J. DOWNING, Sr.

Method of Forming Piles or Fagots of old Railway-Rails.

No. 165,219. Patented July 6, 1875.

Fig. 1

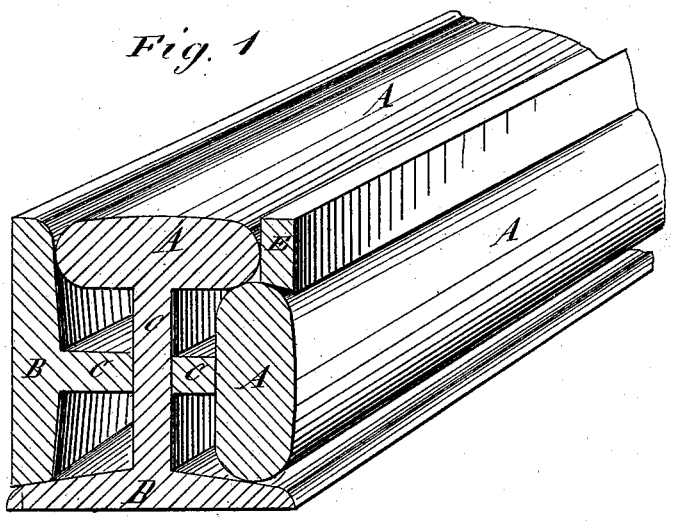


Fig. 2

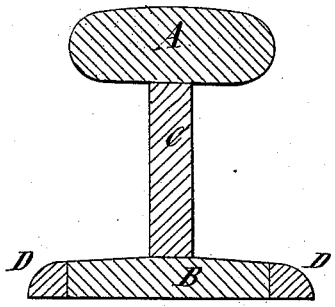


Fig. 3

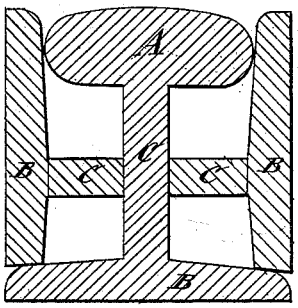
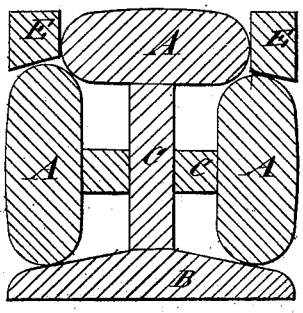


Fig. 4



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH DOWNING, SR., OF ALLENTOWN, PENNSYLVANIA.

IMPROVEMENT IN METHODS OF FORMING PILES OR FAGOTS OF OLD RAILWAY-RAILS.

Specification forming part of Letters Patent No. **165,219**, dated July 6, 1875; application filed May 15, 1875.

To all whom it may concern:

Be it known that I, JOSEPH DOWNING, SR., of Allentown, in the county of Lehigh and State of Pennsylvania, have invented a new and useful Improvement in Reworking Old Rails, of which the following is a specification:

The object of my invention is to produce merchant bar and other forms of marketable iron from old rails, with the different qualities of iron in the rail disposed to the best advantage in the new bar, and to contrive the pile or fagot so that it can be reduced with one heat only.

The head, web, and base of the rail are each of different qualities of iron, the head being hard and inclined to cold-short, the base is soft and fibrous, and the web is the medium quality, which it is important to dispose in the bars to be made, so that the best qualities will be outside, and the poorest inside, for bar-iron, and in rails the different qualities should be disposed the same as before rolling.

To this end, my invention consists in so cutting up the old rails as to separate these different qualities along the longitudinal lines of their union in the rails, and arranging the pieces cut in such manner in the pile as to have the different qualities developed in the new bars where wanted.

Figure 1 is a perspective view and cross-section of a pile contrived according to my invention. Fig. 2 is a cross-section of a rail, showing one mode of cutting it for the pile. Fig. 3 is a cross-section of a pile or fagot, illustrating my invention. Fig. 4 is a cross-section of another arrangement of the pile.

Similar letters of reference indicate corresponding parts.

Fig. 1 represents a pile formed of two rails, and a piece of fine iron by splitting one rail along the middle of the web, and placing the split rail sidewise to the upright rail which is not split, with the piece on the upper edge of the head of the rail, which is laid on its side, thus having two sides of the pile formed by heads A, and the other sides by the bases B, while the webs C come in the middle.

Fig. 2 represents a plan for trimming off the edges D of the base of the rail, to adapt it for piling, so as not to make it necessary to use the piece E to make up the pile symmetrically.

Fig. 3 is a plan of piling two base-pieces with about half of the web, by the sides of an unsplit rail, the bases having the lower edge trimmed off, thus arranging the head for the upper side of the bar, while the bases form the other three sides.

Fig. 4 represents a pile with three sides formed by heads, and one side by a base.

Thus I can dispose the three different qualities of iron of which the rail is composed in such way that I can have the two better portions in any exterior part of the bar to be made that I may wish, with the inferior part in the middle.

I am aware that it is not new to make piles with a filling of puddle or reheated iron, and for large mills; but I manufacture without a filling of puddle-iron, and for guide-mills; hence

What I claim is—

A pile of old railroad-rails, constructed of one whole rail and two part-rails, divided by cutting longitudinally along the middle of web, the web portion of said parts being placed in the pile, so as to abut against the web of the whole rail, and the interstices being filled with extra pieces of metal, one or more, substantially as and for the purpose described.

JOSEPH DOWNING, SR.

Witnesses:

HENRY J. KLECKNER,

W. H. DOWNING.