

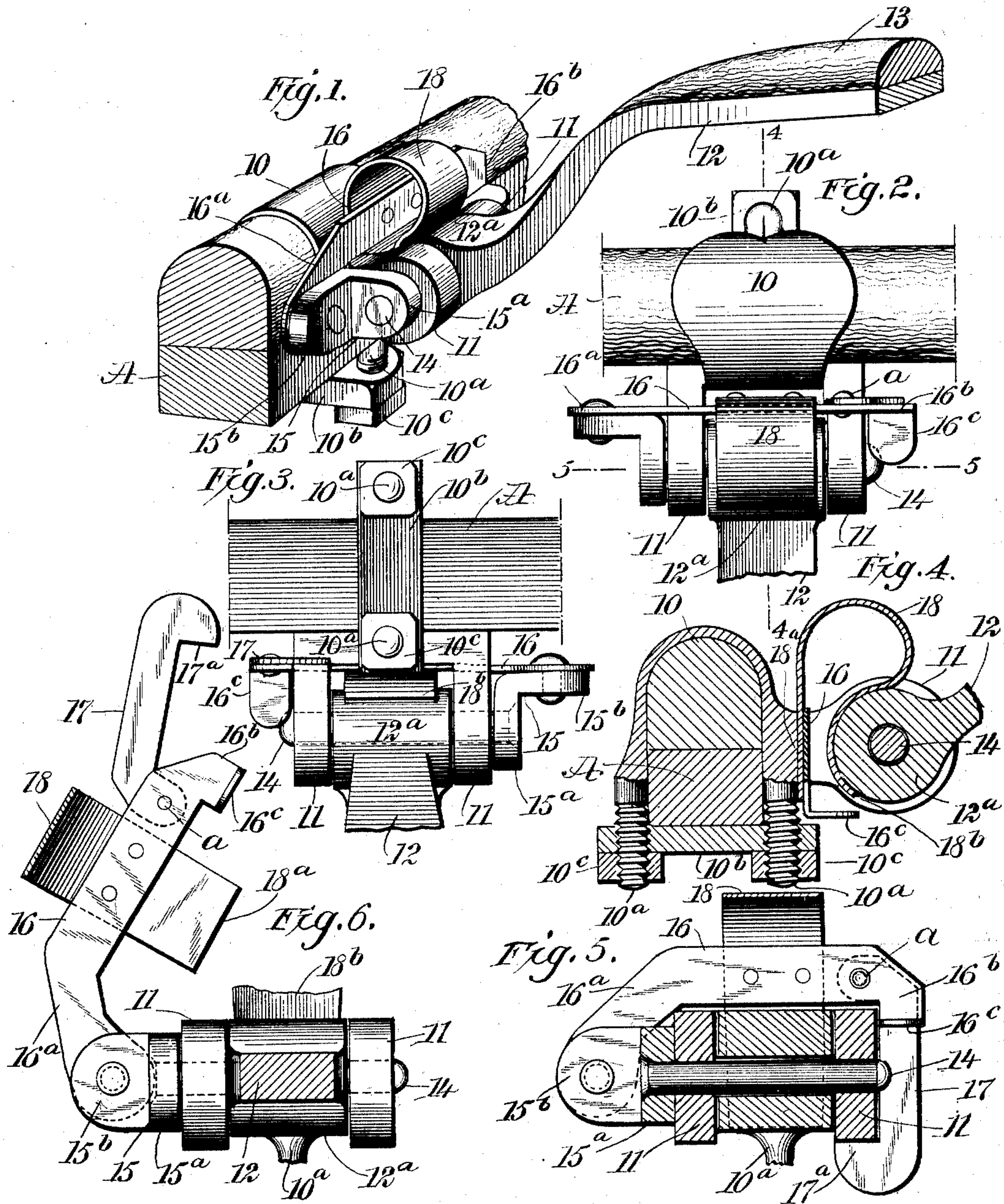
No. 759,046.

PATENTED MAY 3, 1904.

H. TURNER.
THILL OR DRAFT POLE COUPLING.

APPLICATION FILED NOV. 6, 1903.

NO MODEL.



WITNESSES:
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UNITED STATES PATENT OFFICE.

HARRY TURNER, OF KOOLUNGA, SOUTH AUSTRALIA, AUSTRALIA.

THILL OR DRAFT-POLE COUPLING.

SPECIFICATION forming part of Letters Patent No. 759,046, dated May 3, 1904.

Application filed November 6, 1903. Serial No. 180,045. (No model.)

To all whom it may concern:

Be it known that I, HARRY TURNER, a subject of the King of Great Britain, and a resident of Koolunga, South Australia, Australia, have invented a new and Improved Thill or Draft-Pole Coupling, of which the following is a full, clear, and exact description.

