

No. 694,754.

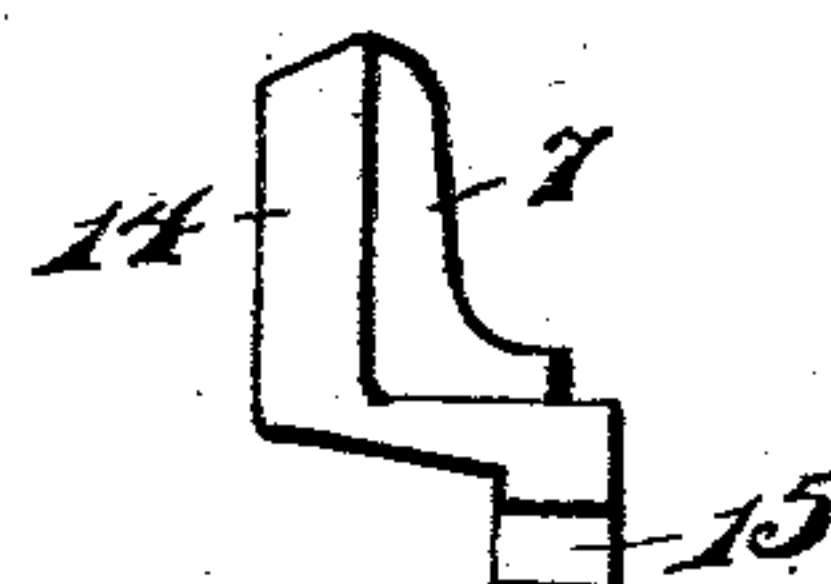
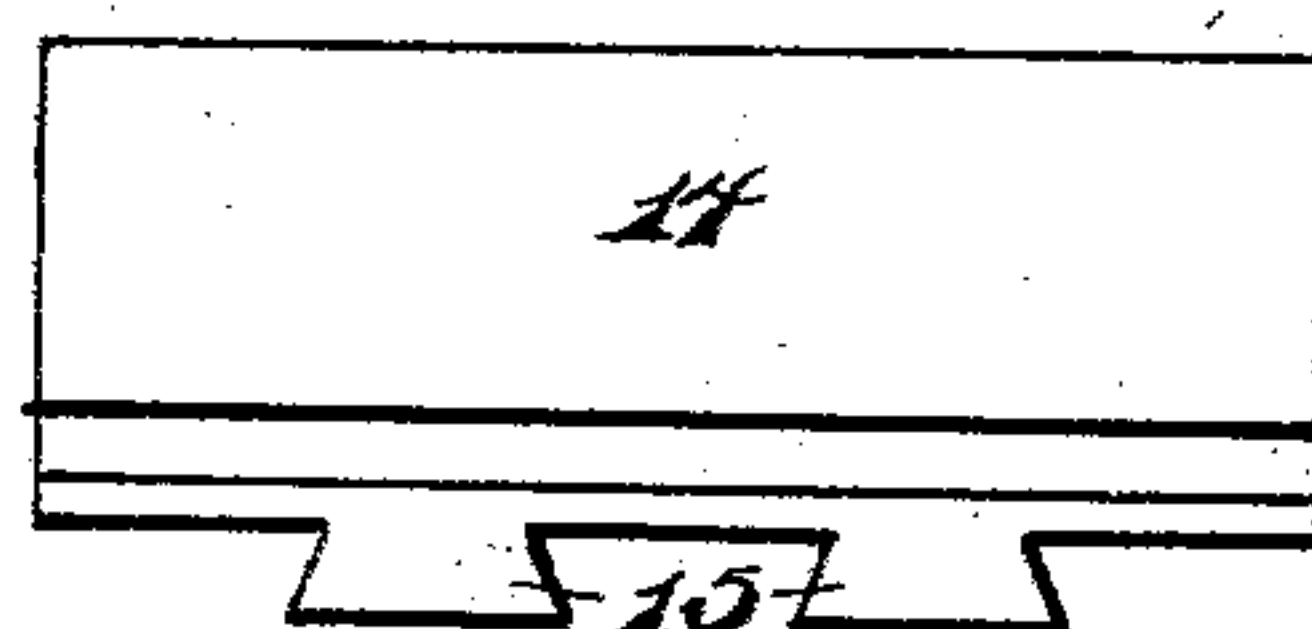
