

(No Model.)

J. F. HEMPEL.
THILL COUPLING.

No. 502,491.

Patented Aug. 1, 1893.

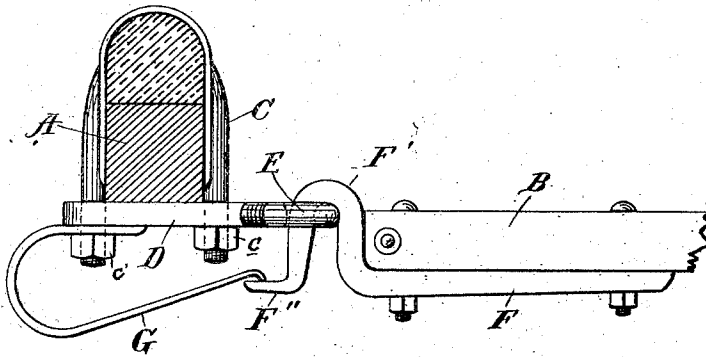


Fig. 1.

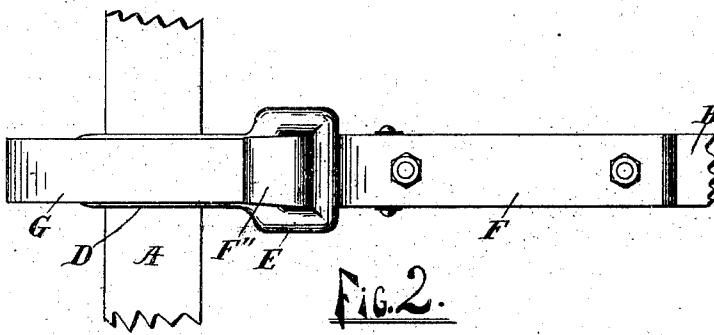


Fig. 2.

WITNESSES:

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JOHN F. HEMPEL, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR OF ONE-HALF
TO SWAN J. TURNVALL, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 502,491, dated August 1, 1893.

Application filed January 23, 1893. Serial No. 460,142. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. HEMPEL, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in 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 has relation to that class of thill-couplings in which the thill-iron has a hook at its end received by an opening in, and engaging the end of the other member of the coupling and is itself engaged by a spring projecting from said other member; and the object of my invention is to so change the details of construction of thill-couplings of this class as to simplify the construction, cheapen the cost of production, obviate the necessity of employing a clip of special construction, and to make the spring quickly and easily removable when necessary or desirable. This object is accomplished by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation; and Fig. 2 a plan view in service of a device embodying my invention.

Like letters refer to like parts in both of the figures.

A represents a portion of the forward axle of a vehicle; B a portion of one of the thills.

C is a clip of the ordinary construction embracing the axle; and D a bar which engages the limbs of the clip and is held in contact with the under side of the axle by nuts, *c*, *c'*, on the ends of said limbs. Said bar is extended forward and terminates in a suitable rectangular eye E to receive an inverted U shaped hook F' in the strap F, which strap is secured to the thill B, with said hook F' abutting against the end thereof. The rear end of said hook F' is also extended at right angles at F'' to engage the free end of a spring G, which spring extends rearward beneath the axle, and is turned upward in a semi-circular loop, and is secured by the nut *c'*, on a limb of clip C, which limb passes through said spring near its rear end, and said nut binds it against the bar D. The spring G thus

counterbalances the thill B, by pressing down upon the extension F'', the forward side of the eye E serving as a fulcrum. The coupling is also by the pressure of said spring prevented from rattling, and by the described construction I am able to quickly detach the thills without the necessity of removing bolts or pins, or using tools, by simply elevating the thills sufficiently to detach the spring G from the extension F'', then lowering the thills again and lifting the hook F' in the eye E, and lastly turning the thills toward the vertical position until the extension F'' can be passed through said eye. The thills are again attached by reversing the operation. I also have materially reduced the cost of construction of thill-couplings of the class to which this belongs, and made it possible to quickly and cheaply replace any of its parts in the event of breakage thereof.

If it is desired to remove the spring it can be accomplished without disturbing the other parts simply by removing the nut, *c'*, and slipping the end of the spring from off the end of the limb of the clip. The bar also may be removed and disengaged from the clip by first removing the nuts, *c* and *c'*, then slipping it off the limbs of the clip and finally turning it at an inclination to the hook, F, and working it off the same. When the spring is removed the device will operate as a detachable thill-coupling without the anti-rattler feature, as the extension, F'', is so located with respect to the eye, E, as to engage the under side thereof and thereby prevent accidental detachment when in use.

What I claim is—

The herein-described thill-coupling, consisting of the ordinary clip, designed to partially encircle the axle of the vehicle; a bar, designed to engage the ends of the limbs of said clip and projecting forward beyond said clip, said bar having an opening in its said projecting end; a strap, designed to be secured to the thill and having at its rear end an inverted U-shaped hook engaging the forward end of said bar, the inner member of said hook extending through the opening in said bar and being formed with a rearward extension; a loop spring, having in its rear end an opening through which a limb of the clip pro-

jects, said rear end of the spring being located
in contact with said bar and the forward end
thereof pressing against the upper side of
said extension of the hook; and nuts on the
5 ends of the limbs of the clip for removably
securing the spring, clip and bar in position,
substantially as set forth.

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

JOHN F. HEMPEL.

Witnesses:

LUTHER V. MOULTON,
LOIS MOULTON.