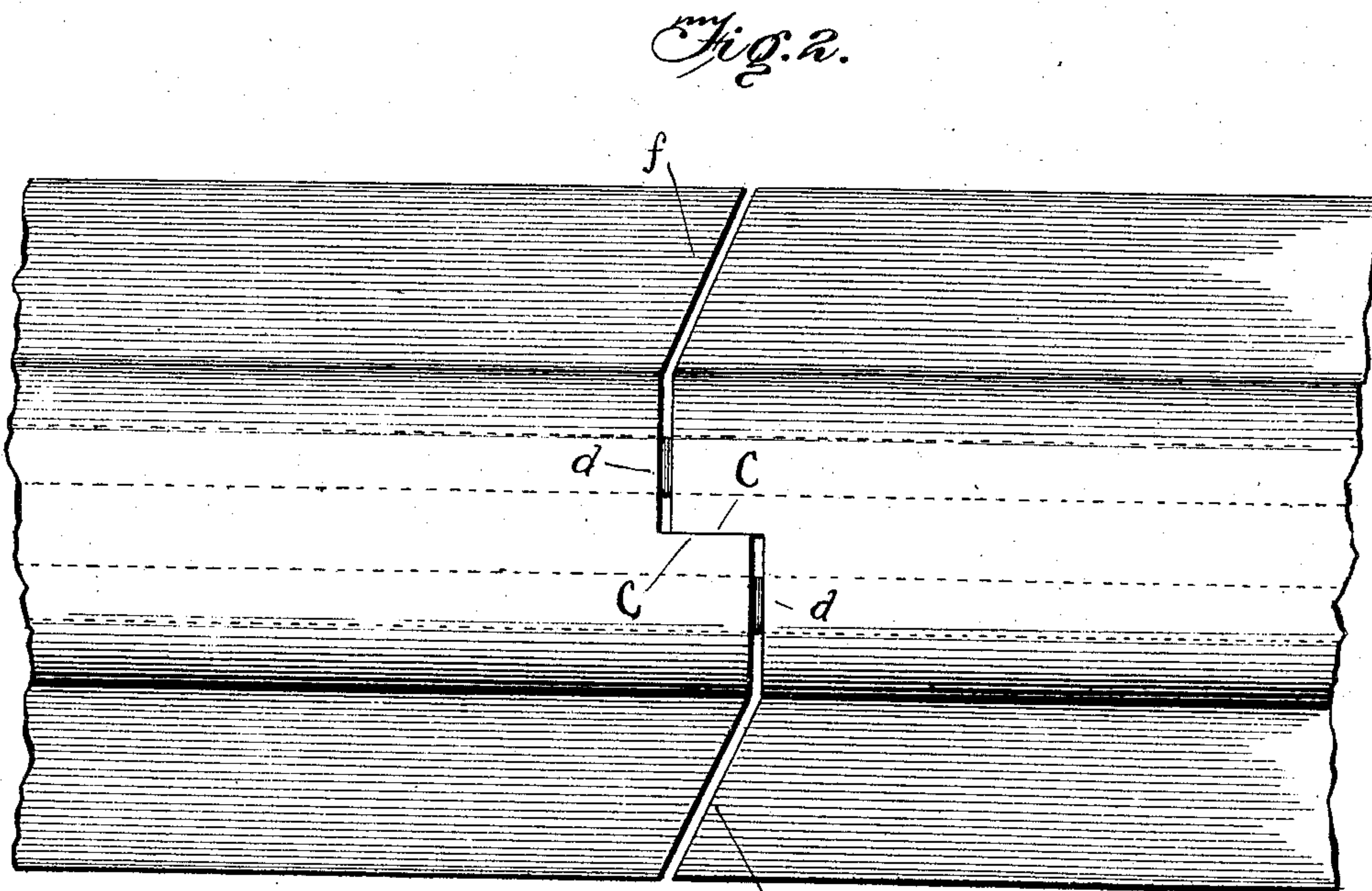
