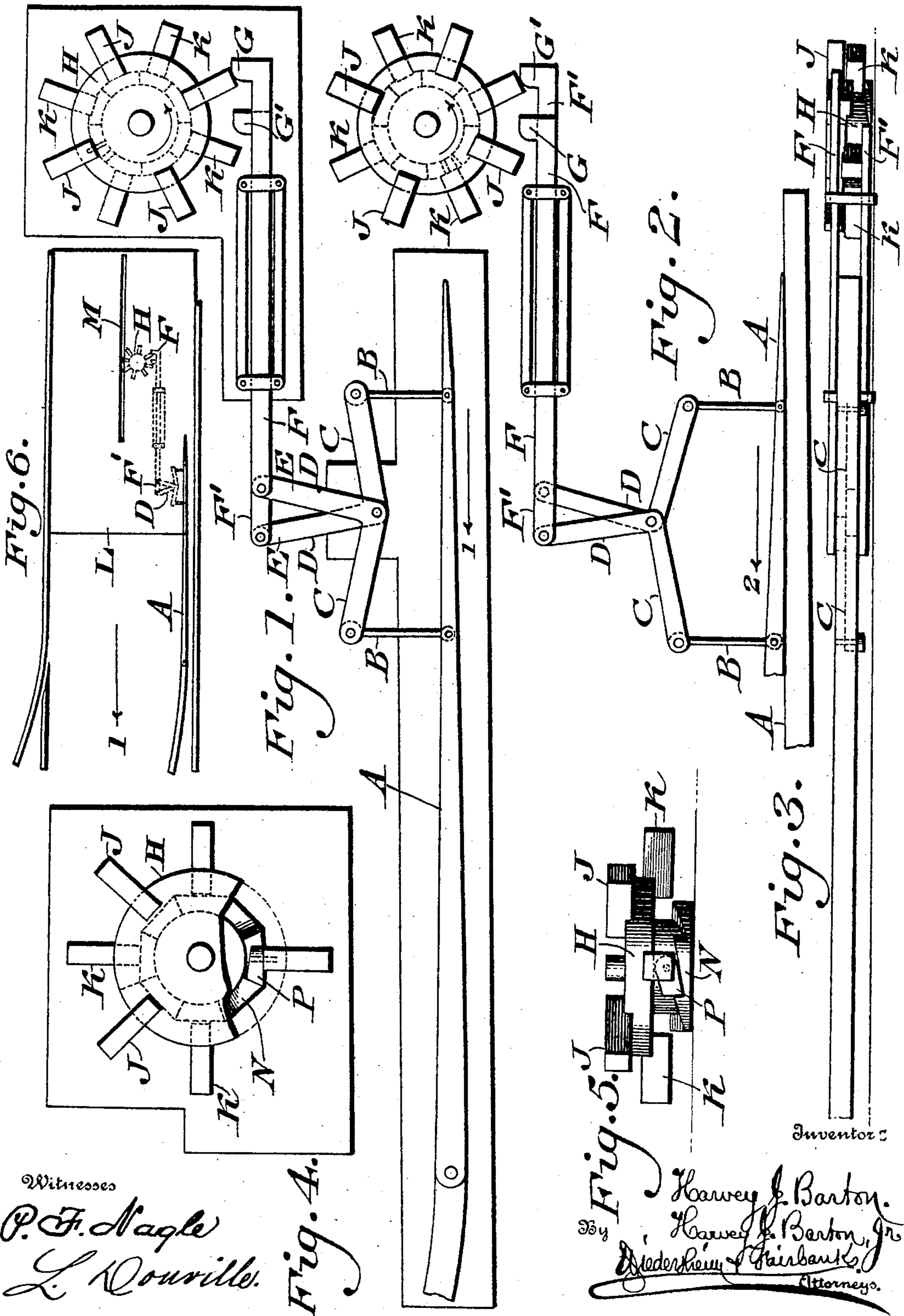


H. J. BARTON & H. J. BARTON, JR.

SWITCH.

APPLICATION FILED DEC. 7, 1904.



Witnesses
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Fig. 4.

Fig. 5.
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UNITED STATES PATENT OFFICE.

HARVEY J. BARTON AND HARVEY J. BARTON, JR., OF PHILADELPHIA,
PENNSYLVANIA.

SWITCH.

No. 795,475.

Specification of Letters Patent.

Patented July 25, 1905.

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To all whom it may concern:

Be it known that we, HARVEY J. BARTON and HARVEY J. BARTON, JR., citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Switch, of which the following is a specification.

