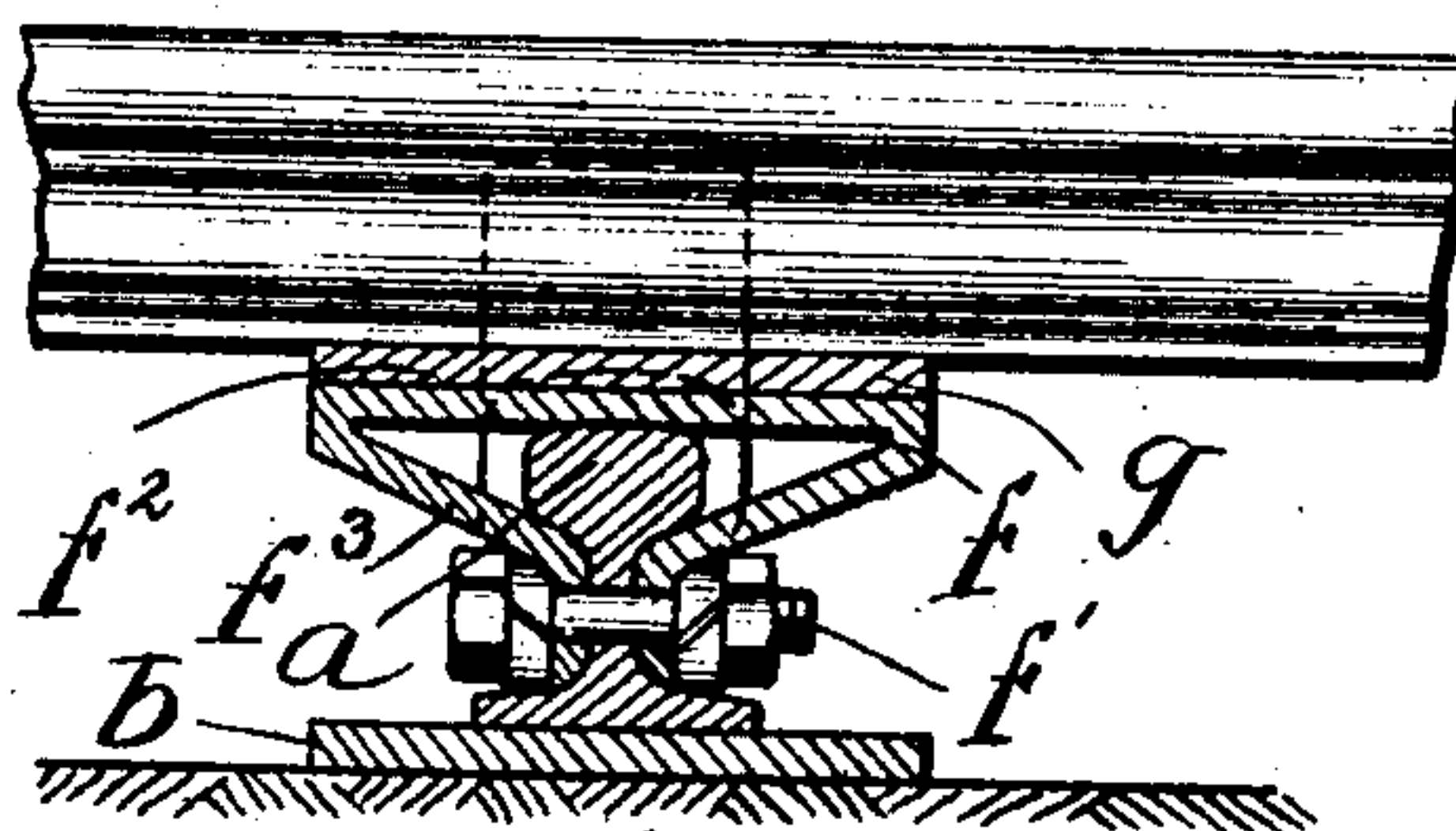
