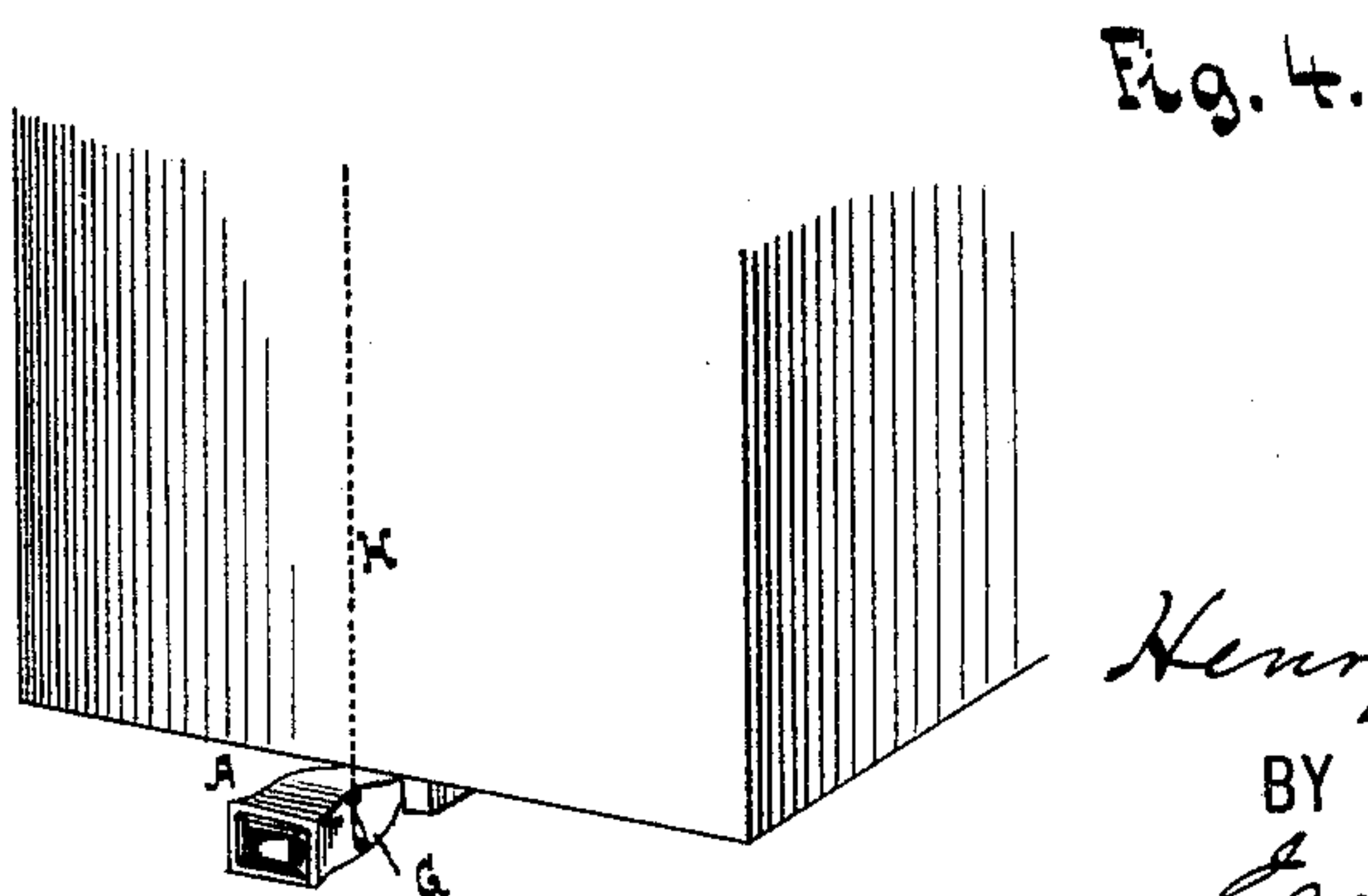
