

(No Model.)

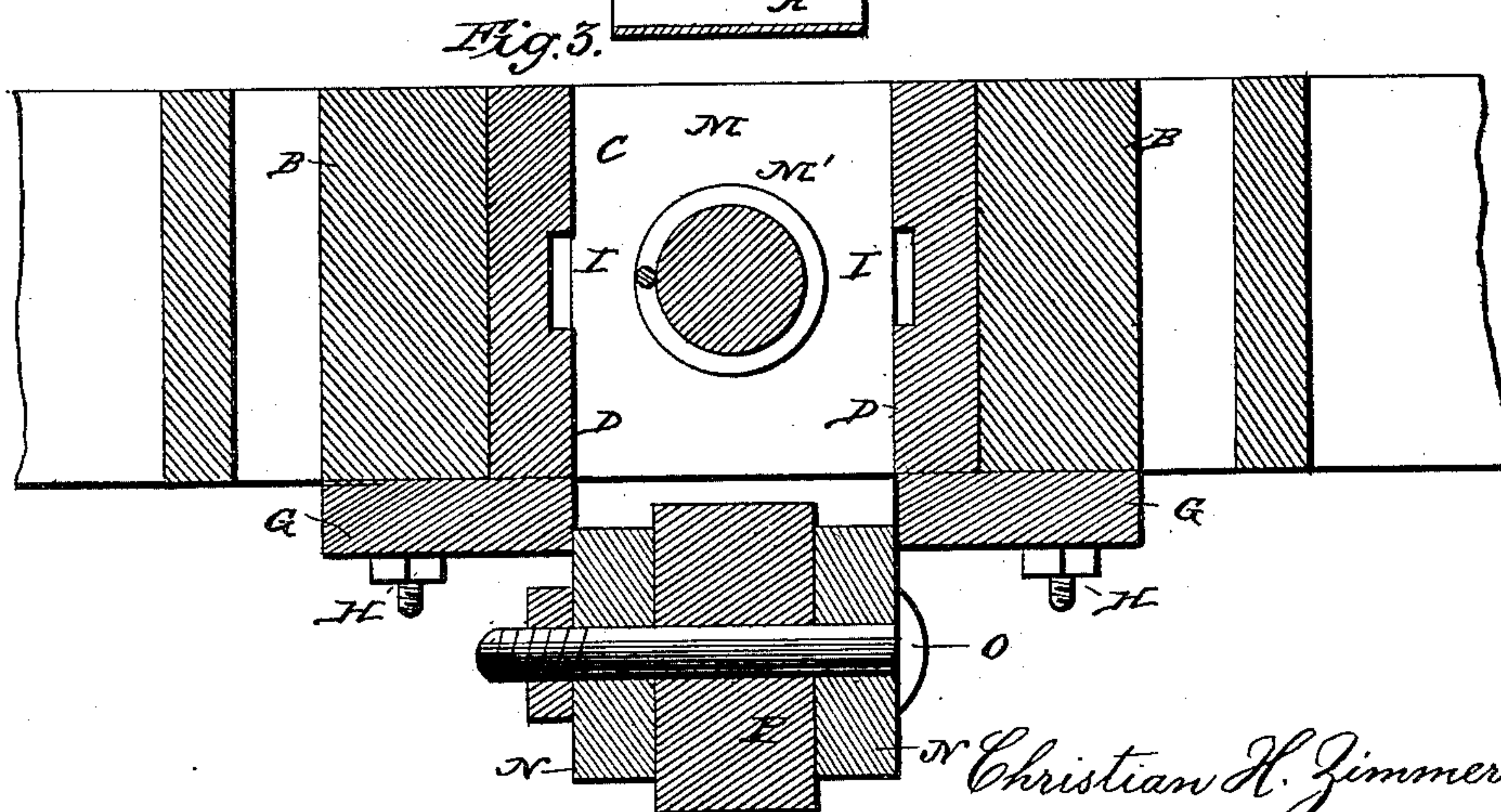
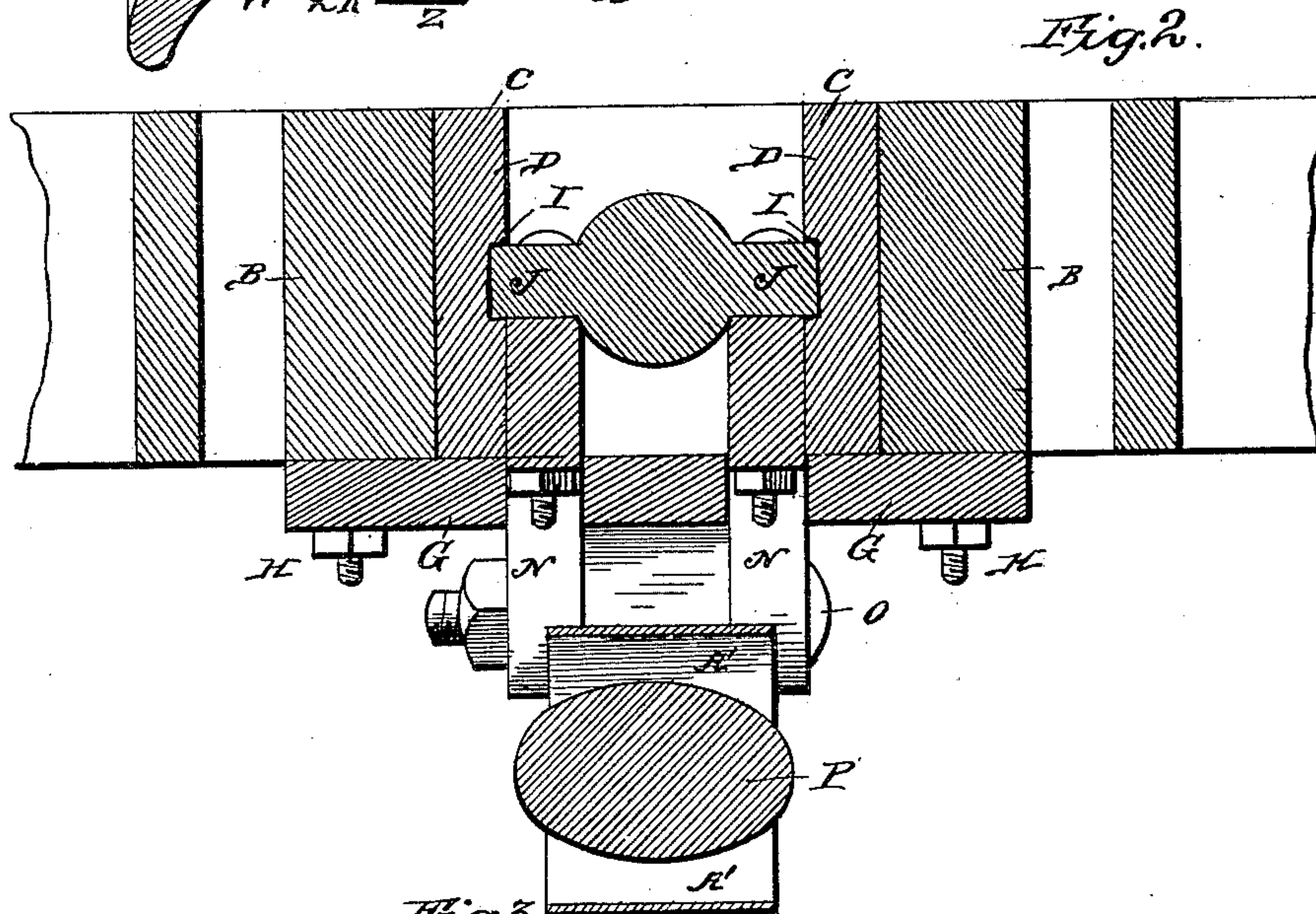
