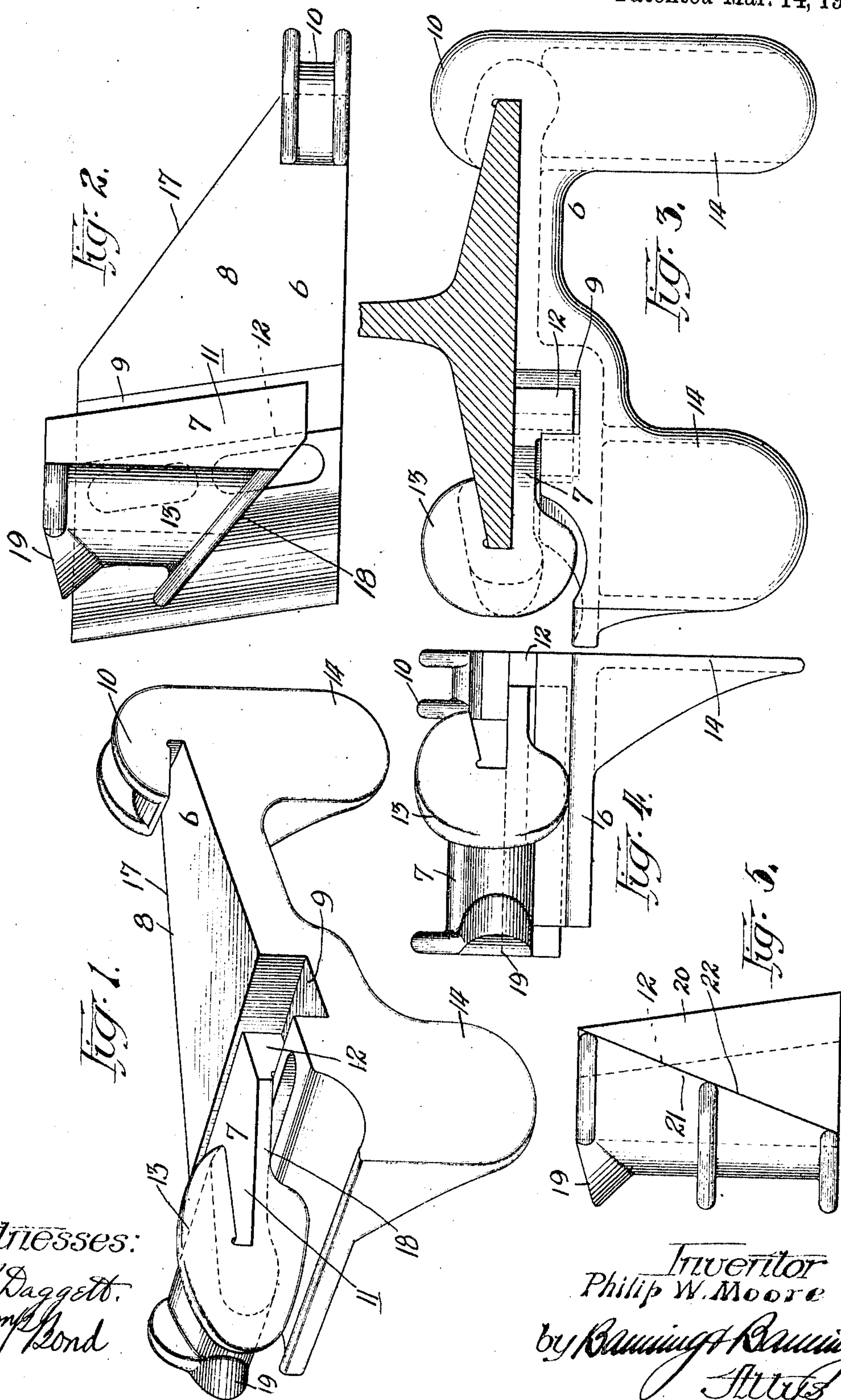


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RAILWAY RAIL STAY.
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RAILWAY-RAIL STAY.

986,935.

