No. 610,835. Patented Sept. 13, 1898.

G. W. SPRINGER.

ANTIRATTLING THILL COUPLING.

(Application filed Dec. 1, 1897.)

(No Model.)

Fig. 1.

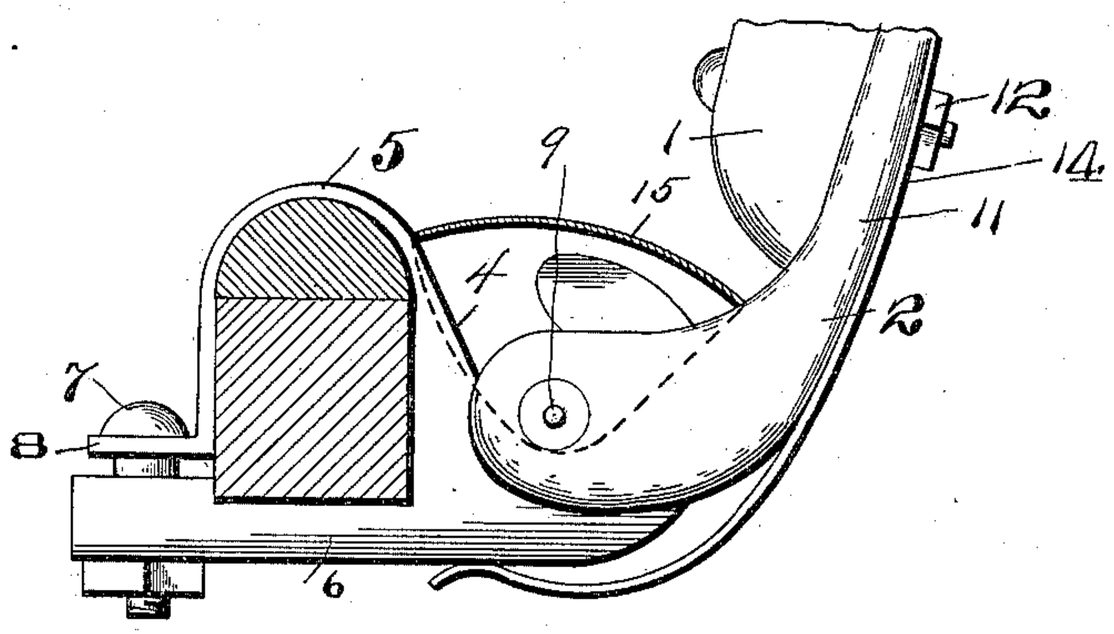


Fig. 2

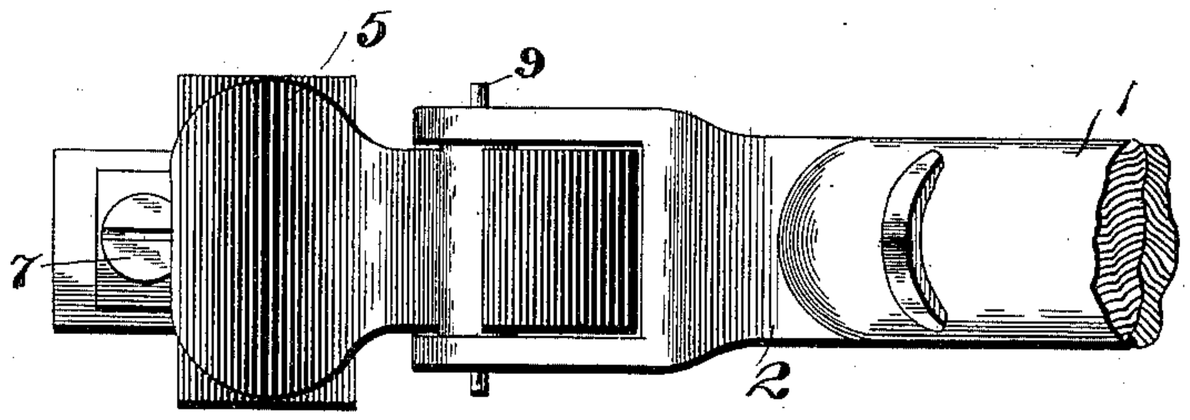


Fig. 3.

