

G. B. DURKEE.
PLANNER CHUCK.

Patented Apr. 18, 1882.



Fig. 1

Fig. 3.

Fig. 4. $i \circ \pi$

Fig. 5

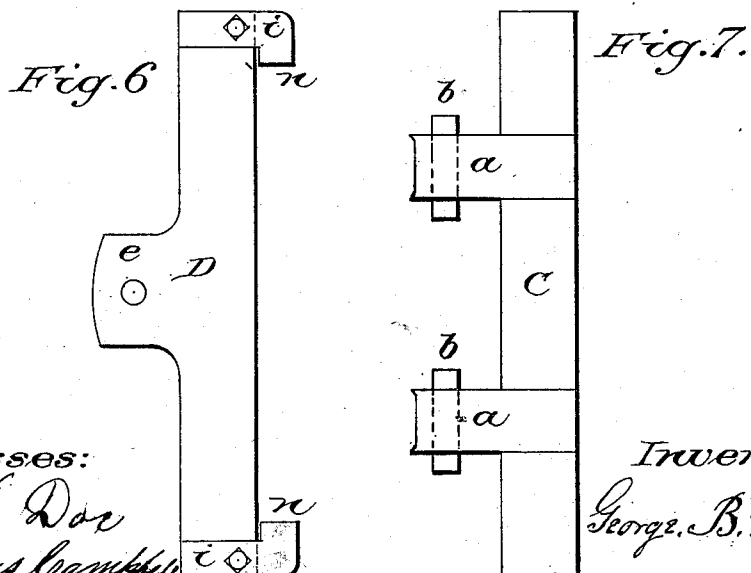


Fig. 6

Fig. 7.

Witnesses:

A. K. Doe

Angus Campbell

Inventor:

George B. Purkee

UNITED STATES PATENT OFFICE.

GEORGE B. DURKEE, OF CHICAGO, ILLINOIS.

PLANER-CHUCK.

SPECIFICATION forming part of Letters Patent No. 256,656, dated April 18, 1882.

Application filed April 14, 1881. (Model.)

To all whom it may concern:

Be it known that I, GEORGE B. DURKEE, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Planer-Chucks, of which the following is a full description.

The object of my invention is the production of an improved planer-chuck; and it consists principally in a peculiarly-constructed movable jaw, whereby the usual holding-down bolts are dispensed with; and it consists, further, in a novel construction of the clamping bar or jaw, whereby the same may be clamped or released with greater dispatch than has heretofore been done, substantially as hereinafter more fully described.

Figure 1 is a plan view of my improved chuck, and Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an end elevation, and Fig. 4 is a detached view, of one of the flanged fingers which is bolted to the under side of the clamping-bar at each end to prevent the bar from tipping. Fig. 5 is an elevation, being partly in section, showing the means by which the movable bar is adjusted or held in place. Fig. 6 is an under view of the clamping-bar, and Fig. 7 is the same view of the movable bar.

A, Figs. 1, 2, and 5, represents the upper or working face of the chuck, through which two slots, B B, are cut.

C, Figs. 1, 5, and 7, is the movable bar, which has two arms, *a a*, through which the steel pins *b b* are fitted, as shown. Theribs *cccc*, (shown in Fig. 2,) projecting downward from the under side of the body of the chuck, are provided with notches, which are planed in to match and fit the steel pins *b b*, as shown at *d d*, Fig. 5. The movable bar C and its arms *a a* are cast in one piece, of steel, iron, or any other suitable metal.

D, Figs. 1, 3, 5, and 6, represents the clamping-bar, which has an arm, *e*, through which the bolt *f* passes, and is tapped into the sliding nut *g*, which is fitted to work freely in the T-groove *h*, as shown in Fig. 3. The said T-groove is made of sufficient length to allow the clamping-bar to move forward somewhat farther than the distance between the notches *d d*, thus making the device capable of holding any

piece of work within its range without resorting to extra blocks or parallel pieces. The front or working side of the clamping-bar is held down by two flanged fingers, *i i*, which are bolted to the under side of the bar at the ends. Said fingers are provided with projecting lips or flanges *n n*, which are located entirely forward of the bar and extend partially into the grooves *o o*, but are fitted nicely to the upper face of said grooves.

The object of not allowing the flanges to extend entirely into the grooves is to give such freedom of movement to the clamping-bar that one end may be moved independent of the other for the purpose of holding taper or wedge shaped pieces in the chuck. The object of locating the flanges *n n* forward of the bar is to render the bar perfectly free to be moved backward when the clamping or chuck screws *s s* are backed out and the releasing-screw *f* is slackened. The flanges *n n* projecting forward and the arm *e* reaching backward gives the bar an extra wide face, which prevents it from tipping in the direction of the line of force when work is held in the chuck; but when the chuck is empty either the clamping-bar or the movable bar is free to move by tipping them toward the center; but the movable bar must be tipped enough to allow the steel pins to drop out of the notches, while the clamping-bar does not require any perceptible tipping to move it.

The releasing-screw *f*, which may also be termed a "binding-screw," is seldom used or changed for ordinary work; but in case the work is unusually heavy, or is of such shape that its edges touch the bars below the center, then the screw *f* is indispensable.

It should be noticed that the slots B B are planed out and the arms of the movable bar are planed to fit, to prevent dirt and dust from getting between the pins and the notches. Another object in making a good fit between the arms and the slots is to secure uniform and equal lateral movements of the bar at both ends when the steel pins are out of catch, thus keeping the pins and notches always in line, so that the bar can be moved instantly from zero to its extreme capacity.

The hole *x* shown in Fig. 2, which passes through the center rib, *z*, is made for the purpose of inserting the steel pins after the mov-

ble bar with its arms *a a* are in place, there not being room between the arm and rib or between the arm and side for their insertion. I have made the movable bar to work without
5 the notches on the under side of the chuck, substituting holes or slots in the face of the chuck, with corresponding pins or tongues on under side of bar to fit them; but as they disfigure the face of the chuck and are difficult to
10 keep clean, I prefer the plan I have shown in the drawings.

In manufacturing this chuck I hollow out the upper face of the arms *a a*, as shown in Figs. 1 and 7, and as shown by the dotted line in
15 Fig. 5, for the purpose of keeping the dirt or dust out of the joints between the arms *a a* and the slots *B B*. The base *F* is made circular for the purpose of being graduated, and the boss shown in the center is made to receive a
20 swivel-pin for the purpose of swinging the

chuck at any desired angle to the line of motion of the planer-bed.

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

1. The base-piece *A F*, slotted, notched, and otherwise constructed substantially as described, jointly with the movable bar *C*, having laterally-extended arms *a a* and pins *b b*, for the purpose set forth. 25

2. The base-piece *A F*, slotted, notched, and otherwise constructed substantially as described, jointly with the clamping-bar *D*, having the slotted arm *e*, flanged fingers *i i n n*, and the screws *S* and *f*, as and for the purpose
30 set forth. 35

GEORGE B. DURKEE.

Witnesses:

A. K. DOE,

M. E. DUGGAN.