

No. 810,588.

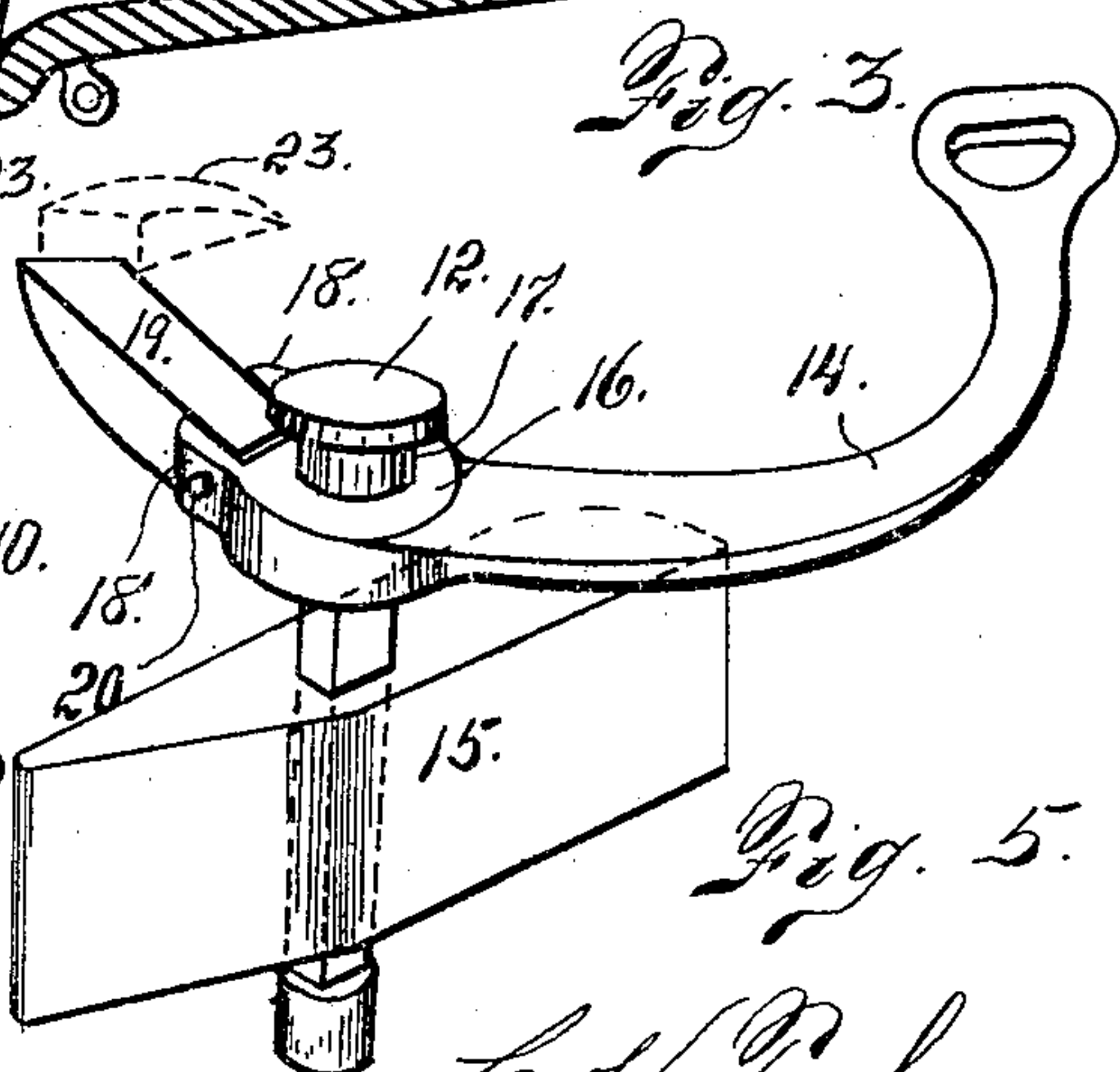
