

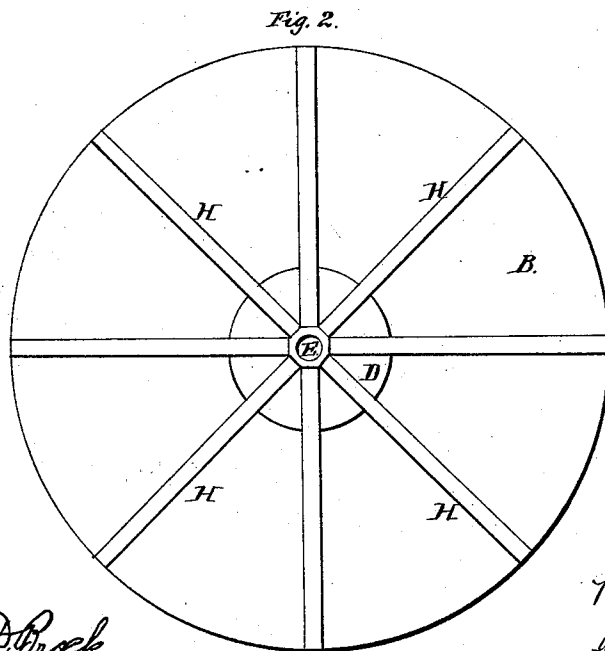
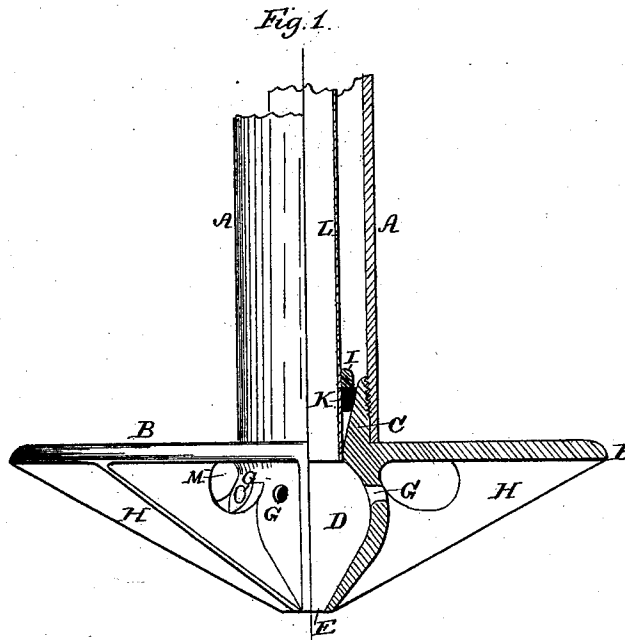
(No Model.)

R. E. PEARY.

SINKING PILES.

No. 299,419.

Patented May 27, 1884.



Attest:

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Inventor:

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UNITED STATES PATENT OFFICE.

ROBERT E. PEARY, OF CAPE ELIZABETH, MAINE.

SINKING PILES.

SPECIFICATION forming part of Letters Patent No. 299,419, dated May 27, 1884.

Application filed January 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. PEARY, a citizen of the United States, residing at Cape Elizabeth, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Sinking Piles by Hydraulic Power, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 represents a side view, partially in elevation and partially in section, of a device to which my improvement has been applied. Fig. 2 is a bottom plan view of the same.

My invention relates to the sinking of piles by the hydraulic-jet method.

Heretofore in the construction and method of sinking piles by the hydraulic-jet process difficulties have been encountered from the want of a jet or jets to properly loosen the water-bed by both vertical and lateral jets through ports for that purpose, where the usual disk at the end of the pile is employed. A disk having inclined ports like that shown in the Johnson patent of March 2, 1880, does not inject the head of water vertically into the bed of the stream with sufficient force and effect to properly accomplish the desired object, while that class of vertical jets and disks illustrated by the patent of I. W. Mac-lay, granted April 6, 1880, does not admit of a sufficient lateral washing of the bed of the stream to allow the weight of the pile to sink itself readily and regularly into the excavation made by the jet. To remedy these difficulties I have combined with the disk, which is applied to the lower end of the pile to be sunk by the hydraulic-jet method, a distributing-chamber, from which leads a vertical port, and also a series of lateral ports, the former acting, by its jet, to force away the mud and sand beneath the pile, and the latter to wash away the bed around the distributing-chamber and beneath the disk outwardly in all directions. These lateral jets, by forcing the matter out radially, readily admit of the weight of the iron pile gradually and regularly sinking itself as long as the jets are continued, the mud and sand escaping upwardly around the periphery of the disk.

My improvements further consist of a peculiar packing applied to the end of the jet-pipe in the lower interior of the pile.

To enable others skilled in the art to make and use my invention, I will now proceed, in connection with the drawings, to describe it in detail.

A represents the lower end of an iron pile broken away. It is provided with a screw-thread, within which is screwed the disk B, the thread being carried on a sleeve, C.

D is the distributing-chamber, which forms a downwardly-projecting part of the disk, and is arranged axially beneath the pile A. It is provided with a vertical port, E, and a series of lateral ports, G.

H are a series of radially-arranged ribs or vanes, extending from the bottom of the distributing-chamber to the outer periphery of the disk. The sleeve C is conically-shaped on its inner surface, and the jet-pipe L is provided with a collar, I, abutting against which is a rubber or other packing-ring, K, surrounding the pipe. The jet-pipe L is arranged concentrically within the pile A, and extends upward to the surface, where it is connected with the hydraulic pump. (Not shown.)

M are a series of openings in the ribs H.

The pile is preferably rotated when being sunk into the bed. The weight or pressure upon the jet-pipe forces the packing-ring into the conical sleeve, so that it is water-tight, and at the same time permits the jet-pipe to be withdrawn upwardly when the pile is sunk to the required depth.

Having described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In combination with the pile, a disk provided with a central distributing-chamber having a vertical port and a series of lateral ports, substantially as and for the purpose described.

2. A disk having a central distributing-chamber provided with ports, substantially as described, and having also radially-arranged ribs or vanes provided with perforations M, in combination with a pile, A, as set forth.

3. A disk having a conical seat, in combination with a jet-pipe carrying a packing-ring

on its exterior, and a pile, substantially as set forth.

4. In combination with a pile, a disk provided with a downwardly-projecting part,
5 having therein a vertical port, and a series of lateral ports, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT E. PEARY.

Witnesses:

WALLER B. SIMMONS,
CHARLES ACTON IVES.