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C. E. SEARCH & E. CHESHIRE.

ADJUSTABLE TOOL HOLDER FOR TURRET LATHES.

APPLICATION FILED AUG. 21, 1903.

NO MODEL.

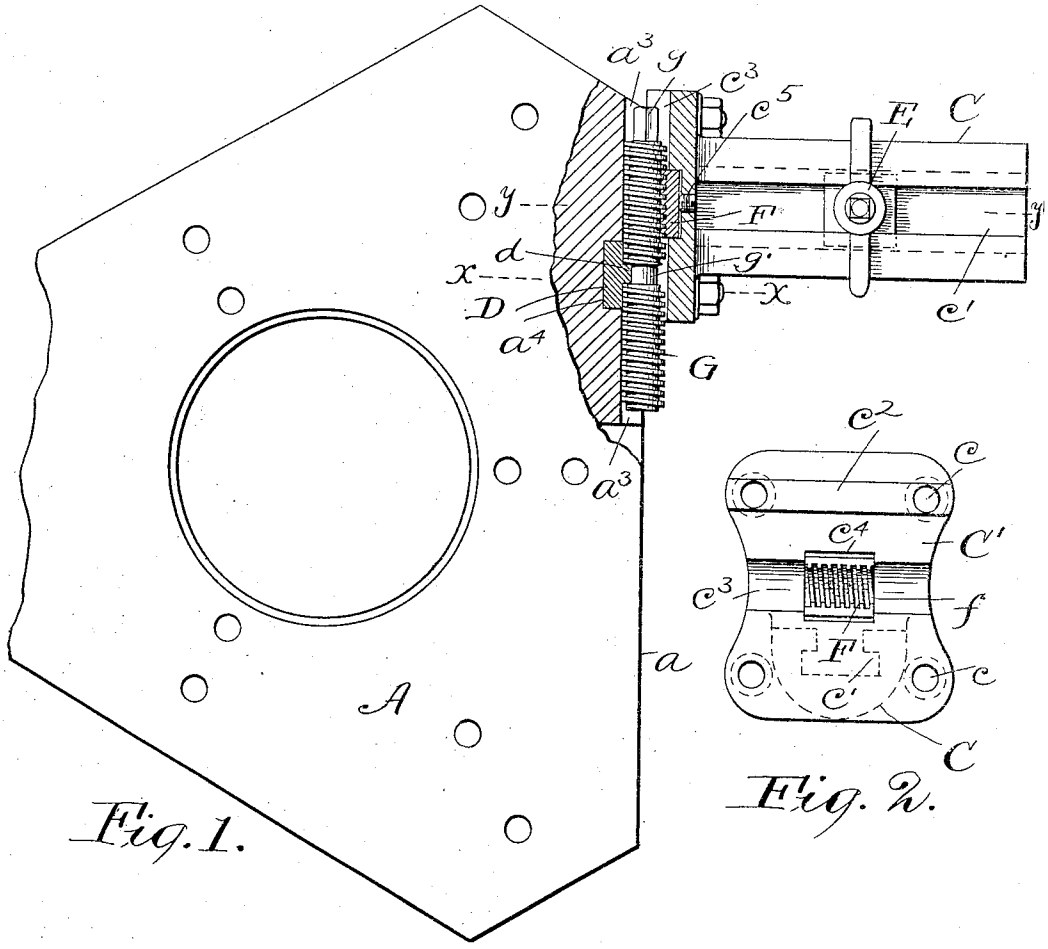

Fig. 1.

Fig. 2.

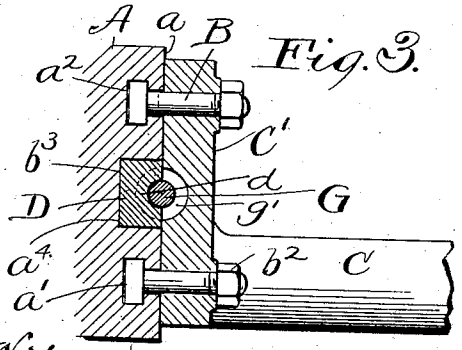

Fig. 3.

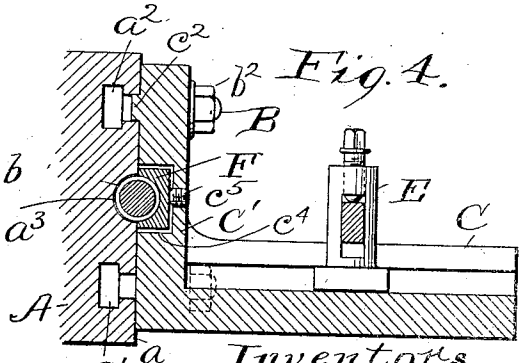

Fig. 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES E. SEARCH AND EDWARD CHESHIRE, OF MILWAUKEE, WISCONSIN, ASSIGNORS, BY MESNE ASSIGNMENTS, TO NILES-BEMENT-POND COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

ADJUSTABLE TOOL-HOLDER FOR TURRET-LATHES.

