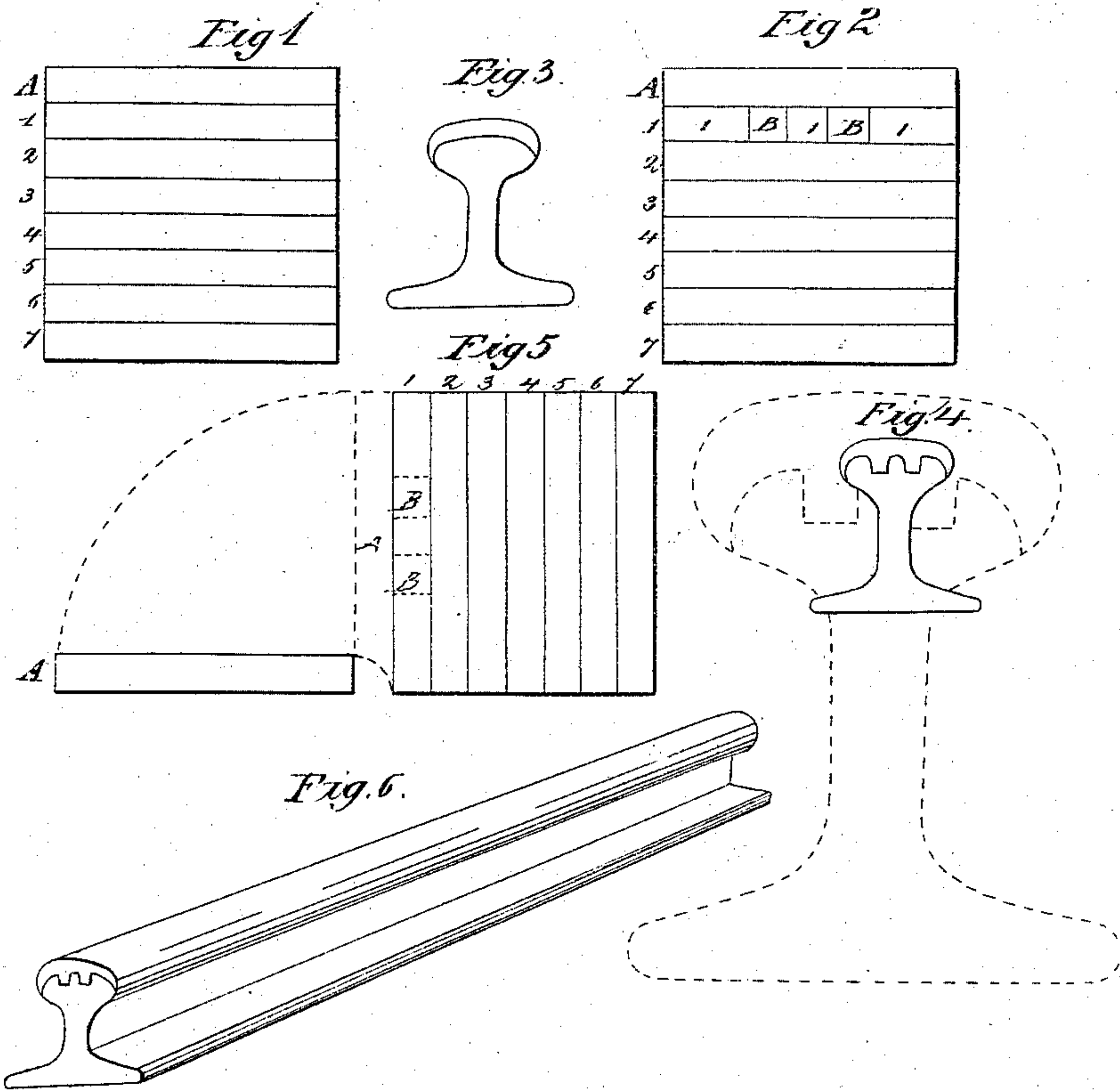


*A. J. Hindermeyer*

*Piles for Making Railroad Rails.*

*N<sup>o</sup> 40,212.*

*Patented Oct. 29, 1867.*



*Witnesses,*  
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# United States Patent Office.

