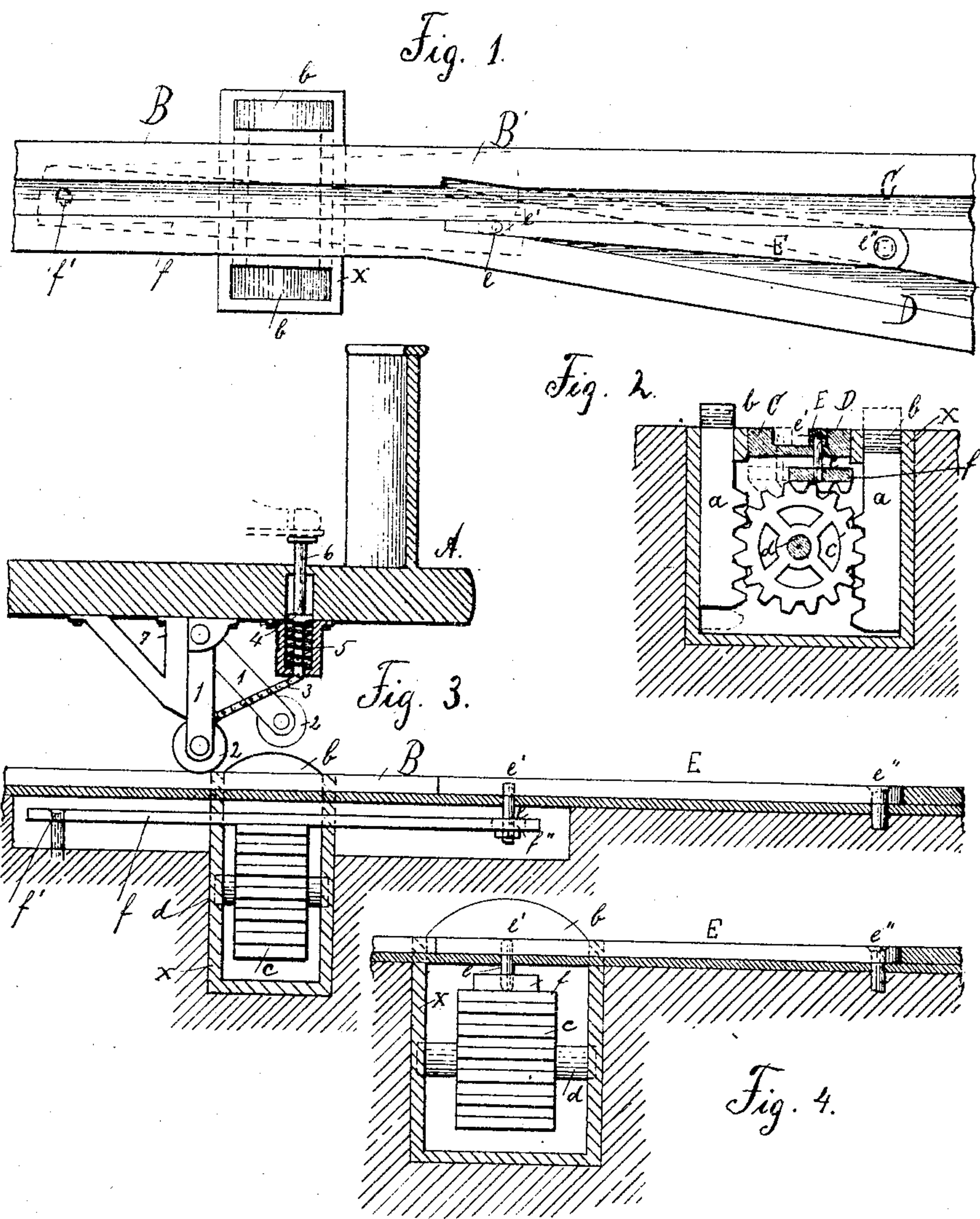


No. 785,780.

PATENTED MAR. 28, 1905.

F. UHTBROCK.
RAILWAY SWITCH.
APPLICATION FILED MAY 20, 1904.



Frederick Uhtbrock.

INVENTOR

WITNESSES:

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FREDERICK UHTBROCK, OF NEW YORK, N. Y.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 785,780, dated March 28, 1905.

Application filed May 20, 1904. Serial No. 208,973.

To all whom it may concern:

Be it known that I, FREDERICK UHTBROCK, a subject of the German Emperor, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification.

My invention pertains to railway-switches, and more particularly to those which are operated by mechanism.

In a general way the mechanism of my invention may be said to comprise means which are mounted on a car and adapted to depress at the will of an operator either one of the two segmentary-headed vertical cogged bars slidably affixed in a box and set into a cog-wheel, which again, by means of a cogged arm or plate connected with a switch-point, moves the latter in a predetermined direction in order to shunt the beforementioned-car onto a track on which it may be intended to run.

My invention as thus briefly described involves the use of simple elements, which being but few in number and connected and operated by direct and simple means forms a device of which simple and prompt action is a marked and pronounced characteristic.