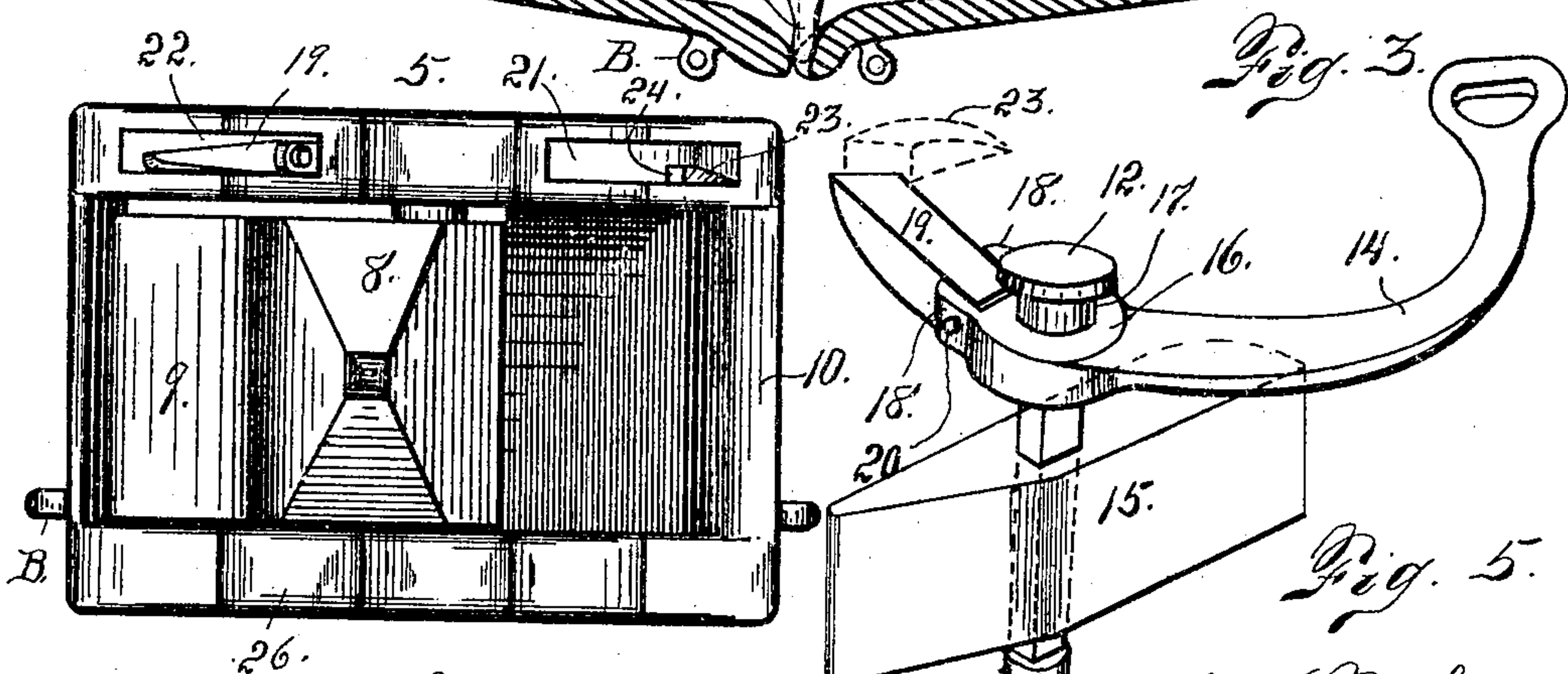
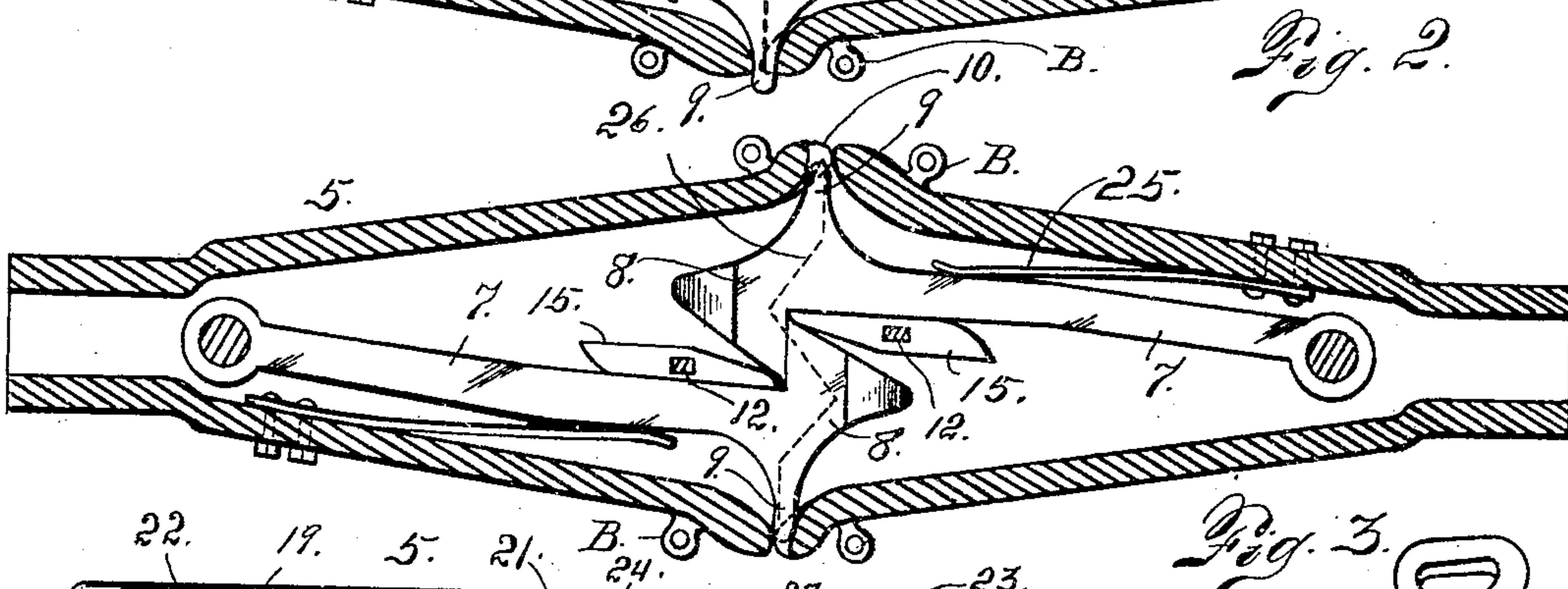
