No. 677,342. Patented July 2, 1901.

S. P. DAY & C. E. NEAL.

TRACK FASTENING.

(Application filed Feb. 9, 1901.)

(No Model.)

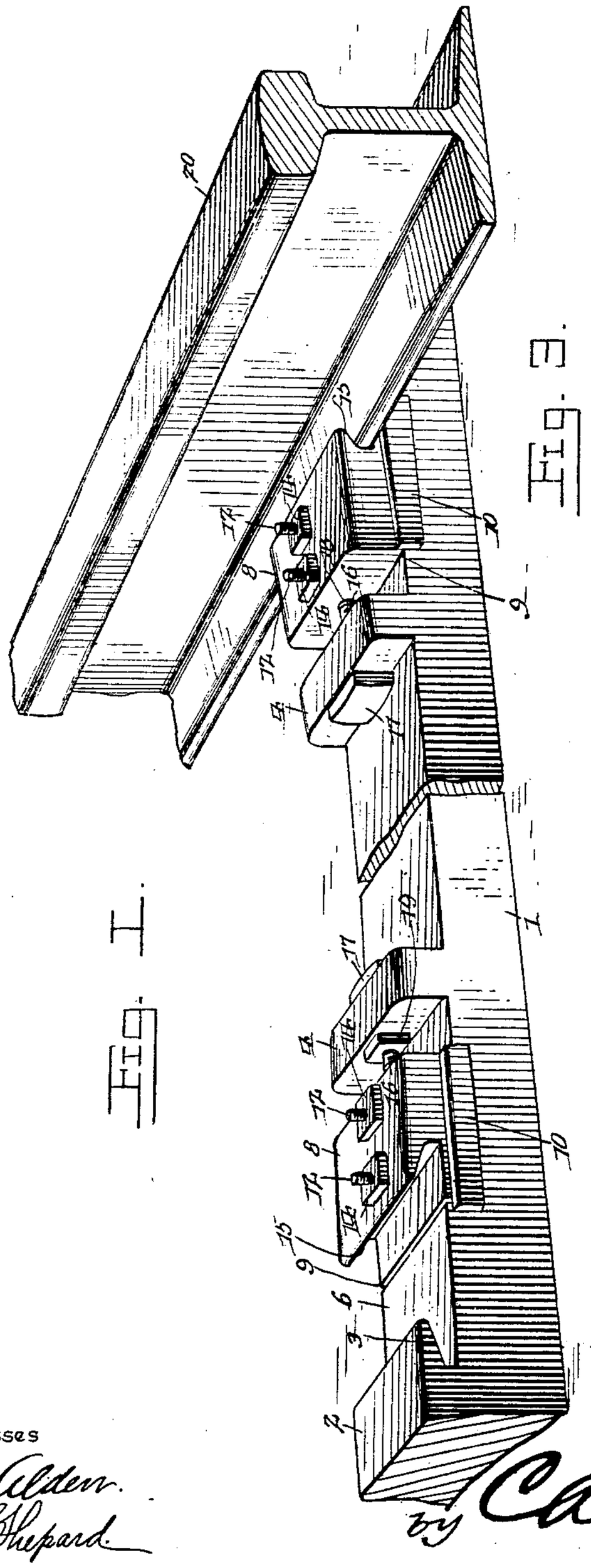

FIG. 1.

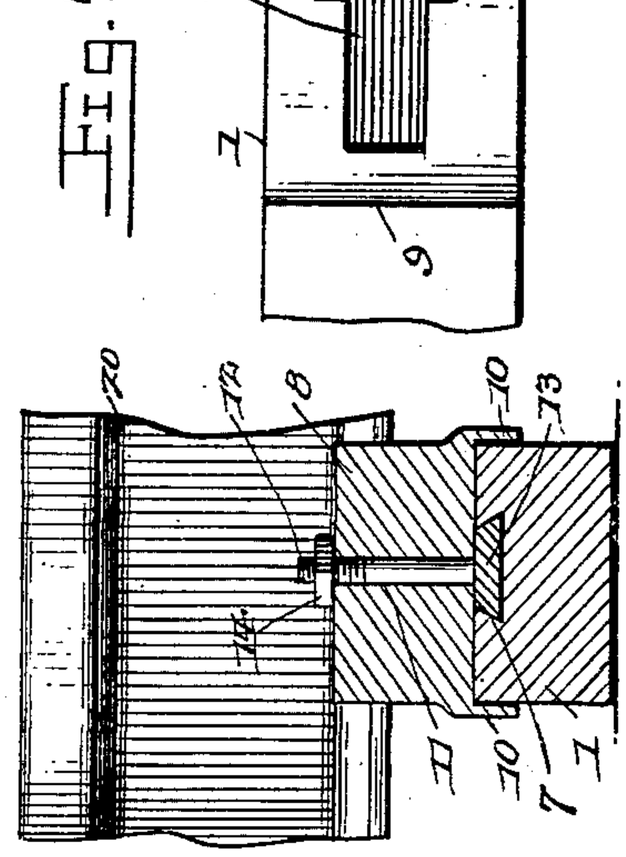

FIG. 3.

