D. B. OLIVER.

Pile for Making Skelps.

No. 198,854. Patented Jan. 1, 1878.

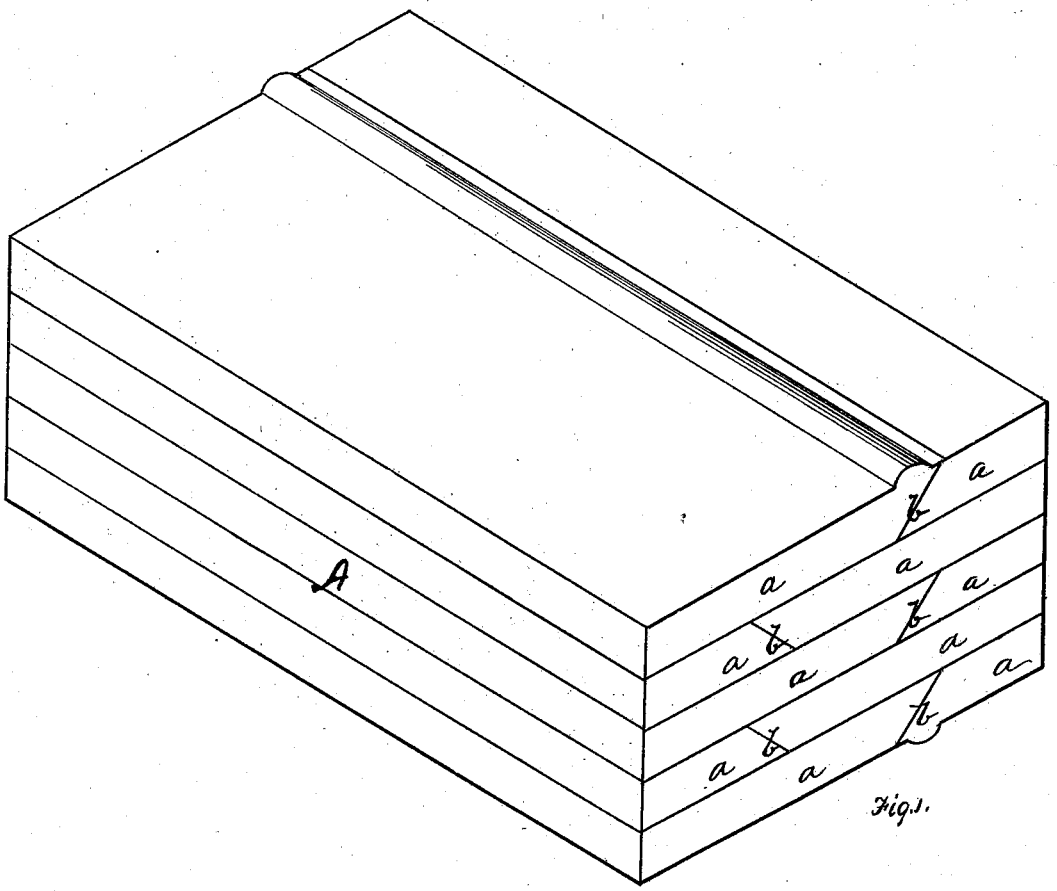

Fig. 1.

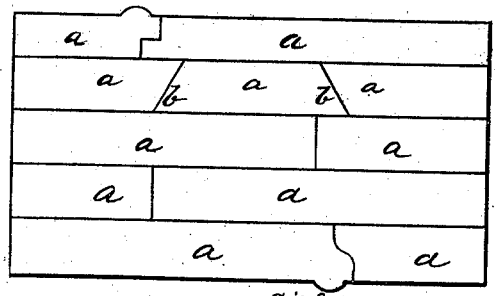

Fig. 2.

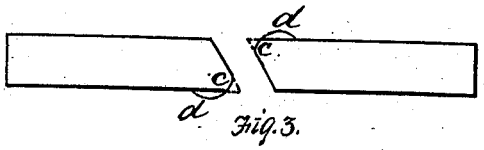

Fig. 3.

Witnesses.

R. A. Wrenshall

Jno. K. Smith

Inventor.

David B. Oliver

by Bakewell & Kerr

Attys.

UNITED STATES PATENT OFFICE.

DAVID B. OLIVER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN PILES FOR MAKING SKELPS.

Specification forming part of Letters Patent No. **198,854**, dated January 1, 1878; application filed November 28, 1877.

To all whom it may concern:

Be it known that I, DAVID B. OLIVER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Piles for Making Skelp-Iron; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a pile embodying my invention. Fig. 2 is an end view of a pile, showing some modification. Fig. 3 is a diagram introduced for purposes of explanation.

Like letters refer to like parts wherever they occur.

My invention relates to the formation of pile-bars and piles, adapted to the manufacture of skelp-plates, boiler-plate, tank-iron, and all other forms of sheet or bar requiring greater width than can be made from a single puddle-ball.

I will now proceed to describe my invention and the means by which I have overcome the existing difficulties, so that others may apply the same.

A represents a pile formed of a series of bars or pieces, *a*, having their edges scarfed or beveled, as at *b*, so that when arranged to form a pile, the edges or ends lap in such manner that the pressure of the rolls, in working the pile in the usual manner, will cause the pieces to unite by lap-welding. The bars or pieces *a* can be formed either from reworked stock, which is always to be preferred for the outer layers of a pile, or directly from the puddle-ball or muck-bar, by means of suitably-grooved rolls, and the latter or bevel-edged puddle-bar is what will be most commonly employed for the inner layers. In many instances, and especially where wide piles are desired, the bar will be beveled on both edges, as shown in Fig. 2, so that a layer may be constituted of three or more pieces.

In heating the pile preparatory to rolling, it frequently occurs that the thin edge of the piece or bar formed by the beveling will be burned off, leaving the bar somewhat rounded, as shown at *c* in diagram, Fig. 3, and this is almost invariably the case with the outer layer, which is exposed directly to the action of the flame. If not provided for, this might result in a marking or disfiguring of the plate produced; and, therefore, to make provision therefor, I form some (those for the outer layer) or all of the bars with a swell or increase of metal along the thin edge of the bar, as shown at *d*, so that in the subsequent rolling of the pile the bead or rib thus formed will fill the space of the metal burned away.

In making tank-iron, pipe-iron, &c., by the old method of piling, the inability at times of obtaining a thorough union of the pieces and a homogeneous plate which will withstand high pressures is one of the main objections to said method; but this difficulty can be overcome by substituting for one or more layers of such a pile a layer of bevel-edged beaded pieces, and I shall construct piles in that manner when so desired.

I have selected and shown a bevel or scarfed edge as the easiest to be produced by the rolls; but I wish it understood that a tongue or ogee, or other well-known form for obtaining a lap-weld, may be substituted for the bevel, the bead *b* being retained.

Having thus described the nature and advantages of my invention, what I claim, and desire to secure by Letters Patent, is—

A pile for forming skelp, plate, tank iron, &c., having one or more layers formed from bevel or equivalent lapping-edged beaded pieces or bars, substantially as specified.

In testimony whereof I, the said DAVID B. OLIVER, have hereunto set my hand.

DAVID B. OLIVER.

Witnesses:

JAMES I. KAY,

JOHN K. SMITH.