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To all whom it may concern:

Be it known that I, PHILIP W. MOORE, a citizen of the United States, residing at Evanston, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Rail Stays, of which the following is a specification.

The device of the present invention relates to a structure adapted to be positioned upon railway rails, for the purpose of preventing the creeping of the rails, such as is evidenced at the terminus of a grade or adjacent switches, and like places; and has for its object, to construct a stay which will be lightened by the cutting off of superfluous metal, and, at the same time, retaining the strength of the stay so that its usefulness is not impaired in any degree.

A further object of the invention is to provide a broad abutting surface, which will rest against the rail tie, thus providing a broad bearing surface for the rail stay against the tie; and another object is to form a head upon one of the members of the stay, which will serve as a driving head, against which a hammer or other instrument strikes when the stay is being positioned.

In devices of this character, because of the cheapness of construction, the reduced cost of shipment, and ease of handling, the weight of the device enters materially into the practicability of construction. A device which is light in comparison with other devices of similar nature at present on the market, and which will require less metal than such devices, is a step in advancement in the art, because of the savings in the various ways heretofore set forth. And a device of this character, which is light and cheap of construction, and which at the same time retains all of the strength and rigidity necessary for a practical device, is what applicant has designed, and these are the salient features of the present invention.

The invention further consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a perspective of the completed stay; Fig. 2, a plan view; Fig. 3, a front elevation of the stay, showing a rail held therein; Fig. 4, a side view of the stay; and Fig. 5, a plan view of a modified construction of the movable clamping member.

The device, as shown in the drawings, com-

prises a fixed clamping member 6 and a movable clamping member 7. The fixed clamping member comprises a body portion 8, having a diagonally extending groove 9 formed therein, and is provided with a rail gripping jaw 10. The movable section comprises a body portion 11, which terminates in a downwardly projecting flange 12, adapted to enter the groove 9 in the fixed member 6; and the movable member is provided with a rail gripping jaw 13. The fixed member is provided with one or more downwardly projecting abutments 14, preferably one at either extremity of the front edge thereof, which abutments lie, in operation, against a railroad tie and prevent the fixed section 6 from movement during the creeping of the rail. It is against these abutments that the major portion of the strain is communicated, hence, these surfaces, being of the substantial and broad nature shown, will remain durable and effective during usage.

As shown in Figs. 1 and 2, one of the side walls of the fixed member 6 is cut away, for a portion of its length, to form a diagonally extending wall 17, and this wall terminates, at one end, adjacent to the edge of the diagonally extending slot 9, and at its other end adjacent the edge of the front wall of the fixed member; and formed in the space intermediate the terminus of the wall 17 and the front wall is the rail gripping member 10. It will be seen by a study of this construction that a great amount of metal is thus eliminated from the fixed section, but in view of the fact that no great strain is placed upon the gripping member 10, the small gripping surface shown in this structure does not impair in any way the efficiency of the device. It will also be seen that the abutments 14 are broad, and upon these surfaces comes the greatest strain in operation. This is because of the fact that the movement of the rail is withstood by the contact of the abutments and the tie, hence the pressure of the rail is principally against these abutments.

The movable member is beveled upon its front wall 18 and provided with a sloping head 19, which serves as a driving head against which the hammer or other instrument is swung when the stay is being positioned. The sloping of the head provides a driving surface which is of a substantially broad nature and which is so sloped or an-

gled that the force of the blow from the striking instrument will act to drive the movable locking member directly onto the rail and eliminate any canting action of the movable member during the driving operation.

As will be seen by a study of Fig. 2, the front wall of the movable section is cut away, thus eliminating at this point a quantity of superfluous metal, and yet the rail gripping property of the section is not in any way impaired or decreased.