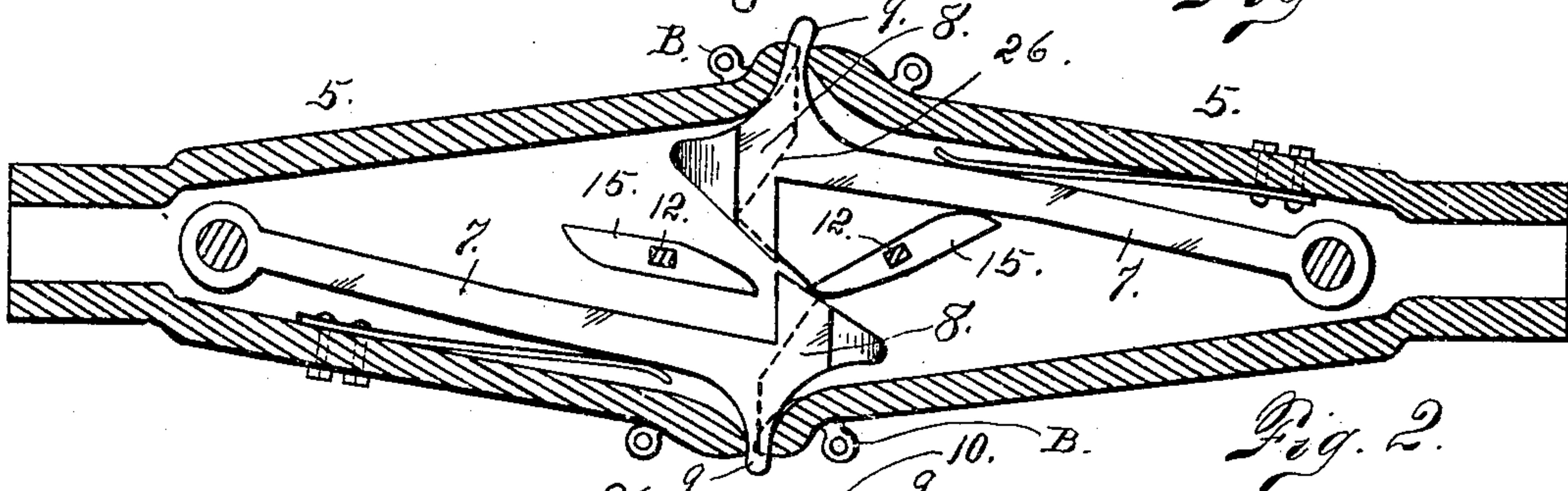
