C. R. LADEVEZE.

JOINT OR MITER PLANER TOOL.

APPLICATION FILED AUG. 30, 1909.

959,017. Patented May 24, 1910.

Fig. 1.

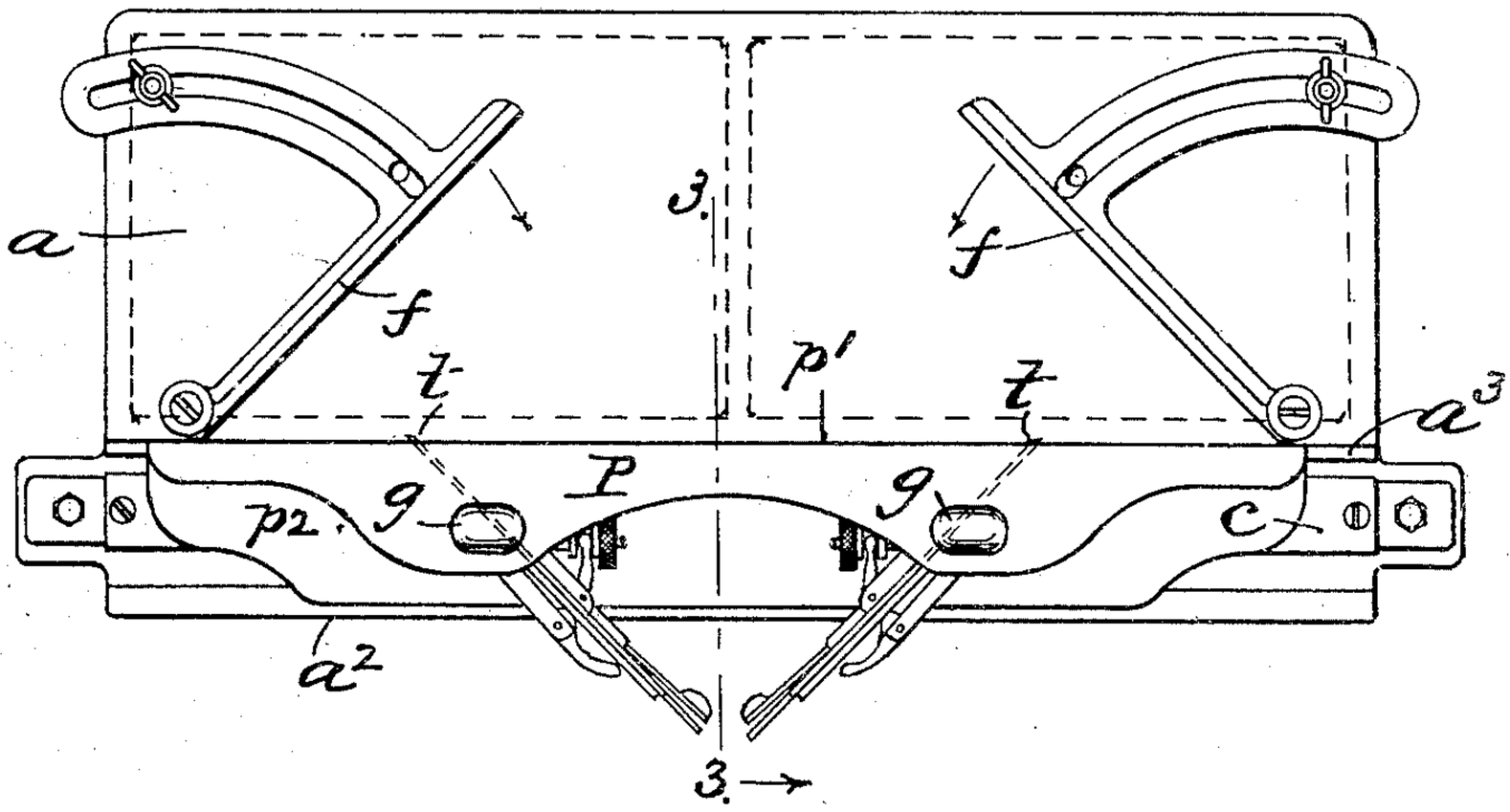


Fig. 2.

