

T. SHEA.
CAR COUPLING.

No. 519,480.

Patented May 8, 1894.

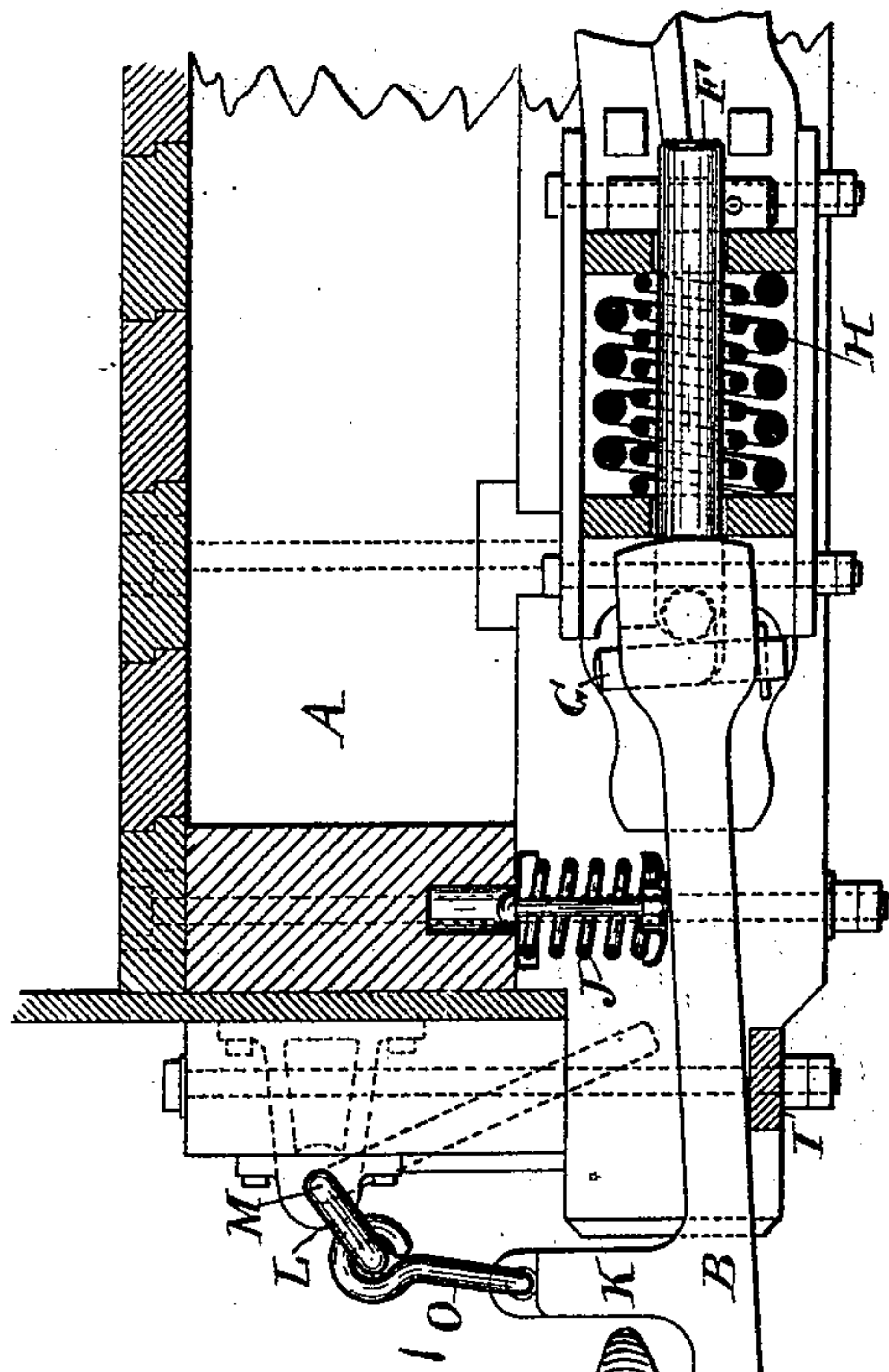


Fig. 1.

