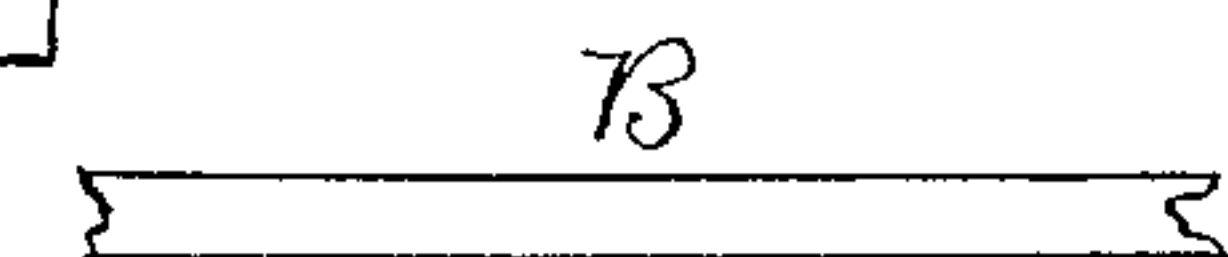
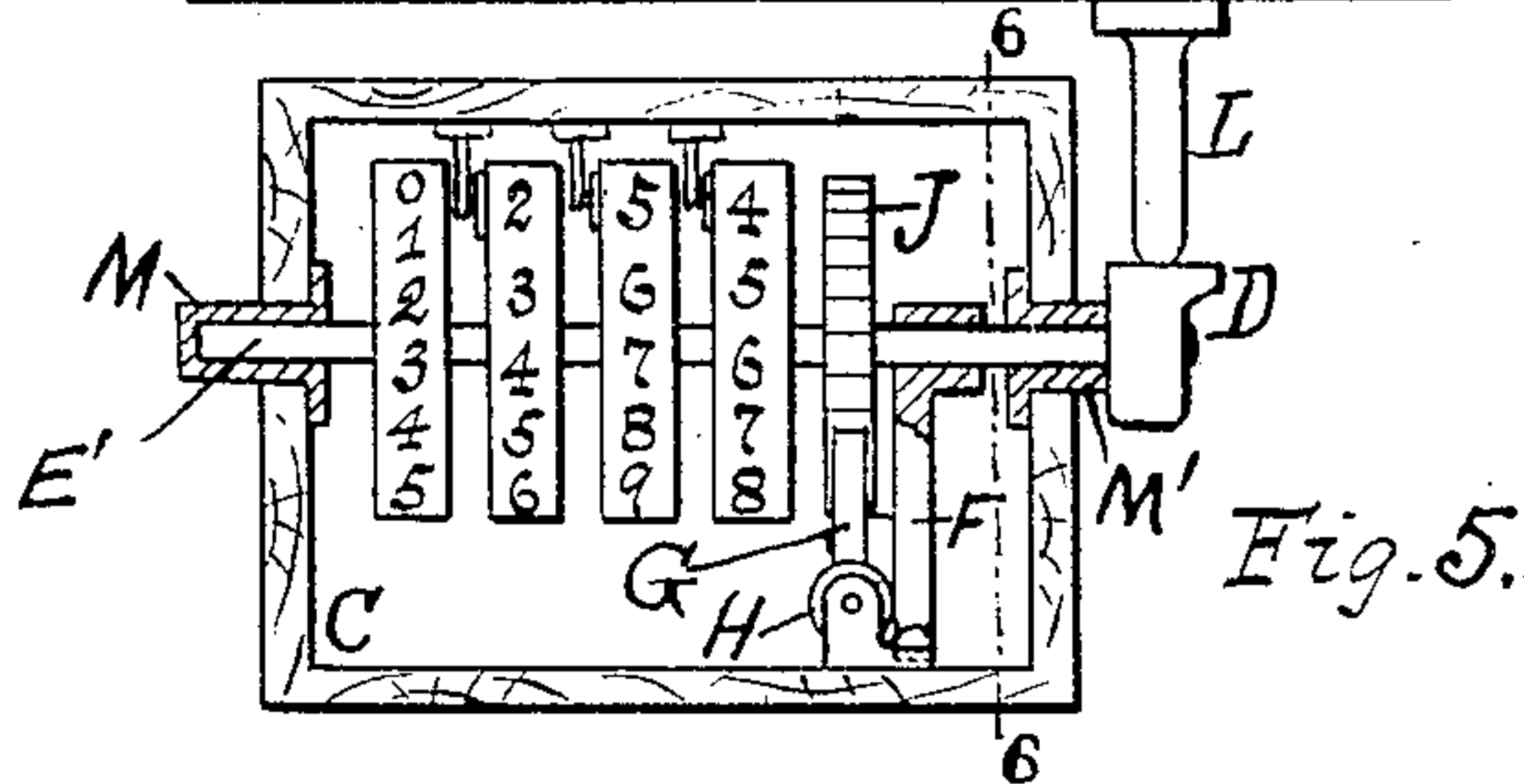