SPECIFICATION forming part of Letters Patent No. 767,598, dated August 16, 1904.

Application filed August 21, 1903. Serial No. 170,247. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. SEARCH and EDWARD CHESHIRE, citizens of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a certain new and useful Improvement in Adjustable Tool-Holders for Turret-Lathes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

In using a turret-lathe it is often desirable to employ a surface-tool which may be easily set at various distances from the axis of the rotating work, and in many cases it is desirable to have means for easily positioning said tool with exactness.

The object of the present invention is to provide simple and novel means for securing said results.

The invention may be said to consist of the construction and combination of parts hereinafter described, reference being had to the accompanying drawings and to the specification of the claims.

Referring to the drawings, Figure 1 is a top plan view of a turret provided with our device upon one of its vertical faces and having parts broken away in order to more clearly illustrate the application of our invention thereto. Fig. 2 is a rear face view of the bracket when it is removed from the turret. Fig. 3 is a sectional view upon the line x x of Fig. 1, and Fig. 4 is a sectional view on the line y y of the same figure.

Referring to the parts by letters, A represents a turret of a lathe having in one of the vertical faces a thereof horizontal T-shaped grooves a' a^2, adapted to receive the heads of bolts B, which project outward from said turret and pass through openings c in a clamping-plate C′ of a bracket C. In the same face of the turret in which the T-shaped grooves are located and preferably between them is another horizontal groove a^3, preferably semicylindrical in form. At a suitable point in the length of this groove there is a square cavity a^4, adapted to receive a retaining-block D, having a forwardly-projecting rib d, which extends out into the semicircular recess for a purpose hereinafter described.

The supporting-bracket C is substantially of the configuration shown in the drawings, having a vertical clamping-plate C′ at the rear end thereof and an outwardly-projecting member provided in its top face with a T-shaped groove c', adapted to receive a tool-post E. This tool-post E is adjustable in the groove c' in the usual manner. On the back of the clamping-plate C′ is a bead c^2, arranged to project into the upper one of the T-shaped grooves a^2 for the purpose of preventing any torsional movement of the bracket when the nuts b^2 on the bolts passing through the holes c therein are loosened. At a suitable point in this clamping-plate to coöperate with the semicircular groove a^3 there is a like groove c^3 and also a cavity c^4 for the purpose of receiving a half-nut F. This half-nut F may be set up toward the face of the turret by means of an adjusting-screw c^5.

When the clamping-plate upon the supporting-bracket is secured to the face of the turret, there is a complete circular opening formed by the semicylindrical recesses in both members of the device, and in this recess there is a long screw G, having a square head g at one end for rotating same and an annular groove g' about midway of the length of said screw, adapted for engagement by the rib d, carried by the block D. The threads of the screw are arranged to engage the threads of the half-nut F.

From the above description it will be seen that when the nuts B are loosened and the screw G is rotated the rib d on the bracket D will prevent endwise movement of said screw, wherefore the nut F will travel along the screw, carrying with it the supporting-bracket C. Should there be any wear in the parts—that is, in the screw and in the nut—this may be taken up by means of the adjusting-screw c^5. After the bracket, with its tool, has been

adjusted to its proper position the nuts b^2 may be set up, so as firmly clamp the device in place.

Having described our invention, we claim—

1. The combination of a lathe-turret having a flat face in which is a horizontal groove between the ends of which there is a block-holding recess, a tool-holder having a horizontal tongue-and-groove engagement with said turret, and having in its rear face a horizontal groove opposed to the horizontal groove in the turret, there being a nut-holding recess in the groove in the tool-holder, a horizontal screw lying in the recess formed by said two horizontal grooves, said screw having an annular groove, a block in the recess in the turret and provided with a flange which enters the annular groove in the screw, a half-nut in the recess in the tool-holder, and means for rigidly fastening the tool-holder to the turret.

2. The combination of a lathe-turret having a flat face in which is a horizontal groove between the ends of which there is a block-holding recess, a tool-holder having a horizontal tongue-and-groove engagement with said turret, and having in its rear face a horizontal groove opposed to the horizontal groove in the turret, there being a nut-holding recess in the groove in the tool-holder, a horizontal screw having an annular groove, a block in the recess in the turret and provided with a flange which enters the annular groove in the screw, a half-nut in the recess in the tool-holder, a set-screw screwing into the tool-holder against the rear side of said half-nut and bolts, to hold the tool-holder up against the turret.

3. A lathe-turret having horizontal T-shaped grooves in its face, and a recess, a block set in said recess and having a projecting rib, a tool-support having a recess in its rear face, bolts passing through the support and having heads which operate in said T-shaped grooves, a half-nut set in said recess in the tool-support, and a horizontal screw lying in a recess between said turret-face and tool-support in engagement with said half-nut and having an annular groove into which said rib projects, substantially as specified.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

CHARLES E. SEARCH.
EDWARD CHESHIRE.

Witnesses:
JAMES W. SPENCE,
E. O'KANE.