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Samuel D. Le Compte's
Self Operating Car Coupler

PATENTED

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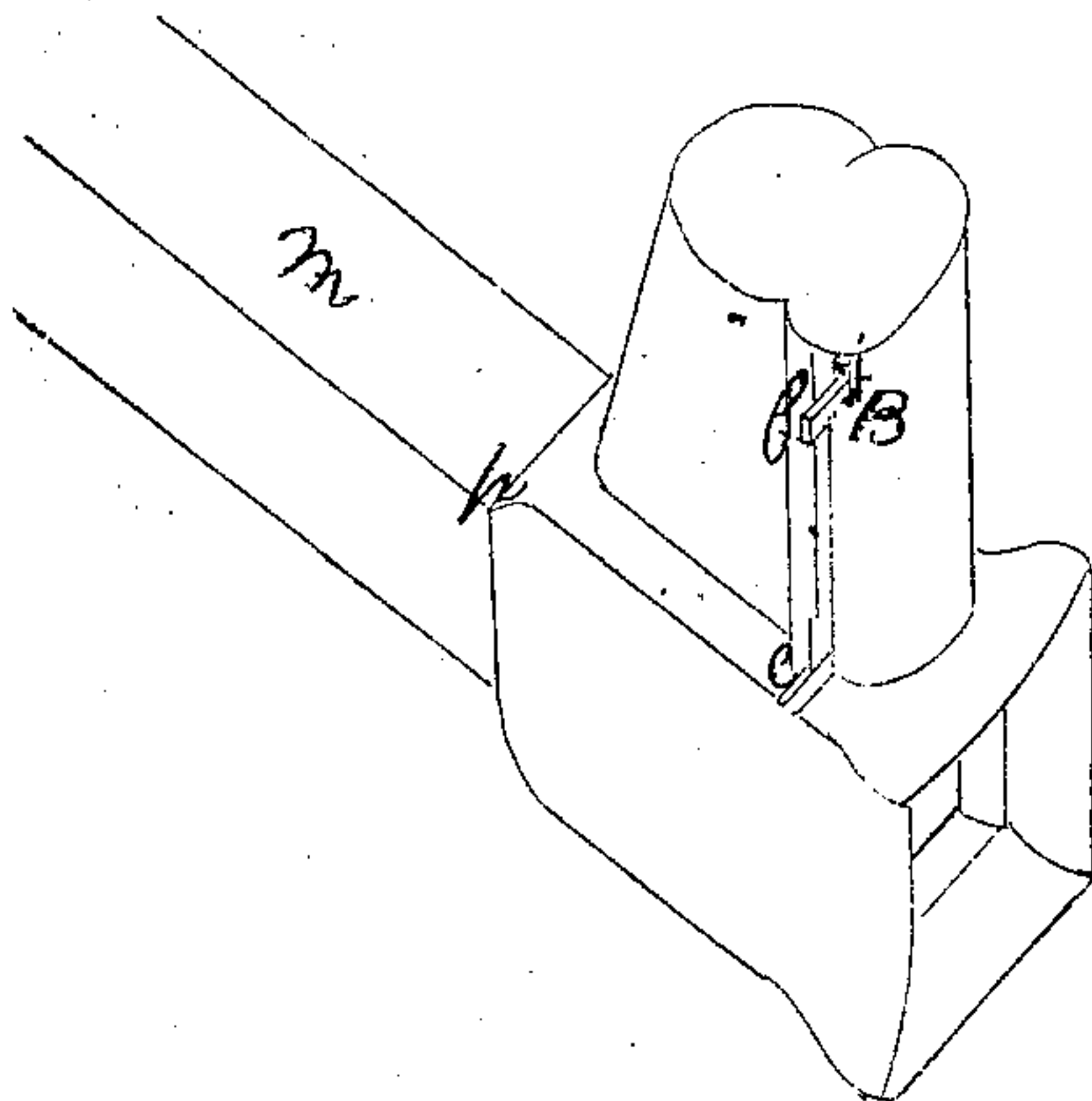
