(No Model.)

C. A. BRENZINGER.

CHUCK FOR DRILLING MACHINES, &c.

No. 294,755. Patented Mar. 11, 1884.

Fig. 1.

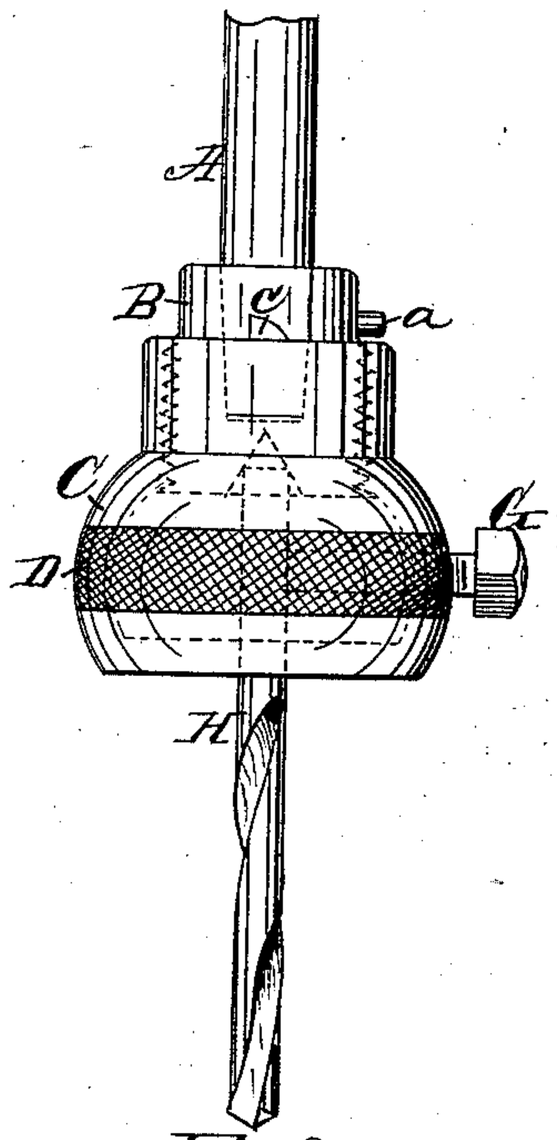


Fig. 2.

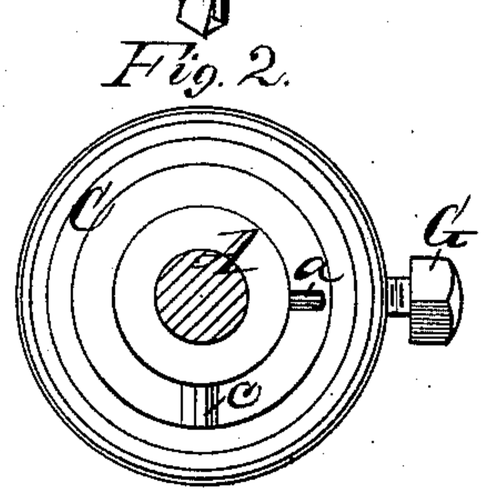


Fig. 3.

