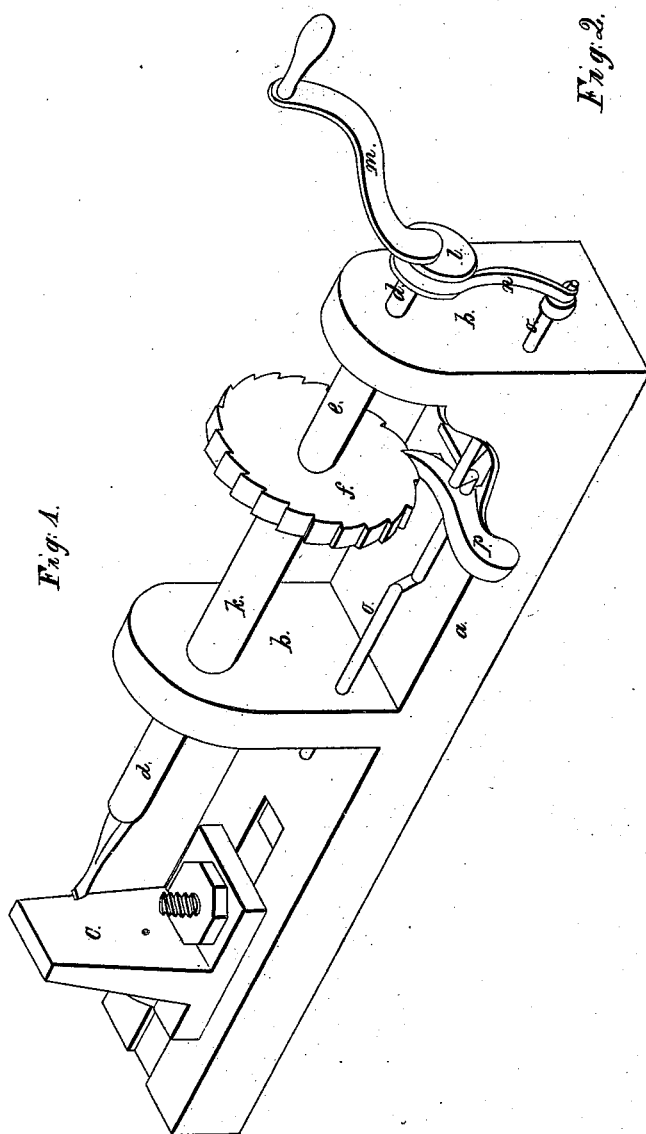


*Patented May 15, 1847.*



*Fig: 1.*

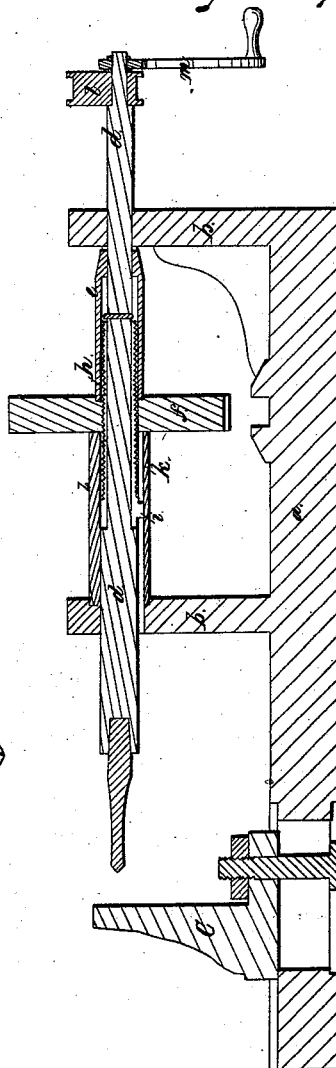


Fig. 2.

# UNITED STATES PATENT OFFICE.

AMOS MORGAN, OF MASSILLON, OHIO.

## DRILLING-MACHINE.

Specification of Letters Patent No. 5,116, dated May 15, 1847.

*To all whom it may concern:*

Be it known that I, AMOS MORGAN, of Massillon, in the county of Stark and State of Ohio, have invented a new and Improved Drill, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an isometrical view, and Fig. 2 a longitudinal vertical section.

The same letters indicate like parts in all the figures.

The nature of my invention consists in constructing a cheap hand drill for iron and other metals so as to be made self feeding, and at the same time being readily fed by hand without stopping the other feed.

The construction is as follows, viz: On a suitable base (*a*) are arranged two puppet heads (*b*) and a movable rest (*c*) similar to many drills now in use. In these puppet heads the mandrel (*d*) turns in the socket of which the drill is put. A thimble (*e*) is put on over the mandrel that extends from the rear puppet head to the center of the space between the puppet heads where a ratchet wheel (*f*) is located the hole through the center of which is a female screw.

The mandrel has a tube (*h*) fitted onto it so as not to slip which is half the length of the space between the puppet heads and on the outside of this tube a screw is cut that works into the nut or female screw on the ratchet wheel; a feather (*i*) is formed on

this tube which plays in a slot in an outer case (*k*) that surrounds it and is affixed to the front puppet head, this prevents the screw tube from turning with the mandrel; by this arrangement it will be seen that as the ratchet wheel is turned the mandrel is moved forward or back.

The mandrel extends through the rear puppet head far enough to have on it an eccentric (*l*) of common construction and on the end of said mandrel there is a crank (*m*) or other device for turning it, the eccentric is surrounded by a band which is connected by a rod (*n*) with a crank on a shaft (*o*) that has its bearings in the puppet heads below and parallel with the mandrel. The shaft has a portion of it between the puppet heads formed into a long bent crank on which there is a dog (*p*) that works into the ratchet wheel to turn it, the turning of the mandrel causing the shaft to vibrate for that purpose. If it becomes necessary to feed faster than the ratchet and dog will do it, the ratchet can be turned by hand enough to make up the deficiency.

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

The combination of the mandrel with the feeding apparatus in the manner described, by means of the hollow screw and case surrounding the mandrel connected with the ratchet and dog, substantially in the manner set forth.

AMOS MORGAN.

Witnesses:

A. V. BROWNE,  
J. P. VAN TYNE.