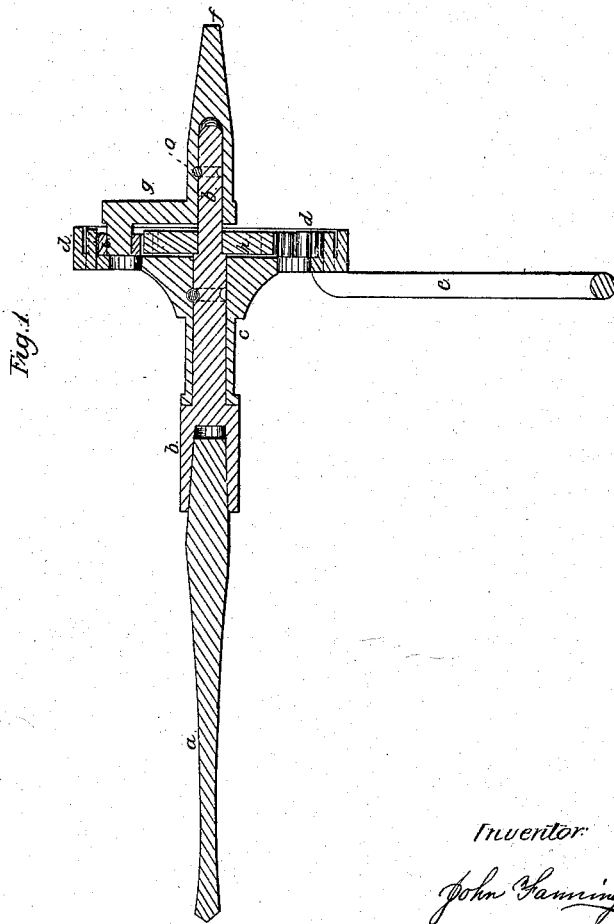
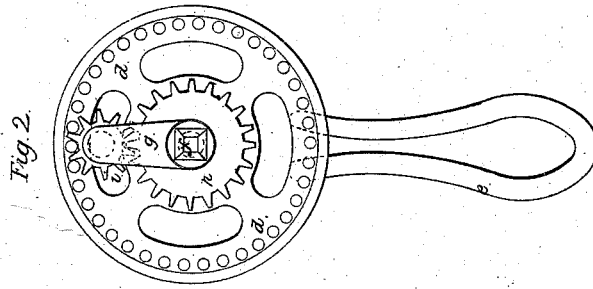


J. FANNING.
DRILLING APPARATUS.

No. 66,229.

Patented July 2, 1867.



Witnesses:

Chas. N. Smith
Geo. S. Waiker

Inventor:

John Fanning

United States Patent Office.

JOHN FANNING, OF NEW YORK, N. Y.

Letters Patent No. 66,229, dated July 2, 1867.

IMPROVED DRILLING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN FANNING, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Hand-Drill Stocks; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a longitudinal section of said drill-stock; and

Figure 2 is a view at the end of the said stock.

Similar marks of reference denote the same parts.

The object of my said invention is to communicate to the drill a larger number of rotations than is given to the apparatus by hand, so that by a cheap and simple contrivance a small drill may be rotated with great speed. The nature of my said invention consists in a hand-drill stock in which the power is applied on the line of the axis of the drill and transmitted to said drill by a planetary movement that increases the speed of the drill without changing the manner of applying the power to the stock or the manner of pressing the drill to its work.

In the drawing, *a* is the drill or boring tool, of any usual character, secured in any convenient manner within the sockets of the mandrel *b*. This mandrel *b* is sustained in the pipe *c* of the stationary internal gear-wheel *d*. *e* is a handle projecting from the side of the said gear *d*, by which the tool may be guided to its place and the wheel *d* be prevented from turning. *f* is a square or other connection for receiving a brace or other means for applying, by hand or otherwise, rotation to the square *f* and its projecting crank *g* that carries the pinion *i*, working at one side into the teeth of the internal gear *d* and at the other side into the wheel *h* on the mandrel *b*. The mandrel *b* runs into a hole in the square *f*, and the parts are connected and allowed to turn by a pin, *o*, entering a groove in *b*. It will be understood that the wheel *d* being held stationary the wheel *h* will be revolved faster than the square *f* in proportion to the number of teeth of *d* and *h*, the increased action of the pinion *i*, in consequence of its progression and rotation.

This improvement might be applied to give extra speed to small drills when introduced in a lathe adapted to large drills, and if the square *f* was stationary and the wheel *d* worked by a ratchet and lever this apparatus might be used where a brace could not be employed, and by inverting the position of the drill and the power a slower motion can be given to the drill for heavy work.

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

A drilling apparatus, constructed as described and shown.

In witness whereof I have hereunto set my signature this twenty-fifth day of February, A. D. 1867.

JOHN FANNING.

Witnesses:

CHAS. H. SMITH,
GEO. D. WALKER.