

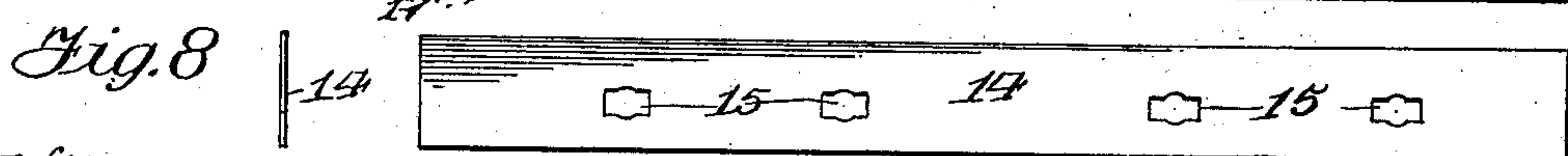
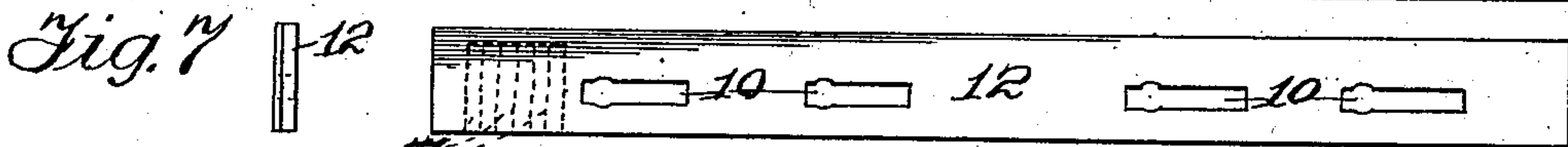
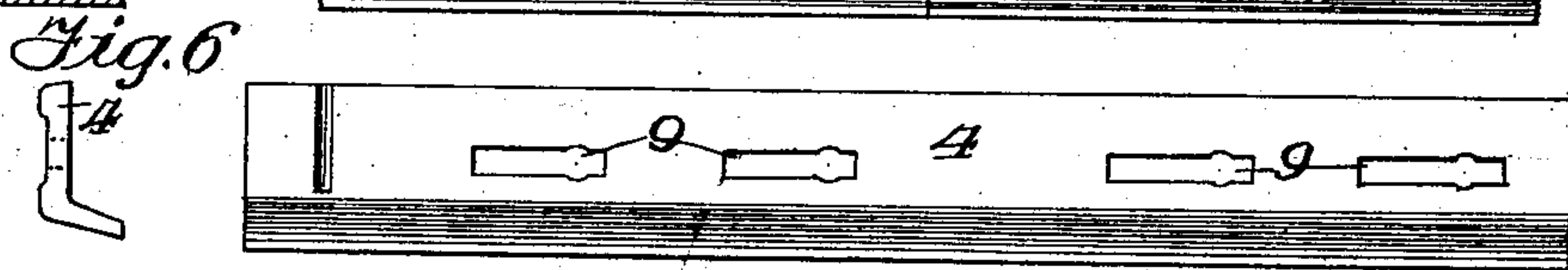
