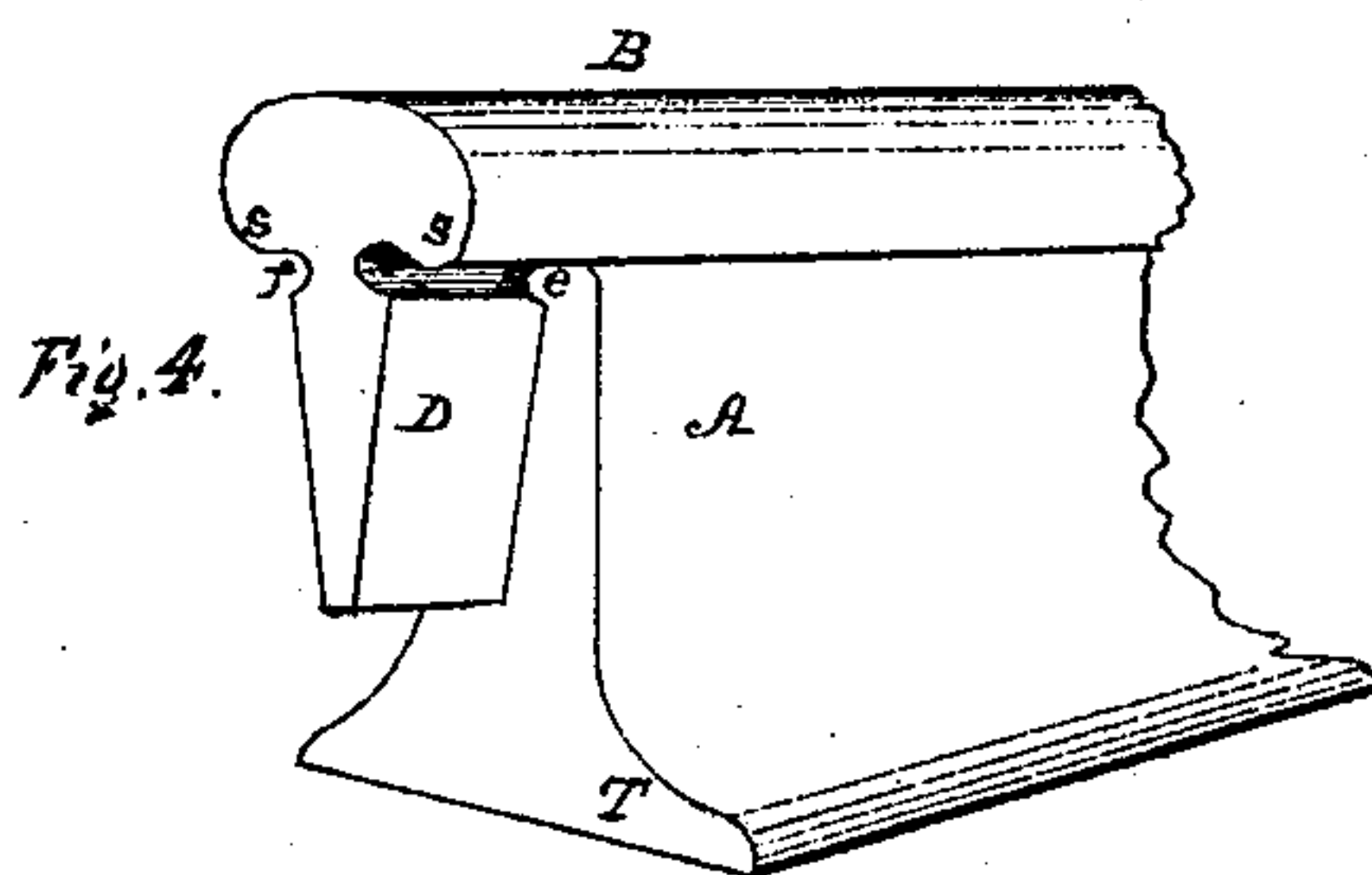
