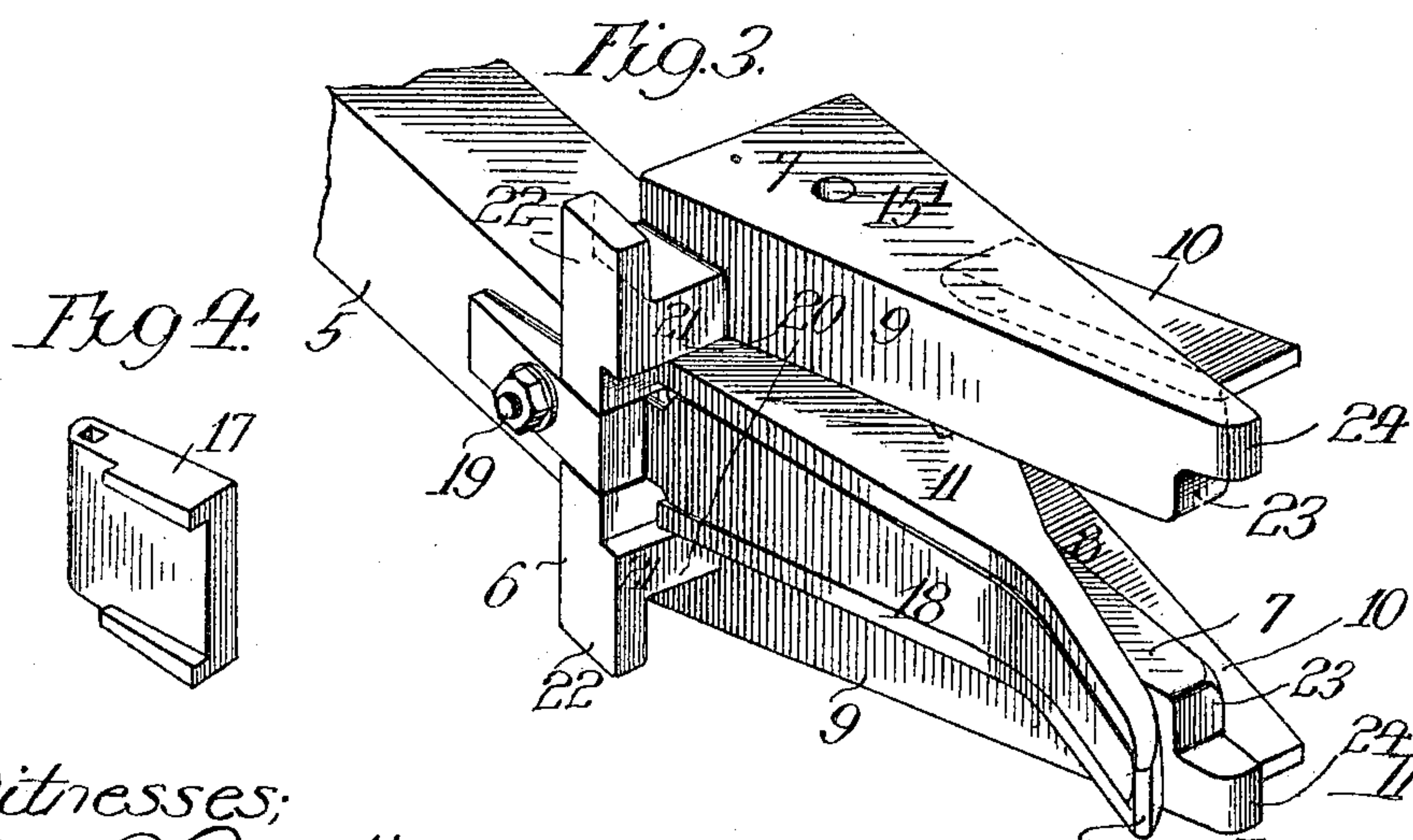
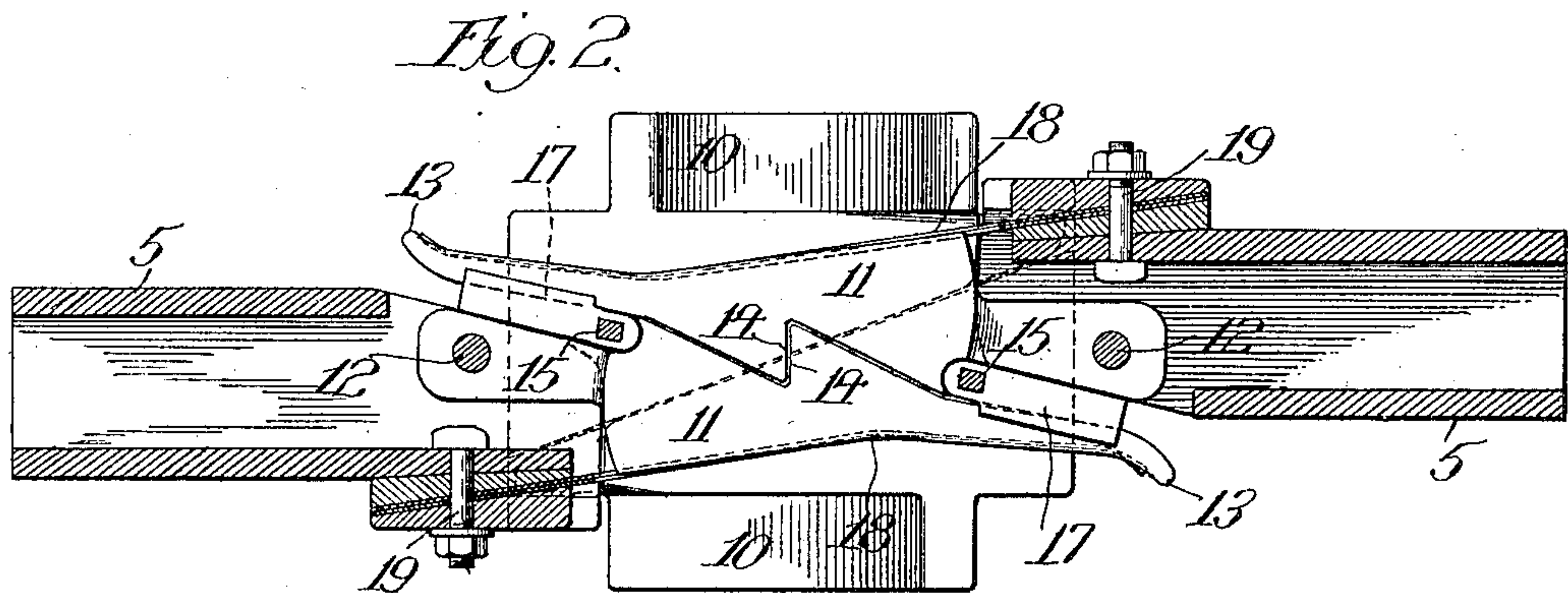
