

No. 867,314.

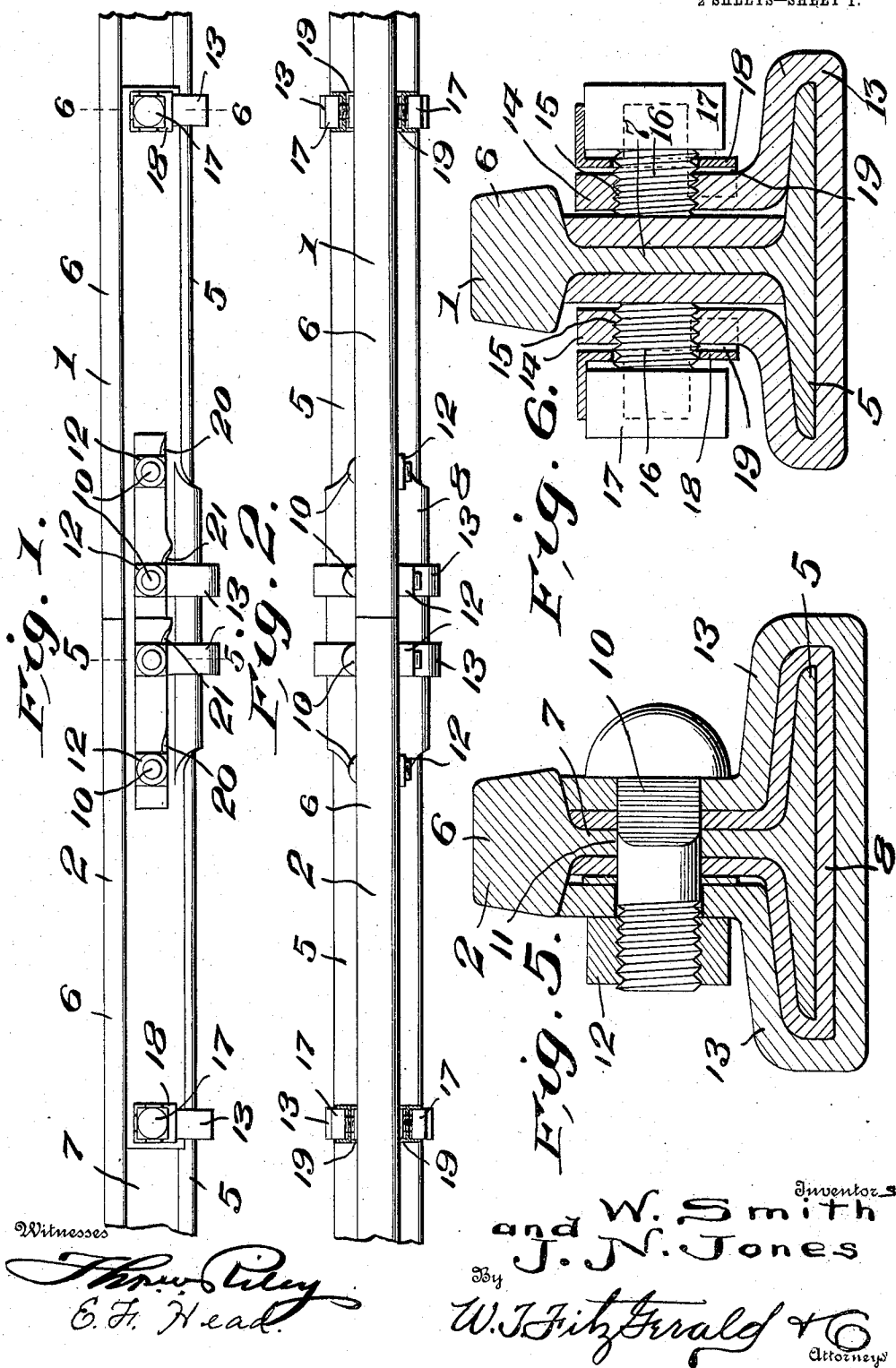
PATENTED OCT. 1, 1907.

W. SMITH & J. N. JONES.

COMBINED FISH PLATE AND RAIL LOCK.

APPLICATION FILED MAY 22, 1907.

