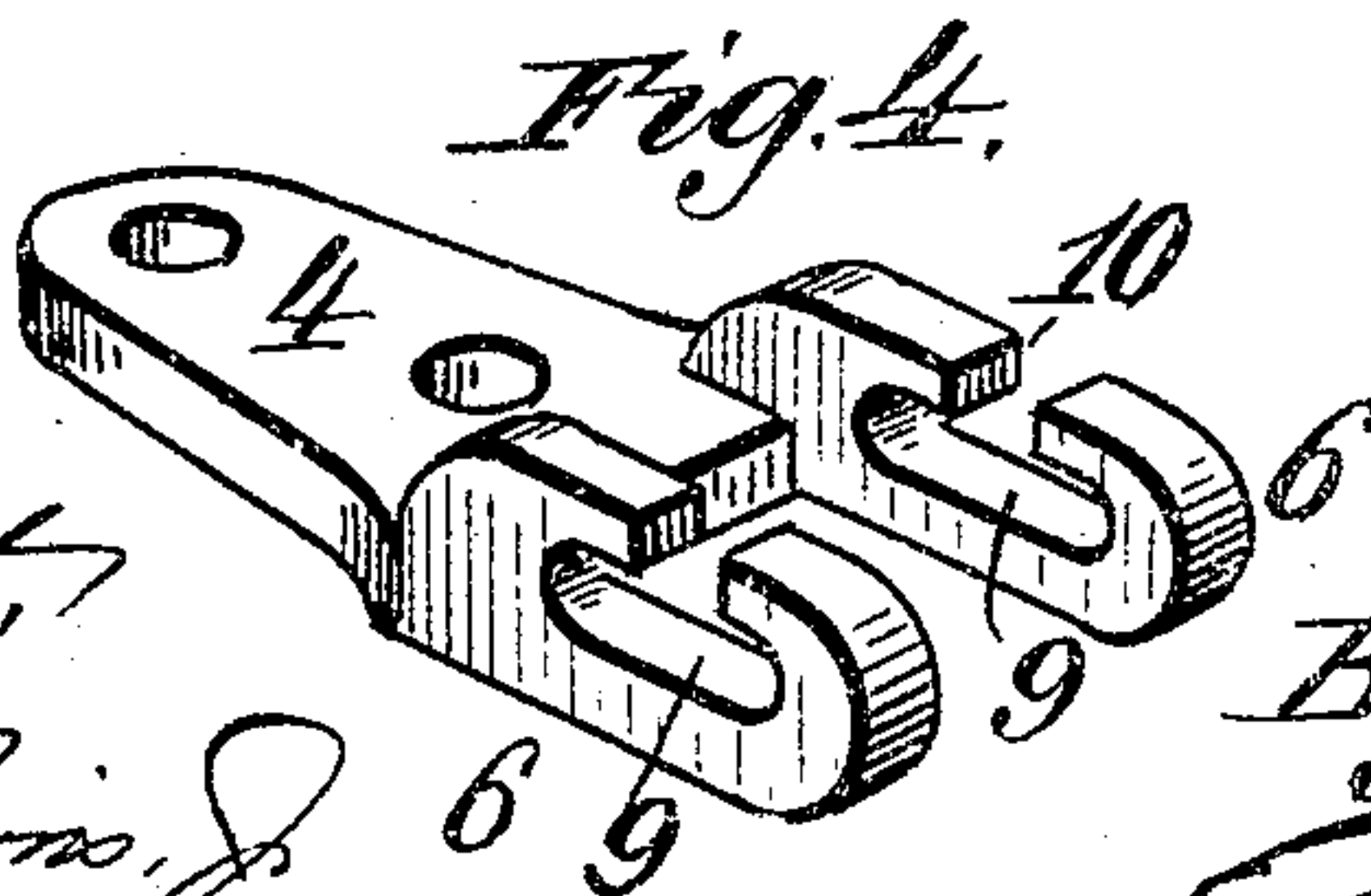
