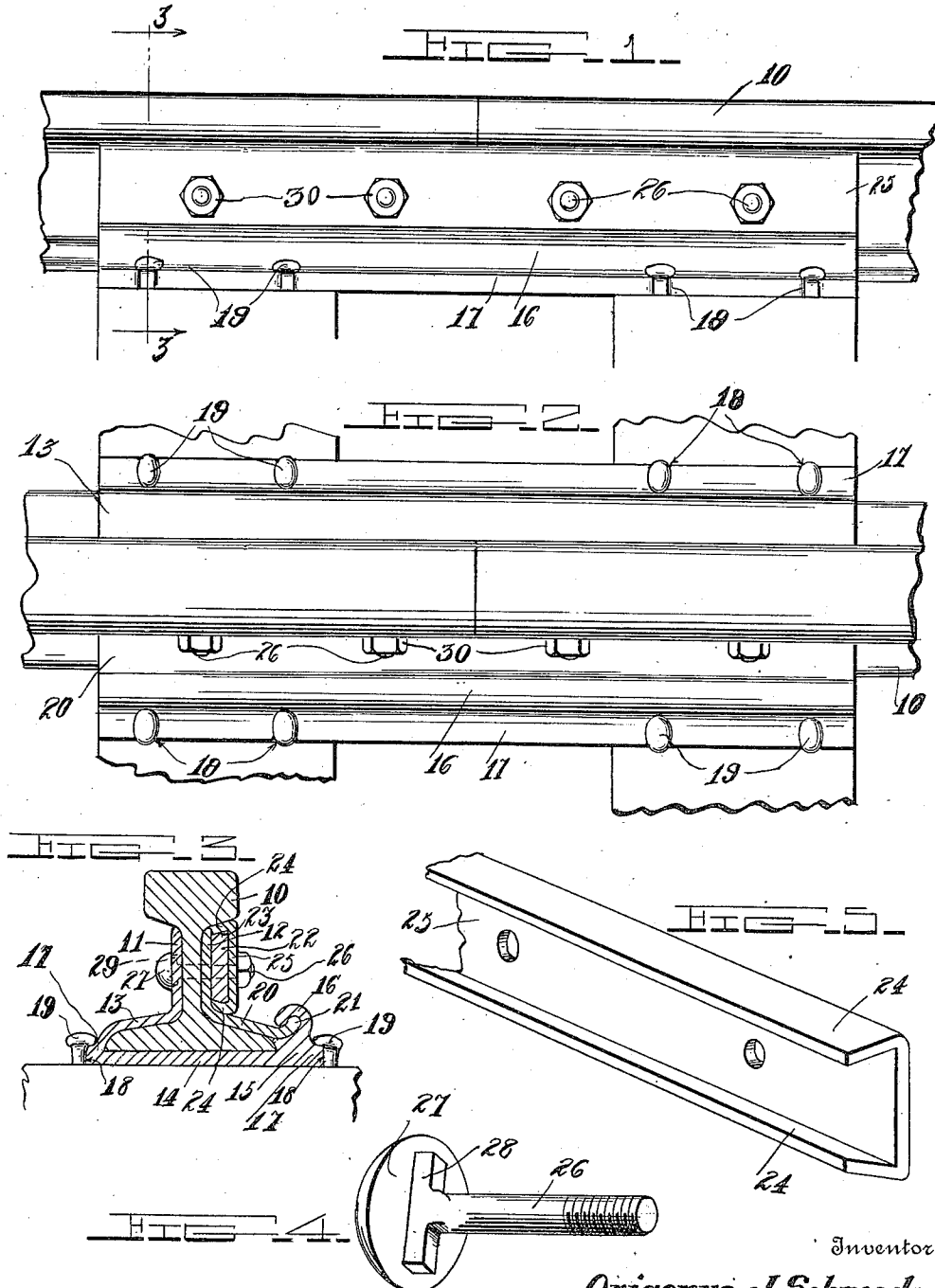


O. J. SCHROEDER.
RAILWAY JOINT.
APPLICATION FILED APR. 17, 1911.

1,013,689.

Patented Jan. 2, 1912.



Witnesses
W. C. Fielding.
Edwin Curch.

Inventor
Origenus J. Schroeder

By *Charles H. H. H.*

Attorneys

UNITED STATES PATENT OFFICE.

ORIGENUS J. SCHROEDER, OF LARNED, KANSAS.

RAILWAY-JOINT.

1,013,689.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed April 17, 1911. Serial No. 621,617.

To all whom it may concern:

Be it known that I, ORIGENUS J. SCHROEDER, a citizen of the United States, residing at Larned, in the county of Pawnee, State of Kansas, have invented certain new and useful Improvements in Railway-Joints; 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.

This invention relates to new and useful improvements in rail joints and the object of the invention is to provide an improved rail joint whereby sagging of the abutting rails and sliding thereof at the joints will be prevented.

