

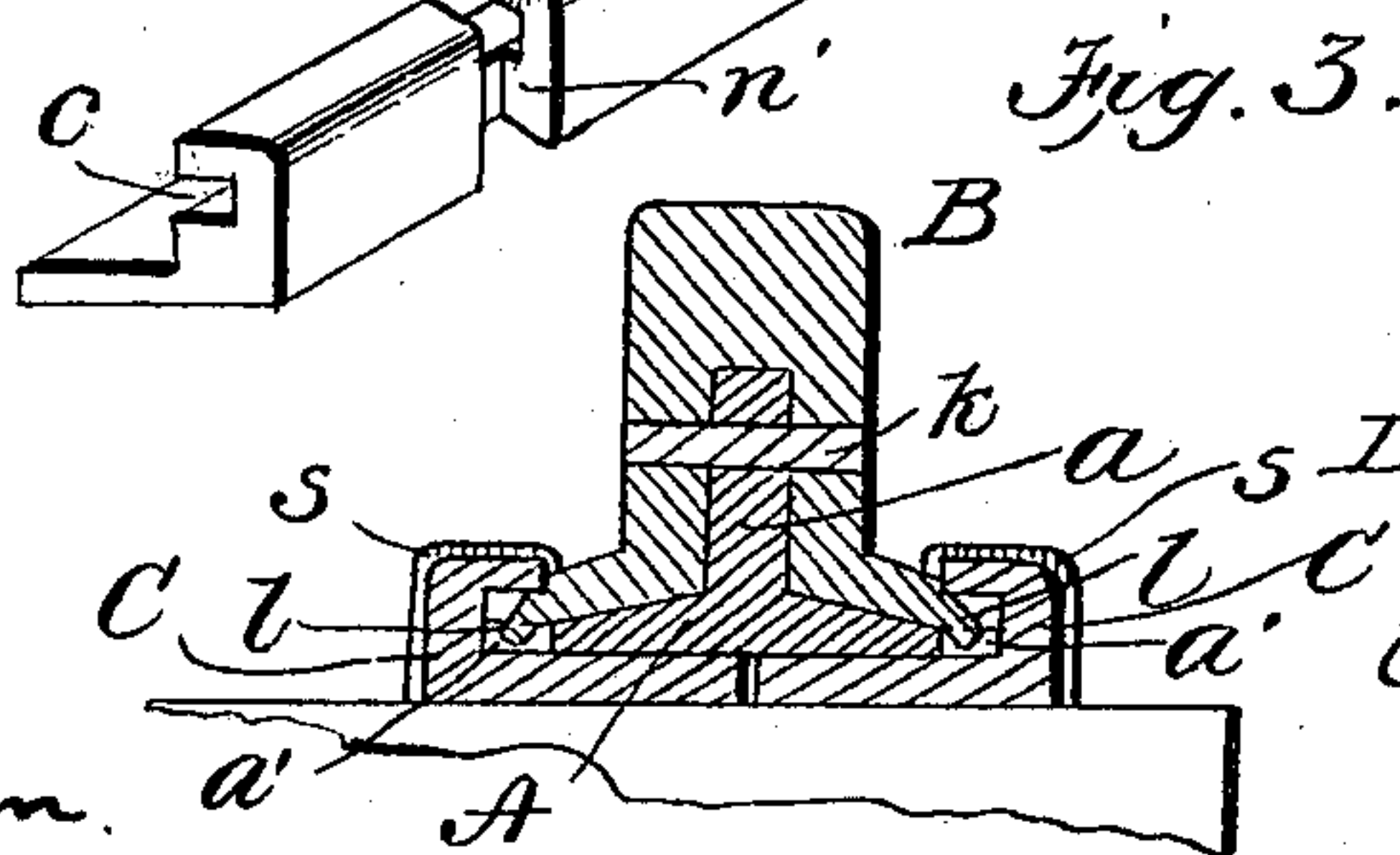
