

(No Model.)

2 Sheets—Sheet 1.

W. E. WILLIAMS.
CAR COUPLING.

No. 467,126.

Patented Jan. 12, 1892.

Fig. I.

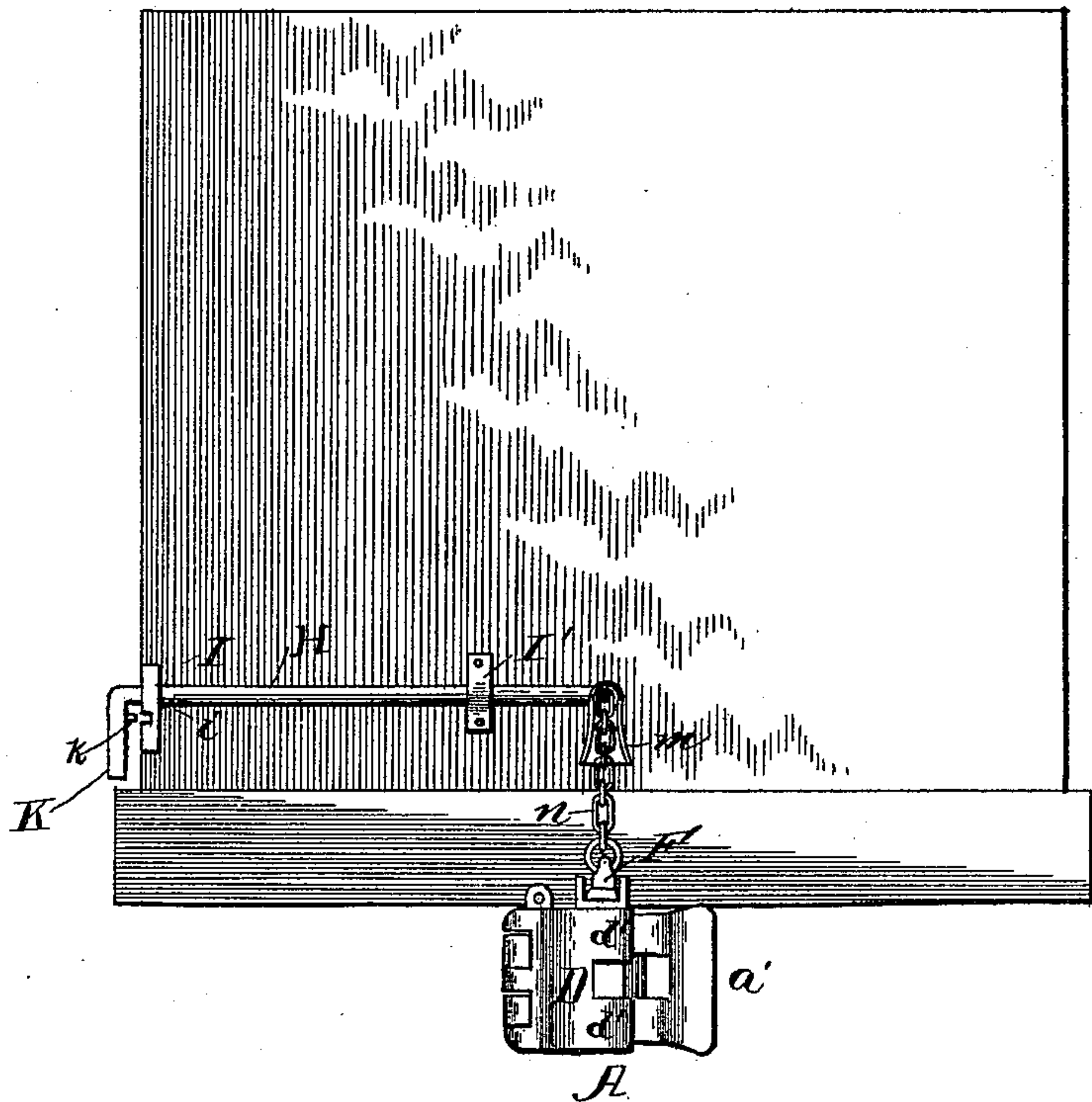


Fig. II.

