

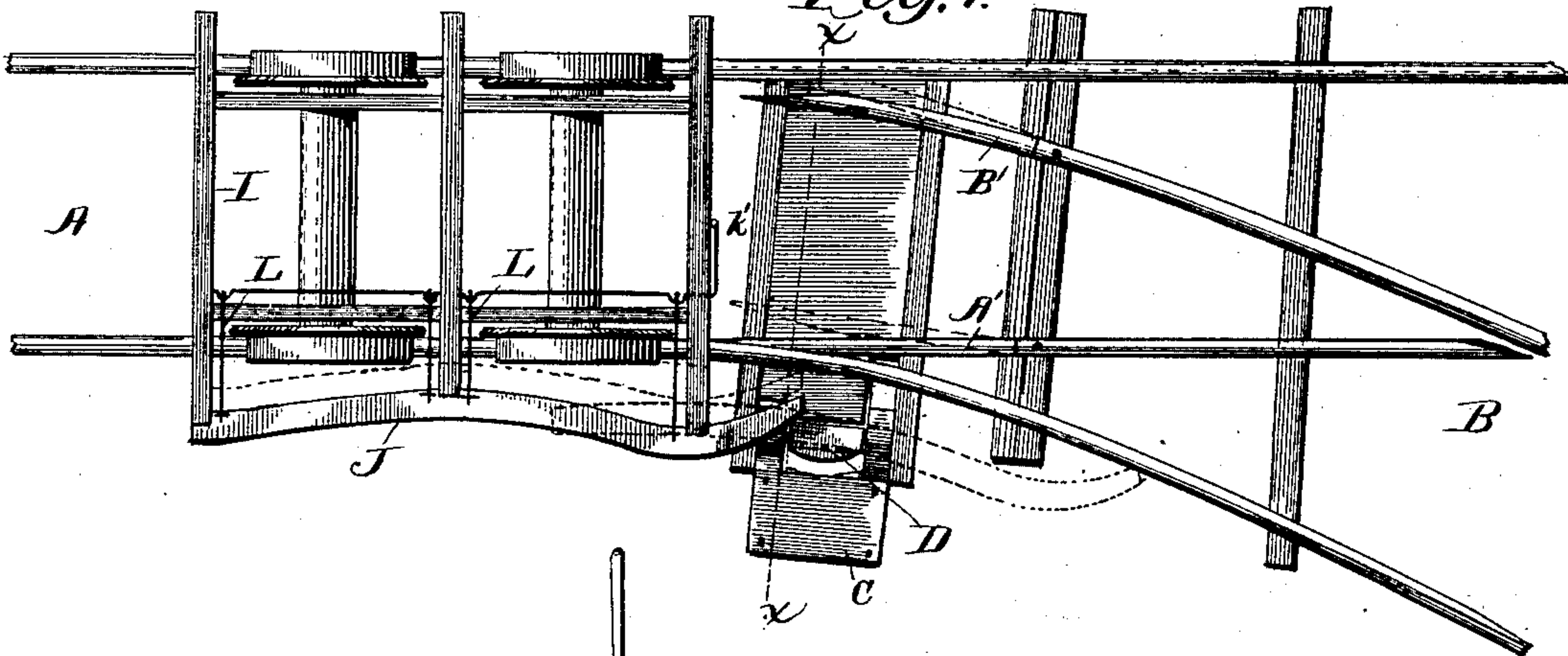
(No Model.)