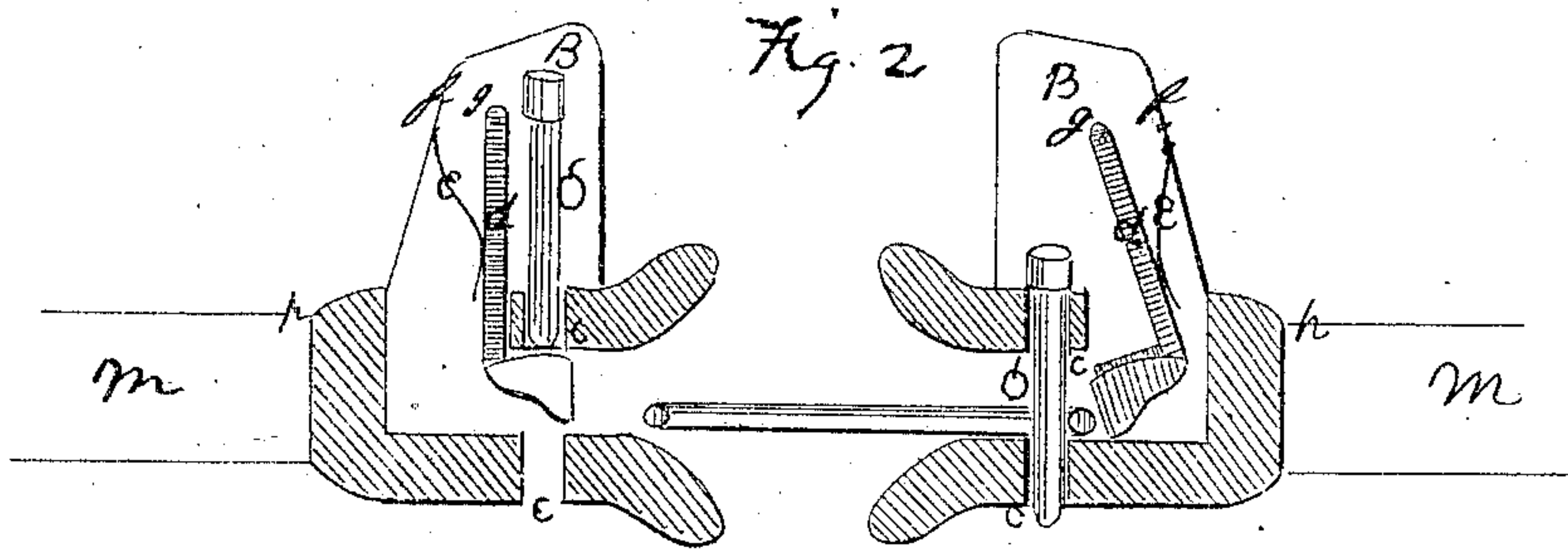
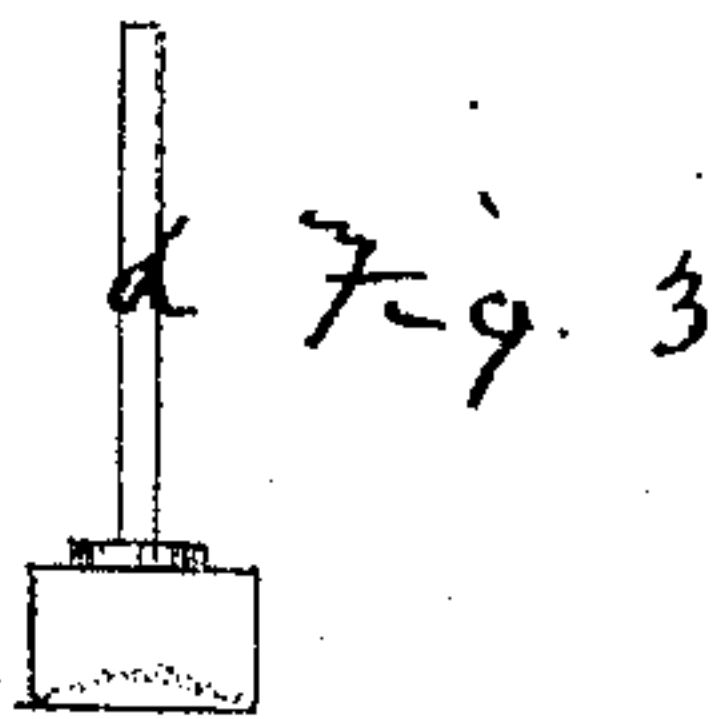
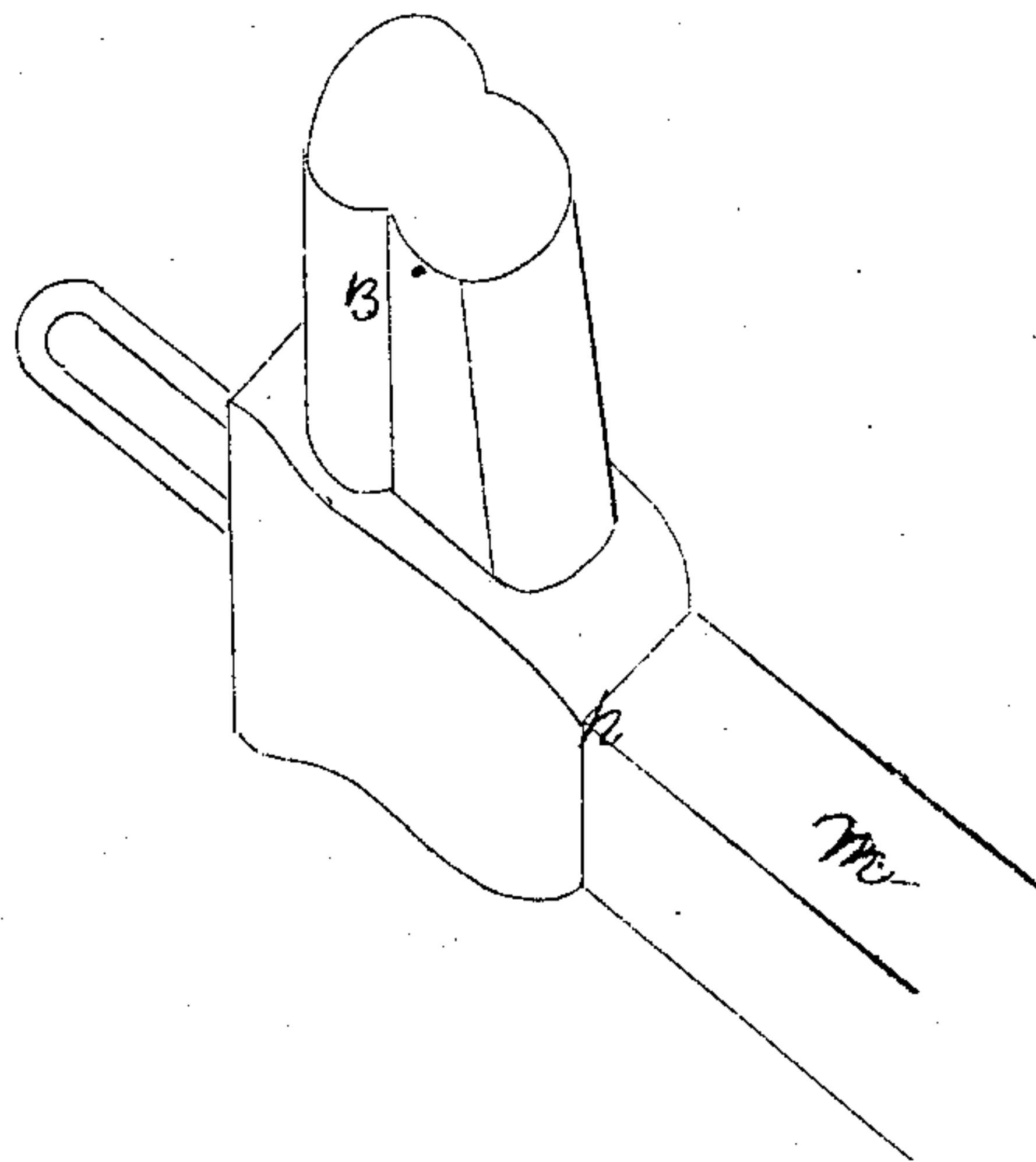