2 SHEETS—SHEET 1.



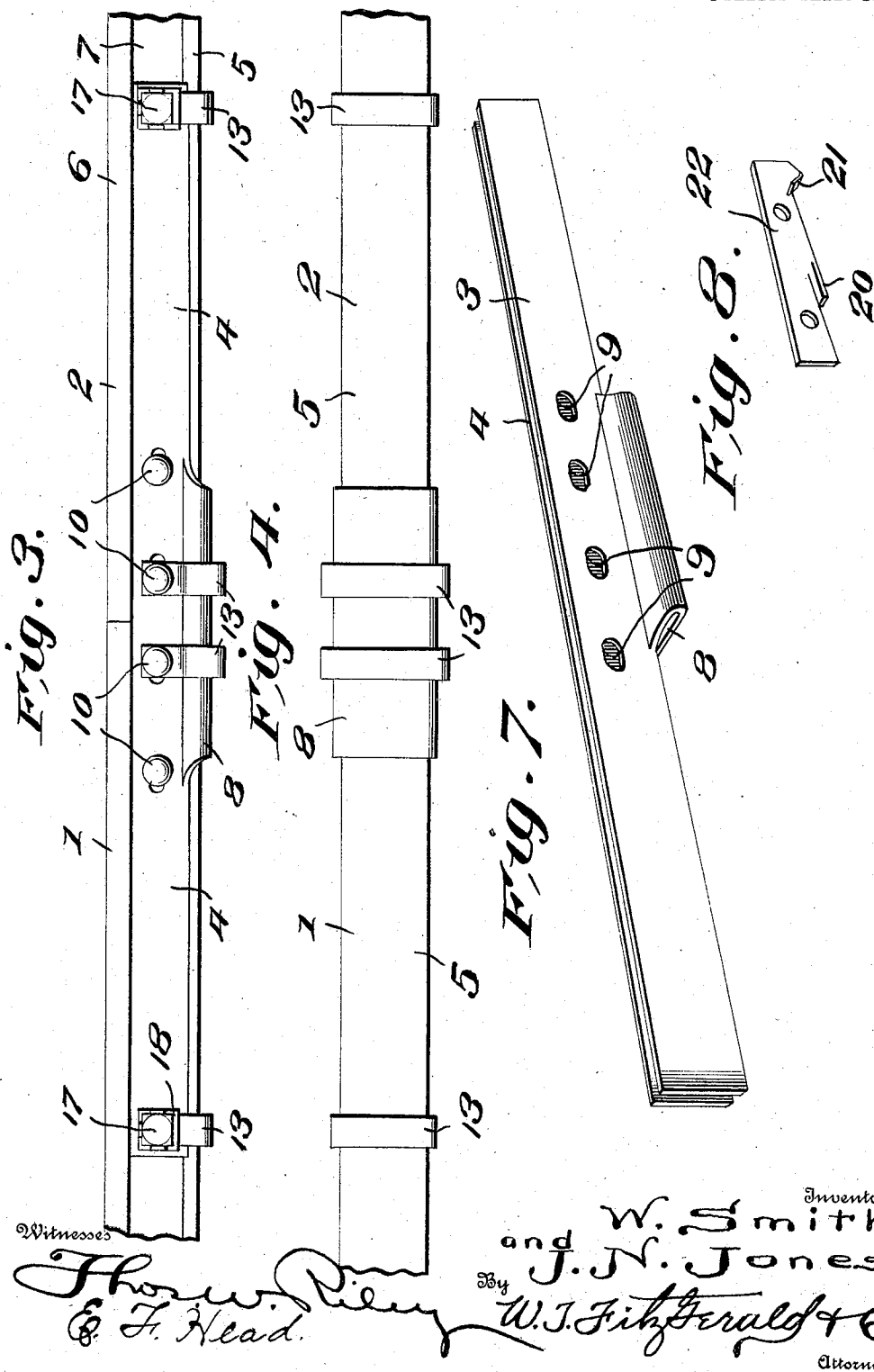
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Witnesses

Thomas Riley
& F. Head.

Inventors
W. Smith
and J. N. Jones
By W. J. Fitzgerald & Co.
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM SMITH AND JAMES N. JONES, OF BASTROP, LOUISIANA.

COMBINED FISH-PLATE AND RAIL-LOCK.

No. 867,314.

Specification of Letters Patent.

Patented Oct. 1, 1907.

Application filed May 22, 1907. Serial No. 375,071.

To all whom it may concern:

Be it known that we, WILLIAM SMITH and JAMES N. JONES, citizens of the United States, residing at Bastrop, in the parish of Morehouse and State of Louisiana, have invented certain new and useful Improvements in a Combined Fish-Plate and Rail-Lock; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to new and useful improvements in combined fish plates and rail locks, and our object is to provide means for securely locking the meeting ends of the rails together and form a rigid connection therebetween.

A further object is to provide means for holding the parts of the device in engagement with the rails and a still further object is to provide means for locking the nuts upon the bolts employed in connecting the several parts of the device to the rails.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings which are made a part of this application, Figure 1 is a side elevation of the meeting ends of track rails showing our improved device secured thereto. Fig. 2 is a top plan view thereof. Fig. 3 is a plan view as seen from the opposite side of the rails from that shown in Fig. 1. Fig. 4 is a bottom plan view of the track rails and parts secured thereto. Fig. 5 is an enlarged sectional view as seen on line 5-5, Fig. 1. Fig. 6 is a similar view as seen on line 6-6, Fig. 1. Fig. 7 is a perspective view of the combined fish plates and support, and, Fig. 8 is a detail perspective view of one form of nut lock employed in connection with our improved device.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 and 2 indicate rails which may be of the usual or any preferred form and of that class employed for supporting rolling stock.

