No. 638,710. Patented Dec. 12, 1899.

R. HOLLAR.

THILL COUPLING.

(Application filed May 20, 1899.)

(No Model.)

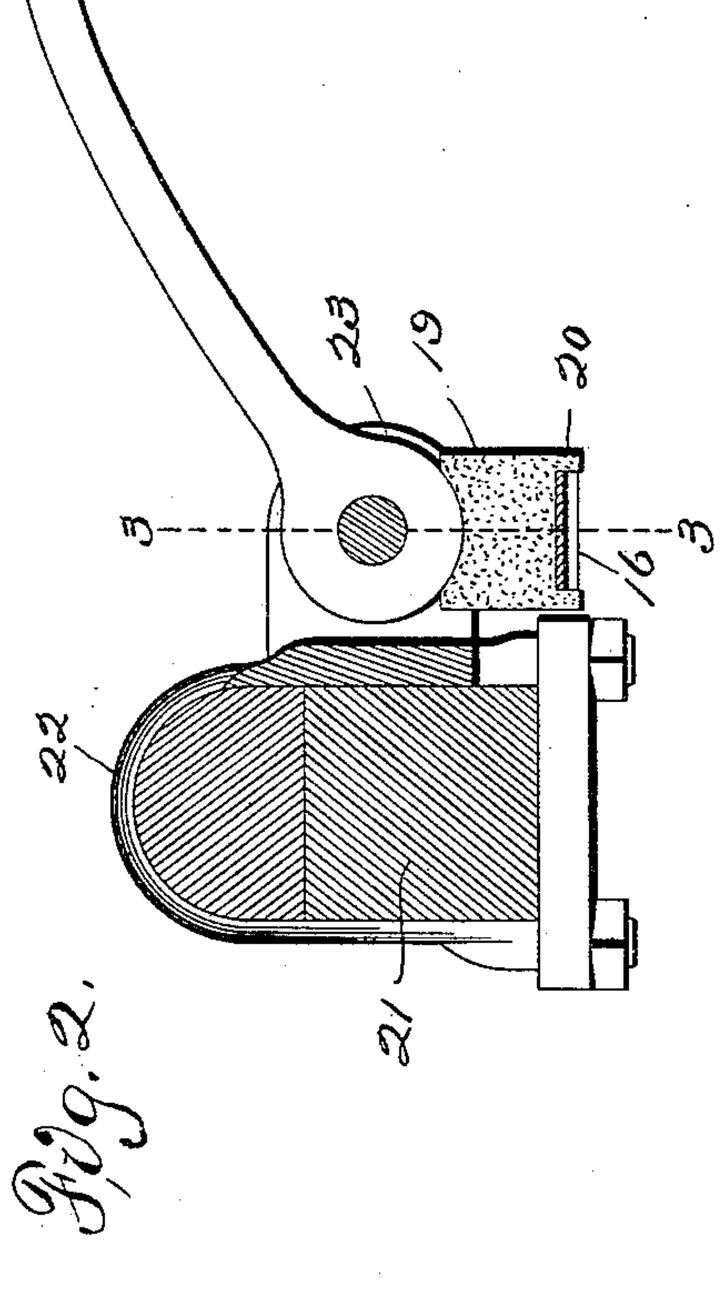

Fig. 2.

