

(No Model.)

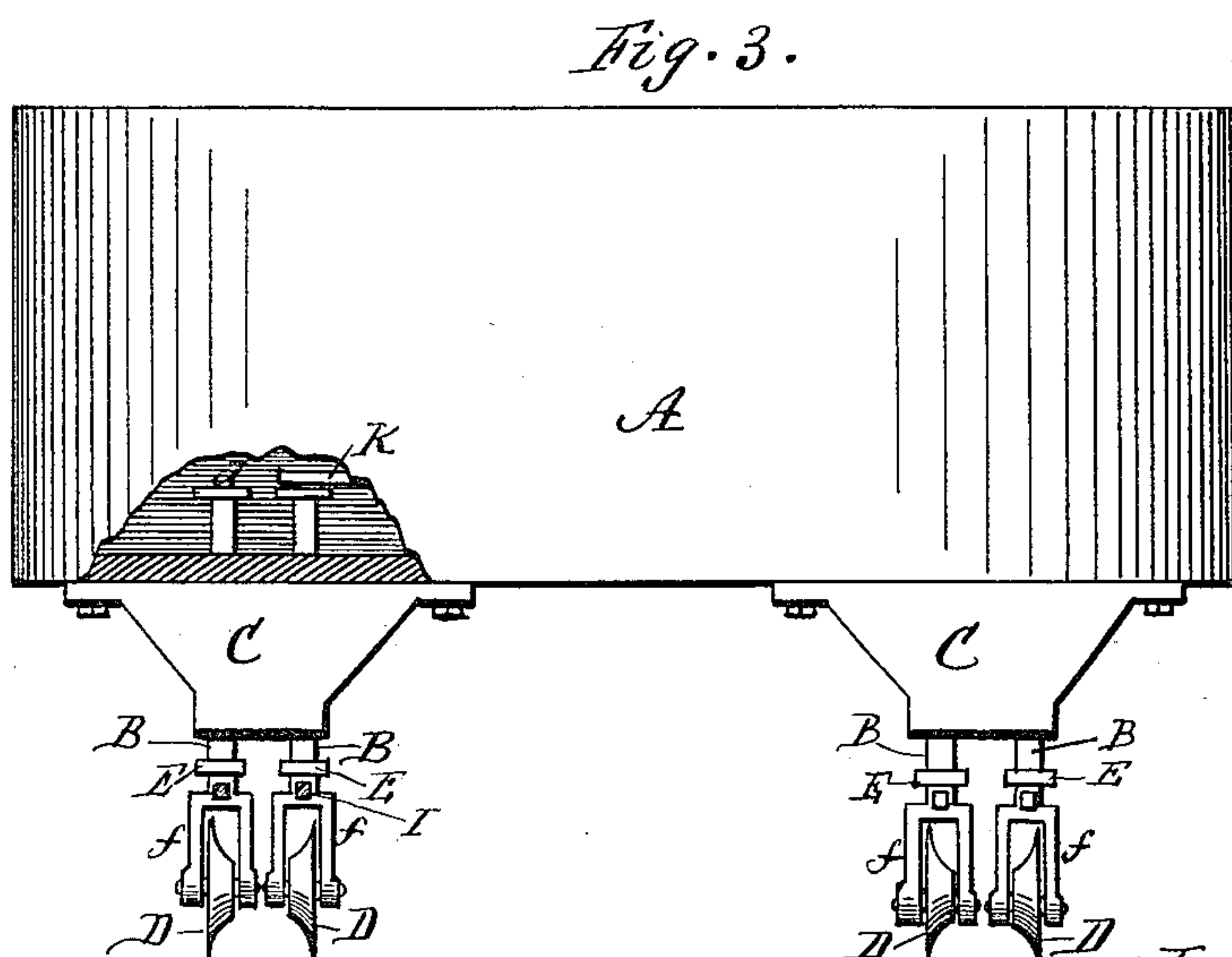
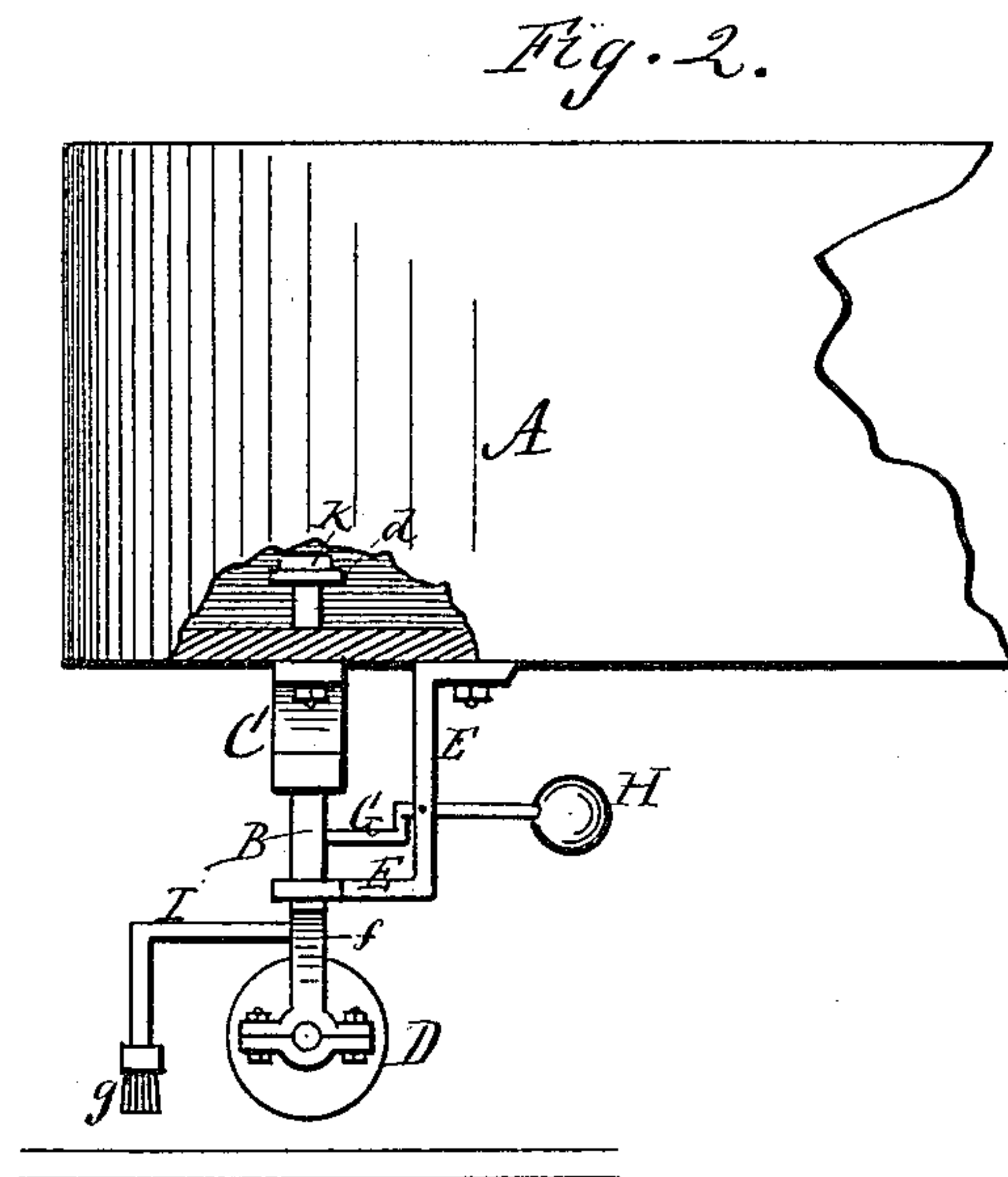
