

No. 779,695.

PATENTED JAN. 10, 1905.

H. ELLIOT.  
RAILWAY SWITCH.  
APPLICATION FILED OCT. 31, 1904.

FIG. I.

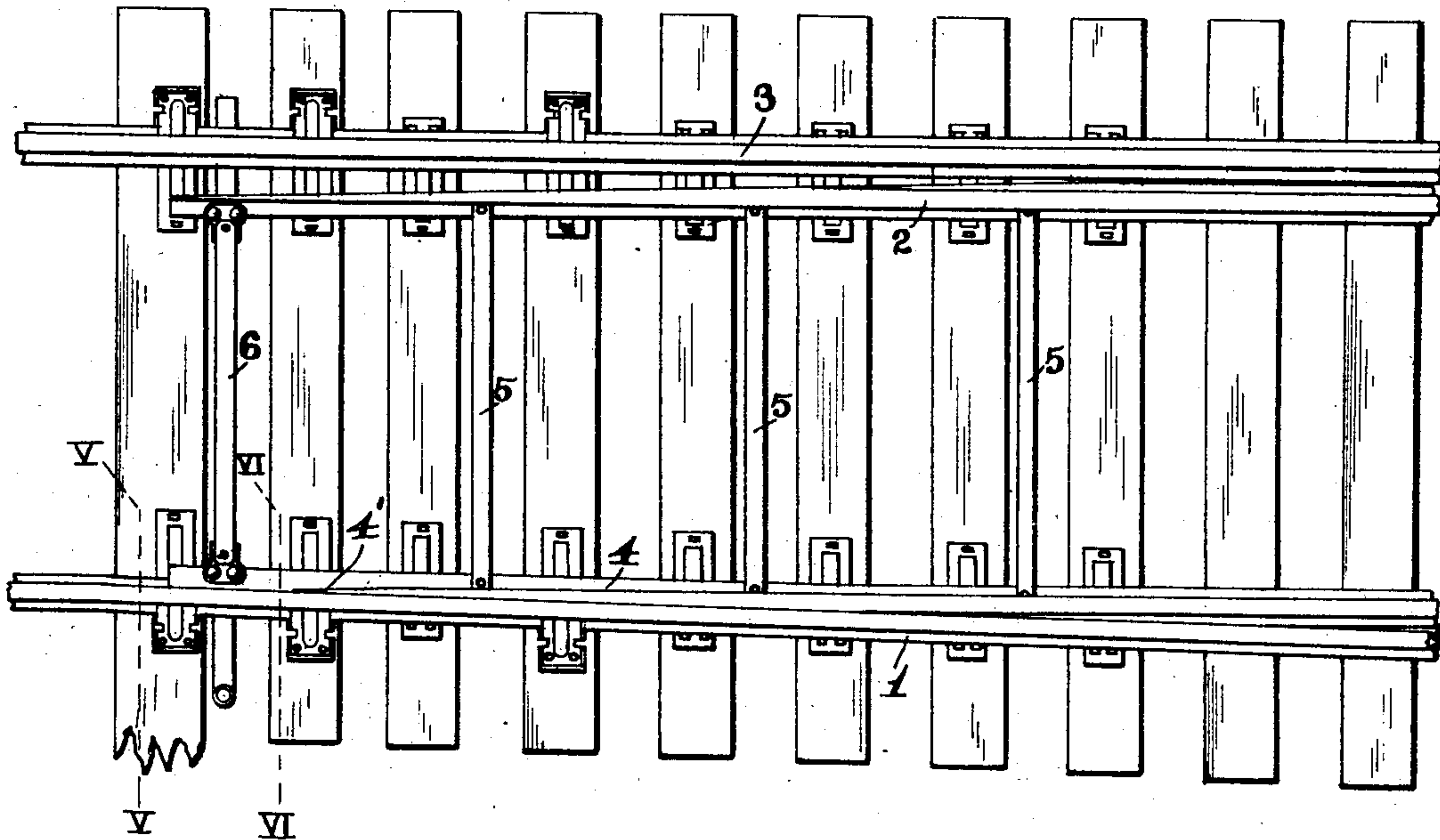


FIG. II.

