

(No Model.)

T. C. SWOFFORD.
RAIL JOINT.

No. 553,180.

Patented Jan. 14, 1896.

Fig. 1.

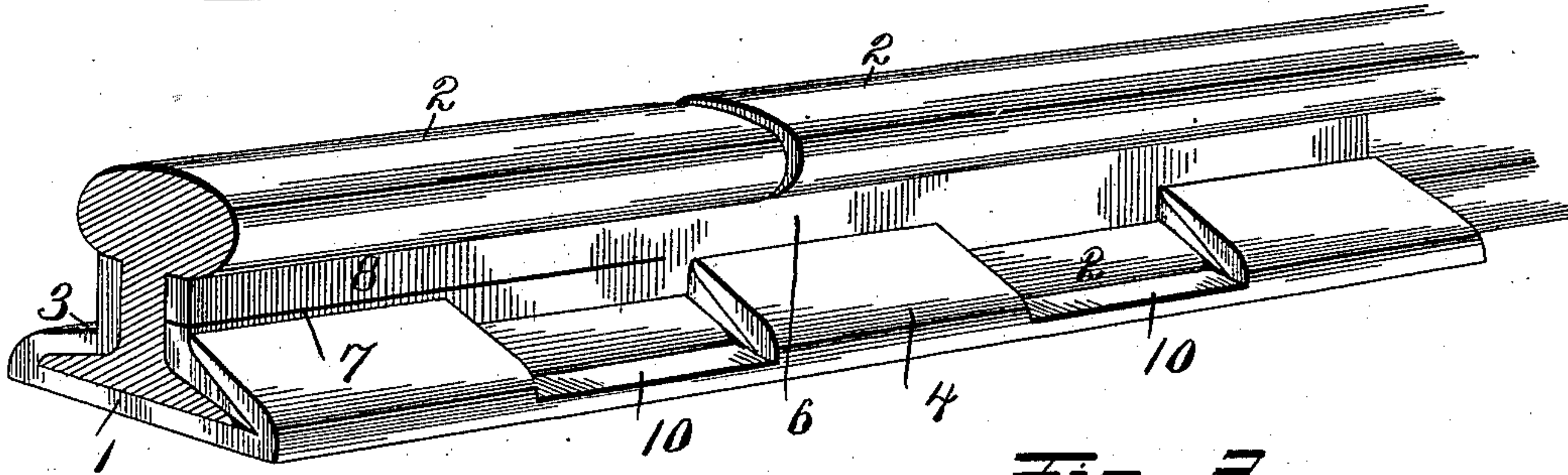


Fig. 2.

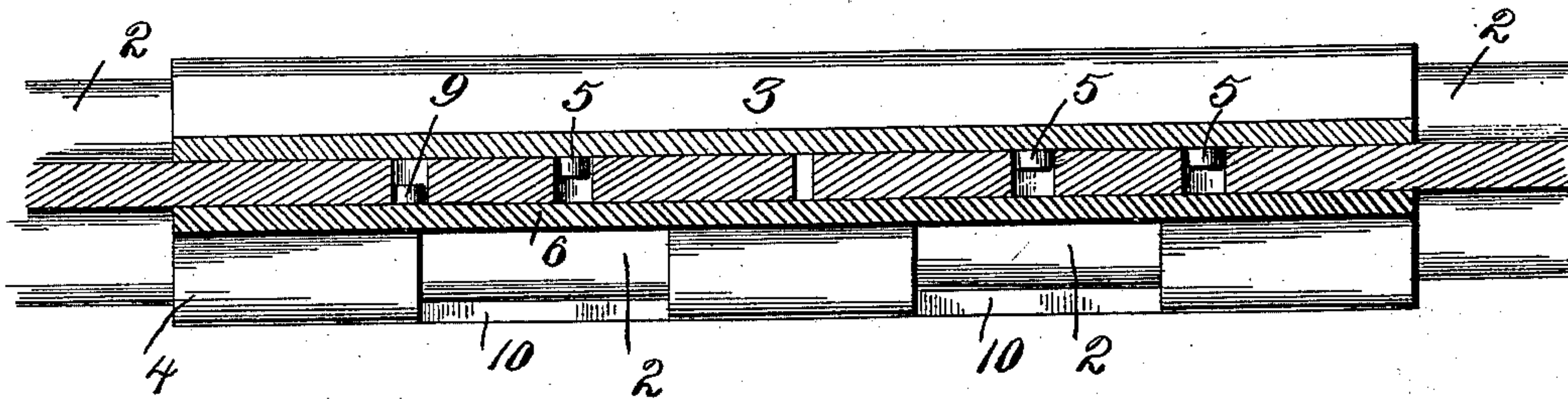


Fig. 5.