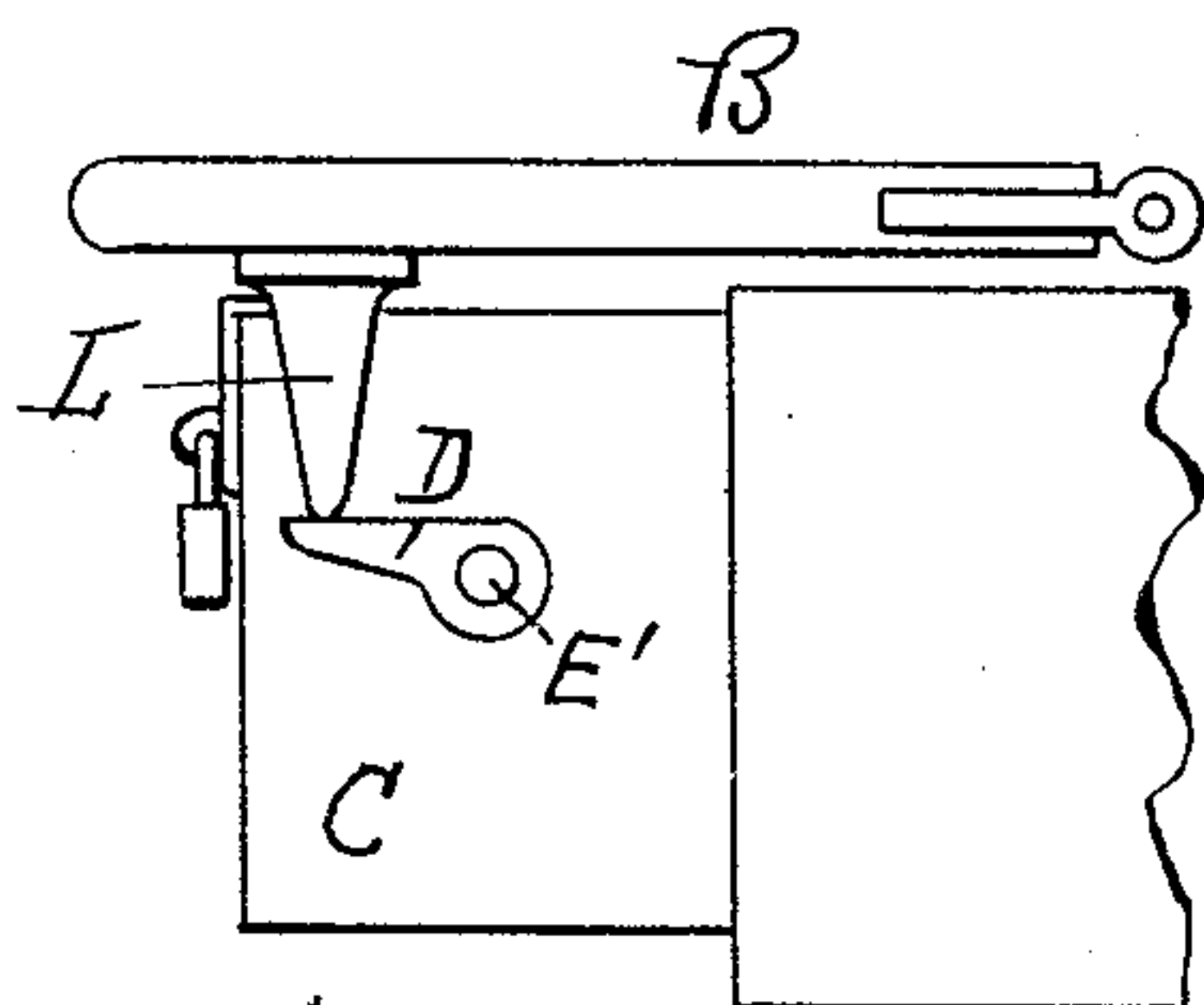
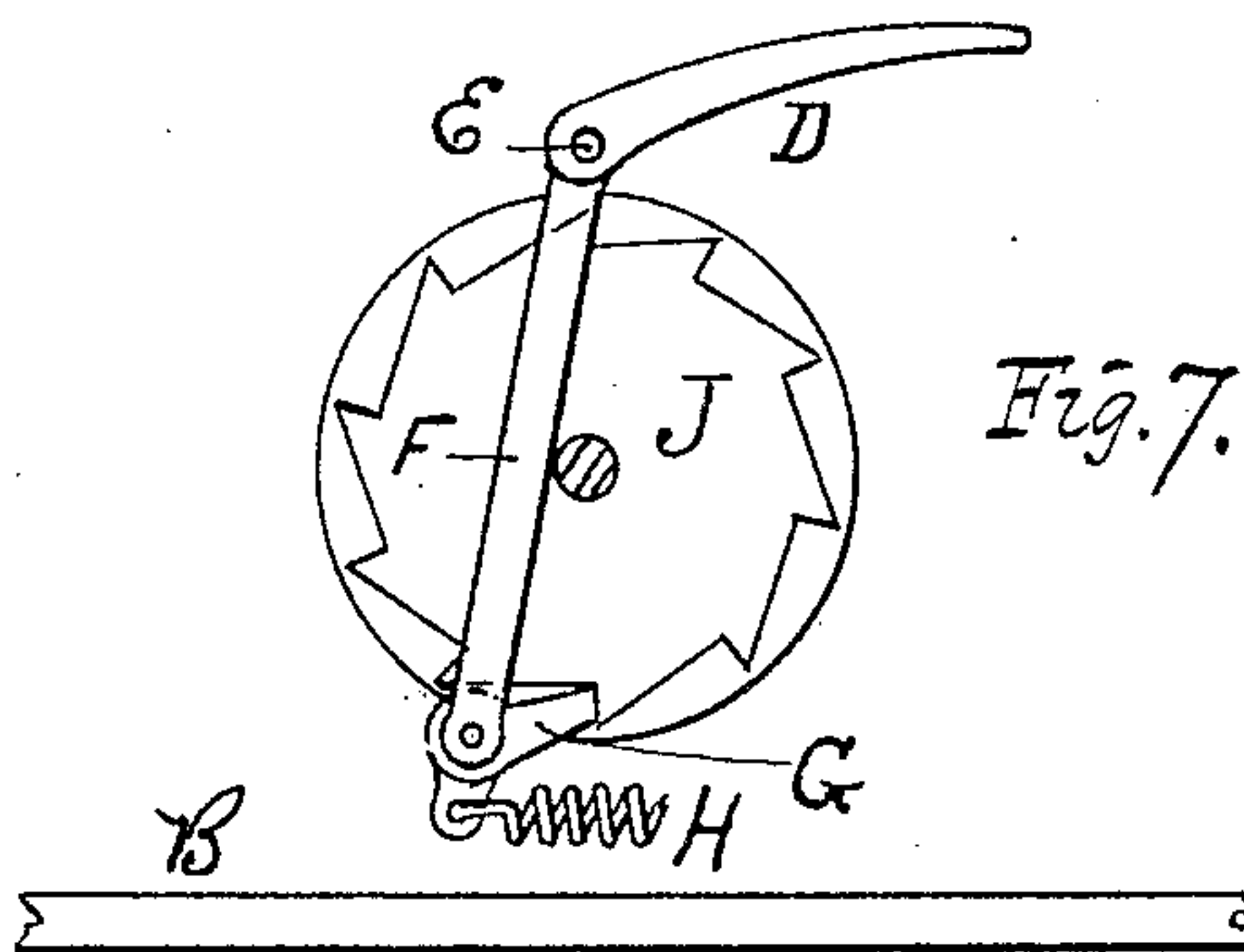