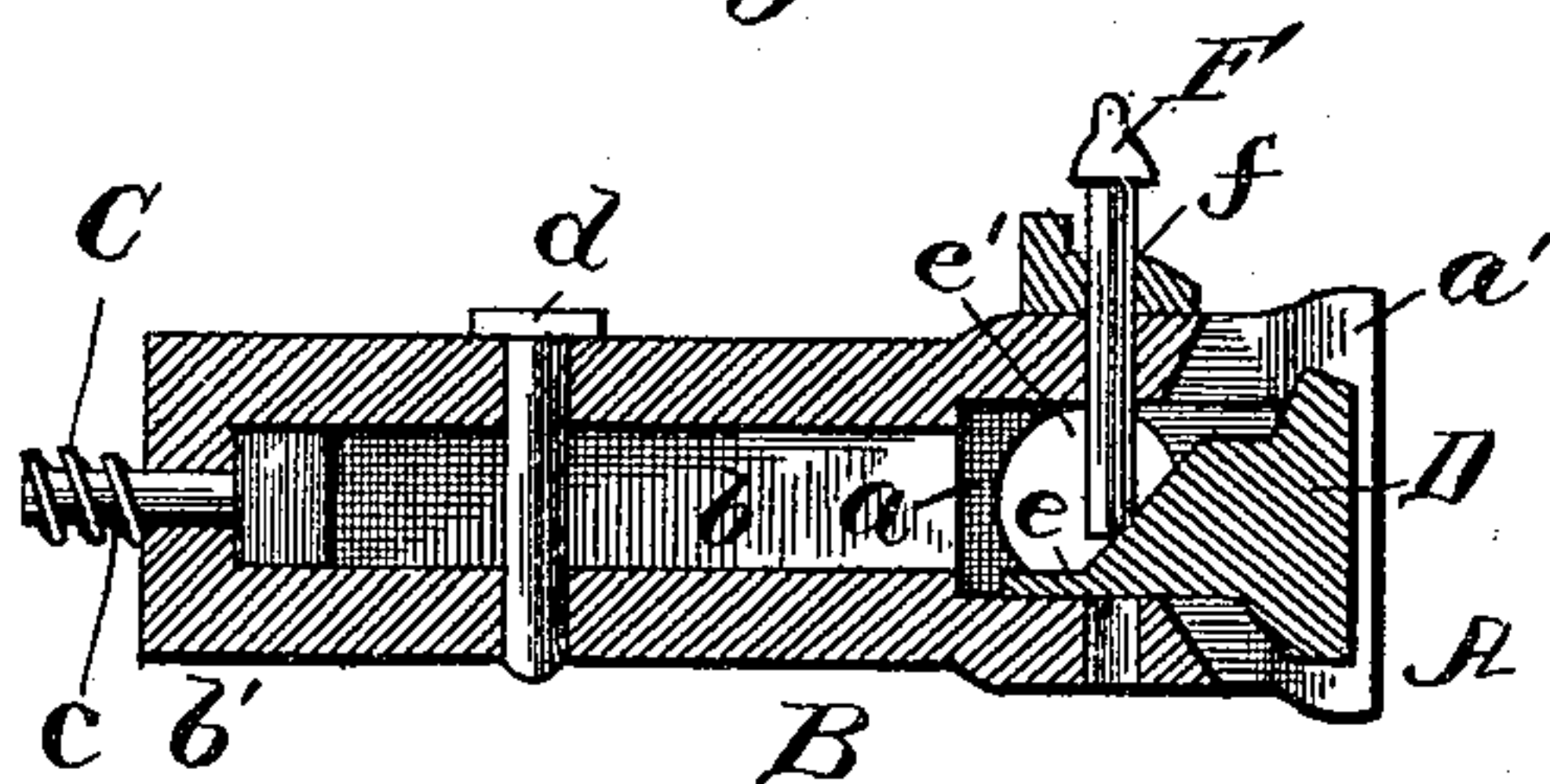
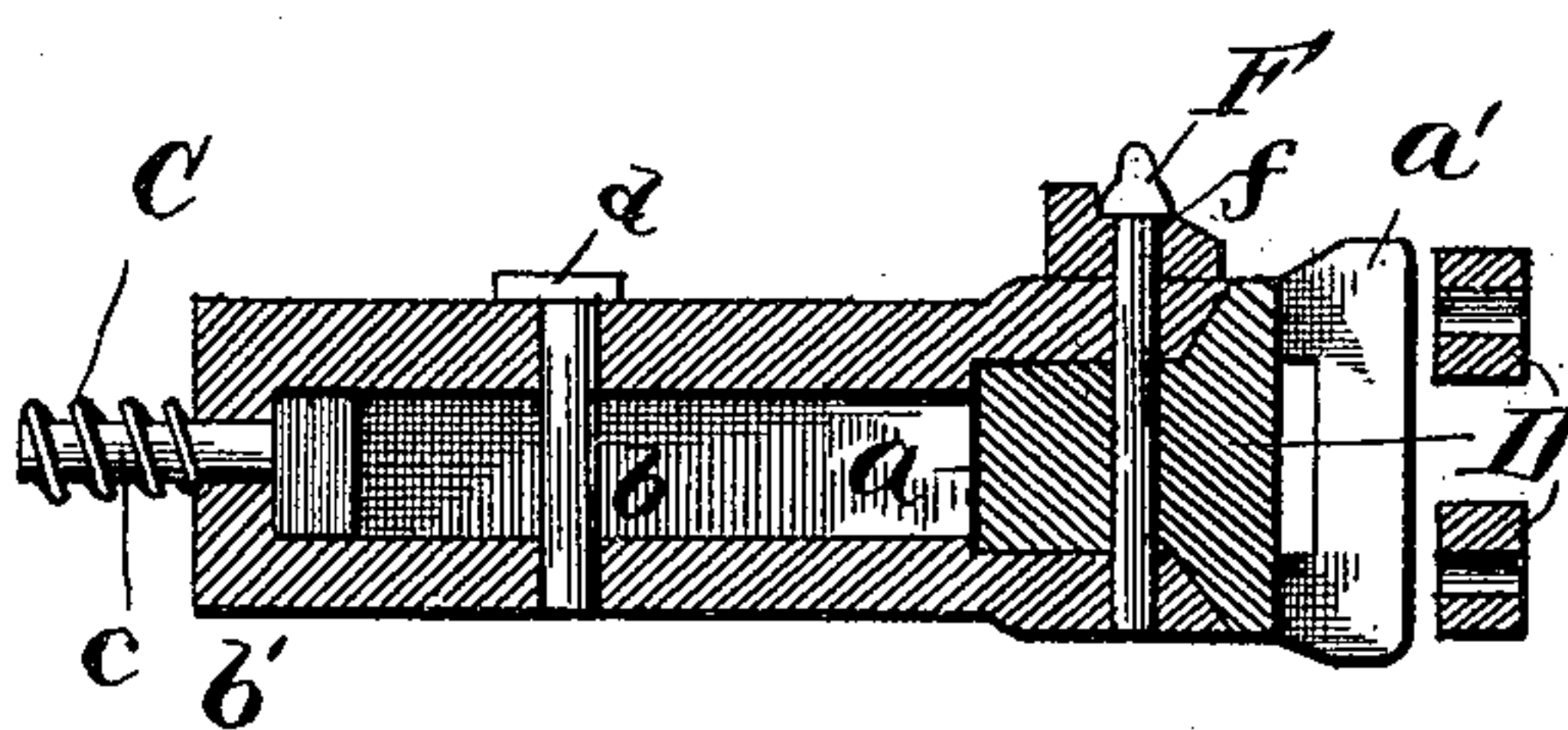


