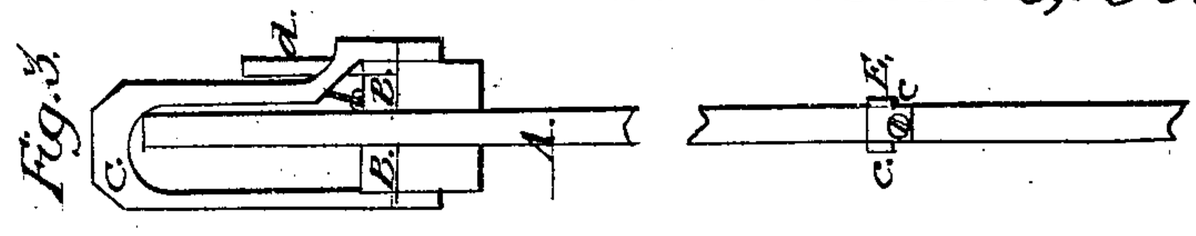
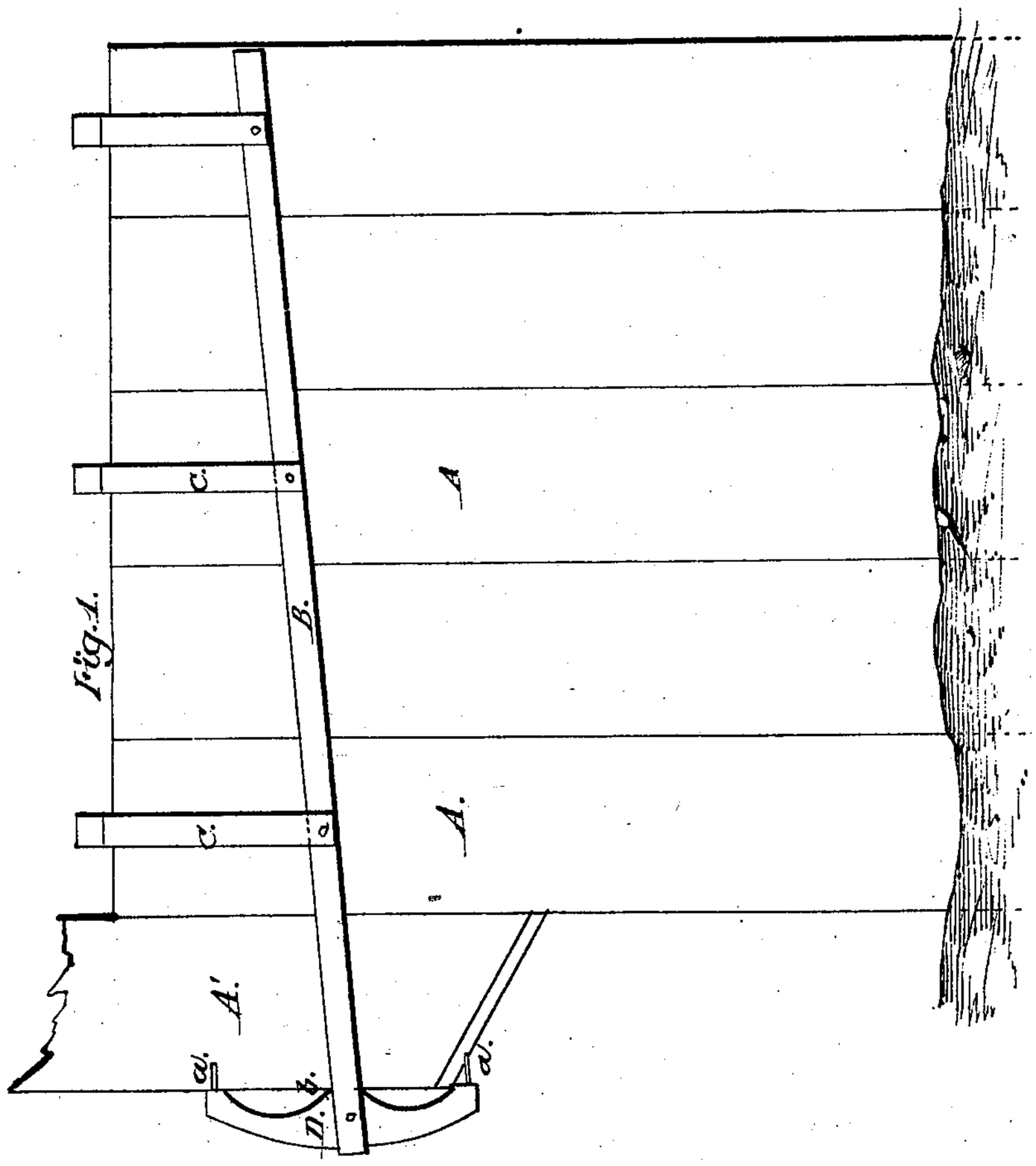
S. B. Diggs.

