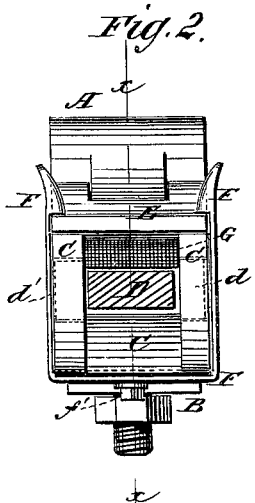
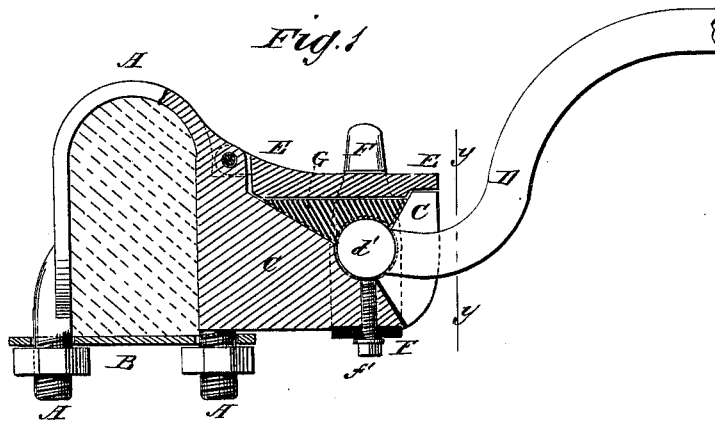


R. HOUGHTALING.
Thill-Coupling.

No. 213,424.

Patented Mar. 18, 1879.



WITNESSES:

Francis McArdle.
C. Sedgwick

INVENTOR:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

RILEY HOUGHTALING, OF GREAT VALLEY, NEW YORK.

IMPROVEMENT IN THILL-COUPINGS.

Specification forming part of Letters Patent No. **213,424**, dated March 18, 1879; application filed October 23, 1878.

To all whom it may concern:

Be it known that I, RILEY HOUGHTALING, of Great Valley, in the county of Cattaraugus and State of New York, have invented a new and useful Improvement in Thill-Couplings, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved coupling taken through the line *x x*, Fig. 2. Fig. 2 is a front view of the same, the thill-iron being shown in cross-section through the line *y y*, Fig. 1.

Similar letters of reference designate corresponding parts.

The object of this invention is to furnish an improved coupling for connecting thills or a pole to the axle of a vehicle, which shall be so constructed that the thills or pole may be easily and quickly attached and detached, which will hold the thills or pole securely, will prevent all noise or rattling, and which at the same time shall be simple in construction, strong, and durable, not being liable to break or get out of order.

A represents the bow, and B the yoke, of an axle-clip, which are secured to the axle in the usual way. Upon the forward arm of the bow A is formed a block or projection, C, in the upper side of which is formed a deep notch made with its forward side sharply inclined, and with its rear side longer and less steep. The bottom of the notch in the block C is rounded out or made cylindrical in form, to form a seat for the cylindrical cross-head *d'*, formed upon the end of the thill-iron D.

The upper part of the forward end of the block C is slotted vertically to receive the thill-iron D, the bottom of the said slot being made inclined, as shown in Fig. 1, to give the said thill-iron D sufficient play.

To the upper side of the inner end of the block C is hinged the inner end of the cover E, the lower side of which is made of such a

form as to fit into the notch in the upper side of the block C, and has a cylindrical notch formed in its angle to fit upon the upper side of the cylindrical cross-head *d'* of the thill-iron D.

To the under side of the forward part of the block C is secured, by a screw, *f'*, the middle part of the U-shaped steel bar F, the arms of which extend up along the sides of the block C and cover E.

The ends of the arms of the steel bar or spring F rise a little above the cover E, and have shoulders formed upon their inner sides to catch upon the upper side of the said cover E, and thus lock it closed.

With this construction the cover E can be raised, and the thill-iron put in and taken out by pressing the spring-catches F back with thumb and finger, or with a suitable instrument.

In the angular lower side of the cover E is formed a dovetailed groove, into which is fitted a dovetailed block, G, of rubber, to press upon the upper side of the cross-head *d'* of the thill-iron D, and thus prevent any noise or rattling.

I am aware that it is not new to use a hinged lid pressed on the rubber by a spring-held ferrule, or by a spring operating against a rear lip of the lid; but

What I claim as new is—

1. The combination, with a hinged cover, E, of the U-bar F fastened under projection C, and having a catch on the end of each of two spring arms that extend above the cover, as and for the purpose specified.

2. The rubber pressure-block G of a thill-coupling, fitted into a dovetailed groove of the lower part of the cover E, as shown and described.

RILEY HOUGHTALING.

Witnesses:

EDWIN S. KING,
EDWIN D. NORTHROP.