J. W. ADAMS.  
RAILROAD SWITCH.

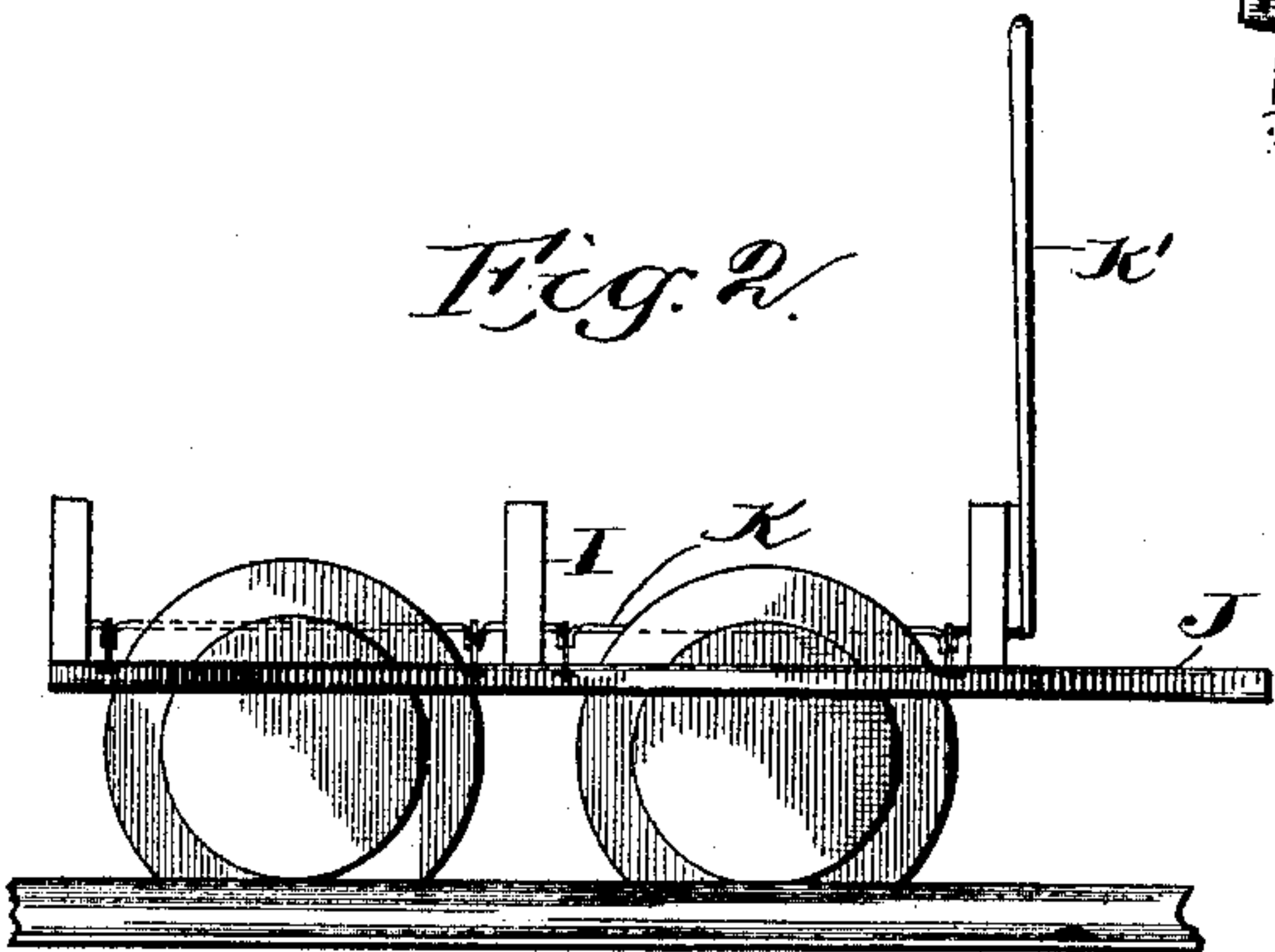
No. 348,608.

Patented Sept. 7, 1886.