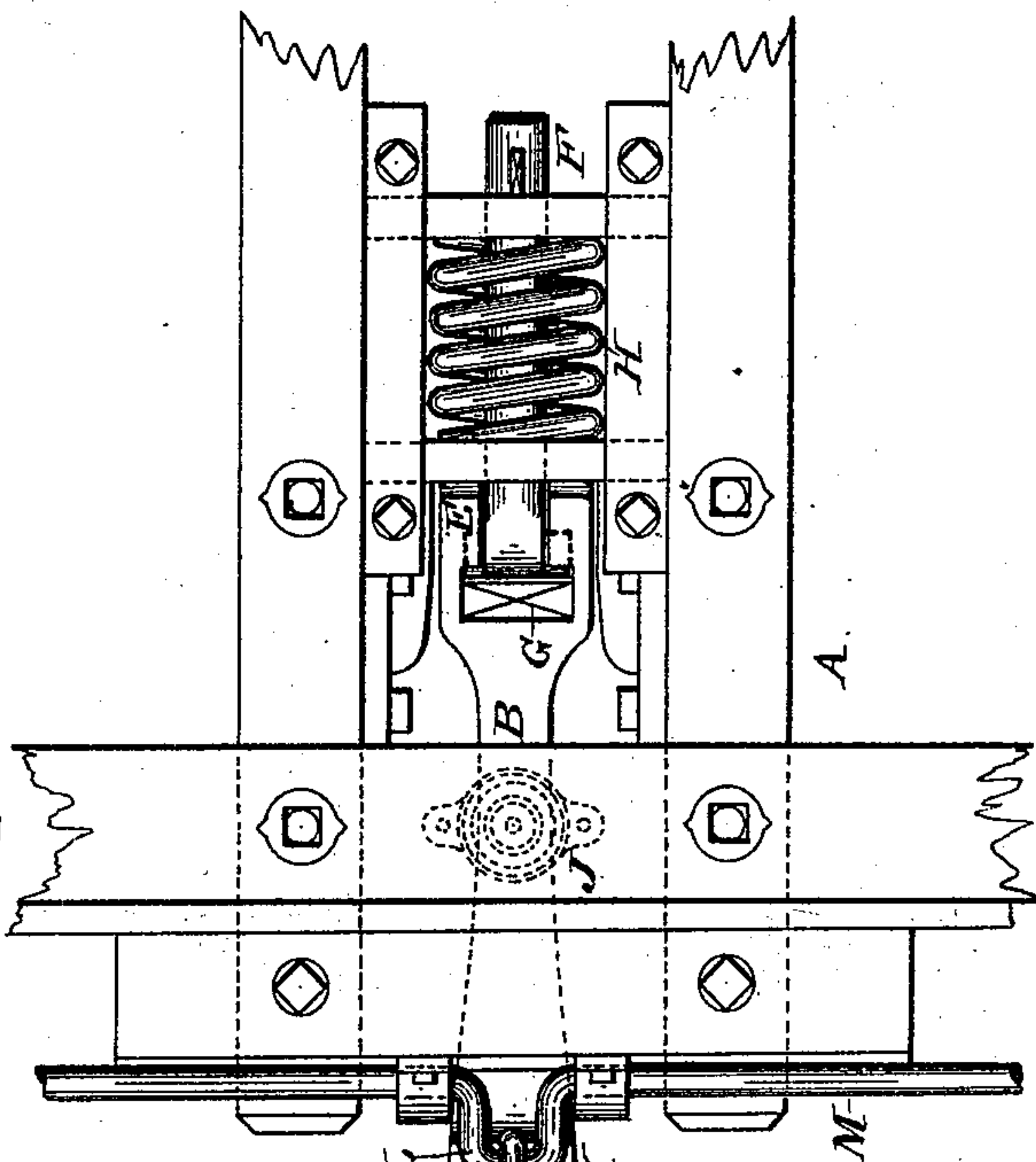
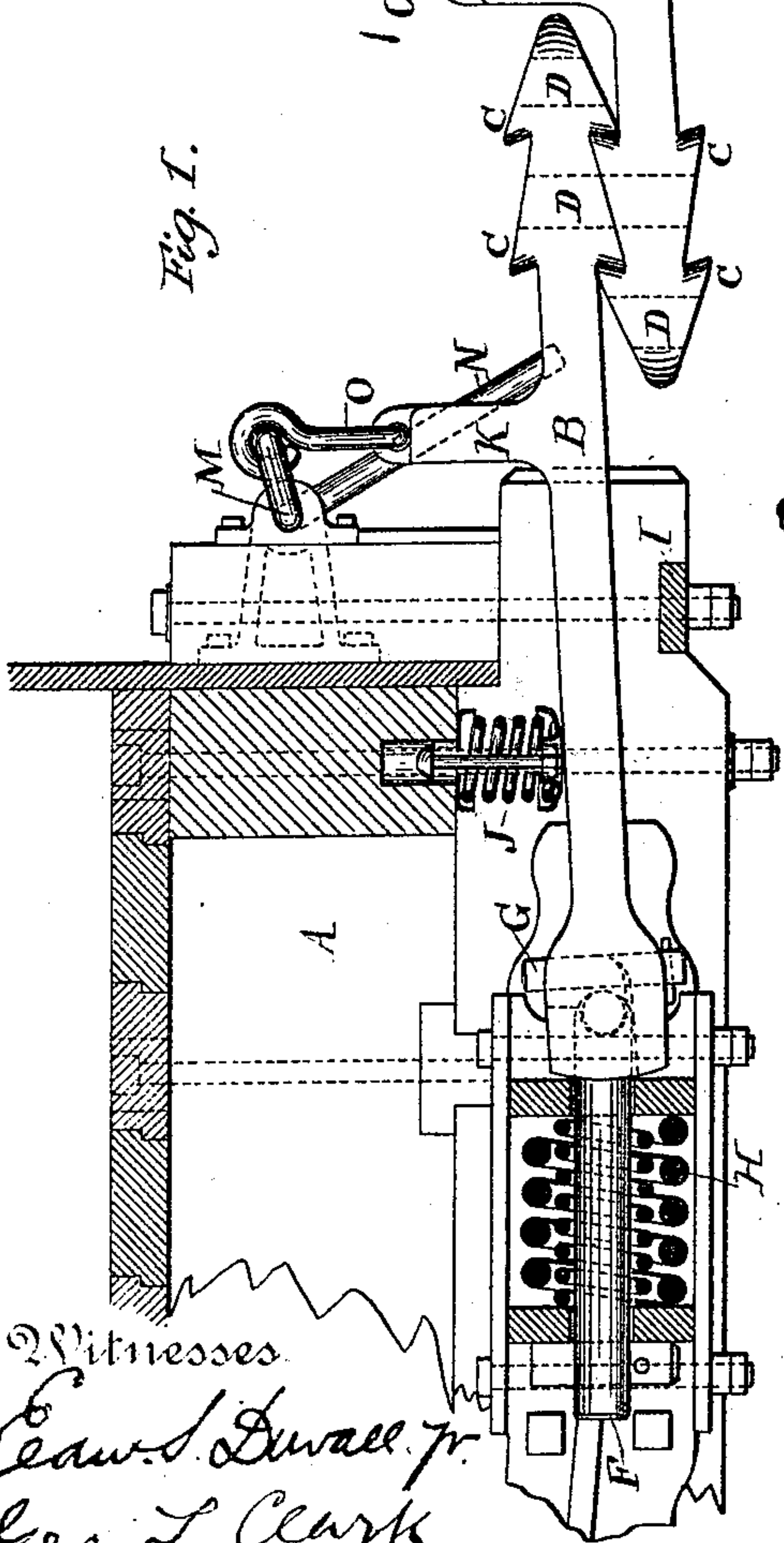
