(No Model.)

H. SCHITLER.

THILL COUPLING.

No. 346,503. Patented Aug. 3, 1886.

Fig. 1.

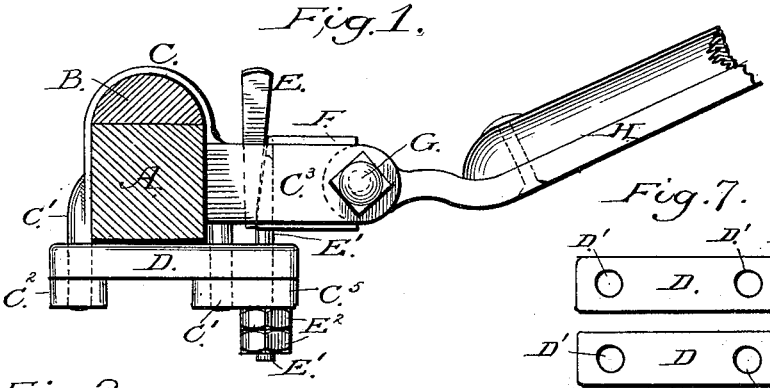


Fig. 7.

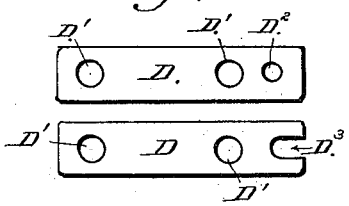


Fig. 2.

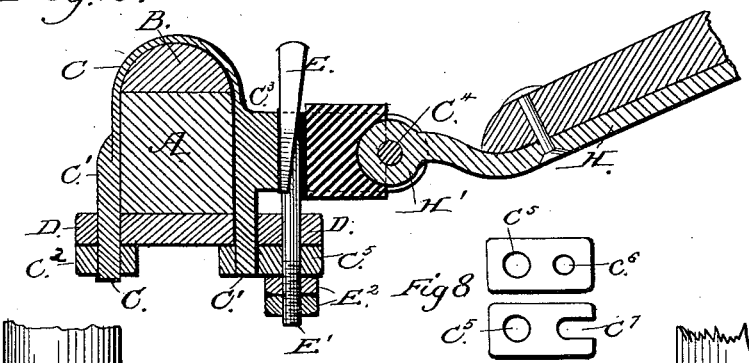


Fig 8

Fig. 3.

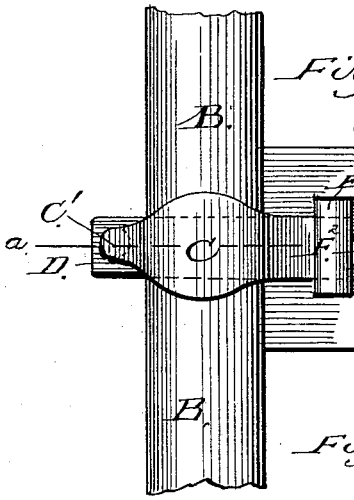


Fig. 4.

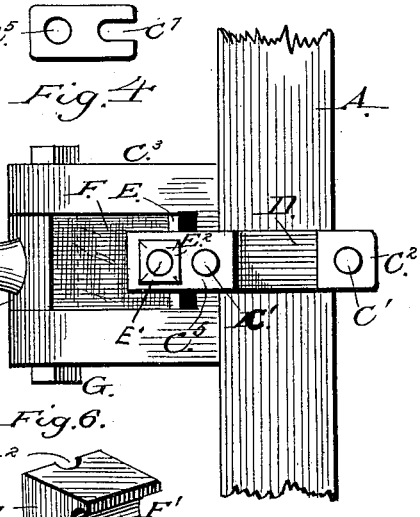


Fig 5

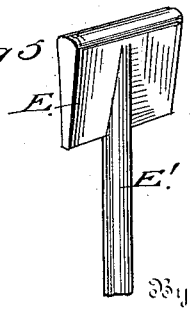
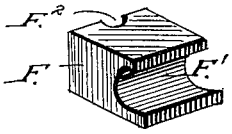


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

HIRAM SCHITLER, OF READING, PENNSYLVANIA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 346,503, dated August 3, 1886.

Application filed November 28, 1885. Serial No. 184,146. (No model.)

To all whom it may concern:

Be it known that I, HIRAM SCHITLER, a citizen of the United States, residing at the city of Reading, county of Berks, State of Pennsylvania, have invented a new and useful Improvement in Anti-Rattler Thill-Couplings, of which the following is a specification.

This improvement is more particularly related to the ordinary thill-couplings in use upon the carriages of the present day.

The object of the improvement is to furnish to carriage-manufacturers and owners thereof the means of converting at a very moderate cost the loose and noisy thill-couplings of their carriages to positive anti-rattlers, and their subsequent retention as such by an occasional attention thereto.

