

No. 707,741.

Patented Aug. 26, 1902.

T. F. WARE  
THILL COUPLING.

(Application filed May 1, 1902.)

(No Model.)

Fig. 1.

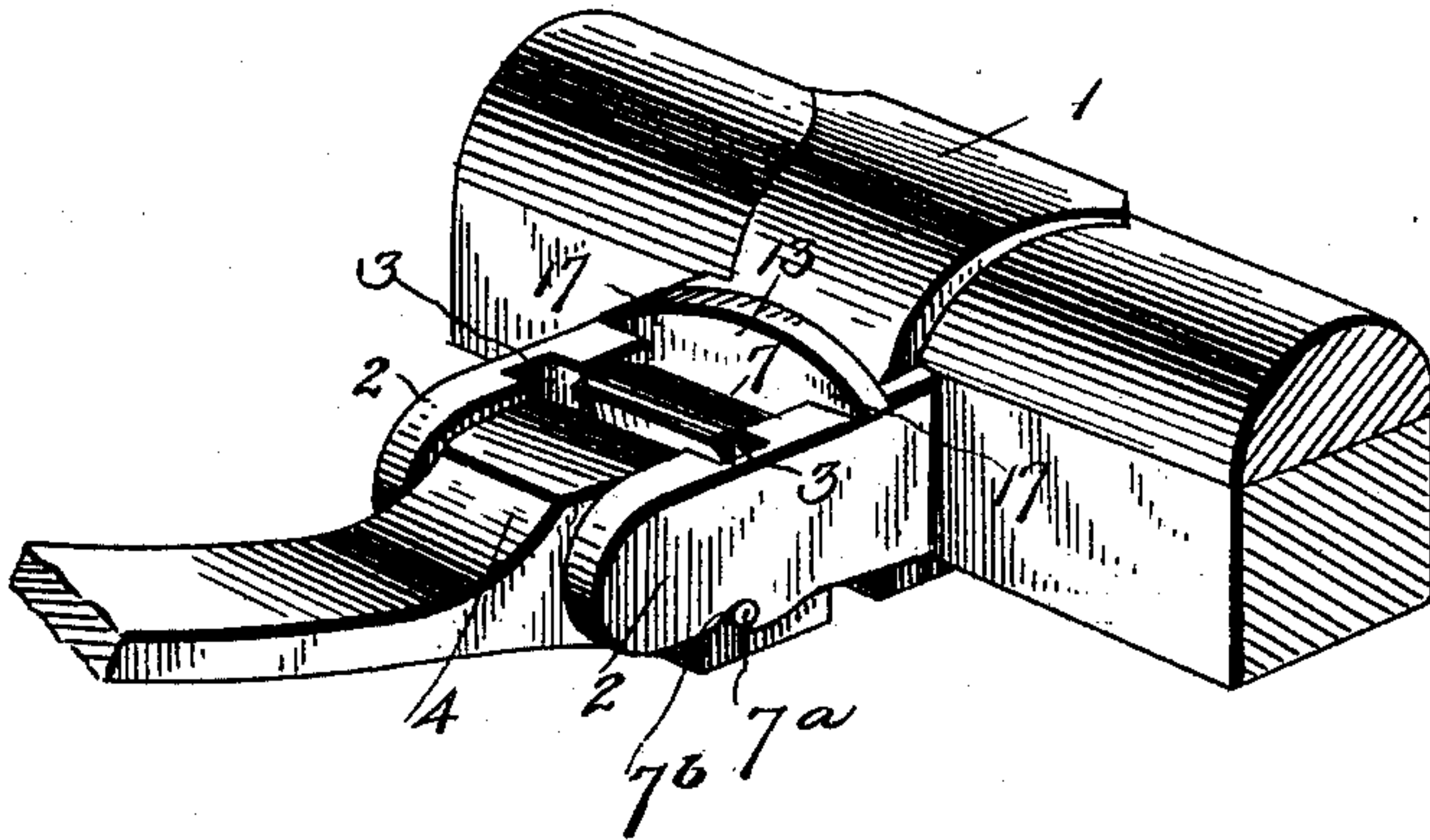


Fig. 2.