Clamp for Sheet Piles.

No. 87,030. Patented Feb. 16, 1869.





Witnesses:
J. B. Coombs
A. Leclerc

Inventor:
S. B. Diggs
per Brown Coombs & Co
Attys.

United States Patent Office.

SPENCER B. DRIGGS, OF NEW BRUNSWICK, NEW JERSEY.

Letters Patent No. 87,030, *dated February* 16, 1869.

IMPROVED CLAMP FOR SHEET-PILING.

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, SPENCER B. DRIGGS, of New Brunswick, in the county of Middlesex, and State of New Jersey, have invented a new and useful Improvement in Clamps for Piling, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a side elevation of a series of sheet-piles as they are driven home, or to their places in the bed, together with one of the piles in the act of being driven, and my improved clamp applied to the same;

Figure 2, a top view or plan thereof; and

Figure 3, an end elevation of the same.

Similar letters of reference indicate corresponding parts.

Much difficulty has heretofore been experienced in the construction of coffer-dams, dikes, and other works, where sheet-piling is used, in guiding and holding the piles as they are successively driven home.

My invention consists in a novel clamp and guiding-device, or devices, for such purpose, the same being made up for the most part of bars, lying on opposite sides of the piles, and capable of being slid across their faces, to make room for each fresh pile in succession, together with clamping-saddles over the tops of the piles, and connecting the side or face bars; likewise, a peculiarly-constructed rocking-clip or guide, pivoted to said bars, and operating on or against the outside edge of each fresh pile as it is being driven home, and a guide affixed to the inner edge of the pile, to direct the latter in its lower run.

In the accompanying drawing—

A A represent a series of sheet-piles, as driven home, and

A′, a pile, in the act of being driven.

Said piles are made sloping at their lower ends, in order that, as they are driven into the ground or bed, said piles will be drawn or forced towards each other at their edges.

B B are the side bars of the clamp, arranged to receive the piles in between or through them, and connected, in a loose or free manner, by saddles C, that straddle the upper ends of the piles.

Pivoted to the bars B B, at their one end, is a rocking edge-clip, D, formed of upper and lower arms, with prongs *a a*, arranged to lap over either face of each fresh pile, on its outer edge, and also formed with an inner swell or protuberance, *b*, at its centre.

The inner edge of each fresh pile is fitted, at any suitable height from its lower end, with a guide, E, let into or secured to it, and provided with ears *c c*, arranged to overlap the faces of the piles, the edges of which are contiguous.

This guide serves to direct the fresh pile in proper relationship, as regards contact of their edges, with the pile previously inserted, as and after said fresh pile has been passed through the bars B B, and is driven into the bed, to secure a close-fitting joint.

To insert a fresh pile, the bars B B, with their saddles C, are drawn or slid across the faces of the piles A A, a sufficient distance to receive a fresh pile, A′, through the bars, and in between the pile last driven and edge-clip or guide D.

The saddles, C, which have a loose or free fit at one of their ends, over the one bar, B, to facilitate the sliding of the bars and entry of the fresh pile between the latter, are then tightened up by means of wedges, *d*, for the purpose of holding the entire clamp in proper position, and the driven piles in their places, while the fresh pile, A′, is being driven.

The bars B B are sufficiently eased or separated to admit of the free passage in between them of the fresh pile, without straining on the clamp, and it is preferred to make each succeeding saddle, C, from back to front of the work, deeper or longer than the preceding one, so that the bars B B lie diagonally across the faces of the piles, the dip inclining toward the fresh pile, which arrangement stiffens the bracing action of the clamp on the several piles.

By making the outside clip or guide D of a rocking character, not only is there increased freedom secured for entry of the fresh pile between the upper prongs *a a*, and, as the pile passes the protuberance *b*, and strikes the lower arm of the clip, the close hug of the latter at its top made sure, and the lower prongs *a a* adjusted to receive the pile in between them, but said clip and guide is made to regulate itself, to suit different dips or positions of the bars B B, and whereby a proper guiding-action of the clip to the outside edge of the fresh pile is at all times insured.

For each successive fresh pile, the whole clamp requires to be adjusted or set, as hereinbefore described.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The combination of the bars B B, saddles C, and rocking outside edge-clip or guide D, substantially as specified.

2. The fixed guide E, formed with ears *c c*, for use on the inside edge of the pile, essentially as described.

S. B. DRIGGS.

Witnesses:

CHAS. PALMER,

HENRY PALMER.