

P. W. Lamb,
Pattern for Casting,
No 60,909. *Patented Jan. 1, 1867.*

Fig. 1.

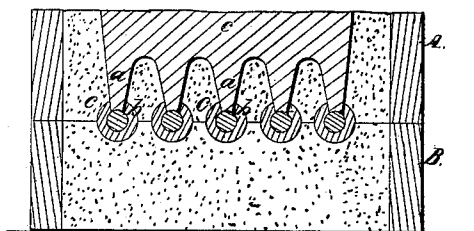


Fig. 2.

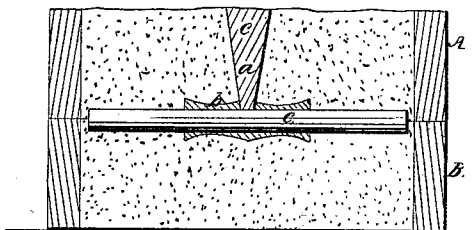


Fig. 3.

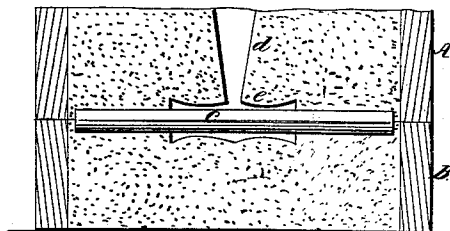
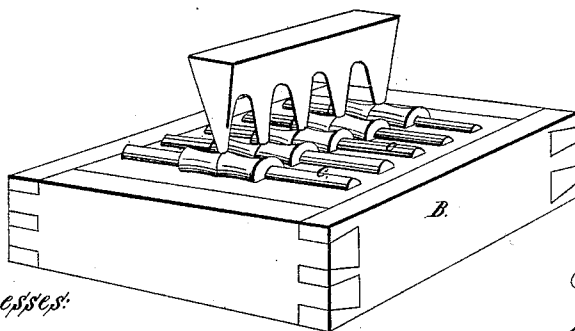


Fig. 4.



Witnesses:

J. W. Combs
G. W. Reed.

Inventor:

P. W. Lamb
per his attorneys
Crown, Combs & Co.

United States Patent Office.

PATRICK W. LAMB, OF ALBANY, NEW YORK.

Letters Patent No. 80,909, dated January 1, 1867.

IMPROVEMENT IN SPRUE FOR MOULDERS.

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, PATRICK W. LAMB, of the city and county of Albany, in the State of New York, have invented a new and useful improvement in the manufacture of Sad-Iron Handles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms part of this specification, and in which—

Figure 1 represents a vertical section through a box mould, with the sprue and handle patterns in the course of being moulded.

Figure 2, also a vertical section of the same, taken at right angles to the former figure.

Figure 3, a similar view to the last, but with the patterns removed; and

Figure 4, a view in perspective of the casting as formed by said patterns, the cope or upper box part being removed.

In the manufacture of smoothing or sad-iron handles, that is, in providing the usual wrought-iron shank or handle-rod with a cast-iron swell forming the handle proper, it is customary to cast the latter on or around the former. By thus shrinking the cast-iron handle on the rod and amalgamating, as it were, the two, and uniting in the usual, or any suitable way, the rod at its ends, which protrude through the handle proper, with the smoothing portion of the "iron," a solidity is given in a cheap and effectual manner to the implement, the cast-iron handle being made to form, as it might be said, part and parcel of the rod, and consequently secure against getting loose or turning. It has heretofore, however, been the practice in thus uniting the handle and rod, or handles and rods of a series, within a box mould, to run in the molten metal by gates communicating at both ends with one side of the space constituting the "form" or matrix of a handle. This has not always formed the perfect union that is desirable between the handle and its rod, as the hot metal coming in contact with the cold iron at the ends of the form, and meeting with more or less moisture, besides having but little superincumbent pressure, is apt to "blow." After the casting has been made, too, there are left, on breaking the sprue off, considerable burs, at either end of the handle, to be afterwards reduced or ground off, thus making the "dressing" of such a construction expensive. My invention obviates these defects, and the nature of it consists in casting the handle on or around the rod by running in the molten metal under a superincumbent pressure consequent on a direct vertical head over the rod at the part which forms the centre of the handle, by means of a peculiar construction and arrangement of the sprue, which also is made to accommodate a series of forms, and when detached leaves scarcely a bur, and that at one point only in the handle.

To enable others skilled in such matters to apply my invention, I will now proceed to describe it with reference to the accompanying drawing, in which—

A is the cope or upper box part of a mould, and B the lower one, or nowel; C is a sprue pattern, of tooth or comb shape, tapering vertically, and with its teeth or branches *a* preferably rounded towards their points and made to dip down into the mould so as to pass into the handle patterns *b*, over the rods *c*, arranged side by side at intervals apart in the mould, each tooth *a*, of the sprue pattern, being pitched or arranged to lie over the centre of a handle. On withdrawing the patterns from the box mould a tapered sprue cavity, *d*, is left over and communicating with each handle "form" *e*, at its centre, directly over the rod, so that on pouring the molten metal into the channel formed by the top or back of the sprue pattern, the several branches or tapered vertical inlets made by the teeth *a*, receive and conduct the fluid metal and cause it directly to impinge on the rods *c*, which heats the rods, avoids all tendency to blow by contact with dampness, and a solidity is produced in or to the handle castings by the direct superincumbent pressure of the molten metal, which is tantamount to the amalgamation of the wrought and cast-iron portions of the handles, while on removing the upper box part, as shown in fig. 4, the sprue will only be attached to the handles at a point in their centre, so that on breaking off the sprue, or detaching the handles from it, scarcely a bur will be left on the handles, and this only at one point, thereby reducing, after dressing of them by grinding or otherwise.

What I claim as new and useful, and desire to secure by Letters Patent, is—

The toothed sprue pattern C, constructed substantially as described, and applied so that the spaces moulded by it communicate with the handle forms *e*, at their centre, over the handle-shanks or rods *c*, essentially as and for the purpose or purposes herein set forth.

Witnesses:

FRANCIS H. WOODS,
JOHN McELNY.

P. W. LAMB.