

(No Model.)

E. P. EDWARDS.
FOOT GUARD FOR RAILWAY TRACKS.

No. 410,666.

Patented Sept. 10, 1889.

Fig. 1.

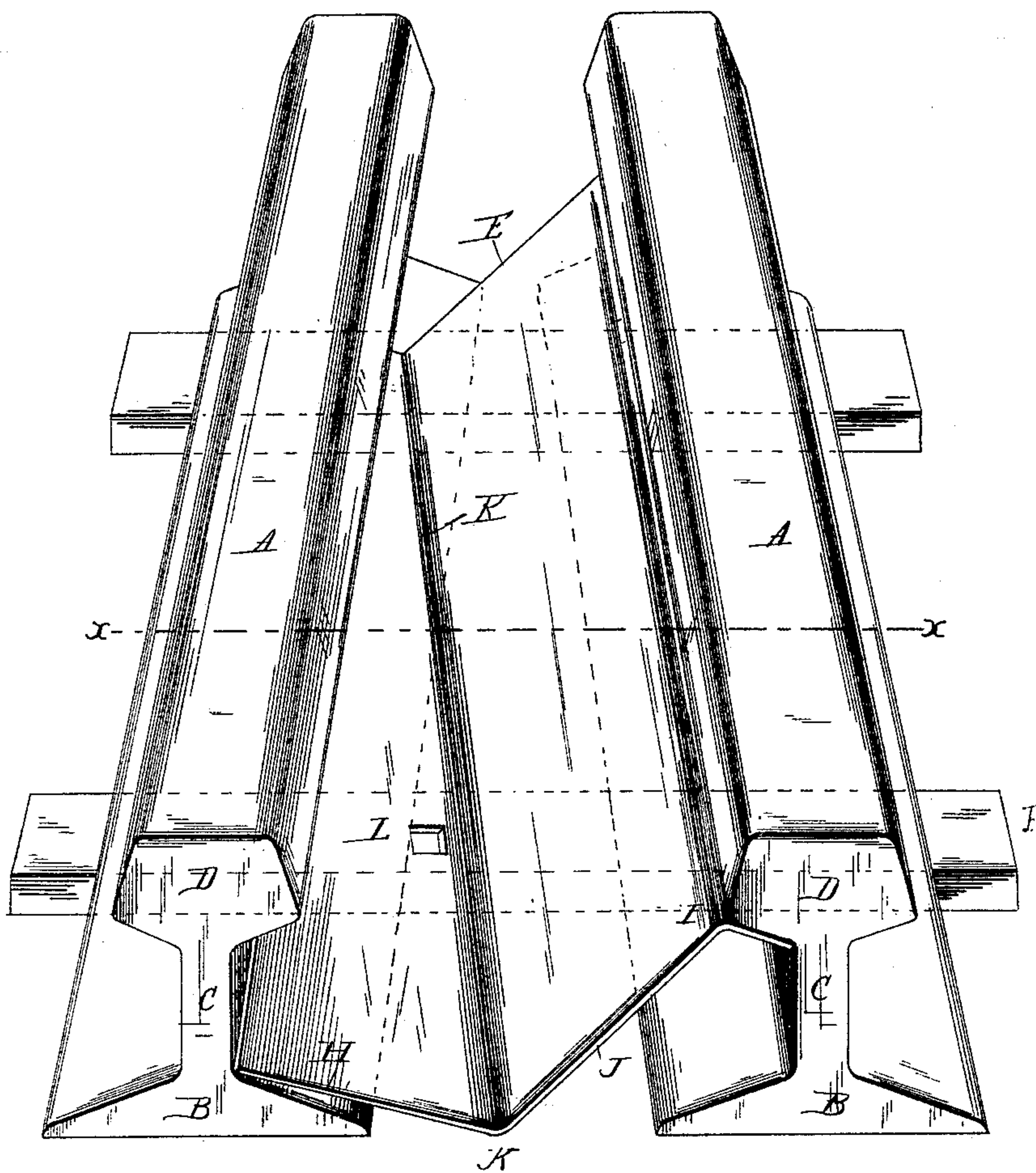
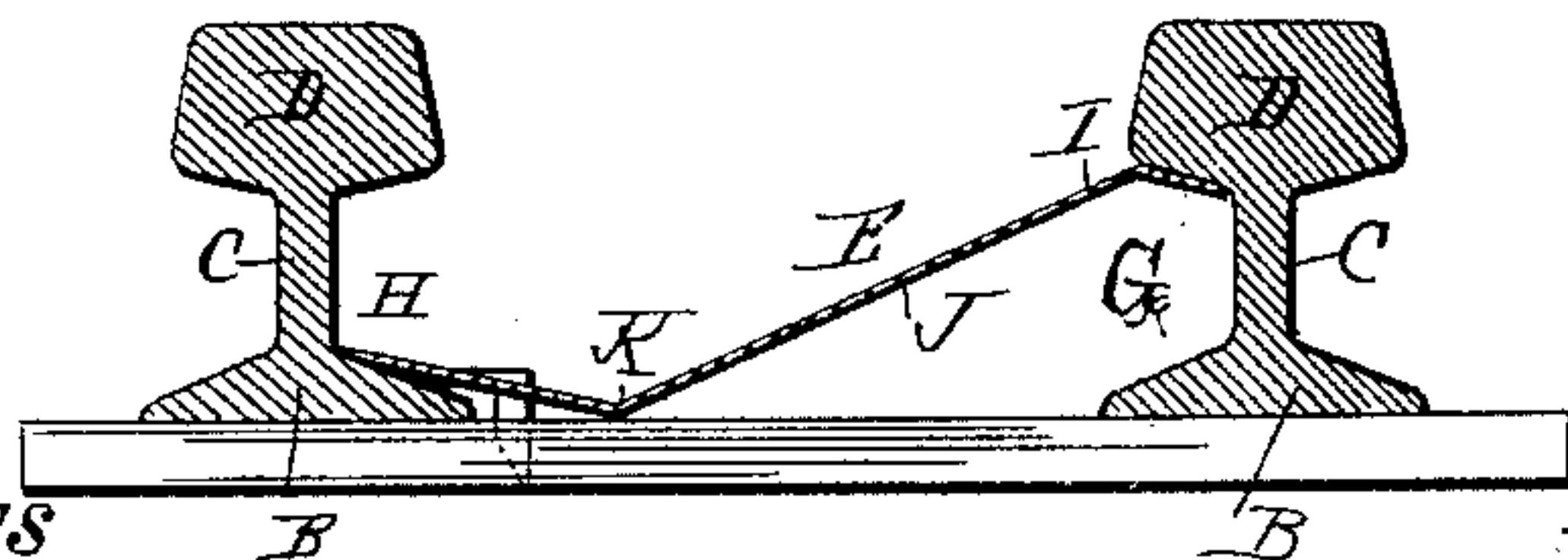


