T. W. CHAPMAN & E. KING.

Thill-Coupling.

No. 208,512. Patented Oct. 1, 1878.

Fig. 1.

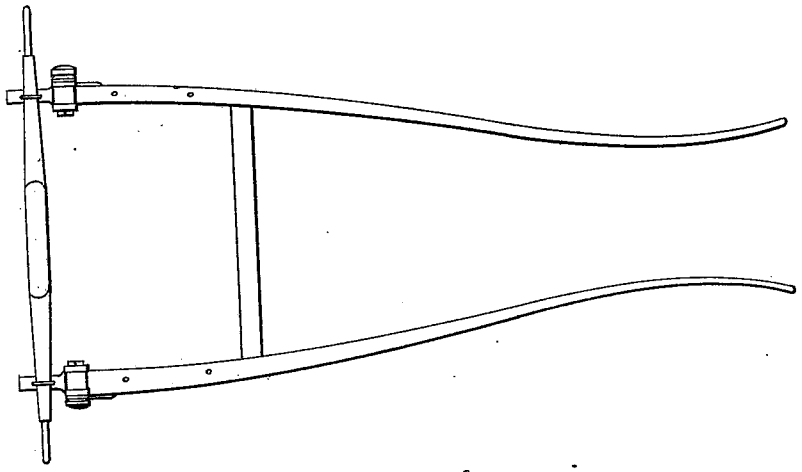


Fig. 2.

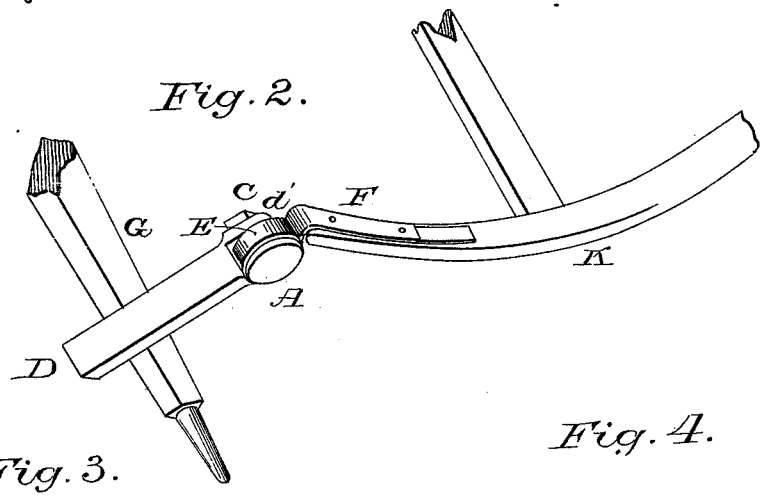


Fig. 3.

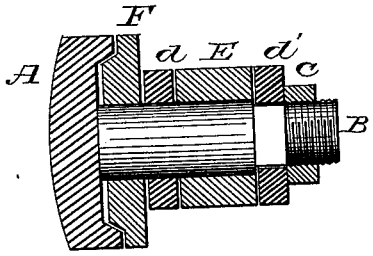
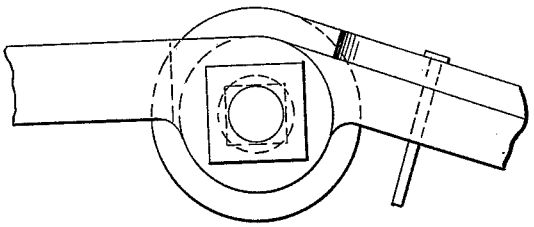


Fig. 4.



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UNITED STATES PATENT OFFICE.

THERON W. CHAPMAN AND ELISHA KING, OF WATERBURY, CONNECTICUT.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **208,512**, dated October 1, 1878; application filed July 29, 1878.

To all whom it may concern:

Be it known that we, THERON W. CHAPMAN and ELISHA KING, both of the city of Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Thill-Supporter and Clip, which improvement is fully set forth and described in the following specification:

In the accompanying drawing, Figure 1 is a plan of wagon-axle and thills with our thill-supporters and clip attached. Fig. 2 is a perspective view from beneath of a portion of the axle and one thill with our thill-supporter and clip attached. Fig. 3 is a longitudinal section of the thill-supporter and clip, and Fig. 4 is a side view of the same.

The object of our invention is to furnish a device which, being attached to the thills and axle of a wagon, carriage, sleigh, or other vehicle, will sustain the thills in whatever position they may be placed, at any angle with the axle, and at the same time allow the thills to be raised or lowered at will, so that while the horse is being attached to or removed from the vehicle the thills need not rest on the ground and be liable to damage, and while the vehicle is at rest the thills may be elevated as high as one desires, which machine will also hold the thills firmly enough to prevent the rattling which in vehicles now in use is obviated by the use of a rubber clip. The use of the rubber is thus dispensed with.

In the drawings, D is a straight iron bar attached to the axle, and having at one extremity two ears or rings, *d d'*, through which passes the bolt B, which bolt is driven into and made a part of the circular head or disk A, the disk and bolt being one piece. The head or disk A is a shallow shell fitted to receive the beveled ear or ring of the part F, the ear being united by a narrow neck to the rest of the piece F. The piece F is attached by a curved extension to the under side of the thill K. The piece E is attached to the thill beneath the piece F, and is provided with an ear or ring placed between the two ears or rings *d d'* of the piece D, through all of which the bolt B passes.

That part of the bolt standing in the ear or ring *d'* is made square, and the ear is fitted to receive it. C is the nut, screwed on the bolt B, which being tightened causes the beveled ear of the piece F to press upon the shallow shell or head A. The friction of the beveled ear in the shell A is regulated by this nut.

When the thills are raised or lowered, the bolt B with its head A is held immovable by the ear *d'*, (a part of the piece D, which piece is fixed to the axle,) which is made square to receive the square part of the bolt B, and the pieces F and E being attached to the thills move on the bolt B, and the ear of the piece F moves in the head A, and when the thill is left at any angle with the axle the pressure of the ear of the piece F in the head or disk A prevents further motion of the thill up or down without the application of external force. A light movement of the hand is sufficient to raise or lower the thills, the quantity of force necessary to move them depending upon the nut C.

It will be seen that thus a person will have perfect control over the thills, that they will remain at whatever angle with the axle he desires to place them, that his horse will not continually be stepping on the shafts, and that when harnessing alone he will have both hands free to manage his horse.

It will also be seen that the rattling of shafts will be prevented, and that even should they rattle the mere tightening of the nut C affords the remedy. It is evident, too, that each thill must have attached to it the above-described supporter.

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

The combination of the bolt B, disk A, nut C, bar or strap D, with its ears or rings *d d'*, piece F, with its beveled ear, and piece E, with its ear or ring, substantially as described, and for the purposes set forth.

THERON W. CHAPMAN.
ELISHA KING.

Witnesses:
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