

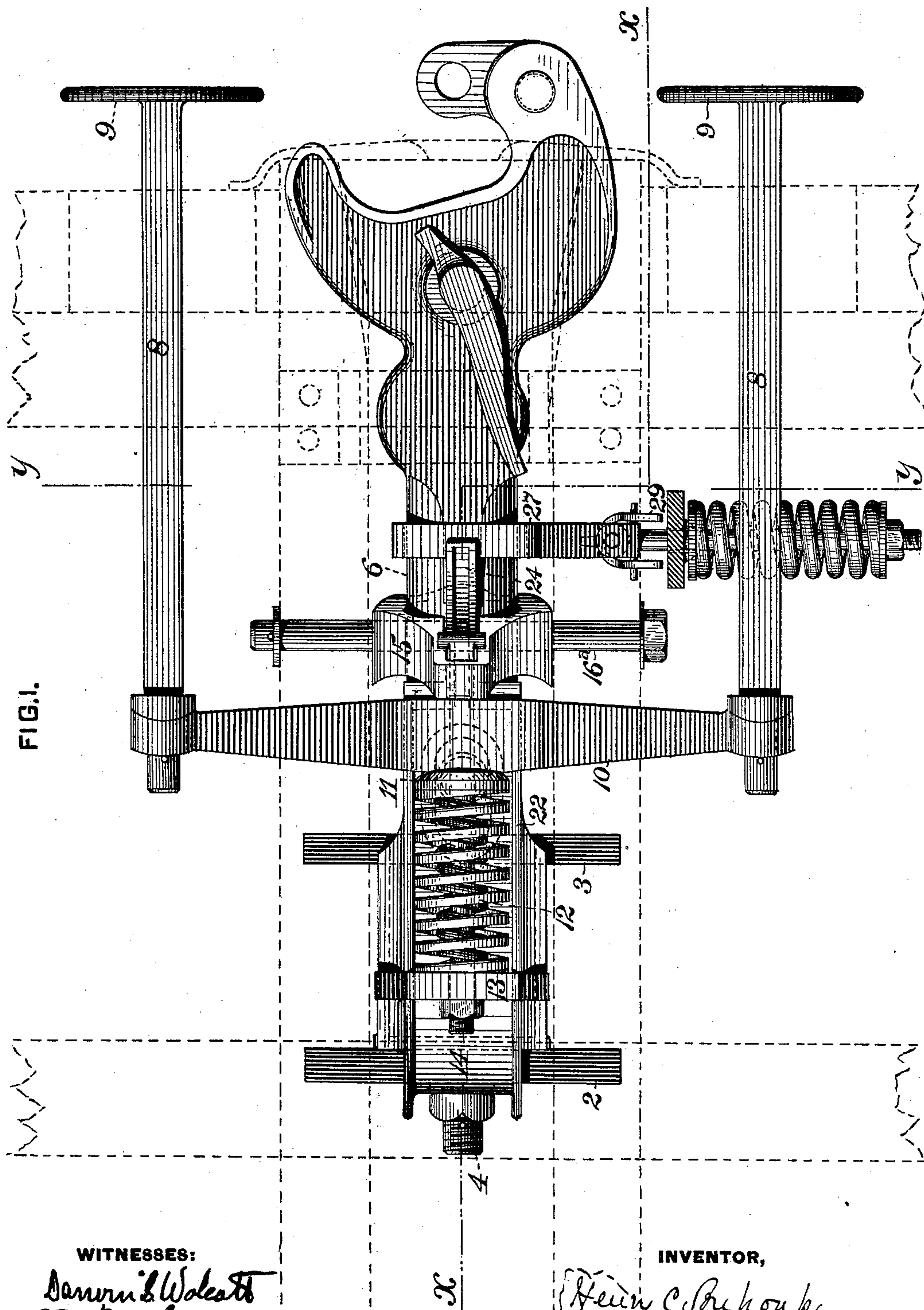
(No Model.)

4 Sheets—Sheet 1.

H. C. BUHOUP.
CAR COUPLING.

No. 429,081.

Patented May 27, 1890.



WITNESSES:

