(No Model.)

W. C. OBERNESSER.

CHUCK.

No. 593,681. Patented Nov. 16, 1897.

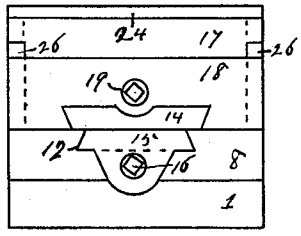


Fig. 2.

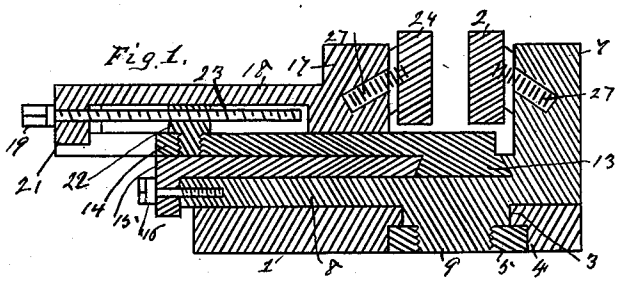


Fig. 1.

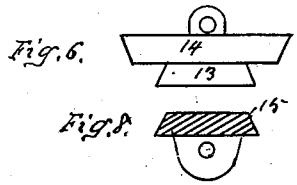


Fig. 6.

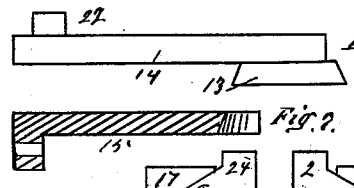


Fig. 5.

Fig. 8.

Fig. 7.

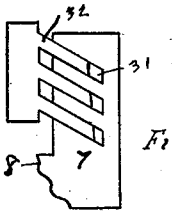


Fig. 9.

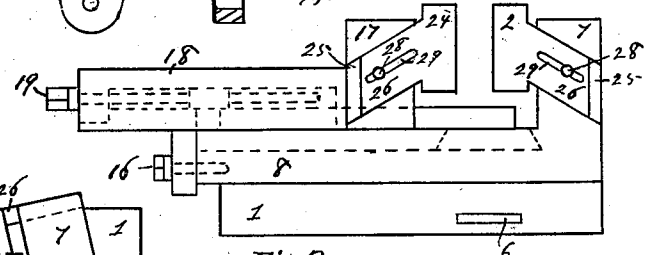


Fig. 3.

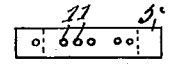


Fig. 10.

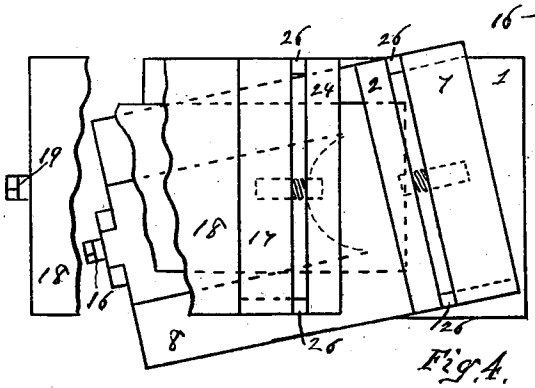


Fig. 4.

WITNESSES
R L Taylor
A Bell

William C. Obernesser INVENTOR
By Robert S. Carr Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM C. OBERNESSER, OF HAMILTON, OHIO.

CHUCK.

SPECIFICATION forming part of Letters Patent No. 593,681, dated November 16, 1897.

Application filed June 1, 1897. Serial No. 638,944. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. OBERNESSER, a citizen of the United States, residing at Hamilton, in the county of Butler and State of Ohio, have invented certain new and useful Improvements in Chucks, of which the following is a specification.

My invention relates to improvements in chucks for shapers, planers, and similar metal-working machines in which the clamping-jaws are adjustable in different horizontal angles in relation to each other and to the base; and the objects of my improvement are to facilitate its action and increase its efficiency by means that will appear from the following description, as illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section; Fig. 2, a front elevation; Fig. 3, a side elevation; Fig. 4, a plan, and Figs. 5, 6, 7, 8, 9, and 10 details of construction.