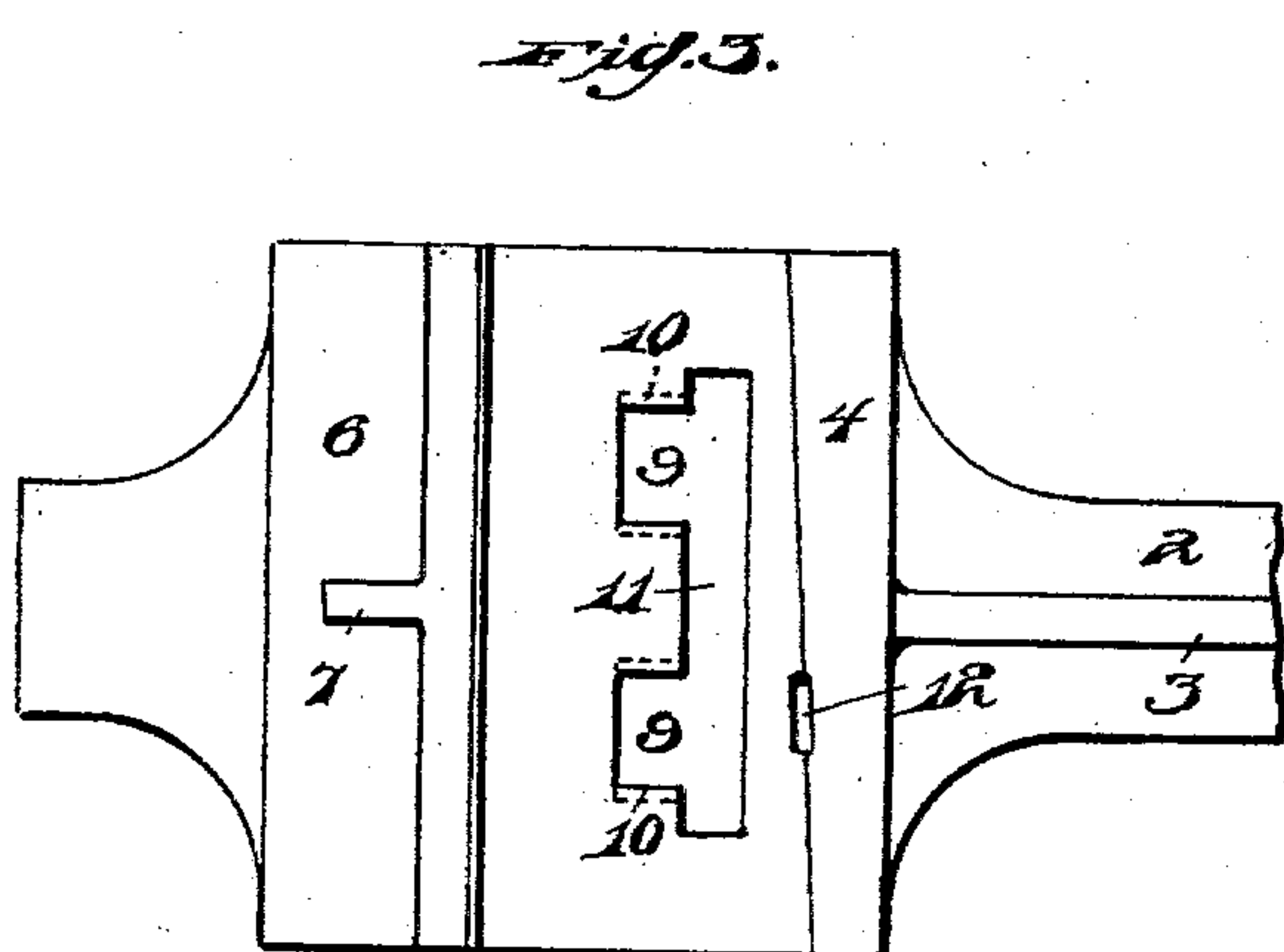
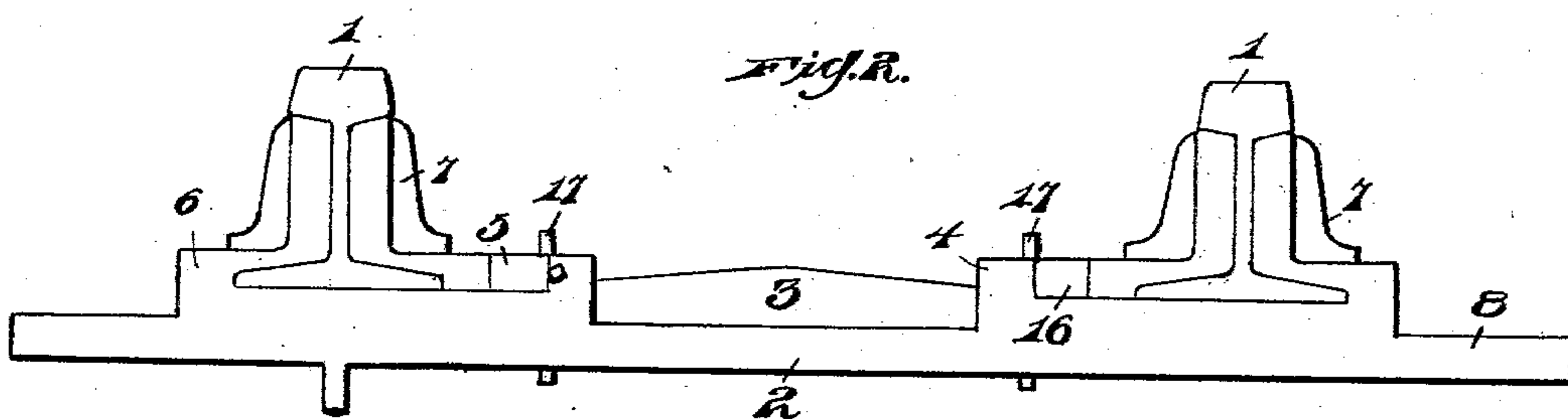