The practical objection to all anti-ratttlers for thill-couplings with which I am conversant is that they are either impracticable, excessive in cost, or become non-operative after a short use of the same. It is well understood that no reliance can be placed upon springs of steel or rubber. The latter particularly, hardening and shrinking after a short exposure, loses its elasticity, and will not keep the parts in contact with each other.

The drawings herewith show fully to an expert the nature of my improvement, and the simplicity of the same, like letters of reference indicating similar parts throughout.

Figure 1 represents the improvement in full side elevation, the axle shown in section. Fig. 2 is a sectional elevation of the improvement on the line *a a* of Fig. 3. Fig. 3 is a top plan of the improved thill-coupling. Fig. 4 represents a reversed plan of the same; Fig. 5, a detached view of the wedge taken up; Fig. 6, a detached view of the anti-rattler block; Fig. 7, a plan of the tie-bar in two alternative forms of construction. Fig. 8 represents in plan two alternative forms of construction for the oblong nut.

In the drawings, A represents the axle-iron; B, the wood finish to the same; C, the usual thill-coupling clip, having the usual screw-tangs, C′, nuts C^2, and lugs C^3, perforated at C^4 for the draw-bolt. To adapt the ordinary thill-coupling clip to my improvement, I take the usual tie-bar away and replace it with a tie-bar, D, perforated at D′, to pass freely over the tangs C′ of the clip, and extend it beyond the forward tang, having it perforated at D^2, or slotted, as at D^3, to admit the shank E′ of the take-up wedge E. An oblong nut, C^5, tapped for the clip-tang, and perforated or slotted, as shown at C^6 C^7, to freely pass over the shank E′, serves, when screwed in contact and parallel with the tie-bar D, to give support and screwing room for the nuts E^2 of the wedge.

Between the clip ears or lugs C^3, I fit a wedge, E, with its inner face in contact with the clip C, and its front face in contact with a suitably-formed block, F, of wood, metal, or some elastic material. I give preference to well-seasoned hard wood. The wedge E has a shank, E′, of a length sufficient to protrude through the tie-bar D, and the oblong nut C^5, and permit the use of two or more nuts upon the shank below the same. The shank being formed integral with the wedge and in line with the back of the same, throws the principal portion of its diameter in front of the wedge. This would prevent the wedge operating upon the block F, and to secure the contact of the wedge-face therewith a vertical groove, F^2, is provided in its back, which allows the surfaces of block and wedge to come to a full bearing with each other. The forward part of the block F is grooved horizontally at F′ to fit the periphery of the thill-strap eye H′, and the block is cut of such length as to project slightly above and below the clip-lugs when in place. The thill-strap H has the usual eye, H′, and is removably held in the clip lugs or ears C^3 by a draw-bolt, G.

I have given the application of my improvement to the ordinary thill-coupling clip; but I prefer, when manufacturing for new carriages, to increase the length of the ears or lugs C^3 to a moderate extent, so as to admit of a block, F, of greater thickness between the wedge E and eye H′ than is generally attainable in the clips at present in use.

I am aware of what has been done in this line of invention, and that the extended clip-bar is not new, and that single compression-blocks have been used secured by a bolt; but I believe myself to be the first to use a non-elastic block grasping one-half of the circumference of the thill-strap eye, and in which this position is positively maintained, until the block is worn out, by an adjustable wedge, as shown. (See Patents No. 176,773, May 2, 1876,

G. W. Cogswell; No. 237,510, February 8, 1881, Albert French; and No. 319,946, June 16, 1885, Joseph H. Barker.)

To use the improvement, the several parts being provided, the clip C is placed upon the axle-iron, the tie-bar D slipped upon the shanks C′, the nut C^2 screwed up, and the oblong nut C^5 also screwed up, with its perforated or notched end C^6 parallel with or coincident with the notch D^3, or perforation D^2 of the tie-bar. The block F is then dropped within the lugs C^3 and placed with its horizontal groove F′ in contact with the eye H′. The wedge E, with its shank E′, is then dropped in the space left between the clip C and back of the block F, with the shank E′ lying within the vertical groove F^2, and protruding below the oblong nut C^5. The drawing-nuts E^2 are then run upon the shank until they contact with the nut C^5 and each other, and are screwed up until the wedge and block faces are in close contact with each other and the clip and eye, the thills being moved upon the draw-bolt while tightening up, to insure freedom of movement without rattle.

Having shown the construction, use, and advantages of my improved anti-rattler thill-coupling, I desire to claim as follows:

1. As an improvement in thill-couplings having ears C^3, extended clip-bar D, with oblong nut C^5, and thill-strap H, as described, the inflexible block F, adapted by concave F′ to the periphery of the thill-strap eye, by groove F^2 and incline back with the wedge E, having screwed shank E′ and nuts E^2, substantially as and for the purpose set forth.

2. As an improvement in thill-couplings having ears C^3 and extended clip-bar D, as described, the oblong nut C^5, having perforation C^6, whereby the same is adapted to form a seat for the nuts E^2 of the stem E′, in combination with the wedge E, inflexible block F, and thill-eye H′, substantially as and for the purpose set forth.

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