No. 790,479. PATENTED MAY 23, 1905.

J. & W. CARR.

BORING TOOL HOLDER.

APPLICATION FILED MAY 26, 1904.

Fig. 1.

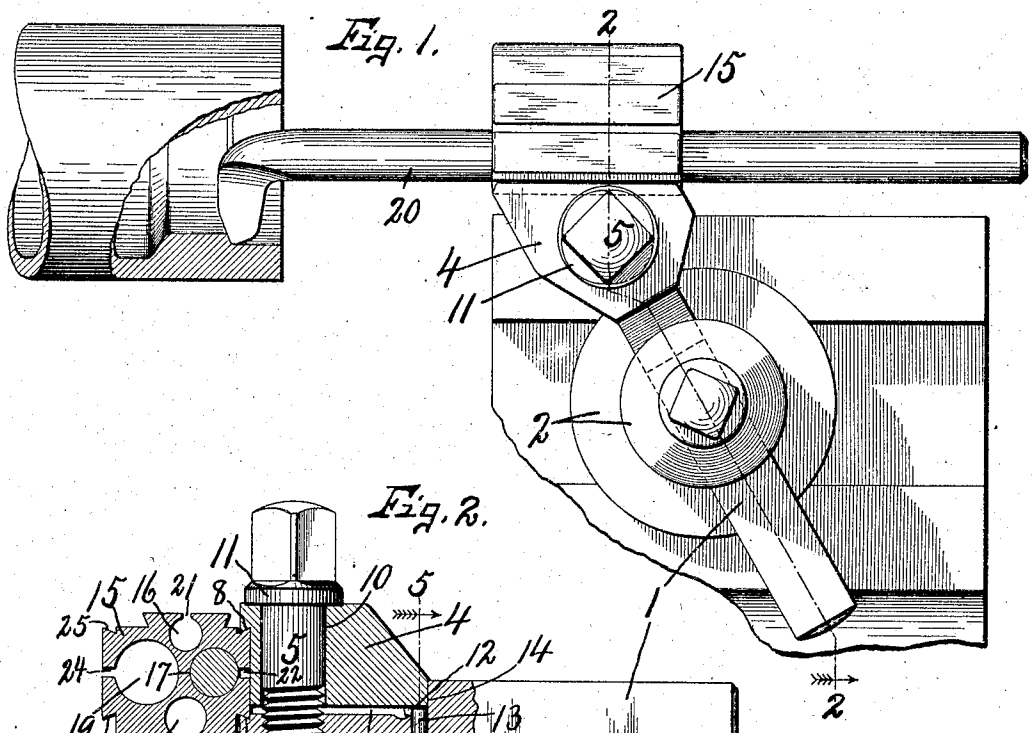


Fig. 2.

Fig. 3.

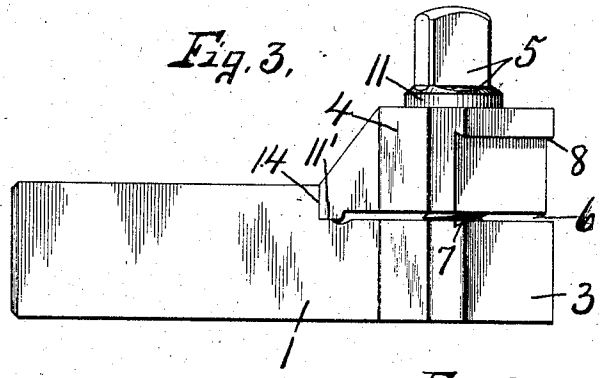


Fig. 4.

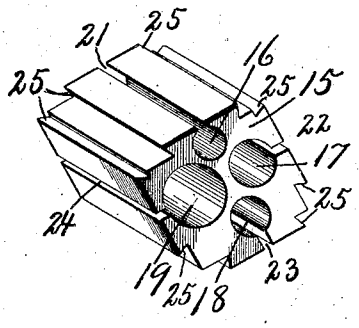
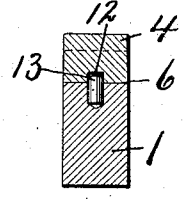


Fig. 5.



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No. 790,479. Patented May 23, 1905.

UNITED STATES PATENT OFFICE.

JAMES CARR AND WILLIAM CARR, OF SYRACUSE, NEW YORK.

BORING-TOOL HOLDER.

SPECIFICATION forming part of Letters Patent No. 790,479, dated May 23, 1905.

Application filed May 26, 1904. Serial No. 209,922.