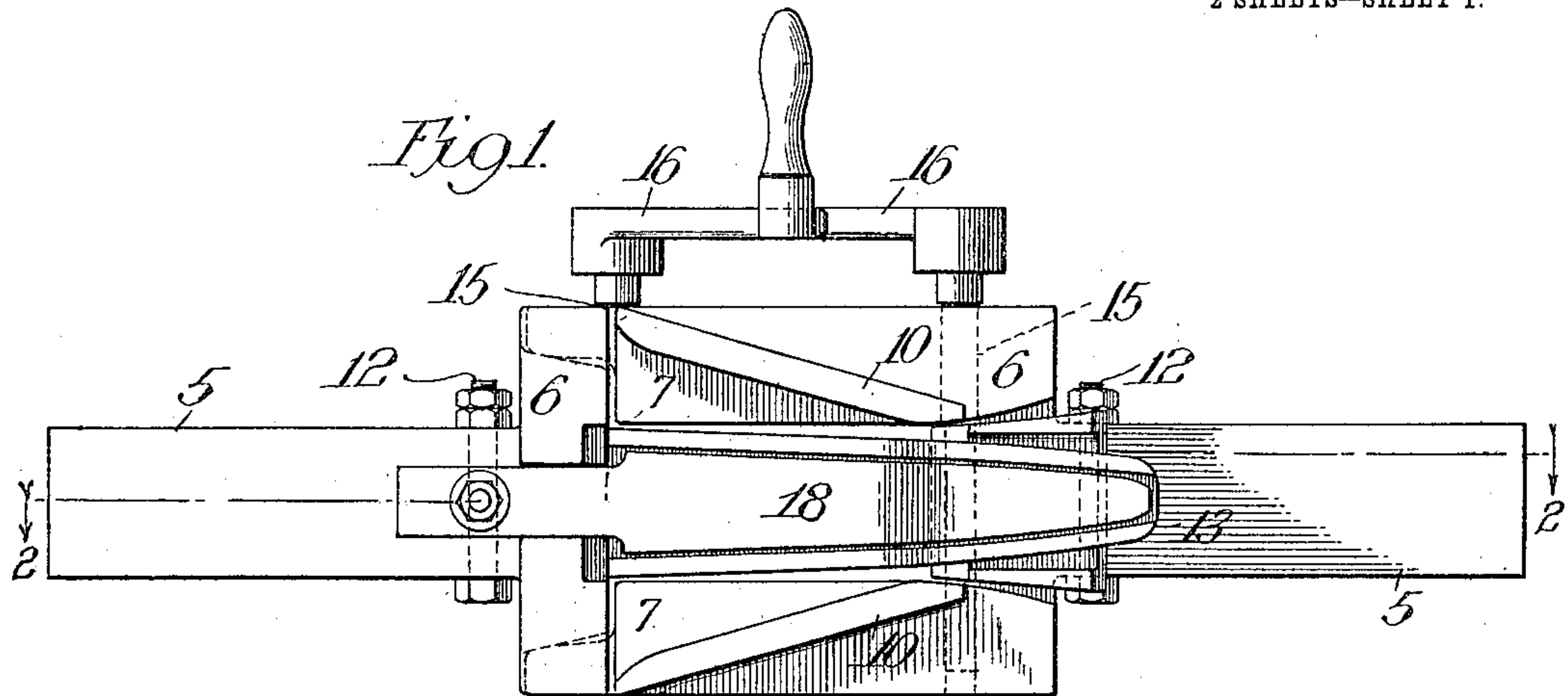