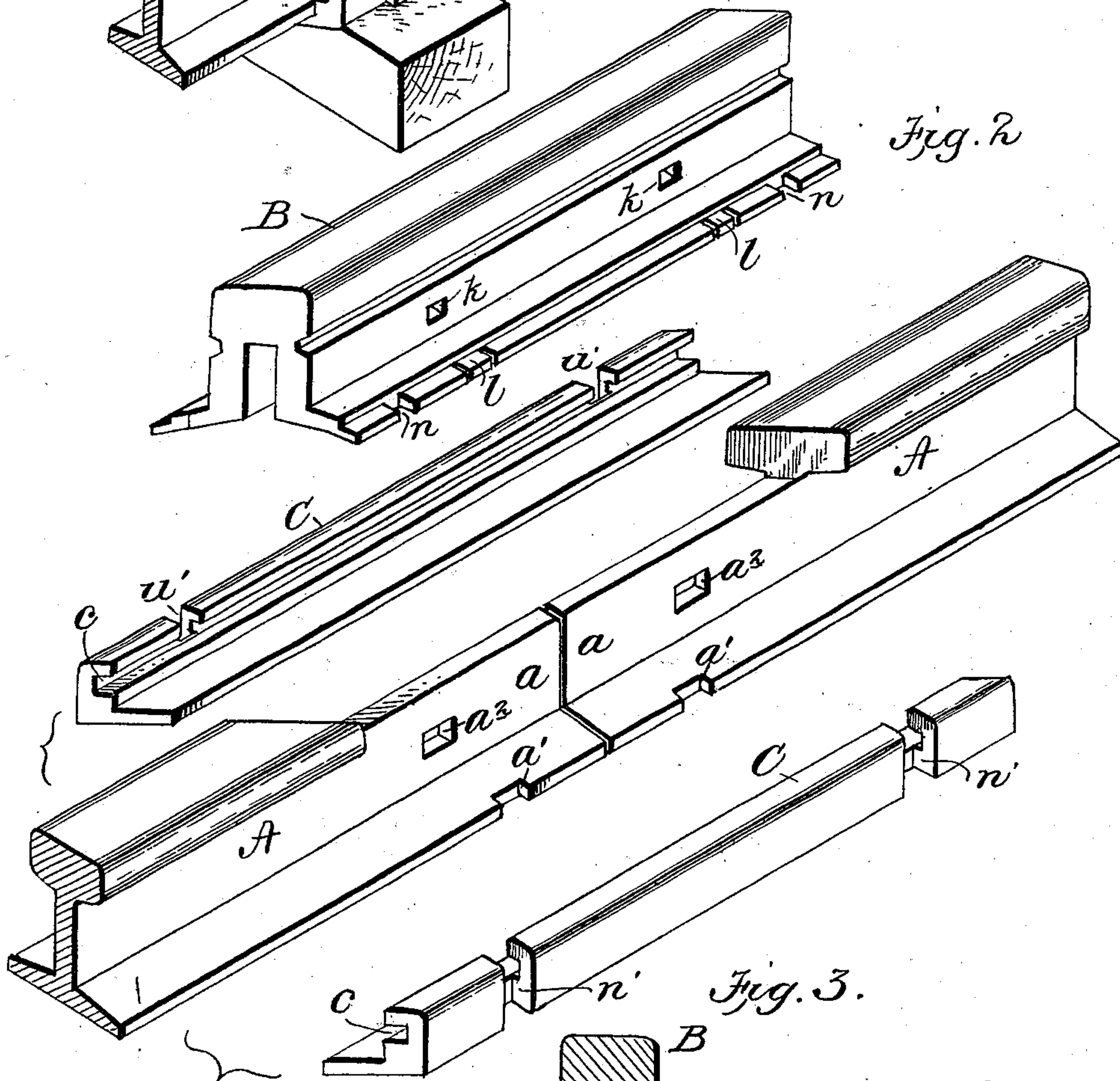