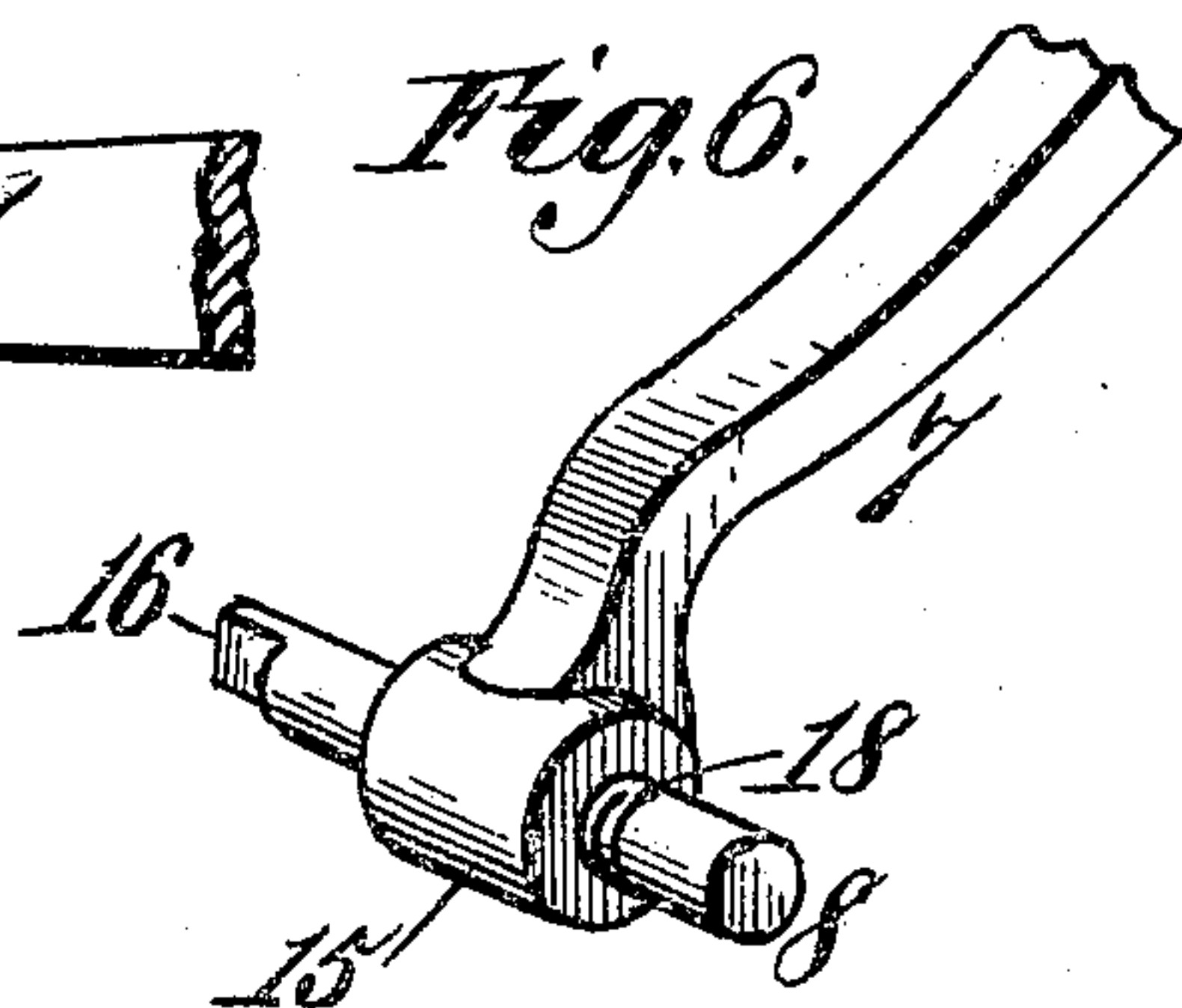
