

No. 674,323.

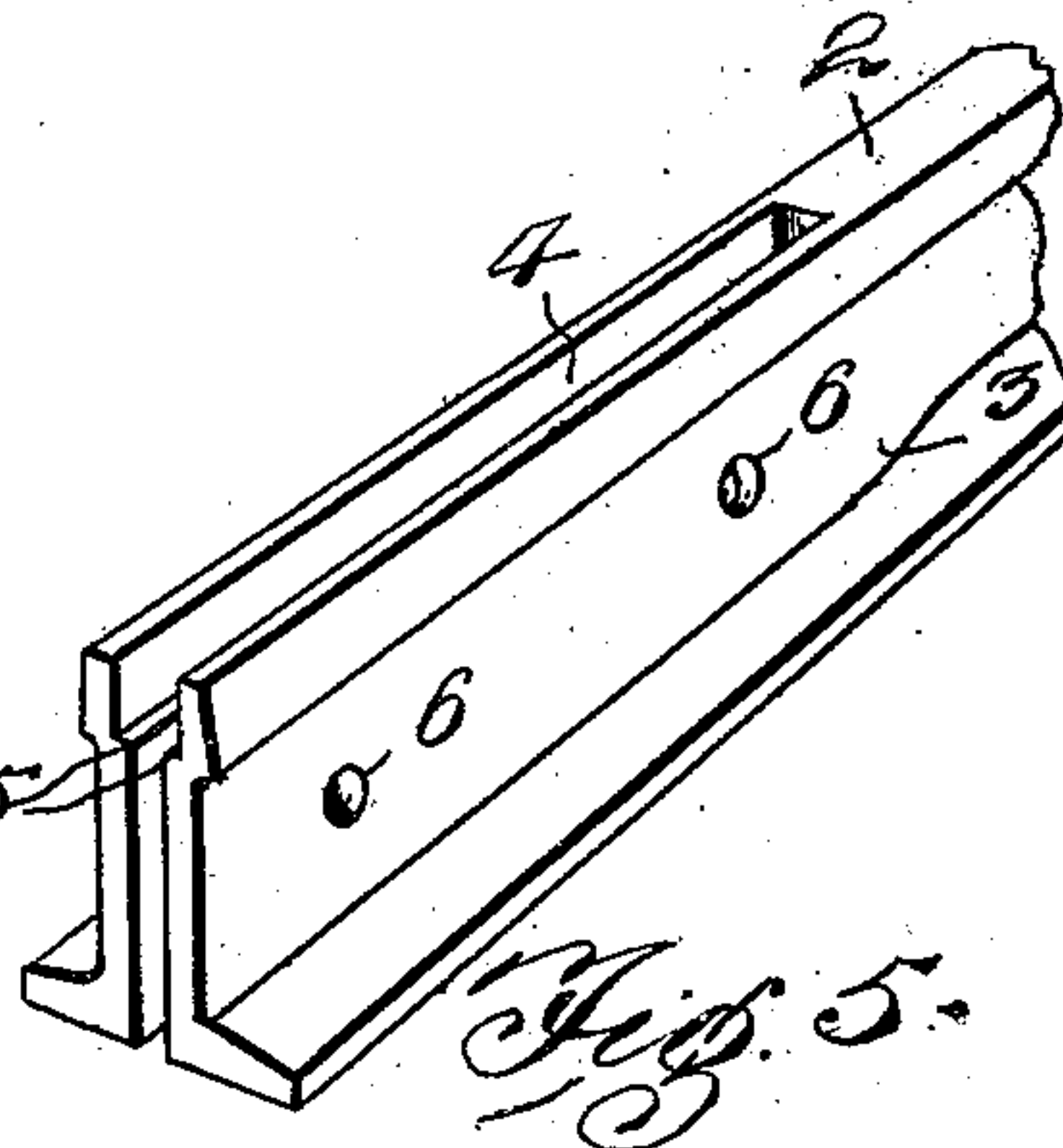