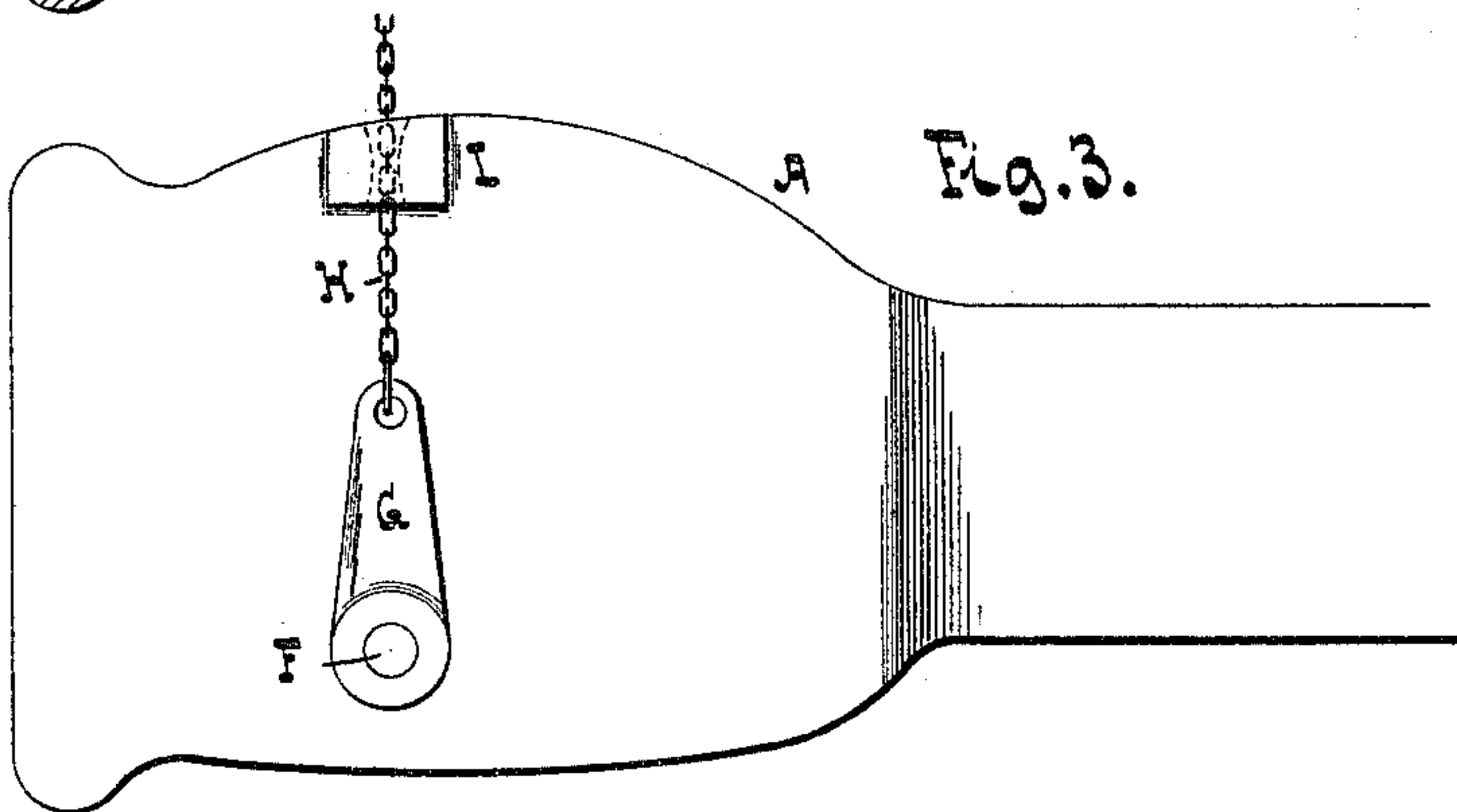
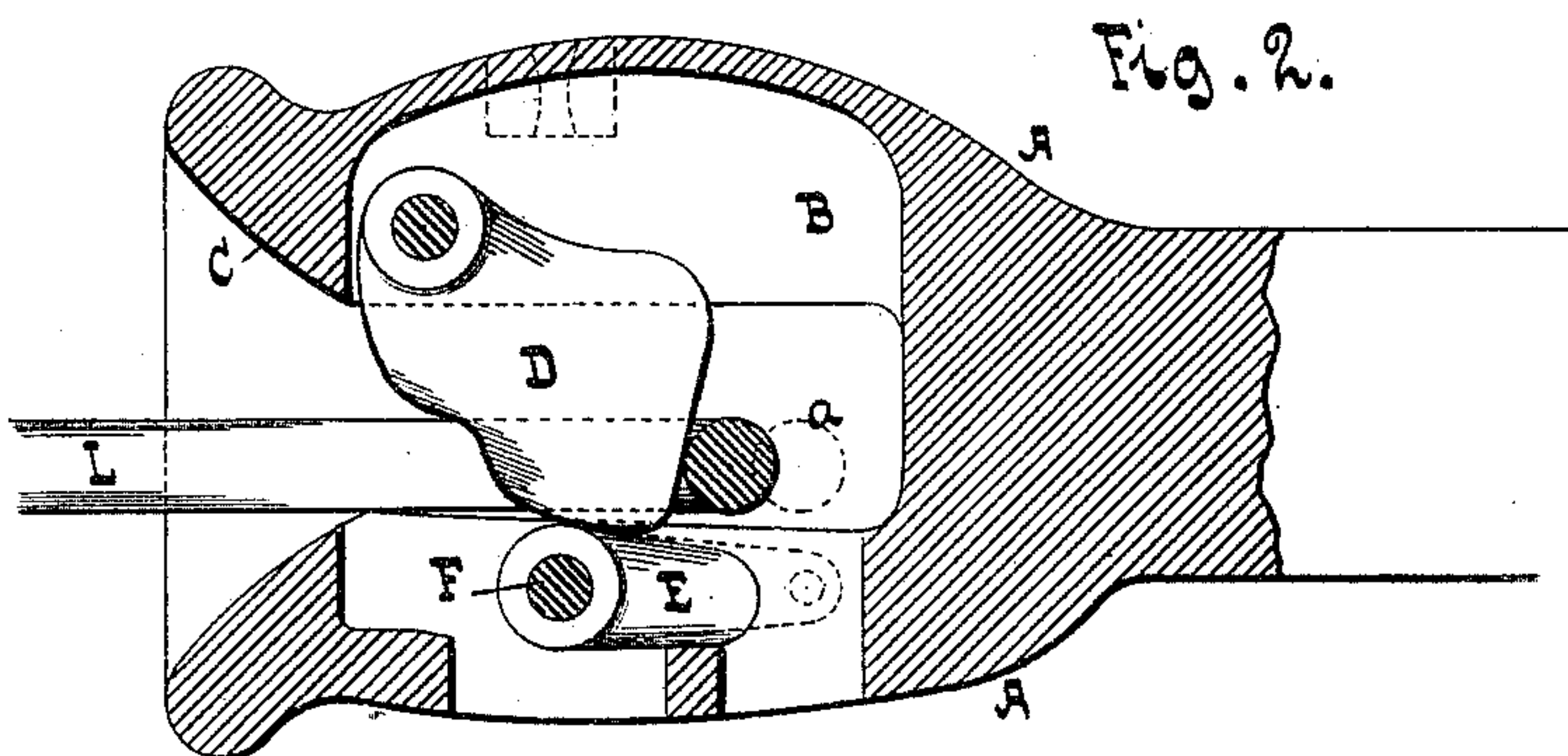