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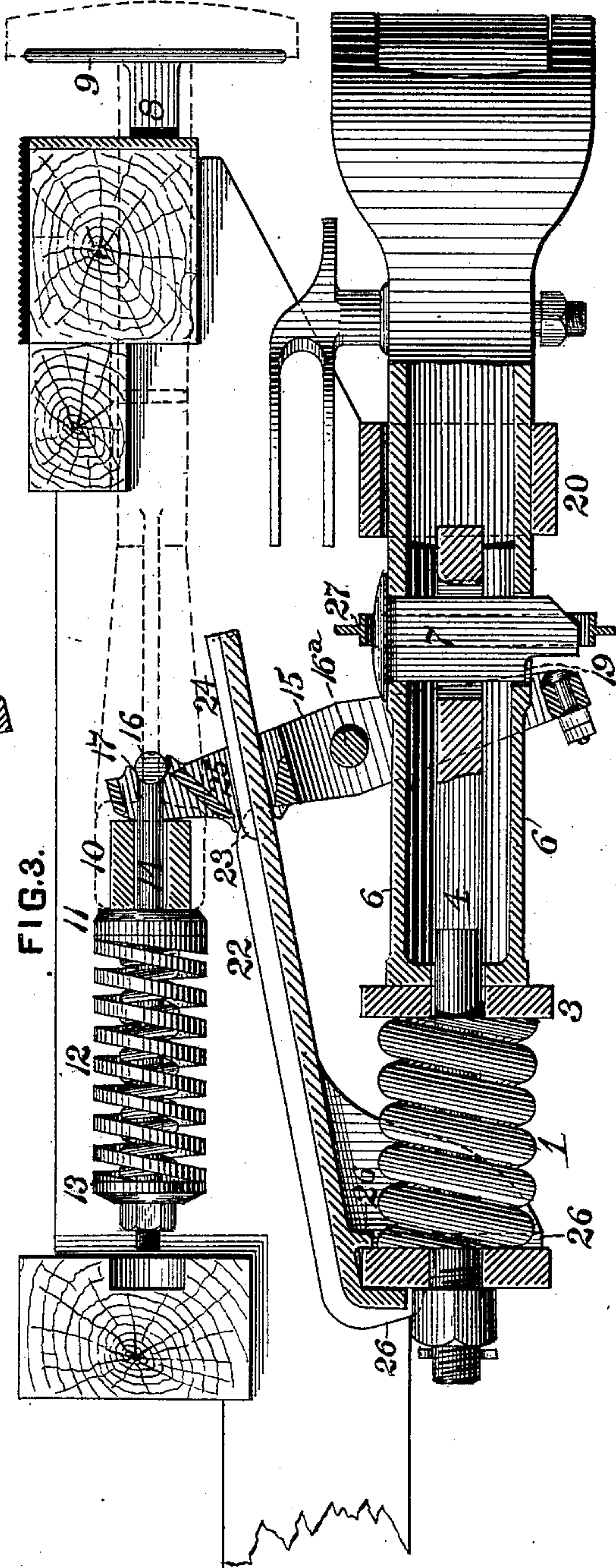
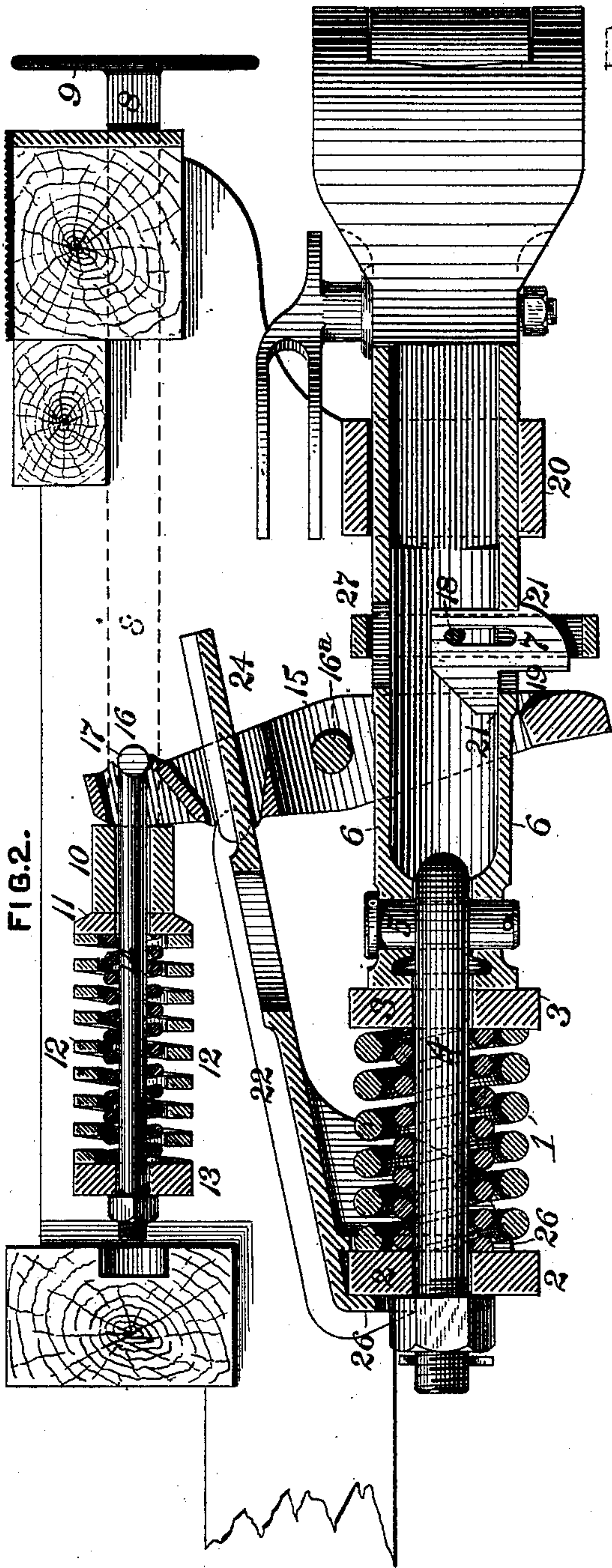
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CAR COUPLING.