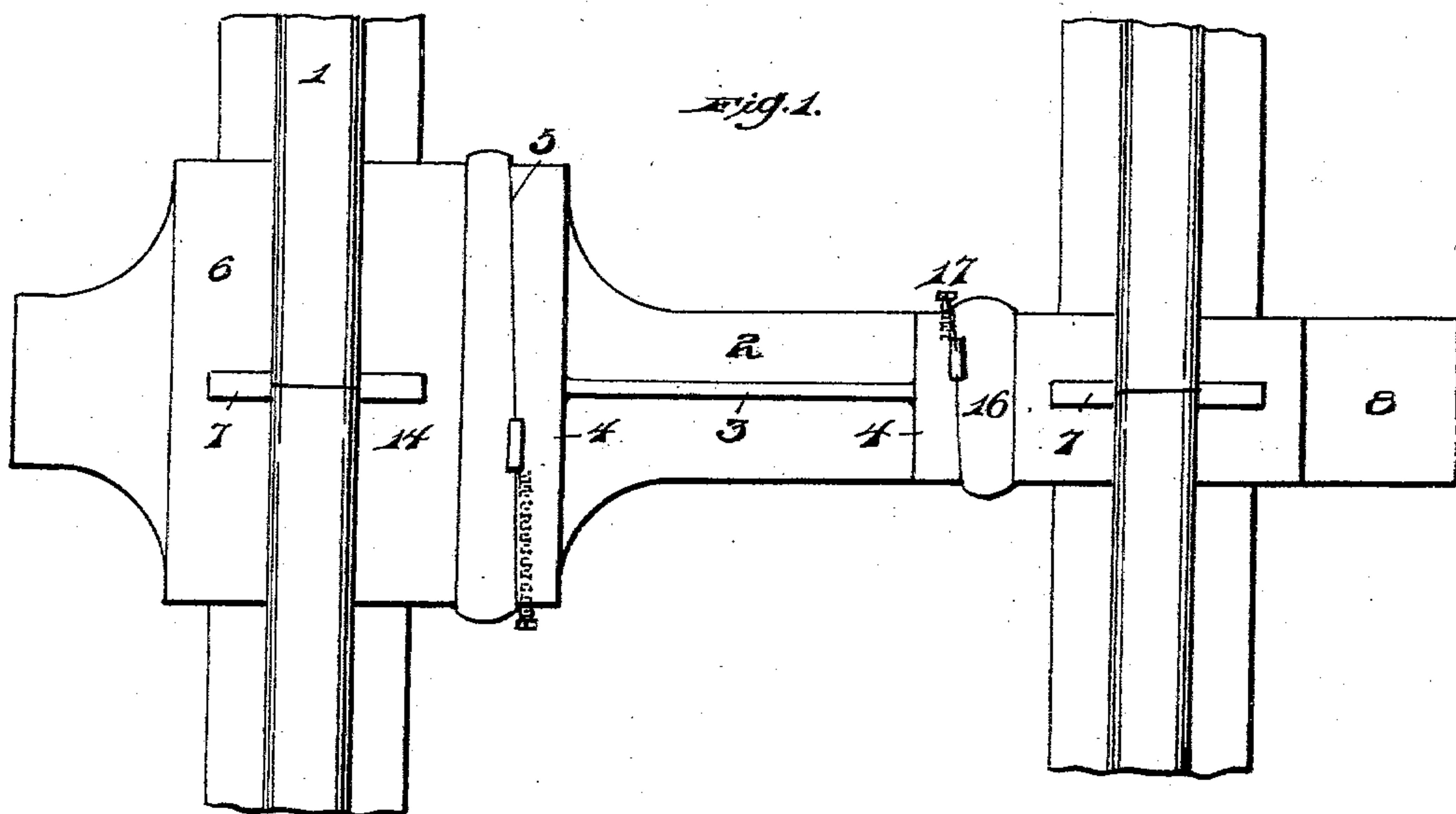
Patented Mar. 4, 1902.

