

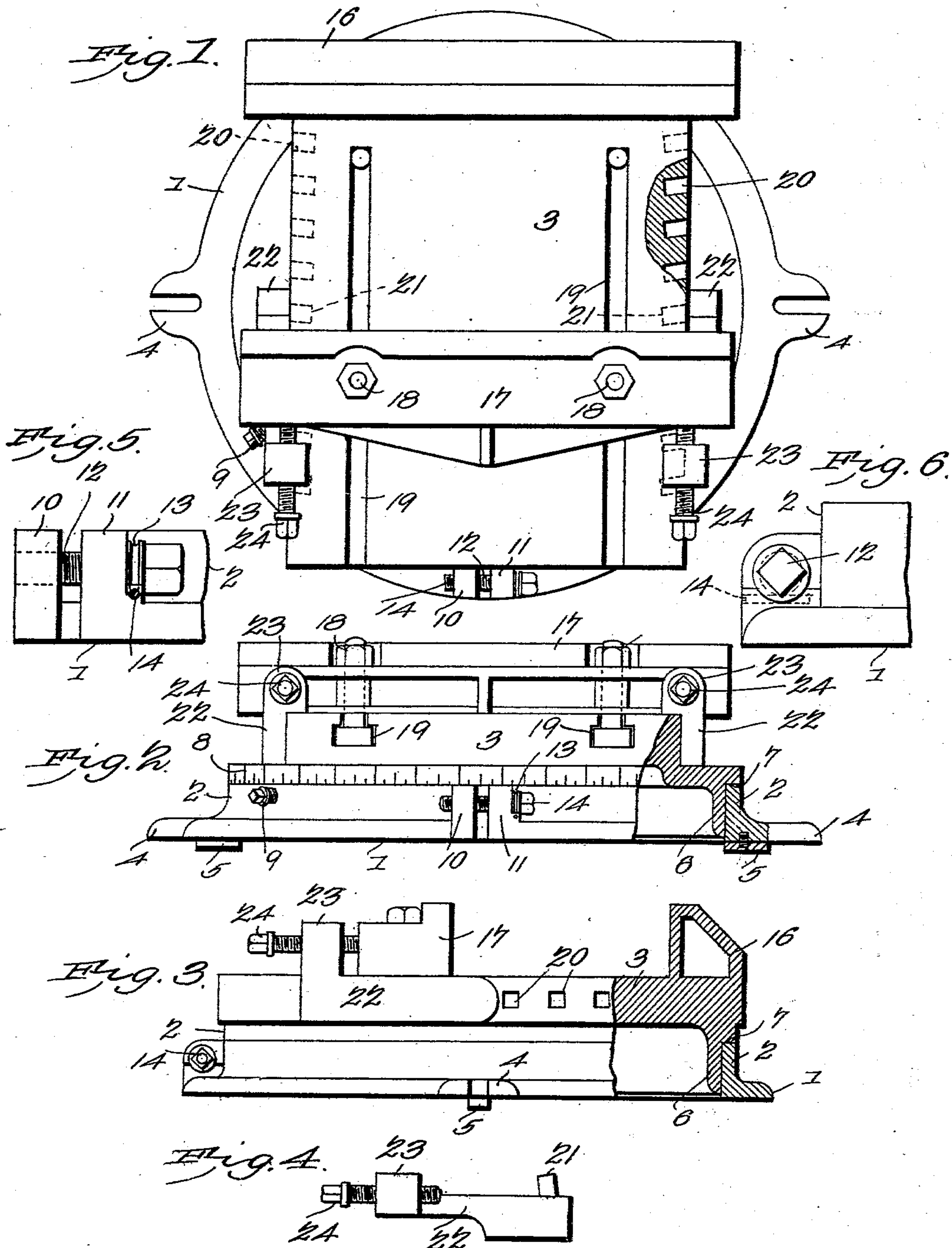
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S. E. WALLING.
PLANER CHUCK.

(Application filed Jan. 25, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL E. WALLING, OF NEW WHATCOM, WASHINGTON.

PLANER-CHUCK.

SPECIFICATION forming part of Letters Patent No. 715,326, dated December 9, 1902.

Application filed January 25, 1902. Serial No. 91,256. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL E. WALLING, a citizen of the United States, residing at New Whatcom, in the county of Whatcom and State of Washington, have invented a new and useful Planer-Chuck, of which the following is a specification.

My invention relates to certain improvements in chucks of that class employed on planers and tools of similar character, and has for its principal object to provide a strong and durable chuck having but few movable parts and which may be adjusted to present the work to the cutting-tool at any desired angle.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a plan view of a planer-chuck constructed in accordance with my invention. Fig. 2 is an end elevation of the same, partly broken away in order to more clearly illustrate the construction. Fig. 3 is a side elevation of the chuck, partially in section. Fig. 4 is a detail plan view of one of the adjusting-dogs for the movable jaw. Figs. 5 and 6 are details of the clamping device for the base-ring.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

1 indicates a split base-ring having a vertical flange 2 for the support of the bed 3, the opposite edges of the ring being provided with slotted lugs 4 for the reception of the usual securing-bolts by which the bed is fastened to the planer. In order to more firmly hold the base-ring in position, I provide lugs 5, which are preferably in the form of small blocks adapted to fit in the slots of the planer-bed; said blocks being secured to the base-ring by suitable countersunk bolts or screws, so that they may be removed when it is desired to secure the base-ring on a flat surface for the employment of the chuck in connection with any other form of tool.

