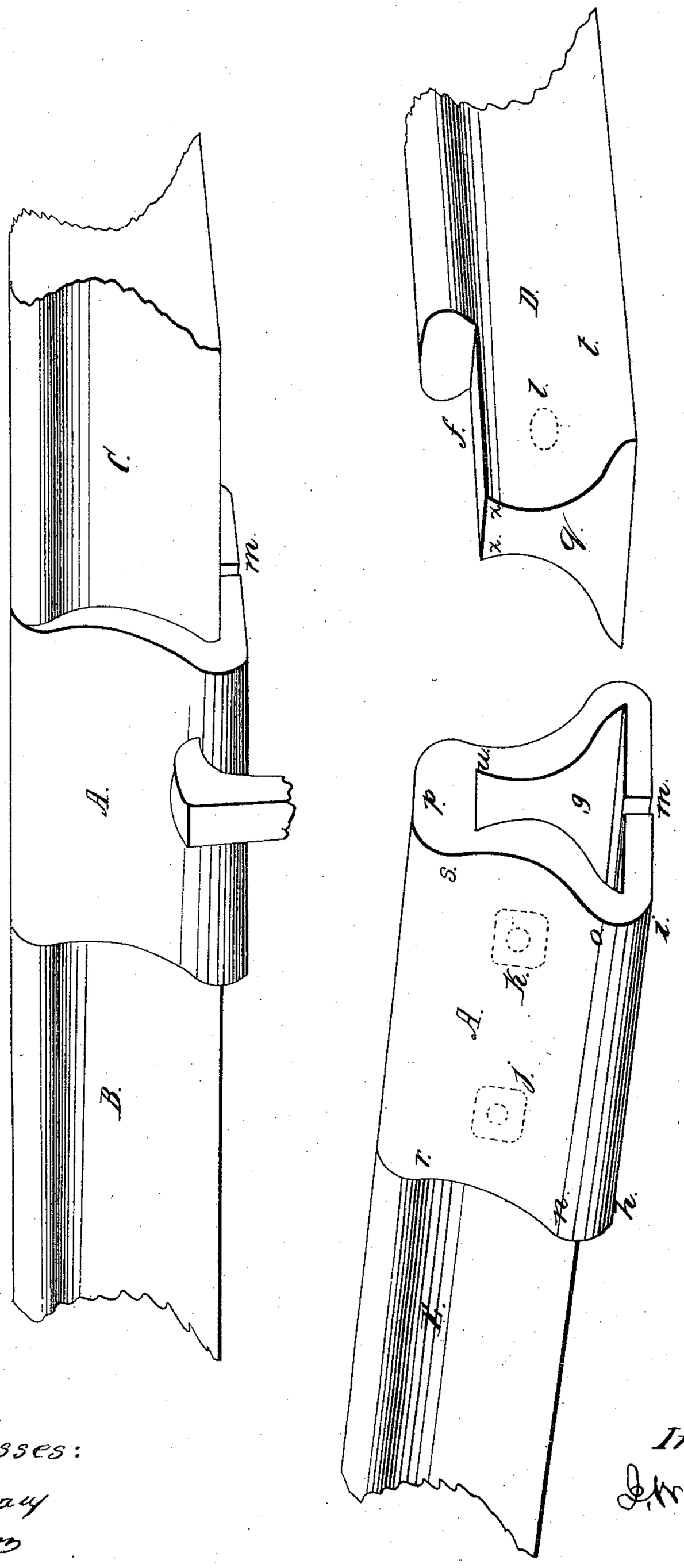
J. W. Wetmore.

Rail Joint.

No. 23,731. Patented Apr. 19, 1859.



Witnesses:

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UNITED STATES PATENT OFFICE.

J. W. WETMORE, OF ERIE, PENNSYLVANIA.

RAILROAD-CHAIR.

Specification of Letters Patent No. 23,731, dated April 19, 1859.