No. 429,081.

Patented May 27, 1890.



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4 Sheets—Sheet 3.

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FIG. 4.

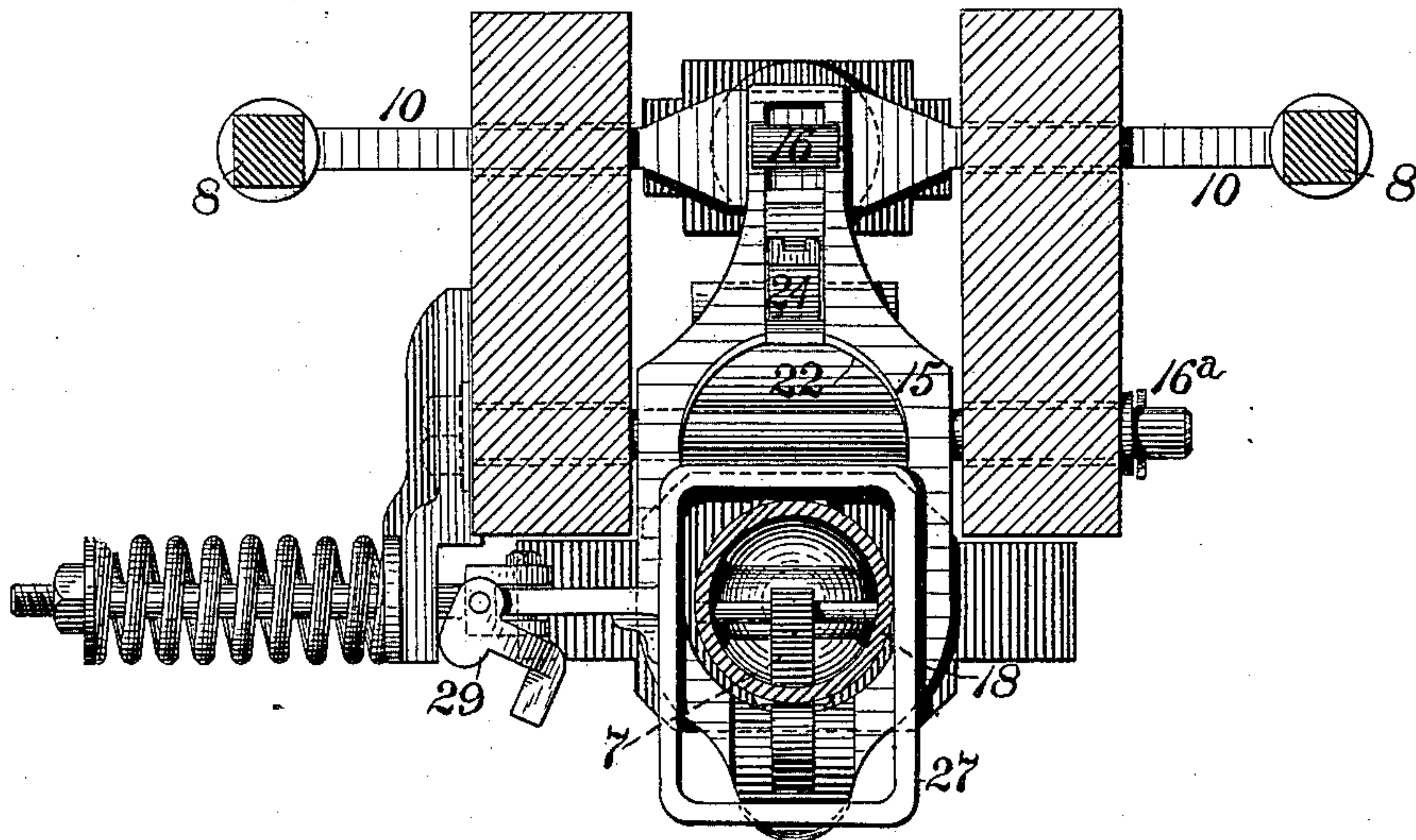


FIG. 5.

