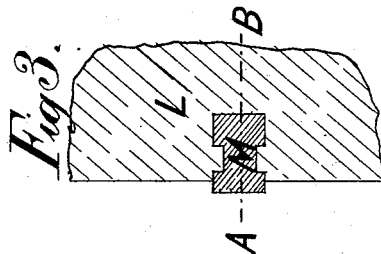
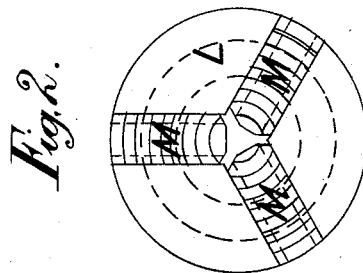
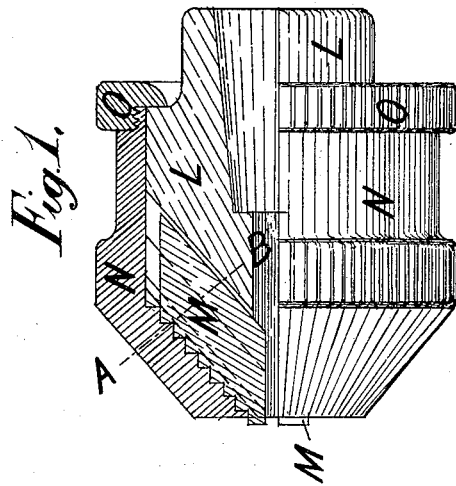


(No Model.)

C. & G. B. TAYLOR.
DRILL CHUCK.

No. 407,554.

Patented July 23, 1889.



Witnesses:-

Richard Bennett
Arthur J. Powell

Inventors:-

Charles Taylor
George Benjamin Taylor

UNITED STATES PATENT OFFICE.

CHARLES TAYLOR AND GEORGE BENJAMIN TAYLOR, OF BIRMINGHAM,
ENGLAND.

DRILL-CHUCK.

SPECIFICATION forming part of Letters Patent No. 407,554, dated July 23, 1889.

Application filed November 20, 1888. Serial No. 291,411. (No model.) Patented in England October 18, 1887, No. 14,146; in France July 24, 1888, No. 191,994, and in Belgium July 25, 1888, No. 82,685.

To all whom it may concern:

Be it known that we, CHARLES TAYLOR and GEORGE BENJAMIN TAYLOR, both of Birmingham, England, subjects of the Queen of Great Britain, have invented certain new and useful Improvements in Chucks for Lathes, parts of which improvements are also applicable to vises and to cramps, (for which we have received Letters Patent in Great Britain, No. 14,146, dated October 18, 1887; in France, No. 191,994, dated July 24, 1888, and in Belgium, No. 82,685, dated July 25, 1888,) of which the following is a specification.

Our invention relates to lathe-chucks, and has for its object to provide an improved construction in that class of chucks having the ways in which the jaws move inclined to the axis of the chuck, and having the actuating device for the jaws placed upon the outside of said jaws, and this we accomplish in the manner and by the means hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 represents a chuck embodying our improved construction, partly in elevation and partly in section, showing the jaws partly projecting. Fig. 2 represents a front elevation of the chuck-body having the actuating device for the jaws removed, the said jaws being shown in position; and Fig. 3 represents a section of a portion of the body, taken through the line A B, Fig. 1, showing one of the jaws in position.

Referring to the said drawings, the letter L indicates the cylindrical body of the chuck, which is of a truncated conical form at the front and has an axial hole of a size suitable for the largest diameter of work intended to be held by it. The rear of the said axial hole is enlarged and made conical for attachment to the machine it is intended for. The said body L has three radial slots cut in its conical front, the bottoms of said slots being parallel with the conical face of the body. In the said slots or ways the jaws M work, and are actuated by a hollow external cone or shell N, having spiral screw-threads cut on

its inner face and engaging with correspondingly-shaped teeth on the faces of the said jaws. The rear of the hollow cone or shell N is made cylindrical and fits upon the cylindrical part of the body L, and is held in position by the ring O, threaded upon its rear end and abutting against a shoulder formed upon the body L of the chuck, as in Fig. 1. The ring O and shell N are milled on their circumferences for convenience in turning them; but, if desired, they may be turned by levers or other means.

Referring to Fig. 1, it will be noticed that the spiral screw-threads on the shell N, and also the corresponding teeth on the jaws M, are at right angles to the line of pressure or parallel to the axis of the chuck. By making the faces of these threads and teeth as above described they are not liable to be stripped under great pressure, as the face by which the pressure is borne is at right angles to the direction of pressure, and is firmly backed up or supported.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

In a lathe-chuck, the combination of a chuck-body having its conical face provided with radial slots parallel with said face and at an angle to the axis of the chuck, sliding jaws adapted to move in said ways and provided with toothed faces projecting above the conical face of the chuck-body, an inclosing-shell surrounding the chuck-body and having a conical portion provided with internal screw-threads that engage the teeth of the sliding jaws, and a ring having a screw-threaded engagement with the rear end of said shell and provided with a shoulder that abuts against a shoulder on the rear portion of the chuck-body, substantially as described.

CHARLES TAYLOR. [I. S.]
GEORGE BENJAMIN TAYLOR. [L. S.]

Witnesses:

RICHARD SKERRETT,
ARTHUR J. POWELL.