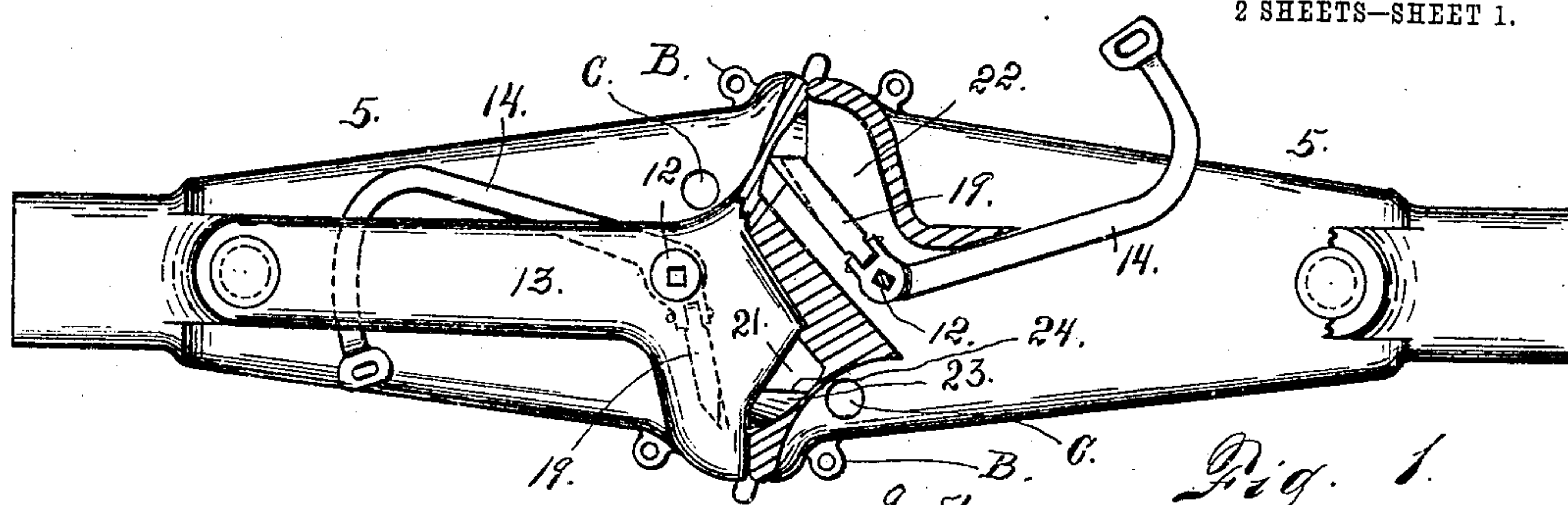
PATENTED JAN. 23, 1906.