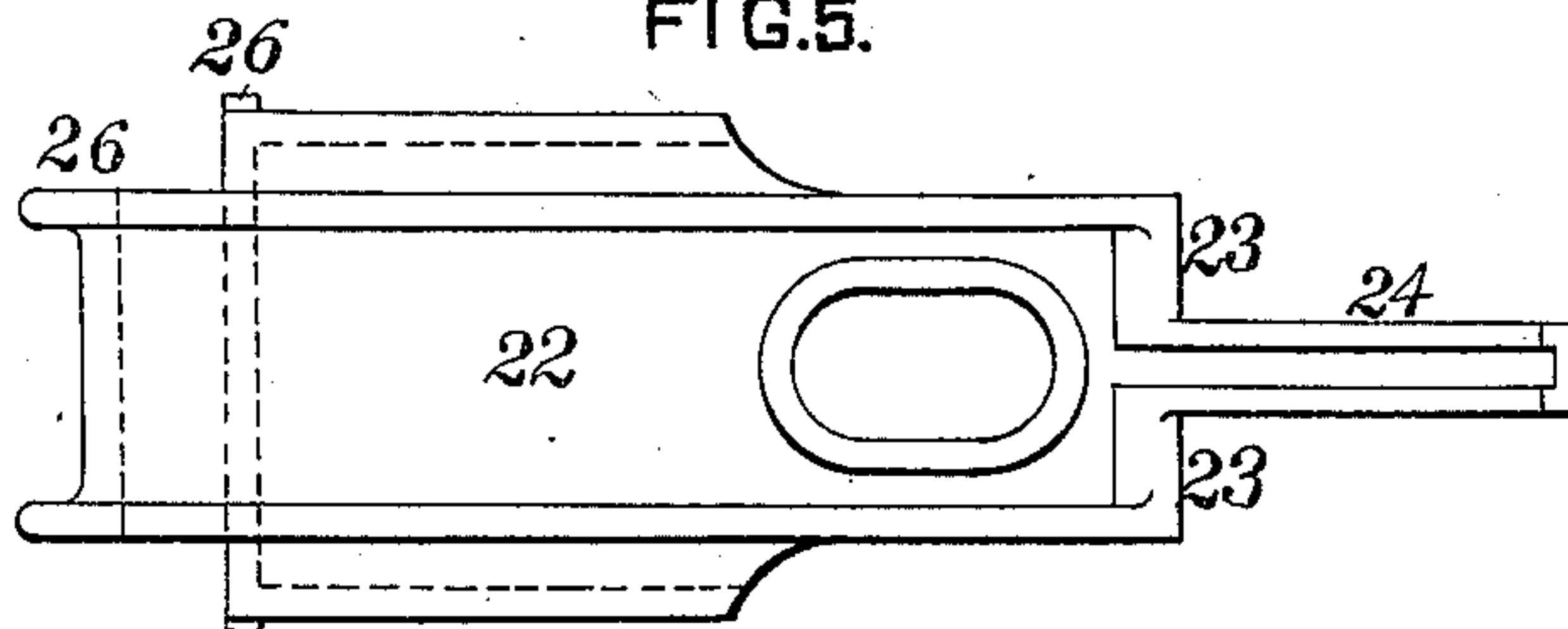


FIG. 7.