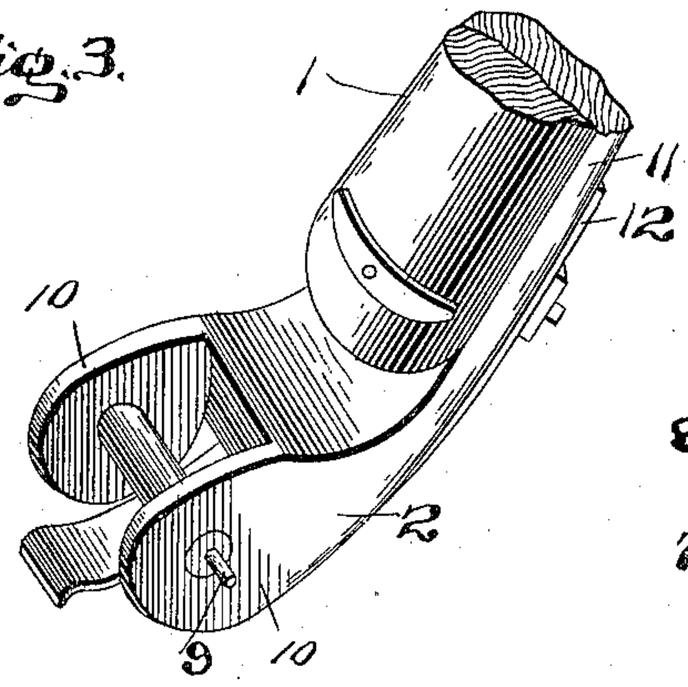
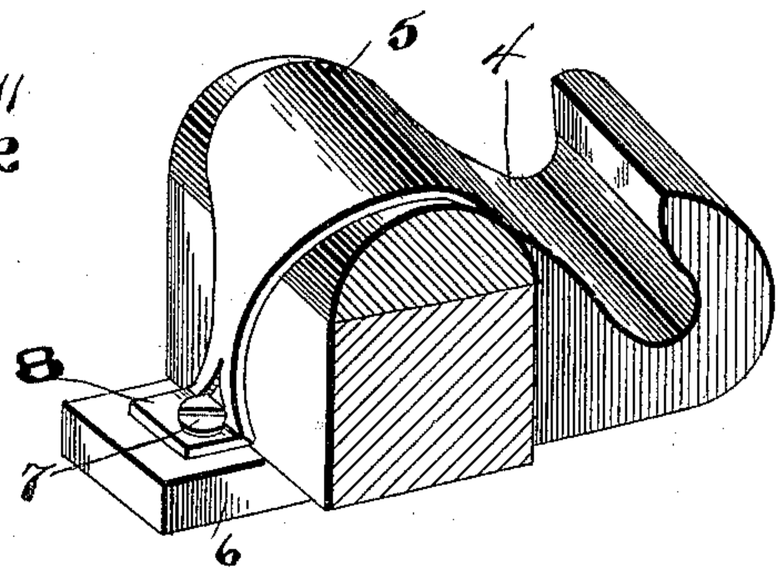


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. SPRINGER, OF INDIANAPOLIS, INDIANA.

ANTIRATTLING THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 610,835, dated September 13, 1898.

Application filed December 1, 1897. Serial No. 660,392. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SPRINGER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Antirattling Thill-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a novel antirattling thill-coupling, the primary object of the invention being to produce a device of this character which will effectually couple the thills to the vehicle in a manner to prevent lost motion between the parts and to relieve the draft-animal of the weight of the thills when hitched to the vehicle.

The invention consists in providing a thill-hook secured to the vehicle-axle by the usual metallic clip and designed to receive a transverse pin extending between a pair of ears formed at the rear extremity of the thill-iron, the parts being held against vibration and the thills being supported by a spring of peculiar form fixedly secured to the bottom of the thill-iron, the whole being constructed in detail and organized in a manner which will more fully hereinafter appear.

Referring to the drawings, Figure 1 is a side elevation of my thill-coupling complete, showing the axle in section and a portion of the thill broken away. Fig. 2 is a top plan view of the subject-matter of Fig. 1. Fig. 3 is a detail view of the thill-iron, and Fig. 4 is a similar view of the axle-clip and thill-hook.

Referring to the numerals on the drawings, 1 indicates the shaft of the vehicle, and 2 the thill-iron of my coupling. The clip member 5 consists of a hook arranged in advance of the axle and having an upwardly and rearwardly projecting bill, thus forming a forwardly and downwardly inclined throat or slot 4, defined between the hook proper and the body of the clip 5.

6 indicates the base-plate, extending horizontally under the axle, and through the rear end of which is passed a bolt 7, which engages the extremity of a strap 8, extending over the top of the axle in a manner which will be readily understood. The upper end of the slot 4 is flared by curving the extremity of the hook in order to permit the ready displacement or replacement of a pin 9, extending between a pair of ears 10, projecting in a direction nearly at right angles to the thill-iron 11 and constituting a part thereof. The thill-iron is secured to the end of the thill, as by bolts 12 or other suitable means, which likewise secure to the iron a powerful leaf-spring 14, extending rearwardly and having its free end bent to conform approximately to the exterior curvature of the hook when the thills are thrown up and are permitted to rest against the front of the vehicle in an inclined position. The extremity of the spring is snubbed or turned back to facilitate its movement from the lower face of the coupling member with which it is in contact, and it will be observed that the spring will exert a tendency to prevent the depression of the thills to a horizontal position, inasmuch as the latter will swing upon a pivotal axis concentric with the curved front face of the hook, while the free end of the spring is forced to move rearwardly in a horizontal plane as it slides along the lower horizontal face of the base-plate of the coupling member. For this reason also the thills when depressed in a horizontal position are constantly urged upwardly, but are retained in proper positions by the belly-band of the harness, the entire weight of the thills being removed from the saddle, or rather from the draft-animal.

If desirable, a rubber shield 15 may be secured at its opposite ends to the projecting extremities of the pintle for the purpose of protecting the coupling from dust, dirt, or other substance which would interfere with the proper operation of the device.

It will be observed that I have produced a simple and efficient thill-coupling which will tend to urge the thills upwardly and remove their weight from the draft-animal and which will prevent vibration or lost motion of the parts and thereby reduce the wear incident to the use of the device to the minimum.

While the construction illustrated and described appears at this time to be preferable, I do not desire to limit myself to the structural details defined, but reserve the right to

change, modify, or vary them at will within the scope of the protection prayed.

What I claim is—

In a thill-coupling, an axle-clip having a hook arranged in advance of the axle and provided with a rearwardly and upwardly inclined bill forming an oblique throat or slot, and also embodying a flat and substantially horizontal base-plate, in combination with a thill-iron comprising rearwardly-extending ears to straddle the hook, a coupling-pin connecting said ears, and a spring secured to the under side of the thill-iron and having a curved end which bears against the lower surface of the base-plate, whereby the tension of the spring is increased as the thill is lowered, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEO. W. SPRINGER.

Witnesses:
MARTIN J. DOBSON,
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