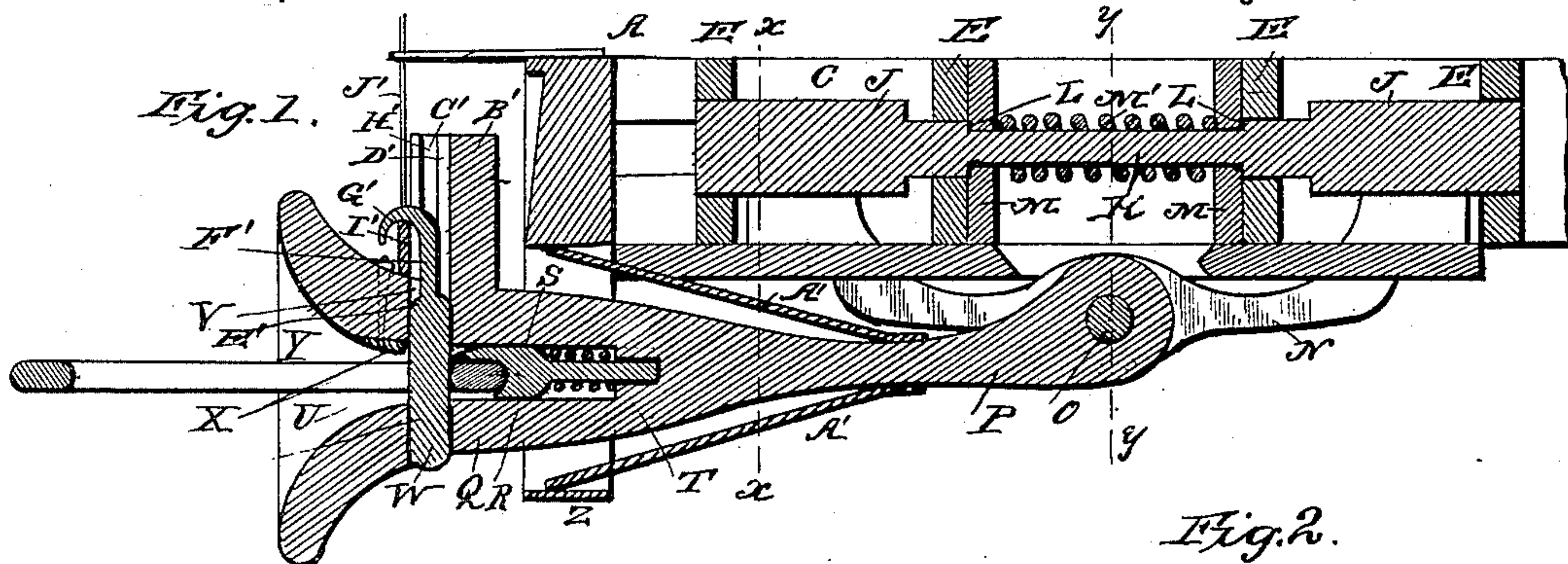
3 Sheets—Sheet 1.