Our invention consists of a switch having novel mechanism for operating the same by a member of a car, the construction and operation being hereinafter described and the novel features thereof pointed out in the claims.

Figure 1 represents a top or plan view of a switch embodying our invention. Fig. 2 represents a similar view, certain parts being in different positions from that shown in Fig. 1. Fig. 3 represents a side elevation thereof. Fig. 4 represents a top or plan view, partly broken away, of a rotating wheel and its adjuncts constituting part of said operating mechanism, on an enlarged scale. Fig. 5 represents a side elevation thereof. Fig. 6 represents a top or plan view, on a reduced scale.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a switch-piece which in general respects is of usual construction and to a forward end of which are pivotally connected the links B, which are also pivotally connected with the limbs C on the elbow-levers D, which have a common axis, the other limbs E being connected, respectively, with the sliding bars F F', said elbow-levers and bars being supported on the road-bed and said bars extending in the longitudinal direction of the track. On the ends of said bars opposite to the connection of the elbow-levers are the laterally-extending toes or shoulders G G', it being noticed that one of said bars is located above the other, and the shoulders are correspondingly located.

H designates a rotary head or wheel which is provided with the radially-extending fingers J K, it being noticed that said fingers are in different vertical planes, whereby the fingers J are adapted to engage with the shoulder G of the bar F and the fingers K with the shoulder G' of the bar F'.

L designates a plate for covering the switch-operating mechanism, the same having therein the longitudinally-extending slot M, through which a foot on a car is adapted

to pass, so as to engage with the head or wheel H.

The operation is as follows: When the switch is open for the main line, as shown in Figs. 1 and 6, the cars running in the direction of the arrow 1 in said figures, the mechanism will not be operated. Should it, however, be desired to run the car to a siding or turn-off, the motorman or driver of the car operates the foot thereon, so that the same passes through the slot M and engages a finger that is in its path. This rotates the head H, whereby one of the fingers K engages with the shoulder G' of the bar F' and causes the operation of the elbow-levers D from the position shown in Fig. 1 to that shown in Fig. 2, whereby the switch-piece is brought into contact with the adjacent side rail and the switch is accordingly opened for the siding or turn-off, as shown at arrow 2, Fig. 2. The foot then returns or is returned to its normal position.

Should it be desired to set the switch for the main line or track, the coming car has its foot lowered, whereby the wheel H is engaged, it now being noticed that the bar F, shifted by the previous operation—say to the left—has its shoulder G in the path of an upper finger J, whereby as the wheel rotates said finger engages with said shoulder and shifts said bar F to the right, while the bar F' shifts to the left. This changes the position of the elbow-levers D from that shown in Fig. 2 to that shown in Figs. 1 and 6 when the switch is opened for the main line or track.

In order to prevent improper rotation of the head H or rotation in reverse direction, there is secured beneath the same the stationary ratchet N, with which engages the gravitating dog-detent P, which hangs freely from the under side of said head, said dog riding freely over said ratchet when said wheel is rotated in the proper direction, but engaging with a tooth of said ratchet should attempt be made to reverse said head, the effect of which is evident.

In the swinging or pivotal movements of the elbow-levers D the links B operate uniformly in either pushing or pulling the switch-piece, as its direction may be.

It will be evident that the switch-operating mechanism is of simple and inexpensive construction, and being composed of few

parts it may be conveniently placed in position, easily operated, and readily kept in repair.

Various changes may be made in the details of construction shown without departing from the general spirit of our invention, and we do not, therefore, desire to be limited in each case to the same.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a switch, a switch-piece, movable bars, levers intermediate of said bars and piece and a rotating device adapted to impart sliding motions to said bars, whereby by means of said levers, motions may be imparted in opposite directions to the switch-piece.

2. In a switch, a switch-piece, levers connected therewith, sliding bars respectively connected with said levers, and a rotating head having means thereon adapted to separately engage said bars.

3. In a switch, a switch-piece, levers connected therewith, sliding bars respectively connected with said levers, a rotating head having projections thereon in different planes, and members on said bars with which said projections are adapted respectively to engage.

4. In a switch, operating mechanism therefor, consisting of levers connected with the switch-piece thereof, independent sliding bars connected with said levers, and a rotating head having means thereon adapted to engage either of said bars.

5. In a switch, a rotating head, a gravitating detent mounted on the latter and pendent therefrom and a stationary ratchet with either member of which said detent is adapted to engage.

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Witnesses:

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