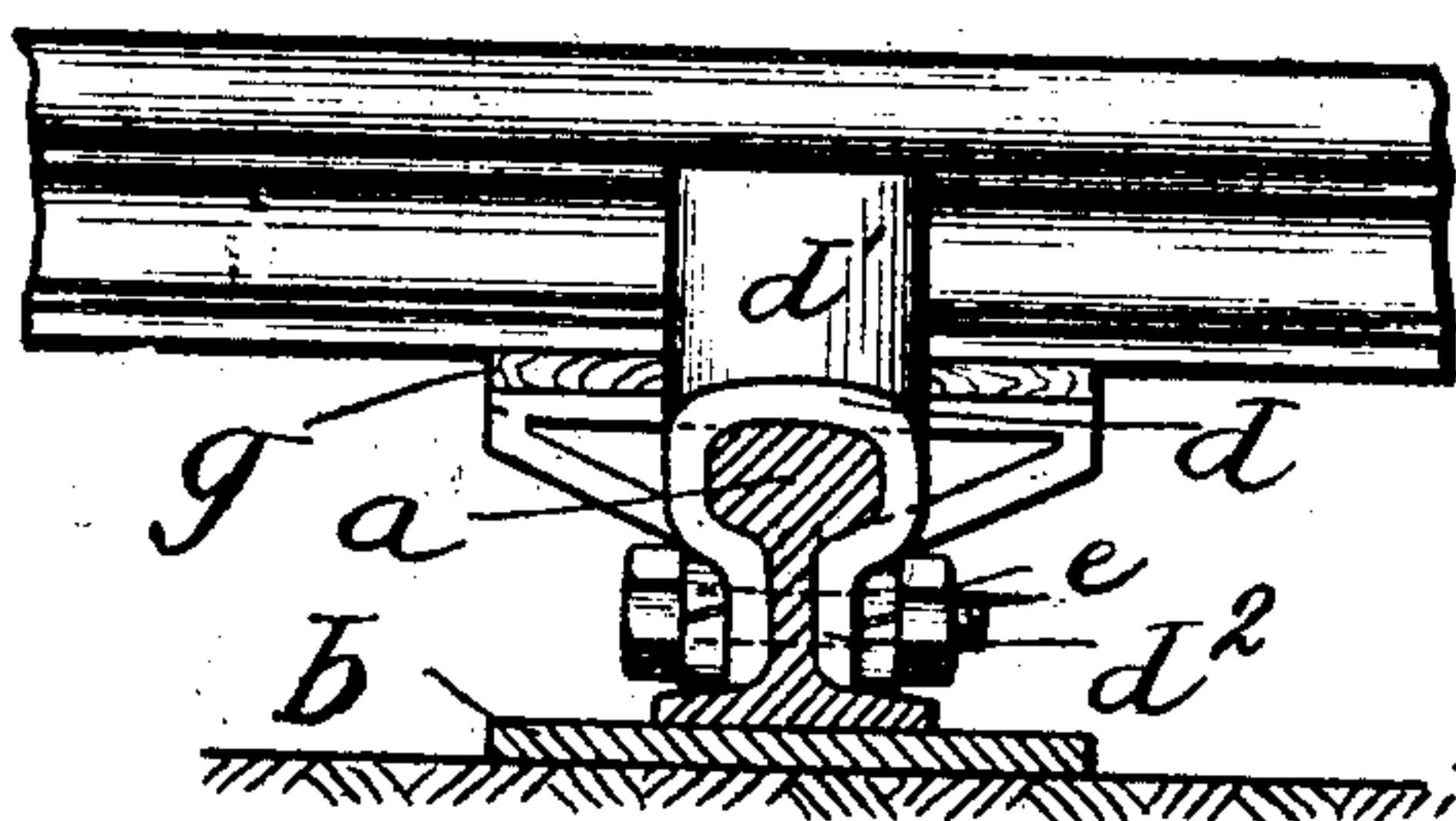