C. H. ZIMMERMAN.

CAR COUPLING.

No. 318,439.

Patented May 19, 1885.



WITNESSES:

Wm. S. Dieterich
Wm. Bagger

Christian H. Zimmerman,
INVENTOR.

by Louis Bagger & Co.
ATTORNEYS.

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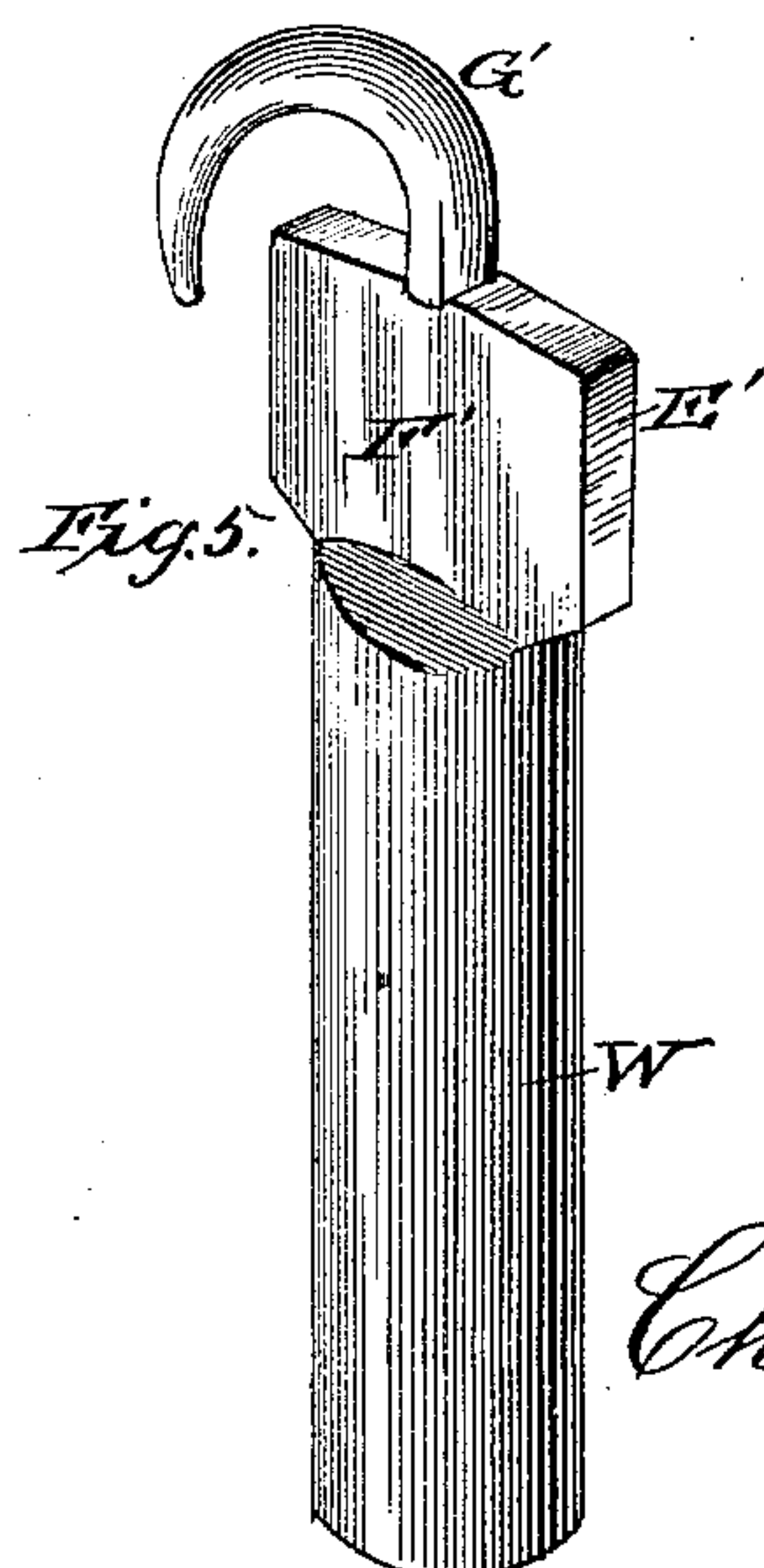
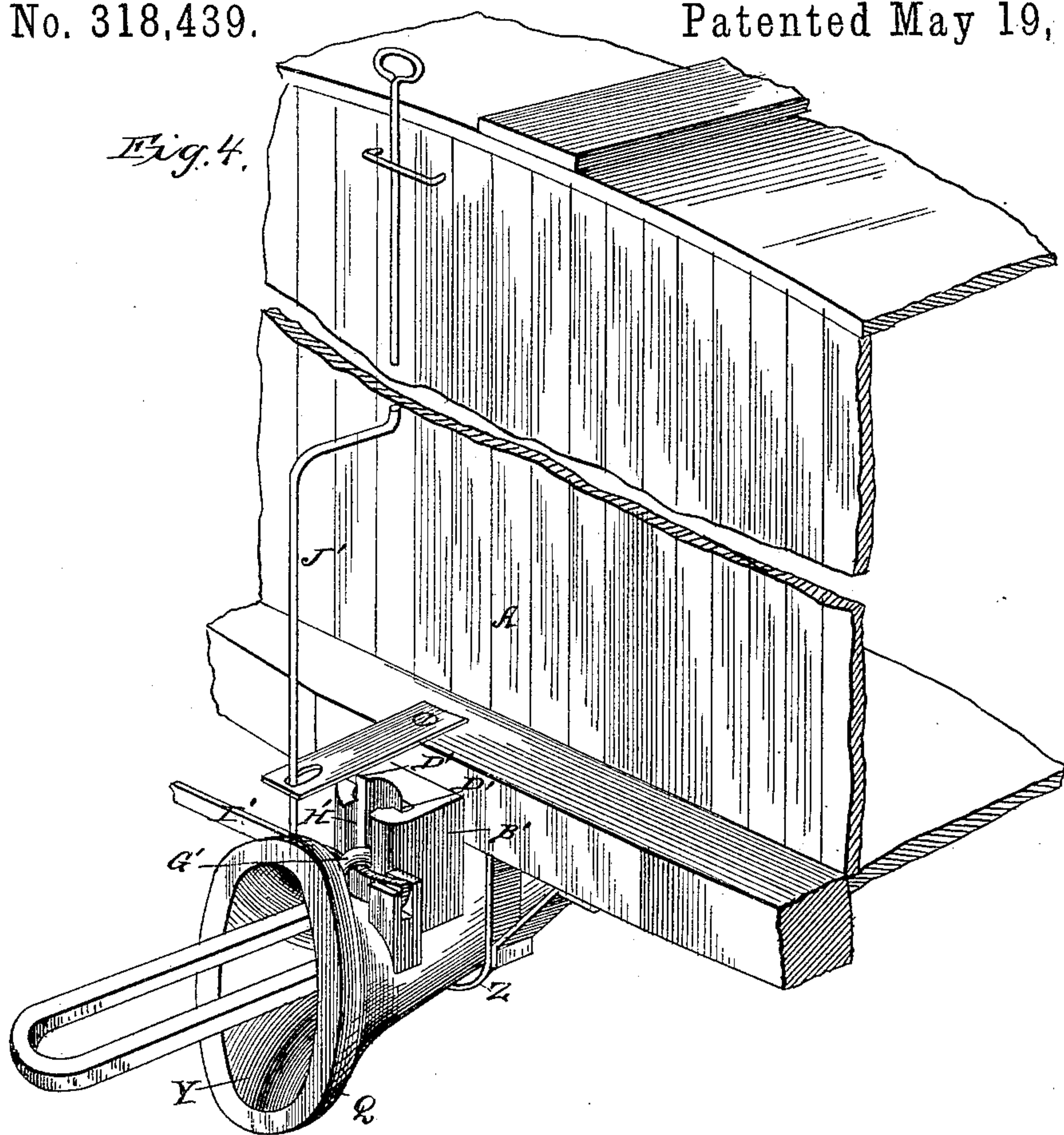
