H. C. BENNETCH.

RAILWAY TIE.

APPLICATION FILED OCT. 10, 1907.

900,648. Patented Oct. 6, 1908.

Fig 1.

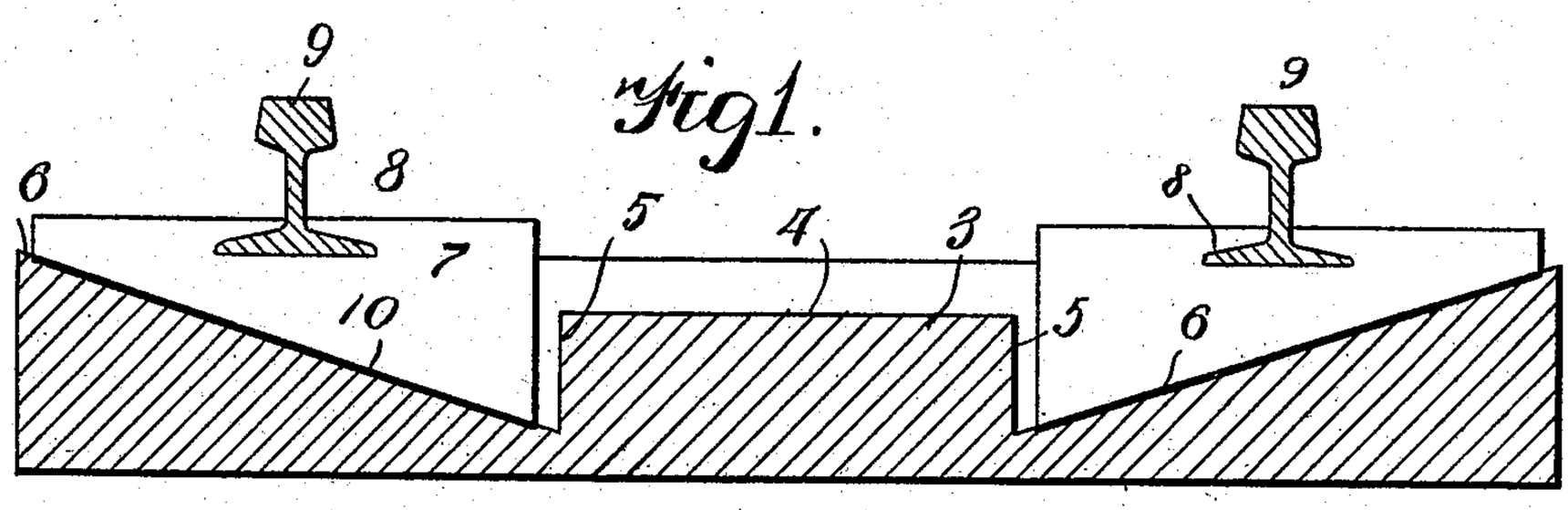


Fig 2.

