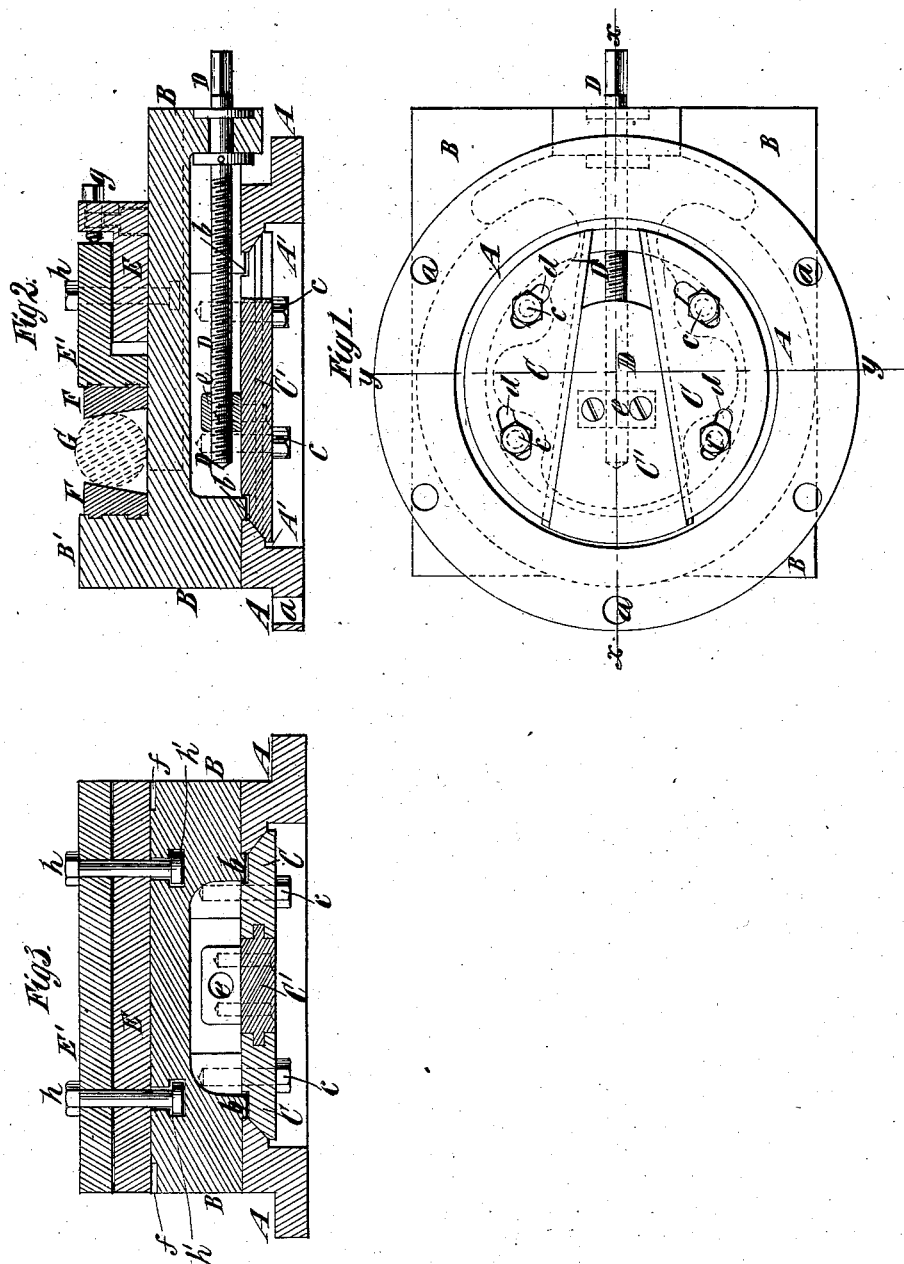


(No Model.)

H. THOMAS.
PLANER CHUCK.

No. 259,945.

Patented June 20, 1882.



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HUGH THOMAS, OF NEW YORK, N. Y.

PLANER-CHUCK.

SPECIFICATION forming part of Letters Patent No. 259,945, dated June 20, 1882.

Application filed January 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, HUGH THOMAS, of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Chucks for Metal-Planing Machines, of which the following is a specification.

My invention relates to that class of planer-chucks which comprise a base piece or plate adapted to be bolted rigidly to the bed of a planer and a top piece or plate provided with clamping-jaws for holding the work, and so connected with the base piece or plate that it may be adjusted and secured thereon at any desired angle about a vertical axis to bring the article to be planed in proper relation to the planing-tool without disturbing the bolts or fastenings by which the base piece or plate is secured to the planer-bed.