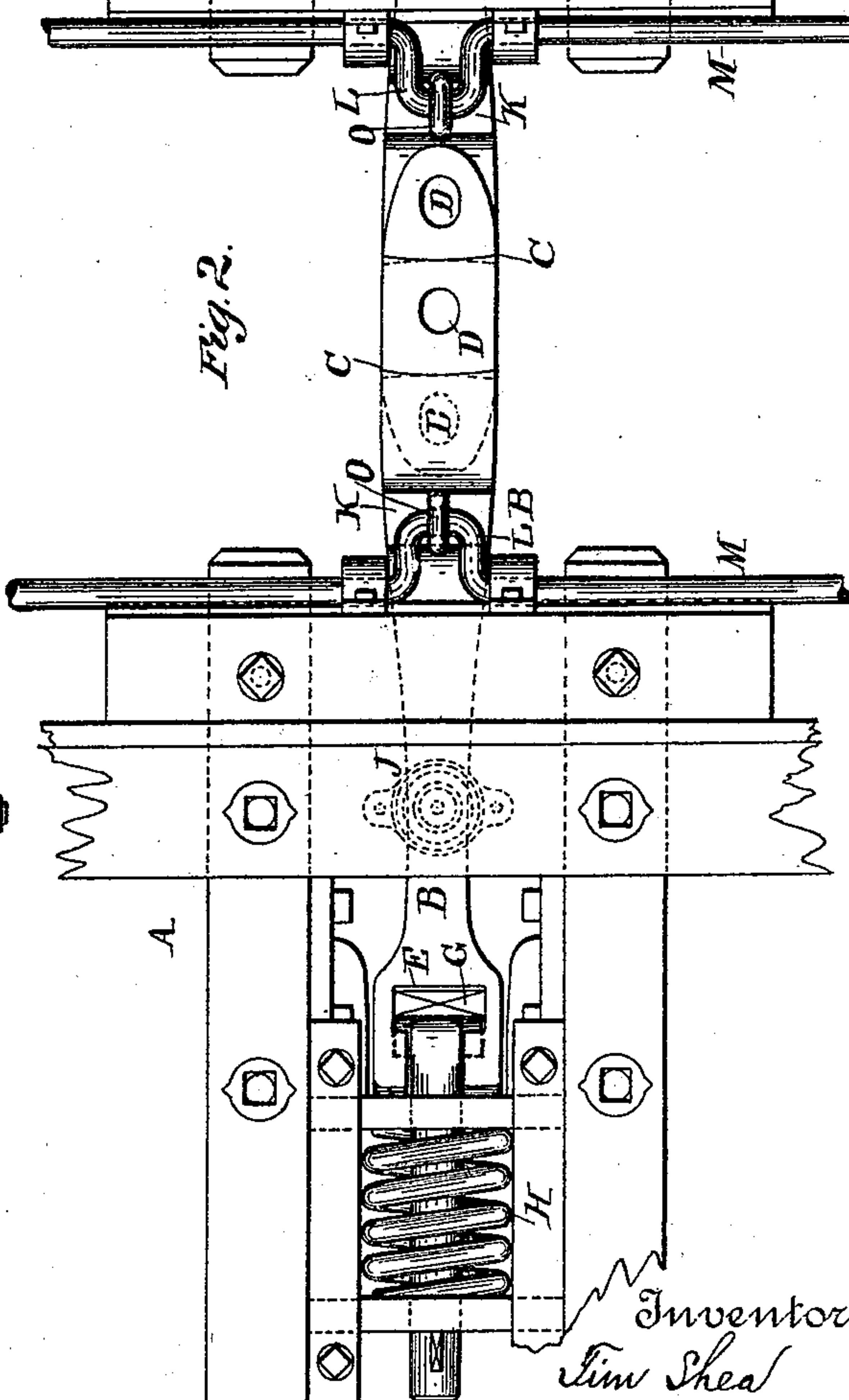