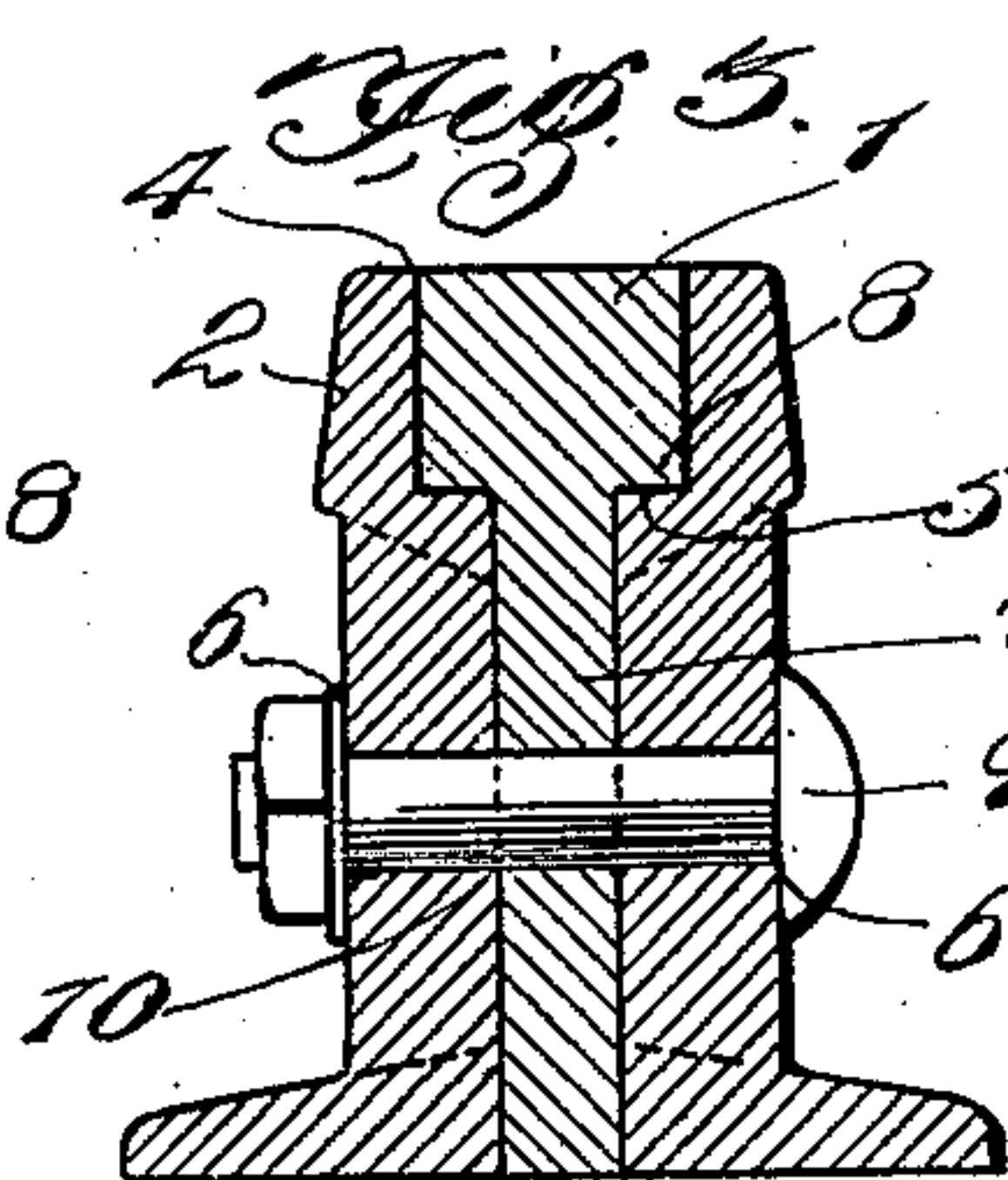
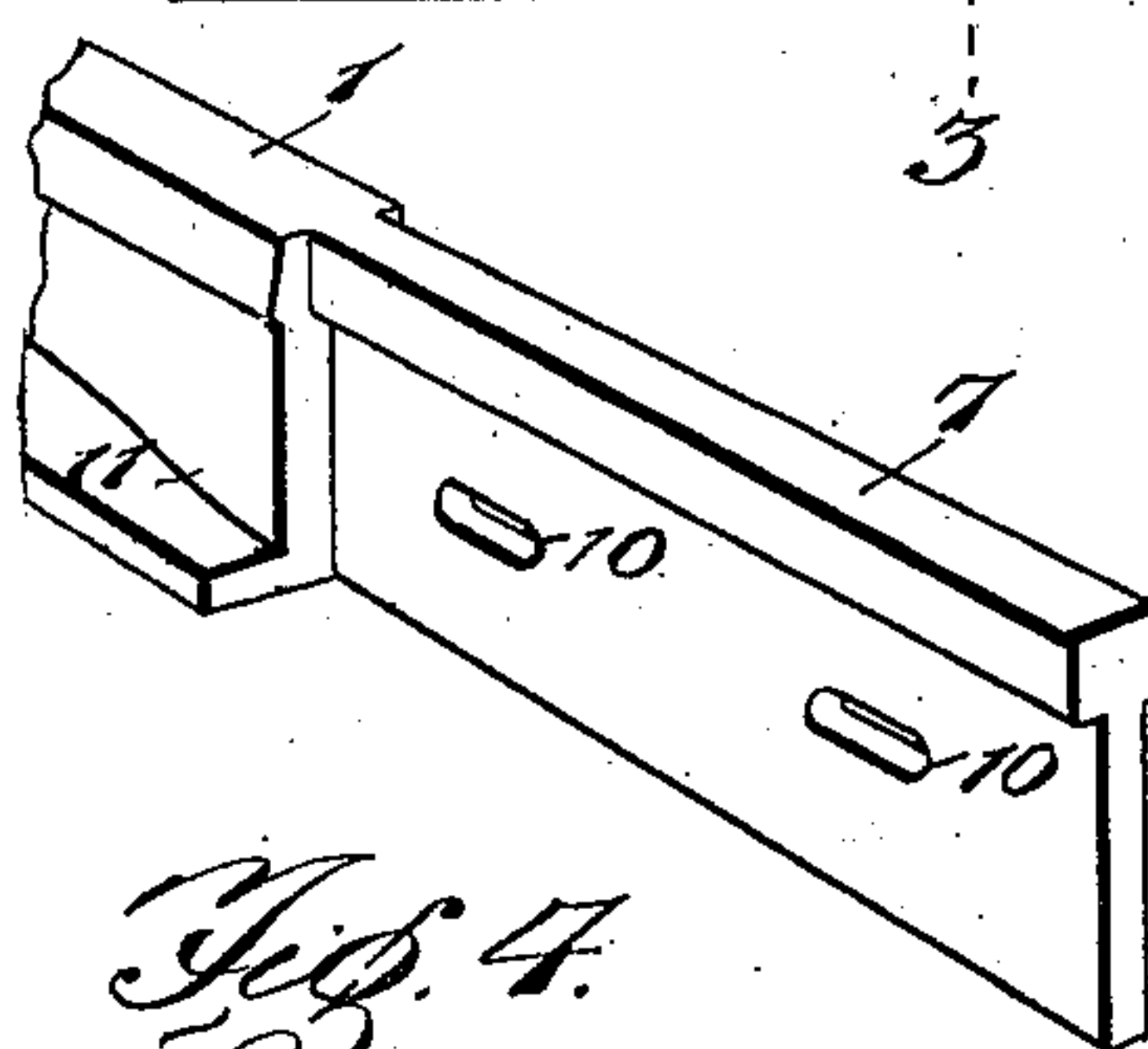