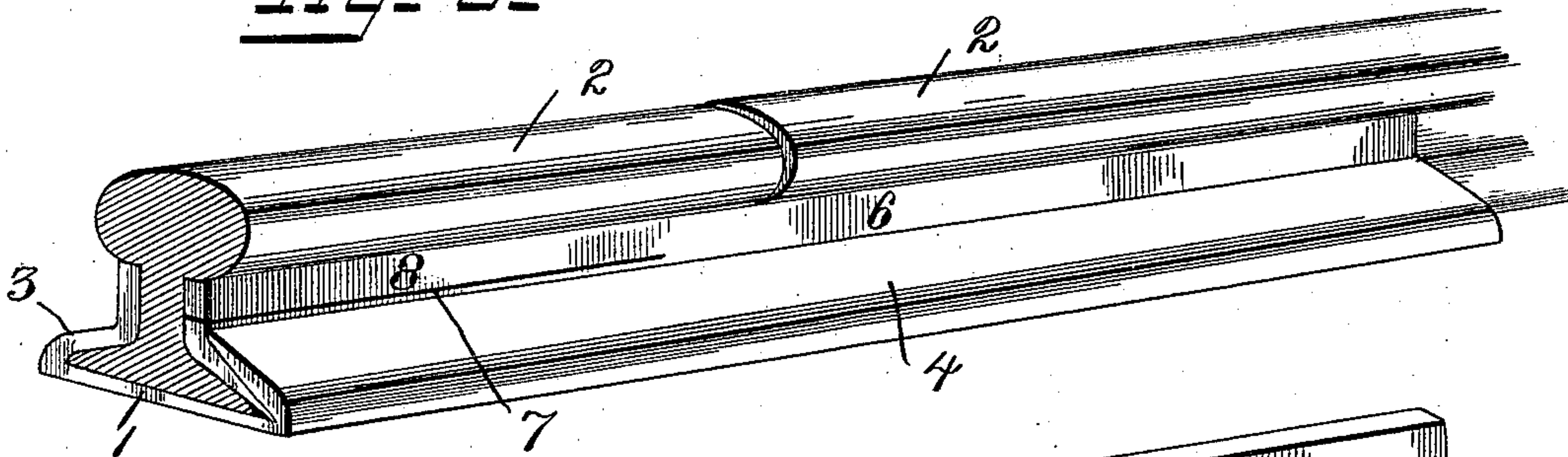


Fig. 4.

