

No. 708,888.

Patented Sept. 9, 1902.

H. C. IVES.
JOINT FOR TOY RAILROAD TRACKS.

(Application filed July 23, 1902.)

(No Model.)

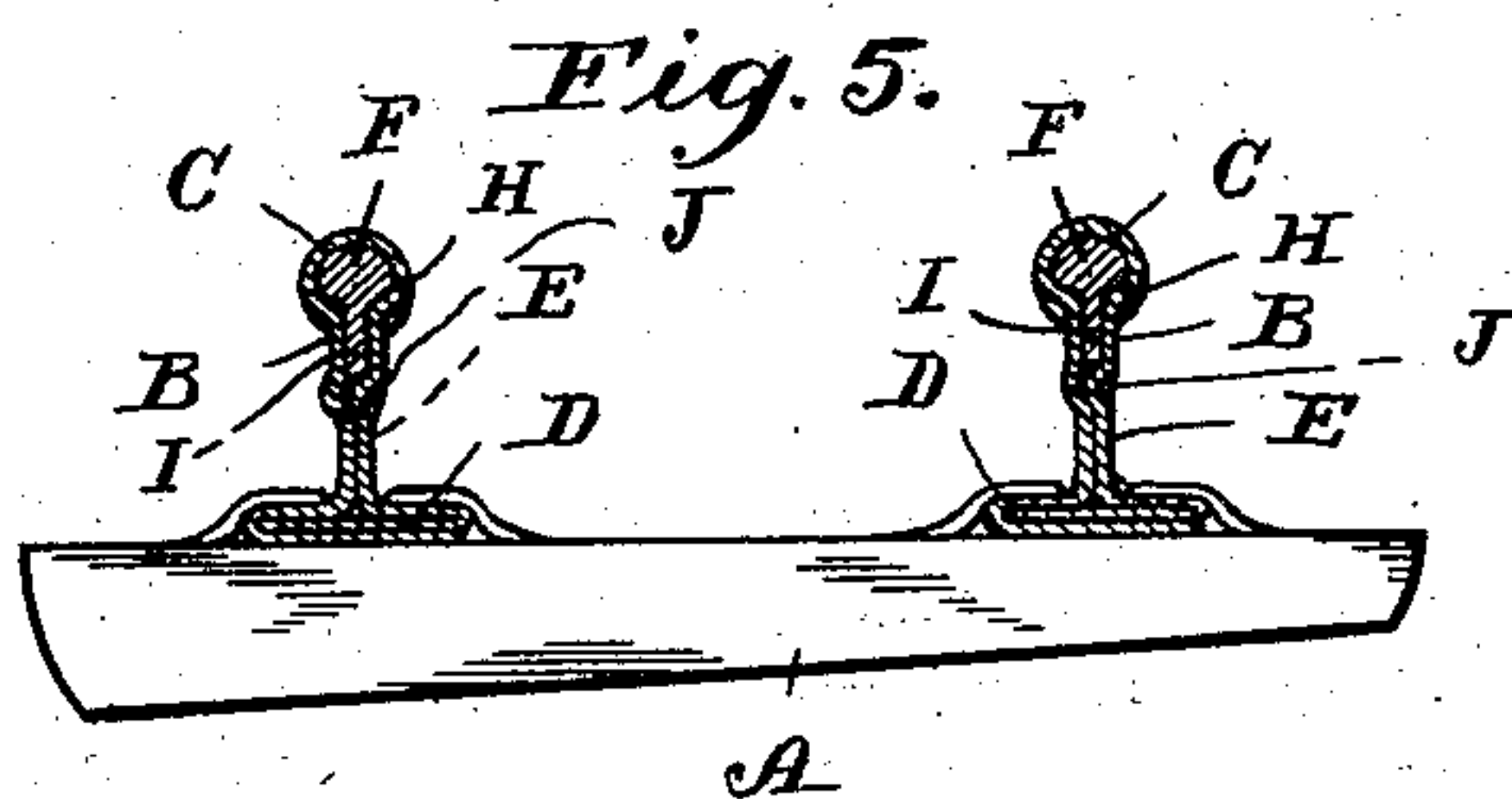
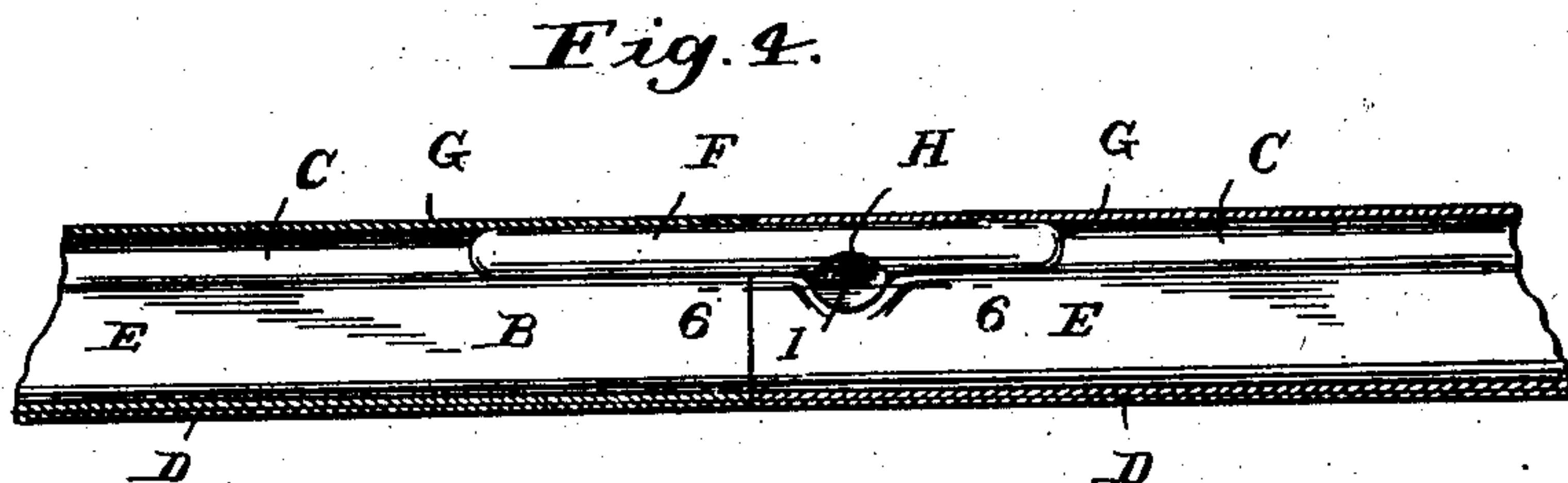