In Fig. 5 is shown a modified construction of the movable clamping member, in which the outer edge 20 is cut on a bevel, as at 21, cutting away the front corner 22. A clamping member formed in this manner possesses several distinct advantages: First, it allows the downwardly depending flange or tongue 12 to be easily engaged with the groove 9. This is due to the fact that the clamping member as thus formed permits of a tilting or canting of the member in order to enter the tongue 12 into the groove 9, eliminating any forcing or driving such as is necessary where the gripping jaw is overhanging along its entire length, such forcing or driving being undesirable because it requires more time and trouble, and frequently results in the opening of the front corner of the jaw. And secondly, the construction shown in Fig. 5 eliminates metal and reduces the weight and cost of manufacture of the clamp, and at the same time does not impair its efficiency as a clamping member.

The operation is as follows: Upon the placing of the stay on the rail, the movable section 7 will be driven forward until the point has been reached where the downwardly depending flange 12 will have traveled sufficiently in the groove 9 to lock against the walls of said groove. This will lock the two sections of the stay together, so that the movement or creeping of the rail will carry the two sections therewith, but owing to the abutments 14 resting against the tie, the movement of the stay will be checked, and, as the sections of the stay are tightly gripping the rail, the movement of the rail will be thus arrested. And these abutments being, as shown, of substantial and broad formation, will offer a large bearing surface against the tie and will serve to resist any further movement of the rail, thus preventing the creeping thereof.

The member 6 is referred to as a fixed clamping member for the sake of convenience in description, as in actual operation there will be a slight movement imparted thereto by the movement of the rail.

I claim:

1. In a railway rail stay, the combination of a fixed and a movable section, the fixed section having a diagonally extending groove therein, a downwardly depending

portion on the movable section, adapted to enter said groove, a rail gripping jaw on the movable section, provided with an overhanging ledge having its forward end cut away, providing a clearance to permit of the canting of the movable section when it is initially positioned upon the rail, the fixed section being formed of a rectangular plate having a portion of one side cut away, and forming a diagonally extending wall, a rail gripping jaw on the fixed section, and an abutment on the stay adapted to bear against a railway tie, substantially as described.

2. In a railway rail stay, the combination of a fixed and a movable section, the fixed section having a diagonally extending groove therein, a downwardly depending portion on the movable section, adapted to enter said groove, the fixed section being formed of a rectangular plate having a portion of one side cut away, and forming a diagonally extending wall terminating at one end at a point intermediate the longitudinally extending edges of the plate, and terminating at the other end adjacent the front edge of the plate, the fixed section having a rail gripping jaw formed between the latter terminus of the diagonally extending side wall and the front edge of the plate, a rail gripping jaw on the movable section, the movable section having formed thereon a sloping surface presenting a driving head, and an abutment on the stay adapted to bear against a railway tie, substantially as described.

3. In a railway rail stay, the combination of a fixed and a movable section, the fixed section having a diagonally extending groove therein, a downwardly depending portion on the movable section, adapted to enter said groove, the fixed section being formed of a rectangular plate having a portion of one side cut away, and forming a diagonally extending wall, a rail gripping jaw on the fixed section, the movable section having a portion of one side cut away, a rail gripping jaw on the movable section, the front wall of the fixed section having formed integrally therewith oppositely disposed, downwardly depending abutments, adapted to rest against a railway tie, the movable section having formed thereon a sloping surface presenting a driving head, substantially as described.

4. In a railway rail stay, the combination of a fixed and a movable section, the fixed section having a diagonally extending groove therein, a downwardly depending portion on the movable section, adapted to enter said groove, the fixed section being formed of a rectangular plate having a portion of one side cut away, and forming a diagonally extending wall terminating at one end at a point intermediate the longitudinally extending edges of the plate, and

terminating at the other end adjacent the front edge of the plate, the fixed section having a rail gripping jaw formed between the latter terminus of the diagonally extending side wall and the front edge of the plate, a rail gripping jaw on the movable section, an abutment on the stay adapted to bear against a railway tie, and a sloping surface on the movable section presenting a driving head, substantially as described.

be interlocked with one another, a rail gripping jaw on the movable section provided with an overhanging ledge having its forward end cut away to provide a clearance to permit of the canting of the movable section when it is initially positioned upon the rail, and a rail gripping jaw on the fixed section, substantially as described.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