To all whom it may concern:

Be it known that I, J. W. WETMORE, of the city and county of Erie and State of Pennsylvania, have invented a new and Improved Railroad-Chair; and I do hereby declare that the following is a full and exact description, to wit:

The nature of my invention is as follows—Rail road chairs and joint stays are constructed and used for the purpose of keeping the ends of the rails even, by carrying the end of the forward rail down with the one under the wheel or by sustaining the rail under the wheel at a level with the forward rail. The defects of the plans in use seem to be that the weight of the cars and load as they approach the end of one rail depresses it below the end of the next forward rail. The wheel consequently runs onto the next rail with a percussion and suddenly presses it below its level and thus injures in succession the ends of the rails and gradually loosens and deranges the ties and chairs.

My design is to make the weight carry down the end of the next forward rail more evenly with the rail under the wheel; and generally, make the joints of the rails firmer and the road thereby safer. I seek to accomplish this, by having sections of the caps of the rails notched out at the joint and the spaces filled with the chairs. The chair will thus form a cap-covering for the joint and this covering will be sustained by leaves extending down the sides and under the rails. The adjacent ends of the rails will thus be wrapped by the chair, the leaves of which will come near together under the ends of the rails and be held firm by the stiffness of the iron and by being pressed onto the tie.

The form is the reverse of the common chair, being continuous over the top and down the sides of the rails and turning its lips or jaws under the base, instead of being continuous under the rail and having its lips or jaws turned up over the base.

Usually, the weight on the forward end of a rail depresses the back edge of the tie more or less at the joint and slightly raises the end of the next forward rail. When the wheel presses on to the end of the next forward rail, the forward edge of the tie is depressed below its level. By my plan the effects of this rocking motion of the tie are avoided; for the first depression will press the cap covering more closely into the first cap joint, and when the wheel passes onto the chair, the depression of the forward edge of the tie and the elevation of the back edge must press the forward end more closely into the second cap joint. Thus, the weight on the rails both by its direct pressure and by its effect in rocking the joint tie, serves to render the surfaces of the rails at the joint even.

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

A, is the chair; B and C, ends of the rails. *p* an end view of the chair; *f* the notch in the rail. The depth of this must be sufficient to give thickness and strength at "*w*," or, the edges "*x*, *x*," may be trimmed off and then "*p*," can be of less thickness, and "*f*" of less depth. *q* end view of the rail. *g* recess of the chair into which "*q*" is fitted.

j, *k*, *l*, are to suggest the following idea, viz: if the chair should only extend to the lower edge of the rail "*n*, *o*," bolts might be used to answer for the extension of the leaves under the rail. A chair of this form could be readily replaced.

r, *s*, are to suggest the idea of having the cap of the chair and the leaf "*s*, *o*, *m*, *n*, *r*," meet in lips at "*r*, *s*," on the outside of the rail; these lips or flanges to be bolted together along the line "*r*, *s*." The only use of this form would be, to meet the difficulty of replacing a broken chair or rail.

t, in the base of the rail at "*t*," &c., may be notches of the length of the notch "*f*" so that the leaf of the chair "*n*, *o*, *s*, *v*," may be a more perpendicular support. The base of the chair would then be of less breadth.

m the meeting of the leaves or lips of the chair. The chair is spiked down in the ordinary way onto the tie.

h, *i*, is the place of a tie. The chair may be made a foot or more long and reach from one tie to another.

If now the approaching train is on rail "D" the entire base of "D" presses down on the inside, "*g*," and will draw the cap "*p*," down and into the notch "*f*." If the down pressure on the edge of the tie at "*i*," would rock the edge "*h*" up, "*p*" would be pressed more firmly into notch "*f*."

After the wheel is on "A," the entire weight pressing on the section of "E," within "A," is bearing "E," down even with "A." If

the edge "*i*," is rocked up by the weight on the forward end of A, the end "*r*," would be pressed more firmly into the notch at "*r*."

What I claim as my invention and desire to secure by Letters Patent is,

Notching the caps of the adjacent ends of the H or T rails as at, *f*, and the adaptation of a chair, A, to surround the two ends or joint within the shoulders of the notches; the chair forming the bearing surface for its length and its leaves being bent under the base of the rail and resting on the tie, substantially as set forth.

J. W. WETMORE.

Witnesses:
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