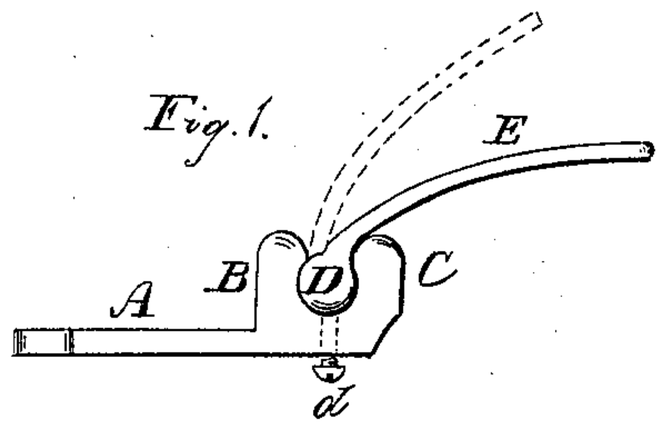


Fig. 2.

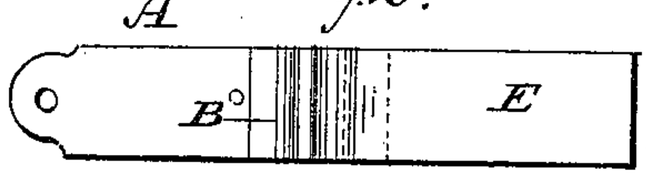
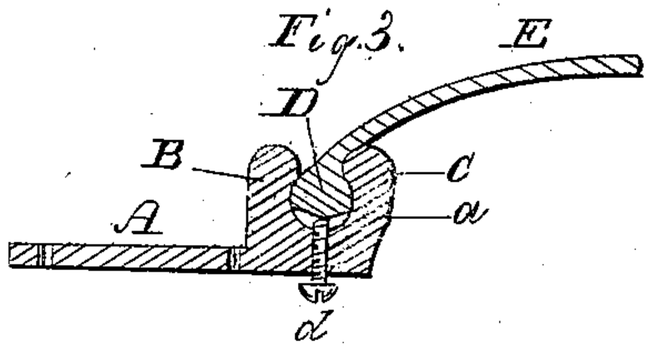


Fig. 3.



Witnesses

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EDWARD J. WATSON, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO HIMSELF AND GEORGE A. RUBY, OF SAME PLACE.

Letters Patent No. 87,311, *dated February* 23, 1869.

IMPROVED THILL-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDWARD J. WATSON, of Bridgeport, in the county of Fairfield, and State of Connecticut, have invented a new Improvement in Carriage-Shackles; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view,

Figure 2, a top view, and in

Figure 3, a longitudinal central section.

This invention relates to an improvement in the means of attaching the shafts or pole to carriages, the article known to the trade as carriage-shackles, the object being to produce a shackle without bolts or other equivalent removable parts; and

The invention consists in forming, upon the clip or device for attachment to the axle, two ears, the space between the two, transversely across the shackle, being formed to receive the cylindrical end of the thill-iron, and so that the said cylindrical end may be turned freely, to raise or lower the shafts, and the two parts secured together by a set-screw, which holds the thill-iron in place, while it permits its free movement.

To enable others to fully understand my improvement, I will proceed to describe the same as illustrated in the accompanying drawings.

A is the clip, or equivalent means, for attachment to the axle, having formed thereon two ears, B and C, the space between the two ears bored or worked out to form a seat for the cylindrical end, D, of the thill-iron E, the said end, D, being fitted so as to pass transversely into its seat, or withdrawn, as denoted in red, fig. 2, and, when inserted into its seat, may be freely raised or lowered, as denoted in fig. 1, the cylindrical part D turning freely in its seat.

To secure the thill-iron in place, I form, upon the under side of the cylindrical end or head D, a recess, *a*, as seen in fig. 3, and through the shackle I place a set-screw, *d*, which, when the thill-iron is in proper position, is screwed up into the recess, as denoted in fig. 3, and thus prevent the transverse movement of the thill-iron.

To remove the shafts or thill-iron, loosen the set-screw.

I am aware of the patent granted to H. R. Hoagland, July 9, 1867, for thill-attachment, but do not wish to be understood as broadly claiming anything embraced in the invention of the said Hoagland. In that patent, the transverse slot through one of the cheeks, and the peculiar construction of the thill-iron, so as to work in the said transverse slot, are entirely avoided in the construction, as herein shown and claimed.

Having fully described my invention,

What I claim as new and useful, and desire to secure by Letters Patent, is—

The herein-described carriage-shackle, as an improved article of manufacture, consisting of the thill-iron E, constructed with its cylindrical head D, and a corresponding coupling formed by the two ears B and C, and combined with the set-screw *d*, substantially as and for the purpose set forth.

E. J. WATSON.

Witnesses:

JOHN H. SHUMWAY,

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