

No. 656,926.

Patented Aug. 28, 1900.

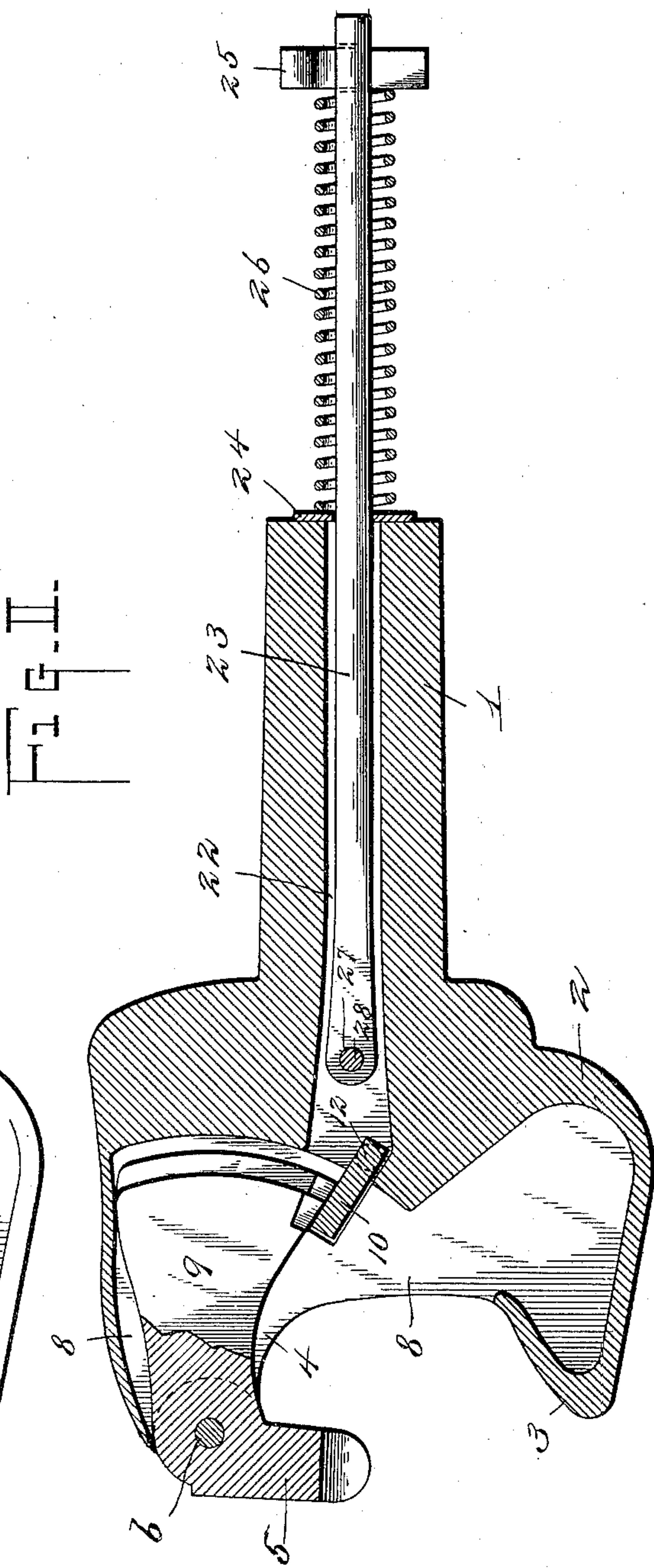