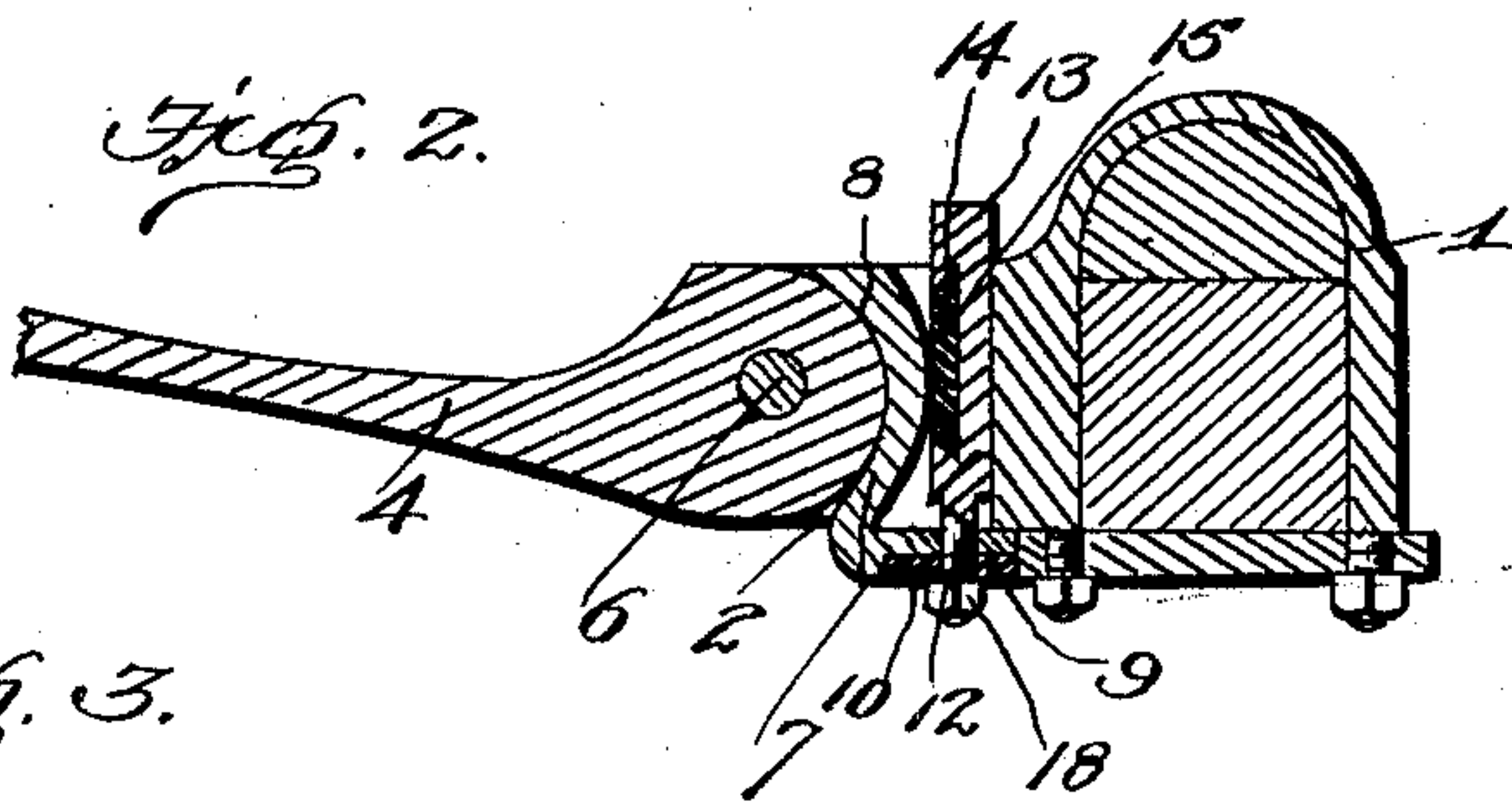


Fig. 3.

