(No Model.)

2 Sheets—Sheet 1.

J. S. P. STRICKLER.

DEVICE FOR FISH PLATES.

No. 580,993. Patented Apr. 20, 1897.

Fig. 1

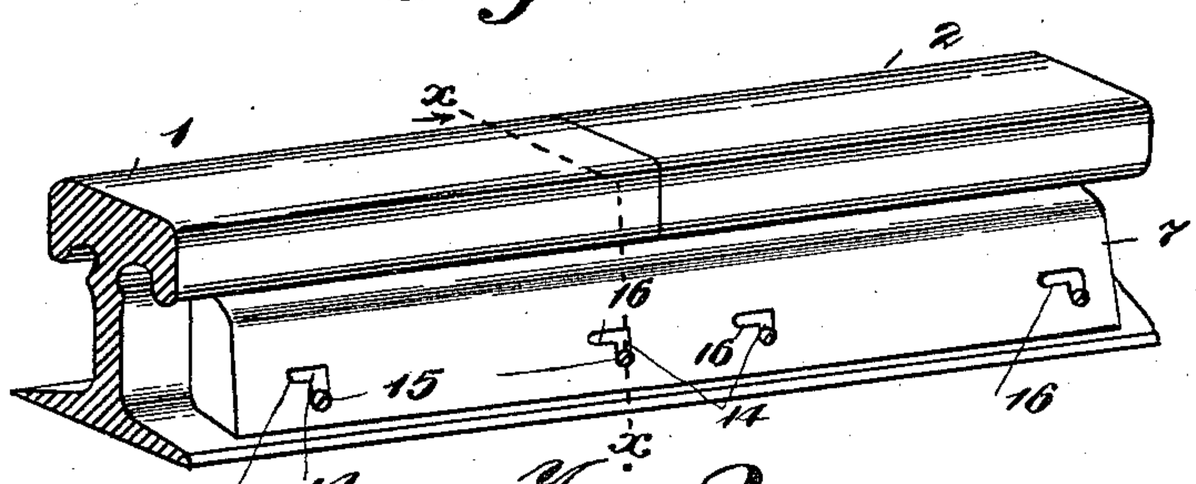


Fig. 2

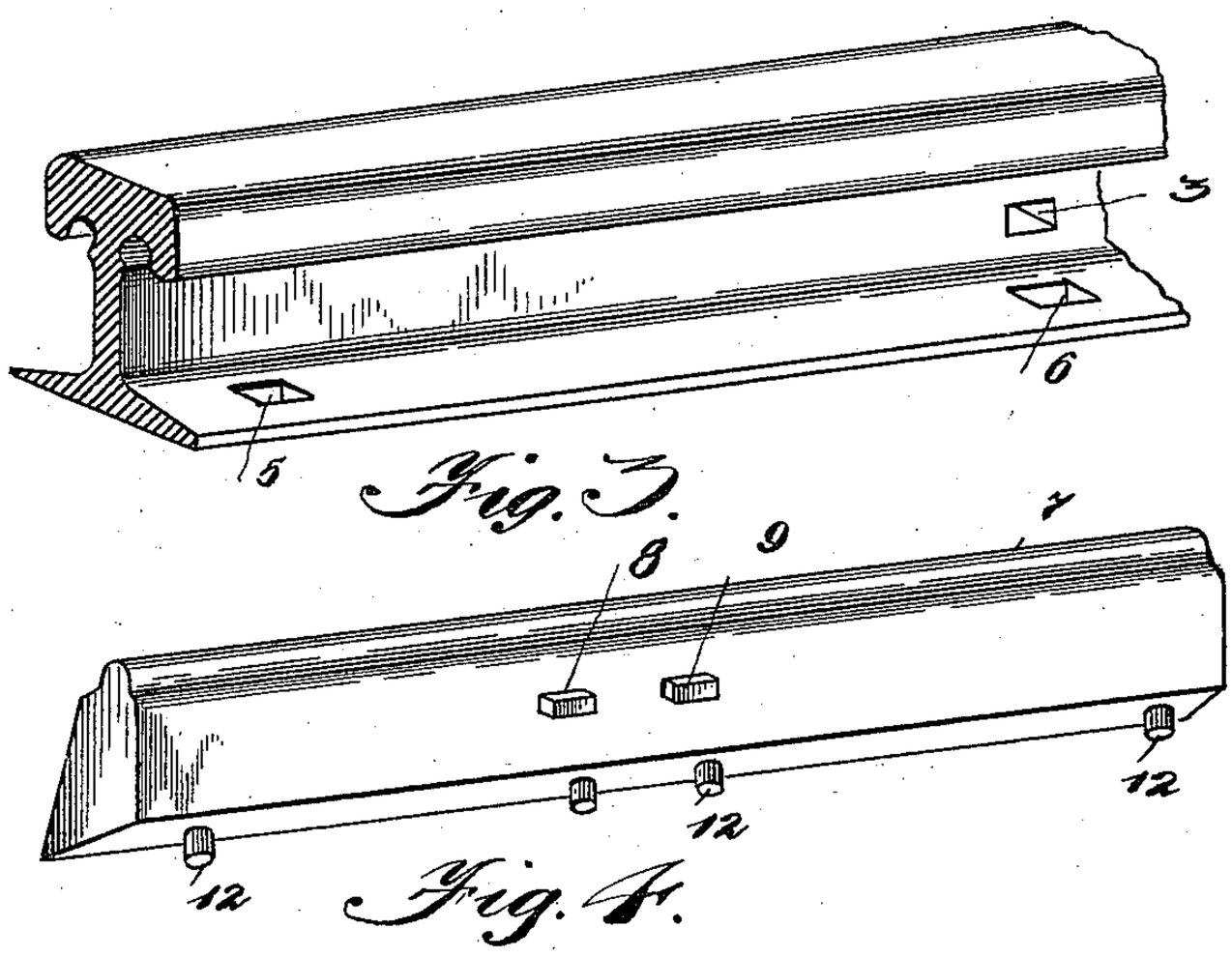
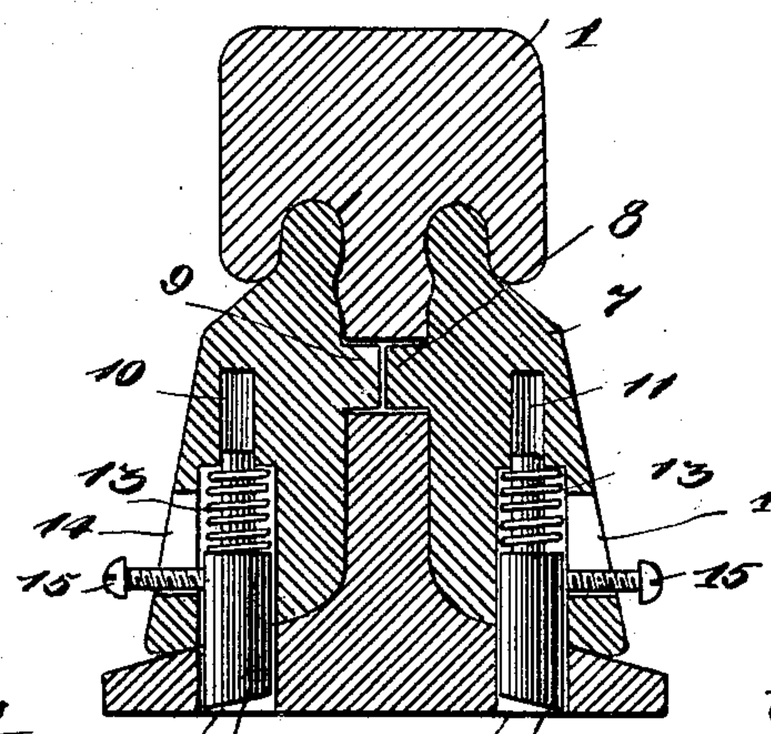


Fig. 3.

