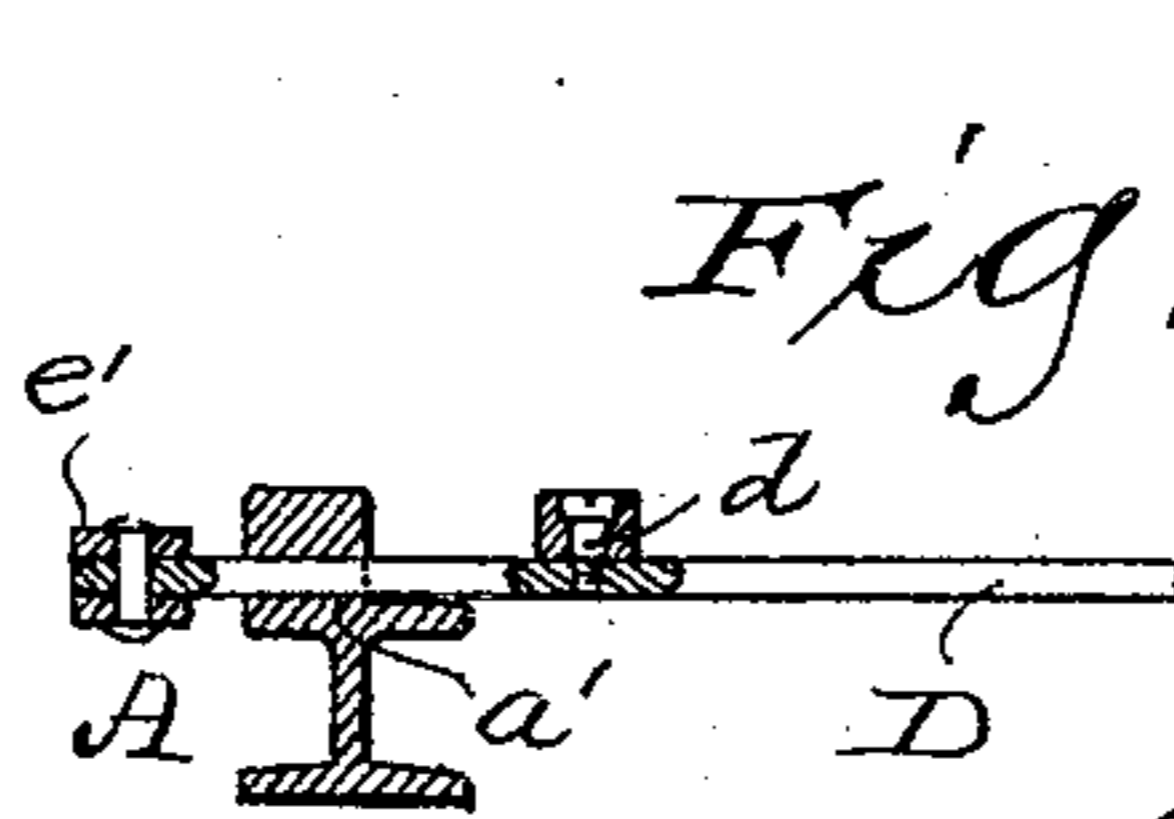
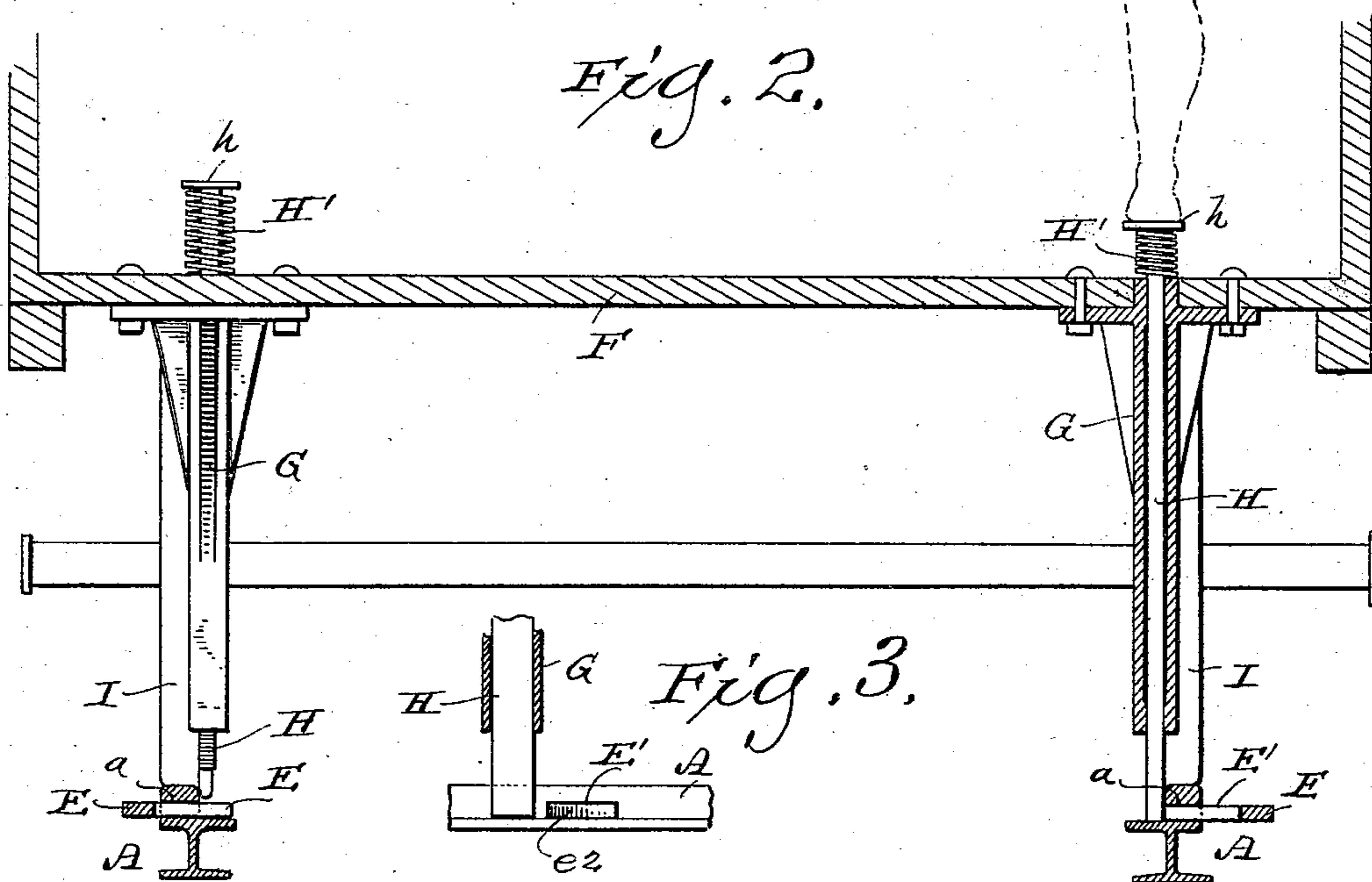