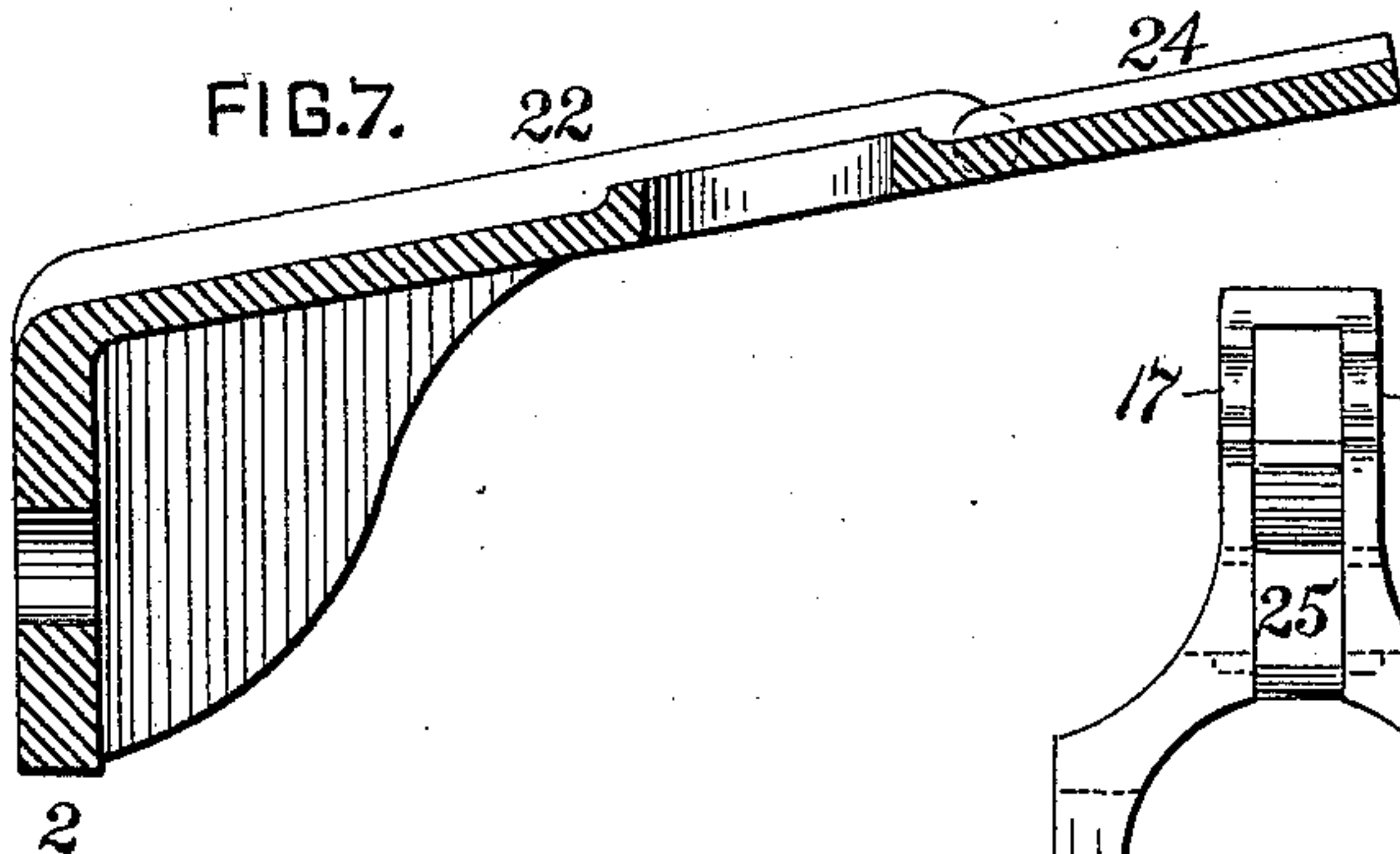
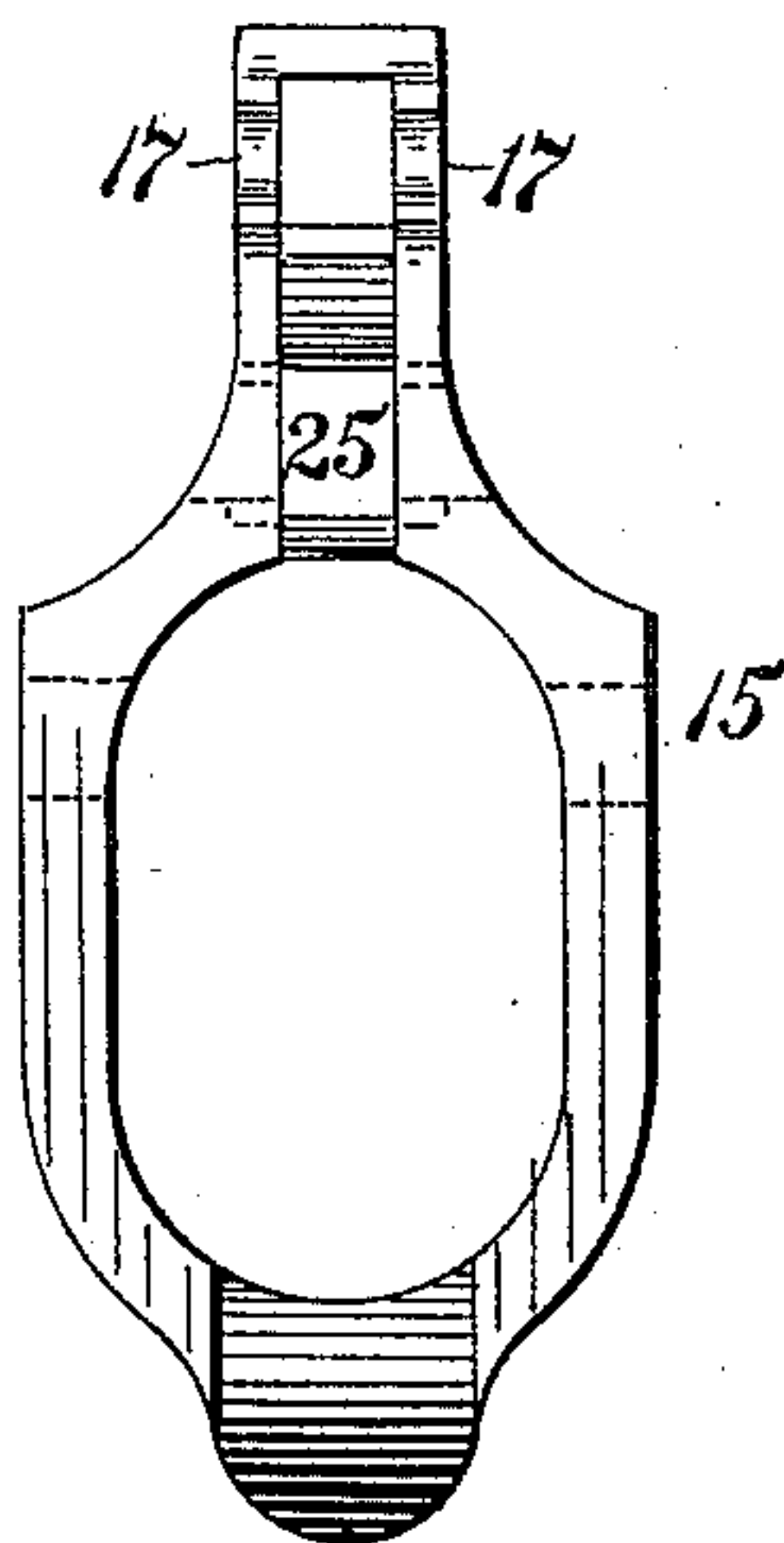


