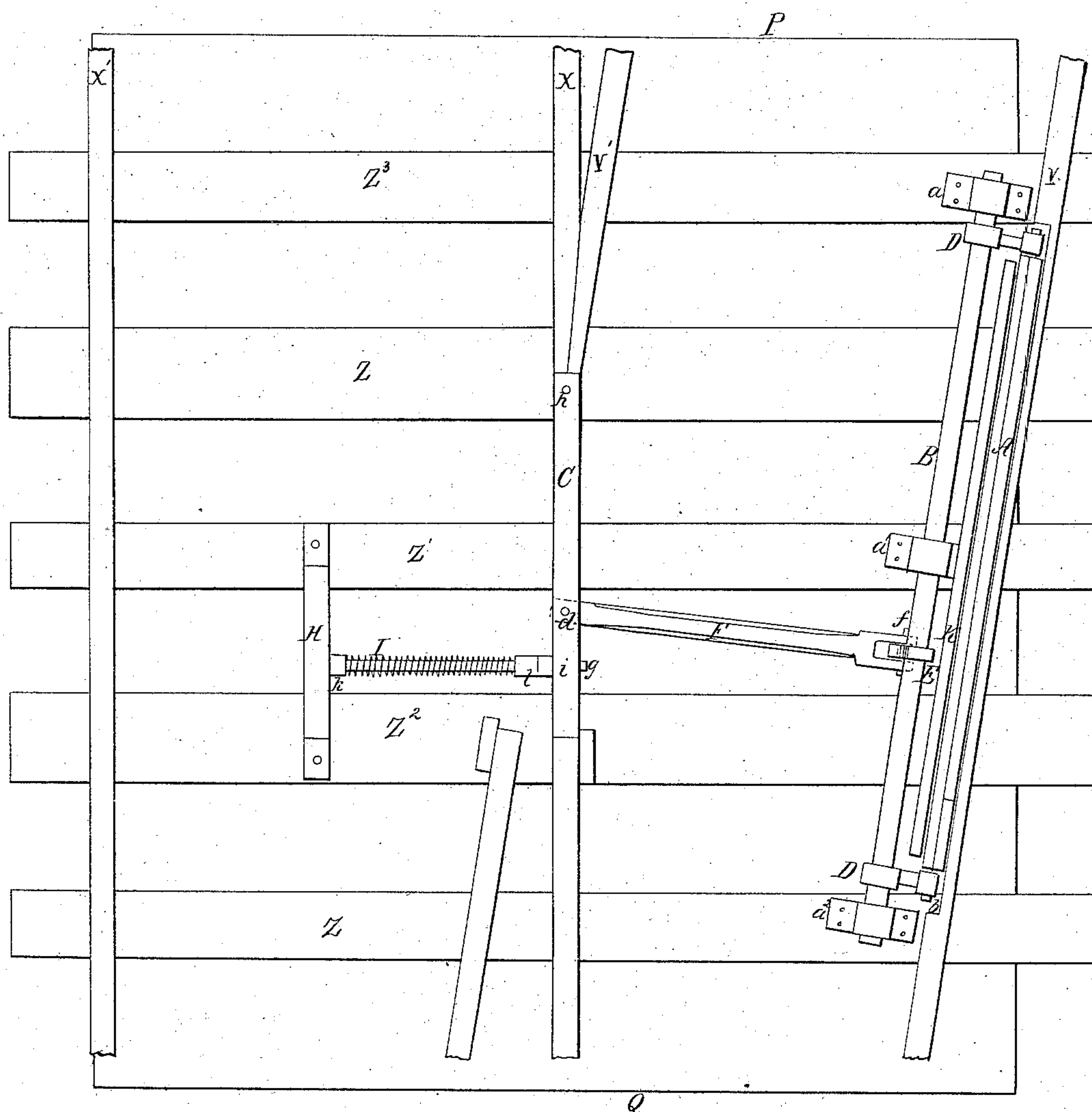


Philippi & Moore.

Railroad Switch.

N^o 34, 119.

Patented Jan. 7, 1862.



Witnesses;
W. Mertz
D. Howland.

Inventors;
 H. K. K. K.
 D. Moore.

UNITED STATES PATENT OFFICE.

ADOLPHUS PHILIPPI AND DOUGLAS MOORE, OF ELIZABETHPORT, NEW JERSEY.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. 34,119, dated January 7, 1862.

To all whom it may concern:

Be it known that we, ADOLPHUS PHILIPPI and DOUGLAS MOORE, of Elizabethport and State of New Jersey, have invented new and Improved Machinery to Work a Switch-Bar by the Weight of the Train; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing and the letters of reference marked thereon.

The nature of our invention consists in the use of a movable bar or rail A, arranged in a suitable manner with levers and spring to work a switch-bar while the train is passing over the former, whereby the attendance of the switchman is rendered imperative.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A represents a movable bar or rail, which is provided on its ends with journals *b b* for the purpose of working freely in the cranks D and D. The rail A is sloped near the journals *b b* to allow the train to pass over it.

B represents a shaft, which works freely in brackets *a a' a²*, the latter being firmly secured to the timbers Z Z' Z².

D D are two parallel cranks, which are fastened on shaft B between the brackets *a a²*. They are operated by the journals of the rail A. E is another crank, secured on the shaft B between the cranks D D, forming with the latter a right angle.

C is a switch-bar movable at the point *h*. *i* is a horizontal hole in the switch-bar C, in order to let a pin *g* pass through it.

F is a crank-shaft, which is connected by pins or bolts *d* and *f* to the switch-bar C and crank E.

H is a bar, which is secured to the timbers Z' Z².

g is a strong pin, which is secured firmly in the bar H.

k and *l* are nuts, the first being fastened to the bar H, and the latter is loose on the pin *g*.

I is a strong spiral spring fastened between the nuts *k* and *l*. This spring is supposed to be large enough so that the pin *g* can pass freely through it. A longitudinal space is cut through the center of the bar Y for the purpose of bringing the bar A in connection with the train.

K is a guide, which serves to keep the bar A in its proper position.

It is obvious that the bar A will be level with the rail Y as long as the weight of the train is on it, but in another case it is more elevated.

Operation: Suppose that the switch-bar C forms a straight line with the rail X, and that a train is moving on the track Y Y' from P to Q. The train will come in contact with the bar A and press it down while passing over it. The cranks D D will be operated by the bar A at the same time and participate motion to the crank E, crank-shaft F, and switch-bar C from the right to the left till it forms a straight line with the rail Y'. As soon as the bar A is relieved from the pressure of the train it will be forced back again by the spiral spring I till it comes in its former position, so that the track X X' can be used.

It is obvious that several bars A may be placed in the same manner on different parts of the track.

Having thus fully described the nature of our invention, what we claim as our invention, and desire to secure by Letters Patent, is—

The loose switch-bar with sloped ends moving in the slotted rail, and receiving both the flange and tread of the wheel when attached to the shaft B, and connected with lever and springs and moved by the train while passing, as described, and for the purposes set forth.

A. PHILIPPI.
D. MOORE.

Witnesses:

W. MERTZ,
D. ROWLAND.