It has been the custom heretofore in securing the meeting ends of the track rails together, to employ separate fish plates for each side of the rails and secure the same to the rails by disposing bolts through the rails and plates, but it has been found that the constant jar of the trains passing over the joints in the rails, causes the fish plates to yield, which will result in the meeting ends of the rails becoming flattened, or bent, so that a jar is occasioned when the trains pass thereover, and to this end, therefore, we provide our improved form of fish plates and support, which consists of a pair of plates 3 and 4, which extend longitudinally of the rails and between the base 5 and head 6 of the rails, the inner faces of said plates engaging the web 7 of the rails.

At the point of juncture of the two rails, the plates 3 and 4 are connected together by means of a supporting plate 8, said plate being formed integral with the lower edges of the plates 3 and 4, and so arranged as to receive the base 5 of the rails, and, in order to positively secure the plates to the rails, that portion of the plates immediately above the supporting plate 8 is provided with registering openings 9, through which extend bolts 10, said bolts also extending through bores 11 in the web of the rails, said bolts being held in position in said openings by means of nuts 12, and the openings 9 in the plates are slightly oblong to allow for contraction and expansion of the rails and plates.

The extended ends of the plates 3 and 4 are held in position between the base and head of the rails by means of stirrups 13, said stirrups being arranged to receive the base of the rail, and the arms 14 of the stirrups are provided with threaded openings 15, through which extend binding bolts 16, the inner ends of said bolts being threaded to enter the threaded openings 15, while the outer ends thereof are provided with heads 17, so that said bolts can be readily rotated, and after the bolts have been properly set against the ends of the plates 3 and 4, said bolts are held against rotation by means of locks 18, the body of which is provided with an opening, through which the binding bolts extend, and in order to prevent the locks from turning upon the bolts, the body of the lock is provided with a plurality of flanges 19, the flanges at the lower end of the locks extending into engagement with the stirrups 13, while the flanges at the upper ends of the locks are extended into engagement with the heads 17 of the bolts, thereby holding said bolts against rotation. A pair of stirrups 13 are also disposed around the supporting plate, and, in this instance, one of the bolts 10 extends through the openings 15 in the stirrups, said stirrups being placed adjacent the abutting ends of the rails, thereby additionally reinforcing the rails at this point.

The nuts 12 are locked on the bolts 10 by means of fingers 20 and 21 carried by locking plates 22, said plates being provided with openings to receive the bolts 10 and the fingers 21 are bent outwardly from the locking plates to extend beyond the edge of the stirrups and engage the nuts on the bolts extending through the stirrups.

In applying our improved device to use, the ends of the rails are first introduced between the plates 3 and 4 and are so arranged as to meet at a point midway the length of the supporting plate 8, the stirrups having been previously placed in position. The bolts 10 are then introduced through the plates and the rails and the nuts introduced on the ends thereof, after which the fingers 20 and 21 are bent into engagement with the nuts on the ends of the bolts, thereby securing the parts of the plates and rails together at the point of juncture of the rails, and after the parts are so secured,

the binding bolts 16 carried by the stirrups at the outer ends of the plates 3 and 4, are directed inwardly until the ends of the plates are positively clamped against the rails when the flanges on the locks engaging the
 5 binding bolts are bent into position to positively lock the binding bolts and prevent rotation thereof.

It will thus be seen that we have provided a very cheap and economical form of device for locking the ends of rails together and lending great rigidity thereto.
 10 It will further be seen that we have provided means for supporting the meeting ends of the rails so that the same will not become bent, or otherwise displaced, by trains passing thereover.

What we claim is:

15 1. The combination with the abutting ends of rails, having openings therethrough; of a pair of plates adapted to extend a distance at each side of the juncture point of said rails, a supporting plate at the longitudinal center of said first mentioned plates adapted to receive and sup-
 20 port the base of said rails, a plurality of stirrups engag-

ing the base of said rails, arms on said stirrups having openings therein and means carried by portions of said stirrups to bind the ends of said first mentioned plates to the rails.

2. The combination with rails; of means to secure and 25 brace the meeting ends of said rails, comprising a pair of parallel plates, bolts adapted to extend through said rails and central portion of the plates, a supporting plate below the meeting ends of said rails and integral with the par- 30 allel plates, a pair of stirrups surrounding said supporting plates and engaging bolts extending through said plates and rails, a stirrup at each end of said parallel plates having threaded openings therein, binding posts in said openings adapted to clamp the ends of the plates 35 against the rails and means to hold said bolts against rotation.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WM. SMITH.
 JAMES N. JONES.

Witnesses:

H. H. DALTON,
 J. E. LEWIS.