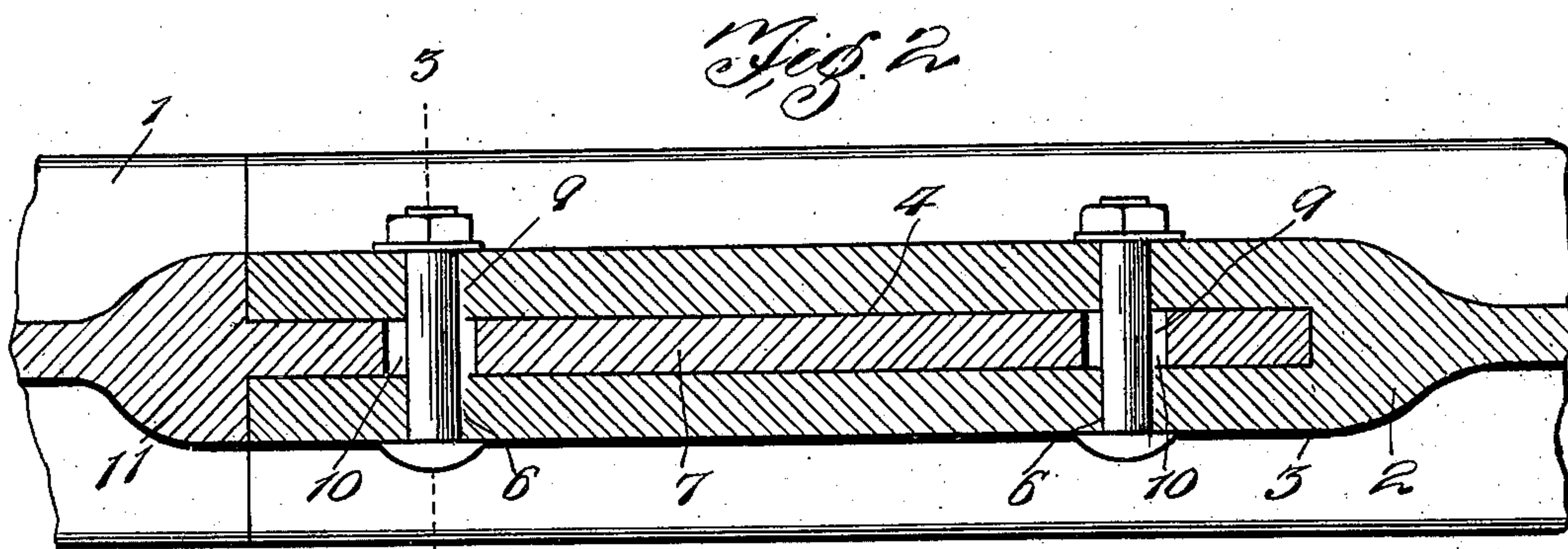