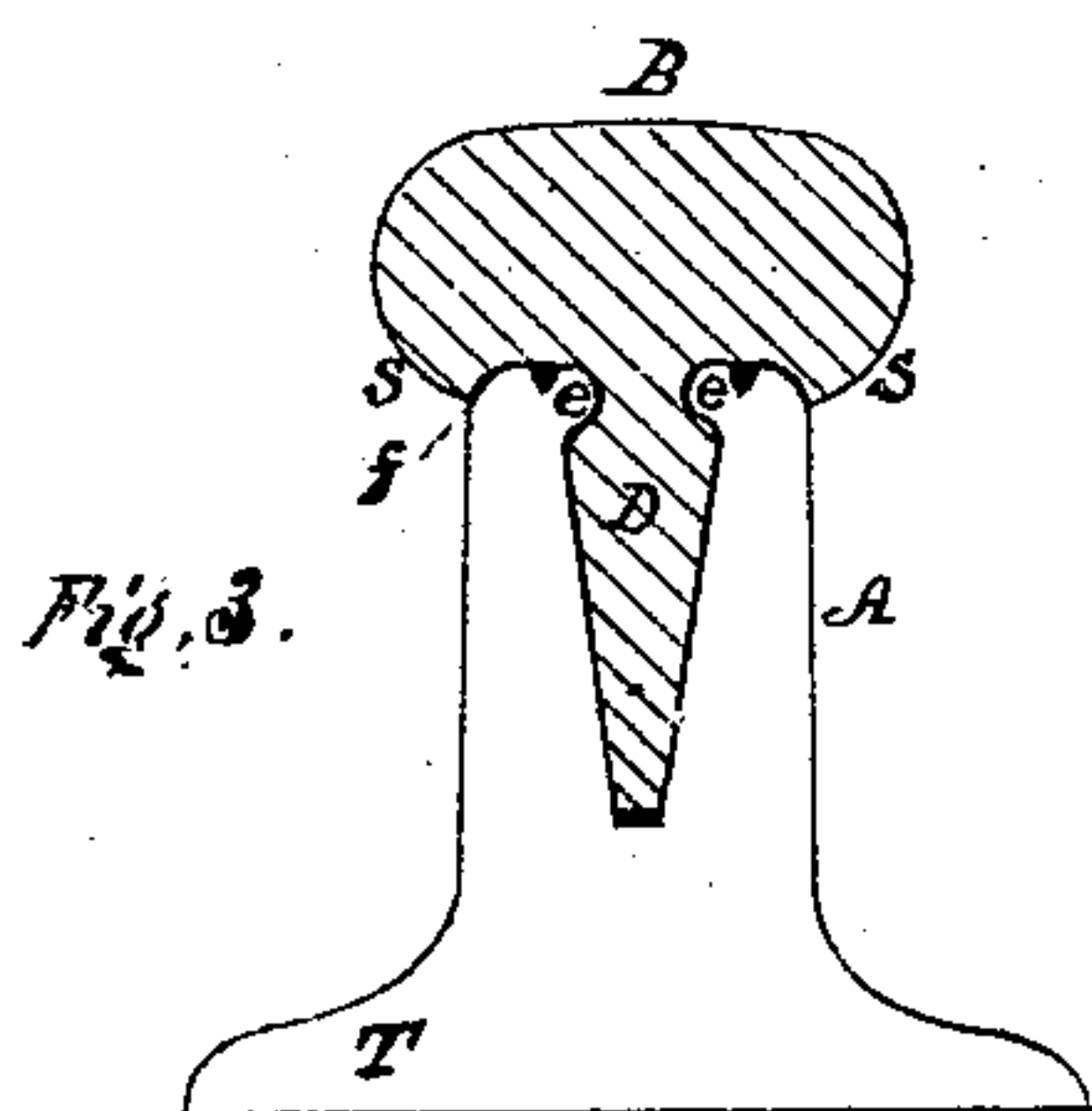
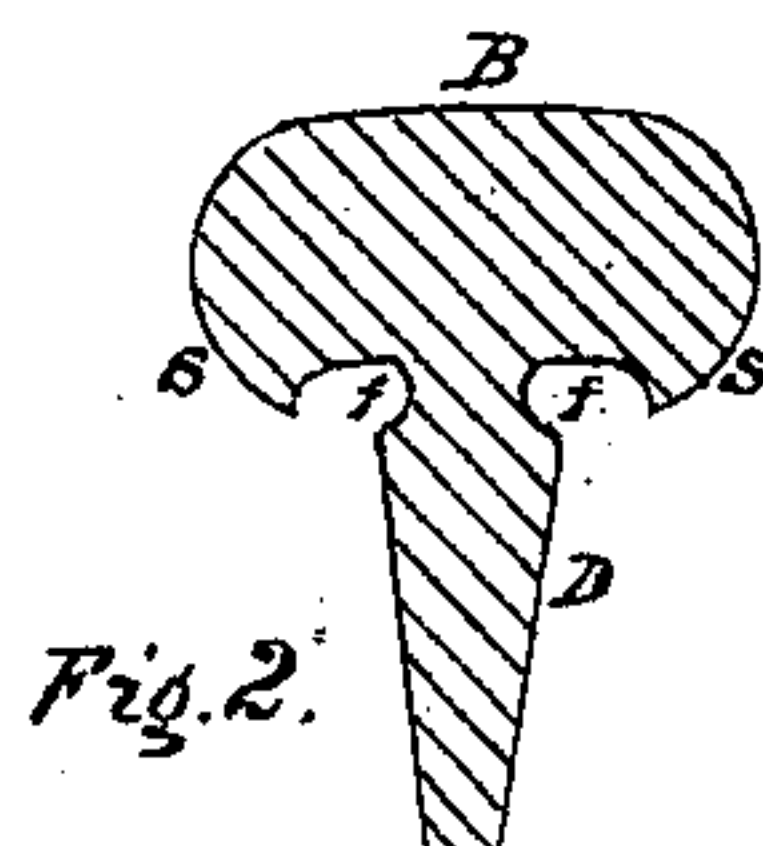