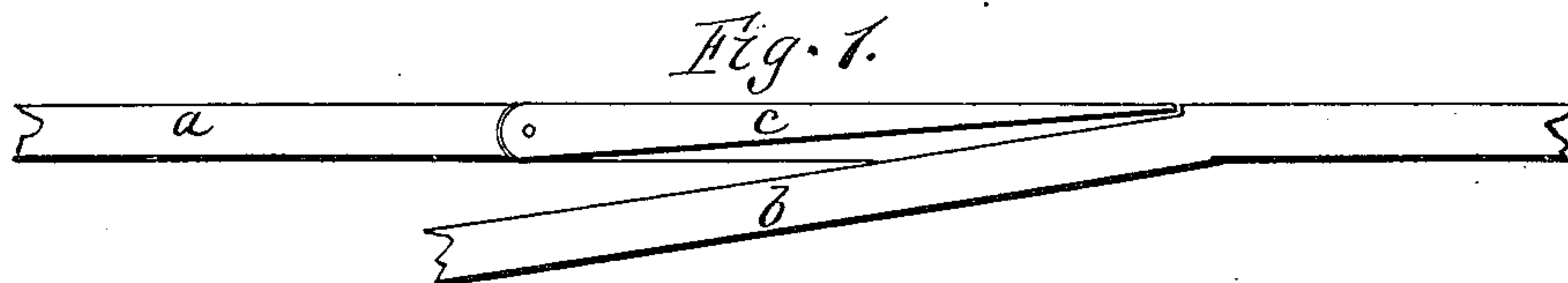
2 Sheets—Sheet 1.