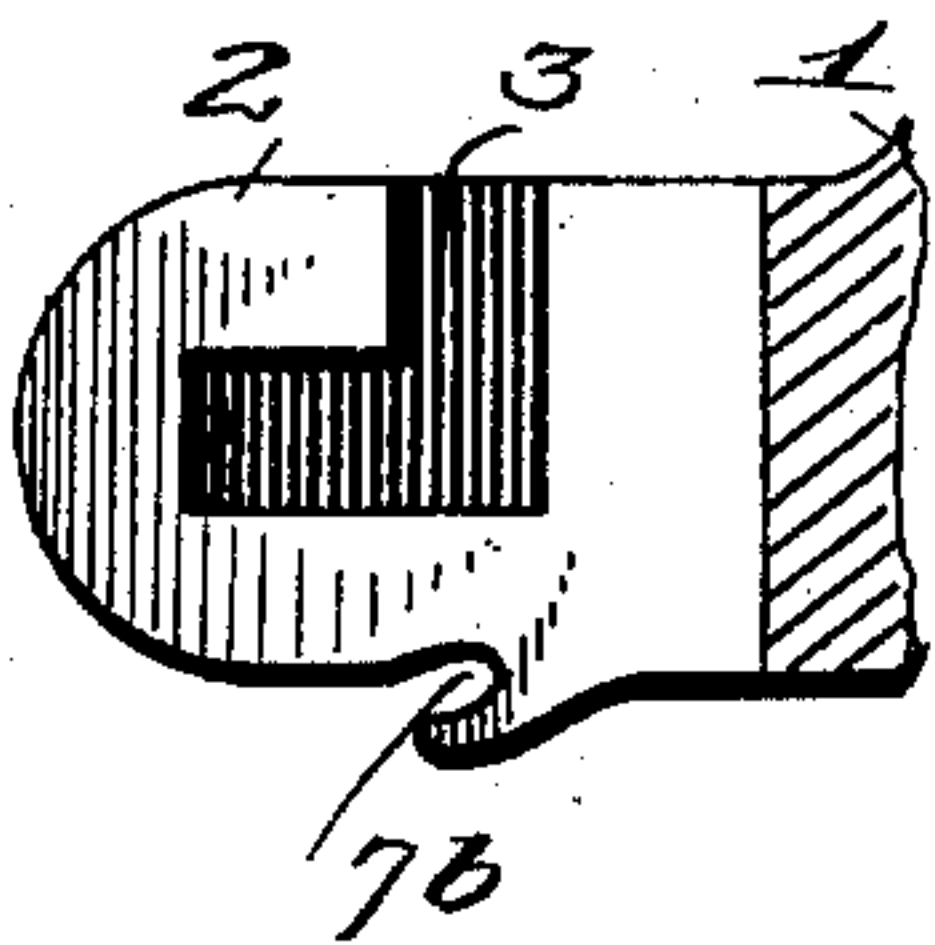


Fig. 4.

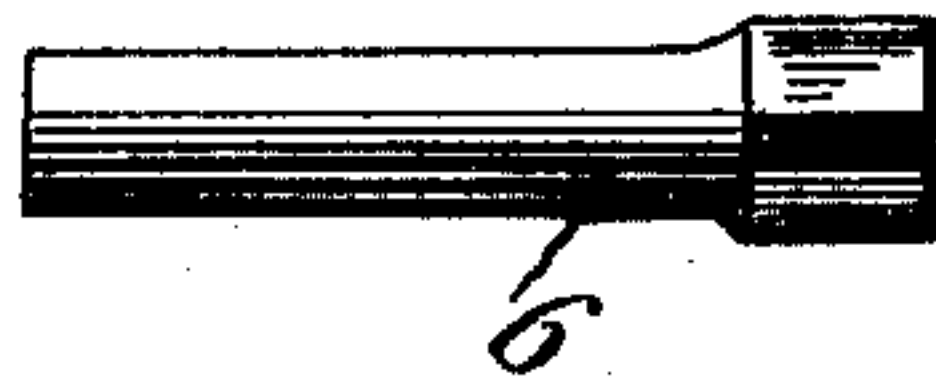
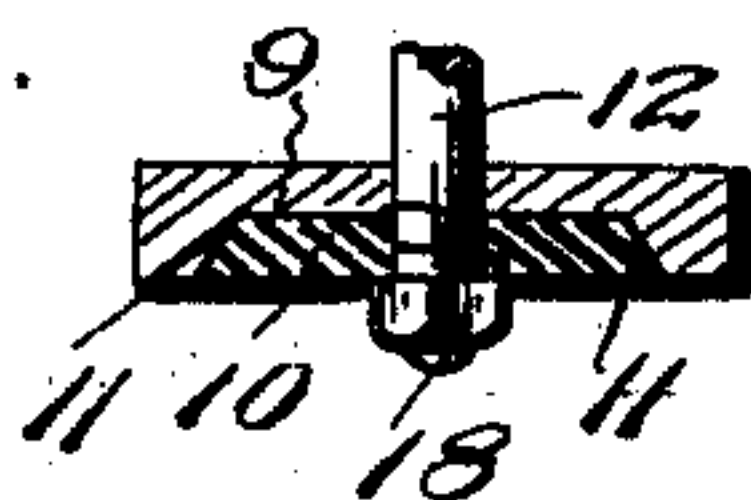