Fig. 4.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

J. S. P. STRICKLER.

DEVICE FOR FISH PLATES.

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Fig. 5

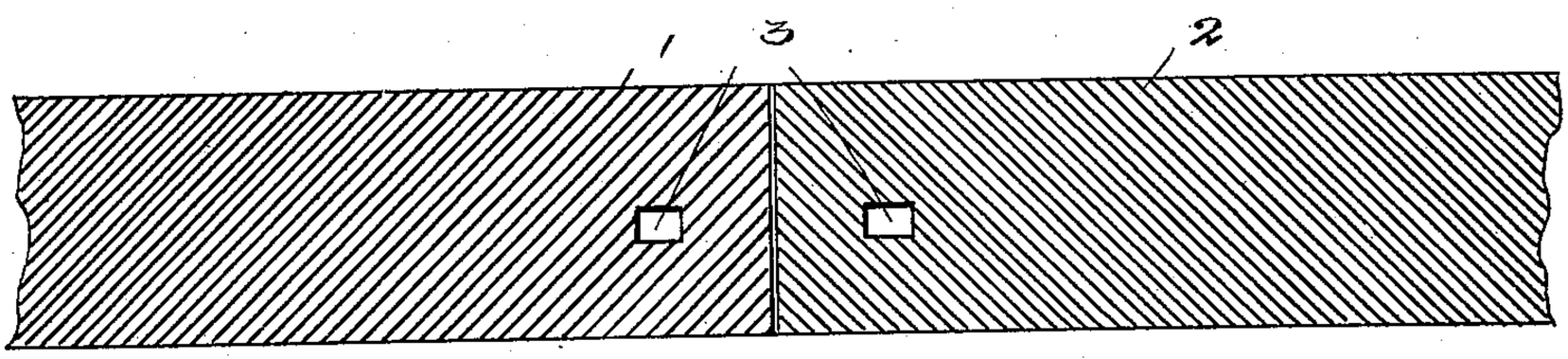


Fig. 6

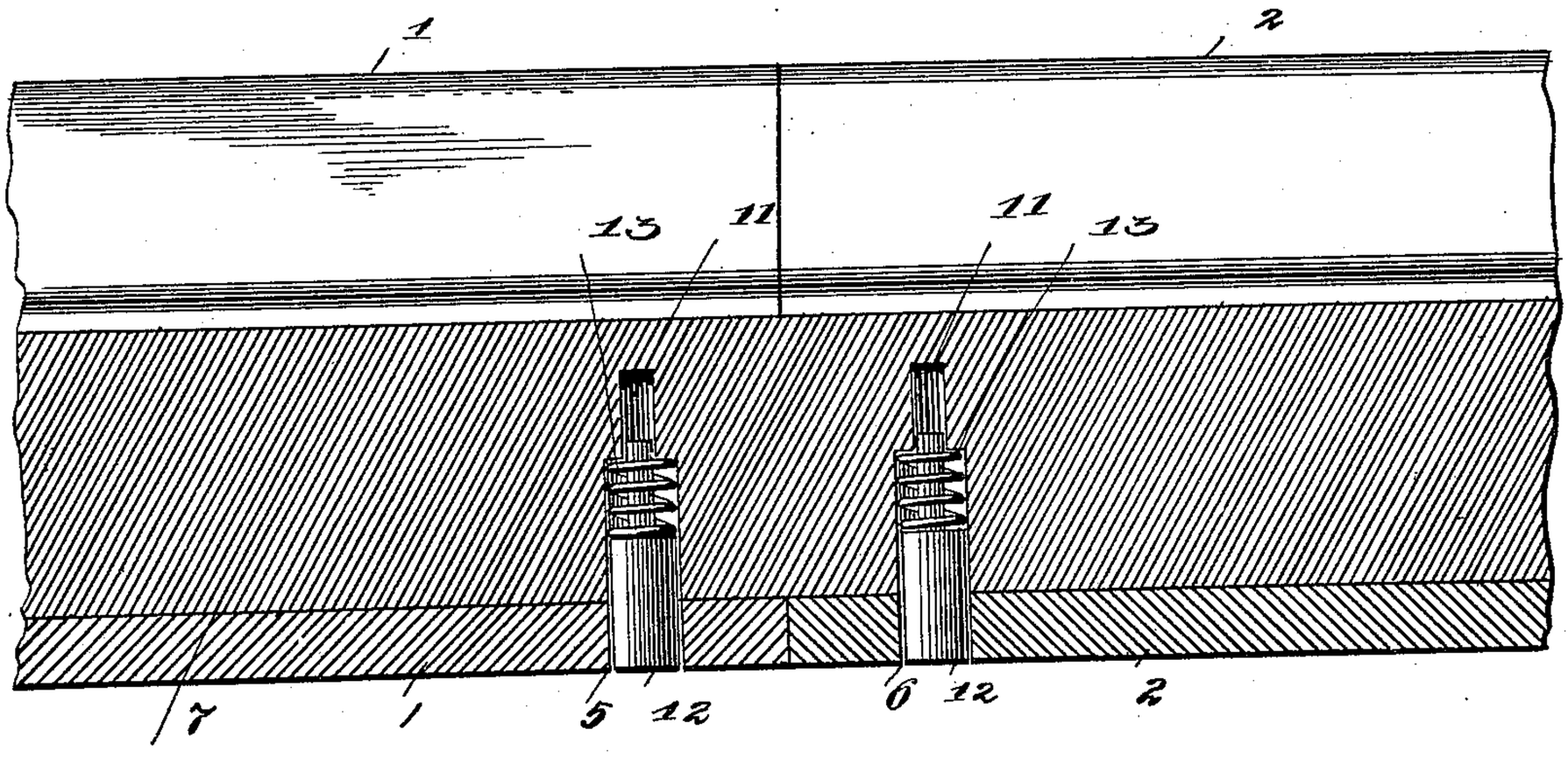
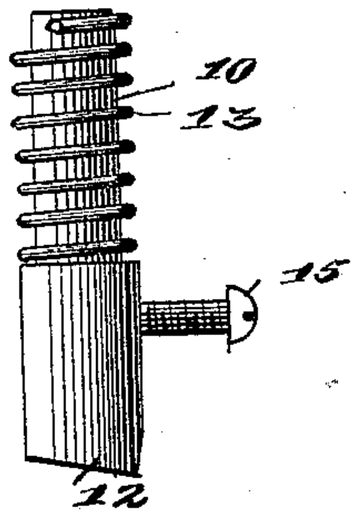


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

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DEVICE FOR FISH-PLATES.

SPECIFICATION forming part of Letters Patent No. 580,993, dated April 20, 1897.

Application filed September 12, 1896. Serial No. 605,671. (No model.)

To all whom it may concern:

Be it known that I, JACOB S. P. STRICKLER, a citizen of the United States, residing at Mifflinburg, in the county of Union and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Fish-Plates; and I 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.

My invention relates to certain new and useful improvements in devices for securing fish-plates in place against the webs of two adjacent rails without the employment of nuts on the ends of the securing-bolts.

The invention consists of a pair of railroad-rails having slots in the webs thereof adjacent to their outer ends, slots in the bases of said rails on the opposite sides of their respective webs, a fish-plate having lugs or projections on its inner face adapted to fit within the slots in the webs of said rails, and spring-actuated bolts adapted to fit within the slots in the bases of said rails.