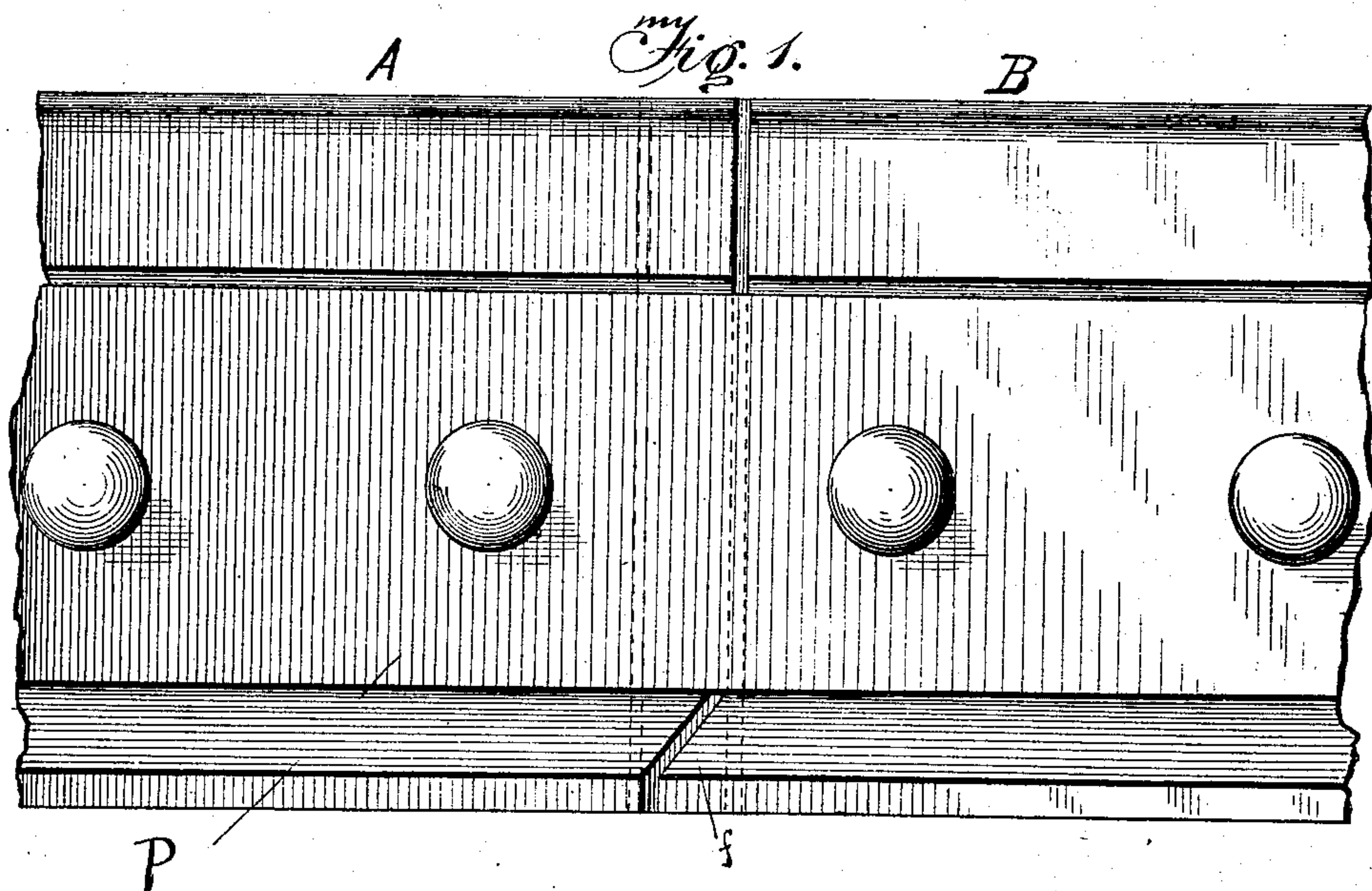


