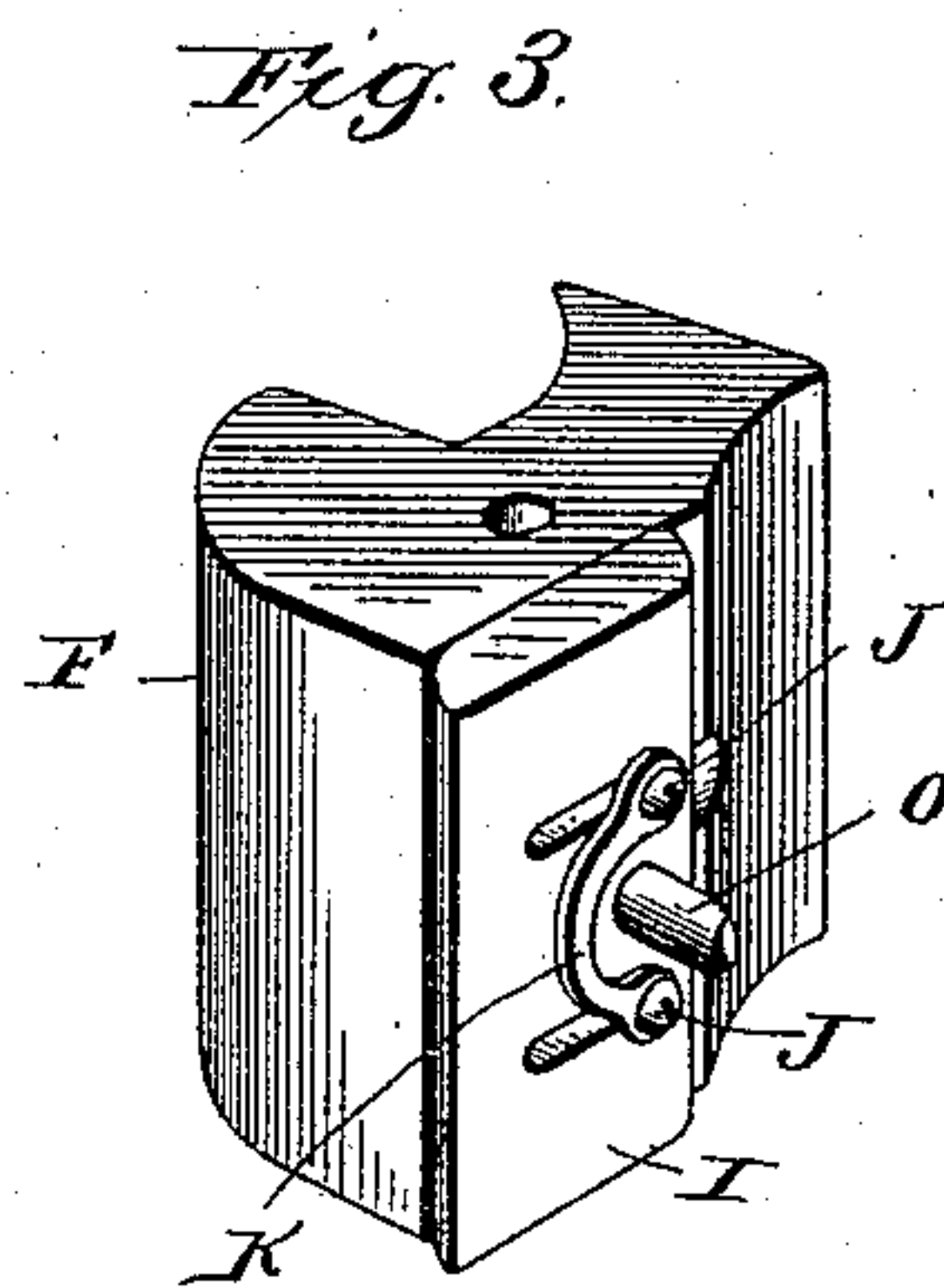