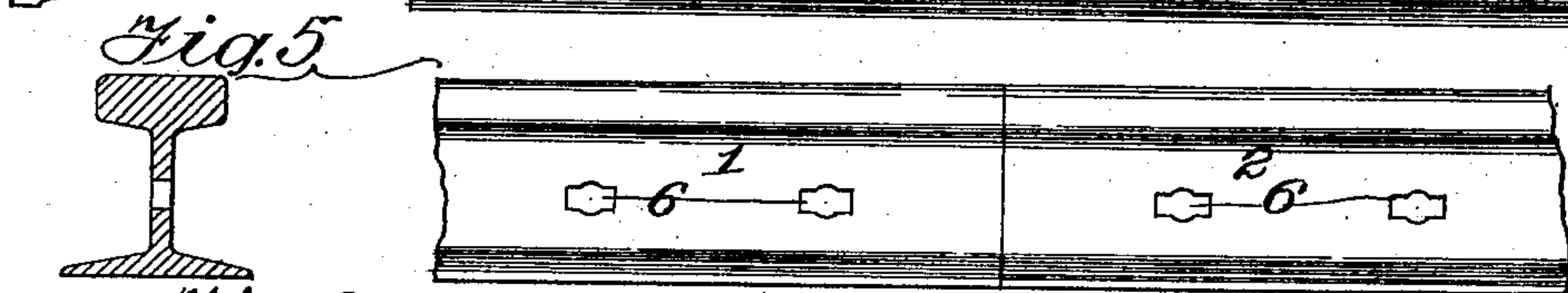
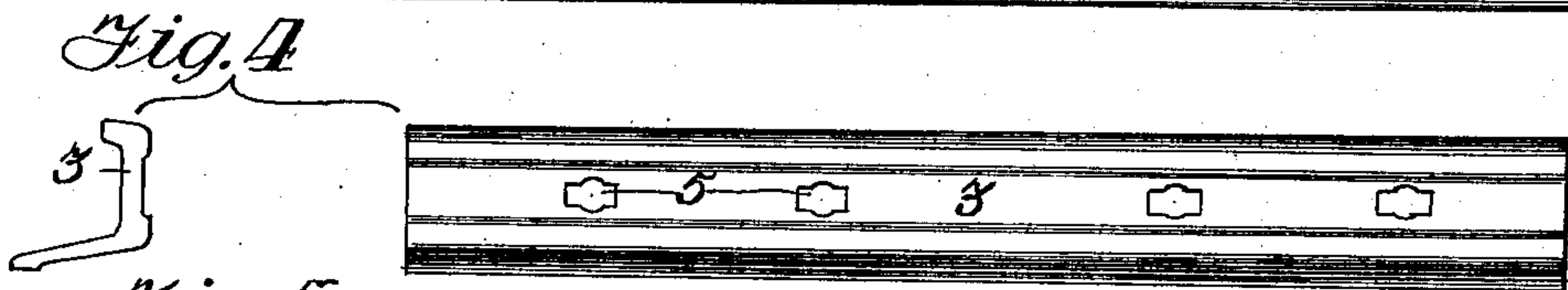
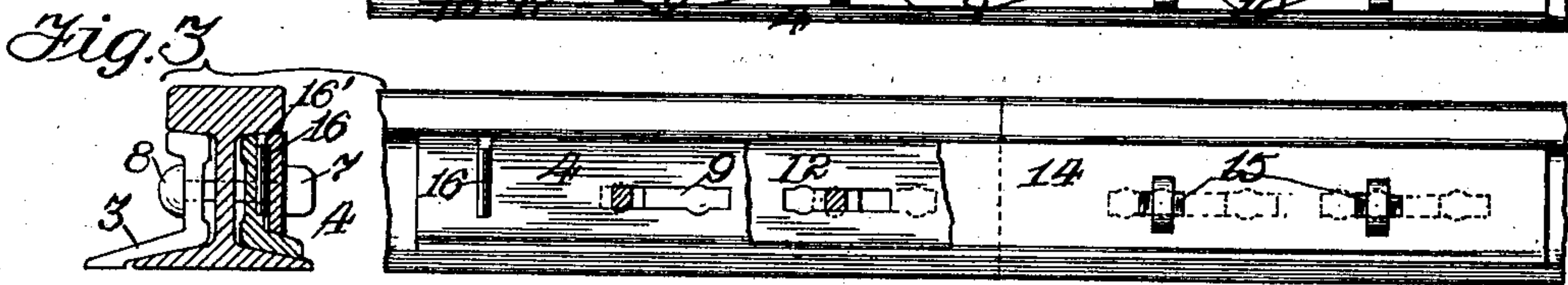