No. 891,415.

PATENTED JUNE 23, 1908.

W. T. FARLEY.  
RAILWAY RAIL.  
APPLICATION FILED JULY 25, 1906.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM T. FARLEY, OF NEWTON, MASSACHUSETTS.

## RAILWAY-RAIL.

No. 891,415.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed July 25, 1906. Serial No. 327,696.

*To all whom it may concern:*

Be it known that I, WILLIAM T. FARLEY, a citizen of the United States, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Railway-Rails; 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.

It is common in the art to prepare the ends of the rails so that the wheels of the cars passing over may rest at one time on the ends of the two adjoining rails, and also to prepare them so that the extremities of the tops of the rails shall be lowered so that there will be no jolt or jar when the cars pass over the rails. It is a fact however that very few of these improved rails are in use. The advantages which may be fairly claimed for them have not been considered sufficient to overbalance the difficulties and delays in producing them, the greatly increased cost of making ready for use, and the difficulties in laying them, especially in the repairs and changes necessarily made in the tracks which are much used. In producing rails for a practical and successful use consideration must be given to the intellectual abilities of the men who are to lay them in the tracks. The cost of preparing these improved rails of the past has been an expensive one when compared with the cost of making the common rails with square ends, and this increased cost has been especially great where both ends of a rail cannot be made on one machine; requiring two or more machines for cutting the ends, and a double handling for each rail at least.

The objects of this invention are to produce improved railway rails which shall combine all the practical merits of those now known with greater cheapness in production, ease and convenience in laying, efficiency and reliability in use and safety and comfort to the travelers over them.

The great weight of the trains now used, and the high speed at which some of them are run produce a momentum such as requires self-support in the rails greater than will generally be found in rails depending on connecting plates alone.

The attempts to use rails in railroads and street railway tracks which were intended to prevent the jars and danger attending the

use of the old forms of rails having square ends, were met with the objection that the improved rails were too costly to be used in most tracks.

For the purpose of meeting the many requirements for improved rails, I have devised the ends and other features of the rails shown in the drawings, as my preferred forms, in order to combine the merits of cheap construction and economy in laying with the essentials of supporting the ends against the strains produced by the passing of engines and cars.

My invention consists in devising the forms and shaping the ends of my improved rails according to the figures shown in the accompanying drawings; and in the means for attaching the end of one rail to the end of the adjoining one, so as to produce a combination of rails joined according to the directions in this specification, or as shown in the drawings.

The preferred forms of this invention are shown in the accompanying drawings, in which the same letters refer to similar parts in all the several views, and to which:

Figure 1 is an elevation of the two rails the ends of which are cut longitudinally, transversely and diagonally in the form shown in Fig. 2 which is a top view of the same combination.

In the drawings two rails, marked A and B, are shown with their ends united by a plate P in the usual manner. The longitudinal cuts along the center of the tops of the rails at their ends are shown in Fig. 2 and marked C C. In Figs. 1 and 2 are shown cuts at right angles to C C, making the ends of the rails and marked *d d*, and the diagonal cuts extending from the bottom of *d d* to the edges of the bases of the rails and marked *f f*.

The ends of the rails shown are of such forms that both ends of each rail are alike and may be cut by one machine at one operation without turning the rail. This form of construction reduces the cost to practically that of square ended rails. These rails almost make a continuous rail, but avoid the evils produced by heat and cold found in such a line of rails. This construction is of great merit as it enables the men who lay the rails in a track to use either end without the turning of the rails so often required in most other kinds, except the old and common form of square ended rails.

With the other improvements in my rails



will be used the device of working down the extreme points of the tops of the rails so as to avoid the jar which might come from the striking of the end of the forward rail by the wheels.

I do not claim that all of the elements of my invention are entirely new or patentable alone; but

What I do claim and desire to secure by Letters Patent is:

1. A railway rail joint made by cutting vertically the ends of the rails which are to be united and longitudinally along the center of the web, transversely at right angles from the ends of the central cut and obliquely from the ends of the transverse cut to the edges of the base, the oblique cut on one side being at an exact reverse angle to the oblique cut on the other side, so that both ends of all the rails to be united shall be alike and fit each to the other, substantially as shown or described.

2. The combination of railway rails, each having both ends cut alike diagonally, each end having one half side of the web extended beyond the diagonal line of the end, the other half side of the web having a depression corresponding to the said extension, so

that the ends of one rail will fit the ends of every other rail, with means for uniting and holding the ends of the rails substantially as shown or described.

3. A railway rail both ends of which are cut alike, longitudinally along the center of the web, transversely at each end of the longitudinal cut and diagonally to the edge of the base so that either end of this rail will fit either end of every other rail, the ends of which are cut in the same form, substantially as shown or described.

4. A combination of railway rails both ends of which are cut alike, vertically to the plane of the base, longitudinally along the line of center of the web, transversely at right angles to said central line and diagonally to the edges of the base, one diagonal cutting being at an exact reverse angle to the other, so that either end of one rail will fit the end of every other rail, and all the joints of the combination of rails being self-supporting laterally both ways, substantially as shown or described.

WILLIAM T. FARLEY.

Witnesses:

JOHN H. DUANE,

HERMAN LOEWENBERG.