(No Model.)

G. WESTERMAN, Sr.

PILE FOR MERCHANT IRON.

No. 316,209. Patented Apr. 21, 1885.

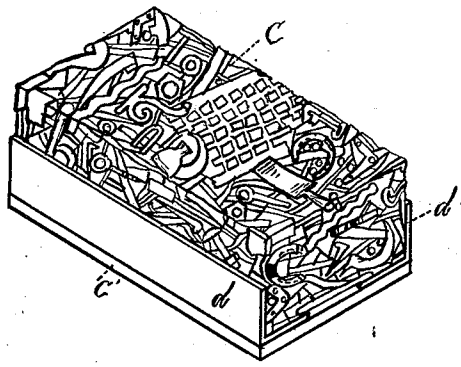

Fig. 2.

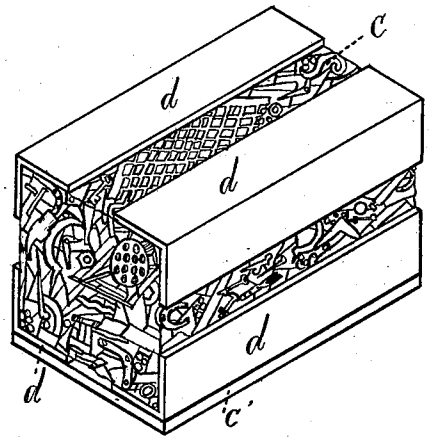

Fig. 3.

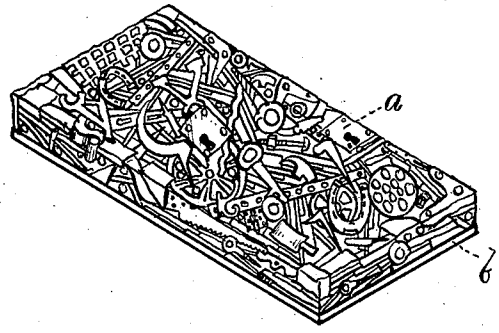

Fig. 1.

Witnesses:
Otto Haddick.
Gohmidt

Inventor.
George Westerman Sr
By. W T Miller
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE WESTERMAN, SR., OF LOCKPORT, NEW YORK.

PILE FOR MERCHANT-IRON.

SPECIFICATION forming part of Letters Patent No. 316,209, dated April 21, 1885.

Application filed August 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WESTERMAN, Sr., a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in the Manufacture of Iron; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates particularly to the manufacture of merchant-iron from scrap-iron.

Previous to my invention it has been the common practice to take a short board and pile upon it odd scraps of iron, and place such pile in the furnace and heat it until the scraps adhere, and, after obtaining four or five such piles, to place them together in another pile and heat them a second time in the furnace until they adhere, and in this manner obtain a bar or chunk of iron, which is then passed through the rolls and made into merchant-iron. It has also been the custom to surround the pile of scrap with plates of iron which meet loosely at the angles of the pile. In the first instance two heats are necessary to make even a fair article of merchant-iron, and in the second instance the edges of the finished iron are often defective after rolling. My invention is designed to remedy these objections; and to that end it consists, substantially, in placing lengths of angle-iron at either two or four of the edges of the piles of scrap, when it is necessary to obtain either round or bar iron, respectively. The piles thus arranged are then subjected to only one heat, which results in the production, when passed through the rolls, of a perfect article of merchant-iron, free from seams or rough edges.

In the drawings, Figure 1 represents in perspective one of the old methods of forming the pile. Fig. 2 represents in perspective a pile of scrap having the angle-irons at two corners to produce round iron; and Fig. 3 represents a similar view, with the angle-irons at all four corners to produce bar-iron.

Referring to the drawings, *a*, Fig. 1, represents a pile of scrap-iron arranged upon the board *b* preparatory to being placed into the heating-furnace. This represents the old method of manipulation, in which it is necessary to reheat the iron to obtain a successful result.

Referring to Fig. 2, *c* is the pile of scrap-iron, which, according to my invention, is to be subjected to only one heat before rolling. Upon the board *c'* at the two lower angles of this pile *c* are placed the angle-irons *d d*, and the whole mass as thus arranged is placed in the furnace, and in one heat a chunk or pile is produced which may be rolled at once.

I have found in practice that in the production of round iron it is only necessary to use two angle-irons, as shown in Fig. 2; but for the production of bar-iron of rectangular shape four angle-irons, as shown in Fig. 3, are necessary.

The advantage gained in the use of angle-iron, as just described, is that its presence results in forming perfectly-solid edges in the finished or rolled iron—a result impossible to accomplish with the old method without heating the iron twice. The presence of the angle-irons, which present perfectly-solid edges to the pile before heating, enables the edges after heating to preserve such solidity during the repeated rolling to which it is subjected.

It will be seen from the drawings that it is not necessary for the angle-irons to cover the entire sides of the pile, as considerable space can be left between such angle-irons, it only being necessary to cover the edges of the pile with the solid-edged angle-iron to produce the advantageous result desired.

I am aware that scrap-piles have been formed with plates which meet loosely at the angles of the piles.

I claim—

In the manufacture of merchant-iron from scrap, a pile having lengths of angle-iron at two or more of its edges, substantially as and for the purpose stated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE WESTERMAN, SR.

Witnesses:
W. T. MILLER,
J. H. MARLING.