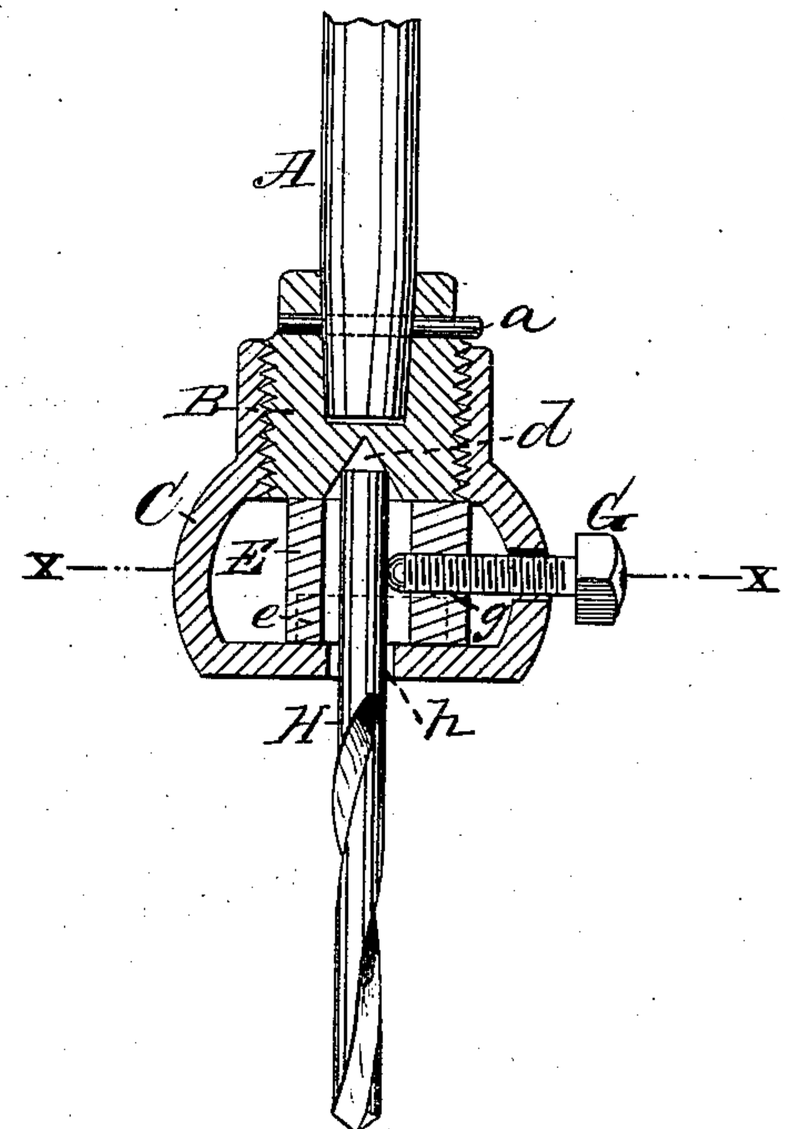


Fig. 4.

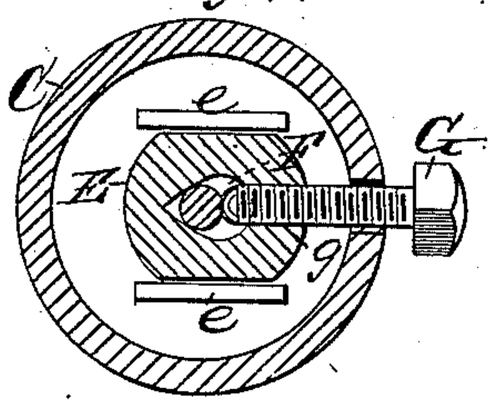


Fig. 5.

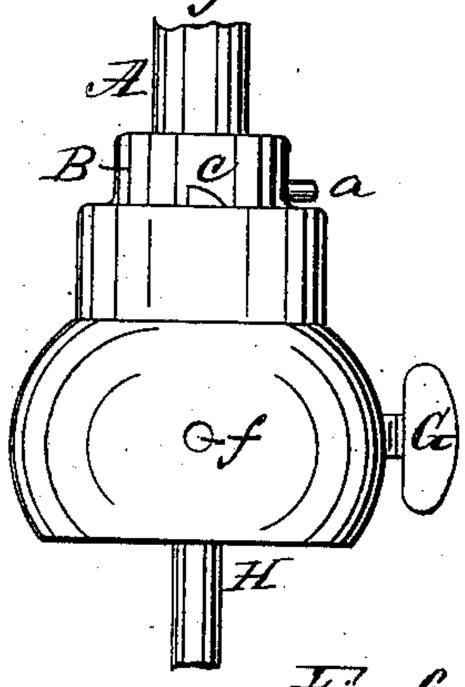


Fig. 6.