FIG. 4.

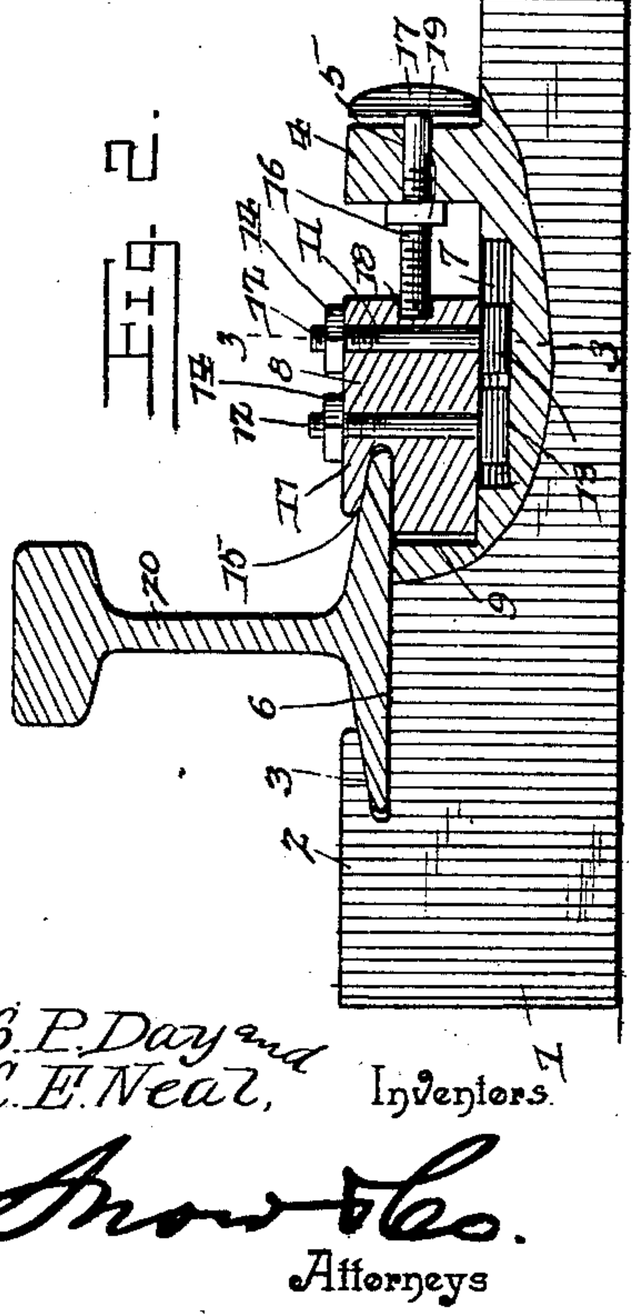

FIG. 2.

Witnesses
F. E. Alden.
Hef. Shepard.

S. P. Day and C. E. Neal, Inventors.
by Church & Co.
Attorneys

UNITED STATES PATENT OFFICE.

SHERMAN P. DAY AND CHARLES E. NEAL, OF SELLERSBURG, INDIANA, ASSIGNORS OF ONE-HALF TO JOHN M. MELOY AND AZRO C. CRIM, OF SAME PLACE.

TRACK-FASTENING.

SPECIFICATION forming part of Letters Patent No. 677,342, dated July 2, 1901.

Application filed February 9, 1901. Serial No. 46,680. (No model.)

To all whom it may concern:

Be it known that we, SHERMAN P. DAY and CHARLES E. NEAL, citizens of the United States, residing at Sellersburg, in the county of Clark and State of Indiana, have invented a new and useful Track-Fastening, of which the following is a specification.

This invention relates to railway-track fastenings, and has for its object to provide improved means for adjustably fastening the rails to the cross-ties, so as to facilitate the laying and removal of the rail-sections. It is furthermore designed to provide for conveniently taking up any looseness in the fastening, and finally to mount the fastening upon a cross-tie, so that it will always be in position for immediate use.

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 showing the present invention mounted upon a cross-tie. Fig. 2 is a sectional view taken transversely through a rail-section and longitudinally of one end of a cross-tie. Fig. 3 is a cross-sectional view on the line 3 3 of Fig. 2. Fig. 4 is a detail plan view of one end of a tie with the fastening device removed.

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

Referring to the drawings, 1 designates a cross-tie that has each end provided with an upstanding shoulder 2, which extends transversely across the top of the tie and has its inner transverse end undercut, as at 3, so as to form an overhanging wedge-shaped flange. At a suitable distance inwardly from this undercut shoulder there is provided another transverse shoulder or rib 4, which is provided with a central transverse perforation or opening 5. The normal thickness of the tie extends outwardly a predetermined distance from the rib 4, and then the tie is abruptly thickened, so as to form a rail-chair 6, the upper face of which is flush with and merges into the bottom of the groove formed by the undercut portion of the shoulder 2. In the upper face of that portion of the tie that lies between the rail-chair and the rib 4 there is provided a longitudinally-disposed substantially T-shaped groove 7, (best shown in Fig. 4 of the drawings,) the head or widest portion of the groove being arranged adjacent to the rib. As shown in Fig. 3, the groove is dovetailed or its edges are undercut, so as to form overhanging flanges.