The bed is provided with a depending annular flange 6, fitting snugly within the vertically-flanged portions 2 of the base-ring,

said bed being provided with a shoulder 7, resting directly on the upper edge of the flange 2. The circular portion of the bed is provided immediately above the vertical flange of the base-ring with an indicating-scale 8, which extends, preferably, around the whole of the periphery of the bed, the scale representing different degrees or angles and fractions thereof to permit of the accurate circumferential adjustment of the bed with respect to the base-ring, the work-holding jaws being thus set at any desired angle to the cutting-tool. For convenience in holding the bed in an adjusted position before the base-ring is clamped together a tapered bolt 9 is employed, the bolt being tapped through an opening in the flange 2 and impinging on the periphery of the flange 6, or the latter may be provided with openings for the reception of the end of the pin or bolt at those angles most frequently used. On the base-ring are arranged two lugs 10 and 11, the lug 10 being threaded and adapted to receive the threads of a clamping-bolt 12, which passes loosely through an opening in the lug 11, said bolt being provided with a grooved collar 13, into which extends a screw or pin 14 to prevent longitudinal movement of the bolt. This construction enables the operator to securely clamp the base-ring to the bed, and when the bolt is turned in the reverse direction serves to open the base-ring and permit of the ready adjustment of the bed.

The flat and substantially rectangular upper surface of the bed 3 is provided at one end with a hollow stationary jaw 16 and a movable jaw 17, which may be adjusted toward and from the fixed jaw to permit of the clamping of the work.

The jaw 17 may be solid or, as shown in the drawings, may be webbed in order to reduce the weight of the metal and is provided with a pair of bolts 18, the heads of which are adapted to slots 19, extending longitudinally of the bed, the upper threaded ends of the bolts being provided with nuts to permit the clamping of the jaw to the bed in any position to which it may be adjusted. On the opposite sides of the bed are formed a series of inclined openings 20, adapted for the reception of similarly-inclined pins 21, carried by adjusting-dogs 22, the inclination of the pin and

openings permitting of the more secure holding of the dogs and lessening the liability of outward movement under any strain. The main body of the dogs is preferably reinforced at that end where the holding-pin 21 is placed, and at the opposite end is formed a lug 23, extending vertically to a point above the upper surface of the bed, the inner edge of each lug extending partly over the top surface of the bed to an extent sufficient to bring the center of its jaw-adjusting screw 24 in vertical alinement with the side wall of the bed, as clearly shown in Fig. 2, this being for the purpose of bringing the strain in a direct line with the inner wall of the dog and avoiding any torsional strains. The adjusting-screws 24 impinge on hardened-steel blocks arranged at the rear wall of the adjustable jaw and are of such length as to permit of a considerable range of movement of the adjustable jaw without the necessity of changing the position of the dogs.

The chuck is preferably formed of steel, and owing to the limited number of parts there is but little danger of the accumulation of dirt or chips to an extent sufficient to interfere with the ready adjustment of either the jaws or the bed, while at the same time the construction is such as to permit of a much greater range of adjustment of the jaws than is possible with the chucks now in use.

While the construction herein described, and illustrated in the accompanying drawings, is the preferred form of the chuck forming the subject of my invention, it is obvious that various changes in the form, proportions, size, and minor details of construction may be made without departing from the spirit or sacrificing any of the advantages of my invention.

Having thus described my invention, what I claim is—

1. The combination in a planer-chuck, of a split base-ring, means for securing the same to the planer bed or table, a chuck-bed having a depending annular flange adapted to be clamped in said base-ring and provided with a series of inclined openings in its opposite side walls, a stationary jaw carried by the bed, a pair of clamping-dogs having inclined pins for engagement in said openings, a movable jaw guided on the bed, means for locking said movable jaw to the bed, and adjusting-screws carried by said dogs and adapted for operative contact with the movable jaw.

2. The combination in a planer-chuck, of the bed having a series of inclined openings arranged in its opposite side walls, a pair of clamping-dogs having inclined pins for engagement in the openings, adjusting-screws carried by said dogs, a movable jaw with which said adjusting-screws are in operative contact, and a stationary jaw carried by the bed.

3. The combination in a planer-chuck, of the bed having a series of inclined openings arranged in its opposite side walls, a pair of clamping-dogs, each comprising a body portion having at one end an inclined pin for engagement in the openings and at the opposite end a screw-carrying lug, said lugs projecting partly over the upper surface of the bed, a movable jaw guided on the bed, adjusting-screws carried by the lugs, said screws having their longitudinal axes in the vertical plane of the side walls of the bed, and a stationary jaw carried by the bed.

4. The combination in a planer-chuck, of the bed having a pair of longitudinally-disposed slots, a movable jaw, clamping-bolts carried by said jaw and having their heads in engagement with the walls of said slots, there being a series of inclined openings arranged in the opposite side walls of the bed, a pair of clamping-dogs each comprising a body portion having at one end an inclined pin for engagement in said openings, and at the opposite end a screw-carrying lug, said lugs projecting partially over the upper surface of the bed, adjusting-screws carried by said lugs and engaging the rear face of the movable jaw, said screws having their axes of rotation in the vertical plane of the side walls of the jaw, and a stationary jaw carried by the bed.

5. The combination in a planer-chuck, of the split base-ring, the chuck-bed, stationary and movable jaws carried thereby, and detachable lugs secured to the bottom of the base-ring to thereby adapt the latter for connection to a slotted or a smooth supporting-bed.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SAMUEL E. WALLING.

Witnesses:

HENRY FANNING,
W. P. SHANLY.