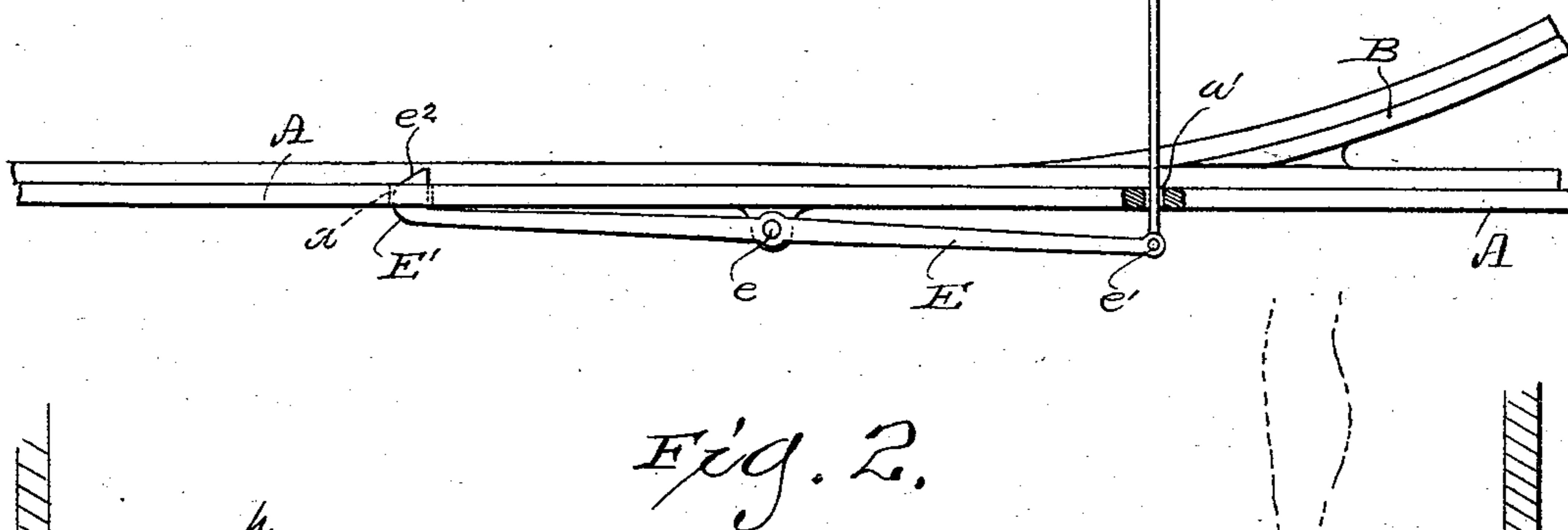
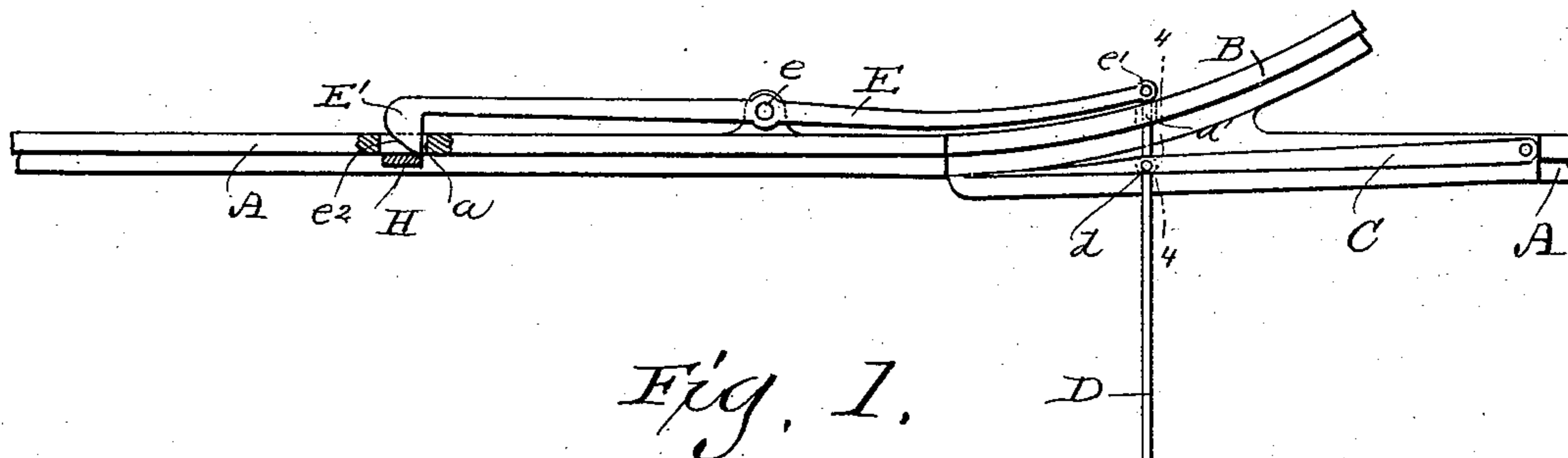