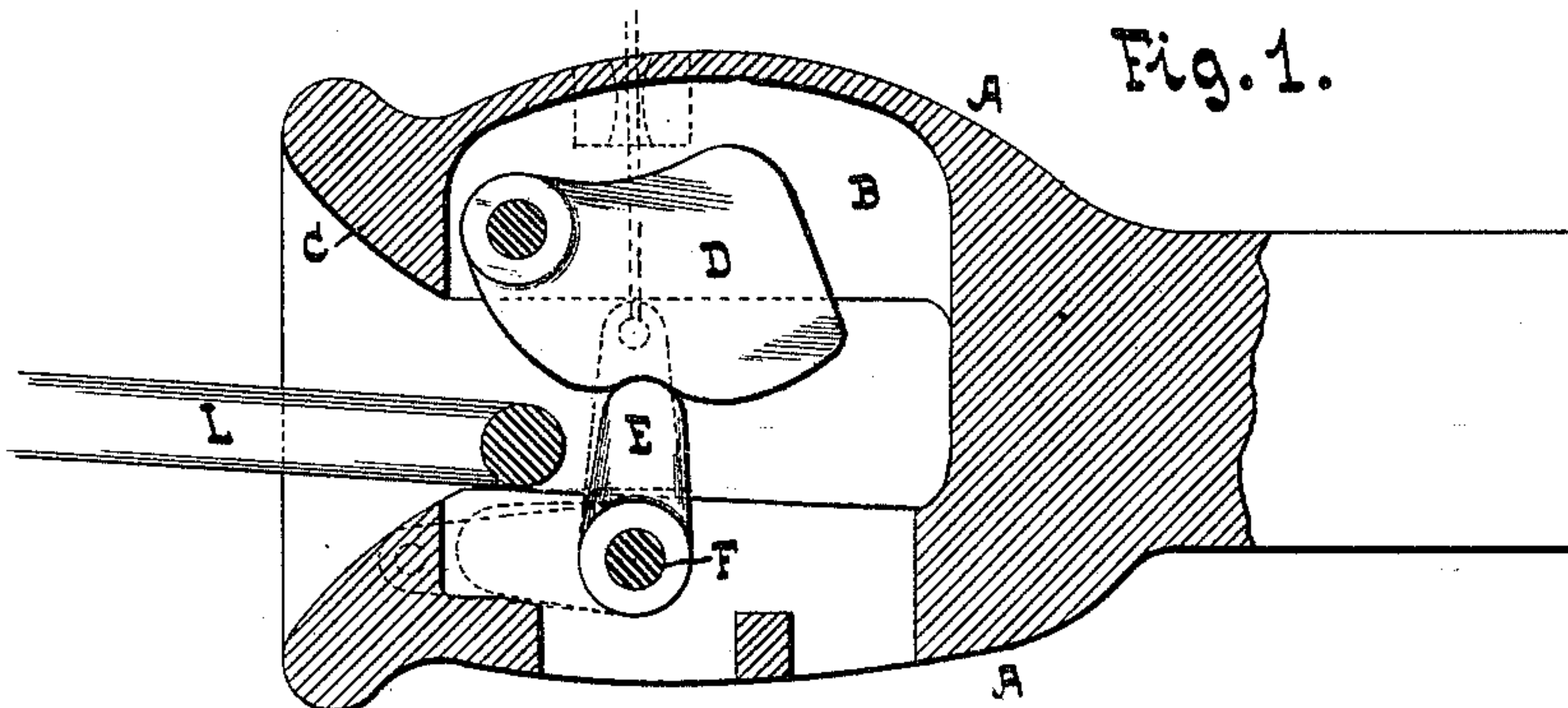