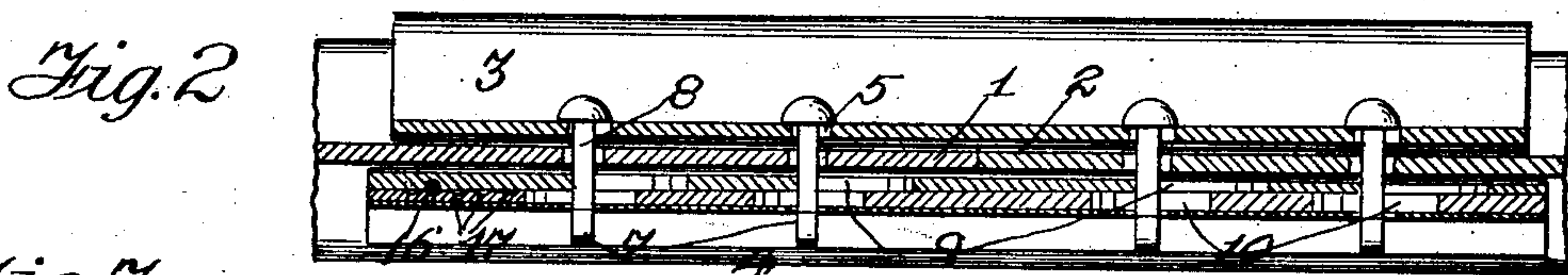
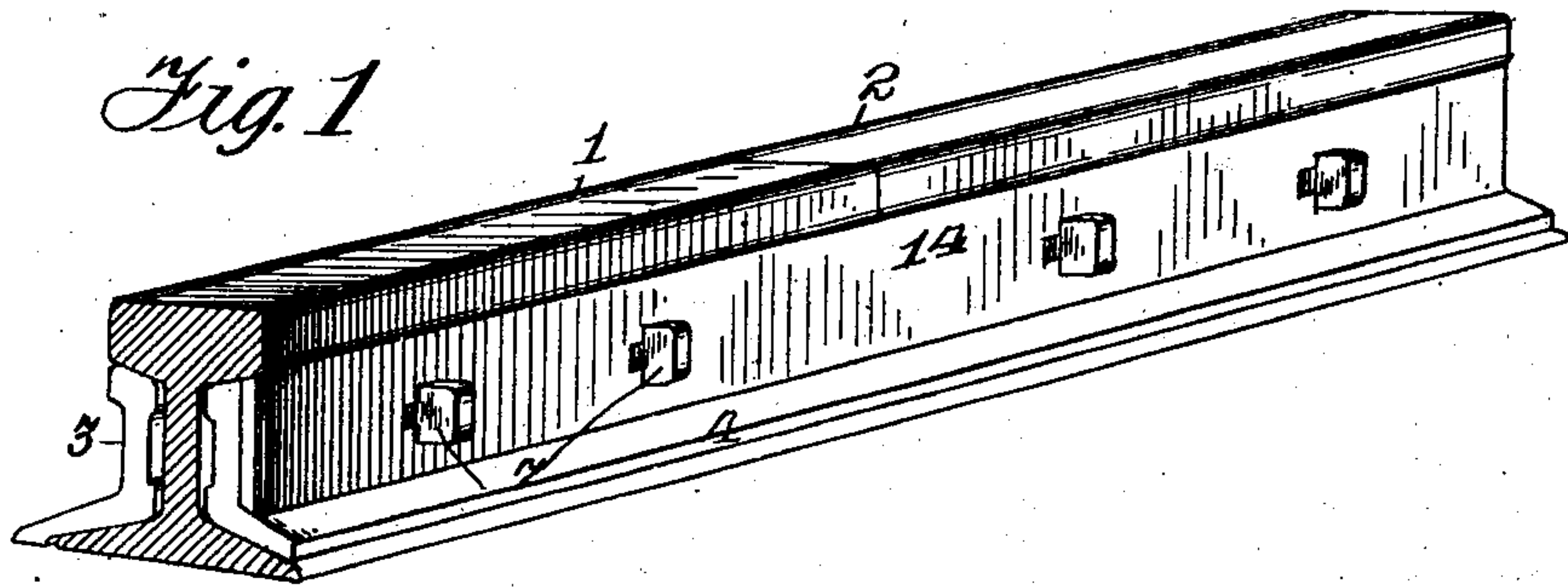
No. 744,633.