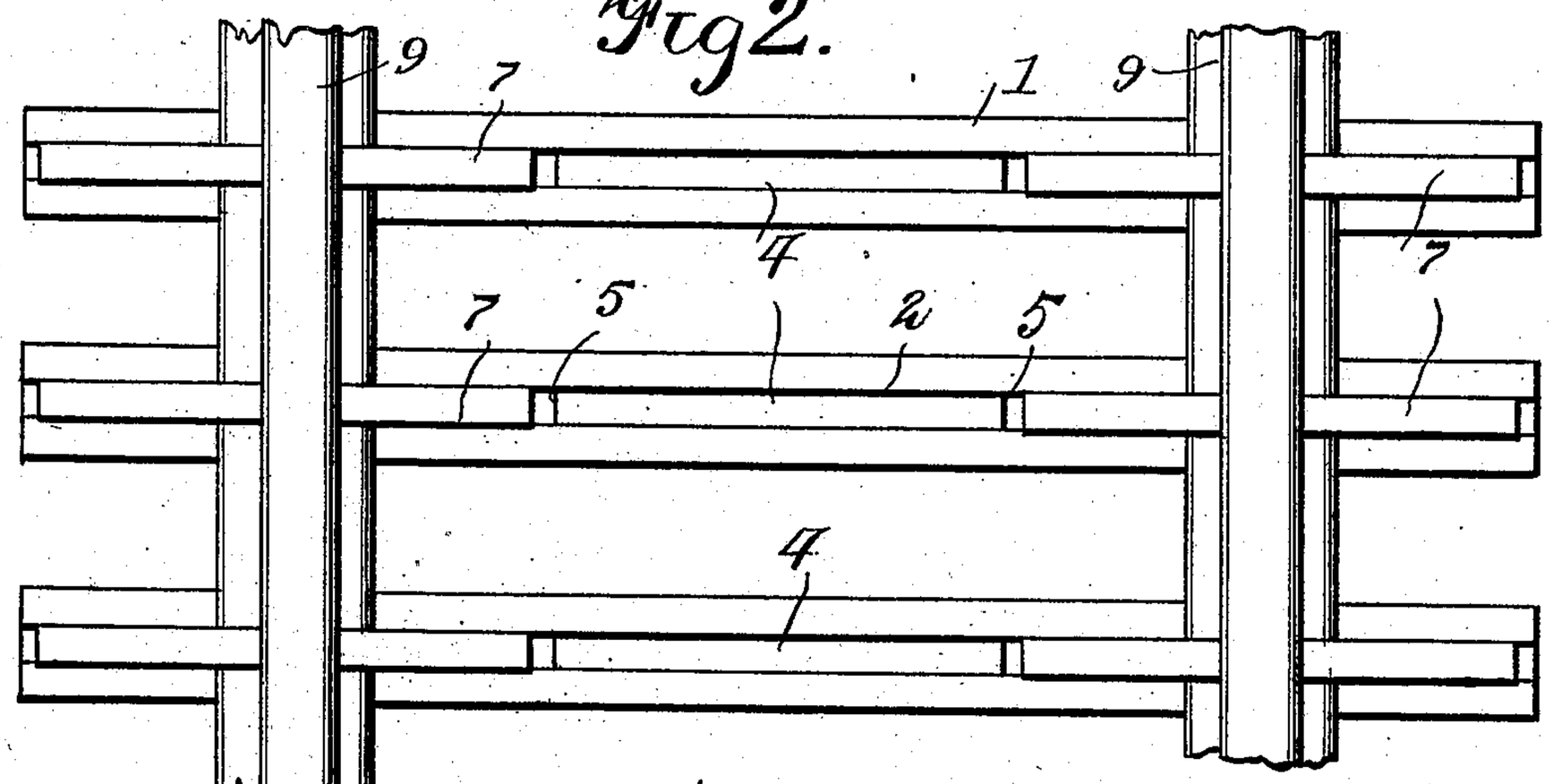