H. P. MILLINGTON.

DEVICE FOR OPERATING STREET RAILWAY SWITCHES.

No. 362,770.

Patented May 10, 1887.



Attest.

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Austin S. Smith

Inventor.
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Atty.

(No Model.)

2 Sheets—Sheet 2.

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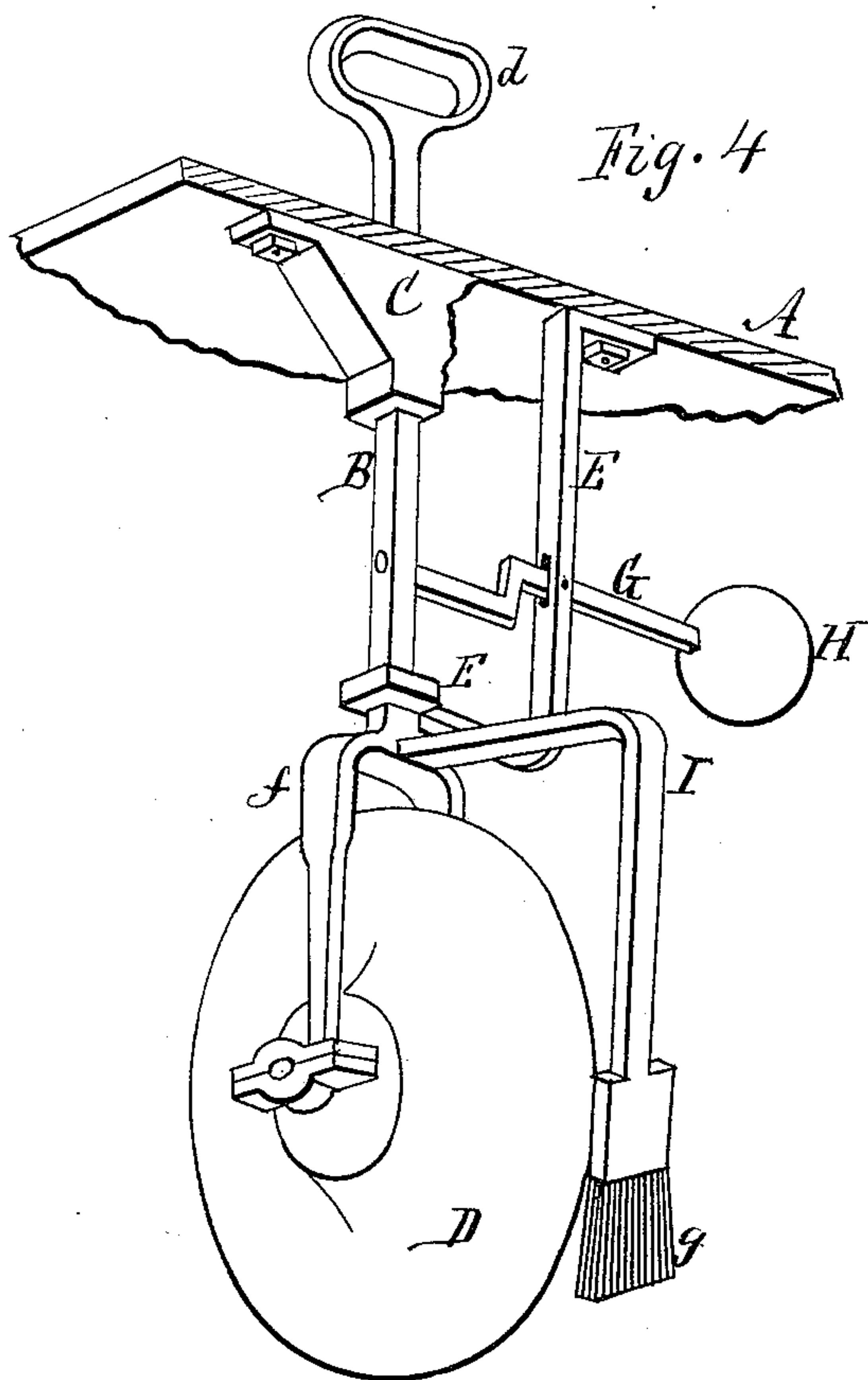