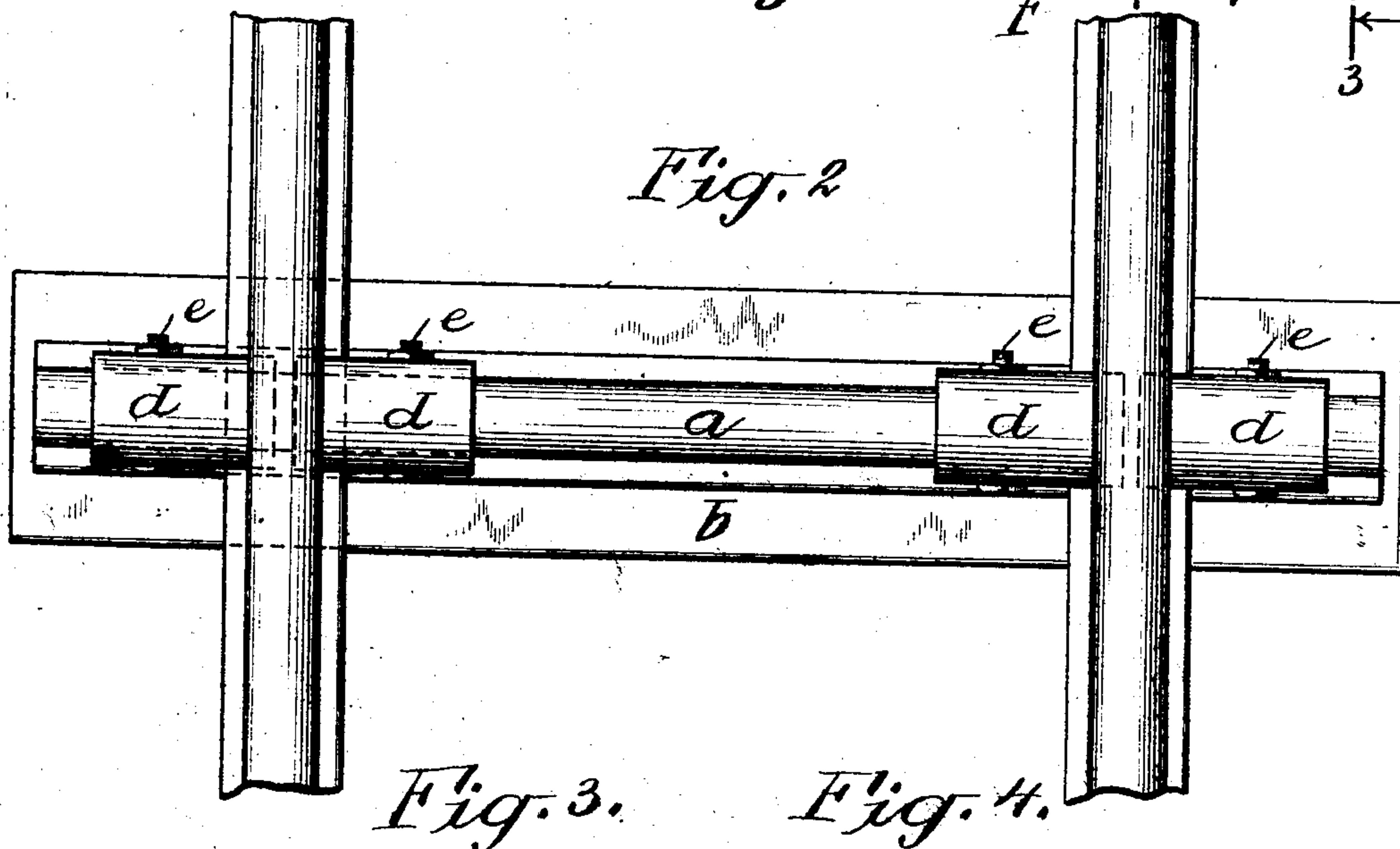