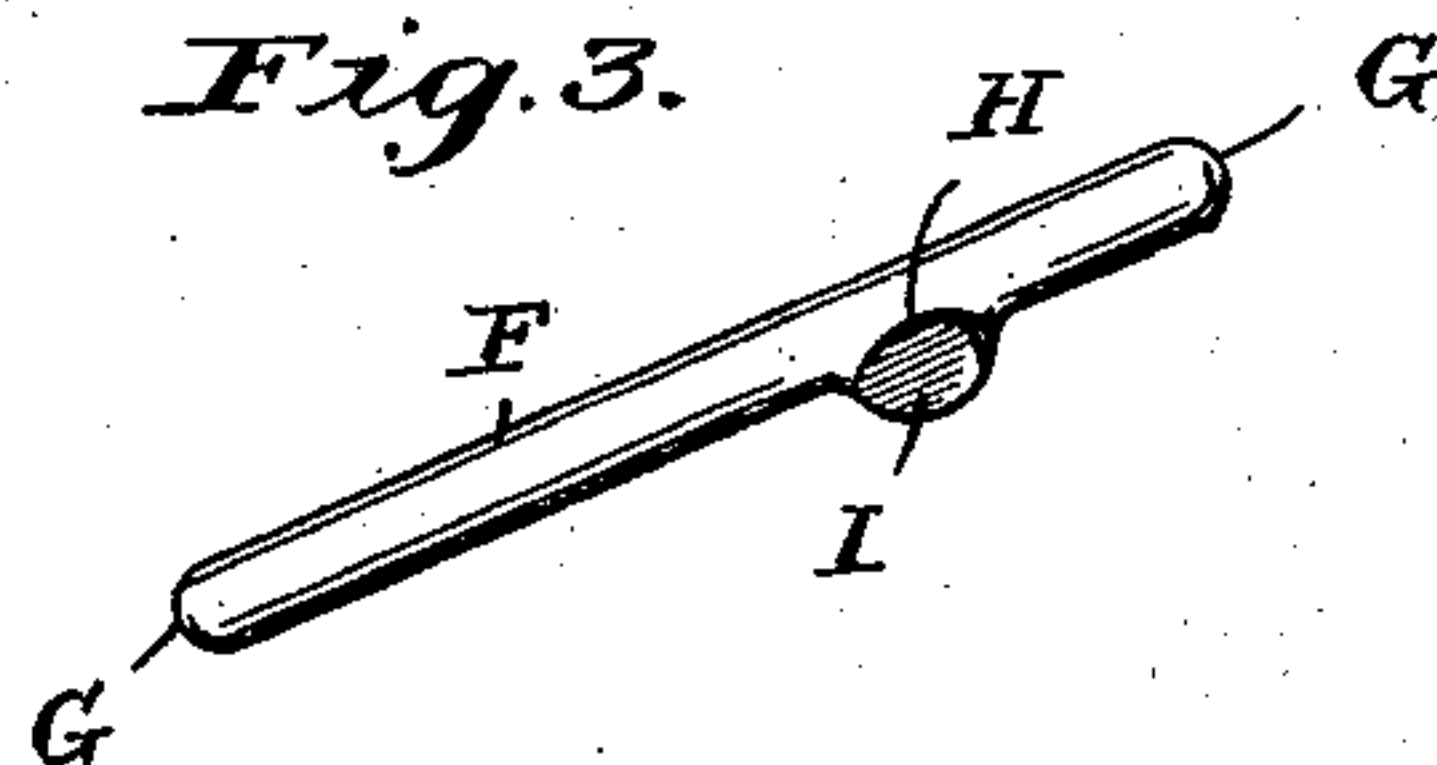
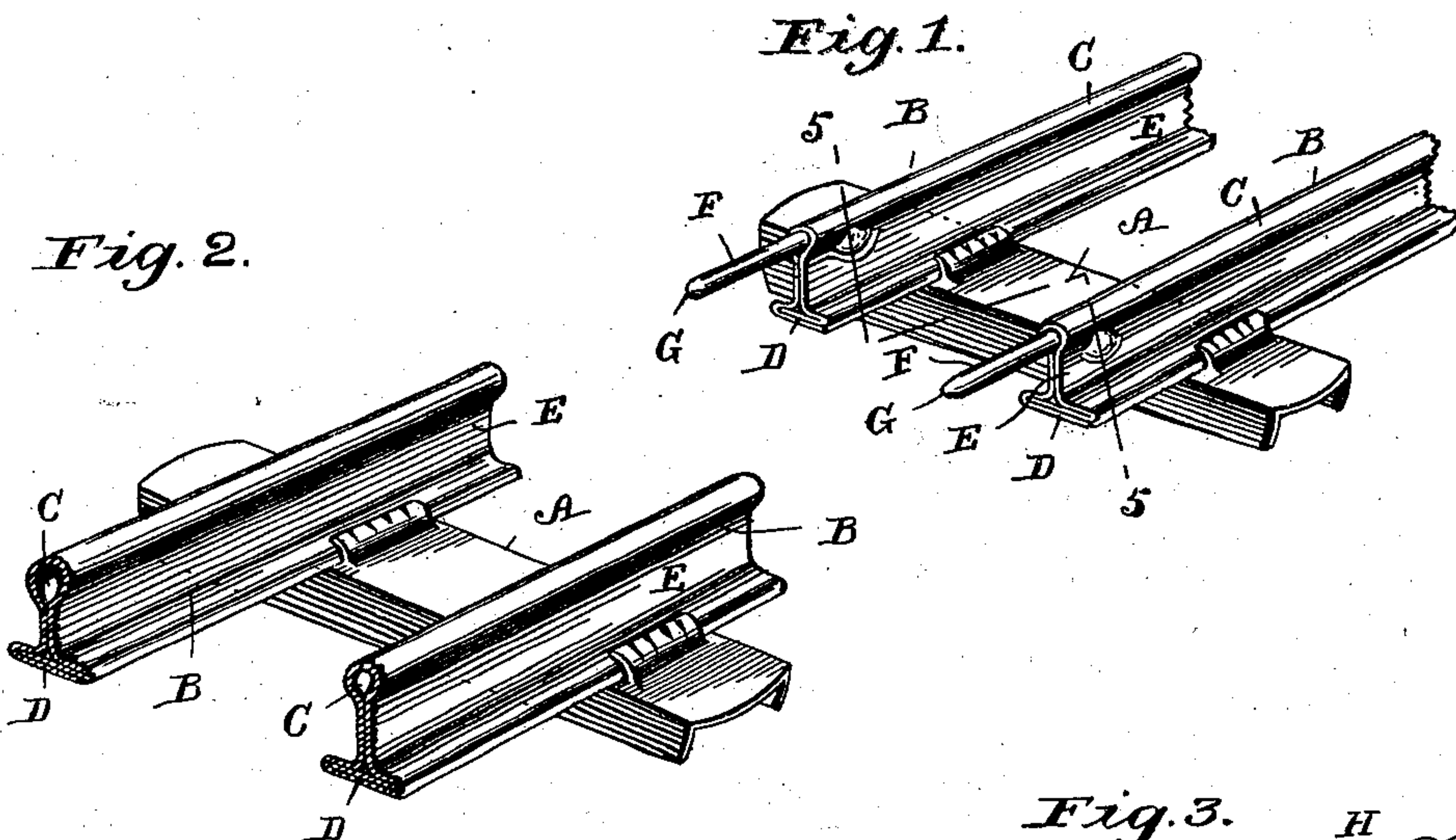
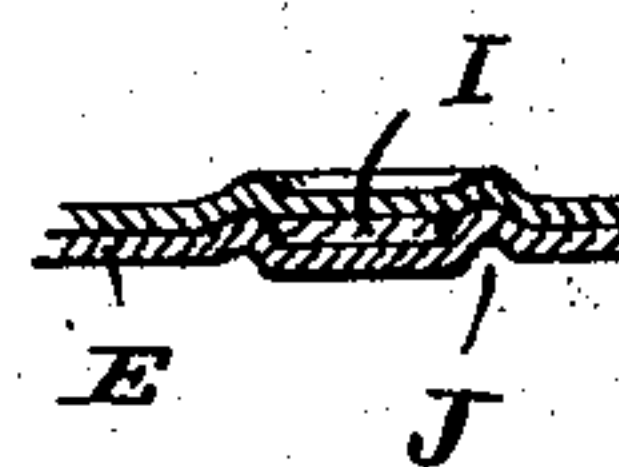