No. 822,344.

PATENTED JUNE 5, 1906.

L. C. CARY.
CAR COUPLING.
APPLICATION FILED OCT. 9, 1905.

2 SHEETS—SHEET 1.



Witnesses;
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2 SHEETS—SHEET 2.

Fig. 5.

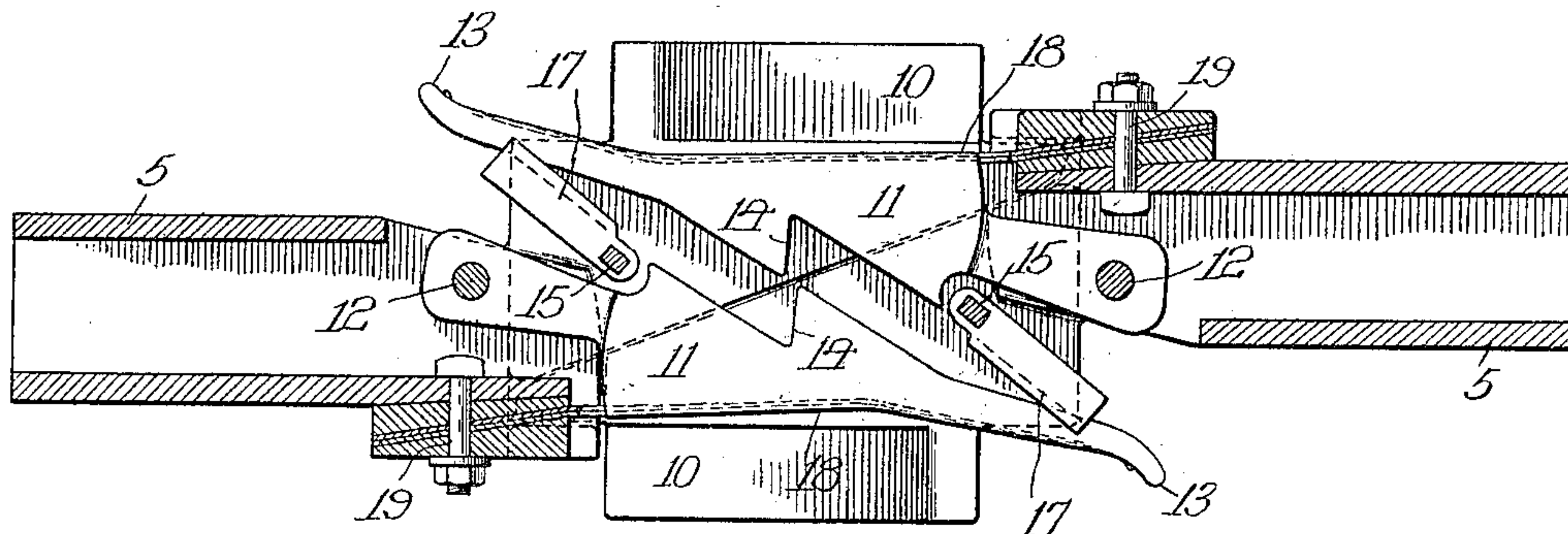
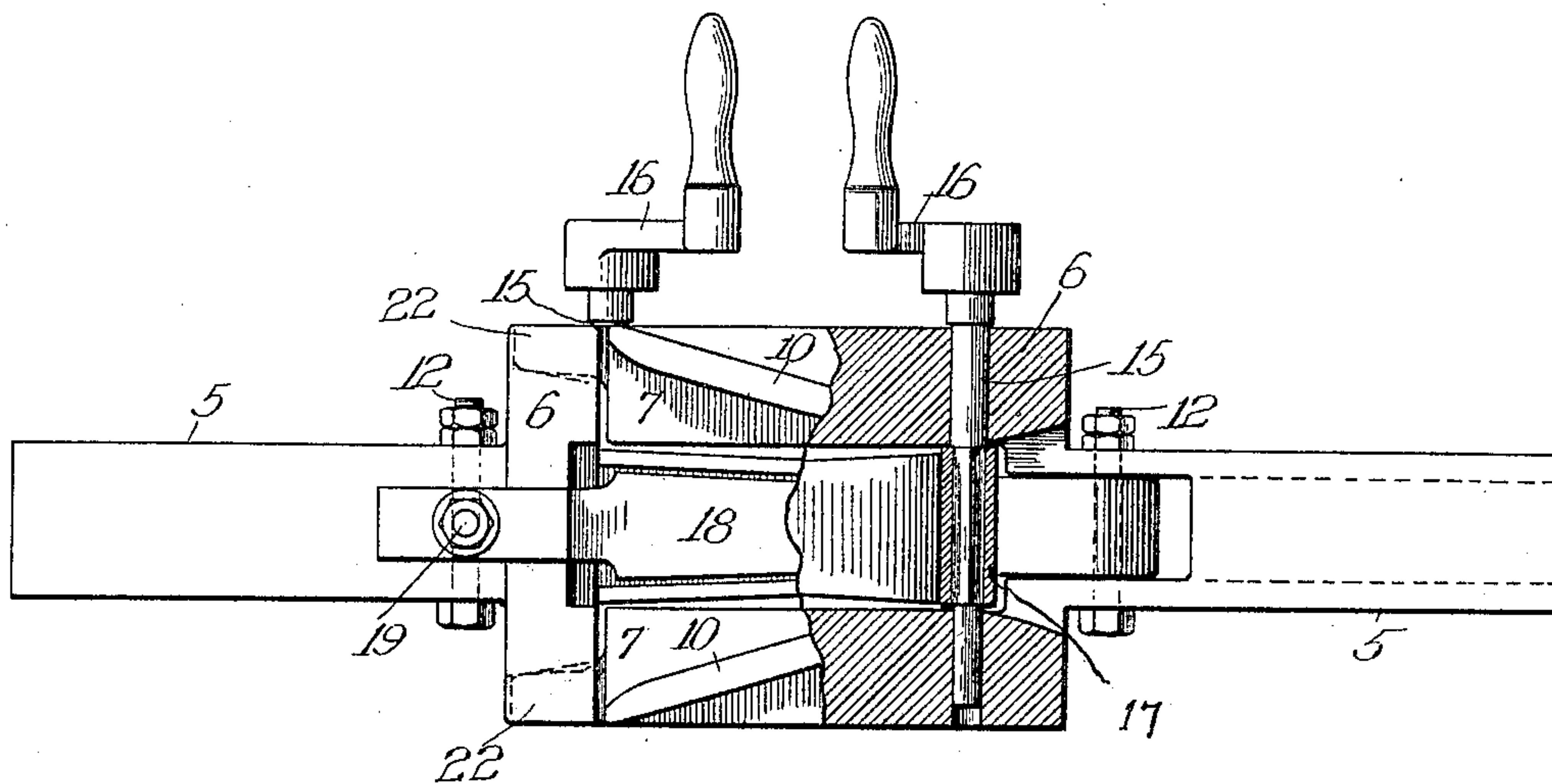