Fig. 2.



WITNESSES

Wm F. Robertson

Kate P. Robertson

INVENTOR

Edward P. Edwards.

By

John G. Manahan
Attorney

UNITED STATES PATENT OFFICE.

EDWARD P. EDWARDS, OF STERLING, ILLINOIS.

FOOT-GUARD FOR RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 410,666, dated September 10, 1889.

Application filed April 23, 1889. Serial No. 308,277. (No model.)

To all whom it may concern:

Be it known that I, EDWARD POMEROY EDWARDS, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Foot-Guards for Railway-Tracks; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

My invention has reference to foot-guards for railway-tracks, and is an improvement upon the device for the same purpose for which Letters Patent of the United States No. 367,609 were granted to me on August 2, 1887.

My invention is intended to be inserted and attached between the inner sides of convergent rails, whether at frogs, switch-rails, guard-rails, or other localities at which there is formed a converging or other space liable to catch and detain the foot of persons passing over or through the same.

It is well known that accidents to brakemen, car-couplers, switchmen, and others employed in and about railway-yards are constantly recurring by reason of the peculiar conformation of the converging rails. The lateral recess in the rail between the base or web and the top or ball thereof when two rails are placed convergently near each other causes the aperture between said rails to operate as a boot-jack, and the person operating the switches or engaged in coupling, uncoupling, or switching the train is liable to drive his foot inadvertently so far into such convergent space as to be unable in the short time usually allotted him to withdraw the same, resulting sometimes in the loss of a limb, and sometimes in the loss of life. It has been attempted to avoid such casualties heretofore by the insertion of wooden blocks within such converging interval. But a serious objection to the use of such means is that said blocks become broken or split by the jar of the train or by contact with the flanges of the wheels, and the broken parts

are apt to be carried forward into the angle of said aperture and derail the train. To insure the adoption and use of a device to prevent such accidents, it must be cheaply and strongly made and must be adapted to be firmly fixed in place against casual displacement by the jar of the train or otherwise. It must be set sufficiently low not to interfere in any degree with the passage of the flange of the car-wheels. It must also be susceptible of ready removal for the purpose of repair or change of the rails.