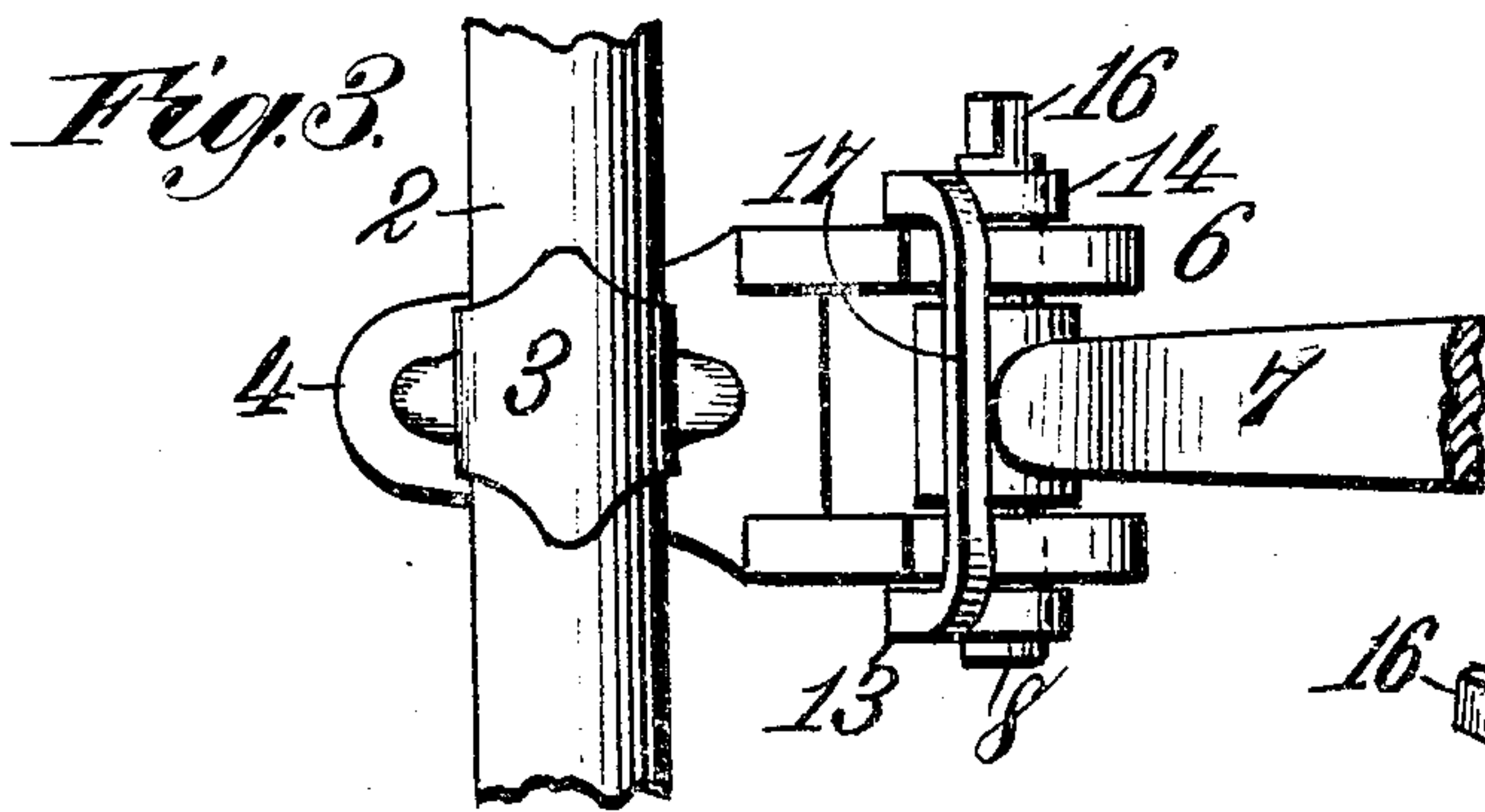
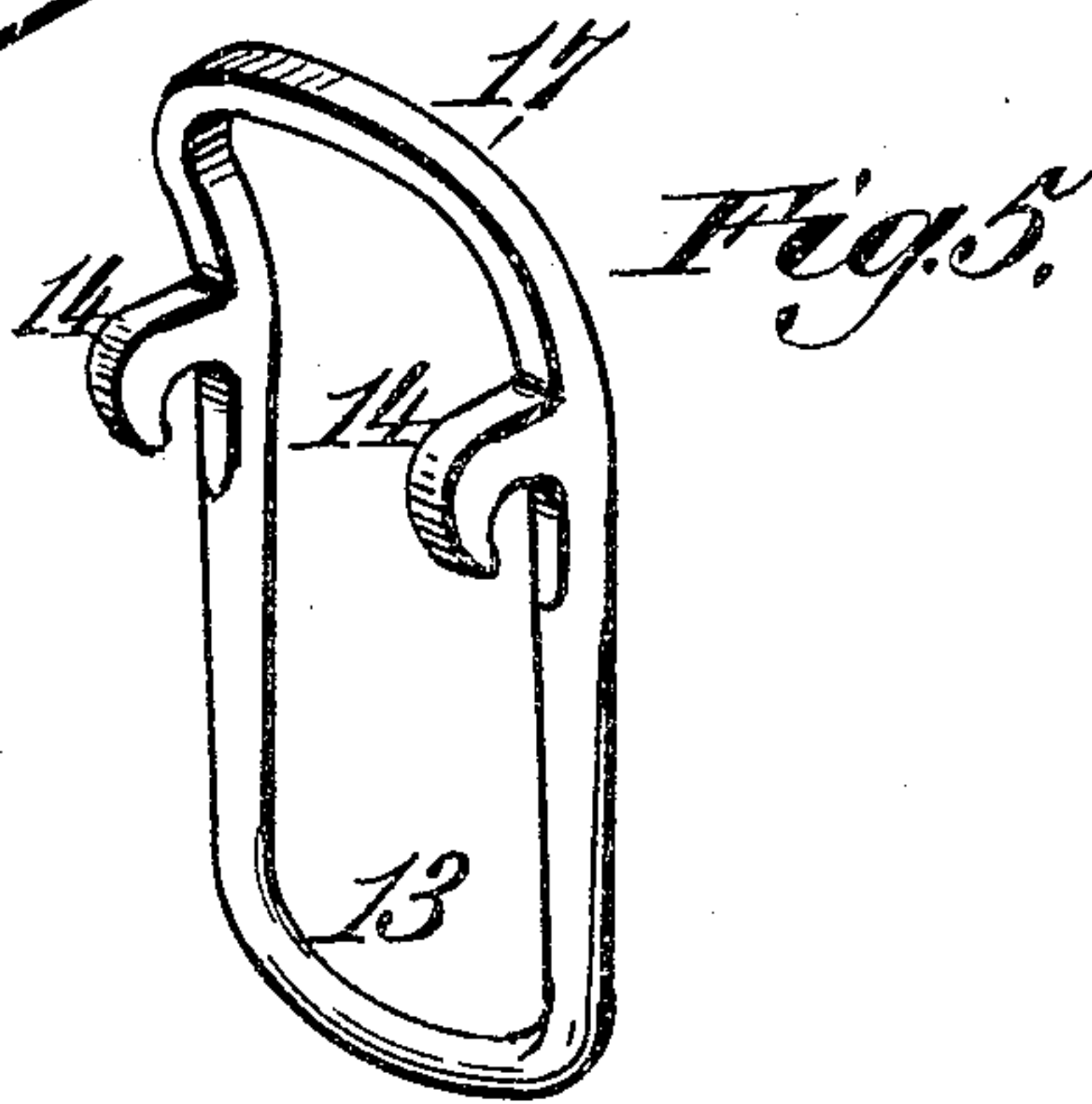