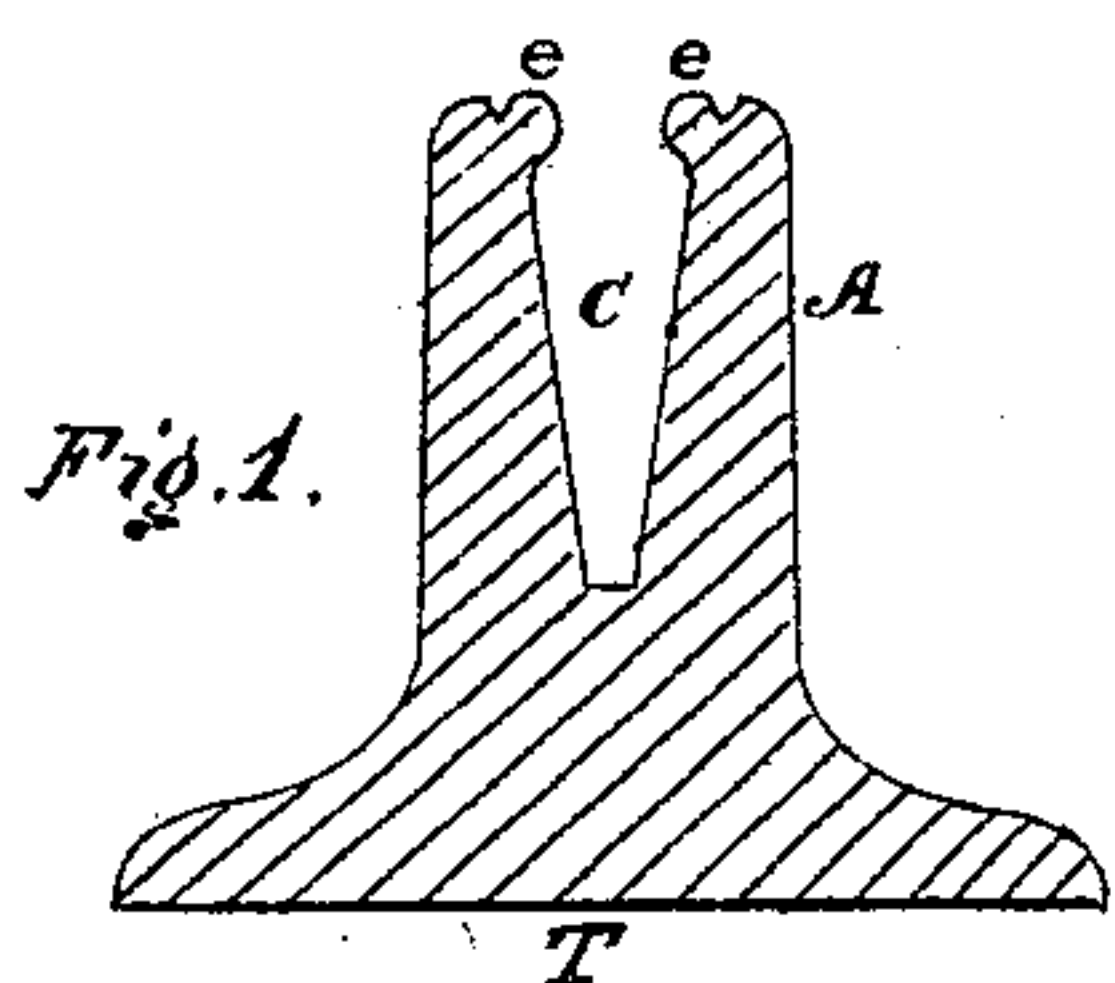