Fig. 4

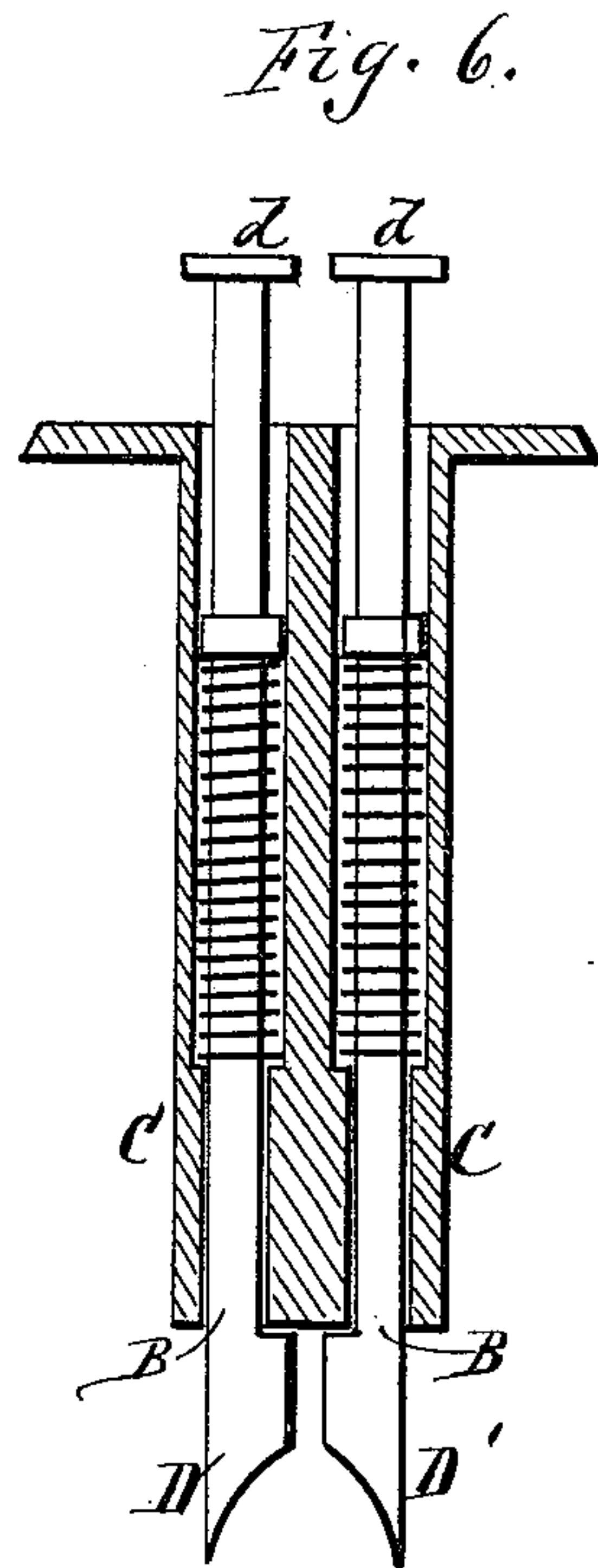


Fig. 6.