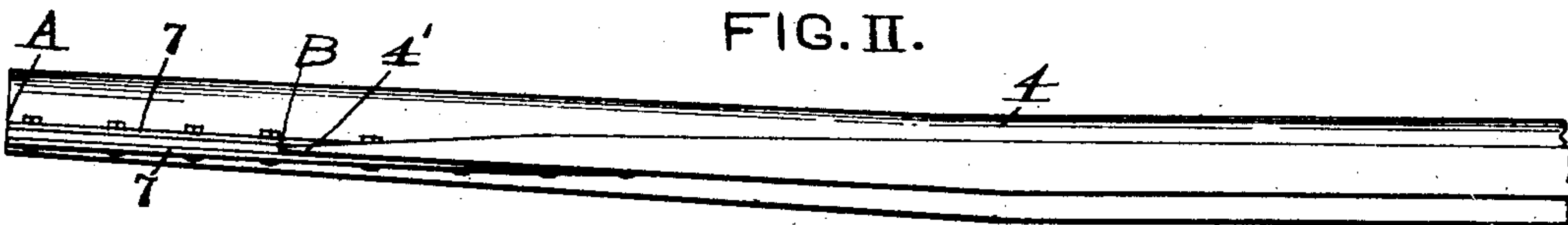


FIG. III.

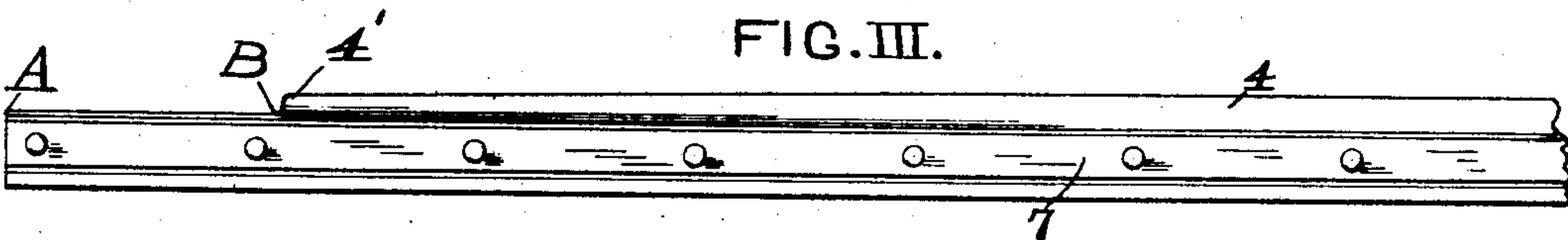


FIG. IV.

