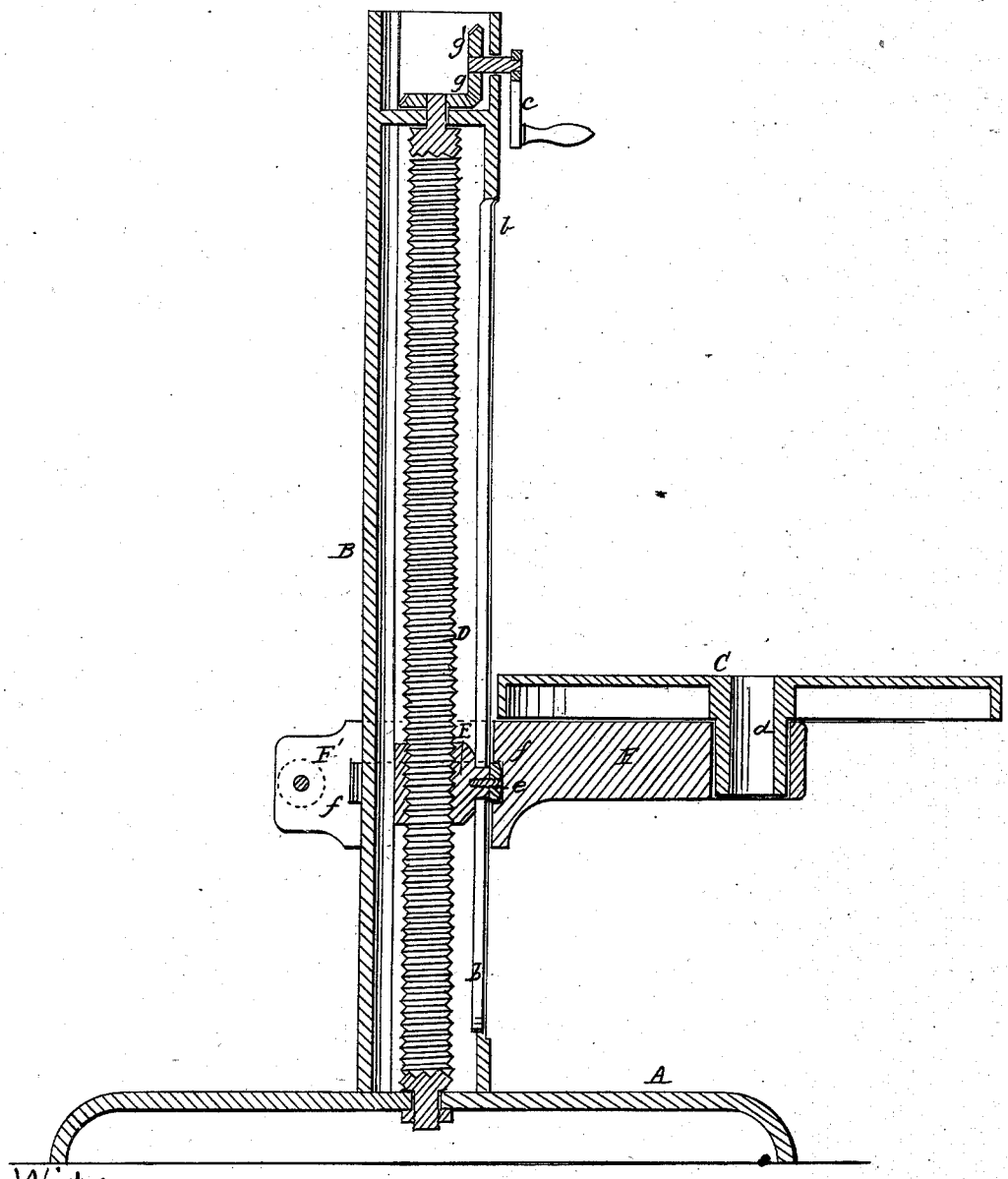
M. M. Ammidown,

Metal Drill,

No. 60,114. Patented Dec. 4, 1866.



Witnesses:

Chas. F. Fleeper

G. A. Nesmith

Inventor:

M. M. Ammidown

by Jos. H. Adams Atty

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

United States Patent Office.

IMPROVEMENT IN DRILLING MACHINES.

M. M. AMMIDOWN, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 60,114, *dated December* 4, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, M. M. AMMIDOWN, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Adjustable Platens for Upright Drills; 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, making part of my specification, and representing a vertical section of the device.

The object of my invention is to provide for the ready and convenient adjustment of a platen to be used in connection with a machine for drilling metal, by which the latter can be readily accommodated to the operation of the drill as it passes into or through the metal to be operated upon; and the invention consists of a slotted cylindrical standard, in which is arranged an upright screw, upon which is fitted a collar having a projection that passes through the slot in the standard and is allowed to move freely up and down in the said slot. The said projection is fitted within a groove in an arm that encircles the standard by which the arm is supported, and on which it is allowed to turn freely, and upon the arm is supported the platen.

Referring to the drawing, A represents the base and B the hollow slotted standard. The said standard has a longitudinal slot *b b*, in one side, extending nearly its whole length. Within this hollow standard, and properly stepped at its lower end and journalled in a cross-piece at its upper end, is a screw, D. Upon this screw is fitted a nut or collar, E, having a projection which passes through the slot in the standard, and having an enlargement, *e*, at its outer end. The collar, E, has a female screw on its inner side, which engages with the screw, D. F represents an arm which is made to encircle the standard, B, and so as to move freely thereon. It is separated at the rear, F′, and provided with a screw by which the two parts can be clamped together, so as to hold the arm tightly upon the standard and render it immovable when required. The front part of the arm, F, extends outwards from the standard, and bears upon its end the platen, C, which is arranged to revolve freely on the said arm, being provided with a shouldered cylindrical bearing, *d*. At the central part of the inner side of that part of the arm that encircles the standard, B, is a groove, *f*, in which fits the enlarged projection *e*, of the collar, E, which supports the said arm, and on which it can be freely turned in a horizontal plane around the standard. At the upper end of the screw, D, is a bevelled gear-wheel, *g*, engaging with a corresponding gear-wheel, *g′*, to which latter is attached a crank for operating the screw, D. As the screw D is turned or operated in one or the other direction, the collar, E, together with the arm and platen, will be elevated or lowered as desired. In operation, the article to be drilled is placed upon the platen, C, and, as the drill enters the article, the turning of the screw serves to elevate the said article, and thus keeps it in contact with the drill until the process is finished. An automatic device for imparting simultaneous motion to the screw, D, to correspond to the desired upward motion of the platen bearing the article to be drilled, may be arranged in any convenient manner, if desirable. The rotation of the platen, C, upon the arm, F, allows the article being drilled to change its position, or several articles may be operated upon without the necessity of removing them from the platen; and the rotation of the arm, F, on the standard admits of the platen being readily removed from under the drill for any necessary or desirable purpose. The elevating screw, D, being within the hollow standard, is in a great measure protected from substances escaping from the platen, and such as would be liable to clog it.

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

1. The combination of the collar E, provided with the projection *e*, and the grooved arm F, substantially as and for the purpose specified.

2. I also claim the combination of the slotted standard B, and screw D, with the collar E, arm F, and platen C, as and for the purpose specified.

3. I claim the grooved arm or holder F, as and for the purpose specified.

In testimony whereof he has signed his name to this specification in the presence of two subscribing witnesses.

M. M. AMMIDOWN.

Witnesses:

G. A. C. SMITH,

CHAS. F. SLEEPER.