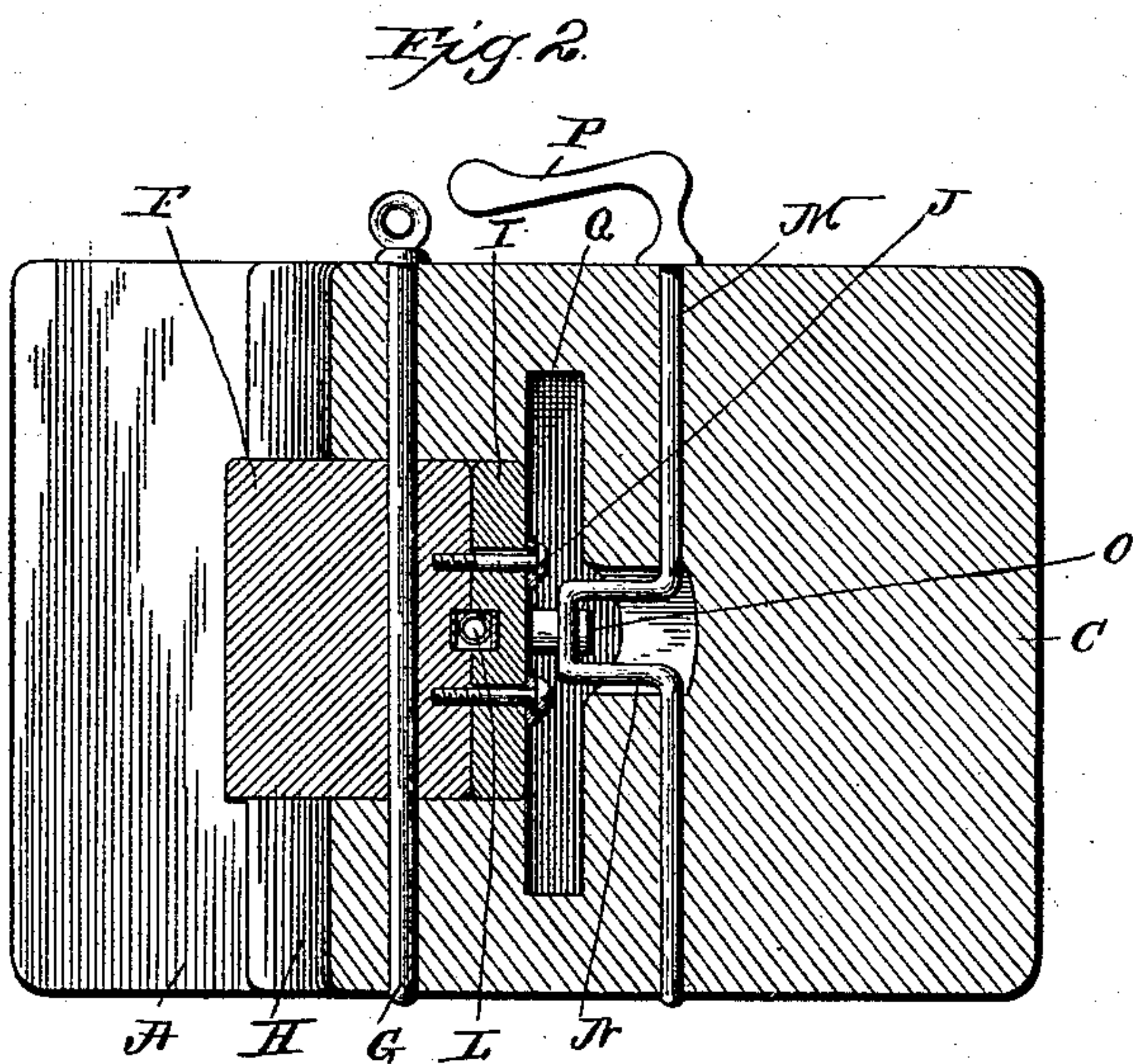