The adjustable part of the fastening is formed by a slidable member or block 8, which is mounted upon the top of the tie and located between the rib 4 and the shoulder 9, formed by the rail-chair, the block being shorter than the distance between these two parts, so as to be slidably adjustable therebetween. This block extends for the entire width of the tie and is provided with opposite pendent bottom flanges 10, which embrace the respective longitudinal edges of the tie to form a guide for the block in its adjustable movement. A pair of vertical openings 11 are formed entirely through the block for the reception of the respective bolts or fastenings 12, having enlarged substantially dovetailed heads 13 at their lower ends and designed to be entered into the groove in the tie through the entrance-opening formed by the head or enlarged portion of the groove. Suitable removable nuts 14 are applied to the upper projected ends of the fastening pins or bolts, so as to connect the latter and the block. By this arrangement the block is slidably adjustably mounted upon the tie and may also be removed therefrom by drawing the headed pins out of the enlarged portion of the groove. The block rises somewhat above the rail-chair, and the face which is adjacent thereto is provided with an undercut groove 15, the lower side of which is flush with and forms a continuation of the upper face of the rail-chair, while the upper side or wall of the groove is inclined inwardly and downwardly, so as to form a wedge-shaped wall.

For the adjustment of the slidable block toward and away from the rail-chair there is provided an adjusting rod or bolt 16, which passes loosely through the opening in the rib 4 and has a head or stop-shoulder 17 upon the outer end of the bolt to engage the rib and limit the inward movement of said bolt. Moreover, this head is angular in shape and lies in contact with the upper face of the tie, so as to prevent rotation of the rod or bolt. The inner end of the bolt fits within a socket or recess 18, formed in the adjacent end of the block 8, and an adjusting-nut 19 is fitted to the screw-threaded intermediate portion of the bolt and lying against the inner side of the rib, so that by turning the nut the bolt or rod may be fed toward the rail-chair, carrying the adjustable clamping member 8 therewith.

To fasten a rail to the tie, the adjustable clamp member is removed, and the rail 20 is placed upon the rail-chair with one edge of its bottom flange or base seated within the notch or groove in the outer terminal shoulder 2 and the opposite edge of the flange projecting inwardly at the inner edge of the chair and overhanging the space between the chair and the rib 4. The clamping-block is then fitted to the tie, as hereinbefore set forth, and the bolt or rod 16 is adjusted to force the clamp member or block toward the rail, whereby the inner edge of the rail-flange is received within the wedge-shaped groove or seat of the clamp, and the rail is firmly held between the clamp and the terminal shoulder of the cross-tie. It will be understood that the distance between the inner edge of the rail-flange and the rib 4 is somewhat greater than the length of the clamp member in order that the latter may be drawn from beneath the flange and then lifted from the cross-tie. It is not absolutely necessary that the clamp be removed from the tie, as it may be merely drawn away from the rail so as to clear the flange thereof, thereby permitting of the rail being removed and replaced while the clamp is upon the tie. Moreover, the weight of the rail is partly supported by the clamp member, so that the latter has additional means to prevent accidental upward displacement.

What is claimed is—

1. A track-fastening, comprising a support or base, having a rail-chair, a transverse rail-engaging shoulder at one side of the chair, an upstanding shoulder disposed at the opposite side of the chair and spaced therefrom, a rail-clamp slidably mounted upon the support or base and located between the upstanding shoulder and the chair, a longitudinally-adjustable rod or bolt passing loosely through the upstanding shoulder and having its inner end in operative relation to the clamp, an angular head upon the opposite outer end of the bolt or rod and lying in engagement with the base to prevent rotation of the bolt, and an adjusting-nut upon the bolt and lying in engagement with the inner side of the upstanding shoulder.

2. A track-fastening, comprising a cross-tie, having a terminal raised rail-chair, provided with an outer transverse rail-engaging shoulder, which is undercut upon its inner side, an upstanding rib or shoulder located at the opposite side of the chair and spaced therefrom, there being a substantially T-shaped flanged groove formed in the upper face of the tie and located between the rib and the chair, the enlarged portion of the groove being located next to the rib, a clamping member slidably mounted over the groove, and provided with opposite pendent flanges slidably embracing the tie, the inner portion of the upper face of the clamp being flush with and forming a continuation of the rail-chair, and also having an overhanging flange to embrace a rail-flange, a removable headed pin passing vertically through the clamp member, and provided upon its upper projected end with a nut, the head being slidably received within the flanged groove, and an adjusting-bolt passing loosely through an opening in the rib, the inner end of the bolt being received within a socket in the clamping member, and the opposite end having an angular head lying in engagement with the tie, and an adjusting-nut carried by the bolt and lying in engagement with the inner face of the rib.

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

his
SHERMAN P. × DAY.
mark
CHARLES E. NEAL.

Witnesses:
LILLIAN E. CRIM,
EVAN EDWARDS.