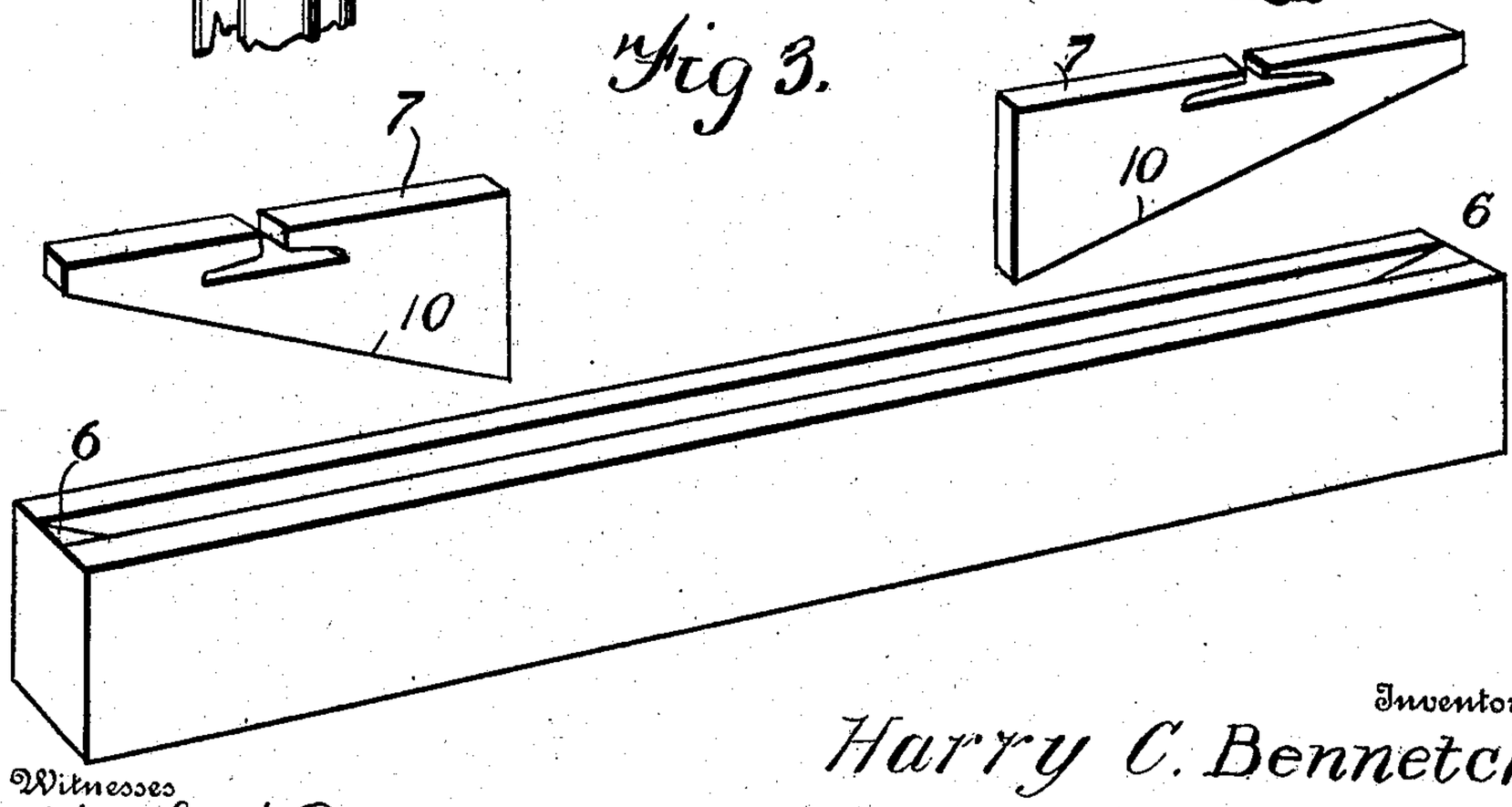