Fig. 6.



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UNITED STATES PATENT OFFICE.

LEWIS C. CARY, OF CHICAGO, ILLINOIS, ASSIGNOR TO CARY INVENTIONS CO., A CORPORATION OF ILLINOIS.

CAR-COUPLING.

No. 822,344.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed October 9, 1905. Serial No. 281,899.

To all whom it may concern:

Be it known that I, LEWIS C. CARY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to car-couplings, and more especially to the automatic type, and has for its objects, first, to provide an automatic car-coupling that will always be ready for coupling engagement without previous opening or setting to receive an approaching head; second, to produce a coupling in which there shall be practically no slack between the heads of the couplings when coupled to avoid the jerk in starting or stopping incident to couplers that are not taut; third, to provide mechanism for uncoupling the heads when coupled, and, fourth, to provide immovable means to prevent lateral movement of the heads when coupled; and to these ends the novelty of my invention resides in the particular construction, combination, and arrangement of parts, as will be hereinafter more fully described, and pointed out in the claims. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view of two heads coupled. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a perspective view of one head. Fig. 4 is a perspective of the releasing-heel. Fig. 5 is a section on line 2 2 of Fig. 1, and Fig. 6 is a side elevation broken away to show pivotal mounting of the releasing-heel.

Similar numerals refer to similar parts throughout the several views.

6 6 denote the heads of the couplings, which are exact duplicates of each other. Each head is provided with two jaws 7 7, triangular in cross-section, normally positioned one above the other, with an intervening space 8 between the jaws, and each jaw is provided with an inclined engaging face 9 and with an integral rib 10 on its back and at sufficient angle to facilitate the coupling of cars of variant heights of coupler positions. Each head is provided with a coupling-lever 11, which is pivotally mounted in the space between the jaws 7 7 and adapted to effect coupling engagement when the heads are brought together.

11 indicates a coupling-lever the inner end

of which is pivoted on shaft 12 at the rear of the triangular jaws 7 7, but through the hollow draw-bar 5.

13 represents the outer end of the coupling-lever, which is curved outwardly at its free end and extends forwardly and somewhat beyond the ends of the jaws for the purpose of guiding the heads into proper horizontal relation when approaching each other for coupling engagement. The coupling-lever 11 in each head is provided with a shoulder 14 for the purpose of interlocking with the lever in the opposing head. Each head is provided with a disengaging device comprising the shaft 15 through the rear ends of the jaws in opening 15', the crank 16, and the releasing-heel 17 for the purpose of uncoupling the heads. The releasing-heel is pivotally mounted in the rear portion of the space between the jaws. Fig. 5 is a longitudinal section showing coupling-levers 11 11 and heels 17 17 just after rotating cranks 16 16 and shafts 15 15 to disengage shoulders 14 14 for uncoupling the heads. One or both of the release-cranks 16 16 may be turned with sufficient force to push the heels 17 17 outward against the forward end of the locking-lever in each head to disengage the shoulders 14 14 to uncouple the heads. Cranks 16 16, Fig. 6, are shown in the positions they would be in Fig. 5 when heels 17 17 have pushed the coupling-levers 11 11 far enough apart to release the shoulders 14 14.

