

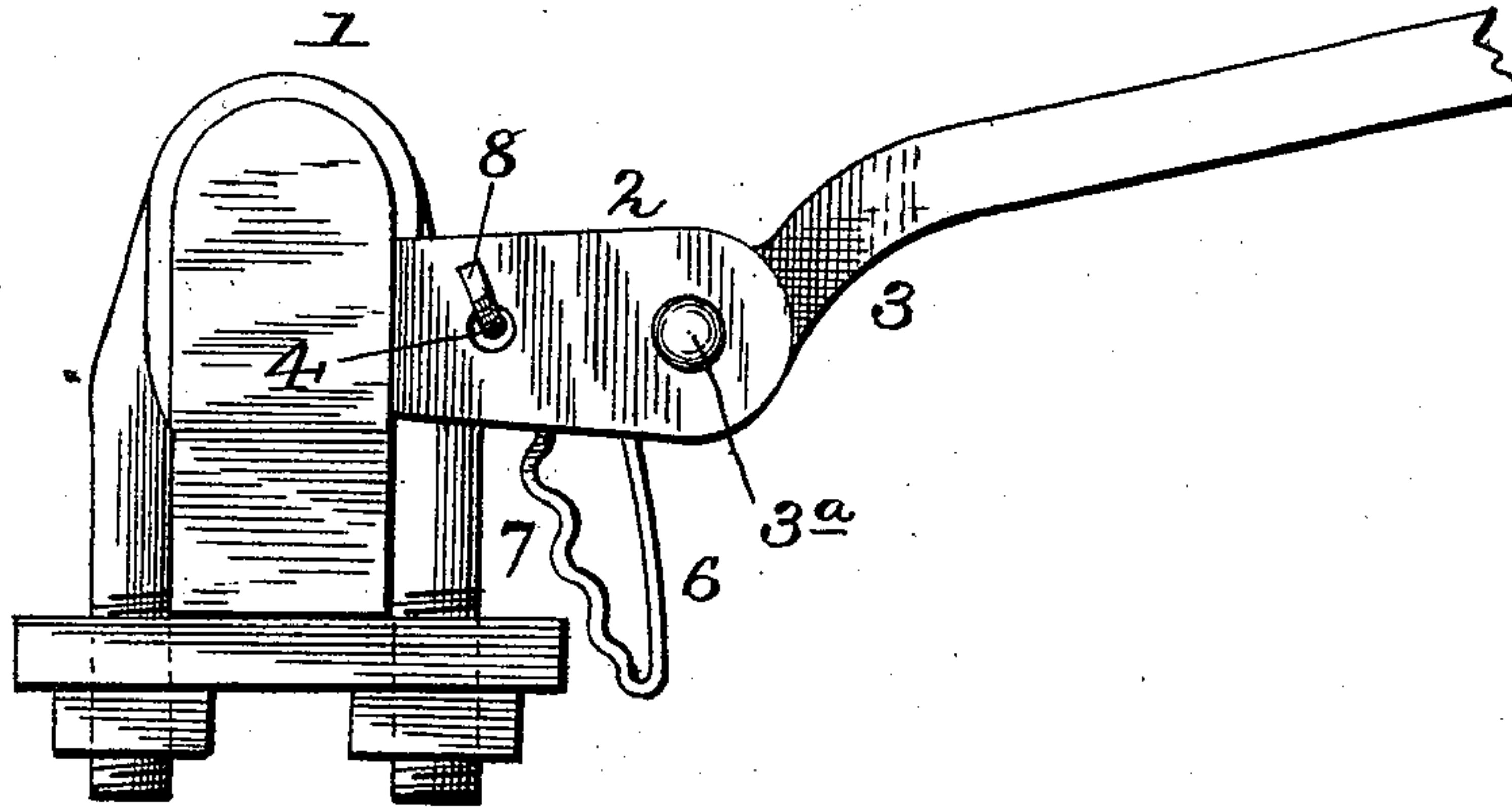
(No Model.)