Fig. III.



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Inventor:

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(No Model.)

2 Sheets—Sheet 2.

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Fig. IV.

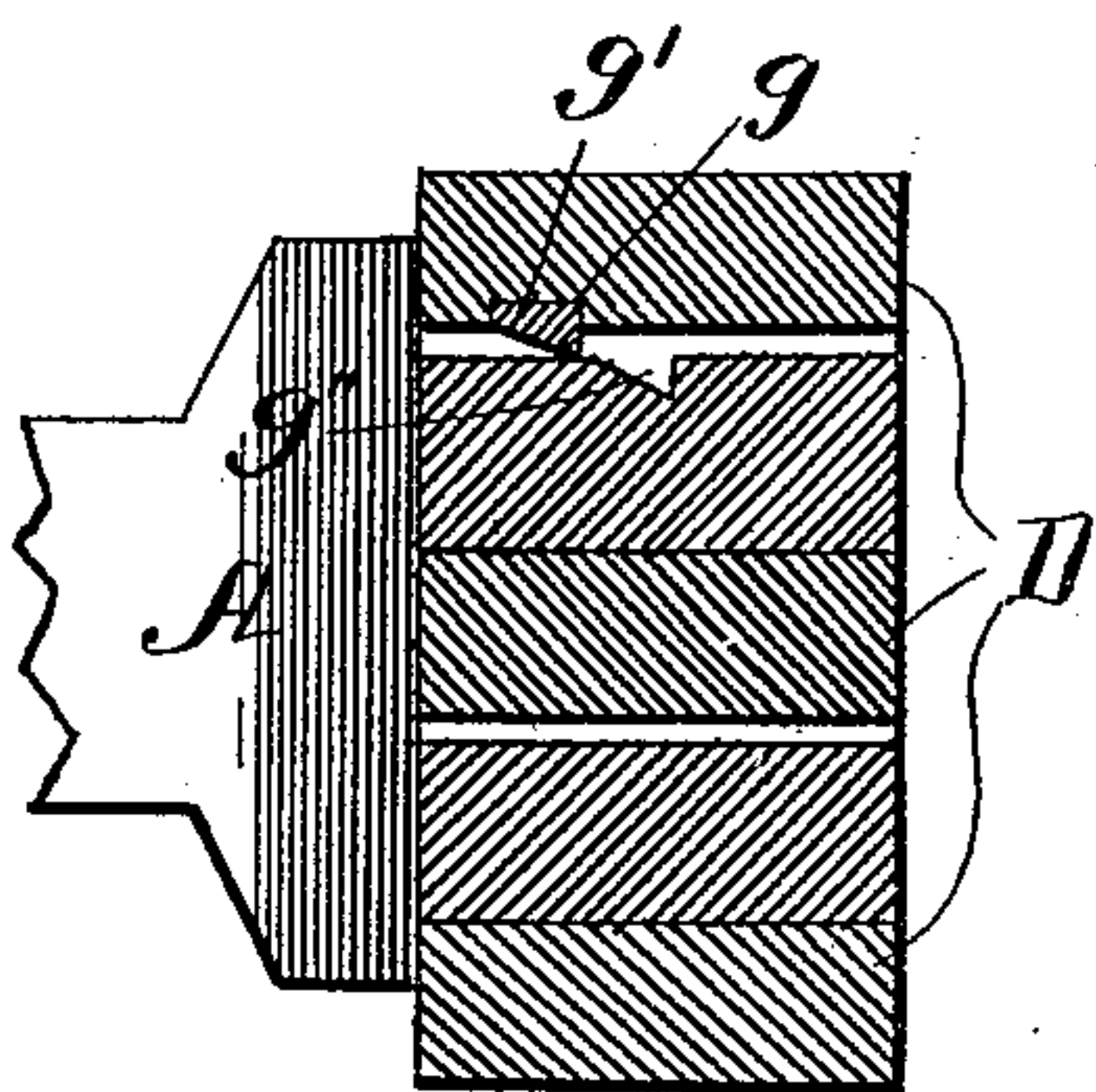


Fig. V.