C. H. TOMLINSON.

CAR COUPLING.

APPLICATION FILED FEB. 10, 1905.

2 SHEETS—SHEET 1.



Witnesses
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Dena Nelson.

C. H. Tomlinson
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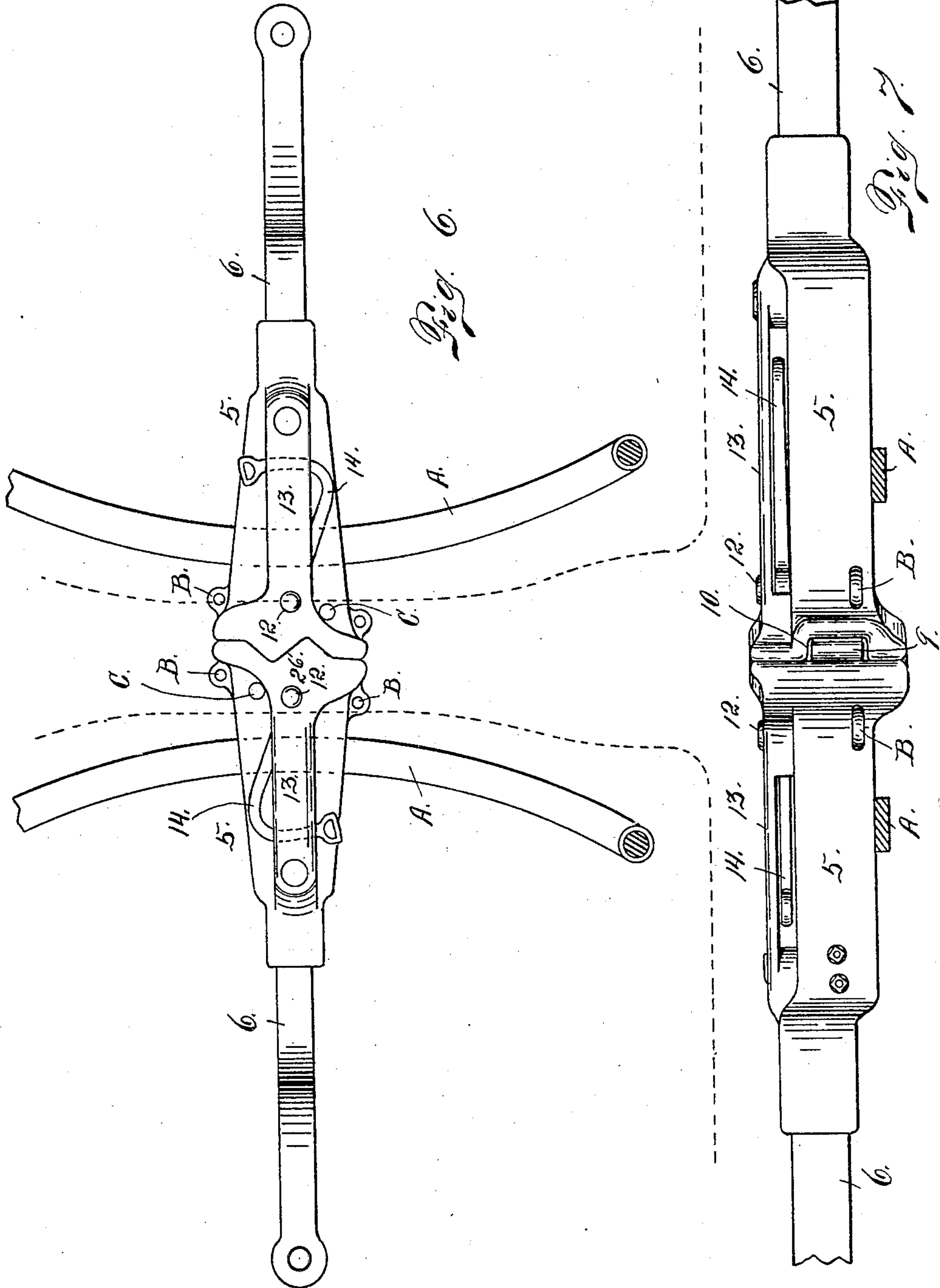
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES H. TOMLINSON, OF DENVER, COLORADO, ASSIGNOR TO THE
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CAR-COUPLING.

No. 810,588.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed February 10, 1905. Serial No. 245,043.

To all whom it may concern:

Be it known that I, CHARLES H. TOMLINSON, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in car-couplers of the class set forth in my application for patent, Serial No. 236,091, filed December 9, 1904.