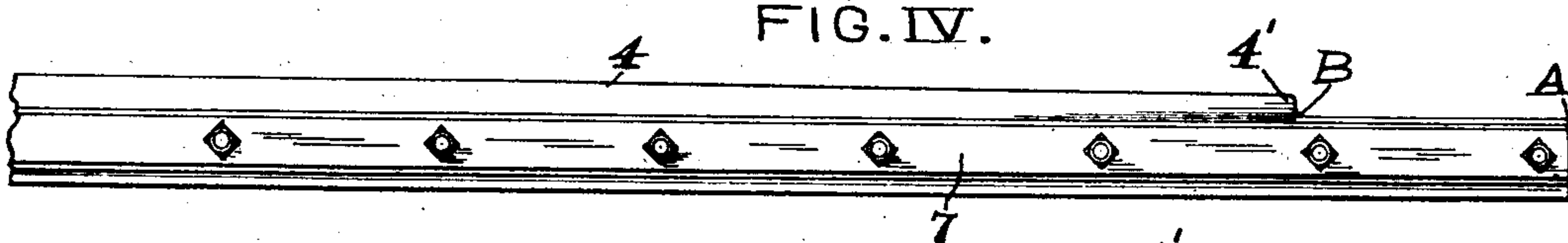
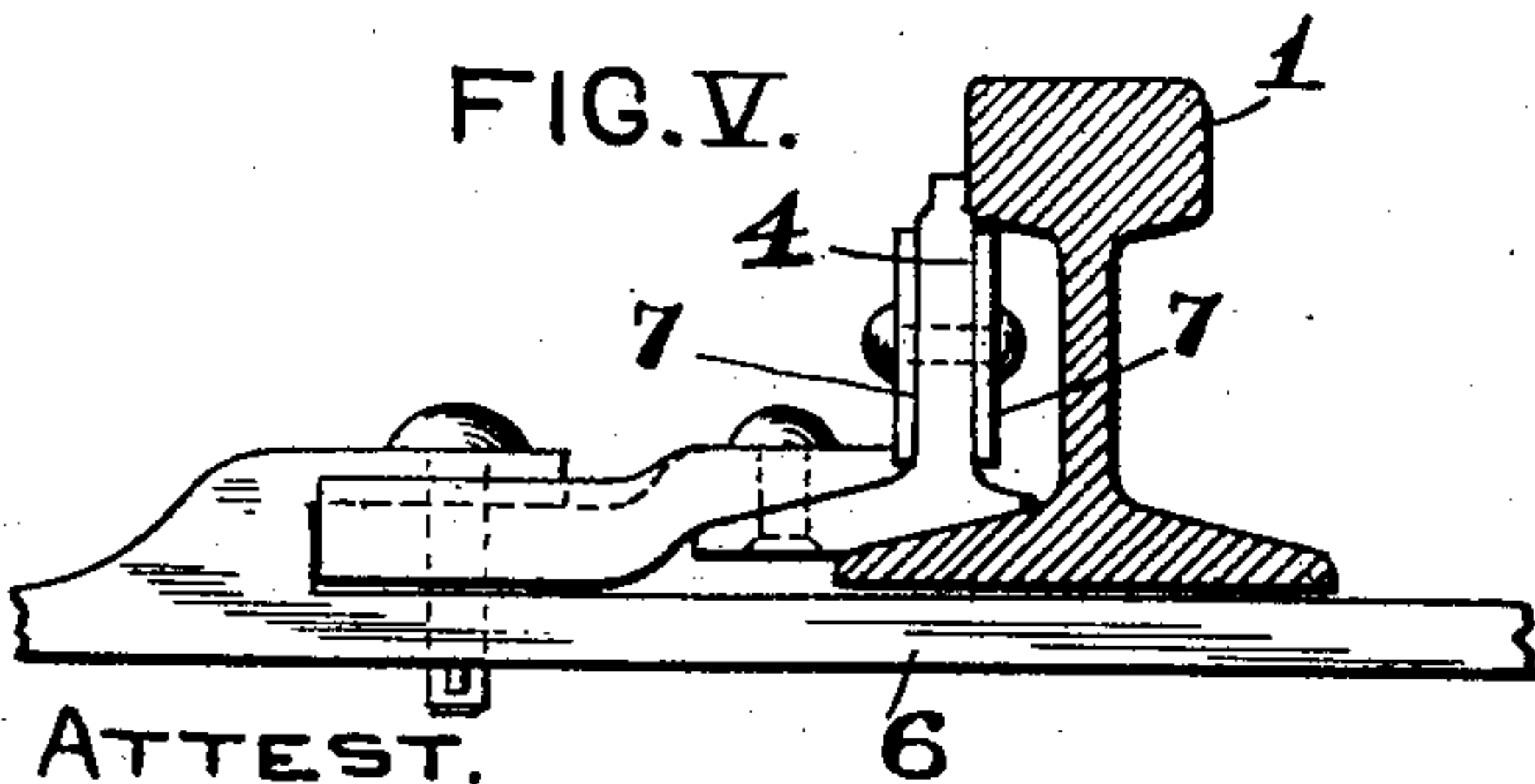