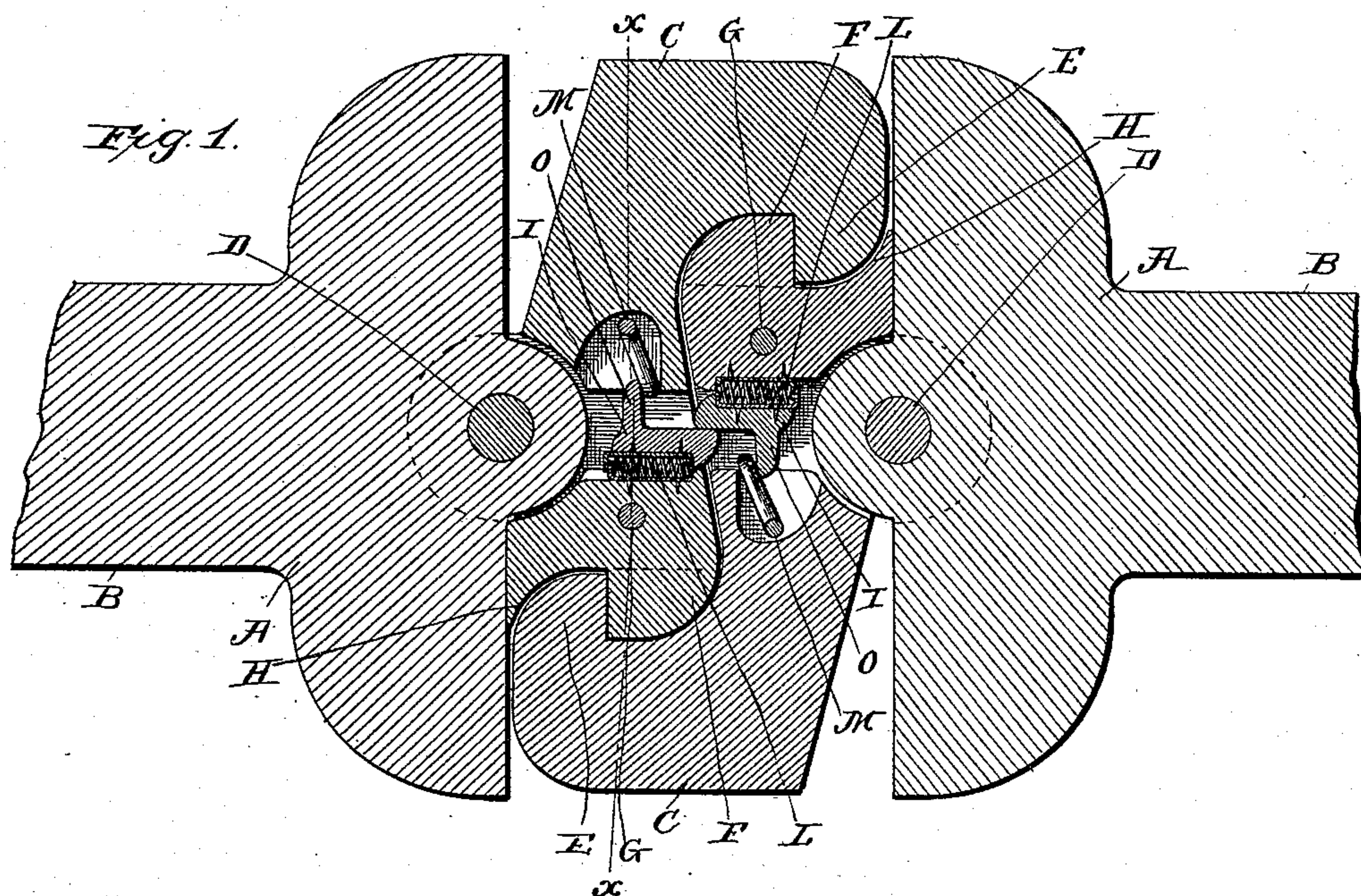


