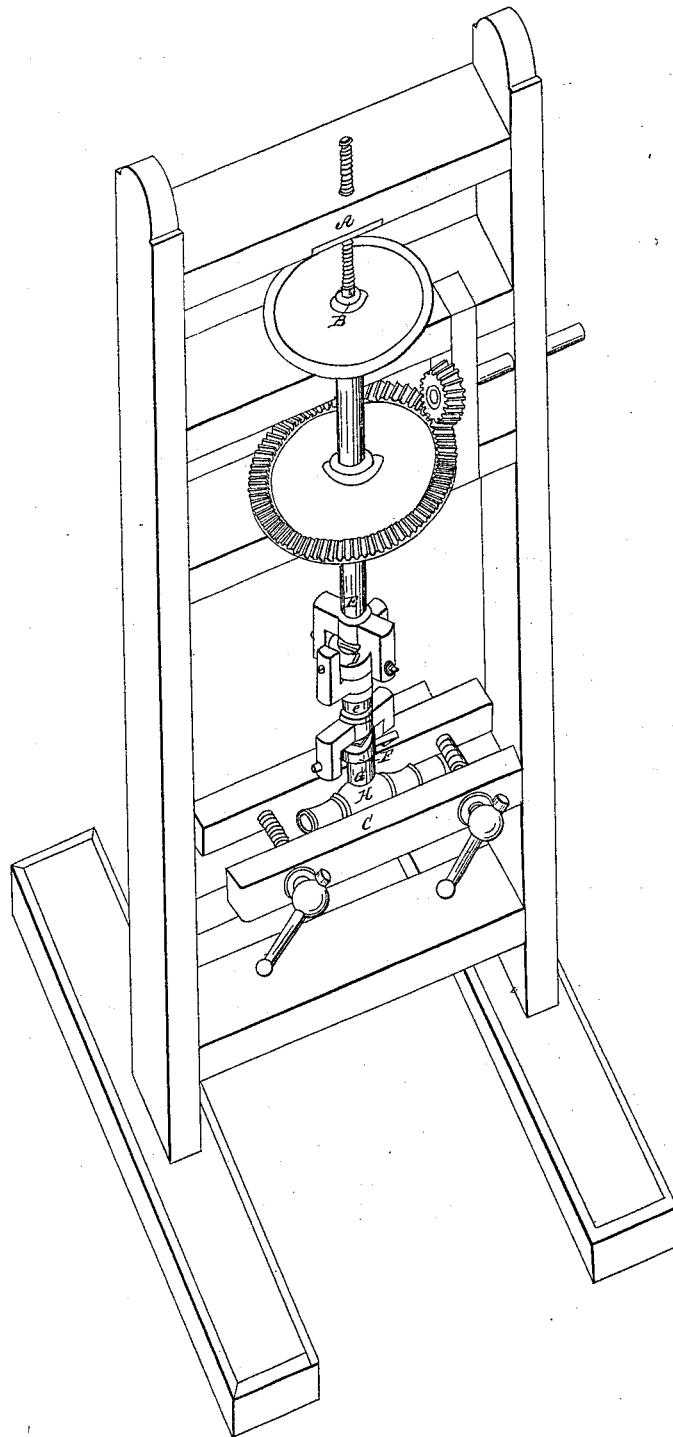


*W. Read,  
Boring Wood.*

*N<sup>o</sup> 4,534.*

*Patented May 23, 1846.*



# UNITED STATES PATENT OFFICE.

WILLIAM READ, OF NEW YORK, N. Y.

## MACHINE FOR REAMING FAUCETS.

Specification of Letters Patent No. 4,534, dated May 23, 1846.

*To all whom it may concern:*

Be it known that I, WILLIAM READ, of the city, county, and State of New York, have invented a new and useful Machine for Boring and Reaming the Barrels of Brass Faucets; 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 drawing, making part of this specification, in which—

Letter A is a perspective view of the frame for holding the machinery; B, a screw to sink the reamer; C, a clamp to hold the faucet; D, a universal joint to connect the upper and lower mandrel; E, e, the upper and lower mandrels; F, a wrench fitting on the head of the reamer; G, the reamer, and H the faucet placed in the clamp for reaming.

The nature of my invention consists in the method of applying to the drill an universal joint in such manner as to cause the drill or reamer to accomodate itself to the position of the faucet insuring a true bore at whatever angle the faucet may be with the mandrel above it.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

To a strong upright frame, I attach the shaft of the main mandrel by means of three metal plates, firmly secured to the cross bars of the frame. The upper plate is threaded to receive the screw which elevates or sinks the shaft as may be required, the screw being attached to the head of the shaft by a socket joint, and revolving independent of of the shaft or mandrel which is moved by a large bevel wheel, through which the shaft slides by means of an upright groove cut in the shaft and fitting to a corresponding projection in the eye of the wheel. The mandrel is divided into two parts, and connected by an universal joint the object of which is that the lower part of the mandrel

may accommodate itself to the position of the reamer placed in the hole to be reamed in case it should not be placed exactly in a line with the upper part of the shaft or main mandrel. The reamer is further assisted to accommodate itself to the hole by means of the projecting arms or yoke of the lower mandrel being grooved on opposite sides to admit the arms of the wrench (which is applied to the head of the reamer by means of a square mortise and tenon joint) to play backward or forward thereby conforming itself more to the position of the reamer a projecting pivot in the foot of the lower mandrel revolves upon a sinking in the head of the drill by which means it is gradually forced down by turning the screw above.

The faucet to be reamed is placed in a clamp worked by two screws and attached to the cross bar of the frame.

The machine may be driven by steam, water, or any other power.

What I claim as my invention and desire to secure by Letters Patent is—

The dividing the mandrel in two parts, and connecting them by an universal joint and applying the motion to the reamer by means of the yoke at the bottom of the lower mandrel embracing the arms of the wrench fitted on to the head of the reamer in such manner that the reamer may only receive a revolving motion from the mandrel, but in every other motion it may act independent of the mandrel, and being tapering and the whole length of the hole to be reamed it may revolve in a true circle and insure a true and correct bore, although the line of the required bore may not be exactly in a line with the main mandrel or shaft which gives motion to the reamer.

WM. READ.

Witnesses:

D. H. BUTZ,  
A. W. METCALF.