The object of the invention is to provide novel simple details of construction for a thill or draft-pole coupling which in duplicate affords convenient and reliable means for detachably connecting a pair of shafts or a draft-pole to the front axle of a vehicle, which will hold the thills or pole free to rock in a vertical plane, prevent rattling of the hinged parts, and permit a quick detachment and interchange of the thills or the pole connecting with the front axle of the vehicle without the use of tools.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improvement connecting an axle with a thill-iron. Fig. 2 is a plan view of the same. Fig. 3 is a reversed plan view of the coupling secured upon an axle. Fig. 4 is a transverse sectional view substantially on the line 4 4 in Fig. 2. Fig. 5 is a transverse sectional view substantially on the line 5 5 in Fig. 2, and Fig. 6 is a partly-sectional front view showing the spring-lock and latch-hook thereon in opened adjustment.

In carrying into effect the features of invention I employ as essential but not novel elements a clip-band 10, that embraces the front axle A and is provided with depending screw-cut bolt members 10^a, that pass through a transverse clip-plate 10^b, bearing on the lower side of the axle and clamped thereon by the nuts 10^c, that contact with the clip-plate, thus binding the wood and metal portions of the axle together, it being understood that two of such clip-bands and the desired attachments therefor are provided as supports for novel details that will now be described.

Above the front depending bolt member 10^a two similar joint-leaves 11 are formed integral with the clip-band 10 and project for-

wardly therefrom. Said leaves are spaced apart for the free introduction of the cylindrical boss 12^a, that is an integral portion of the thill-iron 12, which is affixed upon the rear end of a thill or shaft 13 to afford a means for connecting said shaft or thill with the improved coupling device. The leaves 11 are mainly circular on their edges and project from a vertical front wall on the clip-band 10 sufficiently to afford proper clearance-space between the boss 12^a and said front wall for the insertion and free operation of a novel antirattling device and locking means that is carried upon an end of the hinge pintle-bolt 14, which is loosely insertible in central and aligned perforations in the leaves 11 and boss 12^a, as shown clearly in Fig. 5. One end of the pintle-bolt 14 is secured in a flat ear 15^a, that is an integral member of the right-angular knee-bracket piece 15, and projects from said ear parallel with the plane of the duplicate ear 15^b, that is the remaining member of the knee-bracket 15. Upon the ear 15^b and contacting with its side that is farthest from the other integral ear 15^a one end portion of the flat rockable bracket-arm 16 is pivoted. Said arm is of metal, preferably shaped as shown in Figs. 1, 5, and 6, having an angularly-concaved lower edge and a correspondingly angular convex upper edge, which adapts the bracket-arm when the pintle-bolt 14 is inserted in the leaves 11 to project diagonally upward and toward the nearest leaf 11, as at 16^a, and thence across and above both leaves, terminating at its opposite or free end in a short depending flat shank 16^b, on the lower end of which is formed a thumb-piece 16^c, which projects forward therefrom at the outer side of the nearest joint-leaf 11.

Upon the shank 16^b an end portion of a latch-hook 17 is lapped and pivoted, as at *a*, said latch-hook being shaped as shown in Figs. 5 and 6, the hook-nose 17^a of this flat plate-like latch-hook having contact with the lower surface of the adjacent leaf 11 when the bracket-arm 16 and latch-hook 17 are together rocked into interlocking engagement with the joint-leaves 11, as shown in Figs. 1, 2, 3, and 5 of the drawings.

It will be seen that the adjustment of the

bracket-arm 16 and latch-hook 17, as shown and described, will secure the pintle-bolt 14 from accidental displacement, and this engagement is enforced by the provision of the
 5 keeper-spring 18, that retains the bracket-arm in folded adjustment and also cushions the jar sustained by the hinged connection in service. The keeper-spring 18 is formed of a
 10 strip of resilient plate metal having proper width and length and is given looped form by bending the material flatwise so as to give it a nearly semicircular shape where it is bowed, as shown in Figs. 1 and 4.

The end portion 18^a of the spring 18, that is
 15 designed for contact with the vertical wall of the clip-band 10 between the leaves 11, is extended nearly straight from the bowed portion of the same, and this member 18^a is secured upon the rear side of the bracket-arm
 20 16 at a point which will permit the free downward insertion of the spring member 18^a between the leaves 11.

From the forward downwardly-curved portion of the keeper-spring 18 the end portion
 25 18^b is extended and preferably curved to conform in shape with the cylindric contour of the boss 12^a, on which said member 18^b seats, the extremity of the latter extending from the curved portion thereof substantially parallel with the member 18^a when the keeper-spring is in position for service.