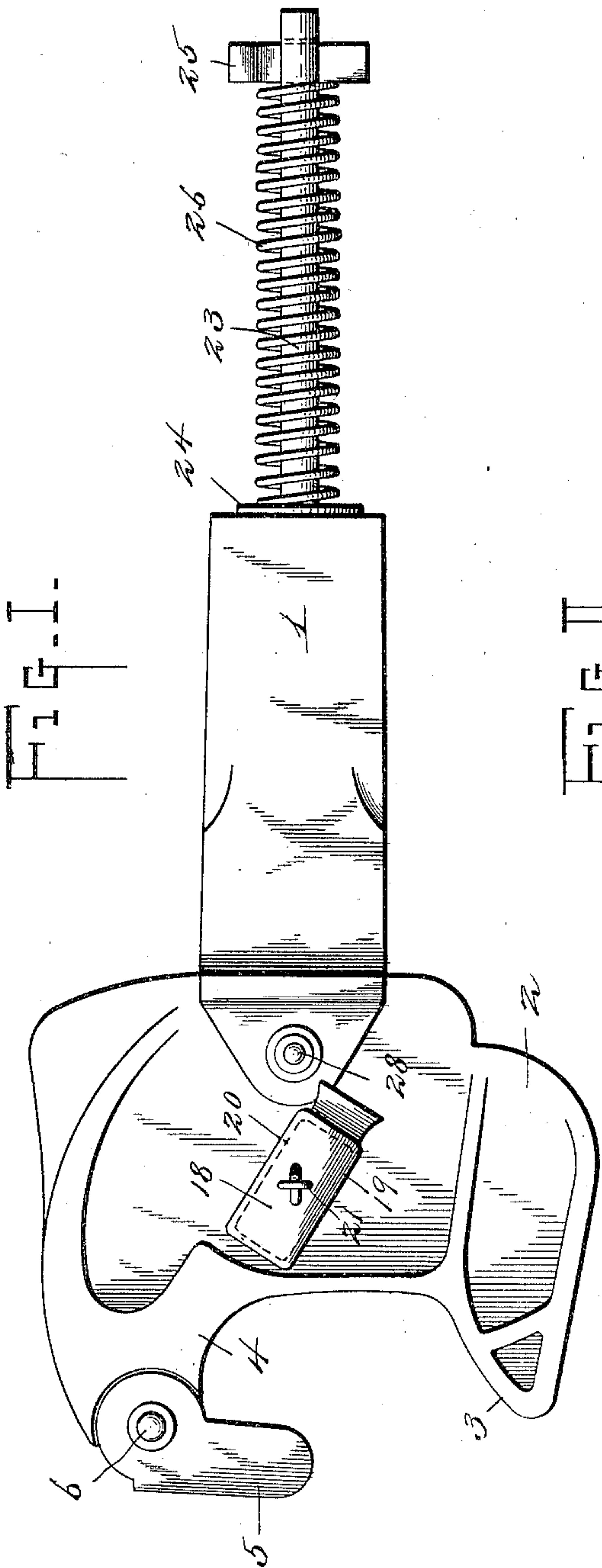
C. BICKMEIER.