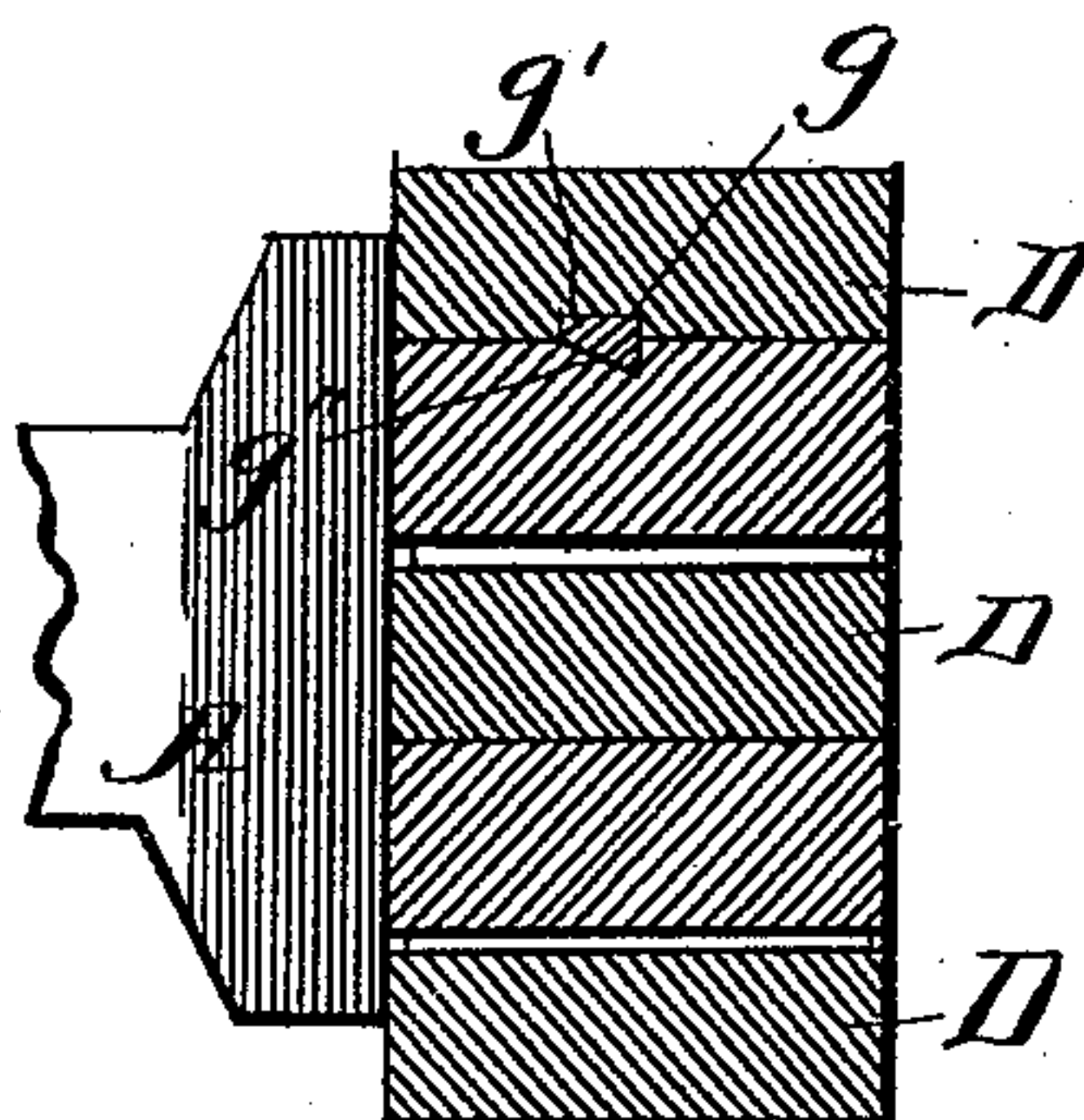


Fig. VIII.