Fig. 2.



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(No Model.)

2 Sheets—Sheet 2.

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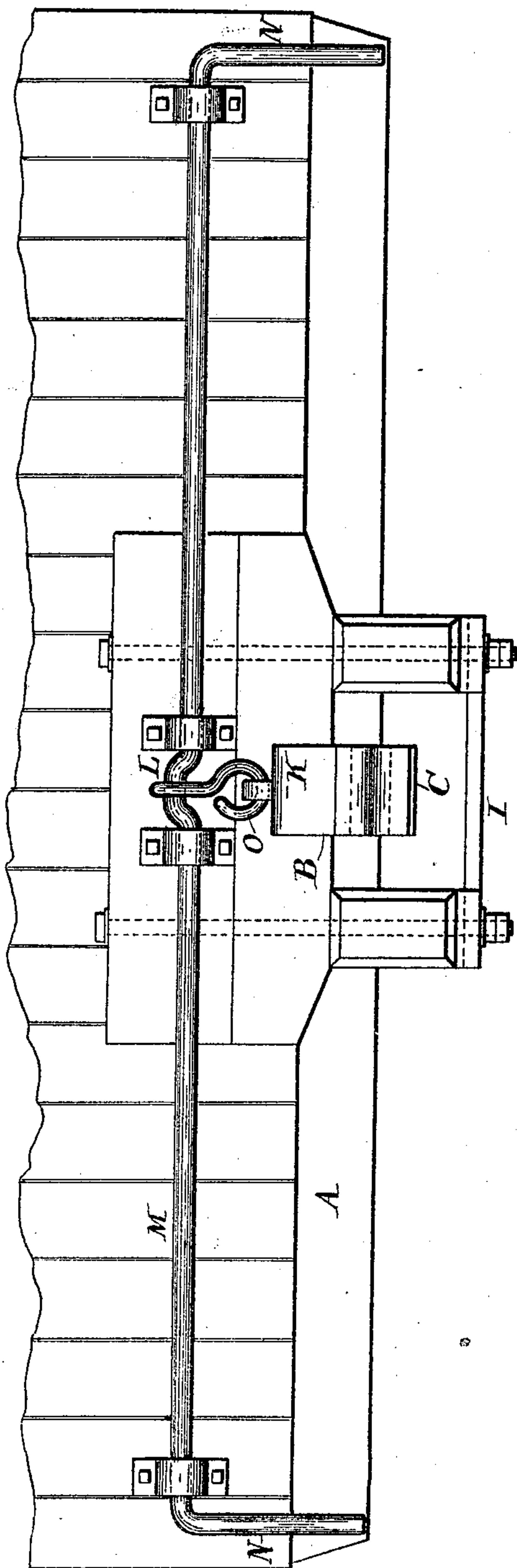


Fig. 3.