17' in Fig. 6 represents the portion of the releasing-heel through which the rectangular part of shaft 15 extends. The shaft may be fastened in or to the heel by a key or other suitable means. The shafts are shown to be round near their ends and rectangular for about the middle one-third of the length and as not extending entirely through the lower jaw, but may be made to extend entirely through the upper and lower jaws and be suitably fastened at its lower end to prevent vertical withdrawal.

Each locking-lever 11 is maintained in locking engagement by an elastic steel plate 18, suitably fastened, as shown at 19, and bearing upon its outer surface.

20 represents a jaw-bearing abutment at the rear end of each head and is provided with bearing-surfaces 21 21 and lateral arms 22 22. The forward end of each jaw is provided with a pushing-surface 23 and an ex-

tension 24. When the heads are being coupled, the extensions 24 24 pass under the lateral arms 22 22, and when coupled these arms prevent lateral movement of the heads.

5 It will be noted the foregoing construction will give equal efficiency whether cars are pulled or pushed and that it will be impossible to "buckle" these couplings. Also no buffer apparatus will be required.

10 In operation when it is desired to uncouple the heads it is only necessary to turn one or both of the cranks 16 to push the heel 17 against the forward end of the locking-lever of the opposite head until the shoulders 14 14
15 are out of engagement, when the heads may be separated.

A great many slight changes might be made in the general form and arrangement of the parts described without departing
20 from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention
25 and the protection prayed.

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

30 1. In a car-coupling a head comprising two jaws positioned one above the other, with inclined engaging faces, an integral rib on the back of each jaw, means for locking said head to an opposing head and a releasing-heel for unlocking the heads.

35 2. In a car-coupling a head comprising two jaws having inclined engaging faces, an integral rib on the back of each jaw, a jaw-bearing abutment, means for coupling said head to an opposing head, and a releasing-heel for uncoupling said heads.
40

45 3. In a car-coupling a head comprising two jaws normally positioned one above the other with inclined engaging faces, an integral rib on the back of each jaw, a jaw-bearing abutment with lateral arms extending therefrom, means for coupling said head to

an opposing head, and means for uncoupling said heads.

4. In a car-coupling a head comprising two jaws triangular in cross-section and having inclined engaging faces, an integral rib on the back of each jaw, a bearing-abutment near the rear of said jaws with lateral arms extending therefrom, pushing-surfaces on the forward ends of said jaws, means for
55 coupling said head to an opposing head and means for uncoupling said heads.

5. In a car-coupling a head comprising two jaws normally positioned one above the other with inclined engaging faces, an integral rib on the back of each jaw, a jaw-bearing abutment with arms extending laterally therefrom, a pushing-surface on the forward end of each jaw, a spring-pressed coupling-lever for coupling said head to an opposing
65 head, and means for uncoupling said heads.

6. In a car-coupling a head comprising two jaws with inclined engaging faces, an integral rib on the back of each jaw, a bearing-abutment with arms extending laterally
70 therefrom, forward extensions on said jaw adapted to be inserted between said inclined faces and said arms to prevent lateral movement of the jaws, a pushing-surface on the forward end of each jaw, a spring-pressed
75 coupling-lever and a releasing-heel for uncoupling said heads.

7. In a car-coupling a head comprising two jaws normally positioned one above the other with inclined engaging faces, an integral rib on the back of each jaw, a bearing-abutment with arms extending laterally therefrom, a spring-pressed pivoted coupling-lever for coupling said head to an opposing
85 head, and a releasing-heel for uncoupling said heads.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS C. CARY.

Witnesses:

ALBERT MILLER,
ERNESTINE MORSTADT.