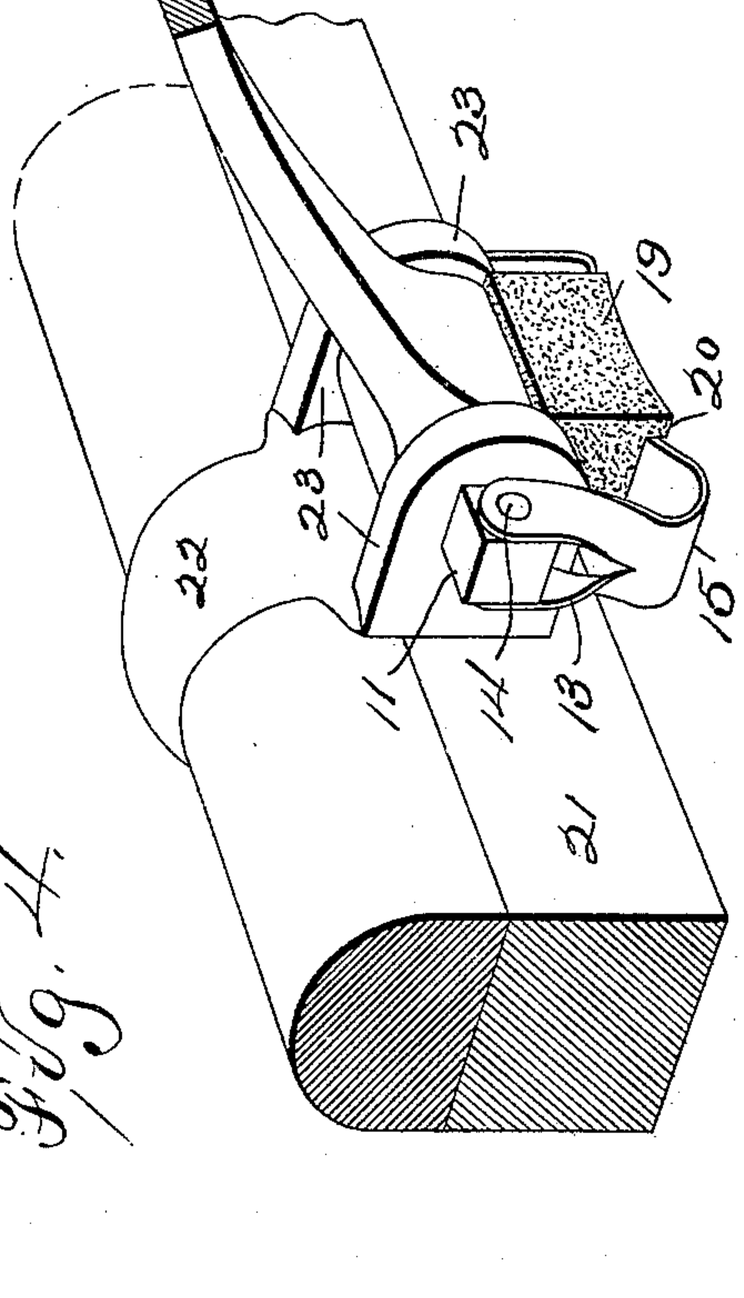

Fig. 4.

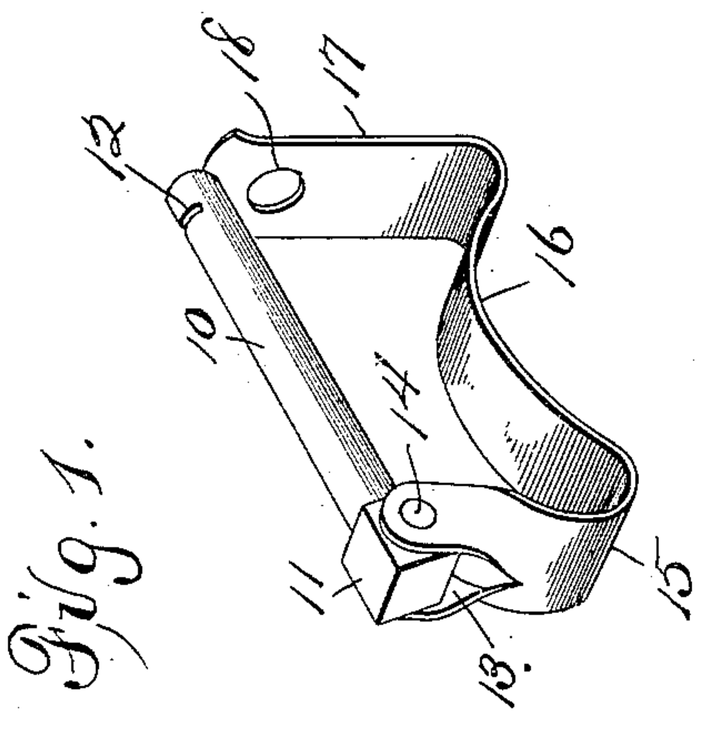

Fig. 1.