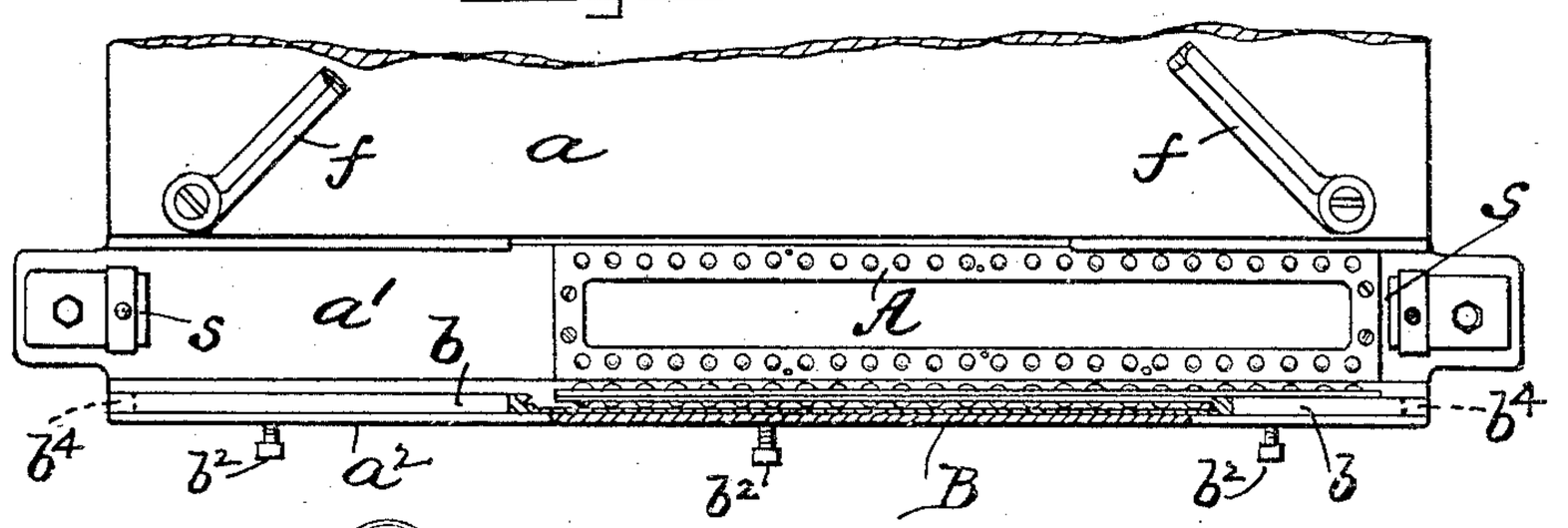


Fig. 3.

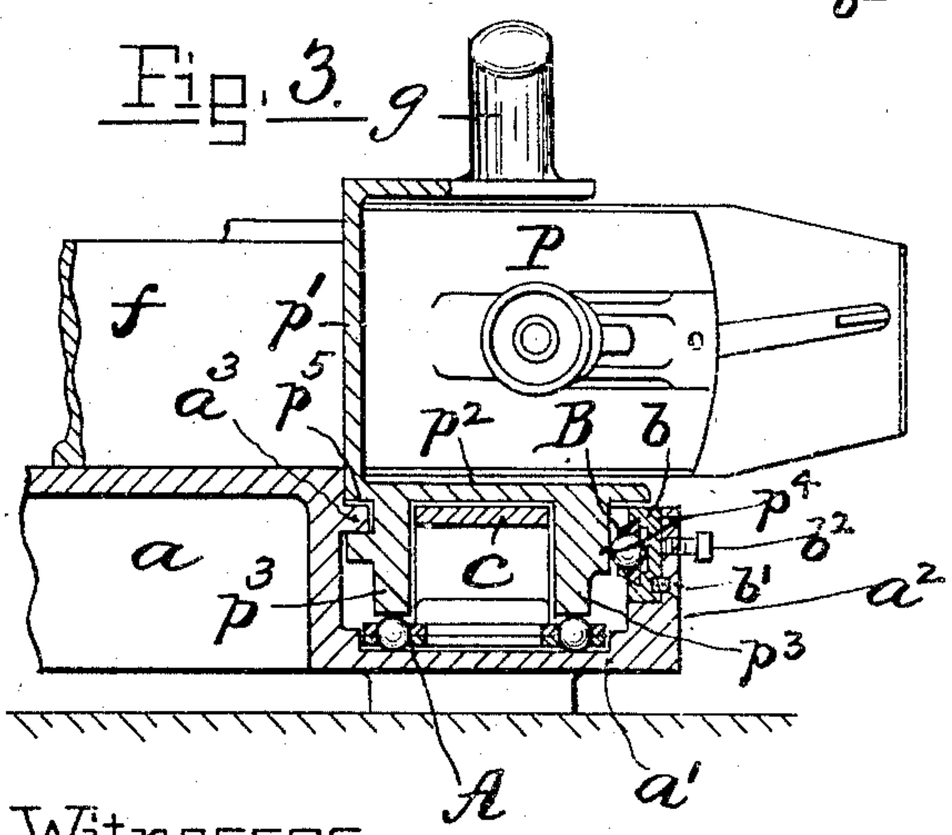
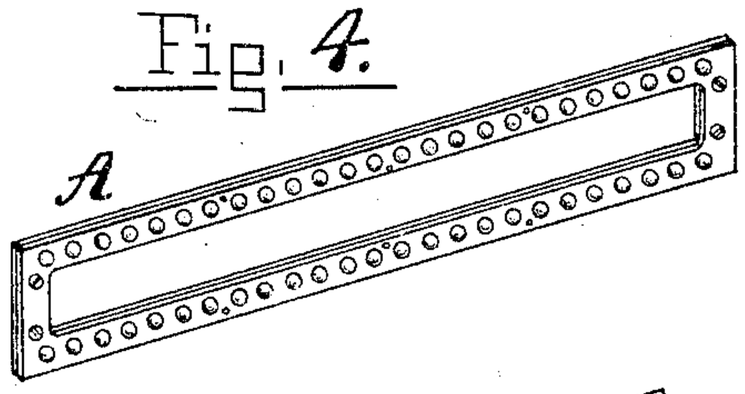