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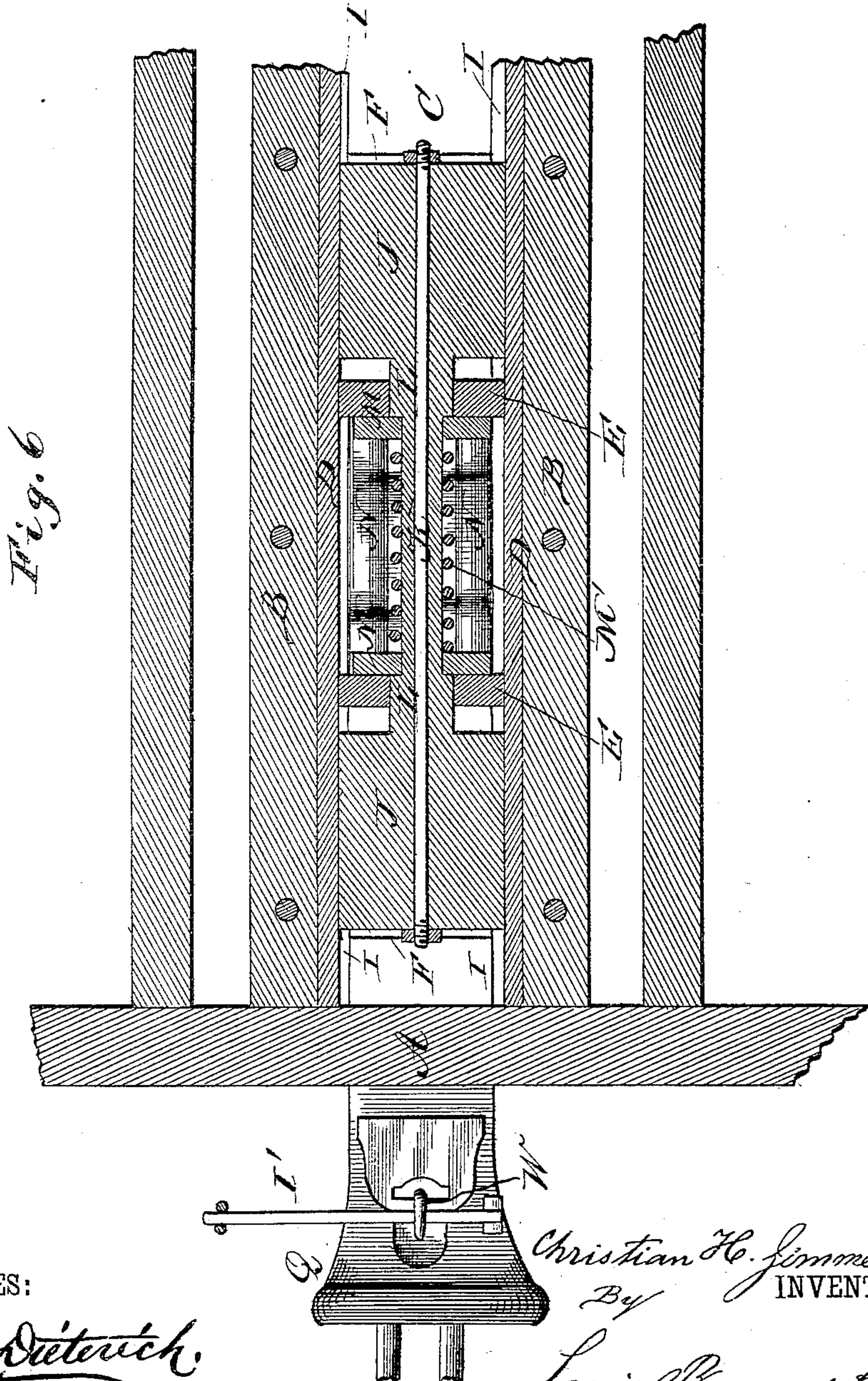
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CAR COUPLING.

