J. CORRY.
Pile.

No. 205,615. Patented July 2, 1878.

Fig. 1.

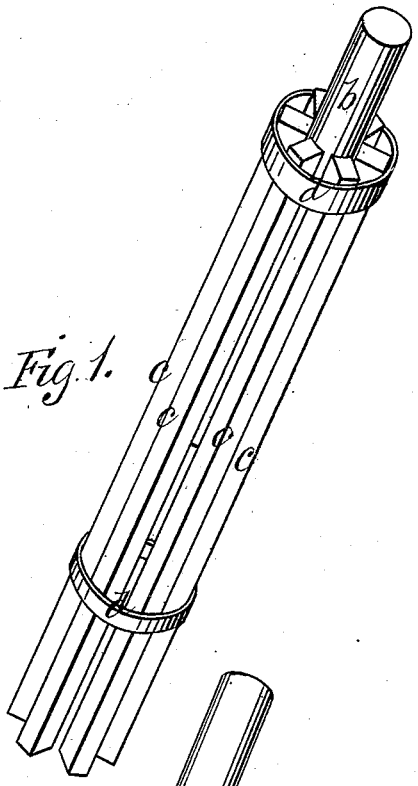


Fig. 2.

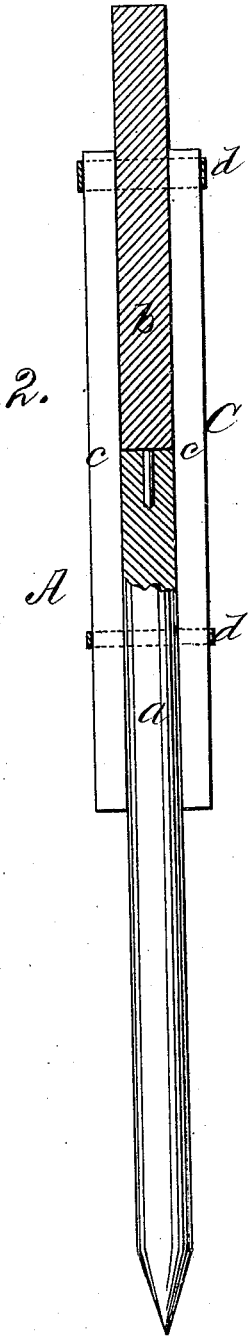


Fig. 4.

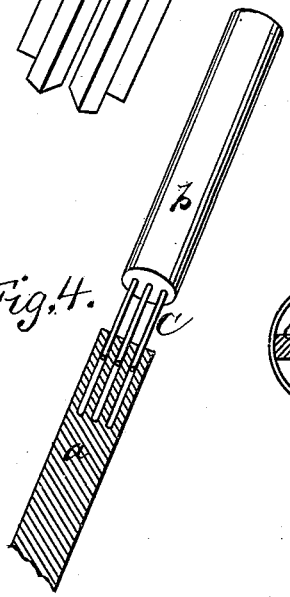
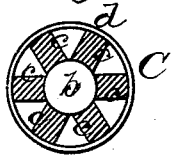


Fig. 3.



WITNESSES
Mary L. Utley.
F. J. Masi

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by E. W. Anderson
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UNITED STATES PATENT OFFICE.

JOHN CORRY, OF MENEKAUNE, WISCONSIN.

IMPROVEMENT IN PILES.

Specification forming part of Letters Patent No. **205,615**, dated July 2, 1878; application filed May 25, 1878.

To all whom it may concern:

Be it known that I, JOHN CORRY, of Menekaune, in the county of Oconto and State of Wisconsin, have invented a new and valuable Improvement in Piles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of the upper section and sleeve of my improved pile. Fig. 2 is a vertical section thereof and part of the lower section. Fig. 3 is a transverse section of the upper section and sleeve; and Fig. 4 is a modification of my improved pile.