My invention is designed for use in positions where complex and intricate mechanism are apt to become disorganized and fail of their purposed operation and where as much as possible any obstacle to the traffic shall be avoided.

It may therefore be said that the object of my invention is to provide a railway-switch which shall be simple in form and reliable in operation and sufficiently durable to withstand the effects of long-continued use under such conditions as attend the latter.

In the drawings, Figure 1 is a plan view of a part of my invention combined with railway-tracks and with a switch-point which is adapted to shunt rolling-stock to either of said tracks. Fig. 2 is a vertical cross-section of Fig. 1. Fig. 3 is a central vertical longitudinal section of Fig. 1 and a part of a railway-car on which certain parts of my invention are mounted. Fig. 4 is another central vertical longitudinal section of Fig. 1 modified.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring to the drawings, A designates a car which is mounted on a railway-track B, which divides at B' into separate tracks C and D. To the floor of the car A are fulcrumed two tappets 1 1. At the lower end of each tappet 1 1 a small wheel 2 2 is attached, chains 3 3 being fastened to the lower parts of tappets 1 1 at one end and to plates 4 4, movable in cylinders fixed to the under side of the floor of the car, on the other end. Helical springs 5 5, which surround each chain 3 and impinge against the upper side of the bottom of the cylinders and the under sides of the plate 4 4, respectively, elevate the lower ends of tappets 1 1 by means of the chains 3 3. Bolts 6 6, attached on top of the plates 4 4 from the upper side of the floor of the car through holes therein, may be severally depressed, thus lowering plates 4 4, chains 3 3, and the farther ends of the tappets 1 1. Strong supports 7 7, fastened to the floor of the car, stop the movement of the lowered tappets 1 1 and hold the same in a vertical position.

Between the rails of track B and below the plane of the latter is fixed a box *x*. In this box *x* is affixed at right angles to the plane and direction of the track B a cog-wheel C, balancing on an axis *d*. Two cogged bars *a a* and segmentary heads *b b*, partially surmounting the plane of track B, are set vertically slidably into the box *x*, pending in the cogs of cog-wheel *c*. A slotted arm *f*, with the farther end pivoted at *f'*, rests with its cogs on top of cog-wheel *c*, being connected, through its slot *f''*, by a stud *e* with switch-point E in *e'*. The farther end of switch-point E is pivoted in *e''* in a well-known manner.

In the modification shown in Fig. 4 the plate *f* is put in the place of arm *f*. The whole box *x*, with cog-wheel *c* and bars *a a*, is moved right underneath the point B' of track B, thus requiring larger segmentary heads *b b*.

The operation and advantages of my invention will be readily understood and appreciated by those skilled in the art to which it appertains. It being presumed that the car A is on a track B and approaching the switch-point E, one of the tappets 1 1 may be lowered—as, for instance, by a person who is on the car A and presses on one of the bolts 6 6. The tappet thus lowered and held in position by

support 7 will by means of the wheel 2 engage the segmentary head *b* of one of the cogged bars *a a*, thus depressing the latter. In moving down the cogs of the depressed bar
 5 *a* will act on the wheel *c*, which by means of the cogged arm *f* and its connection *e'* with switch-point E will place the latter in position to shunt the car A to either the track C or D, according to which tappet 1 has been
 10 depressed. It may be noted that if the right-hand tappet be lowered the switch-point E will go to the right and the car A be shunted to the left-hand track, and if the left-hand tappet 1 be lowered the switch-point E will go
 15 to the left and the car A be shunted to the right-hand track.

I do not desire to be understood as limiting myself to the details of construction and arrangements as herein described and illustrated,
 20 as it is manifest that variations and modifications may be made in the features of construction and arrangement in the adaptation of the device to various conditions of use without departing from the spirit and scope of my
 5 invention and improvements. I therefore reserve the right to all such variation and modification as properly fall within the scope of my invention and the terms of the following claims.

30 Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In railway-switch-operating mechanism:

a switch-point, connected with the switch-point a cogged arm or plate operated by a cog-wheel engaged by cogged bars, cogged bars
 35 with segmentary heads engageable by tappets, said tappets mounted on the car, substantially as described.

2. In railway-switch-operating mechanism: a switch-point, connected with the switch-
 40 point a cogged arm or plate engaged by a cog-wheel, said cog-wheel balancing on an axis, two cogged bars vertically slidable in a box and set into the cogs of the cog-wheel, with segmentary heads, tappets mounted on the
 45 car and severally engageable with the segmentary heads of the cogged bars, all substantially as described.

3. In railway-switch-operating mechanism: a switch-point, connected with the switch-
 50 point a cogged arm or plate, a box fixed below the track, in this box balancing on an axis a cog-wheel standing at right angles to the plane and direction of the track, in engagement with said cog-wheel two vertical
 55 slidable cogged bars with segmentary heads engageable by tappets mounted on the car, all substantially as described.

In testimony whereof I have signed my name in the presence of the subscribing witnesses. 60

FREDERICK UHTBROCK.

Witnesses:

FRED. STAMM,
 E. BIEGEN.