FIG. 6.



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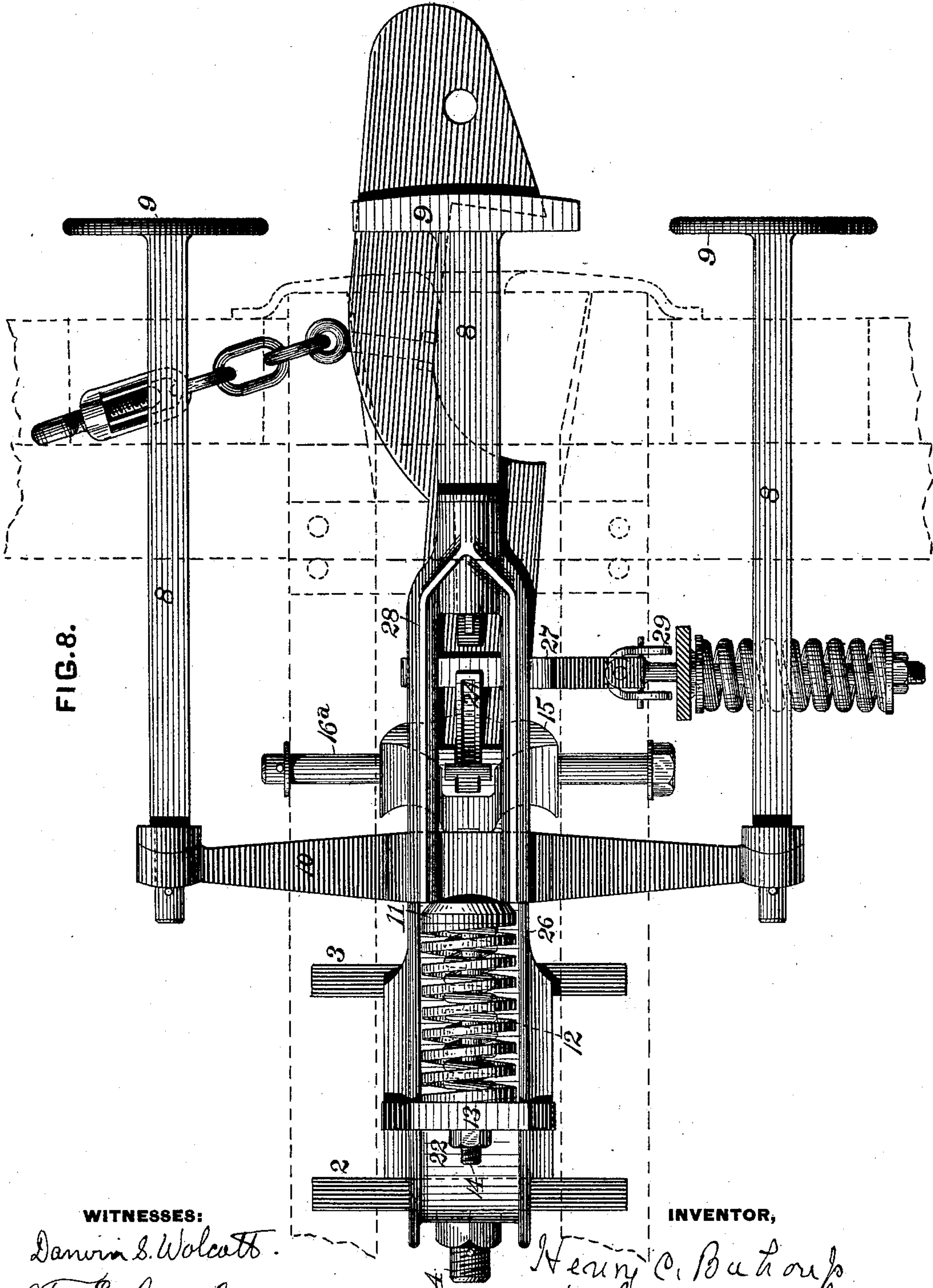
(No Model.)