(No Model.)

G. SCHUMACHER.
SWITCH OPERATING DEVICE.

No. 484,250.

Patented Oct. 11, 1892.



Witnesses
Geo. W. Louny.
John E. Miles.

Fig. 4. Invented
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Attorneys

UNITED STATES PATENT OFFICE.

GERHARD SCHUMACHER, OF MILWAUKEE, WISCONSIN.

SWITCH-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 484,250, dated October 11, 1892.

Application filed March 16, 1892. Serial No. 425,177. (No model.)

To all whom it may concern:

Be it known that I, GERHARD SCHUMACHER, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Devices for Operating Railway-Switches; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to new and useful improvements in devices for operating the movable rails of railway-switches; and it consists in the matters hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a plan view of a switch constructed in accordance with my invention. Fig. 2 is a vertical cross-section of the same, illustrating in section the body of a car provided with my improved appliance for engaging with the levers which throw the movable switch-rails. Fig. 3 is an enlarged detail elevation of a portion of the same. Fig. 4 is a vertical cross-section of a portion of the track and switch rails, said section being taken on line 4 4 of Fig. 1.

In said drawings, A A represent the main-track rails, and B B the rails of a side or branch track leading off from the main track.

The construction illustrated in the drawings is that commonly employed in the construction of switches for street-railway tracks, in which a movable switch-point C is pivoted to one of the main-track rails and is arranged to be moved into a position to guide the wheels of a car past the side or branch track or to cause the car to run off from the main track and onto the side or branch track.