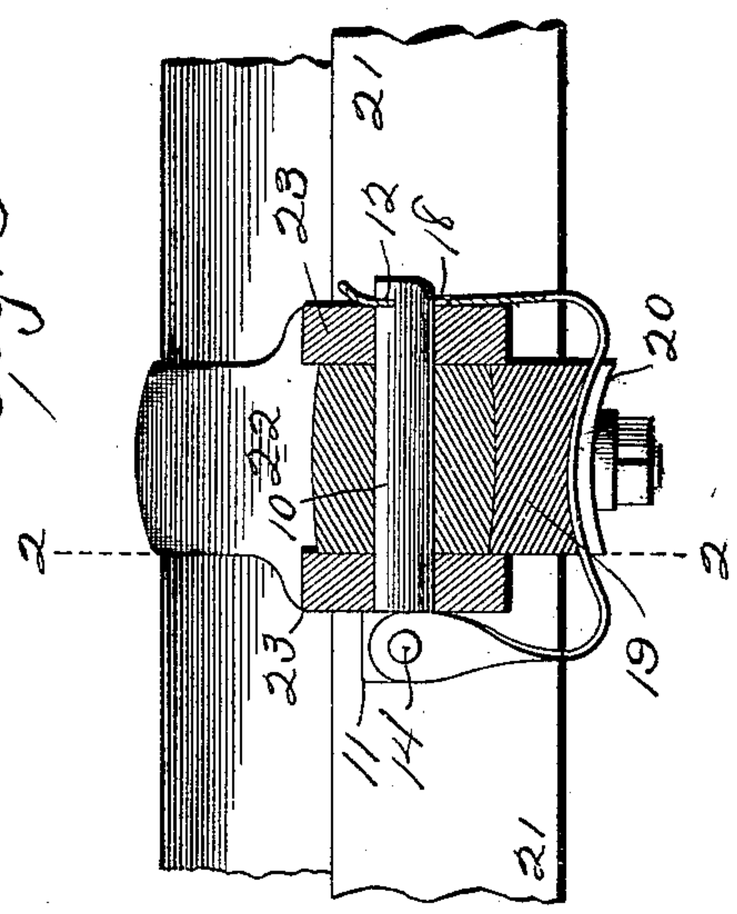

Fig. 3.

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UNITED STATES PATENT OFFICE.

RALPH HOLLAR, OF HUMBOLDT, IOWA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 638,710, dated December 12, 1899.

Application filed May 20, 1899. Serial No. 717,563. (No model.)

To all whom it may concern:

Be it known that I, RALPH HOLLAR, a citizen of the United States, residing at Humboldt, in the county of Humboldt and State of Iowa, have invented a new and useful Thill-Coupling, of which the following is a specification.

The object of this invention is to provide a thill-coupling that will be of simple, strong, durable, and inexpensive construction, which may be applied very quickly and easily without the use of any kind of tool, which when once in place will securely hold the thill and an elastic packing-block against displacement, and which will prevent rattling of the connecting-bolt or thill or other parts.

My invention consists in the construction of the coupling device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows in perspective the coupling device complete. Fig. 2 shows a longitudinal section through the axle and coupling device, taken on the line 2 2 of Fig. 3. Fig. 3 is a transverse section taken through the line 3 3 of Fig. 2. Fig. 4 shows a perspective of a part of the axle and thill and the thill-coupling device in position thereon ready for operation.