CAR COUPLING.

(Application filed Oct. 5, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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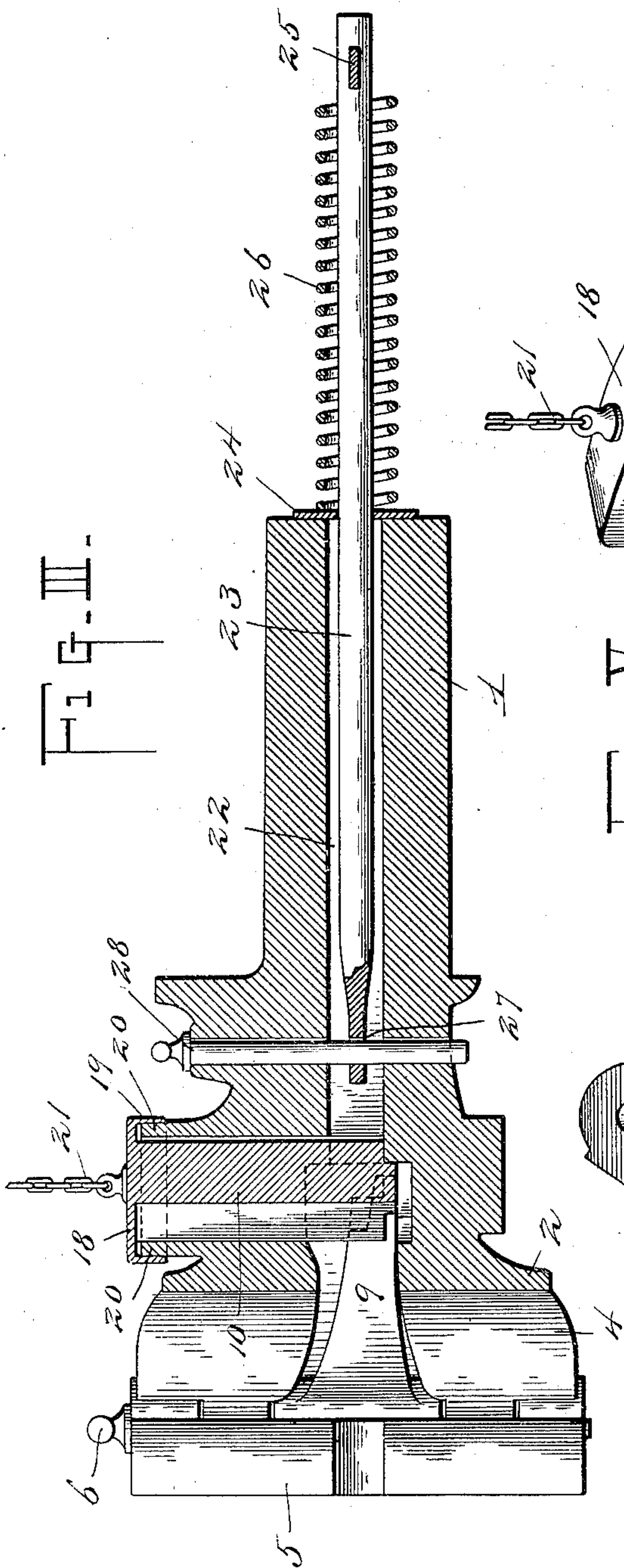


Fig. I.