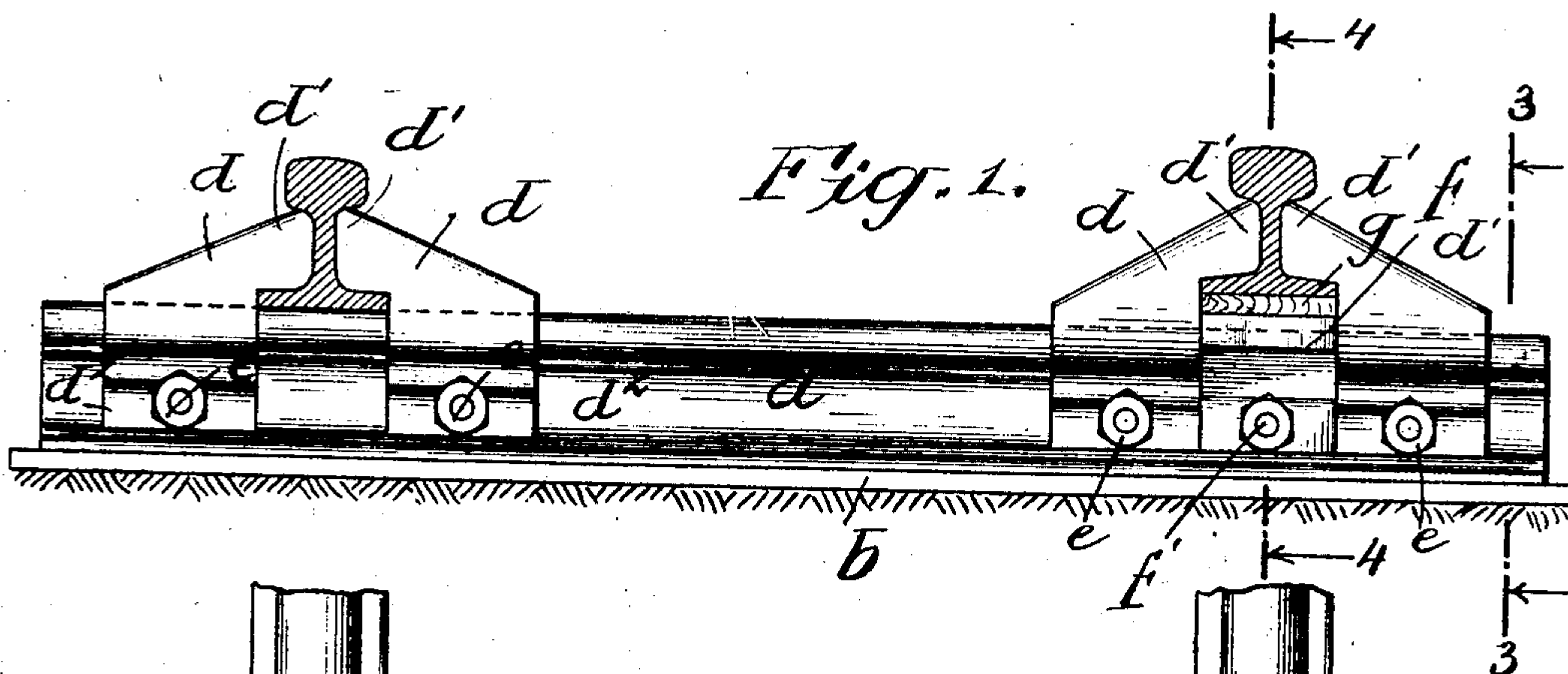