Fig. 1.



Witnesses
J. H. Cunningham
Nicholas Smith

Sam. D. Le Compte

United States Patent Office.

SAMUEL D. LECOMPTE, OF LEAVENWORTH COUNTY, KANSAS.

Letters Patent No. 73,984, dated February 4, 1868.

IMPROVED CAR-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL D. LECOMPTE, of Leavenworth county, in the State of Kansas, have invented a new and improved Self-Operating Car-Coupler for Railroad-Cars; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in providing a "tripper," a "spring," a "bolt and tripper-supporter," and "spring-holder," the holders being set upon the top of the buffer or bumper, and operating so as to sustain the bolt in an upright position immediately above the holes in the buffer, and with its point in the upper hole, supported by the tripper, and ready to fall into the holes instantly upon the tripper being forced back by the ring.

Figure 1 is a side view of the car-coupler.

Figure 2 is a view in section of the pair, they being similarly constructed.

Figure 3 is a front view of the tripper.

To enable others skilled in the art to make and use my invention, I proceed to describe its construction and operation.

I make of suitable material (as iron) a buffer or bumper, in or nearly of the form commonly in use for the coupling of cars, as seen in figs. 1 and 2. Upon the top of this, either constructed separately and attached to it by suitable fastenings, or as a part of it, is placed the bolt and tripper-supporter B. Within this, and immediately above the bolt-holes *c* of the buffer, is a perpendicular round hole, of suitable size for the head of the bolt *O* to play up and down freely. Immediately back of this hole is a slot, within which hangs and plays the tripper, of suitable size, say one-third of the diameter of the hole. Back of the upper hole of the buffer is a corresponding slot, through which the tripper extends and plays. Behind the tripper is a spring, securely fastened in the spring-holder, being the back part and covering of the bolt and tripper-holder. The tripper is marked by the letter *d*, the spring by *e*, and its holder, *f*. The spring plays and presses upon the back of the tripper, so as to force it forward. The tripper is suspended upon a small bolt at *g*. It is so constructed and hung as to play freely in the slots above described. Below the slot, behind the top hole of the bumper, and in the opening or mouth of the bumper, it is prolonged forward by what may be called a jog, which serves for the bolt to rest upon, when raised. It is also enlarged laterally, and also extends downward sufficiently to so fill the aperture of the buffer as to prevent the ring from entering otherwise than by pressing it back, and relieving the support of the bolt. In the lower part of this enlarged surface of the tripper, which may be called its face, is a groove, within which the end of the ring will fall, and by means of which, on account of its shape, and of the pressure of the spring upon it, the inner end of the ring will be kept in position, and thus the ring itself be kept from tilting, and retained in a nearly horizontal position, so as to enter the mouth of the bumper of an approaching car. The bolt has a shank, extending from its head through a slot, as seen at *h*, by means of which the bolt is raised for uncoupling. At the top of the slot is a small offset, in the form of a lateral slot, within which the shank may be turned, and thus the bolt be held up, whenever convenience may require it to be so held, independently of the tripper, as in the case of bumping off a car from the track to a switch, or for any other purpose. When it may be desirable to run the cars together without coupling them, for the purpose of coupling, of course the bolt will rest upon the tripper. There is also a lateral offset at the bottom of the slot last mentioned, within which the shank of the bolt will turn by its own gravity, and a little slant in the slot, or within which it may be turned, and secured by a small pin, to prevent the possibility of the bolt being jostled out of its place. The first is seen at *j*; the other at *l*.

Thus constructed, a ring and bolt are used for the coupling, and the operation of coupling is as follows: The ring being in either one of the pair of buffers, its inner end, being an oblong, is kept in place by the groove in the lower part of the face of the tripper, and the sides of the bolt resting upon the flat surface of the lower part of the buffer, the ring is maintained in a nearly horizontal position, so as to strike within the slope of the mouth of the approaching bumper. So striking, it glides within the mouth, presses back the tripper, and removes the support which keeps up the bolt. The bolt, no longer supported, instantly falls, and being retained in perpendicular position by the bolt-holder, of course falls directly through the ring, into and through the bottom hole of the bumper, and thus makes a secure coupling. The bumper is attached, as now, or in any

other approved mode, to the cars, by means of bolts or otherwise through the shank *m* of the bumper. "Bumper" and "buffer" are herein used as synonymous.

Similar letters of reference indicate like parts.

The bolt may have two shanks, one projecting through a slot on each side of bolt and tripper-supporter, and the shanks so curved on the outside as to make a good hold to the hand.

Other springs than of the particular form herein presented may be used, and may be differently attached. A coiled spring or a cushion of India rubber may be placed back of the tripper, operating the same result; or the tripper itself may operate by its own gravity, by reason of a rear projection below the pivot, with sufficient lefthand to overcome the weight of its enlarged size within the aperture of the bumper. In this case, it would need to be suspended upon a pivot, as near as practicable to the bolt.

As the most successful operation of the coupler will be when the meeting bumpers are at the same height, it is proposed that, whenever necessary, the shank of the bumper at *h* may be turned in the form of a knee or elbow, for the purpose. The top of the bolt and tripper-supporter will be securely fastened, and will be low enough to prevent the bolt being raised so high as to unship the end of the bolt from the top hole of the bumper, so that it cannot get out of position. The ring will be of such length that the edges of the bumpers of two approaching cars will meet before both of the trippers are pressed to the extremities of the slots, so that the bumpers themselves will take the force of the concussion; but it must be, at the same time, of such length, as that one tripper being so pressed back, the other will be sufficiently forced inward to relieve the bolt of its support before the bumpers meet.

I do not limit myself to the particular form or number of the shanks of the bolt, nor to the particular kind of spring, nor to the particular manner or place of securing it, nor to the necessity of a spring, as the various forms of these above indicated have been by me adapted, each of them having some peculiar advantages.

I claim the combination of the pivoted swinging bar *d* and the spring *e*, hinged at *f*, in connection with the double-slotted bolt-holder *B* and shank-headed bolt *O*, when constructed and arranged substantially as and for the purpose described.

SAM. D. LECOMPTE.

Witnesses:

W. S. JENKINS,
A. TUTTLE.