H. D. LANDIS.  
THILL COUPLING.

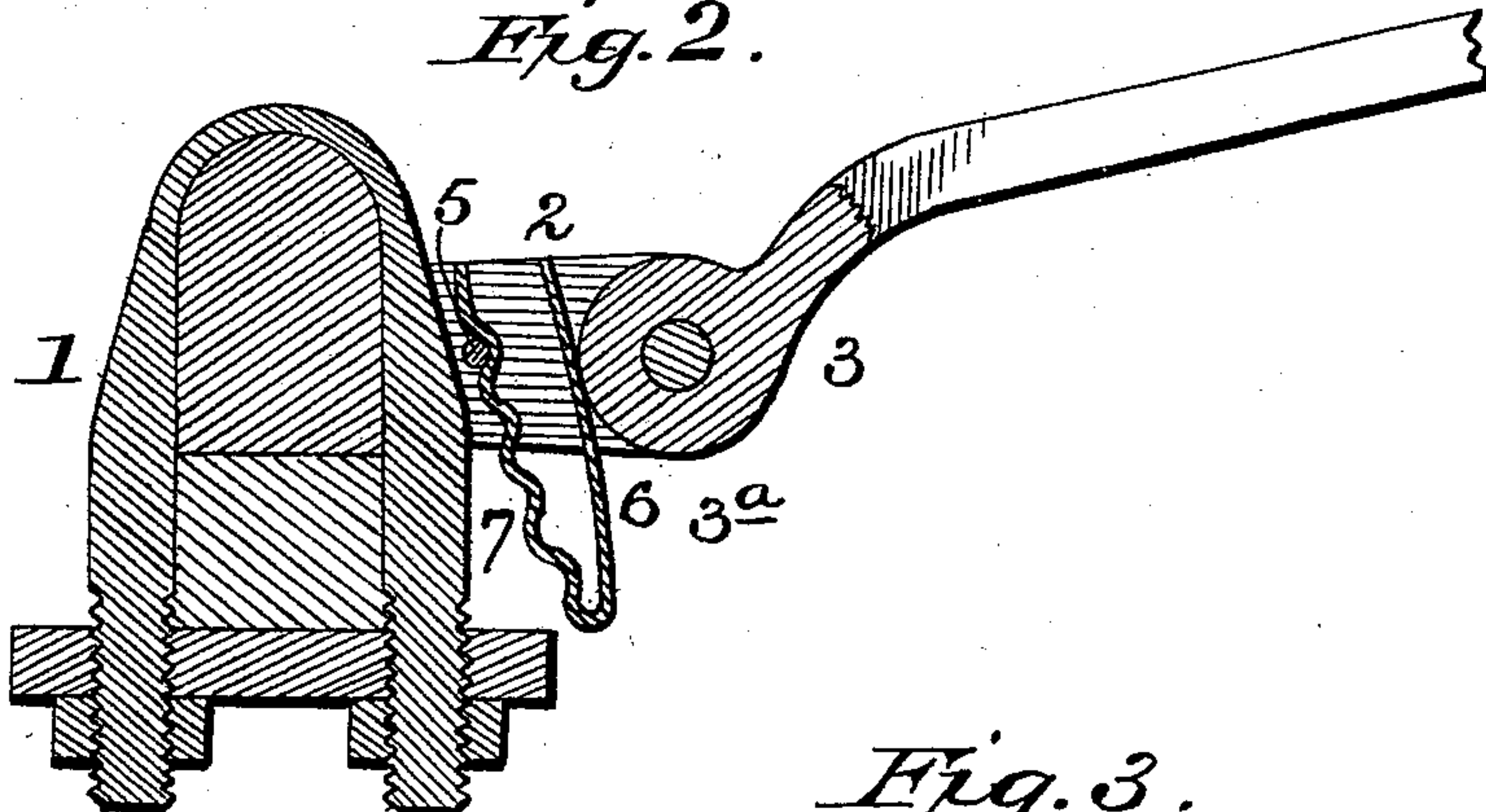
No. 455,218.

Patented June 30, 1891.