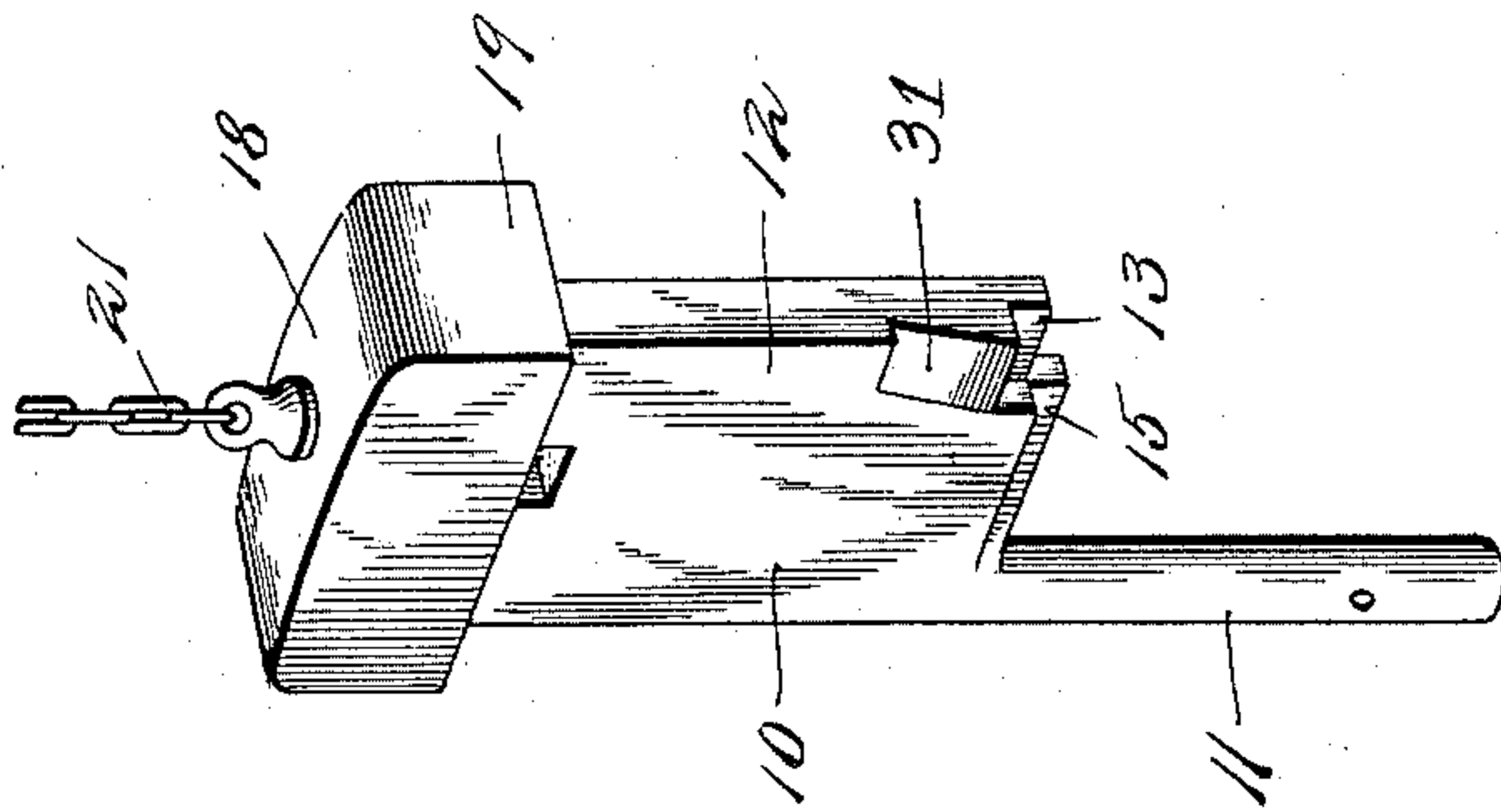


Fig. V.