No. 318,439.

Patented May 19, 1885.



WITNESSES:

Fred. S. Dietrich
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UNITED STATES PATENT OFFICE.

CHRISTIAN H. ZIMMERMAN, OF BURBANK, OHIO, ASSIGNOR OF ONE-HALF
TO CHARLES W. WEISER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 318,439, dated May 19, 1885.

Application filed February 7, 1885. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN H. ZIMMERMAN, a citizen of the United States, and a resident of Burbank, in the county of Wayne and State of Ohio, have invented certain new and useful Improvements in Car-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, and in which—

Figure 1 is a longitudinal vertical sectional view of my improved car-coupling. Fig. 2 is a transverse vertical sectional view taken on the line *xx* in Fig. 1. Fig. 3 is a transverse vertical sectional view taken on the line *yy* in Fig. 1. Fig. 4 is a perspective view of the draw-head and the front end of the car, and Fig. 5 is a detail view in perspective of the coupling-pin used in connection with my improved car-coupling; and Fig. 6 is a horizontal sectional view of the frame, stringers, and buffer-spring.

The same letters refer to the same parts in all the figures.

This invention relates to that class of automatic or self-acting car-couplings in which the coupling-pin is raised by means of a lever and held in position for coupling by means of a spring-actuated sliding plate or block within the draw-head; and it has for its object to provide a coupling of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency, and in which the attachment of the draw-head to the car shall be such as to give it a longitudinally-sliding motion, and at the same time enable it to swing vertically, so as to enable cars of unequal height to be coupled with ease and certainty.

With these ends in view the invention consists in the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A designates the front end of a car, and B B are the longitudinal beams or stringers of the same.

C is a longitudinal frame, fitted between the said stringers, and consisting of side pieces, D D, connected by cross-pieces E E and F F, and provided at its lower edges with flanges G G, extending under the stringers, and secured thereto by means of vertical bolts H H.

The inner sides of the frame-pieces D D are provided with grooves I I, to accommodate a pair of slides, J J, connected by a rod, K, for the accommodation of which as well as of the slides suitable openings are provided in the cross-pieces of the frame. The rod K is provided with shoulders L L, against which are fitted plates or washers M M, bearing against the inner sides of the cross-pieces E E of the frame, and upon the said rod K, between the said plates or washers, is coiled a strong spring, M', which in practice serves as a buffer-spring.