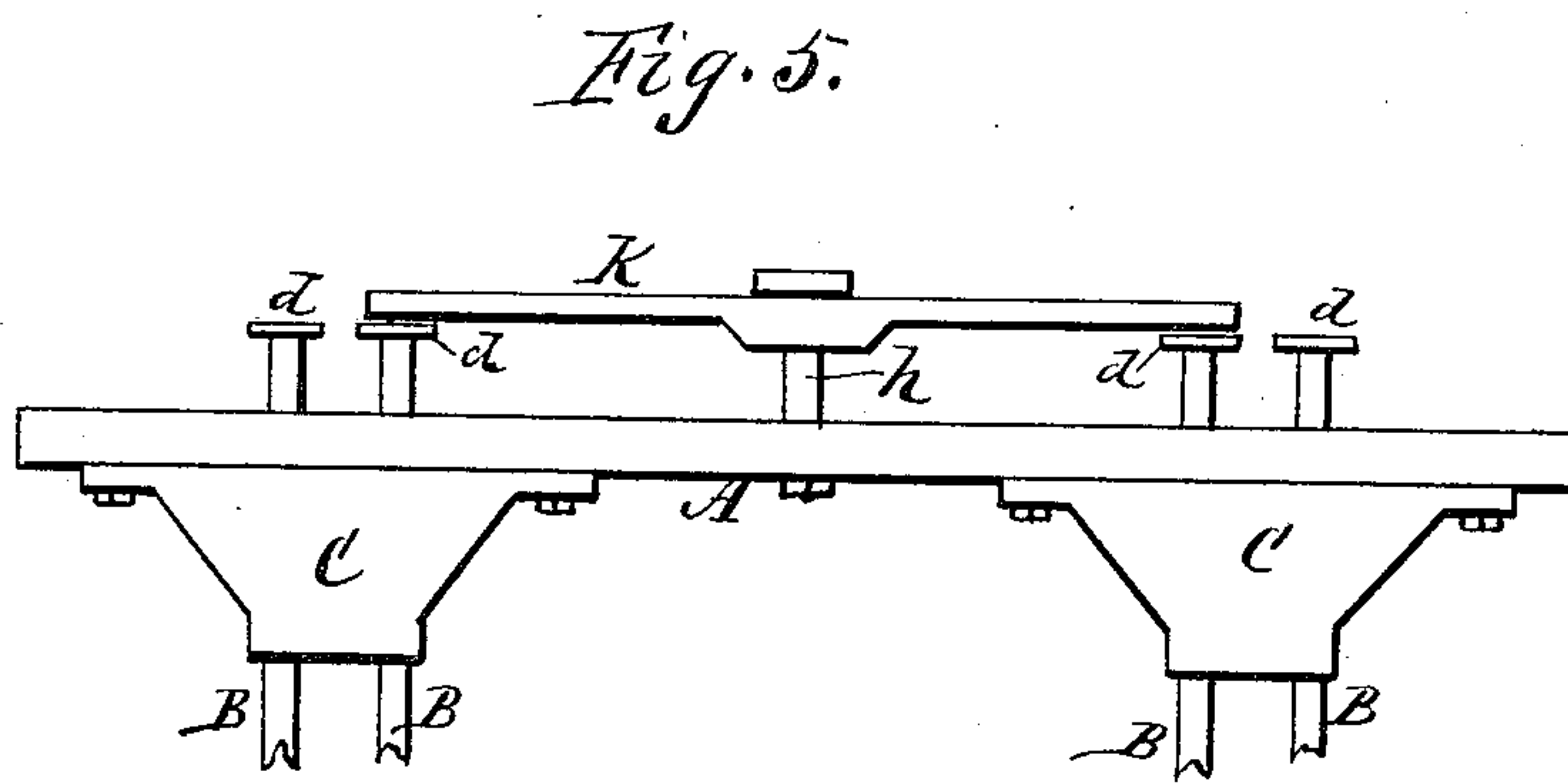


Fig. 5.

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UNITED STATES PATENT OFFICE.

HARRY P. MILLINGTON, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE
GUIDE MANUFACTURING COMPANY, OF SAME PLACE.

DEVICE FOR OPERATING STREET-RAILWAY SWITCHES.

SPECIFICATION forming part of Letters Patent No. 362,770, dated May 10, 1887.

Application filed June 7, 1886. Serial No. 204,293. (No model.)

