No. 657,446. Patented Sept. 4, 1900.

J. C. PERKINS.

THILL OR POLE COUPLING.

(Application filed Mar. 2, 1900.)

(No Model.)

Fig. 1

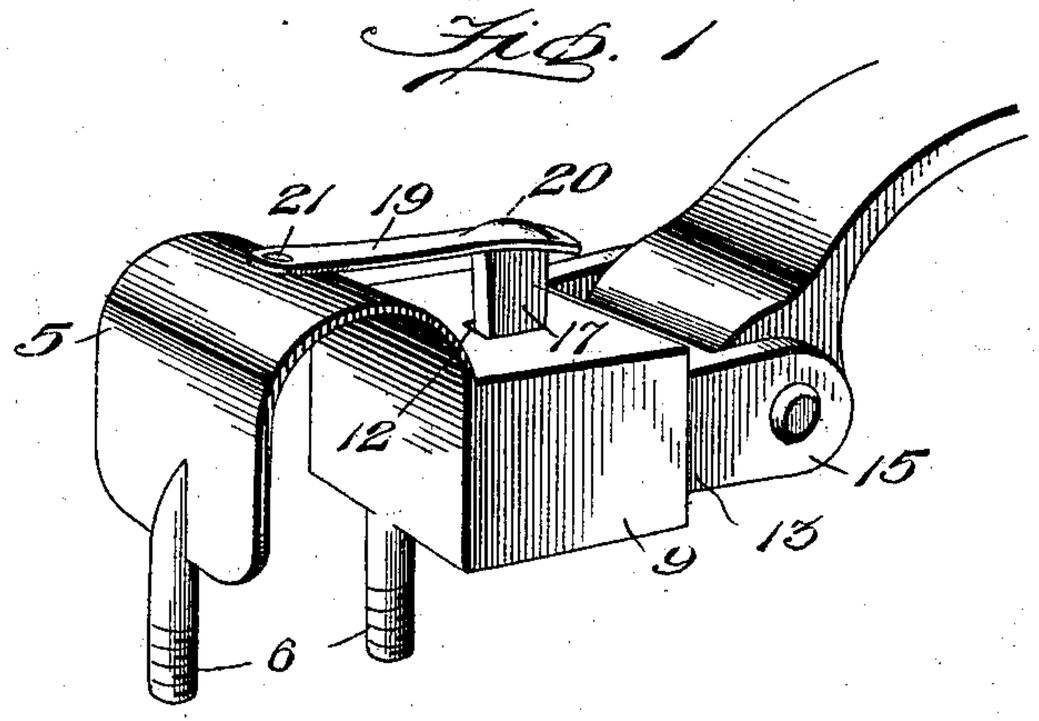


Fig. 2

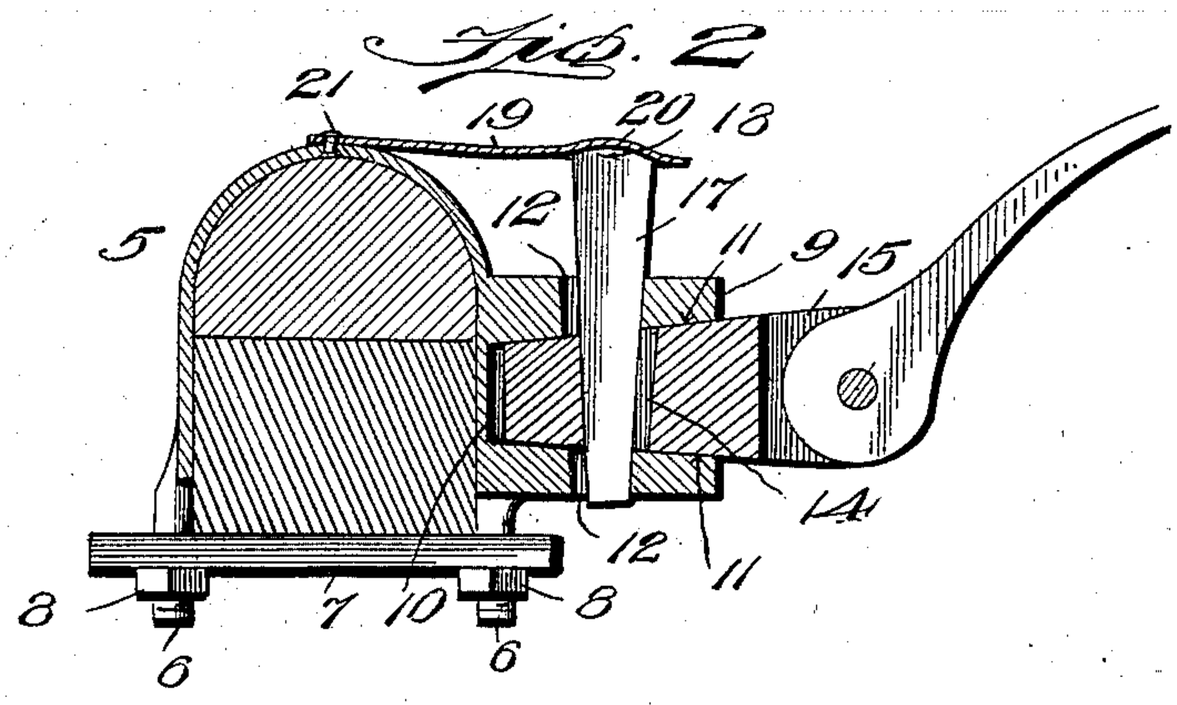
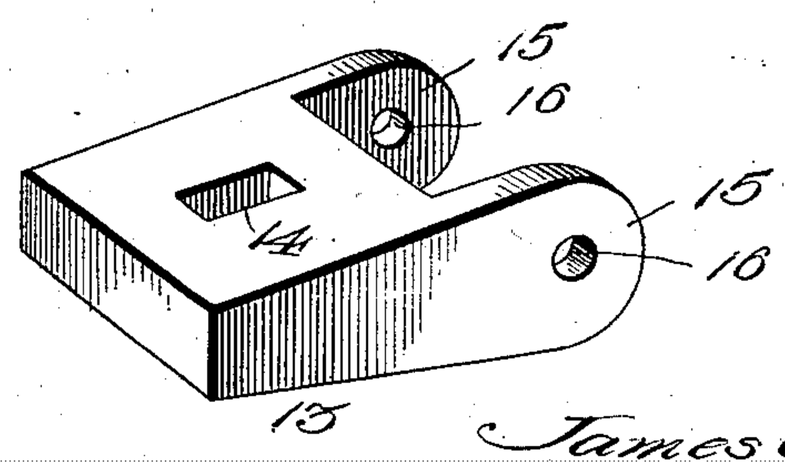


Fig. 3



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JAMES C. PERKINS, OF INWOOD, IOWA.

THILL OR POLE COUPLING.

SPECIFICATION forming part of Letters Patent No. 657,446, dated September 4, 1900.

Application filed March 2, 1900. Serial No. 7,123. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. PERKINS, a citizen of the United States, residing at Inwood, in the county of Lyon and State of Iowa, have invented a new and useful Thill or Pole Coupling, of which the following is a specification.

My invention relates to improvements in thill or pole couplings; and one object in view is to provide a simple contrivance by which the thills or a pole may be easily and quickly interchanged one for the other.

A further object is to provide a coupling in which the parts are held so securely together by a wedging action that they cannot become displaced by the draft on the pole or thills or by jarring or vibration of the parts in traveling over rough roads.

Further objects and advantages of the invention will appear in the course of the subjoined description; and the novelty in the construction and combination of parts will be defined by the claims.

In the drawings, Figure 1 is a perspective view of a thill-coupling constructed in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a detail perspective view of the member adapted to be coupled or applied to the thills or pole of the vehicle.

The same numerals of reference are used to indicate like and corresponding parts in each of the several figures of the drawings.