Referring to the accompanying drawings, the coupling device proper comprises a straight bolt (indicated by the reference-numeral 10) having a square head 11 on one end, and at its other end and on the top side thereof is a notch 12. Pivotally connected with the said bolt is the holder, which same is preferably made of a single piece of flat spring metal bifurcated at one end at the point indicated by the reference-numeral 13 and having the said bifurcated ends twisted laterally to admit the square head 11 between them. This head is then pivotally connected by means of the pin 14 to the bifurcated ends. Thus the holder is pivoted to the bolt. The remainder of the holder is then curved downwardly at 15, then arched upwardly at 16 to engage a packing-block fitted to the arched portion, and then straight upwardly at its end portion 17, and this end portion 17 near its top is curved outwardly and provided with a hole 18 of a size sufficient to admit the end of the bolt 10.

19 indicates a block preferably made of rubber and having shoulders 20 on its lower concave face designed to overlap the sides of the holder as required to limit the movement of the block upon the holder, and said block is of such a thickness as to be held in engagement with the thill when the holder is moved to its locked position.

The reference-numeral 21 indicates an axle, and 22 indicates a cleat fixed to the axle and having formed thereon at its forward edge the two perforated lugs 23. These parts are of the usual construction.

In practical use, and assuming that it is desired to connect the thill with the said lugs, the thill is first placed in alinement with the perforations in the lugs, and then the operator passes the bolt 10 through the lugs and the opening in the thill. Then the holder is grasped and the rubber block 19 placed thereupon. Then the free end of the holder is forced upwardly to thereby compress and secure the rubber between the holder and the under surface of the thill. Then, when the holder is moved upwardly far enough so that the end of the bolt 10 may enter the opening 18, the resiliency of the holder will cause the same to move inwardly and thereby cause the notch 12 in the bolt 10 to admit the upper edge of the said opening 18, and it is obvious that, when in this position, the parts cannot readily become detached on account, first, of the downward pressure normally exerted by means of the resiliency of the rubber block tending to cause the edge of the opening 18 to lie in the said notch, and also the resiliency of the holder itself, which will prevent the free end of the holder from moving outwardly beyond the end of the bolt. When the holder is thus placed in position, it is obvious that the rattling or loosening of any of the parts will be prevented for the reason that the resiliency of the rubber block and also of the holder is exerted to jointly produce an upward pressure upon the under surface of the thill that will prevent the thill from rattling upon the bolt.

It is obvious that no tools are required to either attach or detach the device and, further, that on account of the great simplicity

of the parts the device may be made without the employment of any expensive machine-work, and hence may be constructed very cheaply.

Having thus described the coupling, what I claim as my invention, and desire to secure by Letters Patent of the United States therefor, is—

1. A thill-coupler, comprising a bolt having a head at one end and a notch at its other end, and a spring-metal holder pivoted to the head at one end and bent to pass under a thill when the said bolt is passed through the opening in the thill, and having its central part arched to engage a packing-block and its other end bent outwardly at its top and provided with an opening designed to receive the free end of the bolt, and so arranged that as the holder is forced upwardly the outwardly-flared end thereof will engage the bolt and be forced downwardly until the bolt enters the opening when the holder will pass over the end of the bolt as far as the said notch in the bolt, and a rubber packing-block fitted to the arch of the holder and the thill-iron to operate as and for the purposes stated.

2. A thill-coupling, comprising in combination, a bolt 10 having a head 11 and a notch 12, a holder made of a single piece of flat spring metal, and having one end 13, bifurcated to admit the head of the bolt, a pin for pivoting the bifurcated end of the holder to the head of the bolt, a horizontal part 16 of the said holder arched and its end portion extended vertically and outwardly at its extremity and also having an opening 17 and a rubber block 19, having a concave face designed to rest upon the top surface of the holder and shoulders 20, to engage the parallel edges of the holder, all arranged and combined substantially in the manner set forth for the purposes stated.

RALPH HOLLAR.

Witnesses:
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