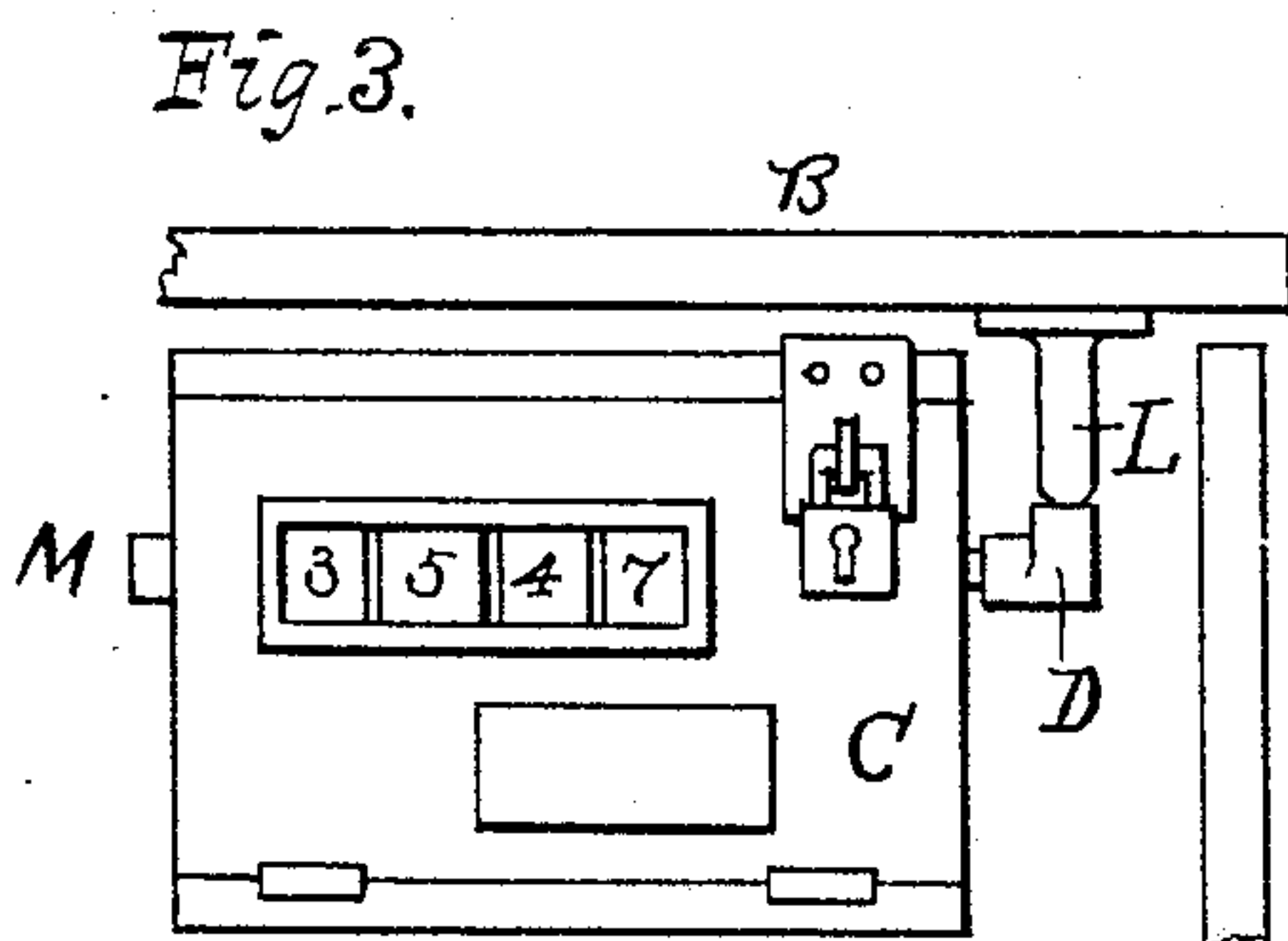