PATENTED NOV. 17, 1903.

C. H. SHOBERT.
RAIL JOINT.

APPLICATION FILED APR. 23, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES H. SHOBERT, OF BROOKVILLE, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 744,633, dated November 17, 1903.

Application filed April 23, 1903. Serial No. 153,969. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. SHOBERT, a citizen of the United States of America, residing at Brookville, in the county of Jefferson and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in rail-joints and relates more particularly to that class of joints which are adapted to be connected without nuts or other threaded means whereby the same would become disengaged by the vibration due to the passing of trains, &c.

The object of this invention is to provide a rail-joint which may be readily attached and will securely hold the two ends of the rails in position until such time as it is desired to disengage the same, when this result may be readily accomplished.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a detail perspective view of the end sections of two rails with my improved joint applied thereto. Fig. 2 is a sectional plan view taken through the web of the rail at a point where the securing means pass through the same. Fig. 3 is a side elevation and end section, the parts being broken away. Fig. 4 is an elevation looking toward the inside of the splice-bar used on one side of the rail and an end elevation thereof. Fig. 5 is a side elevation of the end sections of two rails, showing the apertures formed therein for the application of this joint and a section thereof. Fig. 6 is a side elevation of the splice-bar used on the other side of the rail and an end elevation thereof. Fig. 7 is a side elevation of the locking-gib and an end elevation thereof. Fig. 8 is a side elevation of the washer and an end elevation thereof.

In the accompanying drawings, 1 and 2 indicate the ends of the rails which are to be joined, and 3 indicates the splice-bar which is used on one side of the rail, a splice-bar 4

being used on the opposite side. The rails 1 and 2 and splice-bar 3 are provided with apertures 5 6, which are of an oblong character for the purpose of permitting the heads 7 of the bolts 8 to pass therethrough, the shank of said bolts being substantially square in cross-section. These apertures 5 and 6 are of only sufficient length to permit the head 7 of these bolts to pass through the same when it is in the horizontal position; but the elongated apertures 9 and 10, formed in the other splice-bar 4 and the locking-gib 12, respectively, are of considerably greater length for the purpose to be more fully hereinafter described. The washer 14 has apertures 15, which are of the smaller form, and in all of the apertures 5, 6, 9, 10, and 15, at a point intermediate their length, an enlarged portion is provided whereby the square shank of the bolts 8 may be turned or revolved therein; but the balance of said apertures are of a sufficient smallness to prevent the bolt being turned when it is anywhere but in the center of said enlarged portion. In securing the parts together it is obvious that the enlarged portions of the apertures in the splice-bar 3, rails 1 and 2, splice-bar 4, gib 12, and washer 14 must register, and bolts 8 then being passed therethrough and turned at an angle of approximately ninety degrees by moving any one of these plates so that registry of the enlarged portions of the apertures is broken the withdrawal of the bolt will be prevented. The exterior face of the splice-bar 4 is formed on a slight angle, and in the partially-circular recess formed in one end thereof a pin or roller 16 is placed. This recess is drilled in from the upper edge of the splice-bar and extends only a sufficient distance downward to a little more than contain the said roller. The gib 12 has its rear face formed on an angle similar to that on the face of the splice-bar, and at the end corresponding with the end at which the roller is placed in the splice-bar a series of corrugations 17 are formed, these corrugations extending from the bottom of the gib upwardly to a distance just sufficient to cover the upper edge of the roller 16, thus leaving a wall or flange 16' to hold the roller 16 in position.

In placing this joint in suitable position for connecting two rails the splice-bar 3 is placed

at one side of the rail, (preferably the inside,) splice-bar 4 at the opposite side of the rail, and the gib 12 is placed on the front of the splice-bar 4 and washer 14 placed against gib 12. When in this position, the enlarged portion of the apertures 5, 9, 10, and 15 will register with the apertures in the rails. The bolts 8 are then placed through with the flat heads lying horizontally, and these bolts are then given a one-quarter turn, bringing the heads 7 to a vertical position and locking the bolts. The washer 14 is then moved longitudinally, so as to engage the shanks of said bolts in a manner similar to the engagement of bar 3. The angle-bar 3 is then moved longitudinally from right to left, so as to engage the square shanks of the bolts in the elongated apertures. The splice-bar 4 is then moved longitudinally from left to right, so as to engage the square shanks of the bolts in the smaller part of its elongated apertures, and the gib 12 is moved longitudinally in the opposite direction, or from right to left, so as to engage said square shanks of the bolts in similar apertures of the gib, the bar 4 and gib 12 being moved alternately, and the angle of approximately ninety degrees on which their faces are formed will cause the distance between the two outer faces of bar 3 and washer 14 to be increased, said parts being held against the rail, thereby tightening up on the bolts should they be in place. As placed in position the washer would be over the gib and the said relative movements of the washer, the splice-bars 3 4, and gib 12 would cause registry between the several apertures to be broken, thereby preventing the turning of the bolts, and the relative movement of the splice-bar 4 and gib 12 would draw up and lock the splice-bars and bolts, thereby obtaining a tight and secure joint.