In my invention hereinafter described I believe I have combined all of the foregoing qualities necessary to insure the adoption and use of said foot-guard. As the engagement of the foot before referred to is occasioned by the proximity, convergence, and joint action of the recess in each rail, it is obvious that if the action aforesaid of one of said rails can be precluded the disastrous result mentioned will be obviated. If one of said recesses is prevented from contributing to the engagement of the foot, the remaining recess will be as harmless as a like recess in any other portion of the track.

In my invention, Figure 1 is a perspective of two converging rails provided with my invention. Fig. 2 is a transverse vertical section thereof in the line $x x$ of Fig. 1.

A A are sections of two ordinary rails. B is the base of said rails; C, the usual web or vertical portion thereof; D, the crown or ball thereof.

E is a metallic angular plate interposed between the rails A. The main or central portion J of the guard E extends in a diagonal position downward from the lower surface of the ball D of one rail to the upper surface of the ties F. Said guard E is provided at one edge thereof with a diagonally-downward-extending flange G and at the opposite edge with the diagonally-upward-extending flange H. This produces a crest I at the highest portion of the guard E, which lies along under the ball of the contiguous rail, and also an angle K at the inner end of the flange H, which is substantially parallel with said crest I. The extremity or edge of the flange G is adapted to rest against the neck C of the contiguous rail A and directly under the ball D thereof.

The outer edge of the opposite upwardly-rising flange H is adapted to rest against the contiguous side of the web C of the other rail A, while the lower side of the flange H rests upon the upper surface of the adjacent side of the web B. The abutting of the outer edge of the flange H against the neck C of the rail aforesaid serves to hold the flange G against the neck of the opposite rail, and vice versa. Thus while one side of the foot might project under the ball D of the rail A, against which the flange H abuts, the guard E prevents the ball D of the opposite rail A from engaging the opposite side of the foot, and therefore the engagement of the foot between the rails A is prevented. The convergent character of the extreme edges of the flanges G and H and the convergency of the rails raises the narrow end of the guard enough to prevent the collection of water thereon.

The guard E may be of any desired length; but it should extend from where the convergent aperture is too small for the reception of the foot to where the divergence is so great as to render impossible the engagement of the foot by said rails. Holes L are formed through the flange H near its junction with the part J for the insertion of ordinary spikes, by which said guard is held from longitudinal movement, and if thus spiked, it is immaterial whether the flange H extends entirely into contact with the web C of the contiguous rail A. The intervals within which the guard E is designed to be inserted are of different sizes and degrees of convergence, but may be divided into a few general classes, and the guard E may be formed of such different sizes conformable to such intervals respectively. The guard E can be made of boiler-iron or other suitable metallic plate and be cheaply and readily swaged into the

conformation shown, or such guard can be made of any other suitable material. The guard E by being spiked through the portion J might be used without the flange H; but I deem the addition of said flange preferable as affording greater security. By the descent of the part J from the crest I space is afforded for the passage of the usual flange of the car-wheel without interfering or getting into contact with said guard.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of one of the rails A; the ties F, and the guard E, provided with the flange G, adapted to rest under and against the ball D of said rail, and adapted at or near its opposite edge to be fastened to said ties, substantially as shown, and for the purpose described.

2. The foot-guard E, provided with the downwardly-projected flange G and the upwardly-projected flange H, substantially as shown, and for the purpose described.

3. In combination with the rails A A, the interposed foot-guard E, provided upon one edge with the downwardly-projecting flange G, adapted to rest against the neck C of one of said rails and to be in contact with the lower surface of the ball D of said rail, and provided, further, with the upwardly-projecting flange H, adapted to rest upon the web B of the opposite rail A, substantially as shown, and for the purpose described.

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

EDWARD P. EDWARDS.

Witnesses:

JOHN G. MANAHAN,
EDGAR G. BAUM.