The objects to be attained are substantially the same as those set forth in the said application, and the features covered by my present application may be termed improvements over the construction of the original application.

The main feature of novelty of my improved construction relates to the unlocking mechanism. This consists of a lever device provided with a pawl pivoted on a horizontal axis, and therefore adapted to have a vertical movement. The opposite draw-head is provided with a recess which the said pawl is adapted to enter when the parts are in the coupled position. Now if it is desired to uncouple the cars the lever is actuated to throw the coupling devices to the uncoupled position and the pawl connected with the actuated lever enters the said recess and rides over a lug of the opposite draw-head and drops downwardly in front of an offset, whereby the lever and unlocking-cam are held in the uncoupled position until the draw-heads are separated, when the spring-actuated coupling device of the draw-head corresponding with the actuated lever acts on the cam to return the unlocking-lever and its pawl to the normal position ready for another uncoupling act.

Having briefly outlined my improved construction, as well as the function it is intended to perform, I will proceed to describe the same in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a top plan view of a pair of draw-heads shown in the coupled position, but with the top portion of each draw-head partly broken away and with parts sectionized. In this view the unlocking-lever is illustrated in the unlocked position. Fig. 2 is a horizontal section taken through the two draw-heads with the coupling devices in the unlocked position or in the position corresponding with the position of the unlocking-lever at the right in Fig. 1. Fig. 3 is a similar view with the coupling devices in the locked position. Fig. 4 is a front end view, on an enlarged scale, showing one of the draw-heads with my improved equipment. Fig. 5 is a perspective view illustrating the unlocking-lever, its pawl, and the unlocking-cam connected with the lever. Fig. 6 is a top plan view of two draw-heads equipped with my improvements and shown in the coupled position, the cars being indicated by dotted lines. Fig. 7 is a side elevation of the two draw-heads with the outer extremities of the bars broken away.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the draw-heads, each of which is connected with a draw-bar 6, pivotally connected with the car and arranged to swing within certain limits, as explained in my previous application. In each of these draw-heads is located a coupling device 7, provided with a hook-shaped head 8 and a curved outwardly-projecting deflecting part 9, whose outer extremity passes outwardly through a recess 10, formed in the opposite draw-head when the coupling device is in the unlocked position, as shown in Fig. 2.

A pin 12 is pivotally mounted in a part 13 and the lower wall of the draw-head and also passes through the upper wall of the draw-head. A space, however, is left between the top of the draw-head and the part 13 for the operation of the unlocking-lever 14. The portion of this pin between its journal extremities is angular in cross-section, and upon this angular portion of the pin is mounted the unlocking-cam 15, which occupies a position within the chamber of the draw-head and in such proximity to the coupling devices, when the cars are coupled, that the movement of the cam acts on both coupling devices to throw them to the uncoupled or unlocked position.

The unlocking-lever 14 works in the space between the top 13 and the upper wall of the draw-head, and its inner extremity is provided with a hub 16, having an opening 5 shaped to fit the angular portion of the pin 12. This hub of the lever is located just below the cylindrical part 17 of the pin which is journaled in the upper part 13 of the draw-head. This hub 16 is provided with two 10 separated lugs 18, which receive one extremity of a pawl 19, the latter being pivotally connected with the lugs by a pin 20, which forms a horizontal axis for the pawl which is adapted to swing vertically. When the cars 15 are coupled, this pawl occupies a recess 22 in its own draw-head; but when the lever 14 is actuated to throw the coupling devices to the unlocked position this pawl protrudes beyond the recess 22 of its own draw-head 20 and enters a recess 21 of the opposite draw-head and rides up over a lug 23, located in the said recess and drops in front of an offset 24 when the coupling devices have been thrown to the uncoupled position. When in this position, 25 the pawl holds the lever and the unlocking-cam in the unlocked position until the cars are separated or until the draw-head carrying the actuated lever has been moved far enough from the draw-head of the opposite 30 car to disengage the pawl 19 from the offset 24 of the lug 23. As soon as this occurs the spring 25, acting on the coupling device belonging to the draw-head carrying the actuated lever, will act on the cam 15 to return 35 the cam, the lever, and pawl to their normal position ready to perform again the unlocking function.