To all whom it may concern:

Be it known that we, JAMES CARR and WILLIAM CARR, of Syracuse, in the county of Onondaga, in the State of New York, have jointly invented new and useful Improvements in Boring-Tool Holders, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in boring-tool holders in which a suitable shank is adapted to be held in the tool-post of a lathe and is provided with gripping-jaws drawn together by a single clamping-bolt for retaining the multiple tool-head and simultaneously securing the tool therein.

Our object is to provide a multiple-sided head with tool-openings of different sizes, which openings are split through one side, and each side is adapted to be clamped between suitable jaws, whereby both the head and tool is held in place.

Other objects and uses will appear in the following description.

In the drawings, Figure 1 is a top plan of our improved tool-holder shown as operatively connected upon a portion of a lathe and showing a boring-tool as applied to the work. Fig. 2 is a sectional view taken on line 2 2, Fig. 1. Fig. 3 is a side view of a shank and movable jaw thereon. Fig. 4 is a perspective view of the tool-holding head. Fig. 5 is a sectional view taken on line 5 5, Fig. 2.

Similar reference characters indicate corresponding parts in all the views.

In carrying out the objects stated a suitable shank 1 is mounted in a tool-post 2 of a lathe and is provided with a fixed jaw 3 and a movable jaw 4, which are clamped together by the screw 5. These two jaws 3 and 4 are divided horizontally from each other at 6 and are formed with recesses in their end faces, the upper and lower sides of such recesses being beveled inwardly for forming dovetail shoulders 7 and 8, the jaw 3 being provided with a threaded aperture 9, which is engaged by the screw 5. This screw passes through an aperture 10 in the jaw 4 and has a shoulder 11 engaged with the upper face of the jaw 4, whereby as the screw 5 is rotated in one direction the shoulders 7 and 8 are drawn together for a purpose presently described. The jaw 4 has a narrow bearing 11′ upon the jaw 3 at one side of the screw 5, which constitutes a fulcrum for the jaw 4, and this bearing 11′ has a recess 12, which receives a projecting shoulder or pin 13 in the adjacent part of the jaw 3 to prevent lateral displacement of the rear end of the jaw 4. The jaw 3 is preferably recessed for receiving the jaw 4, which recess forms an abutment 14 for the rear end of the jaw 4 and also constitutes a guide for the movable jaw to further hold it in place and to keep the shoulders 7 and 8 in alinement or parallel with each other.

A multisided tool-head 15, having in this instance four sides, is provided with a corresponding number of tool-openings 16, 17, 18, and 19 of different sizes for receiving different-sized boring-tools, as 20, and each of the tool-openings is split through its outer side at 21, 22, 23, and 24, so as to form opposed clamping-jaws for each opening for holding the tool in place.

Each of the side faces of the head 15 is substantially flat and provided with dovetail shoulders 25, which are parallel, and the shoulders of each face are spaced a distance apart substantially equal to the distance between the shoulders 7 and 8, and each pair of shoulders on each side of the head 15 has a sliding fit with the shoulders 7 and 8, so that when either side of the head is placed between the shoulders 7 and 8 and the tool is inserted in the opening of that particular side of the head and the clamping-screw tightened the dovetail shoulders 25 are not only clamped between the shoulders 7 and 8, but the opposite jaws of the head are simultaneously clamped upon the tool. It now appears that the clamping-screw 5 serves the double purpose of clamping the head 15 in place and also of clamping the tool in the head and that either side, with its tool, may be similarly clamped in operative position, as seen particularly in Fig. 2.

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

1. In a tool-holder, the combination with a shank having opposed jaws movable toward

and from each other, of a tool-holding head having a series of parallel tool-openings each split through one side one split side of the head being clamped between the jaws and means for drawing said jaws together.

2. In a tool-holder, the combination of a fixed jaw and a movable jaw, each having an undercut or dovetail shoulder, a tool-holding head having a tool-opening split through one side only, the portions of the head at opposite sides of the split having dovetail shoulders engaged by the dovetail shoulders of the jaws, and means for drawing the jaws together.

3. In a tool-holder, the combination with a shank having a fixed jaw and a movable jaw, said jaws having parallel dovetail shoulders, a multisided tool-holding head having a number of tool-openings corresponding to the number of sides of the head, each opening being split through the adjacent side only of the head and having dovetail shoulders at opposite sides of its split, said dovetail shoulders of each side head being adapted to be inserted between the dovetail shoulders of the jaws, and means for drawing the jaws together.

In witness whereof we have hereunto set our hands this 19th day of May, 1904.

JAMES CARR.
WILLIAM CARR

Witnesses:
H. E. CHASE,
HOWARD P. DENISON.