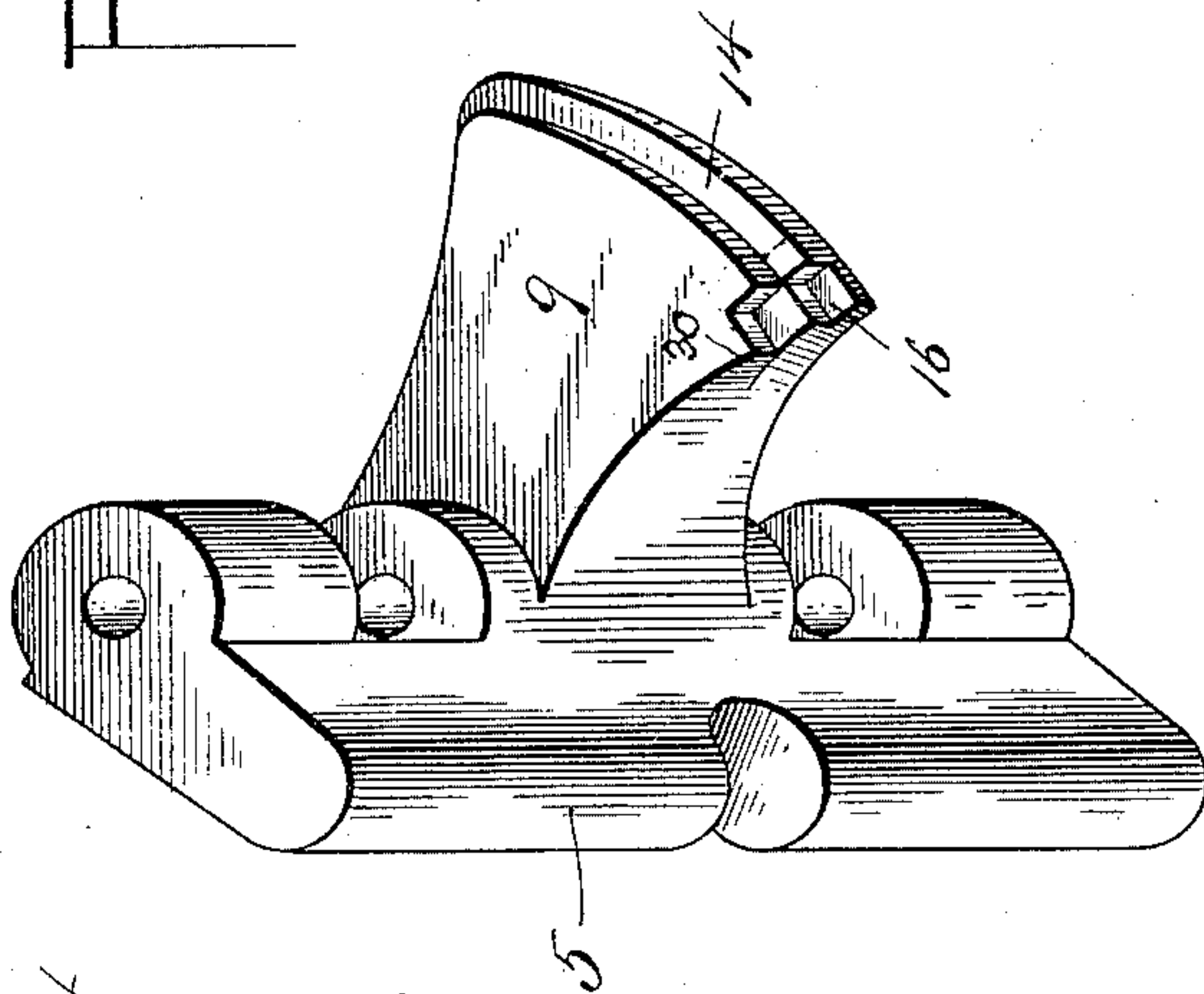


Fig. IV.

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UNITED STATES PATENT OFFICE.

CHARLES BICKMEIER, OF BELLAIRE, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 656,926, dated August 28, 1900.

Application filed October 5, 1899. Serial No. 732,639. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BICKMEIER, of Bellaire, in the county of Belmont, State of Ohio, have invented new and useful Improvements in Car-Couplers, of which the following is a complete specification, reference being had to the accompanying drawings.

The object of my invention is to produce improvements in car-couplers of the knuckle type, whereby coupling under all conditions is facilitated and danger of accident from breakage of the draw-head is obviated.

In the accompanying drawings, Figure I is a top plan view of one of my coupling members. Fig. II is a horizontal longitudinal section of the same. Fig. III is a central vertical section of the same, some of the parts being in elevation. Fig. IV is a perspective view of a knuckle detached. Fig. V is a perspective view of the knuckle-retaining member detached.

Referring to the numerals on the drawings, 1 indicates the draw-bar, and 2 the head thereof, which composes one member of my coupler. The head is provided upon one side with a jaw 3 and upon the other with a jaw 4, to which is pivoted a knuckle 5, 6 being the pin by which the knuckle is pivoted to the jaw 4.

The elements above enumerated constitute a well-known type of coupler, with respect to which my invention constitutes an improvement.

The jaw 4 (compare Figs. II and III) is provided with a suitable recess 8, within which sweeps a segmental wing 9, this segment being of such an extent as to span the arc of its movement. The segmental wing is provided as a support and automatic dropping device for the knuckle-retaining member 10. That member may be described as a pin, which shape it assumes in its terminal portion 11, (see Fig. V,) that is provided with a wing 12. The member 10 is carried in a suitable vertical recess provided for it in the head 2, and when in place its wing 12 either rides upon the segment 9 or dropping in front of it retains it in the coupling position. (See Fig. II.) The wing 12 is provided with a recess 13, which fits within a rabbet 14 in the segment 9. The purpose of the engaging recess 13 and rabbet 14 is to exert sufficient friction between the parts to prevent accidental dis-

placement of the knuckle 5 when it is set in the position ready for coupling.