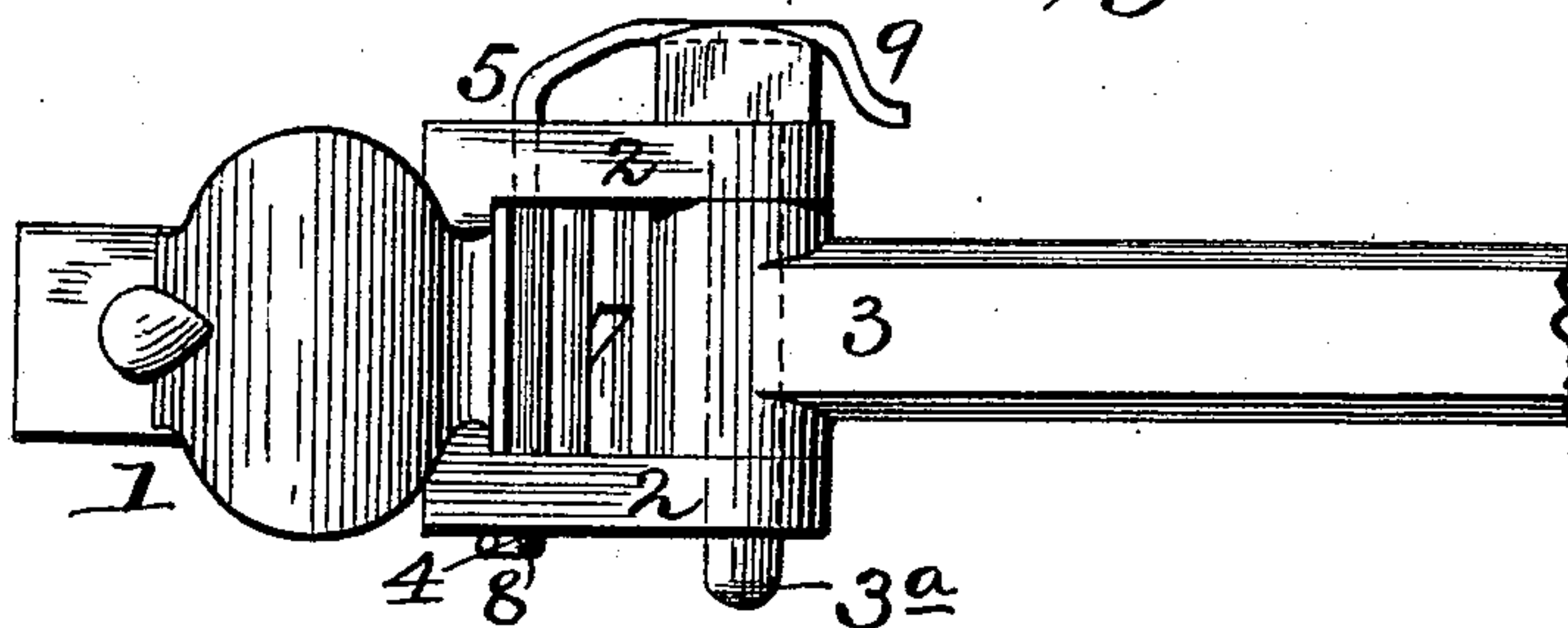
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

*F. L. Ourand.*  
*J. L. Coombs*

INVENTOR:

*Harry D. Landis,*  
*by James Duggan & Co.*  
Attorneys.

# UNITED STATES PATENT OFFICE.

HARRY D. LANDIS, OF BELLEFONTE, PENNSYLVANIA.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 455,218, dated June 30, 1891.

Application filed March 2, 1891. Serial No. 383,370. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY D. LANDIS, a citizen of the United States, and a resident of Bellefonte, in the county of Centre and State of Pennsylvania, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in anti-rattling thill-couplings.

The object of the invention is to provide an improved article of the above description in which a spring consisting of a metal plate is inserted between the clip and the end of the thill and bearing against the same, with means for holding the said spring in position and also preventing the bolt holding the thill in place from being accidentally disconnected from the thill.

The invention consists in the novel construction and combination of parts hereinafter fully described, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of an anti-rattling thill-coupling constructed in accordance with my invention. Fig. 2 is a central sectional view of the same. Fig. 3 is a plan view of the same.

In the said drawings, the reference-numeral 1 designates the clip, provided with the forwardly-projecting lugs 2, in which is journaled the thill 3. These may be constructed in any usual or ordinary manner. In the forward ends of the lugs 2 are formed apertures for the passage of the pivot-bolt 3<sup>a</sup>, which also passes through an aperture in the thill-iron. Immediately in front of the clip the lugs are also provided with aligned holes 4, through which passes a spring-wire 5.

The numeral 6 designates a spring consisting of a metal plate bent over upon itself, forming two lugs, the rear one of which is provided with a series of corrugations 7, which, by engaging with the wire 5, hold the said plate in place. One of the ends of the wire 5 is bent over upon the outside of one of the lugs, forming a short arm 8, which prevents it from being withdrawn, while the other end of said wire is bent, forming an elongated forwardly-projecting arm 9, which is adapted to engage with a slot in the head of the pivot-bolt 3, and thus prevent the same from being accidentally disconnected from the lugs, through which it passes. By this means the usual screw-nut on the opposite end of the bolt can be dispensed with, thus materially improving the device and adding to its superiority and efficiency.

Having thus described my invention, what I claim is—

In an anti-rattling thill-coupling, the combination, with the clip having forwardly-projecting lugs with aligned openings therein and the thill-iron connected therewith, of the pivot-bolt having a slotted head, passing through said lugs, the spring-plate having corrugations located between the clip and thill, and the spring-wire passing through the lugs and engaging with said corrugations, having a forwardly-projecting arm engaging with the slot in the pivot-bolt and its other end bent over upon the outside of one of said lugs, substantially as described.

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

HARRY D. LANDIS.

Witnesses:

D. S. HERGESHEIMER,  
IDA E. LANDIS.