A further object of the invention is to provide a rail joint which comprises a pair of coacting fish-plates of novel construction which will absolutely retain the rails in alinement and which may be applied to rails now commonly in use without altering their construction.

A still further object is to provide means for taking up the vibration of the rails at the joints and also to deaden the sound caused by the trains passing thereover.

The invention consists of certain combinations and arrangements of parts, as will be hereinafter more fully described and clearly specified in the appended claims.

In the drawings:—Figure 1 is a side elevation of my improved rail joint applied to two abutting rail sections. Fig. 2 is a top plan view thereof. Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a detail perspective view of one of the securing bolts for binding the parts of the joint together. Fig. 5 is a detail perspective view of a cover plate for a cushioning member employed in connection with the device.

Referring to the drawings in detail, there are shown the abutting ends of two rail sections 10 which are of the ordinary construction and upon opposite sides of which are secured fish-plates 11 and 12. The fish-plate 11 snugly fits against the web portion and undersurface of the head of the rail and also contacts with the flange of the rail through the medium of the outwardly directed portion 13 which is extended around the flange and beneath the rail as shown at 14. This fish-plate terminates at the oppo-

site flanged portion of the rail where it is enlarged as shown at 15 and formed with an upwardly and inwardly directed curved flange 16 forming a receiving channel for the lower end of the fish-plate 12 and also extended outwardly as shown at 17 to provide for the formation of a series of notches 18, which are also formed in the opposite side of the fish-plate for receiving suitable securing bolts 10.

The fish-plate 12 fits the opposite side of the web portions of the rails in a similar manner as the fish-plate 11 except that the outwardly directed portion 20, similar to the portion 13 of the fish-plate 11, terminates in a curved flange 21 which is slidably received within the channel formed by the curved flange 16 so that the fish-plates will be snugly fitted to the rail and its flange, so as to rigidly brace its tread at the joint and to prevent lateral movement of the abutting rail sections independently of each other. A cushioning strip 22, preferably constructed of wood and approximately twice the thickness of the fish-plates adjacent the web portion of the rail, is disposed in contact with the fish-plate 12 with its upper and lower edges beveled inwardly as shown at 23 adapted to receive similar inwardly extended upper and lower flanges 24 formed upon a cover plate 25. It will be seen that the upper and lower edges of the cover plate 25 also engage the head of the rail and the outwardly extended portion 20 so as to brace the head at the outer side of the rail thereby removing any lateral strain from the web of the rail and it will be furthermore apparent that the said parts may be secured together by bolts 26 disposed through the parts of the rail joint upon either side of the meeting ends of the rails and have head portions 27 formed with projections 28 extending in opposite directions and adapted to seat in recesses 29 coincident with the apertures in the fish-plate 11 through which the bolts are disposed whereby said bolts are held against rotation when the nuts 30 are applied.

From the foregoing description it will be readily seen that the parts of the rail joint may be very cheaply constructed and thus may be applied to rails now in common use and that when so applied, the meeting ends of the two rail sections will be prevented from sagging or from lateral movement

which has often resulted in accidents due to the spreading of the rails. The peculiar formation of the fish-plates is such as to allow for ready assemblage and the cushioning
 5 strip 23 which is preferably constructed of wood, will take up any vibration and assist in deadening the sound of the trains passing thereover, as well as assisting to retain the securing bolts 26 in their tightened po-
 10 sition.

I claim:—

1. In a rail joint, the combination with two abutting rail sections, of fish-plates secured upon opposite sides of the rails, one
 15 of said plates extending beneath the rails and terminating in an upwardly and downwardly directed portion forming a channel, said fish-plate being formed with recesses upon its opposite sides for receiving suitable
 20 securing means, the other fish-plate having its lower portion formed with a flange adapted to fit within said channel, a cushion strip in contact with the web portion of the last named fish-plate, a cover plate for
 25 said cushion strip, said cover plate having inwardly directed upper and lower edges contacting with the upper and lower edges of said cushion strip, the balls of the rails and the flange forming portion, and means

for securing said sections in binding con- 30 tact.

2. In a rail joint, the combination with the meeting ends of two rails; of a fish-plate engaging the web portions upon one side
 35 of the rails, said fish-plate extending outwardly over the flanges of the rails and beneath said flanges, an enlarged portion at the opposite side of the flange formed with the base portion and having a rebent portion forming a channel, a second fish-plate 40 in contact with the opposite side of the web portions of the rails and having an outwardly directed portion formed with a flange extending upwardly and slidably received in the channel, a cushion strip in
 45 contact with said last named fish-plate at the web portion, a cover plate having its upper and lower edges extending over the cushion strip and securing bolts disposed through the said parts to secure the same 50 together, said bolts being held from rotation therein.

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

ORIGENUS J. SCHROEDER.

Witnesses:

A. BEDELL,

H. M. LAWTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."