The member of my improved coupling which is adapted to be applied to the axle of the vehicle includes a clip 5, having the threaded terminals 6, adapted to receive the plate 7, the latter being clamped against the under side of the axle by the nuts 8, which are screwed on the threaded ends 6. This clip is formed in a single piece of metal with a boxing 9, the external contour of which resembles a cube, although the particular shape of the boxing is not material. This boxing is provided with a socket 10, which opens through the front vertical face of the boxing. Two of the walls, preferably the top and bottom, of the socket are inclined reversely to each other, as indicated at 11, in order to give to the socket a flaring shape, and these walls diverge from the clip to the outer end of the boxing. In the top and bottom of the boxing are formed the vertical longitudinal slots 12, which are disposed in alinement with each other for the reception of a retainer-held wedge-pin, presently described. The other member of the coupling is in the form of a wedge 13, which is provided at a point intermediate of its length with a longitudinal slot 14, and this wedge member is furthermore provided at its large end or base with the pair of ears 15, said ears and the wedge being cast in a single piece of metal. The ears are spaced relative to each other, so as to occupy a parallel relation, and they are provided with transverse alined openings 16, whereby the thill-iron or the pole-iron may be fitted between the ears to receive a pivotal pin (not shown) in order to connect said wedge-coupling member to the pole or thill. This wedge 13 is shaped and proportioned to fit snugly within the socket 10 of the boxing in a manner for the wedge to have a binding action within the socket, and the proper assemblage of this wedge member with relation to the socketed boxing brings the slot 14 of the wedge in alinement vertically with the slots 12 of the boxing. The wedge-pin 17 tapers from its large upper end toward the lower smaller end, and this pin is adapted to be passed in a downward direction through the upper slot 12, the slot 14 of the wedge, and the lower slot 12 of the boxing. The larger upper end of the wedge-pin forms thereon a head 18, which is adapted to be engaged by a spring-retainer 19. This retainer is made in the form of a plate, of elastic metal, provided at one end with a cavity 20, the latter adapted to receive the head of the wedge-pin. This retainer is pivotally attached to the crown of the axle-clip by means of a pin 21, and said retainer may be turned on its pivotal connection with the clip, so as to be disengaged from and occupy a position to one side of the wedge-pin, so that the latter may be easily withdrawn from the slotted portions of the coupling members, thereby permitting the wedge member to be withdrawn by an endwise movement from the socket of the axle member.

In the operative position of the parts comprising the improved coupling the front edge of the wedge-pin binds against the front ends of the slots in the top and bottom of the box-

ing, while the rear edge of the wedge-pin binds against the corresponding end of the slot in the wedge member. This wedge member is thus adapted to be drawn endwise into the flaring socket of the boxing by the action of the wedge-pin thereon until said wedge member has a tight frictional engagement with the walls of the boxing, whereby the wedge member is frictionally and positively held in the axle member by its engagement with the boxing and by the action of the wedge-pin. The spring-retainer engages with the head of the wedge-pin to prevent the same from moving in an upward direction and becoming displaced accidentally by jarring or vibration of the coupling; but this spring may be lifted for its cavity to be free from engagement with the head of the wedge-pin, and then the spring may be turned on its pivot to a position at one side of the wedge-pin, whereby the latter may be drawn or forced out of the coupling.

The improved thill-coupling of my invention provides for the easy and quick attachment of thills to a vehicle in place of a pole, and vice versa, and such coupling also provides for the removal of either the pole or thills, so that they may be stored in a carriage-room and take up a small amount of space. As the wedge member of the coupling is provided with ears similar to ears commonly cast on the clip, the wedge member may be attached to any form of thills of ordinary make, it being intended that each pole or pair of thills shall be equipped with a pair of the wedge members.

Any form of antirattler can be used between the bolt of the wedge-ears and the pole or thill-eyes. The wedge-shaped construction of one coupling member in connection with the vertical wedge-pin, arranged to constantly pull the wedge member farther into the socket of the clip member, prevents all possibility of rattling in the coupling.

Slight changes in the form and proportion of parts may be made without departing from this invention.

Having thus described the invention, what I claim is—

1. A thill-coupling comprising a U-shaped clip provided with an integral flaring socket, a member adapted to engage said socket and having means for attachment to a pole or thills, a wedge-pin retaining the member in the socket, and a yielding retainer operatively engaging the wedge-pin.

2. A thill-coupling comprising a clip member provided with a flaring socket, a wedge member adapted to said socket and having ears at its exposed end, a wedge-pin coacting with the socket and the wedge member, and a spring-retainer attached to the clip member and engaging with the wedge-pin, substantially as described.

3. A thill-coupling comprising a clip member provided with a slotted boxing having the flaring socket, a wedge member adapted to the socket and provided with a longitudinal slot and ears at its exposed end, a wedge-pin fitted in the slotted boxing and the wedge, and a spring-retainer pivoted to the clip member and engaging with the wedge-pin, substantially as described.

4. A thill-coupling comprising a clip member provided with a flaring socket, a member adapted to engage said socket and having means for attachment to a pole or thills, a wedge-pin connecting the socket and member, and a pivoted resilient retainer carried by the clip member and provided with a terminal cavity for the reception of one end of the wedge-pin.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES C. PERKINS.

Witnesses:
C. A. SOUTH,
O. A. RANDOLPH.