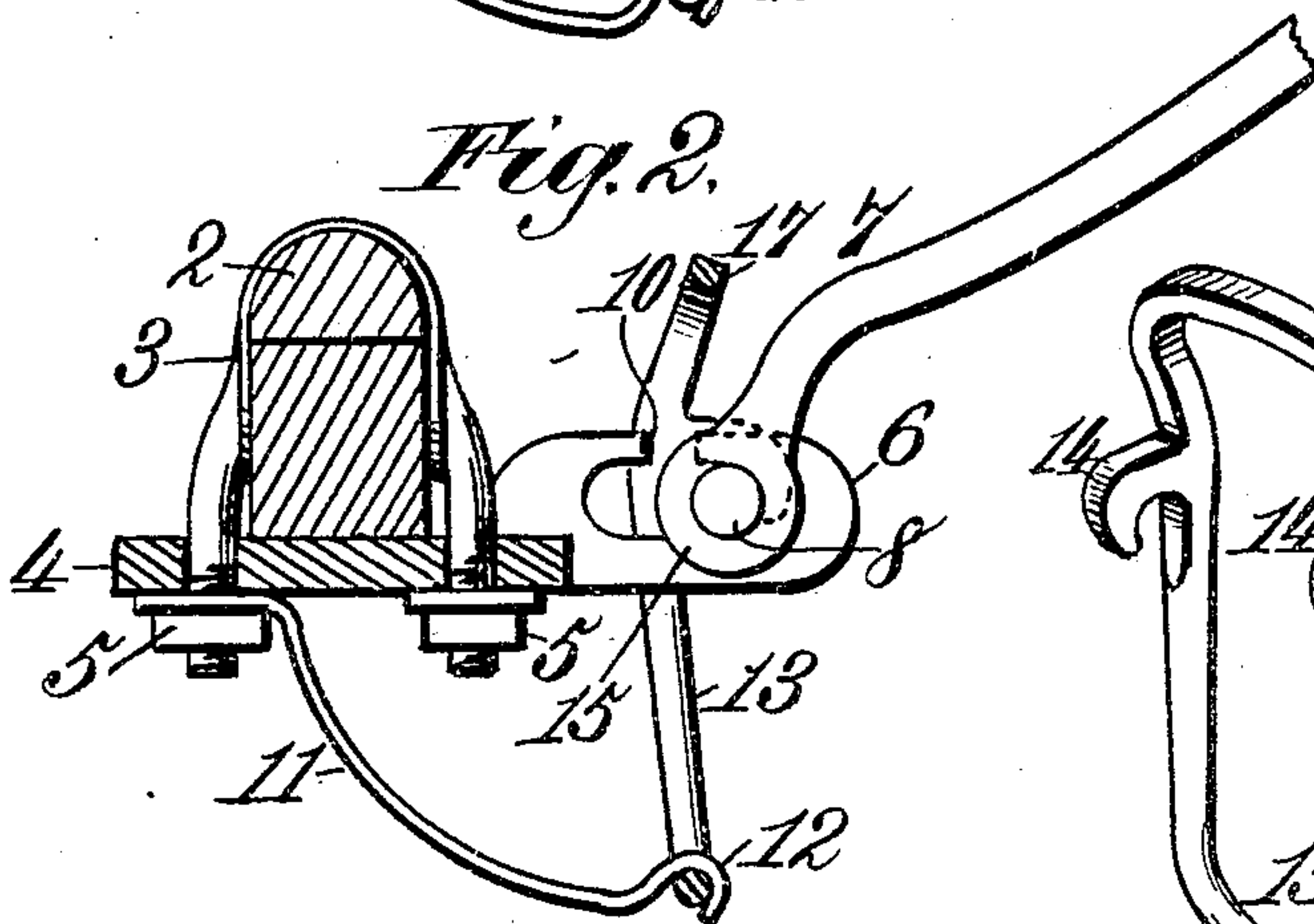
