

(No Model.)

J. A. GILES.
WORK HOLDING CHUCK.

No. 463,332.

Patented Nov. 17, 1891.

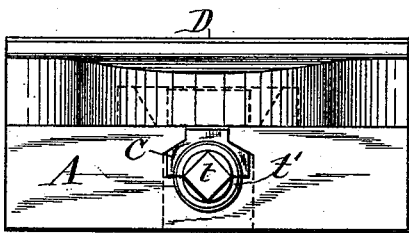
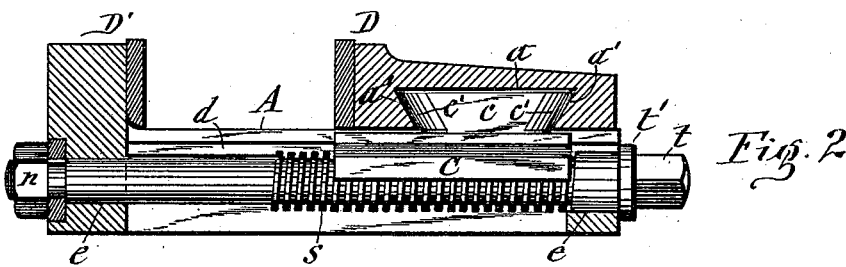
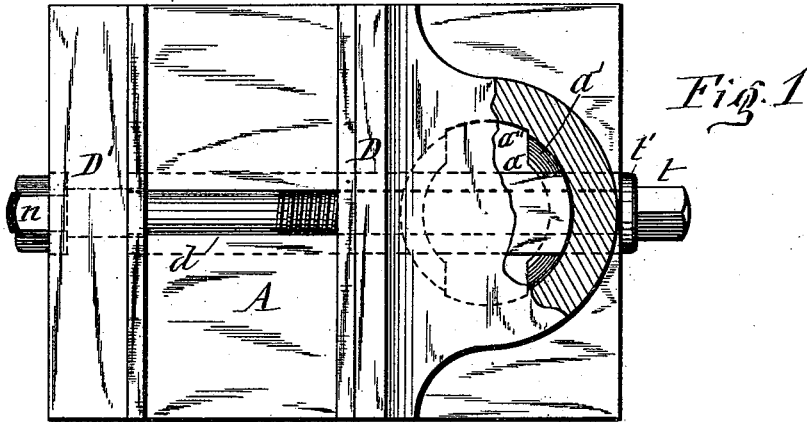


Fig. 3

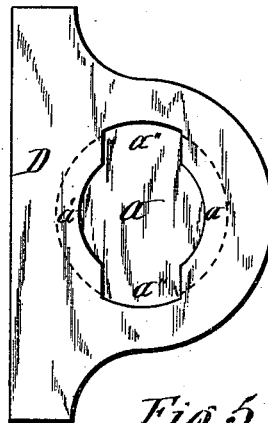


Fig. 5

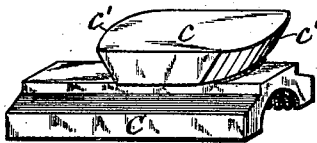


Fig. 4

WITNESSES:

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UNITED STATES PATENT OFFICE.

JULIAN A. GILES, OF WATERTOWN, NEW YORK.

WORK-HOLDING CHUCK.

SPECIFICATION forming part of Letters Patent No. 463,332, dated November 17, 1891.

Application filed July 11, 1891. Serial No. 399,154. (No model.)

To all whom it may concern:

Be it known that I, JULIAN A. GILES, of Watertown, in the county of Jefferson, in the State of New York, have invented new and useful Improvements in Work-Holding Chucks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the connection of the chuck-jaw to its carrier, which latter is provided with a nut engaging the screw by which the jaw is set to grip the work between it and the opposed jaw or jaws.

The object of the invention is to render the jaw readily detachable from the carrier, and thus permit the use of jaws of different shapes and also facilitate the repairs or renewal of the jaw when required; and the object of the invention is also to connect the jaw to the carrier by devices which shall cause the jaw to be automatically forced upon the base-plate or face-plate of the chuck by the pressure of the jaw on the work gripped in the chuck, and thus obtain a firmer hold on said work; and to that end the invention consists in the improved construction and combination of parts hereinafter fully described, and set forth in the claim.

In the annexed drawings, Figure 1 is a plan view of a chuck embodying my improvements, a portion of the adjustable jaw being broken away to better illustrate its connection with its carrier or nut. Fig. 2 is a longitudinal section taken along the side of the adjusting-screw. Fig. 3 is an end view of the chuck. Fig. 4 is a detached perspective view of the carrier, and Fig. 5 is an inverted plan view of the adjustable jaw.

Similar letters of reference indicate corresponding parts.

The chuck represented in the drawings is of the species which is applied to planing-machines for holding thereon the article to be planed; but it is obvious that my improvements are also applicable to lathe-chucks.

A represents the base-plate or face-plate of the chuck, which in this instance has the jaw D' either formed integral with it or firmly attached to it. This plate has a longitudinal

slot *d* through its center and is formed with journal-bearings *ee* at opposite ends of said slot. In said bearings is journaled the adjusting-screw *s*, which protrudes through the ends of the base-plate and is confined from longitudinal movement by the wrench-head *t* on one end of the screw formed with a collar *t'*, bearing on the end of the base-plate, and by a nut *n*, fastened to the opposite end of the screw and bearing thereat on the base-plate, as shown in Fig. 2 of the drawings. On the said screw is mounted the half-nut C, which constitutes the adjustable carrier of the jaw D, which I swivel and detachably connect to said carrier in the following manner: The underside of the jaw D, I form with an annular socket *a*, having beveled undercut segmental sides *a' a'* and slots *a'' a''* between said sides, as shown in Fig. 5 of the drawings. The top of the carrier C, I form with a head *c*, which is elongated lengthwise of the carrier, as shown in Fig. 4 of the drawings, and of a length equal or nearly equal to the diameter of the socket *a* and of a width which allows it to pass through the slots *a'' a''*. The end walls *c' c'* of said head are of segmental shape and undercut beveling, corresponding to the segmental sides *a' a'* of the socket *a*.

In attaching the jaw D to the carrier C said jaw is to be turned to stand with its face parallel to the carrier C. The head *c* of the latter is then inserted into the socket *a*, and by turning the jaw back toward a position at right angles to the carrier the beveled segmental ends of the head *c* pass under the segmental sides *a' a'* of the socket, and thus the jaw D is retained on the carrier and swiveled thereon to conform to the shape of the article to be held by the chuck. In tightening the jaw D against the work or article to be gripped between said jaw and opposed jaw D' the beveled bearings *a'* and *c'* of the jaw D and carrier-head *c* at the side adjacent to the face of the jaw cause the jaw D to be forced toward the base-plate A and become firmly seated thereon, and thus better enabled to obtain a firm grip on the work or article held between the jaws.

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

5 The combination of the jaw D, provided with the annular socket *a*, formed with the undercut segmental sides *a' a'* and slots *a'' a''* between said sides, and the carrier C, provided with the head *c*, elongated lengthwise of the carrier and formed with the undercut

segmental end walls *c' c'*, adapted to pass 10 through the slots *a'' a''*, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name this 18th day of June, 1891.

JULIAN A. GILES. [L. S.]

Witnesses:

H. M. SEAMANS,
MARK W. DEWEY.