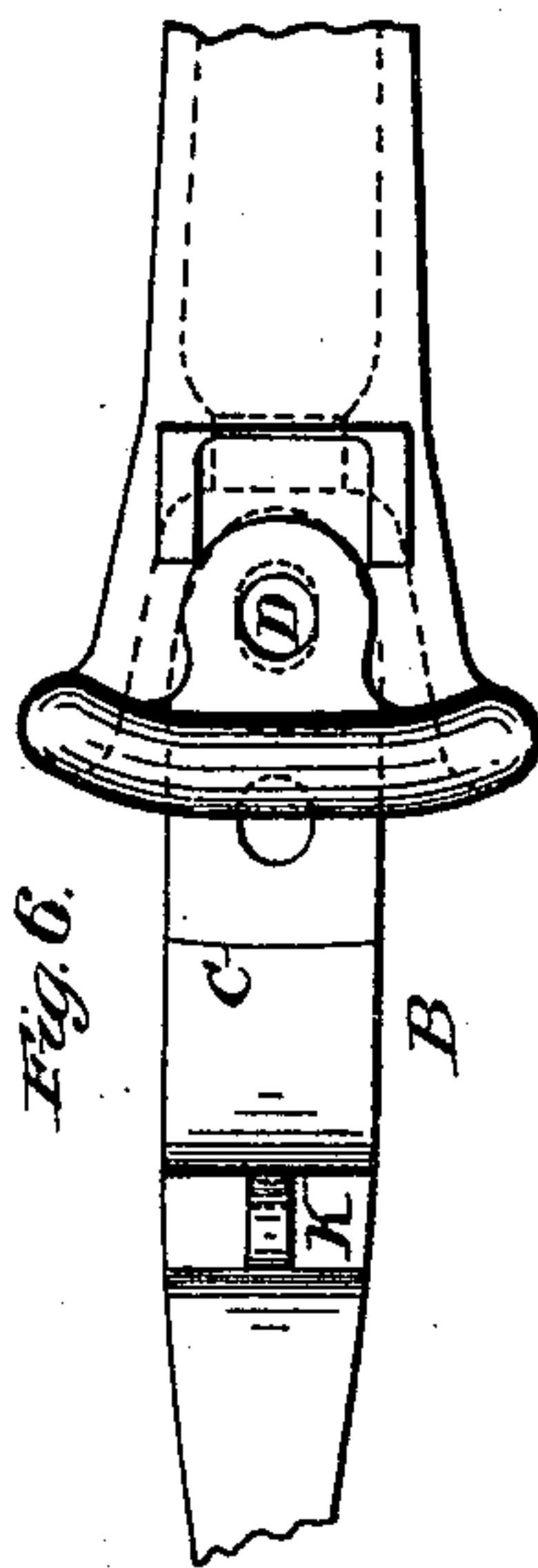


Fig. 6.

