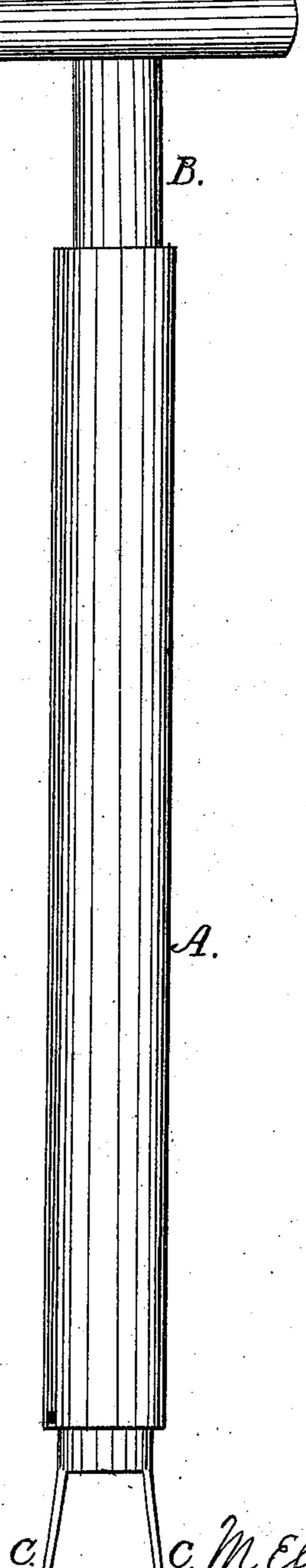
## M.C.Chanderlin,

Earth Azzoer

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Fatented Jan. 30. 1866.



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John P.

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Inventor:

C.M Elvin Co. Co handerland

Hexander Masan

## United States Patent Office:

MELVIN C. CHAMBERLIN, OF WARSAW, NEW YORK.

## IMPROVED EARTH-BORER.

Specification forming part of Letters Patent No. 52,267, dated January 30, 1866.

To all whom it may concern:

Be it known that I, Melvin C. Chamber-Lin, of Warsaw, county of Wyoming, and State of New York, have invented certain new and useful Improvements in Machines for Forming Subterranean Reservoirs for Wells; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

In the accompanying drawing, A represents a hollow metallic cylinder. B is a shaft provided with a suitable handle at the top, and at the bottom of said shaft two knives are secured, one on each side of the shaft, as seen at CC. These knives are sprung at the lower portions and expand somewhat wider than the diameter of the cylinder. The ends of said knives are turned over, forming a disk at the end of each knife. One of them is also a little longer than the other and overlaps the shorter one.

The shaft B is passed into the cylinder A by compressing the knives C C, and when the shaft is passed through the cylinder the knives

spring outward. Thus it will be seen that whenever it is in use for boring wells the shaft is turned by means of the handle, causing the knives to cut and loosen the dirt and other substances which fall between the knives and rest upon the disks D D, when the shaft is withdrawn from the cylinder and the dirt emptied. The cylinder is then to be pressed down, the shaft again inserted, and the operation continued until the well is the required depth.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the shaft B, the knives C C, together with the hollow cylinder A, constructed and used as and for the purposes herein set forth.

In witness that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

MELVIN C. CHAMBERLIN.

Witnesses:

L. W. SMITH, L. L. THAYER.