To all whom it may concern:

Be it known that I, HARRY P. MILLINGTON, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Devices for Operating Street-Railway Switches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to that class of devices which are attached to the platform of a street-car and arranged to run in line with the rails, and are depressed by the foot of the driver and forced into the joint between the rail and the switch and made to push the latter to one side to come in alignment with the branch track.

The invention consists in the construction and arrangement of the parts, as hereinafter more fully described and definitely claimed.

In the drawings, Figure 1 is a plan view showing one main rail and one branch rail of a street-railway track and the switch or frog connected therewith. Fig. 2 is a side elevation of the platform of a street-car with my improvement attached. Fig. 3 is a front elevation of the same. Fig. 4 is a perspective view of a portion of the device. Fig. 5 is a front elevation of the upper portion of the apparatus. Fig. 6 is a sectional view showing a modification.

In the drawings, *a* shows one of the main rails of a street-railway, *b* one of the branch rails, and *c* the switch or frog. In order to change from one track to the other, the switch has to be thrown laterally, and the usual method is for the driver to reach down and insert the point of a car-hook in the joint between the rail and switch and push the latter to one side.

My improvement is as follows:

A is the platform of a street-car.

B B are two shanks that pass down loosely through the platform of the car and through bearings C C, and are provided at their lower ends either with sharp-edged conical wheels D D or, as shown in Fig. 6, with wedge-shaped feet D' D'. On the upper ends of the shanks are foot-pedals *d d*, on which the driver presses with his foot to force the shanks down, and

the shanks, where they pass through the bearings C C, are square in cross-section, so that they will not turn, but will hold the wheels in line with the rail. The wheels are pivoted in stirrups *f f* at the bottom of the shanks, as shown in Fig. 4. Two of these wheels are used on each side of the car, being placed close together, but each having an independent action of its own, and the beveled sides of the two wheels are placed toward each other, as shown. This is to enable the switch on either side of the track to be operated as necessity requires. Sometimes the switch is operated to the right and sometimes to the left, and these double wheels enable it to be thrown either way.

E is a supplementary bearing to each shank, through which the shank runs freely, said supplementary bearing being bolted to the under side of the platform.

G is a lever jointed to the shank above the eye of the supplementary bearing, and thence extending outward through a slot in the body of the bearing, being pivoted to said body and having a weight, H, attached at its outer end. This weight always throws the wheel up away from the rail and holds it in that position, except when the foot of the driver is pressed on the pedal sufficiently to overcome the weight and throw the wheel down to move the switch. In Fig. 6 spiral springs are shown to force the shank up.

I is a stiff arm projecting from the front of the shank B, then bent down in advance of the wheel, and carrying at its lower end a brush, *g*, which is depressed when the wheel is depressed and strikes into the joint or opening between the rail and switch to sweep out the opening and clear it of dirt, so that the wheel can enter and do its work. The brush can be made of wire or other material stiff enough to do the work. A scraper may be used in place of a brush, if desired.

K is a cross-bar mounted on a stud, *h*, on top of the platform, its ends extending over the ends of the foot-pedals of the two inner shanks, by which means the driver can depress both inner shanks at once, which is sometimes necessary to operate two switches at once on opposite sides of the track.

The fixtures above described for operating

the switch are attached to the car-platform some distance in advance of the car-wheels, so that in approaching the switch the wheels or points D come over the opening between the switch and rail before the car-wheels reach the switch, and by operating the fixtures at that time the switch will be thrown before the car-wheel strikes it.

Having described my invention, I claim—

- c 1. The combination, with a street-car platform, of devices arranged in pairs on opposite sides, consisting of shanks sliding freely through the platform, wedge-shaped wheels or feet at the bottom of the shanks with the bevel sides standing inward, and counter-weights or springs for throwing the shanks up, the whole arranged to operate in the manner and for the purpose specified.

2. In a device for operating the switch of a street-railway, the combination of shanks arranged in pairs on opposite sides of the platform, wedge-shaped wheels or feet at the bottom of the shanks, counter-weights or springs for throwing the shanks up, and a cross-bar on the platform with its ends resting over the tops of the two inner shanks, whereby both may be operated at once, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HARRY P. MILLINGTON.

Witnesses:

R. F. OSGOOD,
Z. L. DAVIS.