I provide a transversely-arranged longitudinally-movable rod D, which is pivotally engaged at *d*, with the free end of the movable switch point or tongue C, said rod being passed through suitable apertures *a' a'* in the webs of the main-track rails A A, so as to project somewhat beyond the outer surfaces of said rails at both sides of the main track. Levers E E are pivotally secured at the outside of the two track-rails A A, as at *e e*, and one end of each of said levers is pivoted to one of the ends of the transverse rod D, as at *e' e'*, the free end of each of said levers being turned inwardly, as shown at E', and

passed through a slot *a* in the main-track rail A, and terminating in a wedge-shaped plate *e'*.

The cars for use upon tracks provided with my improved switch-operating device are provided with depending hangers G G, located upon opposite sides of the platforms of the cars, said hangers being each provided with a central bore through which a vertically-movable bar H is passed, said bar being provided at its top with a pressure-plate *h*, by means of which the bar may be depressed by pressure applied thereto by the foot of the driver or other person upon the platform. A spring H' is arranged so as to normally hold each of the bars H H in its elevated position.

The operation of my improved device is as follows: When a car approaches the junction of the two tracks and it is desired to set the switch so as to guide the car onto the side track, the person upon the front platform of the car applies pressure to the bar H upon the side of the platform toward which it is desired to go, so as to depress said bar and cause it to engage at its lower end with the inwardly-projecting inclined surface of the wedge-shaped plate E' of the lever E, which is located at that side of the track, so as to vibrate the free end of said lever outwardly and move the end which is connected with the switch-bar inwardly. This movement of the lever and connected parts will cause the switch point or tongue to be moved into the position illustrated in Fig. 1 in an obvious manner, so as to guide the car onto the side track B. If now another car approaches the switch and it is desired to run said latter car straight ahead upon the main track, the person upon the front platform may by depressing the bar H upon the other side of the platform cause the same to engage with the other one of the levers E, so as to move the switch point or tongue in the opposite direction from that before described, thus enabling the car to proceed past the switch upon the main track. Similarly, when a car approaches the switch in the dark and it is impossible to see which way said switch is set the driver or other person on the platform may insure the proper operation of the switch by simply depressing the bar H at the side of the car, which will

engage with the one of the levers E E to adjust the switch-point in the desired direction, when, if the switch is not already in the desired position, the lever E will be operated so
 5 as to effect the desired adjustment, and if the switch has already been so adjusted no movement of the parts will be produced.

By my improvements the switch point or tongue may be set to the desired position as
 10 the car approaches the switch without stopping the car and without any exertion on the part of the driver or other person on the platform other than to depress the desired one of the bars H.

15 While I have shown and described my improvements as applied to the rails of a street-railway track, yet I would have it understood that said improvements are equally applicable to the rails of railroad-tracks for steam-cars,
 20 and I therefore do not desire to be limited to the exact form of construction and arrangement of parts shown in the drawings and herein described.

Having thus described my invention, what
 25 I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the track-rails and the movable switch-tongue of a railway-track, of a transversely-arranged longitudinally-
 30 movable rod engaged with said movable switch-tongue and pivoted levers extending longitudinally adjacent to the track-rails and arranged to vibrate horizontally, each of said levers being pivotally engaged at one end
 35 with one end of said transverse rod and provided at its free end with a laterally-oblique surface adapted for engagement with a depending device upon a car, whereby said levers may be vibrated into a position to shift
 40 said transverse rod and the connected switch-tongue, substantially as described.

2. The combination, with the main-track rails and the movable switch-tongue of a railway-track, of a transversely-arranged longi-

tudinally-movable rod pivotally engaged with
 45 said movable switch-tongue and extending outside of the track-rails upon opposite sides of the track, levers extending lengthwise of the track and pivotally supported upon opposite sides thereof and arranged to vibrate
 50 horizontally, each of said levers being pivotally engaged at one end with one end of the transverse rod, suitable slots in the webs of the track-rails, and inwardly-extending wedge-shaped projections upon the free ends of said
 55 levers, arranged to project through said slots and adapted for engagement with a suitable depending device upon a car, whereby said lever may be vibrated to shift the transverse rod and the connected switch-tongue, sub-
 60 stantially as described.

3. The combination, with the main-track rails and the movable switch-tongue of a railway-track, of a transversely-arranged longitudinally-movable rod operatively engaged
 65 with the said movable switch-tongue, horizontal levers located upon opposite sides of the track and extending longitudinally thereof, each of said levers being pivotally supported at its central portion and provided at its free
 70 end with an inclined surface and having operative engagement at its other end with said transverse rod, and one or more depending hangers located upon a car and each carrying a vertically-movable bar adapted to be moved
 75 into a position to be engaged with the inclined surface on one of said levers to vibrate said lever and the connected switch-tongue, substantially as described.

In testimony that I claim the foregoing I
 80 have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

GERHARD SCHUMACHER.

Witnesses:

JOHN E. WILES,
 H. G. UNDERWOOD.