No. 891,662.

PATENTED JUNE 23, 1908.

A. S. BOUCHARD.
METALLIC RAILWAY TIE.
APPLICATION FILED OCT. 12, 1907.



WITNESSES:

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UNITED STATES PATENT OFFICE.

AULSON S. BOUCHARD, OF ST. LOUIS, MISSOURI.

METALLIC RAILWAY-TIE.

No. 891,662.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed October 12, 1907. Serial No. 397,155.

To all whom it may concern:

Be it known that I, AULSON S. BOUCHARD, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Metallic Railway-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to produce a cheap and efficient metallic tie by utilizing for that purpose railway rails which have become worn in spots, or have for some reason been superseded by new rails on the road. To this end I cut the superseded rails into appropriate lengths for ties and fit the ties with mechanism for supporting and clamping the rails, and I may further, where I find it desirable to do so, provide a flat plate on the bottom of the rail affording a greater bearing surface in the road bed.

The nature of my improvements will be understood in detail from the following description and the accompanying drawing, in which the same reference characters refer to like parts throughout.

Figure 1 is an elevation of the entire tie with the rails in place; Fig. 2 is a plan view of the same; Fig. 3 is a section on the line 3—3 of Fig. 1, and Fig. 4 is a section on the line 4—4 of Fig. 1.

The tie comprises a section *a* cut from an ordinary railroad rail, and this rail section is preferably riveted or welded, or otherwise secured, to a flat plate *b* which affords a wide flat bearing surface in the road bed. Onto this rail section I slide the saddle blocks *d* facing in opposite directions and having the projecting lips *d'* which take over the foot of the track rail and hold it in place. These projecting lips are preferably of the shape shown whereby they engage the web of the track rail and support the head thereof, but it is only essential that they should engage the foot of the rail to hold it in place. The saddle blocks *d* have depending flanges *d²* which are bent inwardly to surround the head of the rail section of the tie and engage the web thereof, and are held in place by bolts *e*. The depending flanges *d²* are preferably rolled or forged, or made of malleable metal so that they may have a degree of flexi-

bility allowing them to be sprung apart sufficiently to engage rail sections of different sizes or somewhat different forms, as for instance, the ordinary rail section as shown in the drawings, and of different weights.

As shown at the left hand side of Fig. 1, these saddle blocks may hold the track rail directly against the upper surface of the head of the rail section of the tie, but in order to provide a longer bearing surface for the rail and at the same time a cushioning device, I prefer to use the construction illustrated at the right hand side of Fig. 1 and in Figs. 3 and 4, in which there is slid onto the rail section of the tie, between the saddle blocks, a bearing block *f*. This bearing block is preferably made of rolled, or forged, or malleable metal formed as shown, but may be made of other appropriate material. This block straddles the rail section of the tie and has a long flat surface *f²* running in the direction of the track rail, and the depending inwardly-bent flanges *f³* engaging the web of the rail section and preferably having a degree of flexibility allowing them to be fitted to rail sections of different sizes, as described above in connection with the saddle blocks. The flanges *f³* are secured to the rail section *a* by the bolts *f'*. For the purpose of cushioning the track rail, I place between the bearing block *f* and the rail the wooden cushioning block *g*.

What I claim is:—

1. A metallic railway tie comprising a section of railroad rail of standard construction, a bearing block straddling the head of said rail section and secured to the web thereof, holding members secured to the web of the rail section at each side of the bearing block and engaging the track rail, and a cushioning block between the bearing block and the track rail; substantially as described.

2. In a railway tie, a base portion and upstanding flange, a bearing block straddling the flange and having depending members engaging the flange, and holding members secured to the flange adjacent to the bearing block for holding the track rail in place thereon; substantially as described.

3. In a railway tie, a base portion and upstanding flange, a bearing block straddling the flange, said bearing block having an upper flat longitudinal main body portion and hav-

ing depending members extending downwardly and inwardly at an angle thereto and fitted to the said flange, means for locking the said angular depending members to the said flange, and holding members secured to the flange adjacent to the bearing block for holding the track rail in place thereon.

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

AULSON S. BOUCHARD.

Witnesses:

WILLIAM H. DAVIS,
LAURA B. PENFIELD.