

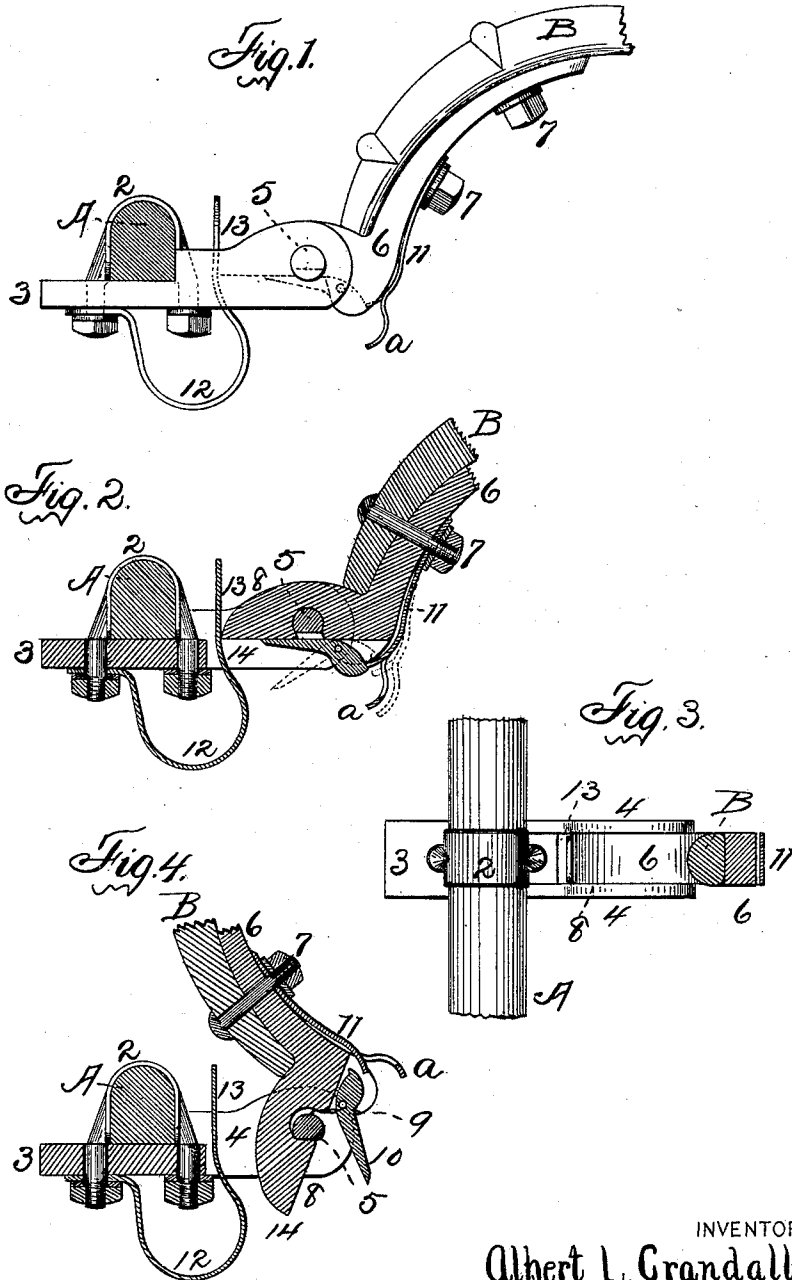
No. 609,663.

Patented Aug. 23, 1898.

A. L. CRANDALL.
THILL COUPLING.

(Application filed Nov. 26, 1897.)

(No Model.)



WITNESSES:

Charles Morrin.
Mary A. Franklin.

INVENTOR
Albert L. Crandall.

BY
Smith & Arison
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALBERT L. CRANDALL, OF PHELPS, NEW YORK.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 609,663, dated August 23, 1898.

Application filed November 26, 1897. Serial No. 659,732. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. CRANDALL, of Phelps, in the county of Ontario, in the State of New York, have invented new and
5 useful Improvements in Thill-Couplings, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to thill-couplings or shackles, and to that class in which the draw-iron hooks over the draft bolt or pin, and is of the type known as "easily detachable."

My object is to produce a thill-coupling embodying a body and means to clip it onto an
15 axle provided with a draft-pin in a plane parallel to the axle, a draw-iron slotted transversely to receive the draft-pin, a spring-latch to retain it therein, and a spring having one end secured to the axle-clip and
20 having its upward free end bearing elastically against the rear end or heel of the draw-iron to prevent its rattling, but at the same time permit said draw-iron to swing freely upon its pivot (the draft-pin) said spring retaining its engagement therewith in all positions, said iron playing up and down upon its front face, except when the thills are thrown
25 up and over against the dashboard, but immediately reengaging as soon as they are lowered again. The neck or entrance to the draft-pin slot is constricted, and the draft-pin is flattened on one side to reduce its thickness in one direction, so that it will enter said slot, but when so entered and turned
30 slightly cannot be removed until again turned into the proper position in said slot, where its diameter is less than the width of the slot.

It is constructed as follows, reference being had to the accompanying drawings, in which—

40 Figure 1 is a side elevation of the coupling made. Fig. 2 is a longitudinal section thereof. Fig. 3 is a top plan thereof. Fig. 4 is a longitudinal section showing the draw-bar turned upon the draft-pin and the latch open
45 ready for the removal of said draw-bar.

A is any ordinary axle, and 2 is a clip by which the body 3 of the coupling is secured in position under and more or less abutting

against the front of said axle. Its front end is bifurcated, creating the parallel arms 4, 50 and 5 is the draft-pin, cut away on one side substantially as shown, as upon a chord of a circle, and secured in said arms and extending across the space between them.

B is a part of a suitable thill or pole upon 55 which the draw-iron 6 is suitably secured, as by bolts 7. This is provided with a rearwardly-extending arm 8 of substantially the outline shown and having a transverse circular aperture 9 and a transverse slot open- 60 ing into it, the width of which is less than the diameter of the cylindrical part of said draft-pin and greater than its diameter through the cut-away side. A latch 10 is suitably pivoted upon said draw-iron, normally extending 65 across said slot and held there by a spring 11 engaging with its outer end and provided with a thumb-piece extension *a*, by which said spring can be sprung away and the latch opened when the draft-iron is swung into the 70 position shown in Fig. 4 for its removal from or replacing upon said draft-pin.

A spring 12, having one end secured, substantially as shown, and its free end 13 projecting up through the coupling-body and 75 normally engaging with the heel 14 of the draft-iron, operates as an antirattler.

Having described my invention, what I claim, and desire to secure by Letters Patent, is— 80

In a thill-coupling, the combination with an axle and a coupling-body secured thereon and bifurcated in its forward end, and a draft-pin across said bifurcation cut away on one side, of a draft-iron recessed and slotted 85 transversely to permit its receiving said draft-pin, a spring engaging with the heel of said draft-iron, and a spring-pressed latch normally closing said slot.

In witness whereof I have hereunto set my 90 hand this 22d day of November, 1897.

ALBERT L. CRANDALL.

In presence of—

B. F. PRICHARD,
E. F. NEEDHAM.