It is of course necessary that the gib and splice-bars be locked in any relative position at which they may be placed, and this is done by means of pin 16, which engages one of the corrugations 17 when the said gib is forced over the splice-bar 4.

The washer 14 is placed over the gib for the purpose of taking up the wear consequent upon the friction of the heads of the bolts 8, and said washer also permits the gib to be more easily moved to its position.

While I have shown and described my invention in detail as practiced by me, yet it will be understood that various slight changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a rail-joint, the combination of a splice-bar having elongated apertures formed therein, the central portion of said apertures being enlarged, rails having correspondingly shaped and located openings, a second splice-

bar, the outer face of which is cut on a longitudinal angle and near the tapered end of which is formed a partially-circular opening extending from its upper edge downward, said second splice-bar having elongated apertures formed therein, said apertures having an enlarged portion positioned correspondingly with the enlarged portions of the apertures in the first-mentioned splice-bar, a pin or roller fitted within the partially-circular opening of the second-mentioned splice-bar; a tapered gib provided with elongated openings having an enlarged portion corresponding with the enlarged portions of the apertures in the splice-bar, and having formed in its face near one end corrugations adapted to be engaged by the pin fitted in the second-mentioned splice-bar, a washer having apertures which have enlarged portions corresponding with those of the gib, and bolts having squared shanks and a flat head adapted to be passed through the several apertures in the different parts and secure the same in place when rotated, substantially as described.

2. In a rail-joint, the combination of a splice-bar having elongated apertures formed therein, the central portion of said apertures being enlarged, rails having correspondingly shaped and located openings, a second splice-bar, the outer face of which is cut on a longitudinal angle and near the tapered end of which is formed a partially-circular opening extending from its upper edge downward, said splice-bar having elongated apertures formed therein, said apertures having enlarged portions positioned correspondingly with the enlarged portions of the apertures in the first-mentioned splice-bar, a pin or roller fitted within the partially-circular opening of the second-mentioned splice-bar, a tapered gib provided with elongated openings having an enlarged portion corresponding with the enlarged portions of the apertures in the splice-bar, and having formed in its rear face near one end corrugations adapted to be engaged by the pin fitted in the second-mentioned splice-bar, a washer having apertures which have an enlarged portion corresponding with those of the gib, bolts having squared shanks and flat heads adapted to be passed through the enlarged portions of the several apertures in the different parts, said shanks rotating in the enlarged portions of the apertures but being secured against rotation by the relative movement in opposite directions of the enlarged portions of the apertures in any of the different parts, whereby the square portion of the shank is held within the smaller portion of said apertures, said bolts when turned securing the several parts against lateral displacement, substantially as described.

3. In a device of the character described, the combination of splice-bars, a rail outside of which the splice-bars are adapted to be placed, one of said splice-bars having its outer face formed on a longitudinal angle and having formed in one end thereof a partially-

5 circular aperture, a pin adapted to be placed in said aperture, a tapered gib, one end of which has formed therein corrugations adapted to be engaged by the pin seated in the splice-bar, an elongated washer, bolts having square shanks and permanent heads, one of said heads being elongated and flattened and adapted to pass through apertures formed in the splice-bars, gib, washer and rails and rotated whereby to secure the same against lateral displacement, the said gib when being moved longitudinally in one direction with relation to the splice-bar against which it abuts drawing the splice-bars against the rail

through the action of the bolts, thereby securing said rail, said gib being held in its position to which it has been moved by the pin which is placed in the partially-circular aperture in the splice-bar and engaging the corrugations in said gib, substantially as described. 15 20

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

CHARLES H. SHOBERT.

Witnesses:

G. G. LOWRY,
JAMES B. CALDWELL.