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY C. IVES, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE IVES MANUFACTURING CORPORATION, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

JOINT FOR TOY RAILROAD-TRACKS.

SPECIFICATION forming part of Letters Patent No. 708,888, dated September 9, 1902.

Application filed July 23, 1902. Serial No. 116,611. (No model.)

To all whom it may concern:

Be it known that I, HARRY C. IVES, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Joints for Toy Railroad-Tracks, of which the following is a specification.

My invention relates to new and useful improvements in joints for toy railway-tracks upon which may be operated spring or electric actuated toy trains, and is more especially applicable to a track formed of sheet metal in suitable sections which can be assembled to form a track of any desired length, including the customary curves, switches, and turnouts, as may be necessary to provide various designs of track.

It is the object of my invention to improve upon sheet-metal tracks of the above class by producing a more desirable connection or rail-joint for detachably uniting the several sections together; further, to provide a connection which will make the sections interchangeable one with another and permit their being quickly and firmly united, and, finally, to design it in a way that will allow of the parts being manufactured by automatic machinery. These tracks, as will be understood, comprise a hollow oval tread portion, the usual vertical central web, and a bottom flange which, like the tread, is slightly hollow. It is through the medium of this hollow tread and web that I preferably secure my connection, which consists of an improved form of pin, comprising in part the formation of a wing upon the under side of the pin and the swaging of the vertical portion of the rail around and against this wing in such a manner as to positively prevent the withdrawal of the pin from the section in which it is placed. In the production of these sections it will be obvious, of course, that each section must in itself represent a male and female member having a connecting-pin upon one end and an open hollow tread upon the other, so as to permit the sections being joined interchangeably to form indefinite lengths and designs of track.

With the above objects in view my invention resides and consists in the novel construction and combination of parts shown upon the accompanying drawings, forming a part of this specification, upon which similar letters of reference denote like or corresponding parts throughout the several figures, and of which—

Figure 1 shows a perspective view of the pinned end of a rail-section, while Fig. 2 shows a similar perspective of the opposite or adjoining end, the parts of these two figures being in their relative positions for assembling. Fig. 3 is a detail perspective view of a pin such as is employed and secured within the ends of the rails shown in Fig. 1. Fig. 4 is a central vertical longitudinal section through one rail, showing my improved pin connection in place. Fig. 5 is a cross-section of the track, taken on line 5 5 of Fig. 1, illustrating the manner in which the stock is swaged down around the wing of the pin to hold the same in place. Fig. 6 is a longitudinal cross-section taken on line 6 6 of Fig. 4 and illustrates the way in which the stock is swaged into the pin, fore and aft of the wing, to prevent any lateral movement.

Referring in detail to the reference characters marked upon the drawings, A indicates the sleepers or ties, which, as will be observed, like the track, are made of sheet metal stamped up into the desired form. In practice there may be two or three of these sleepers to each section, according to the length of the latter. These connections are made up both straight and curved, so as to produce any desired layout of track.