ANTHONY J. HINDERMEYER, OF ROHRESTOWN, PENNSYLVANIA.

*Letters Patent No. 70,212, dated October 29, 1867.*

## IMPROVED METHOD OF PILING, HEATING, AND FLUXING FAGOTS FOR RAILROAD RAILS.

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

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ANTHONY J. HINDERMEYER, of Rohrestown, in East Hempfield township, Lancaster county, and State of Pennsylvania, have invented a new and improved Mode in the Manufacture of Steel-Capped Rails for Railroads; and I do hereby declare that the following is a full and exact description thereof. Reference to the accompanying drawings, making a part of this specification, will aid in more clearly understanding the same, in which—

Figure 1 shows an ordinary pile of iron plates, with the steel plate A on top.

Figure 2 shows a similar pile, with the addition of steel bars B under the plate A, being a second process.

Figure 3 shows the steel-capped rail resulting from my first process.

Figure 4, the steel-capped rail resulting from my second process.

Figure 5 shows a pile set edgewise preparatory to joining the steel plate A.

Figure 6, a portion of a rail shown in perspective.

The nature of my invention consists in the manner of manipulating, in order to produce a thorough union of the steel plate, or plate and bars, with the iron plates, preparatory to being rolled into the desired form or shaped rail by any of the machinery now in use.

To enable others skilled in the art to use my improved mode or process, I will now describe more fully.

I construct my pile in the usual manner for heating in the furnace, composed of the desired number of iron plates. In the mean time, in a separate side furnace, I heat my steel plate A. The furnaces may be charged with six of these piles and separate plates at a time. When brought to a welding heat, I draw a plate of steel, A, lay it in a proper position, so that when my patent flux is applied to the top of the pile and plate, by turning the pile on its edge, as shown by fig. 5, with a paddle and quick motion I raise the steel plate A, so as to come in contact with the top plates of the piles, (shown by the dotted lines,) being of the same size, brings the fluxed faces in close and equal contact. I now turn the pile with the steel plate A, beneath or on the hearth-bed, in order to heat the sides for the flanges thoroughly without injury to the steel plate. I then turn the pile to bring the steel plate on top, when I apply another coat of flux to protect the steel plate from being burned. When the same is brought to a yellow heat, I draw the pile, and submit it to the ordinary machinery for rolling out, which results in producing a steel-capped rail, shown by fig. 3.

My second process differs only in forming the top layer of the pile, by introducing two steel bars B, say one inch square, with an iron inch bar between them, in the centre of the pile, and a two-inch bar on the outer side of each, as shown by fig. 2. I apply my flux to the steel bars both for the purpose of fluxing and protecting the steel, being heated together with the other plates forming the pile, the steel plate A being, however, separately heated and worked on to the pile, as in my first process, and rolled out, which results in forming the rail, as shown by figs. 4, 6.

I am aware that S. L. Potter, Superintendent of the Wyandotte Rolling-Mills, claims to have discovered a plan by which a pile can be made of iron and steel, and disposed in such a manner that the iron will receive twice as much heat in the furnace as the steel, consequently both brought up to a welding heat at the same time, without injuring the properties of either. Be this as it may, I find it safer and giving more satisfactory results by heating the steel in a separate furnace for the steel cap or top plate. Besides, he introduces a billet of five by four inches thick, having been previously rolled or hammered from ingots seven or eight inches square, which he introduces into the side of the ordinary rail pile. When worked off it forms a wedge-shaped head, extending partially into the shank, thereby weakening it greatly at a very essential point. I am also aware that Patent No. 60,723 claims a steel-headed rail, by working in a corrugated steel bar; both of which methods I disclaim.

What I claim as my invention, and desire to secure by Letters Patent, is—

The method herein described of constructing, fluxing, and heating a pile of iron and steel bars, to be subsequently converted into a railroad rail by rolling, as set forth.

ANTHONY J. HINDERMEYER.

Witnesses:

WM. B. WILEY,  
JACOB STAUFFER.