J. W. KENNEDY.

RAIL JOINT.

(Application filed Sept. 25, 1901.)

(No Model.)



WITNESSES:

WITNESSES:
J. P. Appleman,
E. E. Potter,

INVENTOR

J. W. Kennedy.

BY *H. Everett & Co.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH WILSON KENNEDY, OF DUQUESNE, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 694,754, dated March 4, 1902.

Application filed September 25, 1901. Serial No. 76,456. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WILSON KENNEDY, a citizen of the United States of America, residing at Duquesne, in the county of Allegheny 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 wherein the use of nuts and bolts is entirely dispensed with.

The present invention aims to construct a rail-joint of the above-described class that will allow for the expansion and contraction of the rails, caused by the difference in temperature; furthermore, provide novel means that will allow the rails to be easily removed and replaced when desired.

The invention further contemplates to construct a rail-joint that will be extremely simple in construction, strong, durable, and comparatively inexpensive to manufacture; furthermore, one that will be highly efficient in its use.

The invention further aims to construct a steel tie and rail-joint combined that will balance the rails and cushion the same.

The invention still further aims to construct a locking mechanism in the interior of the rails that may be easily removed and to provide a section of chair on the outer sides of the tie that will prevent the rails from spreading.

With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

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

Figure 1 is a top plan view of two rails having my improved tie and rail-joint attached thereto. Fig. 2 is an end view thereof. Fig. 3 is a top plan view of a portion of the tie, showing a portion of the chair. Fig. 4 is a

side elevation of the locking fish-plate. Fig. 5 is an end view thereof.

In these drawings, the reference-numeral 1 represents the rails. 2 represents the steel tie, extending transversely across the rails, said steel tie being provided centrally with a strengthening-rib 3. The steel tie 2 further carries shoulders 4, 4, having an inclined inner face 5, which is inclined in the opposite direction from one another.

The reference-numeral 6 represents an integral chair portion formed with the tie, said chair portions being arranged against the outer webs of the rails and forming a seat for the base of the rail, said outer integral chair portions carrying strengthening-ribs 7. In the base of the tie are formed openings 9 9, which are beveled and form guideways 10, said openings 9 communicating with the slot 11. A wedge-shaped opening 12 is also formed in the base of the tie and extends partially down through the shoulder 4 at the inclined side 5.

The reference-numeral 14 represents locking fish-plates carrying dovetailed guides 15. These guides are adapted to be seated in the guideways 10 in the openings 9.

The reference-numeral 16 represents wedges which are driven in opposite directions between the shoulders 4 and locking-plates 14.

The reference-numeral 17 represents keys, which are also wedge shape and are adapted to be placed in the recesses 12 and serve to engage the wedges 16, thereby completing a substantial locking-joint.

The operation of my improved rail-joint and tie is as follows: The rails being placed in position in the integral chair-sections 6 on each side of the tie, the locking fish-plate is then applied, the dovetailed guides 15 riding in the inclined guideways 10 until the inner webs of the rails are engaged. The wedges 16 are then driven into position, thereby obtaining a wedge connection between the shoulders 4 and the inner side of the locking fish-plates. The keys 17 are then driven downwardly into position, thereby securely fastening the wedges 16 and completing the lock. In order to disengage the rails, the reverse operation will take place, when the rails may be easily

replaced. The herein-described rail-joint and steel tie will also act as a ballast, and by reason of the outward extensions 8 a displacement of the entire rail-section will be impossible.

The many advantages obtained by the use of my improved rail-joint will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various 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 with the rails, a steel tie having openings formed therein, chair-sections formed integral with said steel tie arranged at the outer ends thereof, locking fish-plates, dovetails secured to the lower face of said locking fish-plates en-

gaging said openings in said tie, wedges engaging the inner faces of said locking fish-plates and steel tie, and means whereby said wedges are securely locked in position, substantially as described.

2. In a rail-joint, the combination of the rails, a steel tie having openings or guides formed therein, integral chair-sections formed on the outer ends of said steel tie, locking fish-plates, dovetailed guides formed on the lower face of said locking fish-plates engaging said openings and guideways, wedges oppositely inclined engaging said locking fish-plates, and locking-keys engaging said wedges and steel tie, all parts being arranged and operating substantially as described and for the purpose set forth.

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

J. WILSON KENNEDY.

Witnesses:

JOHN NOLAND,
E. E. POTTER.