In the accompanying drawings, forming part of this specification, Figure 1 represents a perspective view of the adjacent ends of two rails, with a fish-plate applied thereto illustrating my invention. Fig. 2 is a perspective view of one of the rails, with the fish-plate removed. Fig. 3 is a similar view of the fish-plate, showing the inner sides thereof; and Fig. 4 is a section on the line *x x* of Fig. 1, said section being taken through the slots in the web and base of one of said rails and the lugs and bolts on said fish-plate. Fig. 5 is a vertical longitudinal section through the adjacent ends of two rails, showing the slots extending through the webs thereof. Fig. 6 is a similar section through the fish-plate and the web of the rail, said section extending through the locking-bolts in said fish-plate. Fig. 7 is a detail view of one of the locking-bolts and the actuating-spring therefor.

Like reference-numerals indicate like parts in the different views.

The rails 1 2 are each provided with rectangular slots or openings 3 4, respectively, adjacent to their outer ends and are provided with similar rectangular slots or openings 5 6 in their bases on opposite sides of their webs. The fish-plate 7 has secured to or formed integral with the inner surface thereof lugs or projections 8 9, adapted to fit within the slots or openings 3 4 in the webs of the rails 1 and 2, respectively. Fitting within sockets 10 11 in the fish-plate 7 are locking-bolts 12 12, the same being normally urged downward by coil-springs 13 13, forcing said bolts into the slots or openings 5 6 in the bases of said rails. Leading into the sockets 12 12, upon the outside of the fish-plate 7, are L-shaped slots 14 14, and secured to the locking-bolts 12 12 are laterally-extending pins or screws 15 15, which move within the slots 14 and are adapted to bear against the shoulder 16, formed at the upper end of said slots.

From the foregoing description it will be seen that in order to secure the fish-plate 7 in place against the sides of the webs of the rails 1 and 2 it is merely necessary to insert the upper beveled edges of said fish-plate beneath the flanges of the rails, forcing the rectangular lugs or projections 8 9 into the slots or openings 3 4, and permit the bolts 12 12 to be forced downward by their springs 13 into the slots 5 and 6 in the bases of said rails. The said bolts are held in their locked positions by means of the springs 13 13, and the said fish-plate 7 is prevented from lateral displacement by the engagement of said bolts with the slots 5 and 6 and by the engagement of the upper beveled edges thereof with the under side of the flanges of the rails. Longitudinal displacement of the rails 1 and 2 is prevented by reason of the engagement of the lugs 8 and 9 with the slots 3 and 4 and by the engagement of the bolts 12 12 with the slots 5 and 6.

In order to remove the fish-plate 7, it is merely necessary to raise the bolts 12 12 by means of the pins or screws 15 thereon, the said pins or screws being held in their raised positions by their engagement with the shoulders 16, formed in the L-shaped slots 14.

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

1. The combination with two adjacent rails having slots in the webs thereof near their outer ends, of a fish-plate having lugs or projections on its inner face adapted to fit within said slots, and spring-actuated locking-bolts

for preventing the lateral displacement of said fish-plate, substantially as and for the purpose described.

2. The combination with two adjacent rails having slots in the webs thereof, near their outer ends, and slots in the bases thereof, of a fish-plate having lugs or projections upon its inner face adapted to fit within the slots in said webs, and spring-actuated locking-bolts adapted to fit within the slots in said bases, substantially as and for the purpose described.

3. The combination with two adjacent rails having slots or recesses in the webs thereof adjacent to their outer ends and slots in the bases of said rails, of a fish-plate whose upper beveled edge is adapted to fit beneath the flanges of said rails, lugs or projections on the inner surface of said fish-plate fitting within the slots in said webs, locking-bolts slidingly mounted in sockets in said fish-plate and adapted to fit within the slots in said bases, springs for normally urging said bolts downwardly and operating pins or handles on said bolts moving in L-shaped slots leading into said sockets, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JACOB S. P. STRICKLER.

Witnesses:

GEO. A. GUYER,

D. STRICKLER.