B indicates the rails proper, both of which are alike in construction, being formed in two operations of sheet metal, such as tin, bent first substantially central and longitudinally to form a hollow tread C and the inwardly-deflected flange portions D and next closed together and completed, forming the vertical central web E. The two edges of the blank overlap upon the under side of the flange to produce increased strength and rigidity. The rails are preferably secured onto the sleepers by having a portion of the latter turned

up over the flange of the rail and then swaged down firmly by means of automatic machinery.

My connection proper comprises a round
 5 pin F, formed of wire, having suitable round
 ends G to insure their free insertion into the
 hollow treads C of the rail. One side of the
 pin is punched or swaged adjacent to one
 end in a manner to form semicircular-shaped
 10 indentations H on opposite sides and to throw
 out a thin lateral projecting fin or wing I
 central with the pin. The short end of the
 pin is thus inserted into one end of the rail
 to about one-half its length, leaving an equal
 15 amount projecting for detachable connection
 with the adjacent section. When the pin is
 inserted in the tread for attachment, this fin
 is forced in between the two parts of the web
 E of the rail in a manner to slightly spread the
 20 same. The end of the rail containing the pin
 is next laid under the press, whose dies de-
 scend, engaging the web of the rail at a point
 opposite to the fin in a manner to swage a
 small part of each side of the lower edge of
 25 the hollow tread into the recesses H of the pin
 and to swage one side of the web in around the
 fin, forming a semicircular recess J on said side
 and a correspondingly-shaped bulge upon the
 other, thus securely retaining the pin in the
 30 rail against both lateral and rotary move-
 ment.

I am aware that there have been several
 patents granted upon joints for sheet-metal
 tracks with pins or tubes for connecting the
 35 rails together; also, that one or more of
 them are provided with means for preventing
 the connections being shoved too far in the
 tread. None of these patents, however, con-
 tains means for preventing the withdrawal of
 40 a connecting-pin, and it is consequently the
 essence of this application to cover a prac-
 tical and very desirable method of securing
 the connecting-pins into the rail ends of sec-
 tions of sheet-metal tracks in a way to avoid
 45 the defacement of the tread and to positively
 prevent the withdrawal and loss of the pins
 from the sections in which they are secured.

Having thus described my invention, what
 I claim, and desire to secure by Letters Pat-
 50 ent, is—

1. In a sheet-metal railway-track the com-
 bination with a hollow tread and two verti-

cally-disposed web members, of a pin adapted
 to enter said hollow tread and provided with
 a projecting fin or wing to fit in between the 55
 web members to retain the pin in place.

2. A rail-section formed of sheet metal hav-
 ing a hollow tread and a substantially hollow
 web, a pin fitted into the hollow tread of the
 rail and provided with a depending fin ex- 60
 tending into the opening of the web and in-
 dentations in the web fore and aft of the fin
 to prevent its withdrawal.

3. A railway connection comprising a rail
 having a hollow tread and web, a pin in said 65
 hollow tread having a projection to enter the
 opening of the web to prevent the turning of
 the pin, the stock of the web being swaged
 in around the projection to prevent the lat-
 eral movement of the pin. 70

4. In a connection for toy-track sections,
 the combination with a rail having a hollow
 tread and web, of a pin to enter said tread
 with recesses on the side and inward projec- 75
 tions of the rail to enter said recesses of the
 pin, in a manner to prevent both the with-
 drawal and turning of the pin within the rail.

5. A railway-joint consisting of a pin hav-
 ing rounded ends and a fin struck up and
 projections from one side of the pin, one end 80
 of the pin and its fin being adapted to fric-
 tionally enter the hollow tread and rail-web.

6. A railway-joint consisting of a pin hav-
 ing rounded ends and a fin struck up and
 projecting from one side of the pin, one end 85
 of the pin being adapted to frictionally enter
 the hollow tread and rail-web, and means to
 engage the fin to prevent its withdrawal from
 said rail.

7. A railway-joint, comprising a rail hav- 90
 ing a hollow tread and web, of a pin to enter
 said tread bearing indentations on opposite
 sides and a fin to enter the web, projections
 in the sides of the rail to engage both the in-
 dentations and the fin in a manner to retain the 95
 pin against both rotary and lateral movement.

Signed at Bridgeport, in the county of Fair-
 field and State of Connecticut, this 16th day
 of June, A. D. 1902.

HARRY C. IVES.

Witnesses:

C. M. NEWMAN,
 HARRIET L. SLASON.