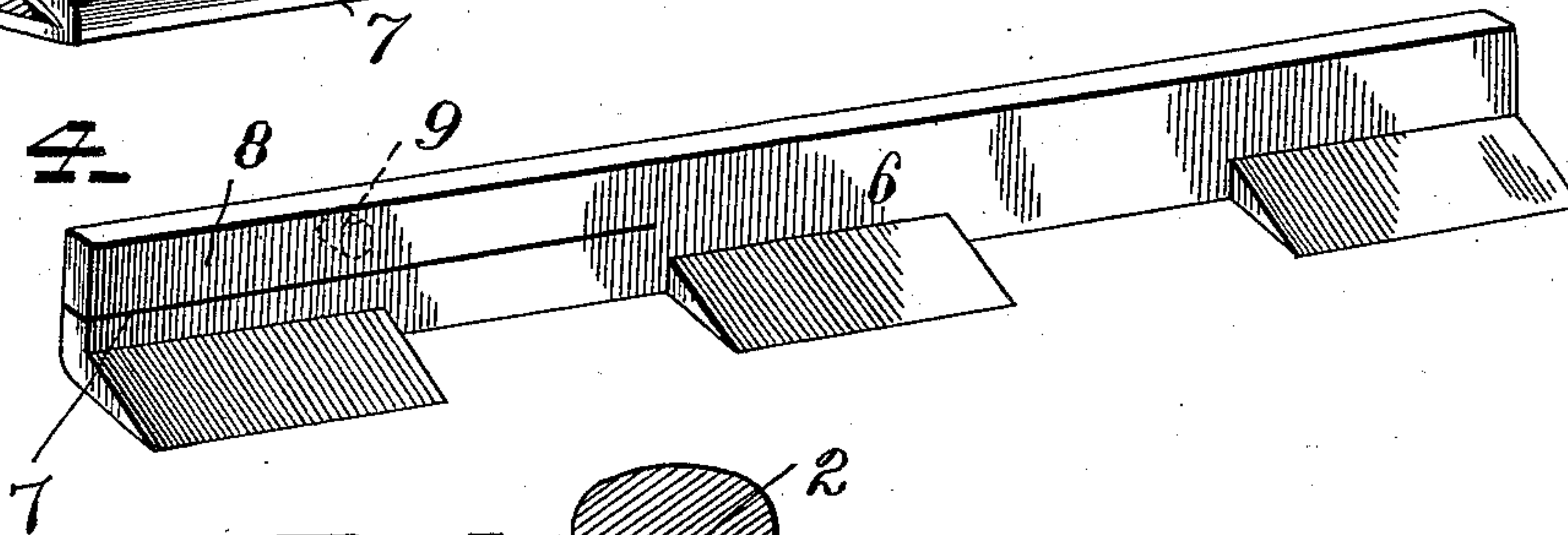
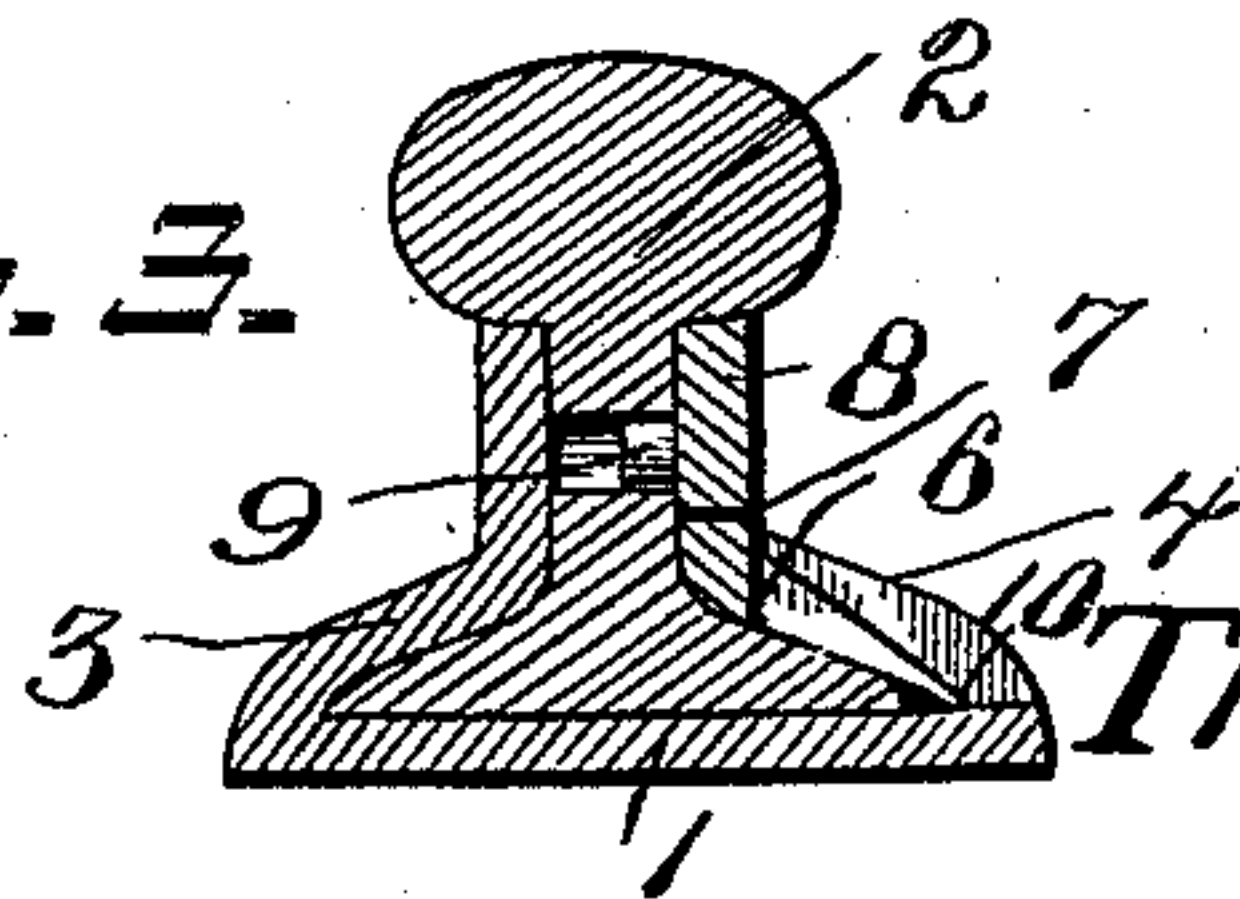


Fig. 3.



Inventor

Thomas C. Swofford

Witnesses

W. J. North.
J. F. W. Riley

By *his* Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

THOMAS C. SWOFFORD, OF HOPE, ARKANSAS.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 553,180, dated January 14, 1896.

Application filed May 21, 1895. Serial No. 550,126. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. SWOFFORD, a citizen of the United States, residing at Hope, in the county of Hempstead and State of Arkansas, have invented a new and useful Rail-Joint, of which the following is a specification.