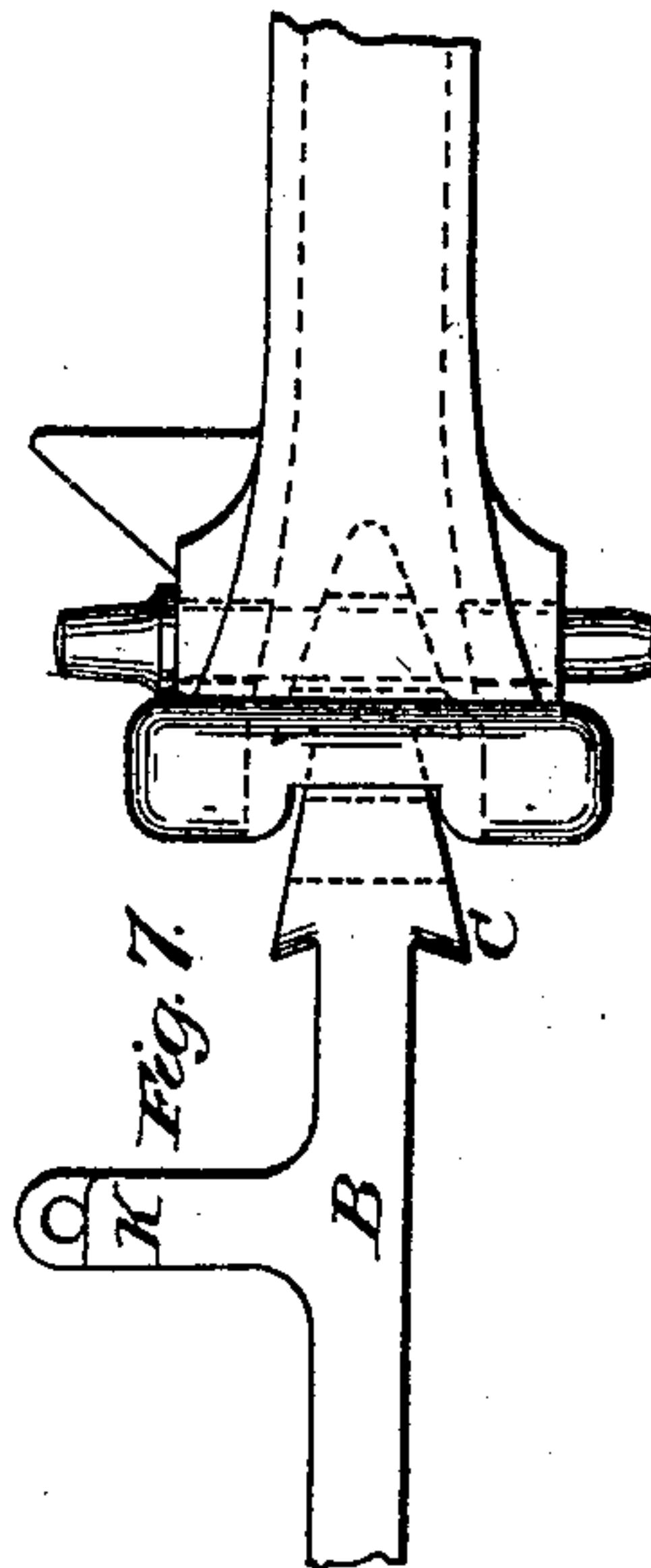


Fig. 7.