To adapt the improvement for effecting the coupled engagement of a pair of thills with the clip-bands 10 on the axle A, the bosses 12^a
 35 on the pair of thill-irons 12 are introduced between respective pairs of the joint-leaves 11, so as to aline the perforations in the leaves and bosses. The pintle-bolts 14 of the duplicate couplings are each inserted through a
 40 pair of the joint-leaves 11 and the intervening boss 12^a, as is represented in Fig. 6 by dotted lines and full lines in Fig. 5. The bracket-arms 16 on the pintle-bolts are now rocked downward, so as to dispose them transversely and above the pairs of joint-leaves 11,
 45 and to effect this adjustment the free ends of the spring members 18^a 18^b must be introduced between the bosses 12^a and the vertical walls that are between the pairs of leaves 11.
 50 The downward insertion of the members 18^a 18^b of each keeper-spring 18 compresses them toward each other, so that their tensional force is exerted upon a respective boss 12^a to prevent the slightest rattling action in case
 55 the pintle-bolts 14 become loose from wear. It will be evident that the insertion of the end portions of each keeper-spring 18 must be effected simultaneously with the downward rocking movement of the bracket-arm 16,
 60 whereon said keeper-spring is secured, so that when the bracket-arm is properly positioned across the upper edges of the paired joint-leaves 11 the members of the spring 18 will be fully inserted into the space between the
 65 clip-band 10 and the boss 12^a. The downward

folding adjustment of the bracket-arm 16 carries the latch-hook 17 into proper position above the joint-leaf 11, that is at the free end of the pintle-bolt 14, which will permit the said hook to be rocked downward and
 70 latched beneath said joint-leaf, as shown in Fig. 5, which will secure the pintle-bolt, bracket-arm, and keeper-spring in proper adjustment for service. Obviously the release of the thills may be readily effected with-
 75 out the use of an implement by rocking the latch-hooks 17 upward and then rocking the bracket-arms 16 in the same direction, the finger-piece 16^c affording a convenient projection for gripping the end of the arm to move it
 80 upward and away from the coupling device, whereupon the pintle-bolt may be withdrawn and the thill-iron released from the joint-leaves 11, which operation being identical for both couplings it is obvious the thills or shafts
 85 may be quickly and conveniently removed as occasion may require.

Slight changes within the scope of the invention may be made—as, for example, the spring-keeper piece 18 may be formed inte-
 90 gral with the bracket-arm 16 and the shape of the latch-hook 17 may be somewhat altered—without detriment to its efficiency. Hence I do not desire to limit the construction of the improved coupling device to the
 95 exact forms and proportions of details herein shown, reserving the right to vary therefrom within the spirit of the invention and scope of the claims.

Having thus described my invention, I claim
 100 as new and desire to secure by Letters Patent—

1. The combination with a clip-band, two integral joint-leaves thereon, and a boss on a shaft-iron, of a pintle-bolt that engages perforations in the joint-leaves and in the boss, a
 105 flat bracket-arm held to rock at one end upon an end of the pintle-bolt above said bolt and across the joint-leaves, and a latch-hook pivoted upon the other end of the bracket-arm, and adapted for hooked engagement with the
 110 lower edge of the joint-leaf toward which the bracket-arm is folded.

2. The combination with a clip-band, two spaced joint-leaves on one side of said clip-band, and a cylindric boss on the end of a
 115 shaft-iron, of a pintle-bolt engaging perforations in the joint-leaves and in the boss, an L-shaped knee-piece secured by one member upon one end of the pintle-bolt, a flat bracket-arm held to rock by one end on the remain-
 120 ing member of the knee-piece so as to dispose it across and above the joint-leaves, and means for holding the bracket-arm folded.

3. The combination with a clip-band having two spaced joint-leaves projected at one side,
 125 and a boss on a shaft-iron insertible between said leaves, of a pintle-bolt engaging perforations in the leaves and boss, a bracket-arm held by one end to rock at one end of the pintle-bolt, and a bowed keeper-spring having
 130

two members adapted to occupy a space between the clip-band and the boss and to expand and press upon the boss.

4. The combination with a clip-band secur-
5 able on an axle, two spaced joint-leaves pro-
jected at one side of the clip-band, and a boss
on a shaft-iron having a cylindric contour and
insertible between said leaves, of a pintle-bolt
engaging alined perforations in the joint-
10 leaves and in the boss, an L-shaped knee-piece
secured by one member on one end of the pin-
tle-bolt, a plate-metal bracket-arm pivoted by
one end upon a side of the remaining mem-
ber of the knee-piece so as to rock above and
15 fold near to the upper edges of the joint-

leaves, a bowed keeper-spring having mem-
bers that by compression toward each other
are insertible between the clip-band and the
boss, and a latch-hook pivoted upon the free
end of the bracket-arm, said hook being 20
adapted to be hooked below the joint-leaf to
which it is adjacent.

In testimony whereof I have signed my name
to this specification in the presence of two sub-
scribing witnesses.

HARRY TURNER.

Witnesses:

CHARLES ANDREW MURPHY,
R. LAWTON.