The invention relates to improvements in rail-joints.

The object of the present invention is to improve the construction of rail-joints and to provide a simple and inexpensive one, which will possess the requisite durability and solidity, and which will dispense with the bolts and nuts usually employed and the necessity for nut-locks.

A further object of the invention is to prevent the adjacent ends of the rails from sinking or sagging and to permit the necessary contraction and expansion of the rails, and to enable them to be readily detached for removal, and to facilitate rapid replacement.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a rail-joint constructed in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of the removable inner angle-plate. Fig. 5 is a perspective view of a rail-joint, illustrating a modification of the invention.

Like numerals of reference designate corresponding parts in all of the figures of the drawings.

1 designates a rail chair or support comprising a horizontal base-plate designed to support the adjacent ends of rails 2, an angle-flange 3 disposed longitudinally of the rails at one side thereof and conforming to the configuration of the same, and an inclined longitudinally-disposed flange 4 arranged to bear on the upper face of a removable angle-plate 6. The base-plate and the side flanges are formed integral, and sufficient space is provided between the flanges 3 and 4 to enable the rails to be inserted in the chair or support longitudinally and to be moved laterally to engage inwardly-extending lugs 5, projecting hori-

zontally from the inner face of the upper portion of the angle-flange 3 and fitting in corresponding perforations of the webs of the rails. The perforations or openings are slightly elongated to permit the necessary contraction and expansion of the rails.

After the rails have been moved laterally to engage them with the inwardly-extending lugs 5 and to cause them to fit against the inner face of the angle-flange 3, they are locked in that position by the inner removable angle-plate 6, which is interposed between them and the inclined flange 4 which fills the space between the same and the rails and prevents the latter from becoming disengaged from the inwardly-extending lugs of the opposite flange 3. The upper portion of the angle-plate 6 fits against the adjacent faces of the webs of the rails and supports the latter, and it is provided at one end with a longitudinal slit or cut 7, forming a resilient portion 8 upon the inner face of which is mounted a lug 9 for engaging a perforation or opening of the web of the adjacent rail. This construction provides a resilient catch which is adapted to be readily sprung out of engagement with the rail when it is desired to remove the angle-plate, and which is adapted to engage the opening or perforation of the rail automatically as the angle-plate is moved longitudinally to its proper position.

The flange 4 may be a continuous one and extend unbroken throughout the length of the base-plate, as illustrated in Fig. 5 of the accompanying drawings, and the angle-plate may be correspondingly constructed and have its lower or inclined portion continuous. In this construction the removable angle-plate has to be introduced at one end of the support or chair and moved longitudinally thereof, as will be readily apparent; but for convenience of assembling the parts of the rail-joint the flange 4 is preferably constructed of sections, as illustrated in the first three figures of the drawings. This provides intervening spaces 10, and the lower or inclined portion of the plate 6 is constructed of similar sections, and the angle-plate may be introduced by inserting the sections or portions of the bottom flange or portion through the spaces between the sections of the flange 4 of the chair or support. This requires only a

slight longitudinal movement of the angle-plate 6 to position it properly.

It will be seen that the rail-joint is exceedingly simple and inexpensive in construction, 5 that it possesses great strength and durability, and that it will enable rails to be quickly connected and conveniently removed when desired. It will also be seen that bolts and nuts and the consequent necessity for nut- 10 locks are dispensed with, and that the rails are permitted the necessary contraction and expansion.

Changes in the form, proportion, and minor details of construction may be resorted to 15 without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. In a rail joint, the combination of a chair or support comprising a base plate, an in- 20 clined flange located at one side of the base plate, and an angle flange located at the opposite side of the base plate and disposed longitudinally thereof, and provided with inwardly extending lugs, rails arranged in the 25 chair or support, and engaged by the lugs thereof, and the removable inner angle plate interposed between the inclined flange and the rails, and locking the latter in engagement with the lugs, and provided with a resilient

portion forming a spring catch, and provided 30 with a lug engaging one of the rails, substantially as described.

2. In a rail joint, the combination of a rail chair or support comprising a base plate, an inclined flange located at one side of the base 35 plate, and composed of sections arranged at intervals, and forming intervening spaces, and a continuous angle flange located at the opposite side of the base plate, and provided with inwardly extending lugs, rails arranged 40 in the chair or support and provided with openings receiving said lugs, and a removable inner angle plate interposed between the inclined flange and the rails, and provided with a spring-catch to engage one of the rails, 45 and having its lower portion composed of sections of a size to be introduced through the intervals of the sections of the inclined flange, substantially as and for the purpose de- 50 scribed.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS C. SWOFFORD.

Witnesses:

JOHN H. SIGGERS,
G. C. SHOEMAKER.