

C. A. BALL.  
 THILL-COUPLING.

No. 195,077.

Patented Sept. 11, 1877.

Fig. 2.

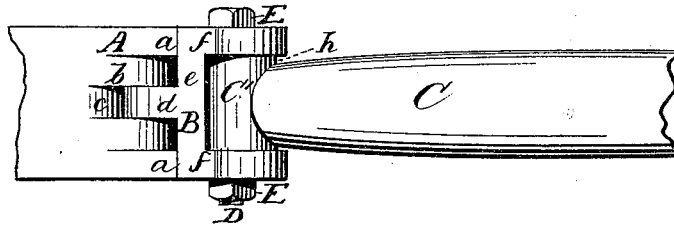


Fig. 1.



Fig. 3.

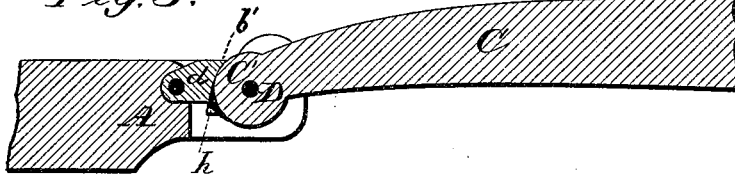


Fig. 4.

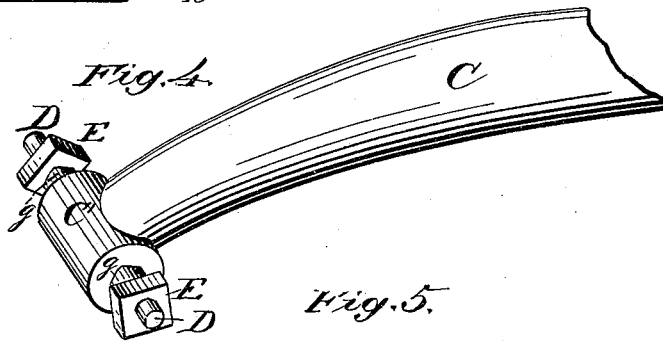
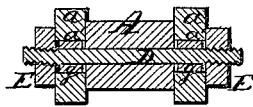


Fig. 5.



Attest:

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# UNITED STATES PATENT OFFICE.

CHARLES A. BALL, OF WELLSVILLE, NEW YORK.

## IMPROVEMENT IN THILL-COUPINGS.

Specification forming part of Letters Patent No. **195,077**, dated September 11, 1877; application filed August 3, 1877.

*To all whom it may concern:*

Be it known that I, CHARLES A. BALL, of Wellsville, in the county of Allegany and State of New York, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation, showing the thill in place in the coupling, with the latch down. Fig. 2 is a top plan. Fig. 3 is a longitudinal section. Fig. 4 is a perspective view of the thill or shaft detached from the coupling, and Fig. 5 is an axial section of the head of the thill inserted in the coupling-box.

Similar letters of reference indicate corresponding parts in all the figures.

My invention relates to certain improvements in thill-couplings; and it consists in the construction and arrangement of parts, which I shall now proceed more fully to describe, with reference to the drawing, in which—

A is the box or coupling proper, which consists of two side pieces, *a a*, and a central block, *b*. The latter has a vertical slot, *c*, in which is pivoted the tongue or ear *d* of the latch B. This latch consists of a cross-piece, *e*, beveled on its under side, with two slightly-projecting wings or side pieces, *f f*, which are left square, and each of which has a curved recess on that side which works or bears against the rounded corners of box A. The side pieces *a a* are extended to form bearings for the thill C, the head of which, *C'*, fits in between these bearings, as shown in Fig. 2. D is a pin or bolt which passes centrally through the cylindrical head *C'* of the thill, projecting on each side. On these projections are inserted boxes *g g*, one on each side of the head, which rest in the bearings *a'* of the side pieces *a a*. E E are the nuts, screwed upon the ends of bolt D, one on each side, to hold the thill-boxes *g* in place.

From the foregoing description, taken in connection with the drawing, the operation of this invention will be readily understood.

To insert the thill in the coupling, latch B

is raised, as shown in dotted lines in Fig. 1, when the head *C'* may be readily slipped down into recess *h* between the side pieces *a a* of the coupling, and the boxes *g g* inserted in the bearings *a' a'*, after which the hinged latch is again turned down into its locked position.

The beveled face *b'* of the latch will curve up around the head *C'*, as shown in the sectional view, Fig. 3, while the wings *f f* will bear against the boxes *g g*, and prevent backward motion of these. The concave side of the wings *f f*, fitting into the convex corners of box A, will prevent latch B from jumping out of its seat by the motion of the vehicle, the thill being kept firmly in the coupling without jarring or rattling.

My improved coupling can be operated in a moment by any one, and tedious delays to couple or uncouple the thills are absolutely and entirely obviated.

The construction is so simple that the coupling cannot get out of order, and it can be manufactured at a small cost from malleable or wrought iron by suitably-constructed dies and drops.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The thill C, constructed with a cylindrical head, *C'*, axial bolt D, and bearing-boxes *g g*, substantially as and for the purpose herein shown and described.

2. The thill-coupling latch B, consisting of the central pivoted ear *d*, cross-piece *e*, having beveled face *b'*, and side wings *f f*, pressing, when the latch is locked, against the bearing-boxes of the thill, substantially as and for the purpose herein shown and described.

3. The combination of the thill C, having cylindrical head *C'*, pin or bolt D, and bearing-boxes *g g*, with the coupling-box A, having recess *h* and bearings *a' a'*, and pivoted lock-latch B, all constructed and combined to operate substantially as and for the purpose herein shown and described.

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

CHARLES A. BALL.

Witnesses:

AUGUST PETERSOHN,  
JOHN M. RICHARDS.