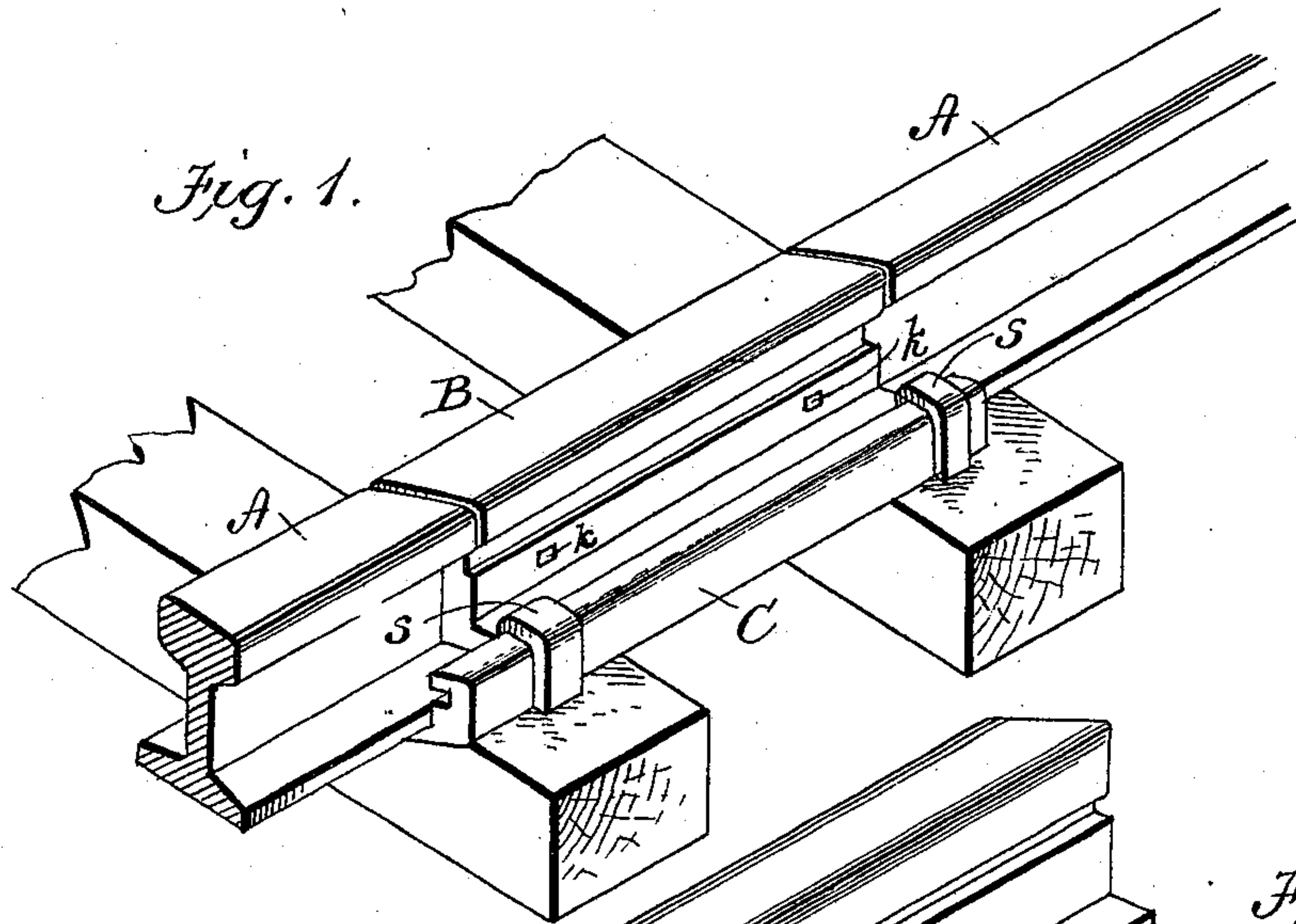
No. 660,936.