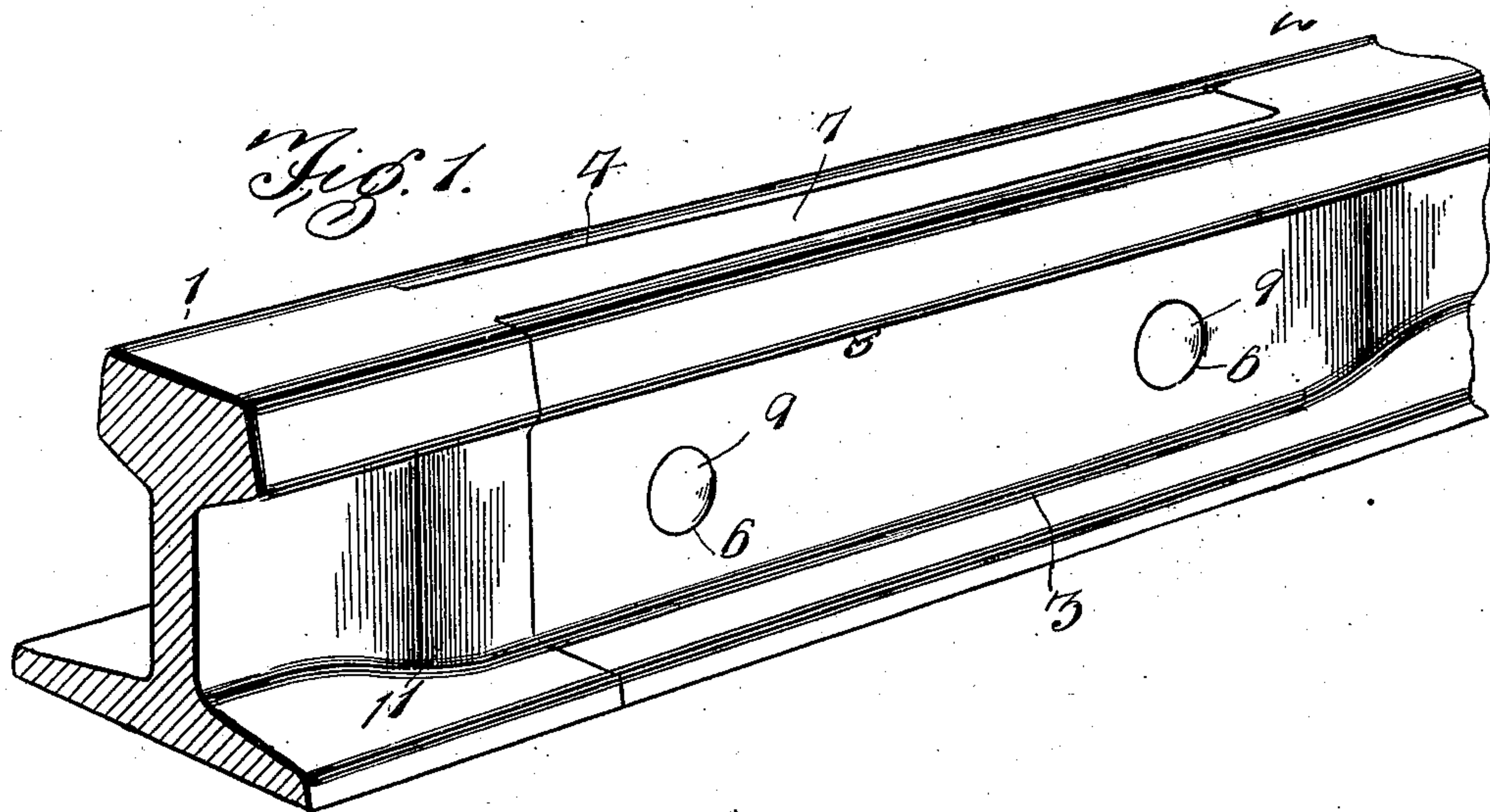
Patented May 14, 1901.