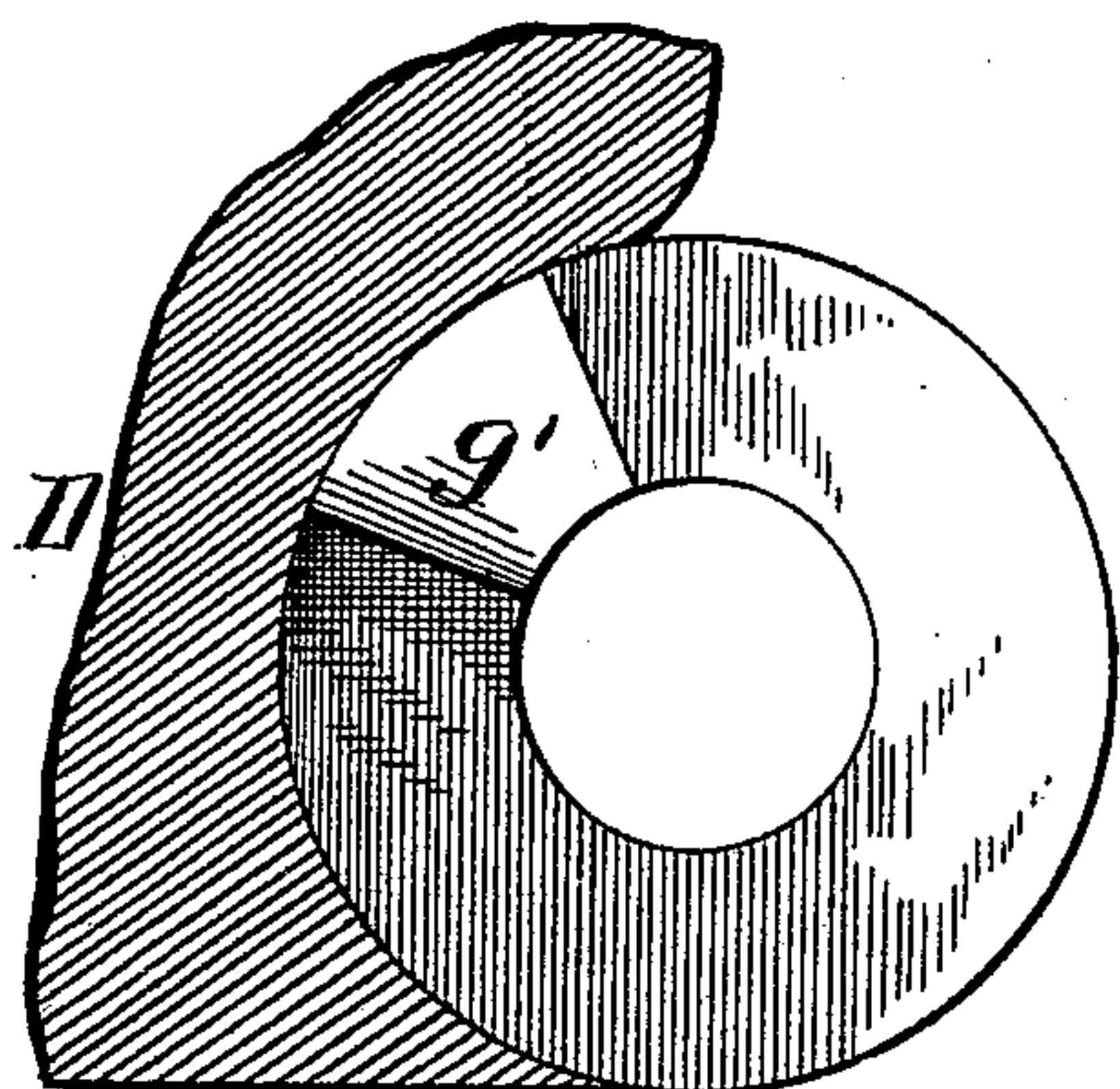


Fig. IX.