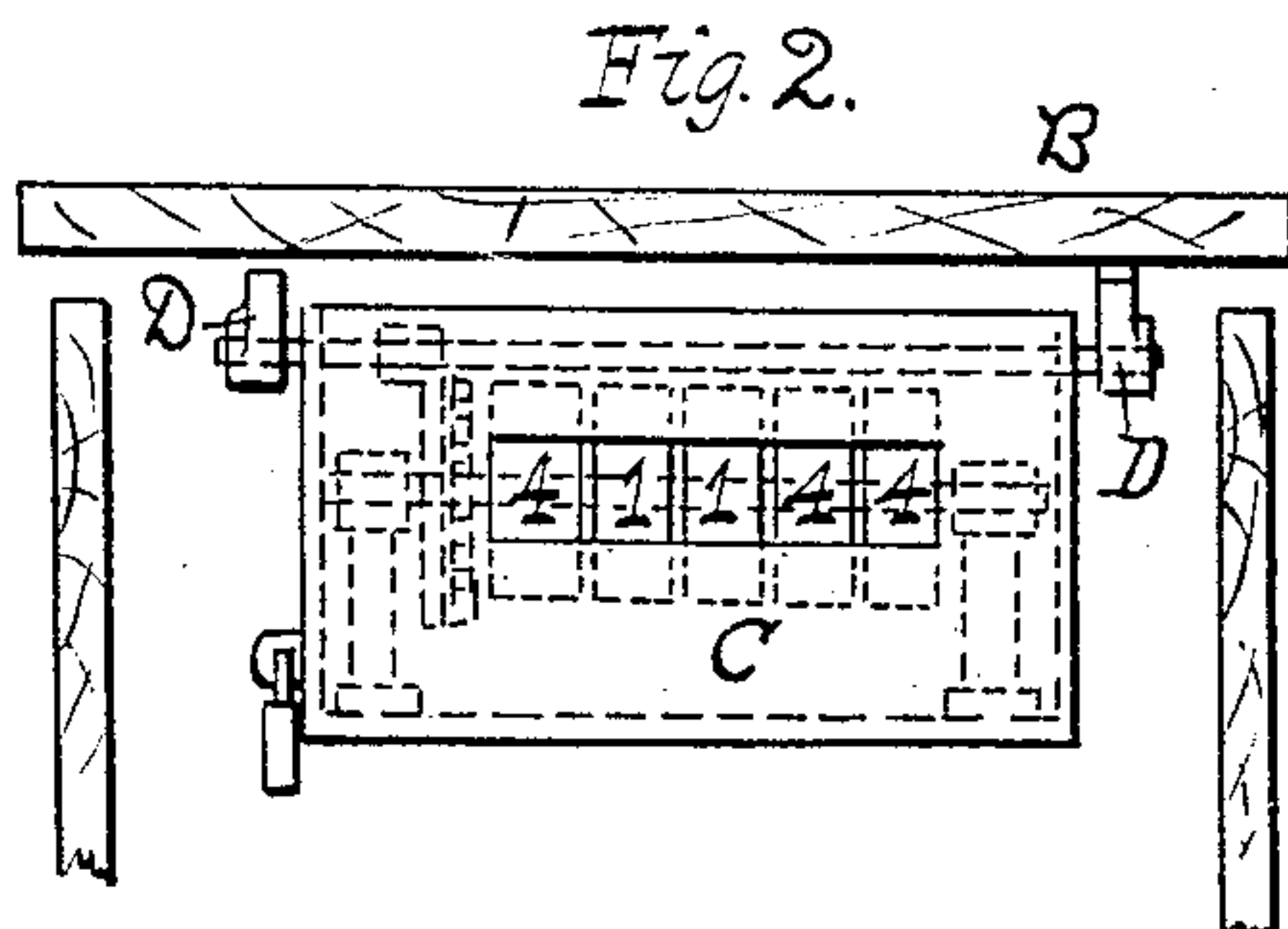
