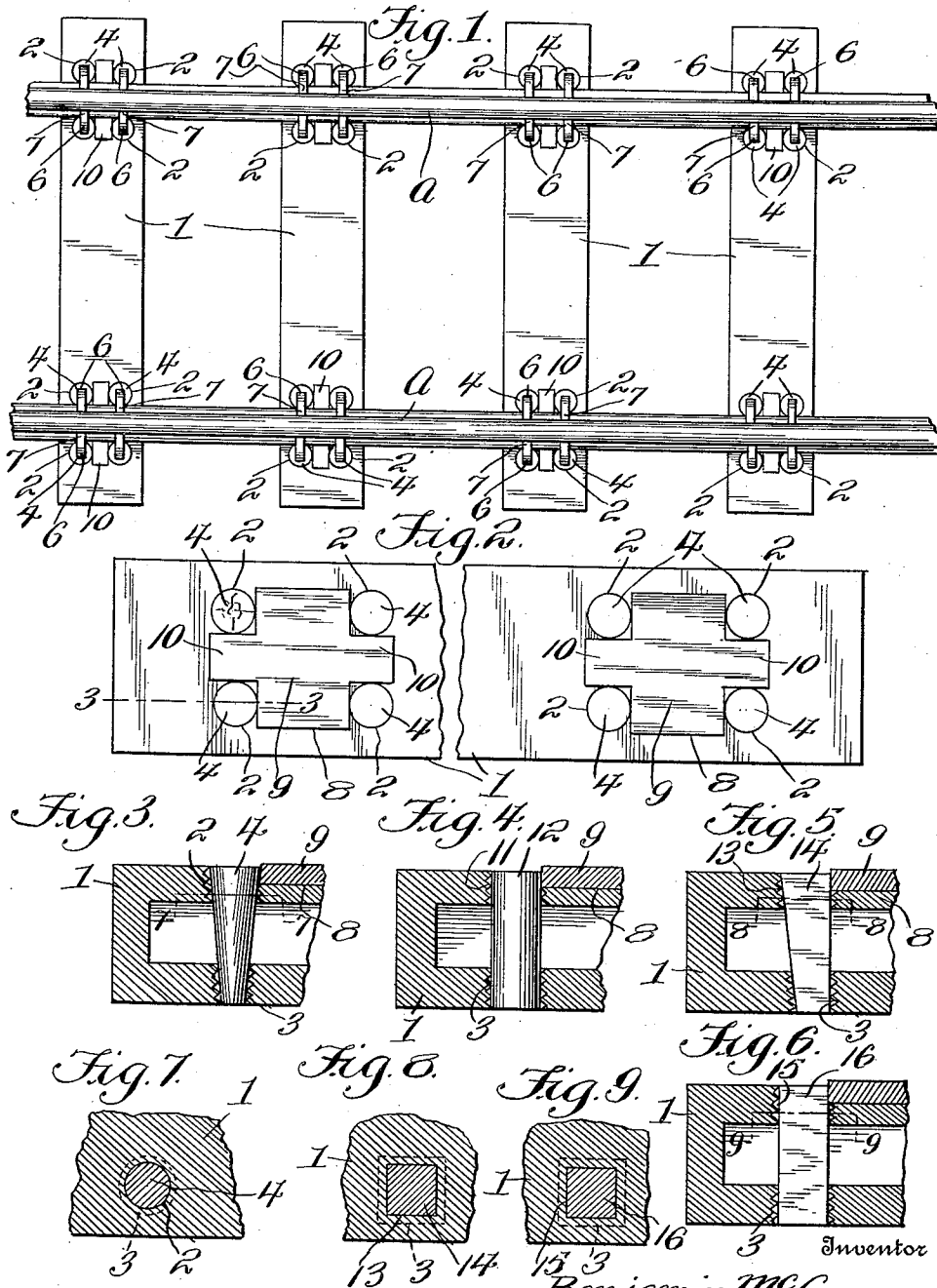


B. McCANN.
RAIL FASTENING.
APPLICATION FILED MAY 16, 1911.

1,017,575.

Patented Feb. 13, 1912.



Witnesses

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[Signature]

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UNITED STATES PATENT OFFICE.

BENJAMIN McCANN, OF MOUNDSVILLE, WEST VIRGINIA.

RAIL-FASTENING.

1,017,575.

Specification of Letters Patent.

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Application filed May 16, 1911. Serial No. 627,410.

To all whom it may concern:

Be it known that I, BENJAMIN McCANN, a citizen of the United States, residing at Moundsville, in the county of Marshall and State of West Virginia, have invented new and useful Improvements in Rail-Fastenings, of which the following is a specification.

This invention relates to rail fastenings and particularly to a fastener which is constructed for use upon metal ties, and has for an object to provide a fastening which will include an expansible member of wood and a metal retaining spike, the latter being adapted to be driven into the former and to expand the same against the walls of its receiving opening in the tie.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views: Figure 1 is a plan view of a portion of a track structure showing my improved rail fastening device applied with the supporting tie. Fig. 2 is a plan view of the tie. Fig. 3 is a section therethrough on line 3—3 of Fig. 2. Fig. 4 is a view similar to Fig. 3 showing a slightly modified form of fastening. Fig. 5 is a similar view showing another modified form of fastening. Fig. 6 is a similar view of a still further modified form of fastening. Fig. 7 is a section on line 7—7 of Fig. 3. Fig. 8 is a section on line 8—8 of Fig. 5. Fig. 9 is a section on line 9—9 of Fig. 6.

The tie 1 is constructed of metal having formed therein suitable groups of vertically disposed passages 2 which are threaded so as to provide grooves 3 for a purpose to be hereinafter described. The passages are preferably cylindrical in cross section and are longitudinally tapered the small ends of the passages being disposed lowermost. These passages have fitted therein the wedge keys 4 which are preferably constructed of wood or other suitable material which may be expanded without splitting. The groups of passages 2 are arranged with respect to each other so that two are located at each side of the base flange of the rail A. The fastening spikes 6 are of usual well known construction, being driven downwardly into the expansible keys 4. These spikes are provided with the head portions 7 which are

adapted to engage the base flange of the rail, as shown. On the effective driving action of the spikes into the keys 4, the keys will be swelled or expanded, hence the provision of the grooves 3 in the key-receiving opening. The grooves serve to allow expansion of the keys and thereby prevent their splitting when the spikes are driven thereinto.

The tie is provided with horizontally disposed recesses 8 and fitted therein are the wooden cushioning blocks 9. These blocks are disposed beneath the base flanges of the rails and serve materially in cushioning the shock and absorbing the vibrations, incident to the travel of the rolling stock. The blocks 9 are provided with fingers or extensions 10 which are arranged in the intervening spaces between the companion pairs of keys 4.

In the form of the invention shown in Fig. 4, the opening 11 in the tie is cylindrical in cross section and straight or of the same diameter throughout so as to receive a correspondingly constructed key 12.

In the form of the invention shown in Fig. 5, the opening 13 is vertically disposed, being rectangular in transverse section and tapered longitudinally throughout, the small end being disposed lowermost. This opening receives the correspondingly formed key 14.

In the form of the invention shown in Fig. 6, the opening 15 is rectangular in cross section and is of the same diameter throughout. This opening receives a correspondingly formed key 16.

I claim:

The combination with a metal tie; and companion pairs of fastening devices including rail engaging spikes and expansible members receiving the spikes and fitted in the tie; of a yieldable member mounted on the upper surface of the tie and having portions fitted in the intervening spaces between the companion fastening devices.

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

BENJAMIN McCANN.

Witnesses:

E. M. HEMPHILL,
O. B. ROBINSON.