J. TRILLING & M. WENSAUER.

RAIL JOINT.

(Application filed Mar. 6, 1901.)

(No Model.)



Witnesses

Oliver M. Simpson
Ed. Shepard

Max Wensauer and
J. Trilling Inventors

By *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH TRILLING AND MAX WENSAUER, OF SHEBOYGAN, WISCONSIN.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 674,323, dated May 14, 1901

Application filed March 6, 1901. Serial No. 50,115. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH TRILLING and MAX WENSAUER, citizens of the United States, residing at Sheboygan, in the county of Sheboygan and State of Wisconsin, have invented a new and useful Rail-Joint, of which the following is a specification.

This invention relates to rail-joints, and has for its object to provide an improved joint in which the parts thereof are reduced to the minimum and at the same time the strength and durability of the joint are preserved and increased. It is furthermore designed to arrange for compensating for the contraction and expansion of the rail-sections and also to obviate the jarring and pounding of car-wheels in passing over the joint.

With these and other objects in view the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of the adjacent end portions of two rail-sections connected by means of the present form of rail-joint. Fig. 2 is a horizontal longitudinal sectional view thereof. Fig. 3 is a transverse sectional view taken on the line 3 3 of Fig. 2. Figs. 4 and 5 are detail perspective views of the opposite terminals of the rail-sections.