Attention is called to the fact that the draw-heads equipped with my improvements 40 are interchangeable, and when the two draw-heads are in the coupled position the cars may be unlocked from either side, since the lever of one draw-head is in position to be actuated from one side of the train, while the lever of the other drawhead is in position to be 45 operated from the other side, and from the foregoing it will be readily understood that it is only necessary to actuate one lever in order to throw the coupling devices to the uncoupled position, since the cam operated by 50 either unlocking-lever acts on both coupling devices to throw them to the uncoupled position. Attention is also called to the fact that the draw-heads of my improved construction are notched in zigzag fashion, as 55 shown in Fig. 6 and indicated by the dotted lines 26 in Figs. 2 and 3, to prevent the draw-heads from independent movement when the cars are coupled. Since the draw-heads are rigidly connected with the swinging draw-bars, as heretofore explained, lateral or horizontal movement of the draw-heads on each other is not required in making turns. Hence by means of my improvements 65 there can be no possible uncoupling

tendency in making turns, since the coupling devices maintain the same position on turns or curves that they do when the cars and draw-heads are in the straight-line position. This zigzag feature, however, was disclosed 70 and claimed in my previous application. The swinging draw-heads 5 are supported during their swinging action by guides A. (See Figs. 6 and 7.) Each draw-head is provided on opposite sides by apertured lugs B, 75 whereby any draw-head which is out of line to couple with the draw-head of the opposite car may by the use of any suitable instrument having a hooked extremity (not shown) be drawn into alinement with the other draw-head 80 for coupling purposes. The draw-heads equipped with my improvements are preferably provided with openings C, adapted to receive pins for the purpose of forming a link-and-pin coupling with those cars having a 85 link-and-pin equipment.

Having thus described my invention, what I claim is—

1. The combination with a draw-head, of a pivoted coupling device located therein, a 90 cam journaled in the draw-head and engaging the coupling device, an unlocking-lever accessible from the outside of the draw-head and connected to operate the cam for uncoupling purposes, and a pawl pivotally connected with the lever, the draw-head being 95 provided with a recess having a stop adapted to engage the pawl of the opposite draw-head, whereby when the lever is thrown to the unlocked position, the pawl engages the 100 stop and holds the locking lever and cam in the said position until the draw-heads are separated, substantially as described.

2. In a car-coupler, the combination with a draw-head, of a spring-actuated coupling 105 device pivoted in the draw-head, an unlocking-cam engaging the coupling device, and a lever connected with the cam and provided with a jointed member adapted to protrude from the forward extremity of the draw-head 110 for the purpose set forth.

3. In a car-coupler, the combination of two draw-heads having draw-bars pivotally connected with their respective cars, of spring-actuated pivoted coupling devices located 115 within the draw-heads and adapted to protrude sufficiently to interlock when the draw-heads are in engagement, an unlocking-cam located in each draw-head and adapted to act on both coupling devices, a lever connected with the unlocking-cam of each draw-head and having a jointed member normally occupying a forward recess in its own draw-head, each draw-head, however, being provided with a forward recess which the said 120 jointed member of the opposite draw-head enters, when the lever is thrown to the unlocking position, each draw-head having a stop located within the said recess, which stop is adapted to engage the jointed mem- 130

ber and hold the parts in the unlocked position until the draw-heads are separated, substantially as described.

4. The combination with a draw-head and a coupling device located therein, of means for throwing the coupling device to the uncoupled position, said means including a lever fulcrumed on the draw-head and provided with a forwardly-projecting jointed member adapted to protrude from the forward extremity of the draw-head for the purpose set forth.

5. The combination with a draw-head and

a coupling device located therein, of a pawl connected with the coupling device, protruding from the draw-head and adapted to engage the opposite draw-head to hold the coupling device of its own draw-head in the unlocked position until the two draw-heads are separated.

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

CHARLES H. TOMLINSON.

Witnesses:

DENA NELSON,
A. J. O'BRIEN.