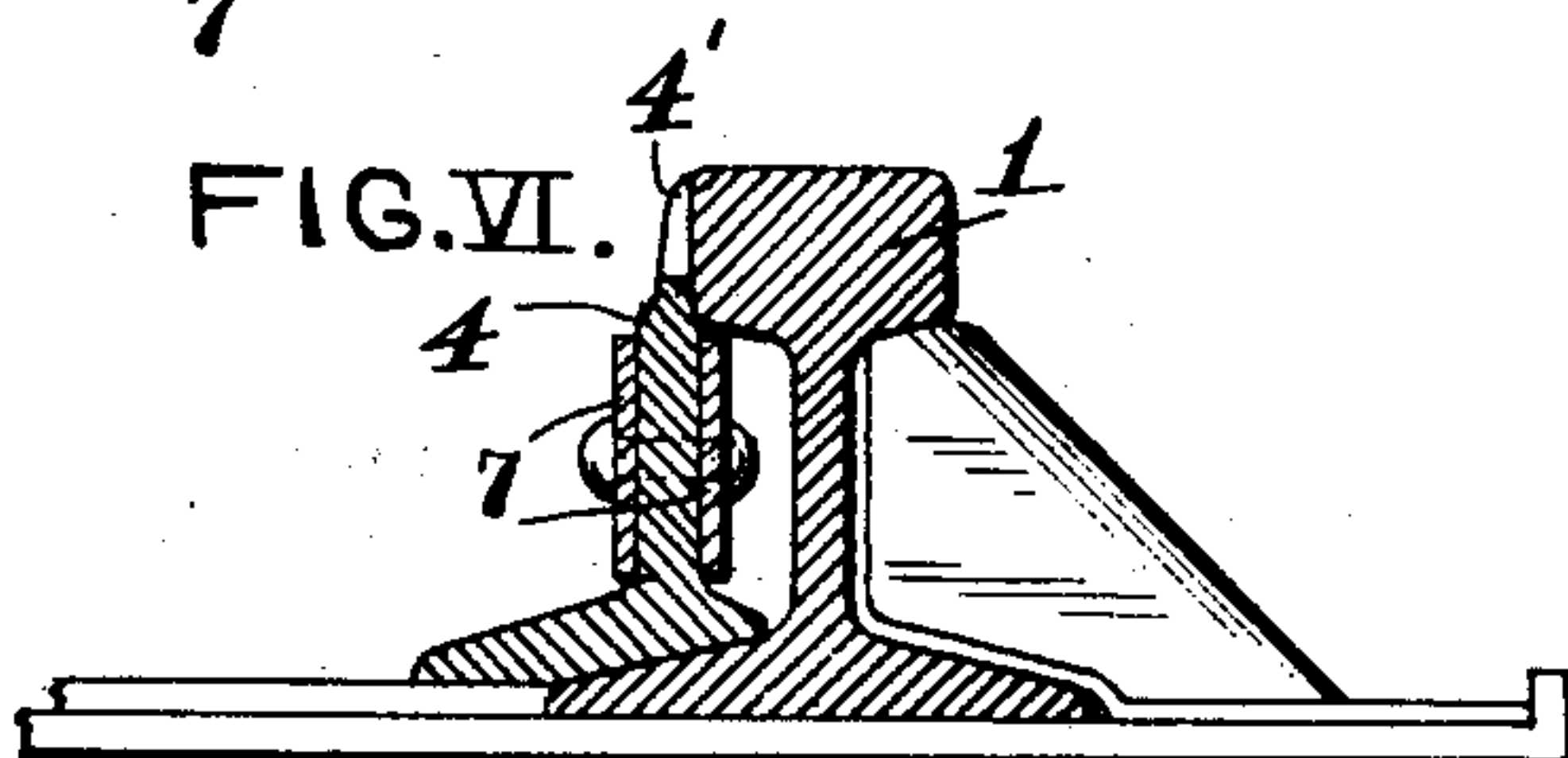
FIG. V.



ATTEST.

H. J. Fletcher.  
Blanche Hogan.

FIG. VI.



INVENTOR,

HENRY ELLIOT.

BY.

Wm. B. Knight  
ATTY'S.



# UNITED STATES PATENT OFFICE.

HENRY ELLIOT, OF ST. LOUIS, MISSOURI.

## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 779,695, dated January 10, 1905.

Application filed October 31, 1904. Serial No. 230,724.

*To all whom it may concern:*

Be it known that I, HENRY ELLIOT, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Railway-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a main-line switch for single-track railways of that character wherein the switch is necessarily run as much against the point as against the heel.

The improvement lies in placing the movable main-line-rail switch-point beyond the line of junction of the adjacent side-track rail, so that it will in itself produce a guard against the travel of the car-wheels running thereon onto the wrong side of the point, with resultant derailing of a car.

A further object of my improvement is to prevent pounding of the car-wheels against the point of the movable main-line-rail switch-point.