The invention consists essentially in the combination, in a chuck, of a base piece or plate having a circular opening, a top piece or plate fitting thereon, and provided with a sectional hub entering said opening, and devices for contracting the sectional hub to permit of the turning of the top piece or plate upon the base piece or plate, and for then expanding said hub tightly against the side of said opening to hold the top piece or plate securely in the position to which it is adjusted. The hub and the opening in which it fits are preferably tapered or beveled upward, so that when the hub is expanded against the beveled side of the opening it will tend to draw the top piece or plate down tightly upon the base piece or plate, and the hub may be composed of two segmental sections and a wedge fitting between them, and actuated by a screw to force them outward to expand the hub or to permit them to move inward when the top piece or plate is to be shifted.

In the accompanying drawings, Figure 1 represents a plan of the under side of a chuck embodying my invention. Fig. 2 represents a vertical section of the chuck upon the dotted line *x x*, Fig. 1; and Fig. 3 represents a vertical section thereof upon the dotted line *y y*, Fig. 1.

Similar letters of reference designate corresponding parts in all the figures.

A designates the base piece or plate of the chuck, which is represented as of circular form,

and is provided with a flange in which are holes *a*, for the reception of bolts, whereby it may be rigidly secured to a planer-bed.

B designates the top piece or plate of the chuck, which is fitted upon the upper face of the base-piece A, and is provided with an annular lip or tongue, *b*, which fits in a circular opening, A', in said base-piece. The upper portion of the side of said opening is cylindrical where the lip or tongue fits against it, and below said cylindric portion the side of the opening is beveled outward and downward, as clearly seen in Fig. 2. Upon the under side of the top piece, B, is a hub of approximately circular form, which enters the opening A'; and in this example of my invention, said hub is composed of two pieces, C, of segmental form, which fit against the side of the opening A', and are inclined or beveled to correspond thereto, and a wedge, C', which fits between the segments C and is tongued and grooved into their inner edges, as clearly shown in Figs. 1 and 3. The segments C are attached to the top piece, B, by means of bolts *c*, which pass through slots *d* in the segments, and the latter are thus permitted to move slightly toward and from each other upon the under side of the top piece, B.

D designates a screw which is held against longitudinal movement in the top piece, B, and which engages with a nut, *e*, upon the upper surface of the wedge C', and by turning the screw in one direction the wedge C' may be moved longitudinally to spread the segments C, and thereby expand the hub in the opening A', while by turning the screw in the other direction the wedge is moved to allow the segments to move inward, and thereby contract the hub. When the segments are thus spread apart their beveled outer edges, bearing against the beveled side of the opening A', not only secure the top piece, B, against being shifted upon the base-piece A, but they also tend to draw the said top piece down tightly upon the base-piece, as will be clearly understood.

Instead of being formed of the segments C and wedge C', the hub might be composed of sections of other form adapted to be expanded by means of any suitable devices.

B' designates the fixed jaw of the chuck,

which is represented as formed integral with the top piece, B, and the movable jaw is composed of lower and upper pieces, E E'. The lower piece, E, may be provided with pawls, 5 which are shown in dotted outline in Fig. 2, and which engage with racks *f* upon the surface of the top piece, B.

The upper part, E', of the movable jaw may be set up to clamp the work by screws *g*, and 10 the construction of the jaw in two pieces and the arrangement of the pawls are very similar to that shown and described in Letters Patent No. 168,064, granted to me September 21, 1875, and forms no part of my present invention. 15

The two parts E E' of the movable jaw are clamped rigidly upon the top piece, B, by means of bolts *h*, the heads of which fit in grooves *h'* in the top piece, extending trans- 20 versely to the jaws.

Upon the faces of the jaws B' E' are removable gibs F, which are tongued and grooved thereto, and the faces of these gibs are inclined or beveled downward and away from 25 each other, so that they may be used to securely hold a shaft or cylinder, G, in place, as shown in dotted lines, Fig. 2, for cutting a key-seat or for any other purpose. The gibs F, being 30 tongued and grooved into the jaws, are prevented from rising as they are clamped upon the work.

By my invention I provide for readily adjusting the top B at any angle about a vertical axis and for very securely holding it in 35 place after such adjustment.

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

1. The combination, in a planer-chuck, of a base-piece having a circular opening, a top piece provided with a sectional hub entering 40 said opening, and devices for expanding the said sectional hub against the side of said opening, substantially as specified.

2. The combination, in a planer-chuck, of a base-piece having a circular opening the side 45 of which is tapered or beveled upward, a top piece provided with a sectional hub entering said opening and correspondingly tapered or beveled, and devices for expanding said hub against the beveled side of said opening, sub- 50 stantially as specified.

3. The combination, in a chuck, of a base-piece having a circular opening, a top piece provided with a sectional hub entering said opening, and composed of two segments and 55 an interposed wedge, and a screw for actuating said wedge to expand the segments, substantially as specified.

4. The combination of the base-piece A, having a tapered opening, A', the top piece, B, 60 the segments C, the wedge C', tongued and grooved into the inner edges of the segments, and the screw D, substantially as specified.

HUGH THOMAS.

Witnesses:

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