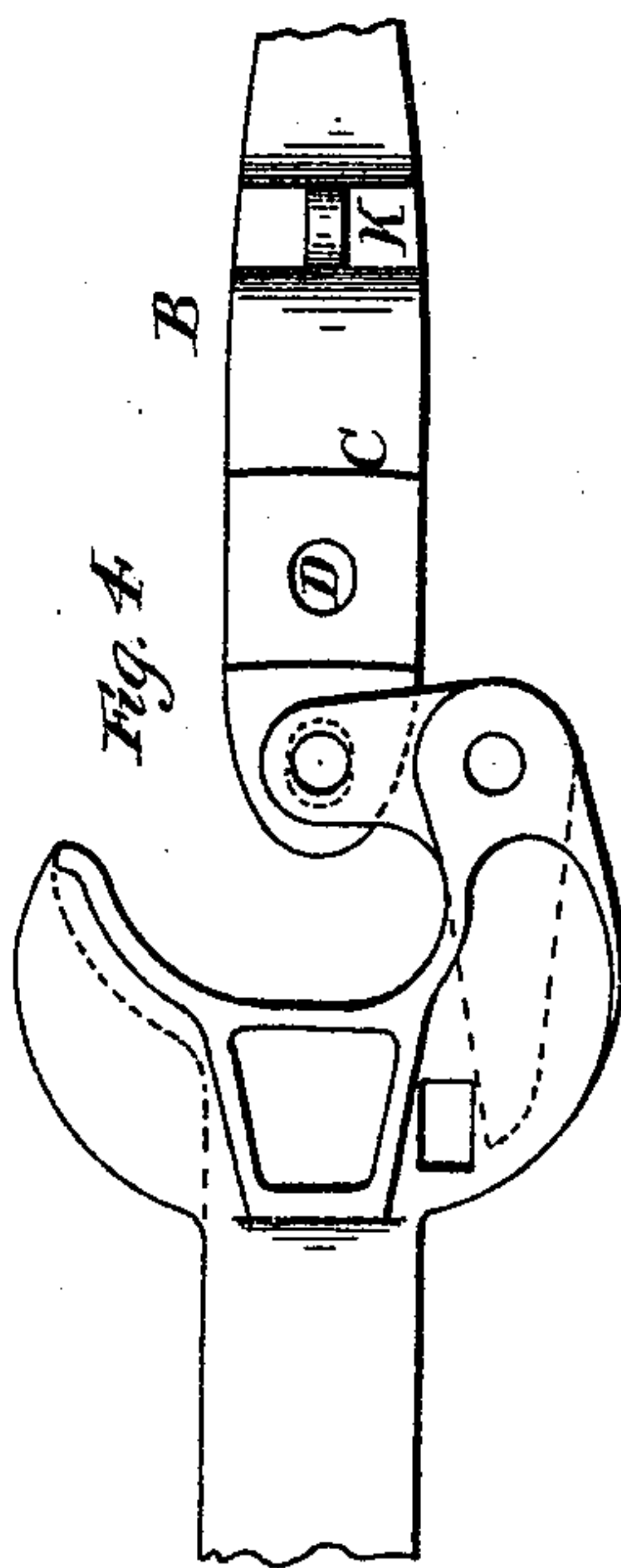


Fig. 4.

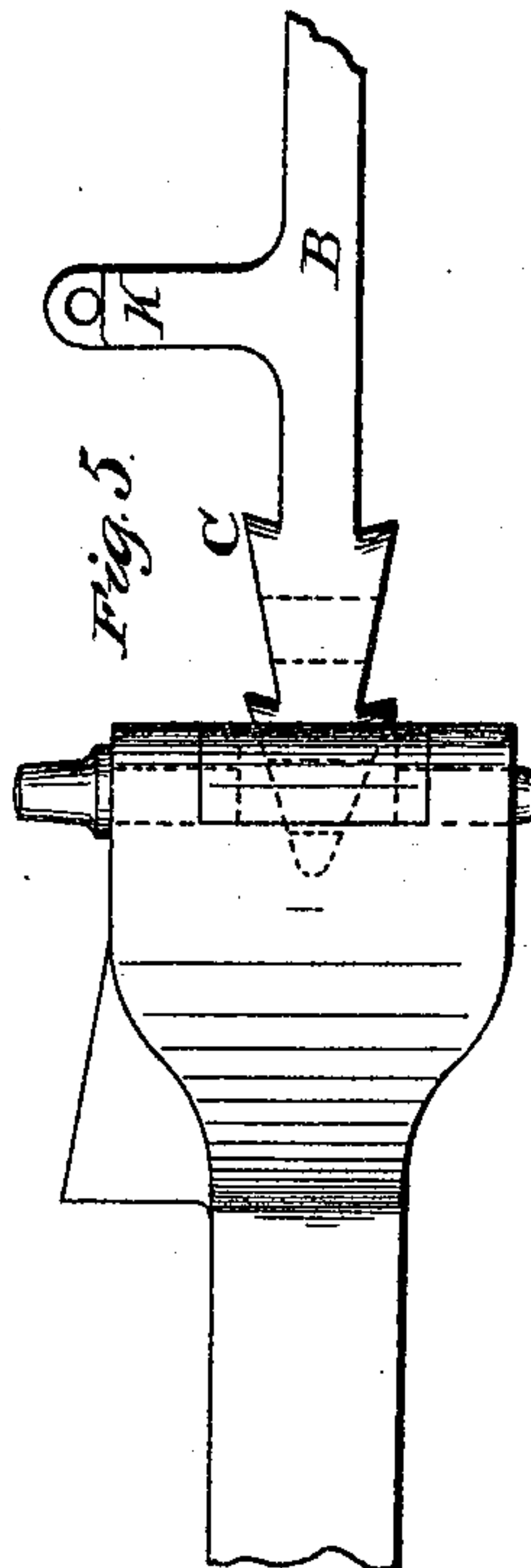


Fig. 5.

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UNITED STATES PATENT OFFICE.

TIM SHEA, OF KNOXVILLE, TENNESSEE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 519,480, dated May 8, 1894.

Application filed January 9, 1894. Serial No. 496,249. (No model.)

To all whom it may concern.

Be it known that I, TIM SHEA, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented certain new and useful Improvements in Car-Couplers; and I do 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, reference being had to the letters of reference marked on the accompanying drawings, which form a part of this specification.

My invention relates to car couplers.

The objects of my improvements are to provide cars with an arrow head type of coupling bar and jaw having certain hereinafter defined advantages whereby the cars may be automatically coupled no matter in what position the jaw heads may be, and which may be uncoupled without the necessity of having to go between the cars.

For these purposes my invention consists in the following construction and combination of parts, the details of which will first be fully described, and the patentable features therein then pointed out and claimed.