(No Model.)

J. D. HOOD.
CAR COUPLING.

No. 572,425.

Patented Dec. 1, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN D. HOOD, OF COLUMBIA, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 572,425, dated December 1, 1896.

Application filed August 20, 1896. Serial No. 603,289. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. HOOD, a citizen of the United States, residing at Columbia, in the county of Lancaster and State of Pennsylvania, have invented a certain new and useful Improvement in Car-Couplers, of which the following is a specification.

My invention relates to a new and useful improvement in automatic couplers for cars, and has for its object to so construct such a coupler as to facilitate the running of cars coupled together thereby upon sharp curves and also to render it unnecessary to pass between the cars for either coupling or uncoupling the same.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a horizontal longitudinal section of two couplers built in accordance with my improvement, illustrating the relative position of the several parts when coupled together; Fig. 2, a section at the line xx of Fig. 1, and Fig. 3 a detailed perspective of one of the locking-jaws.

Referring to the drawings in detail, A represents two draw-heads, which are similar in construction and adapted to be connected to the car by the draw-bars B. Each of the draw-heads has a knuckle C pivoted thereto at D, and these knuckles are provided with the hooks E, adapted to engage the locking-hooks F. The locking-hooks F are pivoted at G within the heel ends of the knuckles, so as to have a limited swinging movement, and the rear portions thereof are curved to correspond to the outer surfaces of the hooks E, as indicated at H, so that when two couplers are brought together the hooked ends E of the knuckles coming in contact with the rear portions H of the locking-hooks will cause the latter to swing inward, which will swing their hooked ends outward, causing them to

engage with the hooks E of the knuckles to retain the knuckles in their engagement with the locking-hooks. It is necessary that said hooks be held rigid, so as not to swing upon their pivot-points after having entered into engagement with the knuckles, and this is accomplished by the sliding blocks I, which are secured upon the inner surfaces of the locking-hooks by means of screws or bolts J, and the yokes K, through which said screws pass.

A spring L is arranged within a housing secured to each of the locking-hooks in order that the blocks may be normally forced forward, from which it is obvious that when the locking-hooks have been swung to the position shown in Fig. 1 the blocks I will spring outward and engage with each other, as clearly shown, thus preventing any swinging movement of said locking-hooks, as well as any side movement of the knuckle-joints independent of each other, which will securely hold the locking-hooks and the hooked ends of said knuckles in engagement after the couplers have been brought together and engaged.

As just described, the knuckles may freely swing each upon its pivot D, which will permit the two cars to be turned at an angle to each other, so that in passing around a sharp curve no side strain will be brought to bear upon the draw bar or head, which will obviate the liability which has heretofore existed of derailing one or both of the cars.

The uncoupling of the cars is accomplished by the rod M, which is cranked at N, and this crank extends within the field of the pin O, projecting from the block I, so that it is only necessary to turn the rod upon its axis by means of the handle P to force said block rearward against the action of its spring, thereby disengaging the nose of this block from the nose of the block in the opposite coupler, which will release the locking-hook and permit it to swing upon its pivot-point, when the hooks and knuckles may pass out of engagement, as will be readily understood.

Heretofore much damage has been done by the derailing of cars and the breakage of the draw bars and heads by the side strain exerted thereon when a train of cars is passing

around a curve whose radius is so short as to cause the cars coupled to each other to pass so far out of alinement as to reach the limit of the sidewise movement of the draw-bars, 5 and when such takes place the obvious result is that some part of the coupling mechanism must break or the car be derailed. This is entirely overcome by my improvement, and when such is used it is possible to construct 10 shorter curves in railways than are now in use, thereby gaining many advantages when space must be economized. The vertical movement incident to the oscillations of the cars is compensated for by the elongation of 15 the slots Q, so that the blocks may move freely up or down.

Having thus fully described this invention, what is claimed as new and useful is—

1. A car-coupler consisting of a draw-head, 20 a knuckle pivoted thereto, a locking-hook pivoted within the knuckle, and a sliding

block carried by said hook, substantially as and for the purpose set forth.

2. The herein-described combination of a draw-head, a knuckle pivoted thereto so as to 25 swing, a hook E formed with said knuckle, a locking-hook pivoted within the heel of the knuckle and adapted to engage the hooked end of an opposite knuckle, a sliding block attached to the locking-hook, a spring for ac- 30 tuating said block, a pin projecting from said block, and a cranked rod for moving the block against the action of its spring, substantially as and for the purpose set forth.

In testimony whereof I have hereunto af- 35 fixed my signature in the presence of two subscribing witnesses.

JOHN D. HOOD.

Witnesses:

S. S. WILLIAMSON,
JAMES O. WILSON.