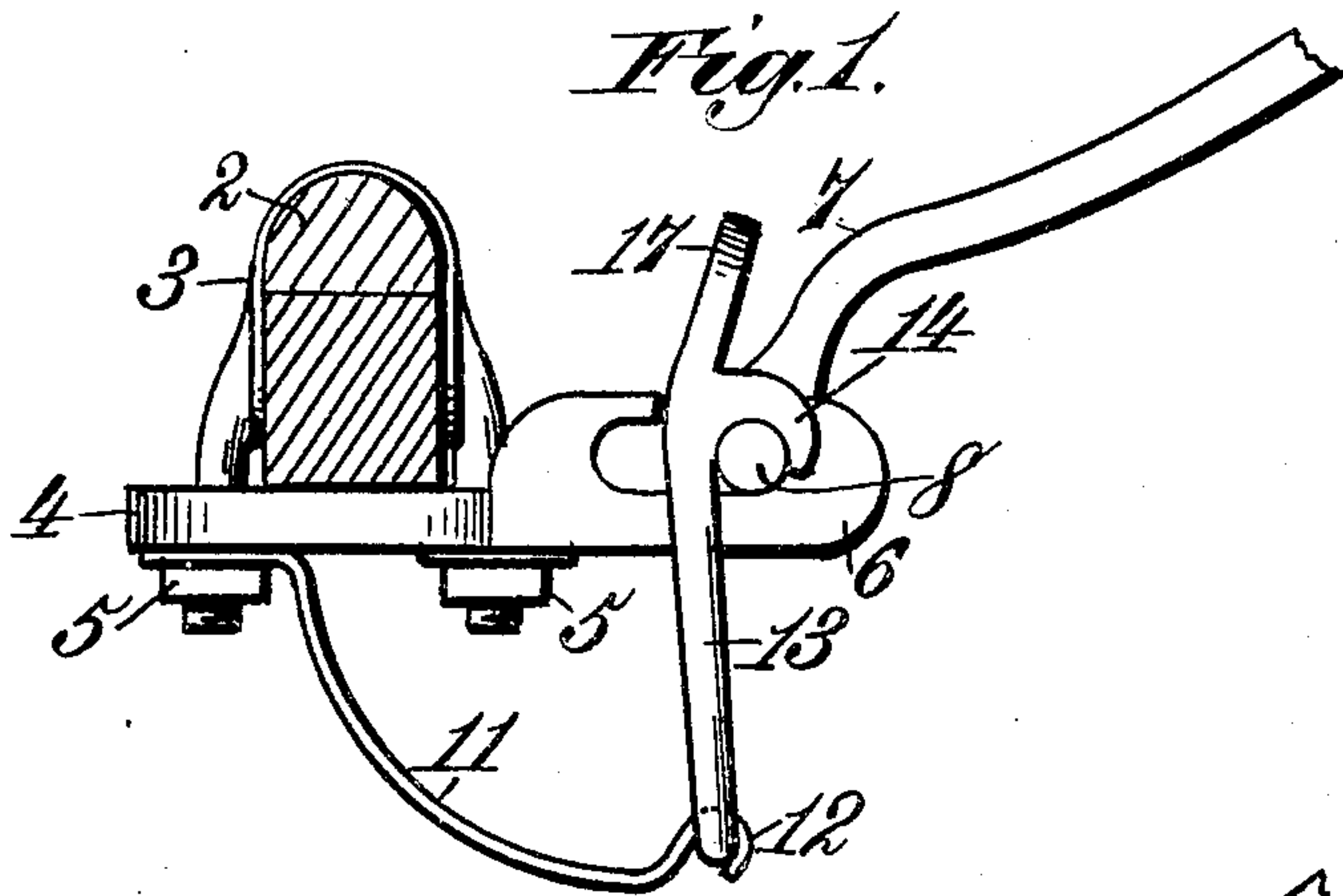