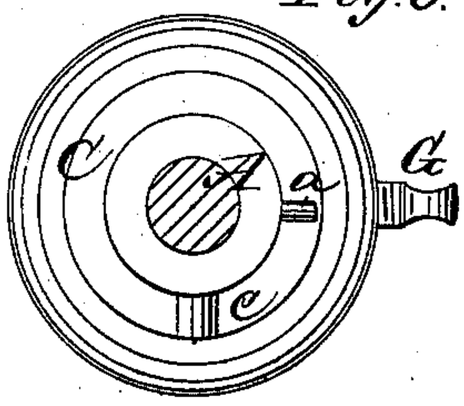
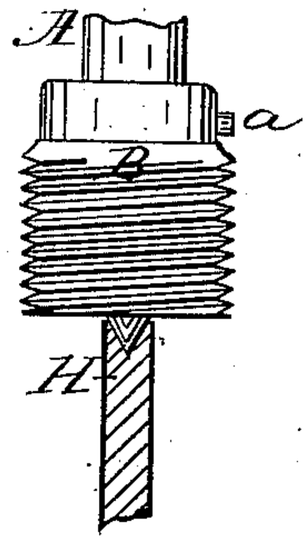


Fig. 7.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CARL ADAM BRENZINGER, OF NEW YORK, N. Y.

CHUCK FOR DRILLING-MACHINES, &c.

SPECIFICATION forming part of Letters Patent No. 294,755, dated March 11, 1884.

Application filed April 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, CARL ADAM BRENZINGER, a subject of the Emperor of Germany, now residing in the United States, in the city, county, and State of New York, have invented certain new and useful Improvements in Chucks for Drilling-Machines, Lathes, &c.; and I do hereby declare that the following is a full, clear, and exact description and specification of the same, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to improvements in chucks such as are used in drilling-machines, lathes, and in machinery that is used for turning off round materials.

That my invention may be fully understood, I will proceed to describe the same in detail by the aid of the accompanying drawings, which form part of this specification.

In the drawings, Figure 1 represents a front view of my improved chuck with a drill attached thereto. Fig. 2 represents a plan view of the same. Fig. 3 represents a vertical central section of the same. Fig. 4 represents a cross-section at the line *x x* of Fig. 3. Figs. 5, 6, and 7 represent modifications of my improved chuck.

A represents a piece of the shaft of a lathe, and to this is fastened a threaded piece, B, by means of a pin, *a*, which not only secures the threaded piece to the lathe-shaft, but also prevents it from turning any farther than the nosing *c*. The bottom of this threaded piece B is turned off exactly at right angles to the center line of shaft A. In the center of the bottom of this threaded piece is bored a tapering hole, *d*, for the purpose of centering the drill, as represented in Fig. 3.

C is a nut, in which is fitted the threaded piece, and the bottom of this nut is also turned off at right angles to the center line of the chuck, and the outside of this nut is milled, as represented at D, Fig. 1, for the purpose of turning the nut forward or backward, as desired; or, in place of being milled, a wrench-hole, *f*, as shown in Fig. 5 of the drawings, is made in the nut, and a wrench is used to turn the nut.

Between the threaded piece and bottom of nut C is placed a ring, E, in which is an egg-shaped hole, F, (see Fig. 4,) made large enough for the drill or material to pass through it, and the top and bottom ends of this ring are turned parallel to each other, and also parallel to the bottoms of the threaded piece and nut. The parallel ends of this ring are at right angles to the walls of the egg-shaped hole F, and to retain this ring in line projections *e e* are cast or fastened upon the bottom of the nut, as represented in Fig. 4. The sides of this ring E are cut away to allow of the projections *e e* acting against them.

The drill H is fastened in position by a set-screw, G, which passes loosely through the shell of the nut into a screwed hole, *g*, in the ring E, and presses the drill or material against the wall of the egg-shaped hole F.

In the center of the bottom of the nut C is a hole, *h*, made large enough for the drill or material that is to be used in the chuck to pass through.

Before fastening the drill in the chuck it must be passed through the holes *h* and F, and then be pressed into the tapering hole *d* and fastened by the set-screw G. The nut C is then turned around to press the ring E with the drill against the threaded piece B. By this means the drill or material is always kept in the central line of shaft A.

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

1. In a chuck, the combinaton of a threaded piece, B, with a nut, C, ring-piece E, and set-screw G, for securing the drill in place, substantially as before set forth.

2. The combination of the threaded piece B, having a tapering hole, *d*, the nut C, having projections *e e*, the ring-piece E, set-screw G, pin *a*, and the nose or stop *c*, for controlling the movement of the threaded piece B, substantially as shown and described.

Witness my hand this 27th day of February, A. D. 1883.

CARL ADAM BRENZINGER.

Witnesses:

W. L. BENNEM,

THOMAS I. HUGHES.