I accomplish the desired objects by cutting away the head of the point-switch rail far enough rearward from the turning-point and back of the head of the moving switch-rod so that the main-line-rail switch-point is located outwardly from the running or gage line of the main-track rail at the side of the track at which it is located. I thereby eliminate the necessity, as in the practice heretofore in vogue, of keeping the switch-point tightly fitted to the adjacent side-track rail, and therefore avoid the use of parts other than the moving rod to keep the switch-point in a position that will insure safety.

Figure I is a plan view of my improved switch. Fig. II is an enlarged top view of my main-line switch-point rail. Fig. III is an enlarged side elevation of the switch-point rail looking at the outer face thereof. Fig. IV is an enlarged side view of the switch-point rail looking at the inner face thereof. Fig. V is an enlarged cross-section taken on line V V, Fig. I. Fig. VI is an enlarged cross-section taken on line VI VI, Fig. I.

1 and 2 designate, respectively, the side-

track rails of my railway-switch, the former 50 being immovable and the latter movable.

3 is a main-track rail located adjacent to the side-track rail 2 and to and from which said side-track rail is shifted.

4 designates the movable switch-section of the second main-track rail, that is located adjacent to the side-track rail 1, to be moved to and fro relative to said side-track rail. This movable section 4 is united to the movable side-track rail-section 2 by ties 5 and a head or moving rod 6, the latter of which is located, as usual, adjacent to the terminations of said sections. As seen in Fig. I, the movable main-track rail-section 4 has the head thereof cut away from its termination at A (see Figs. II, III, and IV) to a point B rearward from the termination and also preferably rearward from the moving rod 6, thereby placing the forward portion of the section between the points A and B beneath the head or ball of the adjacent side-track rail 1, as seen in Figs. V and VI, in order that the car-wheels traversing the side-track rail immediately at the junction of the main-track rail 4 therewith will not contact with the said section until they have passed such cut-away portion.

The forward end of the head of the main-track rail-section 4, which terminates at the point B, is beveled to produce a tapering point 4', which serves as a guiding portion for the car-wheels when the switch is in closed condition and the cars traveling over the switch are to continue a course upon the main track. This beveled point terminates far enough to the rear of the turnout-point of the side track of the switch to place it outside of the running or gage line of the main track, preferably to the extent of five-eighths of an inch, and as a consequence the flanges of the car-wheels traveling on the adjacent side-track rail 1 travel in a path inwardly from the line in which the rail-point 4' extends while approaching said point and traversing the cut-away portion from A to B. Therefore the wheel-flanges will always move in a path away from the tapering point of the main-rail section 4 and will not come in contact therewith to damage the point of said section or pound thereagainst,



and, moreover, there is no liability of the flanges creeping between said rail-section point and the adjacent side-track rail to crowd said section laterally and pass onto the side-track rail while the car-wheels at the opposite side of the track are running on the proper main-track rail. The prevention of this last occurrence is of vital importance in that it obviates derailment of the car, which is obviously bound to transpire whenever the car-wheels at one side of the car pass onto a siding-track while the wheels at the opposite side are traveling on the main-track rail.

For the purpose of increasing the rigidity and strength of the tapered and cut-away rail-section 4, I apply to said section at its sides reinforcing-strips 7, preferably of steel.

By referring to Fig. V it will be seen that the clevis of the head or moving rod 6 is fitted closely to the connecting member that is united to the moving main-track rail-section 4. This arrangement provides for the actuation of said rail-section to throw it even in the event of the connecting-bolt in the clevis becoming broken. The rail-section may therefore be thrown to direct the travel of the car-wheels

on the main track without liability of accident due to failure to move the rail-section 4 when the head-rod is shifted.

I claim as my invention—

1. In a railway-switch, the combination of an immovable main-line rail, an immovable side-track rail, a movable side-track rail, and a movable main-line point-rail section having the head thereof cut away at its forward end; said point-rail section having a tapering point terminating at a location rearward from the switch-turnout, substantially as set forth.

2. In a railway-switch, the combination of an immovable main-line rail, an immovable side-track rail, a movable side-track rail, a movable main-line point-rail section having its head cut away from its termination in a rearward direction, and having a point extending to said cut-away portion, and reinforcing members secured to the web of said rail-section, substantially as set forth.

HENRY ELLIOT.

In presence of—

NELLIE V. ALEXANDER,  
BLANCHE HOGAN.