Patented Oct. 30, 1900.

D. STEPHENS.
RAIL JOINT.

(Application filed Sept. 13, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

DANIEL STEPHENS, OF POTTSVILLE, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 660,936, dated October 30, 1900.

Application filed September 13, 1900. Serial No. 29,915. (No model.)

To all whom it may concern:

Be it known that I, DANIEL STEPHENS, a citizen of the United States, residing at Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My present invention consists in certain improvements in the details of construction of rail-joints of that general construction and arrangement shown in Letters Patent No. 656,539, issued August 21, 1900, on my application, whereby a more perfect construction is secured, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a section of track, showing a rail-joint of my improved construction; Fig. 2, a perspective view of the several parts separated, and Fig. 3 a cross-section through said parts.

In said drawings the portions marked A represent the rails, B a connecting tread portion, and C the side clamps or supports. The construction of said several parts is in the main of the same general character as that shown in the patent above mentioned. The ends of the tread portion are cut away in each rail, and the projecting portion a of the web is covered by the connecting tread portion B, which is formed with a groove in its under side adapted to fit over said web portions and a tread corresponding with the tread of the main rail. The joints are also preferably formed on an angle to form a practically continuous tread to the rail. The clamping-supports C embrace both the flange of the rail and that of the portion B, clamping them together horizontally, and are of sufficient rigidity to afford suitable support to the joint. Spikes s extend down through notches n' in the braces C and notches n in the flanges of the portion B, which notches are arranged to register, and into the ties, thus securing the parts B and C together and permitting the free contraction and expansion of the rails.

Thus far the construction is identical with that shown in the patent before referred to, and my improvement consists in so anchor-

ing the rail to the parts of the joint which are secured to the ties that they cannot "creep," as I find the old construction may on grades. To this end I cut notches a' in the flanges of the rails and cut into the flanges of the part B a short distance to form a lip l near each end, which may be bent down into one of said notches, as shown in Fig. 3. Said notches are made wider than the lips in order to allow the free contraction and expansion of the rail. It will be understood that the lip will not extend to below the under surface of the rail-flange, and thus will not interfere with the use of the side clamping-supports C. I have also shown keys k inserted through apertures a^2 in the web a of the rails and corresponding apertures in the part B to secure the same result. The apertures in the webs a are made of sufficient length to permit the contraction and expansion of the rails, while those in the part B are of a size to just admit said keys. It will be understood that both the keys and the interlocking lips and notches may be used together if found necessary; but I regard either one as sufficient for the purpose on most grades, preferring the lips and notches, inasmuch as no additional parts are required and the construction is less expensive.

It will be understood, of course, that I do not confine myself to the exact form of lip l shown, but regard any interengaging notch and lip or lug of the respective parts as answering the requirements of my invention.

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

1. A rail-joint embodying rails with notches in their flanges, a tread portion B adapted to embrace the ends of the webs of the rails and formed with lips to be engaged with said notches, and side clamping-supports engaging with both the flanges of the rails and the portion B to secure them together horizontally, and spikes as the securing devices, substantially as set forth.

2. In a rail-joint, the combination, of the rails with the ends of their treads cut away and formed with notches in their flanges adjacent to said cut-away portion, a tread portion B mounted on said ends covering the joint between them, and having flanges ex-

tending out over the rail-flanges with lips cut therein to be bent down into said notches, substantially as set forth.

3. In a rail-joint, the combination, of the
5 rails having the ends of their treads cut away, and notches formed in their flanges, a tread portion B adapted to fill in said cut-away portion and having lips to engage said flanges, keys extending through apertures in said por-
10 tion B and the webs of the rails, the clamping-supports C, and the securing-spikes, substantially as set forth.

4. In a rail-joint, the combination, of the rails with the ends of their treads cut away,

the tread portion B supplying said cut-away 15 portions, interengaging notches and lips on said rails and portion B, the side clamping-supports, and spikes engaging the ties and notches in said side clamping-supports and said portion B, substantially as set forth. 20

In witness whereof I have hereunto set my hand and seal at Washington, District of Columbia, this 6th day of September, A. D. 1900.

DANIEL STEPHENS. [L. S.]

Witnesses:

E. A. MOYER,

E. W. BRADFORD.