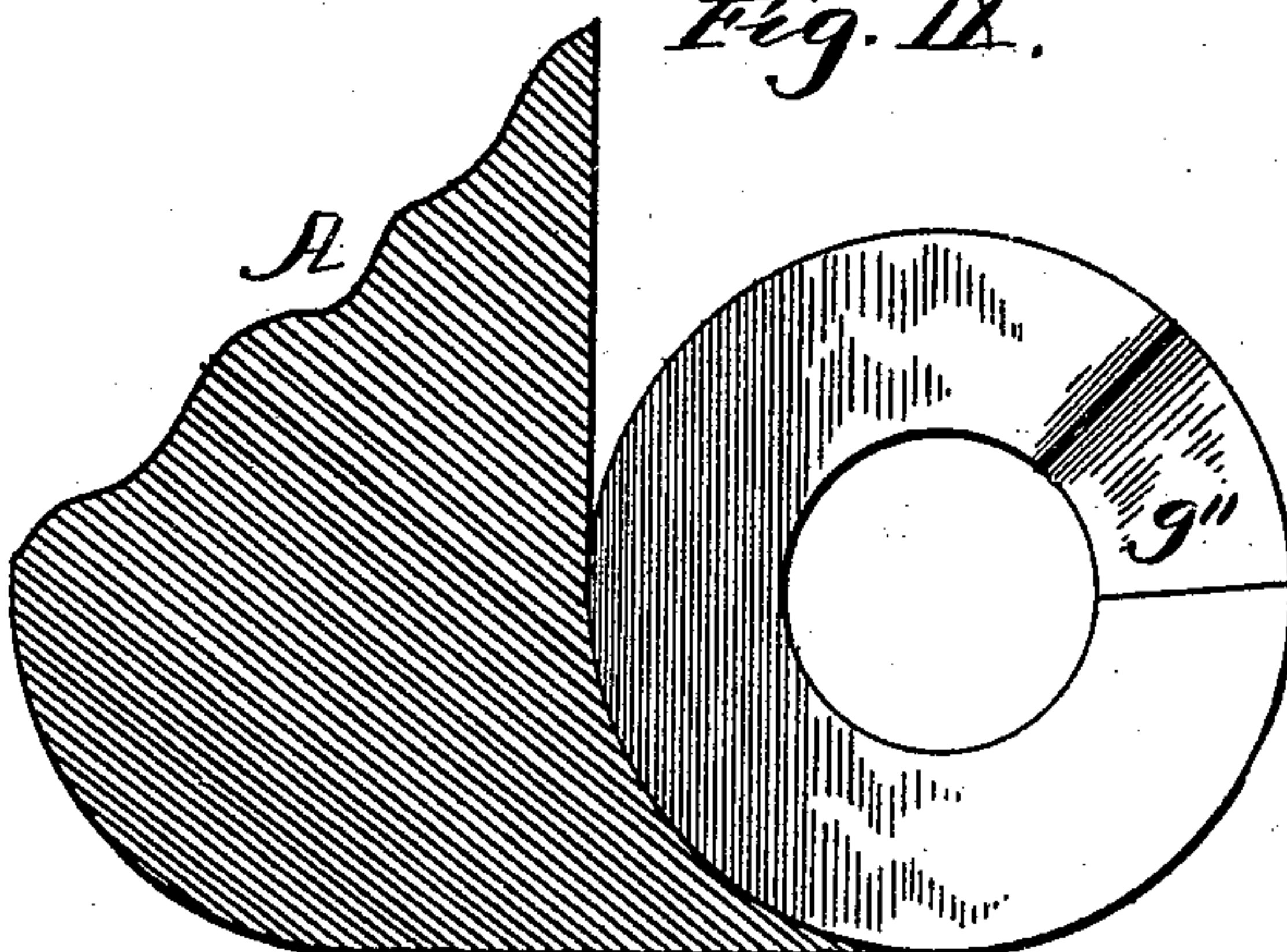


Fig. VI.

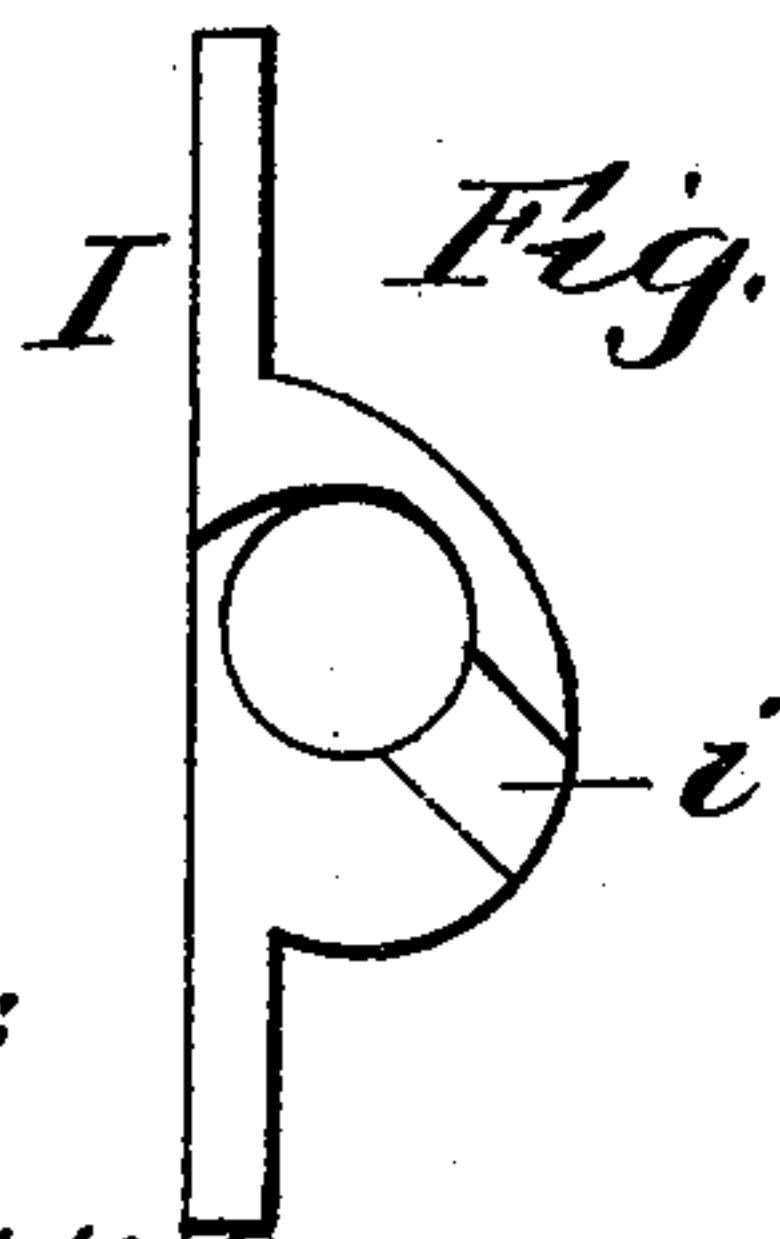
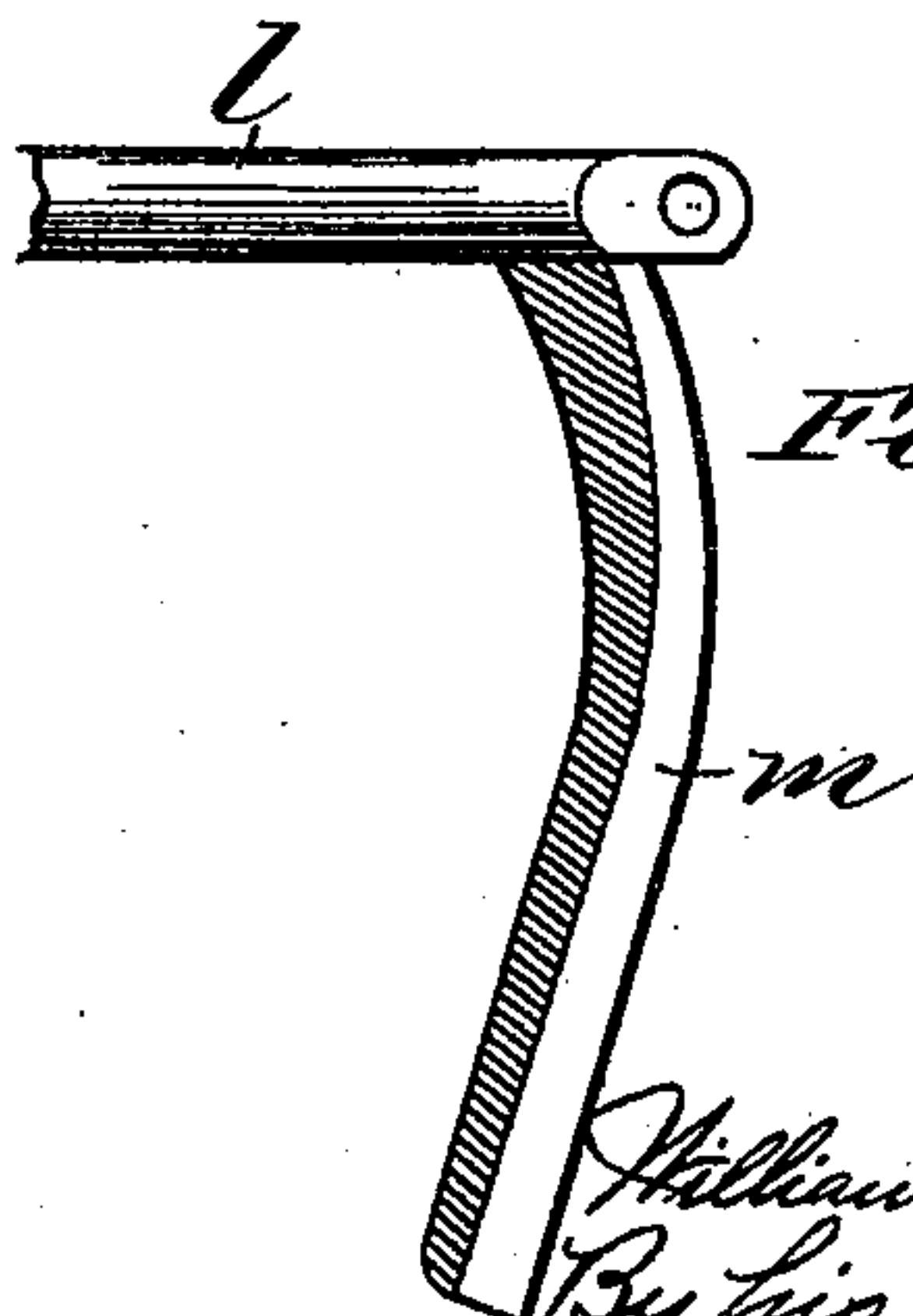