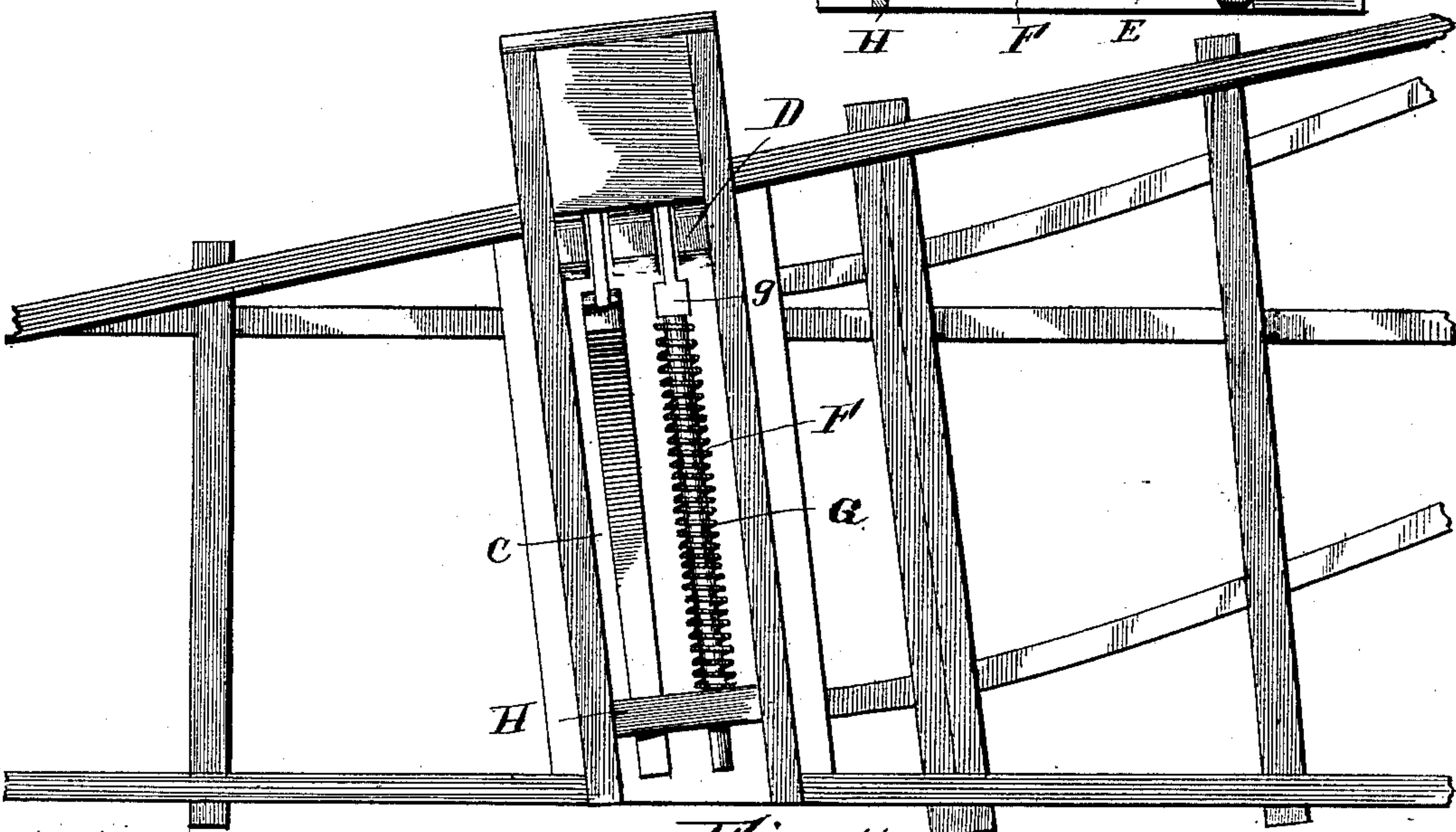
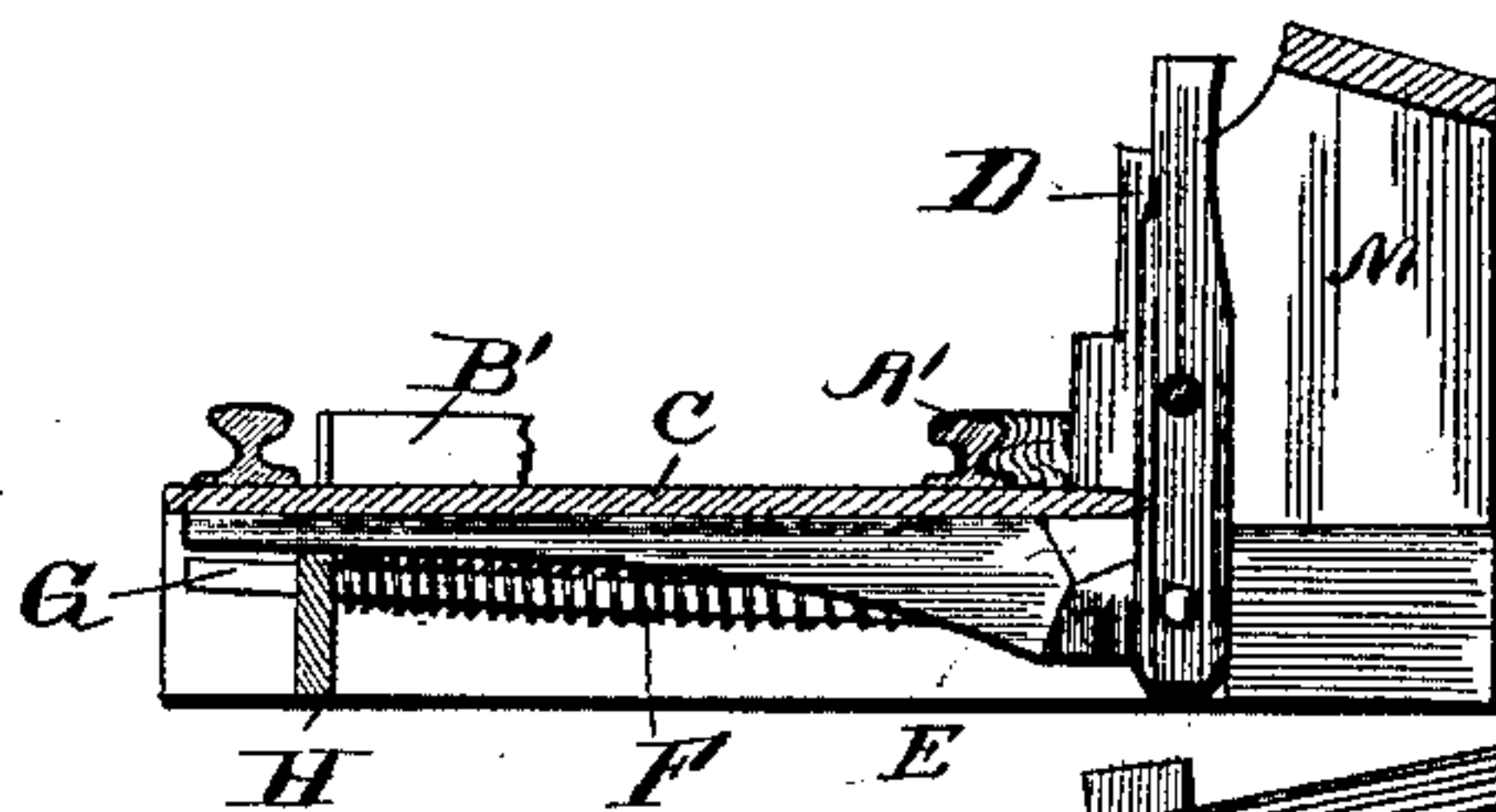
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