No. 791,988.

PATENTED JUNE 6, 1905

H. H. PIPER.
COUPLING AND ANTIRATTLER FOR SHAFTS OR POLES.

APPLICATION FILED JAN. 16, 1905.



Witnesses,
Robert Grant,

James L. Norris, Jr.

Inventor,
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By James L. Norris,
Att'y.

UNITED STATES PATENT OFFICE.

HERBERT H. PIPER, OF JACKSON, MISSOURI, ASSIGNOR OF ONE-HALF TO
ROBERT T. HENDERSON, OF JACKSON, MISSOURI.

COUPLING AND ANTIRATTLER FOR SHAFTS OR POLES.

SPECIFICATION forming part of Letters Patent No. 791,988, dated June 6, 1905.

Application filed January 16, 1905. Serial No. 241,268.

To all whom it may concern:

Be it known that I, HERBERT H. PIPER, a citizen of the United States, residing at Jackson, in the county of Cape Girardeau and State of Missouri, have invented new and useful Improvements in Couplers and Antirattlers for Shafts or Poles for Vehicles, of which the following is a specification.

This invention relates to thill-couplings, and more particularly to the class of antirattling thill-couplings.

The main feature of the invention is the provision of means for securely locking the detachable connections of the shaft-iron and the axle-clips together, so as to overcome any liability of accidental displacement thereof from the working position.

A further purpose of the invention is the provision of means for the easy and quick attaching of the shaft connections and the detaching thereof.

Other features of the invention are the provision of means which possesses strength and durability and which will be simple in the construction, very efficient in its operation, and inexpensive in the manufacture.