(No Model.)

H. H. EVERETT.
CAR COUPLING.

No. 410,667.

Patented Sept. 10, 1889.



WITNESSES:

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HENRY H. EVERETT, OF PASSAIC, NEW JERSEY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 410,667, dated September 10, 1889.

Application filed June 17, 1889. Serial No. 314,645. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. EVERETT, of the city and county of Passaic, in the State of New Jersey, have invented certain new and useful Improvements in Car-Couplings, whereof the following is a specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a vertical longitudinal section exhibiting the device in readiness for coupling. Fig. 2 is a like section showing the parts in a different position. Fig. 3 is an exterior view of the draw-head. Fig. 4 shows the device as in use on a car.

My invention relates to automatic coupling devices and embraces the use of a latch or tumbler acting by gravity to engage the coupling-link, with which is combined mechanism for elevating the tumbler and holding it up while the coupling-link is inserted in the act of coupling one car with another, and also when uncoupling the cars.

The device is adapted for operation and use without requiring an attendant to pass between the cars.

A indicates the draw-head, constructed with a cavity B within the top and a corresponding slot central and lengthwise in the bottom.

C is the mouth of the draw-head.

D is a latch or tumbler arranged in the cavity B and pivoted at its front end, where it abuts against the inside of the draw-head at the front. The free end reaches obliquely down and back into the throat of the draw-head, where it engages and holds the coupling-link L.