4 Sheets—Sheet 4.

H. C. BUHOUP.
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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 429,081, dated May 27, 1890.

Application filed March 31, 1890. Serial No. 345,940. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. BUHOUP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented or discovered certain new and useful Improvements in Car-Couplers, of which improvements the following is a specification.

The invention described herein relates to certain improvements in the mechanism interposed between the car-coupling and buffing mechanisms for the purpose of increasing the rigidity of the buffing mechanism by or from the movements of the coupling mechanism; and the invention has for its object such a construction of the interposed transmitting mechanism as will permit the removal of one class or kind of coupling mechanism, as the Janney, and the substitution of another class or kind, as the Miller coupling, as is frequently necessary in the passage of cars over different lines of railway.

In the accompanying drawings, forming a part of this specification, Figure 1 is a top plan view of my improved apparatus in connection with the Janney type of coupler and buffing apparatus, a portion of the car-timber being represented by dotted lines. Fig. 2 is a sectional elevation, the plane of section being indicated by the line xx , Fig. 1. Fig. 3 is a similar view showing certain modifications in the apparatus. Fig. 4 is a transverse sectional elevation, the plane of section being indicated by the line yy , Fig. 2. Fig. 5 is a plan view of the strut or brace forming a part of the mechanism, interposed between the coupling and buffing mechanism. Fig. 6 is a view in elevation of the yoke-lever, also forming a part of the interposed mechanism. Fig. 7 is a detail showing the strut or brace integral with the follower-plate, and Fig. 8 is a plan view showing my improvements in connection with a Miller coupling and buffing apparatus.

In the practice of my invention the draft-springs 1 and follower-plates 2 and 3 are arranged and supported on the longitudinal sills of the car in the usual or any suitable manner. The draft-bolt 4 is passed through the follower plates and springs and is provided at its outer end with a slot for the re-

ception of the locking-pin 5, which also passes through corresponding slots of the shank 6 of the draw-head, said shank having a suitable longitudinal opening for the reception of the draft-bolt.

In Fig. 2 the draft-bolt is shown comparatively short and connected to the shank or barrel of the draw-head at or near its rear end; but in Fig. 3 the draft-bolt is made sufficiently long to extend a considerable distance into the shank or barrel 6, and is held in position by the horn 7, passing through suitable slots in the shank and draft-bolt and extending a short distance below the shank or barrel, for a purpose to be hereinafter stated.

The stems 8 of the buffers 9 are passed through suitable sockets in the extreme end sill of the car-platform, as is customary, and have their inner ends attached in the usual manner to the ends of the equalizing-lever 10. This lever bears at its center against a washer or bearing-plate 11 at one end of a spring 12, having a corresponding washer or bearing-plate 13 at the opposite end, and through the bearing-plates is passed a bolt 14, provided with a nut or head engaging the rear washer or bearing-plate. This bolt is extended, as shown in Fig. 2, through the equalizing-lever 10 and the upper end of the yoke-lever 15, and is provided at its outer end with a head 16, adapted to engage a suitable seat 17 in the outer face of the yoke-lever, whose rear face is held against the equalizing-lever by the normal tension of the spring 12. The Janney yoke-lever 15 is mounted on the pivot-shaft 16^a, which is fixed at its ends in the longitudinal sills of the car. As is customary, the Janney yoke has an opening through its lower end for the passage of the shank or barrel of the draw-head, and it is so proportioned as to length that the cross-bar forming the lower end of the yoke will be engaged by the horn 7 during the rearward movement of the drawing. The horn may be loosely hung upon a pin 18, passing transversely through the shank or barrel of the draw-head, as shown in Fig. 2, or may be formed by the extended lower end of the bolt or key employed for securing the draft-bolt and draw-bar together, as shown in Fig. 3. In the construction shown in Fig. 2 the horn projects down through a slot 19 in the

shank or barrel of the draw-head, and is vertically slotted so as to permit of its being forced up into the barrel, so as to avoid engagement with the stirrup 20, forming the front support for the draw-head, when the latter is to be removed. The horn is provided on opposite edges with shoulders 21, the one adapted to engage the outer and the other the inner wall of the barrel 6, thereby relieving the supporting-pin 18 of all strain when the horn is brought into contact with the yoke-lever during the rearward movement of the draw-head. The front edge of the projecting portion of the horn is rounded so that it will automatically move up into the barrel on contact with the stirrup. In lieu of connecting the Janney yoke-lever to the draw-head by an upwardly-projecting horn and a bolt leading therefrom, a strut or brace 22 is interposed between the Janney yoke-lever and the rear follower-plate 2, as shown in Figs. 2 and 3. This strut or brace is provided at its front end with rounded shoulders 23, adapted to engage concave seats in the rear face of the yoke-lever, and with a forwardly-projecting tongue 24, arranged between said shoulders and adapted to pass through an opening 25 in the yoke-lever and support the forward end of the strut in proper position, as shown in Figs. 2, 3, 5, and 6, when the upper end of the yoke-lever is thrown forward, as hereinafter described. At its rear end the strut or brace is provided with downwardly-projecting prongs or flanges 26, preferably three in number, two thereof being adapted to bear against the front face of the follower-plate 2 on opposite sides of the draft-spring 1, and the other adapted to extend over and bear upon the rear face of the follower-plate, as shown in Figs. 1, 2, and 3. If desired, the strut and rear follower-plate may be made integral with each other, as shown in Fig. 7.