N N designate a pair of longitudinal parallel hangers or brackets secured to the under sides of and connecting the slides J J, and provided with a central transverse pin or bolt, O, forming a bearing for the rear end of the shank P of the draw-head Q. The latter is provided with the longitudinal recess R, in which is fitted a sliding block, S, adapted to be forced in a forward direction by the action of a suitably-arranged spring, T, and having at its upper front edge a forwardly-extending plate, U, adapted to extend under the upper vertical pin-hole, V, and support the coupling-pin W in position for coupling. A stop, X, is arranged to prevent the sliding block from moving forward too far.

The construction and arrangement of these parts is substantially as shown in Patent No. 285,722, granted to myself on the 25th day of September, 1883, and is not herein specifically claimed.

The mouth Y of the draw-head is comparatively narrow, but of considerable height, and provided with beveled or slanting sides, top, and bottom, for the purpose of enabling cars of unequal heights to be readily coupled without the use of crooked links. The shank P of the draw-head is curved upward and hinged between the hangers N N, as already described, thus enabling the draw-heads of two cars of unequal height to swing, respectively, upward and downward when the cars come together,

and thus adapt themselves to each other. In order to sustain the draw-head normally in a horizontal position, a pair of flat springs are bolted to the upper and under side of the draw-head, near the rear end of the latter, and, extending forwardly, bear, respectively, against the under side of the car and against a bail or bracket, Z, bolted to the under side of the car and encircling the draw-head. These springs, which are designated by letters A' A', also serve to impart the proper elasticity of motion.

The draw-head is provided with an upward-extending lug, B', provided with a pin-hole, C', registering with the pin-holes of the draw-head, and provided at the sides with vertical grooves D', serving as guides for the flanges E', extending laterally from the head of the pin F'. The latter is provided with a forwardly-extending hook, G', for the accommodation of which a slot, H', is provided in the front wall of the lug B'.

I' is a lever pivoted to the draw-head at one side of the latter, and extending under the hook G', so that it may be used to raise or lift the coupling-pin for the purpose of uncoupling the cars. Attached to the end or handle of the said lever is a rod, J', extending through suitable guides to the top of the car, so that the uncoupling may be performed by a brakeman stationed on the roof of the car.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood.

The coupling devices are simple, certain in action, and easily manipulated, and the attachment of the draw-head to the car gives it a free and elastic vertically-swinging and longitudinally-sliding motion, which is useful and effective for the purposes set forth.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, with the longitudinal beams or stringers of a railway-car, of a frame fitted and secured between said stringers, and the draw-head hinged to hangers connecting a pair of slides moving longitudinally in the said frame, substantially as and for the purpose herein set forth.

2. The combination, with the longitudinal beams or stringers, of the frame fitted between said stringers, and consisting of side pieces

connected by cross-pieces, and provided at their lower edges with flanges extending under the stringers, and secured thereto by means of vertical bolts, substantially as and for the purposes herein set forth.

3. The combination of the longitudinal beams or stringers, the frame fitted and secured between the same, and having grooved inner sides and connecting cross-pieces, the slides moving longitudinally in said frame and connected by a shouldered rod, the plates or washers mounted upon said rod, a spring arranged upon said rod between the plates or washers, hangers connecting the under sides of the said slides, and the draw-head having upwardly-curved rear end or shank hinged upon a bolt between the said hangers, substantially as and for the purpose herein set forth.

4. The combination of the frame secured between the longitudinal stringers of a car, the slides moving longitudinally in said frame, the hangers connecting said slides, the draw-head having upwardly-curved rear end or shank hinged between said hangers, and springs secured to the upper and lower sides of the draw-head, and bearing, respectively, against the bottom of the car, and a bail secured to the under side of the car and encircling the draw-head, substantially as and for the purpose herein shown and specified.

5. The draw-head having a longitudinally-sliding pin-supporting spring-actuated block, and a suitable stop to arrest the forward motion of the same, and provided with an upwardly-extending lug having a pin-hole registering with the pin-holes of the draw-head, laterally-extending grooves, and a vertical slot in its front wall, in combination with a pin having flanges extending laterally from the sides of its head, and a forwardly-extending hook, and a lever pivoted to the draw-head, extending under said hook, and adapted to raise the pin for the purpose of uncoupling, substantially as herein described, for the purpose shown and specified.

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

CHRISTIAN H. ZIMMERMAN.

Witnesses:

JOHN DOUBLE.

MARY R. DODD.