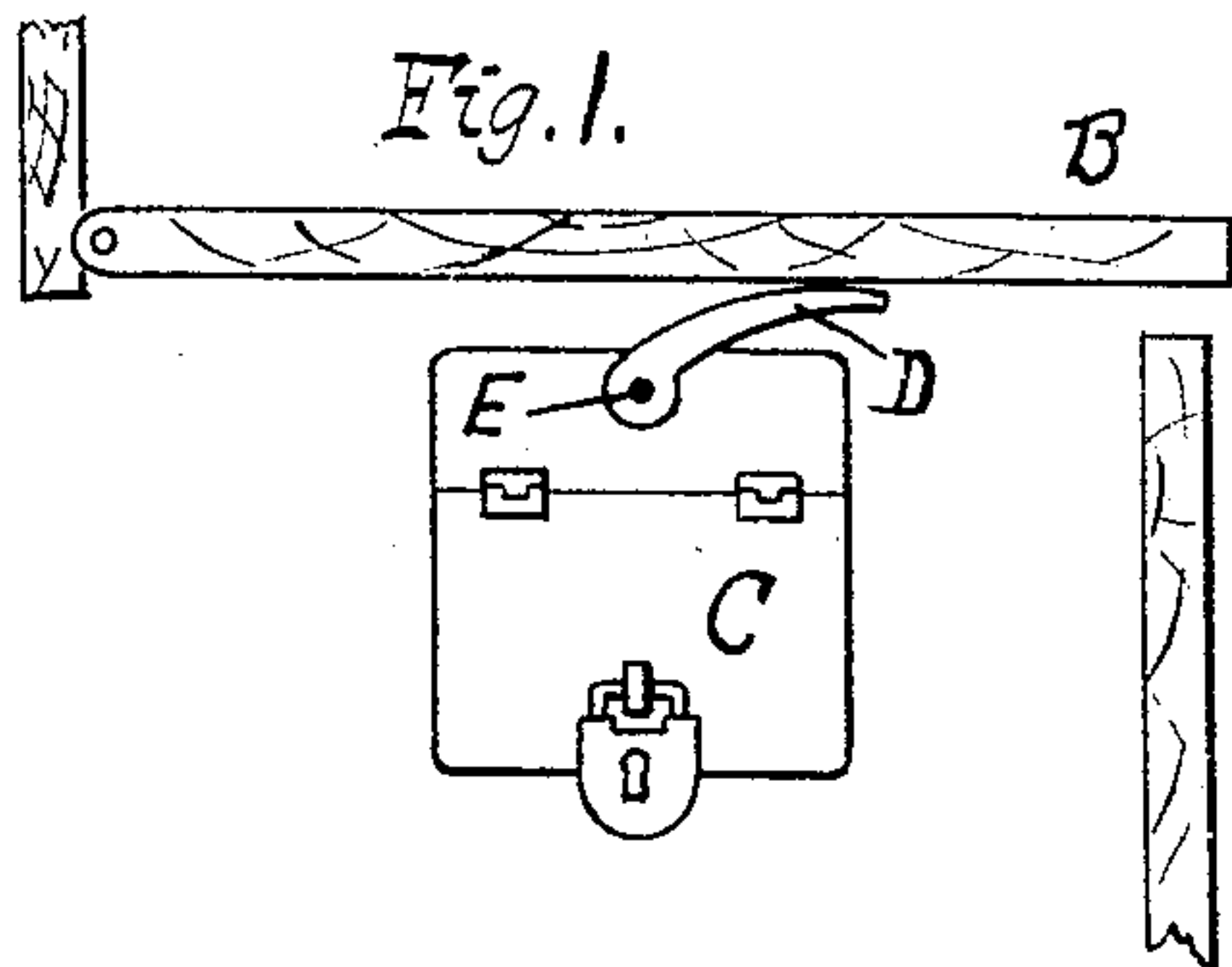


