G. Edwards.

Piles for Making Railroad Rails.

No. 20,702. Patented Jun. 29, 1858.

Fig 2.

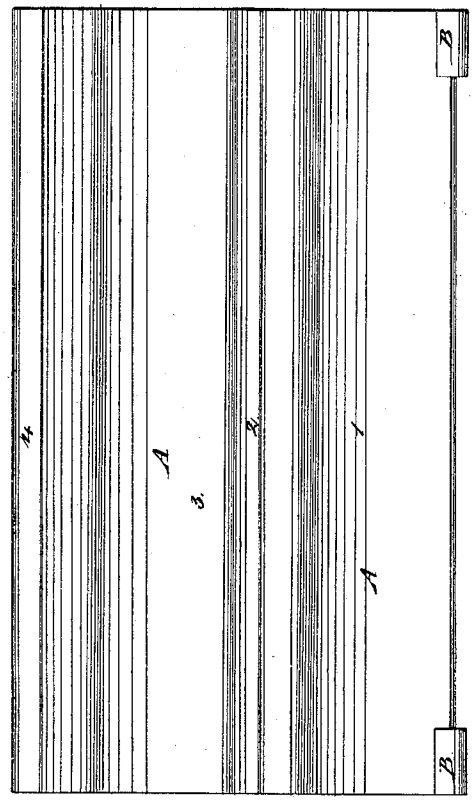
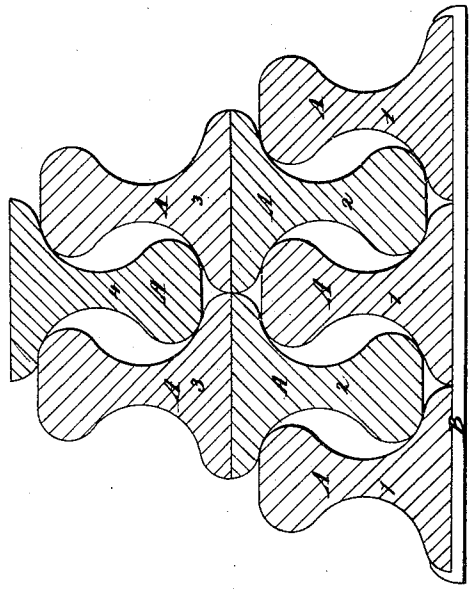


Fig 1



THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

G. EDWARDS, OF JOHNSTOWN, PENNSYLVANIA.

ROLLING RAILWAY-BARS.

Specification of Letters Patent No. 20,702, dated June 29, 1858.

To all whom it may concern:

Be it known that I, GILES EDWARDS, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in the Process of Working or Manufacturing Old or Worn Railroad-Rails into New Ones; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is an end view of a "pile" arranged according to my invention. Fig. 2, is a side view of ditto.

Similar letters of reference indicate corresponding parts in the two figures.

The nature of my invention consists in forming the "pile" by arranging one series of rails in a line, with their heads up, another series between the first series with their heads down and a third series with their bases down and resting upon the second series, and topping off the third series with a single rail which is inverted. By thus placing or disposing the old rails, the new rail formed will have a similar quality of iron in the head or wearing portion as when formed out of new iron, and fibrous iron will be worked or rolled in the base and neck instead of only in the base, and thus the great expense incurred from the rapid wearing of the rails at the sides of the head as when made out of a pile formed of old flat bars is saved in a great measure, and the liability of the rail snapping off at the neck, on account of the neck being formed of granular iron, is avoided.

In constructing railroad rails the following method is generally adopted. 1st. To have the upper part or head of the rail formed of hard granular iron, worked and refined to a state which will allow of the head of the rail being rounded off and well finished. 2nd. To have the neck of the rail formed of an inferior quality of metal, and 3rd. to have the base formed of a fibrous metal. This being the case, the importance of having some way of arranging the rails so that the different kinds of metals in the old rails made after the above method will be thrown into the same parts of the rail which is formed of the old rails, that they occupied in the old rails when first put into use, will be readily seen. My method of arranging or disposing the old rails accomplishes this important desideratum beside throwing fibrous metal into the neck of the rail and enables the manufacturer to produce from old rails as perfect a rail as can be produced from new metal.

To enable those skilled in the art to fully understand and construct rails according to my improved process I will proceed to describe it.

A, represents a series of pieces of old or worn rails. These pieces are of equal and suitable lengths and they are placed together as shown clearly in Fig. 1. Eight pieces are shown, and the three lower ones designated by 1, 1, 1, are connected at their front and back ends by clamps B, which are formed of flat pieces of iron bent up at their ends to catch over the edges of the bases of the lower rails. Two rails 2, 2, are fitted in an inverted position between the rails 1, the bases of rails 2, resting on the treads or upper surfaces of the rails 1. On the inverted bases of rails 2, rails 3, are placed, one on each, and between rails 3, 3, an inverted rail 4, is placed. The pieces of rails thus disposed form what is technically termed the "pile," that is, the mass from which the new rail is to be formed by rolling, it being understood that the "pile" is quite short compared with the length of the rail to be rolled and by repeated rolling the several pieces are perfectly welded and attenuated to the required thickness and length.

Although eight pieces A, are represented in Fig. 1, as forming the "pile" a greater or less number may be used.

I propose to first heat the "pile" to a welding heat and then pass it four times between roughing rollers, then return it to the furnace, before being cool, and subject it to a second heating so as to insure a perfect homogeneousness of the parts and then finish the bar by passing it between the finishing rollers.

The plan hitherto practiced has been to roll each rail or piece with a flat bar, and the several bars being placed one over the other so as to form the "pile". This labor is avoided by my improvement.

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

The manner herein shown and described of arranging or disposing old rails in forming a "pile", for the purpose set forth.

GILES EDWARDS.

Witnesses:
EVAN LEWIS,
W. W. WALTERS.