With these and other objects in view the invention consists in the novel construction, combination, and arrangement of parts, as will be hereinafter more particularly described, and illustrated in the accompanying drawings, forming a part of this specification, though it may be understood that I may make such changes, variations, and modifications as come properly within the scope of the claims hereunto appended, reference being had to the accompanying drawings, forming a part of the specification, in which like characters of reference indicate corresponding parts in all the figures, wherein—

Figure 1 is a side elevation of the thill-coupler and antirattling device. Fig. 2 is a longitudinal section thereof. Fig. 3 is a top plan view of the thill-coupler and antirattling device. Fig. 4 is a detail of the tie-plate and ears. Fig. 5 is a detail view of the locking member. Fig. 6 is a detail view of the thill-iron.

In the drawings the numeral 2 indicates a

vehicle-axle of the ordinary construction, having the usual clip 3 embracing the same and held thereon by a tie-plate 4 and the nuts 5 at opposite terminals of the said clip. Extending from the foremost or front part of the tie-plate are ears 6, between which the thill-iron 7 is pivotally mounted by means of the lateral pin or bolt 8, that is movably supported in corresponding slots 9, longitudinally arranged in the ears and having communicating slots 10, forming an entrance to the longitudinally-arranged slots.

To maintain the pin 8 in the slots 9 and to prevent displacement therefrom from its working position, I provide a bowed spring 11 transversely of the axle, one end of which is secured to the under side of the tie-plate 4 by one of the clip-fastening nuts 5, the other end having a hook portion 12, engaging a locking member 13, in the form of a loop, the latter with hooked projections 14, which engage with the pin 8, so that the latter will be held in the slots 9 in the ears in the said plate 4, thereby preventing the thill-iron from accidentally becoming detached from the axle.

It will be evident that the straightening effect of the curved condition of the spring 10 tends to pull downwardly on the locking member 13, retaining the hook projections 14 normally in engagement with the pin, thus preventing the connections from accelerated displacement. The normal position of the pin 8 is at the forward end of the slots 9, due to the draft on the thill-iron. To detach the thill-iron from the ears of the tie-plate, pressure is applied in an upward direction to the curved spring 11, so that the locking member 13 is sufficiently released to allow disengagement of the hook projections 14 from the plate 8. Then the said pin is moved to the communicating slots 10 and withdrawn therefrom, thus detaching the thill-iron. The end of the thill-iron 7 is provided with a threaded eye 15 for detachably receiving the pin 8, which is provided intermediate its end portions with threads 18, engaging the threads of the eye 15. To afford an easy detachment of the pin 8 from the threaded eye 15 of the thill-iron 7 in case of wear thereof, I provide a

squared end portion 16 in one end of the pin, which is adapted to be engaged by any suitable gripping-tool for the purpose of disconnecting said pin from the thill-iron.

5 It will be apparent that the locking member 13 is extended above the hook portions 14 to form a grip 17, which will assist in engaging and disengaging the hook portions 14 with and from, respectively, the pin 8.

10 Having described my invention, what I claim is—

1. A thill-coupling including a thill-iron having a pin, a fixed plate having lips in parallelism and provided with elongated slots for
15 receiving the pin, a loop having hook-engaging portions for engaging the pin and for normally maintaining the same at the foremost terminals of the slots, said slots having communication intermediate the terminals thereof
20 of and a tension device for said loop.

2. A thill-coupling including a thill-iron having a pin, a fixed plate having lips in parallelism and provided with elongated slots for

receiving the pin, a loop having hook-engaging portions for engaging the pin and for normally maintaining the same at the foremost
25 terminal of the slots, said slots having communication intermediate the terminals thereof, and a hand-grip for releasing the latter.

3. A thill-coupling including a thill-iron
30 having a detachable pin, a fixed plate having lips in parallelism and provided with elongated slots for receiving the pin, a loop having hook-engaging portions for engaging the pin and for normally maintaining the same at the
35 foremost terminals of the slots, said slots having communication intermediate the terminals thereof and a tension device for said loop.

In testimony whereof I have hereunto set
40 my hand in presence of two subscribing witnesses.

HERBERT H. PIPER.

Witnesses:

HENRY L. JONES,
R. T. HENDERSON.