

(No Model.)

T. A. SHINN.
THILL COUPLING.

No. 382,562.

Patented May 8, 1888.

Fig.1.

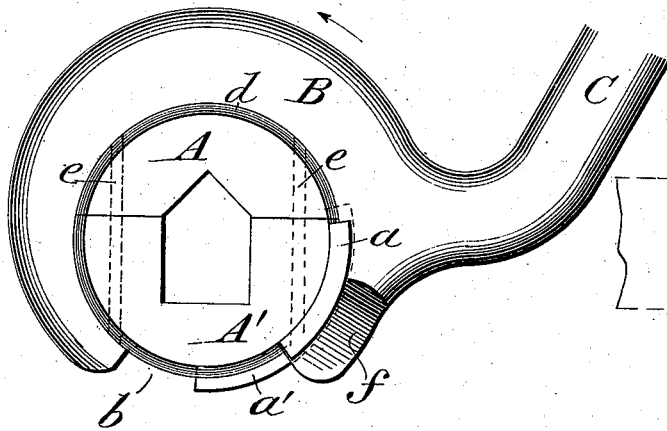


Fig.2.

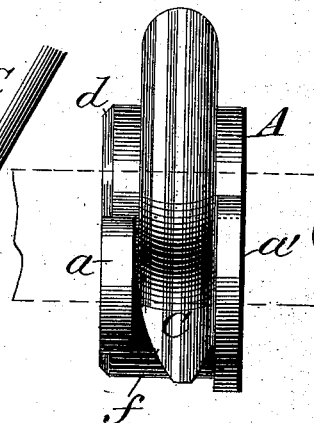


Fig.3.

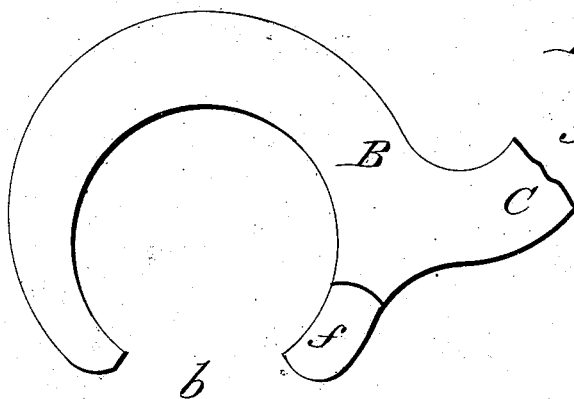


Fig.4.

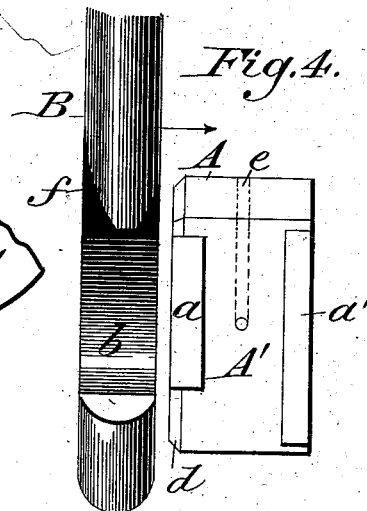
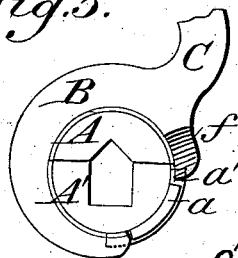


Fig.5.



Witnesses,

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UNITED STATES PATENT OFFICE.

THORNTON ARTHUR SHINN, OF COOLBAUGH'S, PENNSYLVANIA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 382,562, dated May 8, 1888.

Application filed August 17, 1887. Serial No. 247,180. (No model.)

To all whom it may concern:

Be it known that I, THORNTON ARTHUR SHINN, a citizen of the United States, residing at Coolbaugh's, in the county of Monroe and State of Pennsylvania, 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 relates to an improvement in thill-couplings or devices for fastening the shafts to the fore axle, the object being to prevent any possibility of a disconnecting of shafts and axle resulting from the ordinary jolting and shaking of the vehicle; and the invention consists in the construction and combination of parts substantially as will be hereinafter described and claimed.