# *Hammer & Grim,* *Railway Rail.*

*No. 100,030.*

*Patented Feb. 22. 1870.*



Witnesses.

*Josiah W. Ellis*  
*J. B. Whaley*

Inventors

*Alonzo Hammer*  
*David Grim*

# United States Patent Office.

ALONZO HANMER AND DAVID GRIM, OF PITTSBURG, PENNSYLVANIA; SAID ALONZO HANMER ASSIGNS HIS RIGHT TO PHILIP L. GRIM, OF BEAVER COUNTY, PENN SYLVANIA.

*Letters Patent No. 100,030, dated February 22, 1870.*

## IMPROVED RAILWAY-RAIL.

The Schedule referred to in these Letters Patent and making part of the same

*To all whom it may concern :*

Be it known that we, ALONZO HANMER and DAVID GRIM, both of the city of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Rails, of which the following, taken in connection with the accompanying drawings, is a specification.

### *Nature and Objects of the Invention.*

Our invention relates to an improvement in that class of railroad-rails that are made in two parts, one part constituting the flange and web, and the other the crown or head.

The invention we have made consists in so constructing each part, as that, when placed properly together, they will support one another, the object being to hold a detachable crown or head firmly in place without the use of bolts, rivets, or wedges, and yet permit sufficient longitudinal play to allow for unequal contraction or expansion.

### *Description of Accompanying Drawings.*

Figure 1 represents a transverse section of that part constituting the flange and web.

Figure 2, a transverse section of the crown or head.

Figure 3 represents a section of the same parts put together.

Figure 4, perspective view of a portion of a complete rail.

### *General Description.*

In forming our improved rail, we make the flange T of the usual shape, but divide the web A longitudinally, so as to form a deep V-shaped groove, C, the upper edges of which are turned inward by properly-

constructed rolls, to produce a slight bead or rib, *e*, at each of those points.

The top or crown B, which may be of steel or iron, is rolled separately, and with a tongue, D, on its lower side, corresponding in shape with that of the groove C in the web.

On each side of this tongue D, and immediately beneath the crown, is a shallow channel, *f*, in which the ribs *e e* are intended to fit.

The crown B is also large enough to allow its sides or cheeks *s* to overhang and clasp the edges of the web.

The parts being so constructed, the tongue D of the crown B is forced down into the groove C, the sides of which spring apart just sufficient to allow the ribs *e e* to enter the channels *f f* in its sides, when they close up and hold the tongue with a vise-like grip, while the overhanging cheeks *s s* of the crown clasp the top of the web A, binding the parts so firmly together that very considerable force is required to separate them.

### *Claim.*

We claim the channels *f f* in the tongue D, in combination with the ribs *e e* in the groove C, as a means of uniting the head or crown of a two-part rail to the web or base without the use of bolts, rivets, or wedges, as shown and set forth.

In witness whereof, we have hereunto set our hands in the presence of two subscribing witnesses.

ALONZO HANMER.  
DAVID GRIM.

Witnesses:

JOSIAH W. ELLS,  
J. B. WHALEY.