Figure 1 represents a detail vertical section and partial elevation of a car coupler device in connection with the framing of a car, and which embodies my improvement. Fig. 2 is a plan view of the same. Fig. 3 is an end view of one of the cars showing my improvement attached thereto. Fig. 4 is a plan of the twin-jaw type of coupler, showing how my improved coupling bar may be coupled thereto. Fig. 5 is a side elevation of the same. Fig. 6 is a plan view of the ordinary type of link and pin couplers showing how my improvements may be coupled thereto. Fig. 7 is a side elevation of the same.

In the drawings—A represents the frame work of two cars having my improvements attached thereto and brought together to be coupled.

B represents the coupling bars. These bars B constitute also and take the place of the ordinary draw bars. The outer heads are formed with double barbed arrow head jaws having a series of barbs or teeth C both on the upper and under sides.

D are a series of pin holes, preferably two

in each head, so that the ordinary coupling pins may be used therein whenever occasion should require. The tails of these coupling bars are formed with a socket E having retaining flanges or lips within which fit the T-heads of the tail bars F, a pin G being driven into the recess in the coupling bar in front of the T-head in order to securely fasten the parts and yet allow an operative movement to the bar B.

H are the usual draw bar buffer springs by means of which the coupling bars are given the usual longitudinal play or movement.

I is a bar secured to the under side of the front end of each car upon which the coupling bars B normally rest, and J, the spring which acts constantly to force the bar B down upon the bar I.

K is an upwardly projecting lug formed upon the upper sides of the bars B which acts as a stop to limit the movement of the opposite coupling bar, and also has bearings in the top thereof for a crank arm L, by means of which the coupling bar B is raised for the purpose of uncoupling the cars. The crank L is formed with or secured to a cross shaft M having crank handles N at opposite ends, whereby either coupler may be operated from either side of the car for the purpose of uncoupling the cars.

It will be noticed that my car coupler is entirely automatic in its action, and that the cars will couple no matter in what position the coupling bars are in. My coupler will also automatically couple on sharp curves. Coupling links and pins are also entirely dispensed with except in cases where it is desired to couple with cars having other types of couplers. In such cases provision has been made for the use of coupling pins, as is shown in connection with Figs. 4, 5, 6 and 7. Coupling pins may also be used where both cars are equipped with my improved coupler, as will be seen from an inspection of Figs. 1 and 2, but such pins will not be necessary or desirable, except in case of accident to the springs J.

In my invention there is no complicated or expensive mechanism such as is generally used in connection with couplers of the automatic type. It consists of two parts and is very simple and efficient; consequently it

can be manufactured and placed on any car at a very low price. Duplicate parts can be attached with a minimum loss of time.

The operation is as follows: When uncoupled the springs J force the coupling bars B downwardly upon the bar I. When two cars come together the outer points of the bars B are approximately in alignment. Being double beveled at their points one bar B overrides the other and slides past so that the barbs or teeth come into engagement, the spring J of the upper bar giving way and again forcing the bar downwardly as the teeth slip past each other. The coupling is thus instantly effected by the impact of the cars. These teeth are rounded on their outer edges so that the coupling bars will accommodate themselves in coupling or moving upon a curved track. In uncoupling one of the handles N of the upper coupling bar is turned so as to cause the crank L and the attached link O to raise the coupling bar B out of engagement with the under coupling bar. The crank L may be disposed so as to swing upwardly a sufficient distance to lie in line with the link O so that the coupling bar B may be locked upwardly out of engagement, if desired.

The foregoing description taken in connection with the drawings exemplifies a preferred form of construction. It should not be understood however that I limit the scope of

my invention to the precise form or the details for carrying the same into effect. I may change the precise structure in its details, as will be obvious to the skilled mechanic. For instance I may provide only one set of barbs or teeth C, or may change the construction of the tail end of the coupling bar.

My coupler may be applied to any car having the ordinary link and pin coupling or automatic coupler without changing the draft arrangement or the construction of the car in any way.

I claim—

In an arrowhead twin-jaw coupler the combination of spring draw-bars having barbs or teeth at their outer ends upon both their upper and lower edges, and pin holes in each draw-bar which register when coupled with the pin-holes of the opposite barbed coupler, whereby a coupling pin will couple them in addition to the barbs, pieces for supporting the draw-bars, springs for forcing the bars against the pieces, springs upon the ends of the draw-bars, and means substantially as described, for unlocking the draw-bars.

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

TIM SHEA.

Witnesses:

TULLY R. CORNIELL,
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