Fig. 5.



Witnesses  
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# UNITED STATES PATENT OFFICE.

THOMAS FRANKLIN WARE, OF COLFAX, CALIFORNIA.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 707,741, dated August 26, 1902.

Application filed May 1, 1902. Serial No. 105,472. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS FRANKLIN WARE, a citizen of the United States, residing at Colfax, in the county of Placer and State of California, have invented certain new and useful Improvements in Thill-Couplings; and I do 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.

The invention relates to thill-couplings of the antirattle type.

The object of the invention is to provide a thill-coupling of this character which shall be simple of construction, durable in use, comparatively inexpensive of production, and readily adjustable to take up wear and overcome rattling of the parts.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a perspective view of my improved thill-coupling. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a view of the inner side of one of the ears. Fig. 4 is a view of the pivotal bolt; and Fig. 5 is a transverse sectional view through the lower end of the spring, illustrating the dovetail connection of the hard-rubber washer therewith.

Referring to the drawings, 1 denotes a clip provided with parallel ears 2, having L-shaped slots 3, open at their upper vertical ends and closed at their lower horizontal ends.

4 denotes a thill-iron having a rounded head, and 6 denotes a bolt inserted through the eye of the thill-iron and let down into the vertical portion of the L-shaped slots and moved forwardly in the horizontal base of the L-shaped slots and prevented from turning by the head of said bolt.

7 denotes a stiff angular spring having a curved recess 8 to fit the rounded head of the thill-iron and is located between said ears and has its lower end projecting below the same and extending rearwardly and provided

with a dovetail recess 9 to receive a hard-rubber washer 10, which has dovetail edges 11. The spring has laterally-projecting studs 7<sup>a</sup>, which are adapted to fit bearing-recesses 7<sup>b</sup>, formed in the lower edges of the ears.

12 denotes a clamping-bolt, the upper end of which is formed with a flat portion 13, which has a transverse dovetail recess 14 to receive the dovetail edges of the rubber packing 15, which bears against the rear side of the spring. This bolt has laterally-projecting lugs 17, which rest upon and are supported by the upper edges of the ears. The lower end of the bolt extends through the lower end of the spring and receives a clamping-nut 18.

In operation it will be noticed that by clamping the nut the rear lower end of the spring will be tilted or forced upwardly and its curved face brought into firm engagement with the rounded surface of the thill-iron, thus preventing any rattling due to wear of the parts.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily understood without requiring an extended explanation.

Various changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

In a thill-coupling, the combination with the ears having upon their inner faces L-shaped slots, of a thill-iron, a pivotal bolt for the thill-iron located in the horizontal portion of said L-shaped slots, an angular spring provided with studs journaled in bearings formed in the lower edges of the ears, a hard-rubber washer having a dovetail connection with the lower end of said spring, a bolt having a flattened portion at its upper end terminating in laterally-projecting lugs which are adapted to engage the upper edges of the ears, said flattened portion being provided

with a transverse dovetail recess, a rubber  
packing seated in said recess, the lower end  
of said bolt projecting through the lower end  
of the spring and the hard-rubber washer,  
5 and a nut screwed upon the lower end of said  
bolt, substantially as set forth.

In testimony whereof I have hereunto set

my hand in presence of two subscribing wit-  
nesses.

THOMAS FRANKLIN WARE.

Witnesses:

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B. J. GHENT.