Fig 3.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY C. BENNETCH, OF COCALICO, PENNSYLVANIA.

RAILWAY-TIE.

No. 900,648. Specification of Letters Patent. Patented Oct. 6, 1908.

Application filed October 10, 1907. Serial No. 396,743.

To all whom it may concern:

Be it known that I, HARRY C. BENNETCH, a citizen of the United States, residing at Cocalico, in the county of Lancaster and State of Pennsylvania, have invented new and useful Improvements in Railway-Ties, of which the following is a specification.

The invention relates to an improvement in ties, and particularly to a tie and rail supporting means arranged in coöperation therewith.

The main object of the present invention is the provision of a tie and rail supporting means so relatively constructed that the rails may normally yield laterally under certain conditions, the arrangement of parts serving to normally and automatically maintain the proper gage of the rails.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a view in vertical section, partly in elevation, showing my improved tie and rail supporting means therefor. Fig. 2 is a plan of the same. Fig. 3 is a perspective of the tie and rail supporting means, the parts being shown separated.

Referring particularly to the drawings, in which is shown one form of the improvement, the tie 1 comprises an elongated body of any desired material or sectional contour. The tie is formed with a longitudinally disposed comparatively narrow recess 2 opening through the ends of the tie and having the side walls disposed in spaced parallel relation. The bottom wall of the recess is of peculiar shape, and it is in this particular shape that the present improvement resides. Centrally of the tie the bottom wall of the recess is formed to provide a central abutment 3, the upper wall 4 of which is preferably on a plane somewhat below the normal upper surface of the tie, and the end walls 5 of which abutment are disposed at a direct right angle to the upper surface of the tie. From the lower edges of the end walls 5 the base or bottom wall of the abutment projects at an outward and upward incline, as at 6, terminating at the ends of the tie in practical coincidence with the upper surface of the tie, as shown in Fig. 3. The inclined portions 6, which form the operative portions of the base wall of the recess, are disposed at a pronounced incline, as shown in Fig. 1, the end walls 5 of the central abutment providing limiting shoulders for the inner or lower ends of the inclined ways 6.

Coöperating with the tie are sleepers or chairs 7, formed at 8 for relatively fixed connection with the rails 9, said chairs being slightly less in thickness than the width of the recess 2, so that said chairs are adapted for insertion and free sliding movement within the recess. The chairs are of approximately right angle triangular shape, with the side 10 corresponding to the hypotenuse of a triangle having the same relative inclination as the ways 6 of the tie. The chairs are adapted to fit in the recess 2 of the tie, the inclined side 10 of the chair resting on the respective inclined ways 6.

The parts are so arranged that when the base flanges of the rails 9 rest upon the upper surface of the tie, said rails are properly gaged, it being obvious in this connection that the rails owing to the free movement permitted the chairs with respect to the tie may move outwardly from each other, but are limited as respects inward movement beyond that point at which the rails will engage the upper surface of the tie.

The advantage of the construction described is that either rail may yield outwardly under extreme pressure to increase the normal gage between the rails. Owing, however, to the fact that any outward yielding of a rail must force the chair 7 connected to that rail up the pronounced incline 6 of the tie and that this comparatively upward movement of the rail is resisted by the entire weight of the train, it is, of course, obvious that the rail will be so moved only under excessive pressure, as in the passing of a truck or set of wheels having a slightly wider gage than normal. Immediately the pressure is released the weight of the train will tend to instantly restore the normal gage.

The present invention is directed to a means for mounting railroad rails to permit their independent movement from each other while such movement is resisted by the weight of the vehicle traveling on the rails. The illustration as well as the detailed description thereof is intended simply as an example of an ordinary form of the invention, and it is to be understood that the invention, being broadly directed as above expressed is not to be restricted to the form shown and described, but is intended to cover any and all forms which may fall within the scope of the appended claims.

Having thus described the invention what is claimed as new, is:—

1. A railroad tie, and rail supporting seats connected with the tie, said seats being freely movable in a direction from the center of the tie and at an angle to the surface thereof.

2. A tie, and a rail supporting seat mounted for a free inclining sliding movement relative to the tie.

3. A tie, and rail supporting seats, said seats being freely movable longitudinally of the tie and at an incline relative to the surface thereof.

4. A tie formed with a longitudinal recess, the end portions of said recess forming ways inclined downwardly from the ends toward the center of the tie, and rail supporting seats freely movable on said ways.

5. A tie formed with a longitudinal recess, the end portions of said recess forming ways inclined downwardly from the ends toward the center of the tie, rail supporting seats in said recess, and rails carried thereby, said rails limiting the movement of the seats in one direction.

6. A tie formed with a longitudinal recess, the end portions of said recess forming ways inclined downwardly from the ends toward the center of the tie, rail supporting seats in said recess, and rails carried thereby, said rails limiting the movement of the seats in one direction, said seats being freely movable in the opposite direction.

7. The combination with a railroad tie, of a rail supporting element freely movable longitudinally of the tie, the path of movement of said element being at an angle to the surface of the tie.

8. The combination with a railroad tie, of a rail supporting element freely movable longitudinally of the tie, the element engaging surface of the tie being formed at an incline to the surface of the tie.

9. The combination with the rails of a track, of means for permitting automatic relative lateral movement of the rails to compensate for variation in the spacing of the wheels from normal gage.

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

HARRY C. BENNETCH.

Witnesses:
H. H. AUNGST,
MARY CROUSE.