Witnesses  
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John W. Adams  
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# UNITED STATES PATENT OFFICE.

JOHN W. ADAMS, OF KELAT, KENTUCKY.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 348,608, dated September 7, 1886.

Application filed June 29, 1886. Serial No. 206,648. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. ADAMS, a citizen of the United States, residing at Kelat, in the county of Harrison and State of Kentucky, have invented certain new and useful Improvements in Railroad-Switches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to means for shifting railroad-switches; and it consists in the novel features more fully hereinafter set forth, claimed, and shown in the annexed drawings, in which—

Figure 1 is a plan view of a section of a main and side track provided with a switch and means for shifting the same, and a truck having a bar which is adapted to be projected within the path of the shifting mechanism for operating the same to move the switch. Fig. 2 is a side view. Fig. 3 is a section on the line X X of Fig. 1; and Fig. 4 is a reverse plan view.

The object of the invention is to devise a construction by which the switch may be mechanically shifted from the truck or body of the car by projecting an arm therefrom within the path of a projection connected with the switch-shifting mechanism.

Similar letters refer to corresponding parts in all the figures of the drawings.

The main track A, side or branch track, B, and switch comprising the pivoted sections A' and B', are old and of well-known construction, and form no part of my invention. A pit is formed in the road-bed directly beneath the switch and a bed-plate, C, provided to cover the same and support the switch or pivoted sections A' B'. Said bed-plate is extended across the road-bed from rail to rail, and is mounted to have a sliding or reciprocating motion at right angles thereto, to effect the proper switching and bring the desired section into proper position in a manner well understood.

Various means may be devised to effect a

shifting of the bed-plate from side to side, but that shown is preferred; and it consists of a lever, D, pivoted to one side of the road-bed and extended upward in a vertical direction. The lower end is pivotally connected with a web or bar, E, depending from the under side of the plate, and the upper end is free to be moved to and from the road-bed for shifting the plate and switch.

In case it be desirable to have one track or the other closed, so that both may not be open and cause a derailment of the car, a spring, F, is provided and mounted upon a rod, G, located beneath the plate and pivotally connected with the lower end of the lever D. The other end works through a bracket or standard H, located at the end of the pit opposite to that at which the lever D is situated. The spring has its resisting points between this bracket and a shoulder or enlargement, g, on the rod. When the upper end of the lever is pushed outward, the plate is correspondingly moved in an opposite direction and the spring compressed. When the force is removed from the outer end of the lever, the spring, reacting, carries the plate to its normal position and closes the desired track. The spring may be dispensed with and a lever located at each side of the road-bed and connected with the plate, or the lever D may be positively actuated in each direction.

The car or truck I is provided with a trip bar or arm J, which is adapted to be projected within the path of the lever D and move the same. Its forward end is curved for the purpose of acting on the lever like a cam and moving it gradually. A crank-shaft, K, journaled longitudinally of the truck and provided with a series of cranks, k, is connected with the trip-bar by links L, which extend between the cranks and bar, and a lever, K', at one end of the crank-shaft for rotating it about its axis serves to project and retract said bar. The end of the trip-bar projects in advance of the wheels of the truck to strike the lever and shift the switch before the wheels reach it. While one bar is shown on one side only it is evident that a similar one may be located on the opposite side of the car or truck. The trip-bar may be dropped down and made to bear upon plates located at each side of the road-



bed and connected with the switch-operating mechanism for actuating the same, as will be readily understood. Such construction I consider within the scope of my invention, hence do not confine myself to that shown, which is only the preferred means for carrying out the vital point of my invention.

From the foregoing, reference being had to the annexed drawings, the operation of the devices will be readily understood. Therefore, a detailed description of the operation of the several parts is deemed unnecessary.

The lever D is protected by a housing, M, to shield it from wet, snow, and dirt.

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

1. The combination of the movable plate extended at right angles across the road-bed, the switch carried thereby, the lever pivoted between its ends at one edge of the road-bed and pivotally connected at its lower end directly with the switch-plate, a bracket located at the opposite edge of the road-bed, a bar having an enlargement, pivoted at one end to the lower end of the lever and having its opposite end passed loosely through the bracket, and the coil-spring mounted on the bar between the bracket and enlargement, substantially as and for the purpose described.

2. The combination of the movable plate

extended across and covering a pit under the road-bed, the switch carried thereby, a lever vertically pivoted between its ends at one side of the road-bed and pivotally connected at its lower end directly with the plate, a bracket located in the pit at one end opposite to that in which the end of the lever extends, a bar having one end passed loosely through the bracket and its other end pivotally connected with the lower end of the lever, and a coil-spring surrounding the bar and located between the bracket and an enlargement or stop formed thereon, substantially as and for the purpose described.

3. The combination, with a car body or truck, of the herein-described means for mechanically operating a switch, consisting of a trip-bar extended longitudinally of the truck, a crank-shaft journaled parallel therewith and provided with a series of cranks and rods connecting the cranks with the trip-bar, whereby a rotation of the crank-shaft will project and retract the trip-bar, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. ADAMS.

Witnesses:

AASBURY T. RANKIN,  
JAMES R. BRANNOCK.