Adjacent to and a little above the recess 13 I provide in the wing 12 a recess 15, which engages a stepped recess 16 in the forward corner of the segment 9. The engagement of the recesses 15 and 16 permits a slightly-greater opening of the knuckle than is desirable under ordinary conditions, but which affords means for coupling two members when the cars to which they belong are on a curve. When coupled upon a curve and the cars swing into the straight line, the knuckle-retaining member 10 drops into its lowermost position and retains the segment 9 in its fully-retired position, as shown in Fig. II. The office of the recesses 15 and 16 is therefore temporary and intended only to permit occasional though important operation.

The knuckle-retaining member 10 is provided with a cap 18, from the outer edge of which depends a skirt 19. The skirt 19 fits snugly about a projection 20 on the head 2, and thereby serves not only to hold the member 10 firmly in position, but also to exclude dirt or ice and snow from the working parts of the coupler. The chain 21 is indicated as means for raising the member 10 whenever required.

The draw-bar 1 is in couplers of this type a weak portion and is frequently subjected in use to breakage immediately behind the head 2. When such breakage occurs, not only is accident liable to ensue from the dropping of the broken parts, but the coupling mechanism of the train becomes thereby disabled. To obviate these two objectionable features, I provide a longitudinal passage 22 through the draw-bar and head, and within that I employ an emergency-bar 23, which, extending behind the draw-bar, is provided, as between washers or buffers 24 and 25, with a coiled spring 26 and near its end within the head 2 with an aperture 27, through which a pin 28, working in apertures in the head 2, passes. The emergency-bar 23 may be made of wrought-iron or steel and rendered thereby unbreakable under ordinary conditions, while the pin connection between the emergency-bar and the head, being made in advance of the draw-bar, a breakage of the draw-bar will not disconnect the head from the car.

Through the utilization of the buffers 24 and 25 against the usual timbers of a car the spring 26 may be utilized as a spring-buffer, in which case the emergency-bar 23 constitutes also a spring-bar. The emergency-bar, however, may be employed strictly for emergency purposes in case of breakage of the draw-bar 1 and need not be connected to the head 2 except when required in case of emergency.

Upon the forward edge of the segment 9 I provide a projection 30, which is adapted to engage with a wedge-shaped recess 31 on that part of the wing 12 of the retaining member that is adjacent to the recesses 13 and 15. The engagement of the projection 30 with the recess 31 is adapted to prevent rising of the member 10 while the coupler is in use.

What I claim is—

1. In a car-coupler the combination with a draw-head, knuckle pivoted thereto, and segment on the knuckle, of a retaining member on the head, movable to and from the path of movement of the segment, corresponding recesses in the side of the retaining member and edge of the segment, respectively, whereby the knuckle may be securely withheld from opening before it is completely closed,

and an inclined projection upon the forward edge of the segment and a corresponding recess in the retaining member, said projection and recess cooperating to prevent the rising of the retaining member when the knuckle is completely closed, substantially as set forth.

2. A car-coupler comprising a draw bar and head provided with a longitudinal passage through the same, of an emergency-bar working in the passage, and a coupling-pin in the head adapted to secure the emergency-bar thereto, substantially as set forth.

3. A car-coupler comprising a draw bar and head provided with a longitudinal passage through the same, of an emergency-bar working in the passage, and a coupling-pin in the head adapted to secure the emergency-bar thereto, said emergency-bar projecting in the rear of the draw-bar, and there provided with a coiled spring working between fixed limits thereon, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

CHARLES BICKMEIER.

Witnesses:

J. H. ACKER,

GUST. ED. MARK.