In the drawings, 1 represents the base-plate; 3, a bearing formed therein. Annular seat 4 is in the bearing for nut 5. Slot 6 extends from the edge of the base to said seat. Stationary jaw 7 extends vertically above the end of pivot-plate 8 and is formed integral therewith. Said plate is pivotally mounted on the base by means of pivot 9, that depends therefrom and movably engages with bearing 3. The end portion of said pivot is reduced in size and threaded to receive nut 5, that secures plate 8 in any desired horizontal angle to the base The nut is adjusted by means of a rod or tool being inserted through slot 6 in the base and engaging with holes 11, formed in the periphery of said nut.

Groove 12, resembling a dovetail in cross-section, is formed in the top surface of pivot-plate 8. Its rear portion terminates in the form of a semicircle and forms the rear half of the bearing for flanged pivot 13, that depends from table 14. Slide 15 is movable in groove 12, and its rear end terminates in the form of a semicircular flanged gap to form the front half of the bearing for pivot 13. By means of screw 16 the slide may be caused to clamp pivot 13 and securely hold table 14 in different horizontal angles to stationary jaw 7, or permit it to move freely to different angles in relation thereto, as desired.

Movable jaw 17, carried by top plate 18, corresponds in size and form with stationary jaw 7. Said top plate contains a groove in its under surface to receive table 14, and whereon said top plate is longitudinally adjustable by means of screw 19. The movement of the top plate in this manner carries jaw 17 toward or from the stationary jaw and causes articles to be securely clamped between them. Said screw 19 is journaled in lug 21, that depends below the front end of the top plate and engages with nut 22, that is secured on table 14. Longitudinal recess 23 is formed in the under side of the top plate to permit said plate to move freely over nut 22. Supplementary jaws 2 and 24 are attached to the respective jaws 7 and 17. The respective ends of jaws 7 and 17 are formed with parallel gaps 25, that slant downwardly and outwardly. Parallel wings 26, formed on the extremities of the supplementary jaws, slide in the corresponding gaps 25. Springs 27, situated behind the supplementary jaws, force them upwardly and toward each other. The extent of this movement is limited by pins 28, inserted through slots 29 in wings 26.

A modified form of construction is shown in Fig. 7, wherein the face of stationary jaw 7, as well as movable jaw 17, may be formed with a series of parallel transverse grooves 31, that slant in a downward direction. The supplementary jaws attached thereto may be formed with a series of parallel transverse ribs 32 to correspond in slant with said grooves and movably engage therein.

In operation the chuck is secured to the table of the shaper or other machine. The pivot-plate is adjusted to the desired angle to the direction of movement of the cutting-tool. The article to be operated upon is placed between the supplementary jaws, wherein it is clamped by the rearward movement of the top plate, being effected by means of screw 19. With the approach of movable jaw 17 toward the stationary jaw 7 springs 27 press the supplementary jaws against the article placed between them. As the movement of the top plate is continued the resistance of the springs is overcome and the supplementary jaws are forced in a downward direction corresponding to the slant of wings 26. By means of the frictional contact of the

supplementary jaws against the article between them it is forced down and securely held in position on table 14. To clamp wedge-shaped or tapering articles, the pressure of slide 15 on pivot 13 may be relieved by means of screw 16. Table 14 and the top plate are then freely movable on flanged pivot 13 to different angles. This will permit the movable jaw 17 to automatically adjust itself to the necessary angle to correspond with the article being clamped. The same downward pull will be exerted on the article by the downward movement of the supplementary jaws. The clamped article will thus be firmly seated on table 14 without the necessity for the use of a hammer that frequently causes injury to the article or to the chuck and at best is a noisy and ineffectual expedient.

Having fully described my improvements, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a chuck, the combination, with a plate or table, of a jaw movably connected therewith, said jaw being provided with gaps or bearings on its respective opposite sides or ends, said gaps being parallel with each other and slanting downwardly and rearwardly from the face of the jaw, a supplementary jaw provided with rearwardly and downwardly projecting wings adapted to slide in said gaps, whereby the supplementary jaw is movable simultaneously toward the chuck-jaw and the base-plate, means for limiting the movement of the supplementary jaw, and a spring between the said jaws, substantially as shown and for the purpose specified.

2. The combination with a base, a stationary jaw pivotally adjustable thereon, a jaw movably connected with the stationary jaw, and automatically adjustable to different horizontal angles therewith, and means to actuate the movable jaw, of supplementary jaws movably attached to the respective stationary and movable jaws and constructed and arranged to exert simultaneously a downward and clamping pressure on an article placed between them.

WILLIAM C. OBERNESSER.

Witnesses:
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