Fig. VII.



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UNITED STATES PATENT OFFICE.

WILLIAM E. WILLIAMS, OF BOONVILLE, MISSOURI, ASSIGNOR OF FIVE-SIXTEENTHS TO W. SPEED STEPHENS, JOHN E. THRO, CHARLES A. SOMBART, WILLIAM A. SOMBART, AND AUGUST DENGOLSKY, ALL OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 467,126, dated January 12, 1892.

Application filed August 13, 1891. Serial No. 402,542. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. WILLIAMS, a citizen of the United States, residing at Boonville, in the county of Cooper and State of Missouri, have invented certain new and useful Improvements in Devices for Coupling and Uncoupling Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in car-coupling devices; and the objects of the invention are, first, to provide simple, strong, and efficient devices for coupling cars, and, secondly, to provide new and simple devices for uncoupling the cars from one side thereof.

With these ends in view my invention consists of the combination of a draw-head provided with a hinged or pivoted jaw having a rearwardly-extending inclined tongue, a pin passing through the draw-head, and a suitable aperture in said inclined tongue when the coupler is in use, and means for elevating said pin and holding it in its elevated position clear of the opening in the rearwardly-extending tongue on the hinged jaw.

My invention further consists in the peculiar construction and arrangement of parts, as will be hereinafter more fully pointed out and claimed.

