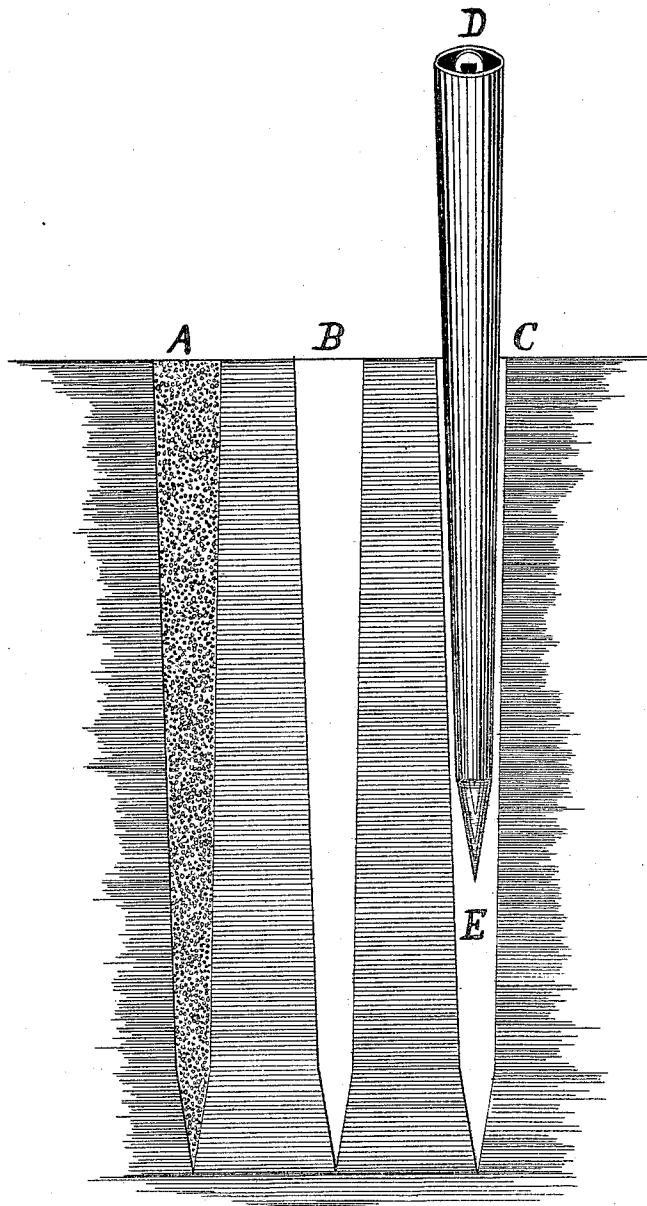


O. C. MATTHEWS.

MODE OF CONSTRUCTING FOUNDATIONS

No. 172,641.

Patented Jan. 25, 1876.



WITNESSES:

A. B. Richmond
J. N. McGloskey

INVENTOR

Orville C. Matthews.

UNITED STATES PATENT OFFICE.

ORVILLE C. MATTHEWS, OF MEADVILLE, PENNSYLVANIA.

IMPROVEMENT IN MODES OF CONSTRUCTING FOUNDATIONS.

Specification forming part of Letters Patent No. **172,641**, dated January 25, 1876; application filed July 1, 1875.

To all whom it may concern:

Be it known that I, ORVILLE C. MATTHEWS, of Meadville, in the county of Crawford, State of Pennsylvania, have invented an Improved Mode of Constructing the Foundations of Buildings, of which the following is a specification:

The object of my invention is to construct a solid foundation in soft ground, on which to erect the walls of buildings, to prevent sinking of the walls.

In carrying out my invention, I construct a strong "pile" of iron or of wood, pointed and capped with iron, of the desired size and length to suit the depth of the foundation to be "put down."

This pile is driven in the ground by a properly-constructed pile-driver, and then by any proper and convenient power drawn from its place. The hole is then filled with small stone and a "grout" or cement of water-lime and sand is run in, filling the interstices or spaces between the stone. When this has "set" or hardened, another is sunk by its side, and this process continued until a foundation of the proper length and width is constructed on which to erect the walls of the building.

In driving the pile the soft earth is impacted around the pile, and as one after another of the piles are driven the earth becomes more and more solid or impact, thereby rendering the foundation solid, and capable of sustaining the weight of the superstructure.

The drawing represents my invention in three stages of the process.

D represents the pile constructed wedge-shaped, so as to be easily removed from the hole. There is an eye at D to attach a chain thereto, when it may be drawn from the hole C by any sufficient power and mechanical device.

E represents the bottom of the hole as the pile is removed.

B represents the hole with the pile removed; A, the hole filled with fragments of stone ready to receive the grout or cement.

When the first row of piles is driven and the cement hardened, another row is driven between, or partly between, the piles of the first row.

The wedge shape of the pile impacts the earth around the concrete piles already formed, and by this process a foundation of any desired depth and width can be constructed in such a way as to impact the earth so that it will sustain any weight put upon it.

What I claim as my invention is—

The herein-described process for constructing the foundations of buildings, by first impacting or compressing the earth by driving piles, withdrawing the piles, and then filling the holes with concrete, cement, or other material which will solidify and harden, substantially as set forth.

ORVILLE C. MATTHEWS.

Witnesses:

A. B. RICHMOND,
J. N. McCLOSKEY.