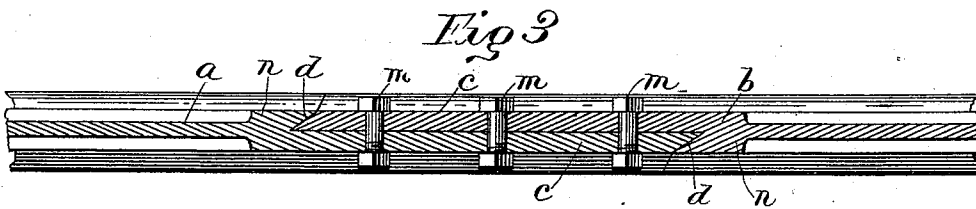
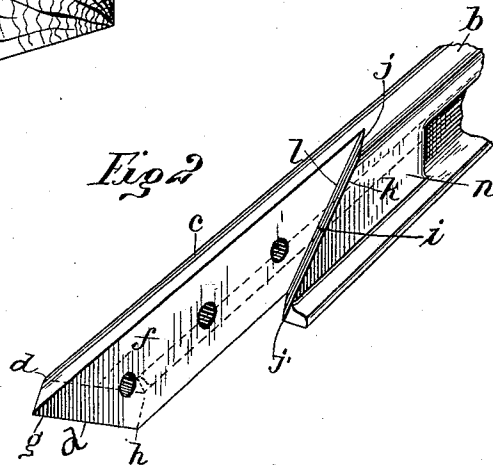
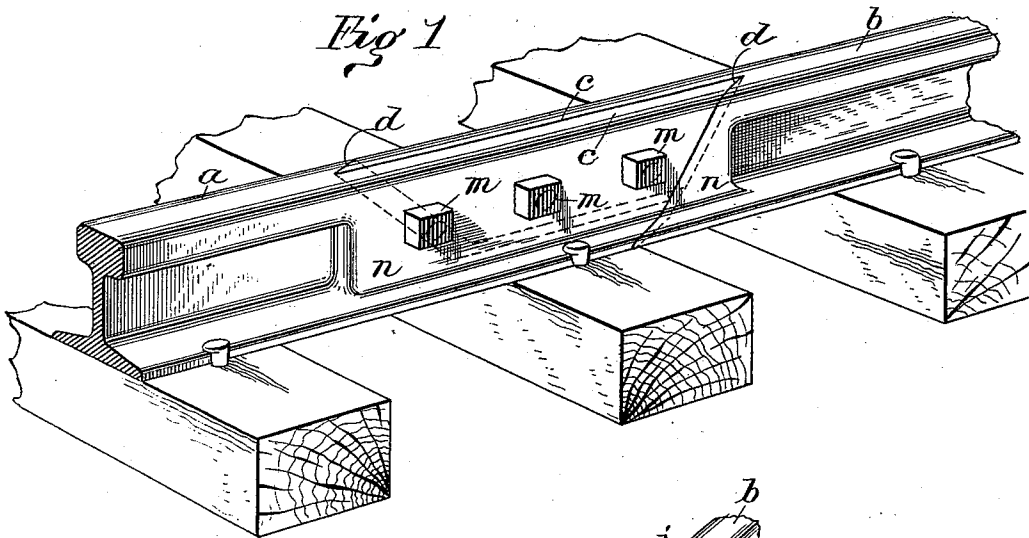


(No Model.)

A. LAWES.
RAIL JOINT.

No. 494,680.

Patented Apr. 4, 1893.



Witnesses

W. C. Burdick
J. B. Stewart

Inventor

Alonso Lawes
per J. B. Stewart

Attorneys.

UNITED STATES PATENT OFFICE.

ALONZO LAWES, OF KINCAID, KANSAS.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 494,680, dated April 4, 1893.

Application filed October 19, 1892. Serial No. 449,364. (No model.)

To all whom it may concern:

Be it known that I, ALONZO LAWES, a citizen of the United States, residing at Kincaid, in the county of Anderson and State of Kansas, have invented certain new and useful Improvements in Rail-Joints; 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 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in rail joints and particularly to that class in which the sections of rail are secured together by splicing and bolting without the help of the usual fish-plate and it consists of a peculiar construction by which a more efficient and durable joint is produced. This construction will now be described, reference being had to the accompanying drawings in which

Figure 1 represents a perspective view of a rail joined after the plans of my invention; Fig. 2, a view of one section of the rail detached from its fellow, and Fig. 3, a lateral section taken through the rails when joined as in Fig. 1.

The reference letters *a*, and *b*, indicate the two sections of the rails which are to be joined. Each of these sections is so constructed as to form a projecting arm *c*, of a thickness and size equal to exactly one half that of the rail, so that when joined the original rail will appear unbroken. The ends of each of the arms *c*, are formed with an outwardly and backwardly extending cut *d*, beginning at the point *d* on the inside of the arm and sloping outwardly to a point designated by the letter *f*, and at the point *g* downwardly and backwardly to a point *h*. This peculiarly shaped end is received by a registering recess *i*, formed in each rail just where the arm *c*, is formed. This recess is made by starting at a point *j*, at the top of the rail and cutting downwardly and outwardly until the lower side *j'* of the rail is reached and then cutting from a point *k*, inwardly and backwardly to the center of the rail or a point *l*. The two sections of the rail as thus formed are fitted together as shown in the drawings and held in rigid adjustment by means of the bolts *m*, which may be of any desired number, preferably three.

This joint may be applied to any style rail

but is shown in the drawings as applied to a peculiarly shaped one wherein that part in which the joint occurs is thickened at *n*, to give a larger area or space to work upon. This, however, is immaterial and may be changed at will. The rail is fixed to the ties in the usual way; it is deemed best, however, that a tie should occur directly under the joint to give it further solidity. It will be seen that a joint effected in this way will be as nearly perfect as practicable, for the slant and formation of the slices or cuts in the arms *c*, will not allow any give whatever in the joint when weight is applied from above. This is due to the downward and backward extending cut *a*, in the arms *c*, which bears against and is prevented from giving by the oppositely extending recess or cut *i*, of the opposite rail, which rail (the opposite rail) is in turn braced by the similar construction in the former.

In the following claims I wish it understood that the expressions "downward and backward" and "downward and outward" are to be construed as always meaning from the top of the rail. Thus, "a downward and backward extending cut" would mean a cut extending downward and backward from the top of the rail, or so as to have planes intersecting below the rail.

Thus described, my invention and its scope are defined as follows:

1. A rail joint comprising the two sections of rails, each having a matching or registering arm provided at their ends with downward and backward extending cuts and downward and outward extending recesses on the rails at the base of the arms for receiving said arm ends.

2. In a rail joint the two sections of rails each having the arms *c*, cuts *d*, and recesses *i*, substantially as and for purpose set forth.

3. A rail joint comprising the two sections of rails, each having a matching or registering arm provided with downward and backward inclined ends and a shoulder on each of the rails, at the base of the arms, upon which the said arm ends rest and by which they are braced.

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

ALONZO LAWES.

Witnesses:

C. E. DURALL,
C. N. JOHNSON.