(No Model.)

T. H. FRENCH.  
REGISTER FOR CAR STEPS, &c.

No. 584,216.

Patented June 8. 1897.



Witnesses:

J. Landring  
A. J. Ivorra

Inventor  
T. Henry French  
by *[Signature]*  
Attorney.



# UNITED STATES PATENT OFFICE.

THOMAS HENRY FRENCH, OF NEW YORK, N. Y., ASSIGNOR TO WILLIAM H. MATTHEWS, OF SAME PLACE.

## REGISTER FOR CAR-STEPS, &c.

SPECIFICATION forming part of Letters Patent No. 584,216, dated June 8, 1897.

Application filed February 20, 1897. Serial No. 624,435. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HENRY FRENCH, of the city and State of New York, have invented certain new and useful Improvements in Registers for Car-Steps and the Like, of which the following is a description, referring to accompanying drawings, which form a part of this specification.

The object of the invention is to produce a registering apparatus which may stand the rough usage to which it must be subjected in railroad use, and which shall combine simplicity and economy of construction with reliability in operation and a minimum liability to derangement. The registering mechanism is operated by the depression or other movement of the step, seat, or other object to which it is attached in operative relation.

The nature of the invention is such that it will best be understood by a brief description of the accompanying drawings, which illustrate my present preferred embodiments of the invention.

Figure 1 shows the device, in its inclosing case, in operative position beneath a car-step. Fig. 2 is a face view of the same. Fig. 3 is a face view of a slightly different arrangement of the same general form. Figs. 4 and 5 are end view and inside detail view of the same. Fig. 6 is a cross-section of Fig. 5 on the plane 6 6, and Fig. 7 is a detail view of the operating-levers and ratchet of Figs. 1 and 2.

The step is shown in the several figures at B as slightly movable vertically at its outer edge. The casing of the register is shown at C, and the tappet or exposed lever which is operated by the step is shown at D.

I will first describe Figs. 1, 2, and 7. The casing C, when closed and locked, is preferably dustproof and is entirely closed, excepting the shaft or rod E, which extends through the casing and carries the tappet or arm D. The depression of the step, and consequently of arm D, merely turns the shaft E in its bearings, and therefore does not in any way prevent the exclusion of dust and dirt. Within the casing, as shown in Fig. 7 and in dotted lines in Fig. 2, the shaft E carries the lever-arm F, to the free end of which is pivoted the spring-pawl G. The spring H serves the double function of causing the pawl to engage

the ratchet J and of drawing the arm F to the right to the position shown in Fig. 7, thereby raising the arm D. This spring may even be relied upon to hold the step in its raised position, or other stronger springs may be used. When the step is depressed, the arm F is forced to the left of the position shown in Fig. 7, causing the pawl D to engage the next tooth of the ratchet J. When the step is released, the spring draws the arm F back to the position shown in Fig. 7, turning the ratchet one tooth forward. The ratchet is connected with decimal or other counting mechanism, (graphically indicated in Fig. 2,) the details being of any desired type. Preferably the decimal mechanism will register one fare for each two depressions of the step.

In Figs. 3, 4, 5, and 6 the form of the device is shown in which the shaft E' constitutes both the support for the decimal mechanism and the shaft for the tappet-arm D. In such case the step is provided with the bracket or other downward projection L, co-operating with the arm D. When the arm D is depressed, the shaft E' is rocked or turned slightly, causing the arm F and pawl G to turn, moving the ratchet J, as already described, by the retracting action of the spring H, when the step is again allowed to rise. It will be seen from Fig. 5 that the shaft E' may be carried in bearings M' M, one of which may be a closed cap, as shown. With this arrangement the box may be made not only airtight, but water-tight, there being no end play whatever where the shaft extends through its sleeve M'.

Having now described my invention in its most preferred forms, I claim and desire to secure by Letters Patent the following:

1. In combination with the movable step or body B, the actuating-shaft and registering mechanism, a casing through which the said shaft extends, and the two arms or levers D, F, both mounted on said shaft, one within the casing actuating the registering mechanism and one without the casing actuated by the movement of the said step or body B.

2. In combination, the registering mechanism inclosed in a casing and provided with a shaft extending through the said casing, and the two arms or levers, D and F, one without

and one within the said casing, constituting with the said shaft a bell-crank lever, a spring II, tending to turn the said bell-crank lever in one direction, and operating connections, 5 whereby the motion of the said bell-crank lever may actuate the registering mechanism, substantially as set forth.

3. In combination with the car-step or other movable body, B, the registering mechanism 5 therefor, provided with an actuating-ratchet, J, an operating-lever F therefor suitably ac-

tuated, a pawl G mounted upon the said lever F, and a spring H, simultaneously controlling the said pawl and the said arm or lever F, substantially as set forth. 15

In testimony whereof I have hereunto set my hand this 10th day of February, 1897.

THOMAS HENRY FRENCH.

Witnesses:

T. R. EDWARDS,  
JOHN O'MEARA.