When cars are forced together, as in coupling or stopping a train, the buffer-plates 9 first engage, thereby pushing the equalizing-bar backward and compressing the spring 12, the rear bearing-plate 13 being held from movement by the bolt 14, connecting it with the upper end of the yoke-lever 15, which is braced as against rearward movement by the strut 22. As the draw-heads are forced inwardly the horn 7 comes in contact with the lower end of the yoke-lever 15, thereby throwing its upper end forward and further compressing the spring 12, and through the medium of the spring and equalizing-lever forcing the buffers more firmly together. When the draw-heads are drawn out, the forward movement of the follower-plate 2 is imparted through the strut or brace 22 to the upper end of the yoke-lever 15, thereby causing the buffer-plates to bear more firmly together, the yoke-lever operating on the buffers through the mechanism hereinbefore described.

In Fig. 8 the improvement hereinbefore described is shown in connection with the Miller

coupler and buffing apparatus, wherein the members of the coupler are held in engagement by means of a spring connected to the shank or barrel 6 of the coupler by a band or collar 27, surrounding the shank or barrel, as shown. This collar is made of such horizontal dimensions as to permit of the usual longitudinal movements of the draw-gear, and of such vertical dimensions as not to interfere with the downwardly-projecting horn 7 during the longitudinal movements of the draw-gear incident to ordinary service or its entire removal for the substitution of another coupler. The barrel or shank 6 is so constructed that it may be connected to the draw-bolt 4 either in the manner shown in Figs. 2 and 7 or in that illustrated in Fig. 3. In the Miller buffing apparatus only one buffer arranged over the coupler is employed, and as it is necessary on account of its projection beyond the end sill of the car to remove this buffer when a Janney coupler is used a yoke 28 is interposed between the Miller buffer and the equalizing-lever 10. This yoke 28, as described and shown in Letters Patent No. 281,901, dated July 24, 1883, has its rear end bifurcated, and each prong is provided with a seat adapted to engage the equalizing-lever 10 on opposite sides of the yoke-lever 15. The operation of the devices herein described is similar, as will be readily understood, regardless of the form of coupler and buffer employed.

As the Miller form of coupler requires a certain amount of lateral movement for coupling and uncoupling, the supporting-strap 20 is made sufficiently wide to permit of such lateral movement, and the barrel or shank 6 of the Janney coupler is provided with lateral enlargements where it passes through the strap 20 for the purpose of holding it from lateral movement, as shown in Fig. 1, and fully described in Letters Patent No. 281,901. Means similar to those described and shown in said patent are employed for operating the lock-pin of the Janney coupler and for shifting the Miller coupler laterally.

When it is desired to substitute a Miller coupler for a Janney, it is only necessary to drive out the pin 5 in the construction shown in Fig. 2, or the horn 7 in that shown in Fig. 3, pull off the Janney draw-head, insert the Miller, replace the locking pin or horn, and connect the chain to the operating-lever. While making these changes, the collar 26 is held away from contact or bearing against the barrels of the draw-heads by means of the dog 29, (shown in Fig. 4,) and operating as described in Letters Patent No. 281,901.

I claim herein as my invention—

1. The combination of a coupling mechanism, a buffing mechanism, a yoke-lever connected to the buffing mechanism, and a brace or strut interposed between the yoke-lever and the rear follower-plate of the coupling mechanism, substantially as set forth.

2. The combination of a coupling mechanism

ism, a buffing mechanism, a yoke-lever connected at one end to the buffing mechanism, a brace or strut interposed between the yoke-lever and the rear follower-plate of the coupling mechanism, and a horn adapted to engage and shift the yoke-lever during the rearward movement of the coupling mechanism, substantially as set forth.

3. The combination of a coupling mechanism, a buffing mechanism, a yoke-lever connected at one end to the buffing mechanism, a brace or strut interposed between the yoke-

lever and the rear follower-plate of the coupling mechanism, and a movable horn adapted to engage and shift the yoke-lever during the rearward movement of the coupling mechanism, substantially as set forth. 15

In testimony whereof I have hereunto set my hand.

HENRY C. BUHOUP.

Witnesses:

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J. P. DUFFY.