This invention has relation to improvements in piles for bridges, docks, lumber-booms, and other purposes.

It frequently happens in cold regions that the freezing of the water around the pile, followed by a strong wind, which backs up the water in a river or bay and causes the ice to rise, draws the piles out of the bottom of the river to such an extent that before spring it is an absolute necessity to redrive the same to prevent them from floating off or being carried away.

The object of my invention is to prevent the piles from being drawn out of the bottom; and the nature of the invention consists in a pile composed of two sections, sleeved together, the lower section being wholly in the bottom and water, and the upper section rising with the ice independently of the lower section, without becoming separated therefrom and without drawing it out of the ground, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates my improved pile, made up of two sections, *a b*. The section *a*, the lower one, is independent of the upper section *b*, and they are sleeved together, as shown at C, Fig. 2. The sleeving device is composed of a number of timbers, *c*, rigidly bolted to the upper section *b*, and connected together by the metallic bands *d*. The sleeve or socket C extends below the lower end of the section *b* several feet, so as to allow the ice to rise without detaching the pile-sections a corresponding distance. The section *a* fits loosely in the sleeve C against the end of section *b*, and the pile thus formed is forced into the bottom in the usual manner; or a pile may be driven into the bottom and sawed off at a proper depth under the water to form the lower pile-section, the sleeve or socket section being then applied to it in the manner above set forth. This mode prevents all possible disarrangement of the parts of the sleeve-section, which might be caused in driving the pile in the usual way.

When in position the joint of the pile-sections should be so far under water as not to be reached and involved in the ice in the coldest weather. The depth under water of this joint will vary with the climate. In some regions two feet is sufficient, in others five feet would be required; consequently no fixed depth can be stated. In this country from two to six feet would probably suffice.

It is evident that the sleeve C may be attached to the lower instead of the upper section, in which case the upper ends of the timbers *c* should be at such a depth under the water as not to be involved in the ice, as well as the joint of the two sections. This mode of coupling the pile-sections will obtain when the water is deep; but when the water is shallow and liable to freeze to the bottom the upper section will be provided with one or more dowel-pins of suitable length and diameter, projecting from its end, that will be received in corresponding holes bored in the end of the lower section; or the bolts may project from the lower section, and be received in holes bored in the upper section. This is necessary in shallow water, because the sleeve or socket C cannot be made of sufficient length to allow the upper section enough endwise play.

In freezing weather the ice forms around and takes a very firm hold upon the ordinary pile, so that as the tide rises or the water is backed up into a stream or bay, and the ice is raised to correspond, the pile is partly pulled out of the bottom. As the ice falls, consequent upon the subsidence of the water, it breaks away from the pile, instead of holding on and forcing it back into the ground, and leaves it, as aforesaid, partly drawn up out of the bottom. This result occurs several times in the course

of the winter, so that as the spring approaches it is necessary to redrive the piles to prevent them from being carried away or falling.

Now, in my sectional pile the ice takes hold upon the upper section above its joint with the lower one, and, as it rises, carries the said upper section with it without disturbing the lower section and without becoming detached therefrom. When the ice falls the section *b* falls also, and resumes its normal position in contact with the section *a*. This will occur as often as the ice rises. By this means I am able to dispense with the redriving of the piles, and make a great saving in time, labor, and expense.

I am aware that short pieces of timber have been secured together to form a pile by means of a metallic ferrule, and therefore I do not claim such invention.

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

1. A pile consisting of two sections, the upper section being endwise movable relatively to the lower section, as and for the purpose specified.

2. The combination, with the pile-section *a*, of the pile-section *b* and a sleeve, C, adapted to fit loosely and slide upon the section *a*, substantially as specified.

3. The pile-section *b*, having the sleeve C, composed of the timbers *c*, bolted thereto, and the bands *d* secured to and bracing the said timbers, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN CORRY.

Witnesses:

AMOS HOLGATE,

LEONARD MILLER.