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

Referring to the drawings, 1 and 2 designate the opposite rail-sections, which are of common or ordinary form, except that the section 2 has the end portion of its web thickened or enlarged, as at 3, so that the rail-section may not be weakened by the formation of the longitudinal bifurcation 4, formed therein and extending from the top to the bottom of the rail, the upper portion of the bifurcation being laterally enlarged, so as to form the opposite longitudinal ledges or shoulders 5, said enlargement being entirely in the tread

of the rail. Corresponding bolt-openings 6 are formed transversely through the opposite sides of the bifurcated portion of the web. The other rail-section is provided with a reduced tongue 7, extending in the plane of the web thereof, and is formed by cutting away opposite sides of the web and the flange, the tread of the rail also being reduced in width to fit snugly the enlarged portion of the bifurcation in the former rail-section, as the tongue is designed to be fitted in the main portion of said bifurcation.

In assembling the rail-sections they are fitted endwise into one another or the tongue-section is placed downwardly upon the other section, as may be most convenient, the laterally-projecting shoulders 8, formed by the reduced tread portion of the rail-section 1, resting snugly upon the ledges 5, formed by the enlargement of the bifurcation, whereby said reduced tread portion is effectively braced by the other rail-section. Suitable bolts 9 are passed transversely through the corresponding bolt-openings of the bifurcated rail-section and also through the corresponding longitudinal slots 10 of the tongue, there being no fish-plates required, as the web portions of the rail-sections overlap and take the place of the usual fish-plates.

From the foregoing description, and as best shown in Fig. 1 of the drawings, it will be apparent that a practically continuous rail is formed by the present rail-joint, thereby avoiding the jarring and pounding of car-wheels, and thus increasing the strength and durability of the joint. The thickening of the web portion of the rail-section 2 is designed to overcome weakness at the bifurcation, and the web of the section 1 is also thickened, as at 11, at the base of the tongue, so as to strengthen and stiffen the latter and also form a broad shoulder to abut against the thickened end of the opposite web portion. The bolt-slots of the tongue permit of the rail-sections working in opposite directions under the influence of contraction and expansion without affecting the joint.

An important feature of the present invention resides in the fact that the bifurcation and tongue may be cut after the rails have been made by the usual rolling process, and therefore without injury to the rails.

What is claimed is—

1. A rail-joint, consisting of opposite rail-sections, one of which has a terminal longitudinal bifurcation extending from the top
5 to the bottom of the rail, and having its upper portion enlarged to form opposite longitudinal ledges or shoulders, and the other rail-section having a reduced projecting web portion forming a tongue to fit snugly within
10 the bifurcation of the former section, the tread of said other section being reduced to fit snugly within the reduced portion of the bifurcation, whereby the laterally-projecting longitudinal shoulders of the reduced tread
15 portion rest snugly upon the corresponding shoulders of the bifurcation.

2. A rail-joint, consisting of opposite rail-sections, one of which has its web terminally thickened and provided with a longitudinal
20 bifurcation extending from the top to the bottom of the rail, the upper portion of the bifurcation being laterally enlarged in the tread portion of the rail, and the other rail-section having a longitudinally-projecting reduced tongue in the plane of its web and ex-

tending from the top to the bottom of the rail, and having an upper tread portion, which is narrower than the normal tread portion and projects laterally at opposite sides
30 of the intermediate tongue portion to form opposite longitudinal shoulders, the tongue being fitted within the bifurcation, with the tread portion thereof in the enlarged portion of the bifurcation, the shoulders of the tongue
35 lying upon the corresponding shoulders of the bifurcation, the opposite sides of the bifurcated web having corresponding bolt-openings, the tongue having longitudinal slots lying between corresponding bolt-openings,
40 and bolts extending through the corresponding bolt-openings and the respective slots.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOSEPH TRILLING.
MAX WENSAUER.

Witnesses:

B. H. MAYER,
FRANK W. MARGENAU, Jr.