In the annexed drawings, illustrating my invention, Figure 1 is a side view of my improved thill-coupling with the parts in the usual position. Fig. 2 is an edge view of the same. Fig. 3 is a side view of the ring-shaped thill-iron. Fig. 4 is an edge view of the same and likewise of the cylindrical axle-bearing, said parts being separated. Fig. 5 is a view showing the relative position of the parts when the thill is being arranged upon or removed from the axle-bearing.

Similar letters of reference denote corresponding parts throughout all the figures.

In carrying out my invention a cylindrical block is fixed at a proper point upon the axle so as to encircle the same, which passes centrally through it, said block being preferably made in two sections or halves, as A and A', and cut out at the middle point sufficiently to enable the axle to be tightly inclosed thereby when the sections are brought together on opposite sides of the axle and secured together by suitable means, as the screws *e e*. This block thus located affords a bearing for the ring-shaped thill-iron B. Said iron consists merely of a ring-shaped piece of metal having a portion of the periphery of the ring broken away at *b* to leave an open space. The thill-iron is further provided with a projection or arm, C, whereby it is attached to the shafts or stays in the usual manner. The diameter of

the ring-piece is such that the latter will fit neatly and loosely around the cylindrical block and be capable of easy movement thereon. The outer cylindrical surface of the block that affords this bearing for the ring-piece is provided with circumferential flanges *a* and *a'*, placed parallel and preferably near the edges of said surface. The flange *a* on the outer edge, or that nearest the end of the axle, is of a length approximately equal to the space broken out of the periphery of the ring B, while the other flange, *a'*, is longer and extends past flange *a* at one or both ends. Further, it will be noted that the flange *a* is fixed at such a point on the circumference of the bearing that when the ring B is being placed thereover with the space *b* inclosing said flange, as shown in Fig. 5, the thill which is attached to the thill-iron will be elevated at a great angle, as will be indicated from the position of the part C in Fig. 5. When, however, the thill has been lowered to its normal position, or changed to any of the several positions that it occupies during the movement or rest of the vehicle, except the elevated position of Fig. 5, it will be evident that the ring-piece will abut against the flange and be incapable of lateral movement off the shaft outward. The inner flange, *a'*, will keep the thill-iron from lateral movement in the other direction, for it is so positioned as to be struck by said iron when first being placed on the bearing, as will be seen by again referring to Fig. 5, and, being longer than the open space in the ring, said ring obviously can never slip past it.

In the practical construction of my device I preferably bevel the outer edge of the cylindrical block, as *d*, and likewise incline or slope off that part of the ring B adjacent to the opening and next to the arm C, as at *f*, such construction being for the purpose of facilitating an easy connection of the parts.

The arrangement of the parts of my improved thill-coupling for actual use and the operation of the device will be clearly perceived from the foregoing statement of the construction and combination of parts without need of further description.

When the thill-iron has been located upon the flanged bearing, it cannot slip therefrom,

and there will be no possibility of disengaging the shafts from the axle except when they are elevated to the extreme position hereinbefore specified, although the amount of play that the thill-irons have upon the bearings is sufficient to accommodate the shafts in any of their usual positions. As this extreme position would never be taken by the shafts without special purpose in view, it is obvious that my coupling is in all respects a perfectly safe device that cannot easily wear out.

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

1. In a thill-coupling, the combination, with a cylindrical axle-bearing provided with partially-circumferential flanges, arranged as described, of a ring-shaped thill-iron located thereon between the flanges, substantially as described.

2. In a thill-coupling, the combination, with a cylindrical axle-bearing having parallel flanges, arranged as described and shown, of a ring-shaped thill-iron broken away at one point for a distance equal to the length of one flange, and shorter than the other, to enable

the thill-iron to be placed on the bearing between the flanges, substantially as described.

3. In a thill-coupling, the combination, with a ring-shaped thill-iron having a part of its periphery broken away, of a cylindrical axle-bearing having flanges thereon of such length and so positioned as to permit the thill-iron to be placed thereon when the shafts are elevated and prevent its removal at all other times, substantially as described.

4. The combination, with a cylindrical bearing, beveled at *d*, of a ring-shaped thill-iron, B, broken away at *b*, having arms C, and beveled at *f*, substantially as described.

5. The combination, with a cylindrical bearing consisting of sections A and A', beveled at *d* and having flanges *a* and *a'*, of the thill-iron B, broken away at *b*, having arm C, and beveled at *f*, substantially as described.

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

THORNTON ARTHUR SHINN.

Witnesses:

DANIEL CLARK,
ROBERT CLARK.