To enable others to readily understand my invention, I have illustrated the same in the accompanying drawings, in which—

Figure I is a view of the end of a car having my improvements applied thereto. Fig. II is a longitudinal sectional view through a coupler constructed in accordance with my invention, showing the same open. Fig. III is a similar view showing the coupler in its closed or operative position. Fig. IV is a sectional view through the hinge connection of the movable jaw. Fig. V is a similar view showing the coupler closed. Fig. VI is a detail view of one of the brackets which support the uncoupling-lever. Fig. VII is a detail view of the chain-guide. Fig. VIII is a bottom plan view of the top section of the hinge connection, and Fig. IX is a top plan view of the section second from the top.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates the draw-head of my improved coupler, which is made integral with a hollow draw-bar B. The chamber *b* in the draw-bar is reduced near its outer end by projecting flanges *b'*, and in this reduced portion is arranged a rod *c*, the head of which contacts with the flanges *b'* and prevents the rod from rearward movement in the draw-bar B. A short distance in advance of the flanges *b'* a key *d* is passed through the upper and lower walls or sides of the draw-bar and extends transversely across the chamber *b* and limits the movement of the draw-bar on said rod. Around the rod *c* is fitted a heavy coiled or cushion spring C, one end of which bears against the inner end of the draw-bar, and the other end of said spring bears against a suitable stop D, secured to the under side of the car.

The draw-head A is provided with an interior chamber *a* and with a nose or outwardly-extending portion *a'*. To the draw-head, at a point opposite to the nose-piece *a'*, is connected by a hinge-joint a movable jaw D, which is provided with two hooks *d'* and with a rearwardly-extending portion or tongue *e*. The portion *e* is adapted to fit in the chamber *a* in the draw-head when the coupler is in use, and through such portion extends a passage *e'*, which aligns with the pin-receiving passage *f* in the draw-head. The portion or tongue *e* is inclined from a point in rear of the passage *e'* to its inner end, and on this inclined portion the coupling-pin F rests when the coupler is open.

On the under side of one of the sections of the hinge connecting the movable jaw with the draw-head A is found a recess or slot *g*, in which is secured in any suitable manner an inclined or wedge-shaped piece *g'*. In the section of the hinge next below the one having the piece *g'* attached thereto is formed a slot or recess *g''*, which is inclined reversely to the piece *g'*, and when the movable jaw is moved or closed the two sections of the hinge are held a short distance apart by reason of the thicker portion of the piece *g'* resting on

the upper end of the slot or recess g'' , and when the coupling-pin is elevated to clear the rearwardly-extending tongue the weight of the movable jaw causes the same to turn on its pivot-pin and the piece g' moves downwardly in the slot or recess g'' , thus causing the coupler to open automatically. Through the hooks d' extend suitable passages, which align and are designed to receive a pin in case it is desired to connect a car provided with my improvements with another car using the ordinary link-and-pin coupling, and said hooks d' are spaced apart or separated a suitable distance to allow of the passage of a link between them.

In Figs. I, VI, and VII, I have illustrated my improved device for uncoupling cars, which consists in a rod or lever H, fitted in brackets I I', attached to the end of a car, and extends from one side of the car to a point directly over the opening of the passage f in the draw-head A. Near its outer end said rod or lever is bent downwardly to provide a handle K, and to such handle is secured a pin or projecting lug k , which is adapted to be inserted in a slot i , formed in the side of the bracket I, and thus hold the rod H firmly in position. To the other end of the rod H is connected, by means of a short arm l , a shoe or guide-piece m , over which extends a chain or cable n , that is connected at its upper end with the outer end of the arm l and at its lower end with the coupling-pin F. The shoe or guide m is curved, as shown in Fig. VI of the drawings, and by it a vertical pull is obtained on the pin in uncoupling.

The operation of my invention may be briefly stated as follows: The pin F is raised by turning the rod H through the handle K until the lower end of such pin is above the upper surface of the rearwardly-extending tongue e , when the movable jaw of the coupler is automatically swung outward on its hinge and the pin rests on the inclined tongue e . The rod H is then forced or moved longitudinally to cause the lug or pin k to enter the slot i in the bracket I. To couple two cars the lug or pin k is disengaged from the slot i and allowed to drop down, and the pin F rests on the rearwardly-extending tongue of the mov-

able jaw. Then as the two cars come together the movable jaw is forced rearwardly and the pin F rides up over the inclined tongue and falls by gravity into the passage therein. To set the coupler the pin F is raised out of the passage in the tongue e , and the movable jaw turns automatically, the wedge-shaped piece g' moving in the slot or recess g'' .

I am aware that changes in the form and proportion of parts and details of construction of the devices herein shown and described as an embodiment of my invention can be made without departing from the spirit or sacrificing the advantages of my improvements, and I therefore reserve the right to make such changes and alterations as fairly fall within the scope of my invention.

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

1. In a car-coupler, the combination, with a draw-head, of a movable jaw having a hinge connection with the draw-head and provided with a rearwardly-extending tongue, said tongue having a vertical pin-receiving passage formed therein and inclined from a point in rear of such passage to the inner end thereof, and a coupling-pin normally resting on said inclined portion of the tongue, substantially as shown and described.

2. The combination, with a car-coupling device, of a rod fitted in brackets attached to the end of the car and provided at one end with a suitable handle, a lug or pin on said handle adapted to be forced into a slot i , formed in one of the brackets and extending from the central opening to the edge of the bracket, a guide or shoe connected to the other end of said rod, and a chain or cable connected at one end to said rod and at its other end to the coupling-pin and passing over said guide or shoe, substantially as shown and described, for the purpose specified.

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

WILLIAM E. WILLIAMS.

Witnesses:

A. A. HOWARD,

THOS. B. WRIGHT.