Beneath the tumbler is a vibrating cam-toe E, whose office is to lift the tumbler and hold the same poised on the end thereof during the coupling and uncoupling operations. This toe is made fast to a rock-shaft F, lying across the head A and journaled therein, the toe being disposed centrally of the tumbler and of the head A within the slot aforesaid in the lower part of the draw-head.

Upon the rock-shaft F outside of the draw-head is an arm G, whose position, as here shown, corresponds to that of the toe E, pointing in the same direction.

A chain H is attached to the end of arm G, and is led to and passes through a guide I on

the draw-head, from whence it may be carried to the side of the car or to the top, as indicated in Fig. 4.

In operating my improved coupling the preferable way is to first elevate the tumbler D by means of the vibrating toe E, the end being thrown up from a horizontal position—such, for example, as shown in dotted lines, Fig. 1—to the upright state shown in full lines in that figure, where it remains until forcibly thrown down. To aid the toe in maintaining itself upright, the tumbler has a depression formed therein underneath, and the end of the toe enters it, and thus tends to retain the toe upright, so that it will not fall of itself, and yet leaves it free to be moved when force is applied. In thus setting the device for coupling it will be evident that the necessity of an attendant going between the cars is obviated. The coupling-link L, (attached to an adjacent car,) being now made to enter the mouth of the draw-head, comes in contact with the cam-toe and pushes it over, allowing the tumbler to fall into and engage the link, as indicated in full lines in Fig. 2.

When the tumbler is to be disengaged, the cars are slackened up, so that the inner end of the link moves back to the dotted lines *a a*, whereupon the arm G is made to turn the rock-shaft F, as by a pull on the chain or otherwise, and thus swing up the toe, throwing out the tumbler, the toe rising through the link. The toe is capable of assuming the horizontal in two positions, forward and rearward, from either of which it may be oscillated thus to throw out the tumbler, and is therefore double-acting. The tumbler is now disconnected from the link L; but the toe has taken its place. In separating the cars, however, the toe offers no resistance to the pull of the link thereon and falls forward to a horizontal position, allowing the tumbler to drop again, leaving the tumbler in the condition shown in full lines in Fig. 2.

I have thus shown the mode of operating my improved coupling in that which I deem the best manner.

The device may, however, be operated in coupling the cars by the more usual practice of thrusting the link directly against the tumbler, the parts being in the condition

shown in Fig. 2, and the tumbler yielding to allow the link to slip past, and then falling into the link when the latter is fully entered.

When operated in this manner for engagement, it matters not what way the toe lies, whether pointing forward or to the rear.

In uncoupling the cars are moved to slacken up the parts, and the toe E is turned up to throw out the tumbler and hold the same elevated, as before specified, leaving it in readiness for re-engagement. In this, as well as that first described, the action of the link is automatic in the coupling operation, and it will be evident that in any condition of the parts the device is always ready in coupling up to receive and engage the link automatically, no matter in what position the parts are left, whether the tumbler be elevated or not.

Although I have shown the arm G and cam-toe E as disposed on the rock-shaft F substantially coincident, the arm G may be differently placed with respect to the cam-toe. Likewise the guide may be set in any location most convenient for the successful working of the coupling device, according to the location and arrangement of the parts.

In the foregoing improvements I shall not, therefore, confine myself to specific forms or special arrangement.

I claim as my invention—

1. The combination, with the draw-head having a tumbler pivoted therein and abutting against the inside of the head at the front, of a cam disposed in a slot in the head beneath the tumbler and adapted to lift the tumbler and hold the same poised on the end of such toe while the coupling and uncoupling take place.

2. In combination with the draw-head having the tumbler pivoted therein and the slot in the head beneath the tumbler, the double-action cam-toe affixed to a rock-shaft and carrying an arm G, placed outside the draw-head and operated to the right or left, according to circumstances, whereby the tumbler may be disengaged by swinging up the cam-toe either from the front or rear, as the case may be, as set forth.

3. In combination with the double-acting cam-toe, the guide I on the draw-head, the arm G, made fast to the rock-shaft carrying the cam-toe, and the chain H, attached to the arm G and passing through said guide.

HENRY H. EVERETT.

Witnesses:

MANLEY A. RAYMOND,
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