Fig. 4.



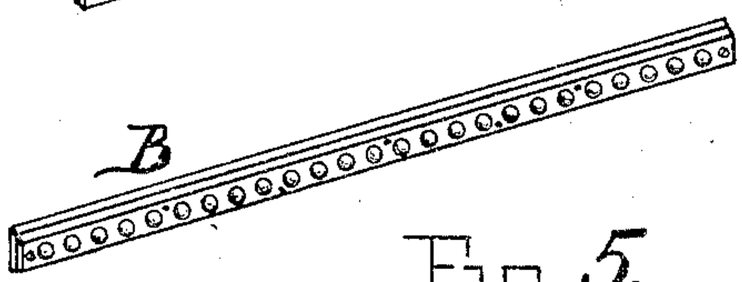


Fig. 5.

Witnesses,

C. J. Hannigan.

Ira Larcie.

Inventor,

Charles R. Ladeveze.

By Geo. H. Remington.

Attorney.

UNITED STATES PATENT OFFICE.

CHARLES R. LADEVEZE, OF PROVIDENCE, RHODE ISLAND.

JOINT OR MITER PLANER TOOL.

959,017. Specification of Letters Patent. **Patented May 24, 1910.**

Application filed August 30, 1909. Serial No. 515,153.

To all whom it may concern:

Be it known that I, CHARLES R. LADEVEZE, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Joint or Miter Planer Tools, of which the following is a specification.

My invention relates to miter or joint-planers, so-called, and it consists in certain novel features of construction, all as more fully hereinafter set forth and claimed.

The principal object sought to be attained by the present invention is to provide planers of the class referred to with improved means whereby the plane is capable of being manipulated more easily, accurately and quickly and at the same time with the exercise of much less force or power. These advantages are attained by a comparatively inexpensive construction as compared with planers of this type as usually devised.

In the accompanying sheet of drawings, Figure 1 represents a top plan view of a miter-plane embodying my invention; Fig. 2 is a partial plan view of the same, portions thereof being broken away; Fig. 3 is a transverse sectional view, in enlarged scale, taken on line 3 3 of Fig. 1; Fig. 4 is a detached perspective view of the bottom ball-carrying frame or shuttle, placed edgewise; and Fig. 5 is a similar view of the movable side frame or ball-carrying shuttle.

The main frame or base a of the device or tool is, as drawn, hollow and flat and provided with a longitudinally recessed extension a^1 having its front wall a^2 integral with the base. The inner face of said wall is adapted to receive a removable plate b having suitable ways in which the ball-carrying side frame B is slidably fitted. Screws b^1 serve to secure the plate in position while other screws, b^2, are employed for effecting its lateral adjustment. The opposite wall of the said part a^1 is provided near the top with an inward projecting longitudinally extending rib or lip a^3 engaging a corresponding groove p^5 formed in the adjacent vertical side of the plane to prevent the latter from moving upwardly. A frame or "shuttle" A having a series of anti-friction balls movably mounted therein is disposed true and flatwise in the bottom of said recess. The diameter of the balls exceeds the thickness of the frame and projects through its upper and lower faces. The shuttle member is somewhat shorter than the track therefor, end stops s (Fig. 2) serving to limit the shuttle's endwise movements. The other, or said ball-carrying front shuttle member B, is materially narrower than the member A and is positioned edgewise in the plate or holder b; fixed stops b^4 being employed to arrest the shuttle's endwise movements, all as clearly shown. The plane P is relatively long and of the double-acting type, that is, it is provided with a pair of adjustably mounted reversely arranged cutters or blades t disposed at an angle with respect to the working or vertical face p^1. The bottom flange, p^2, of the plane is substantially flat and parallel with the said track or base part a^1 (see Fig. 3). Integral with and depending from said flange are two long, laterally separated ribs, p^3, having the bottom faces thereof machined off so as to be supported directly by the exposed upper surface of the anti-friction balls of the bottom shuttle A. The front vertical face portion p^4 of the outer rib is adapted and arranged to bear against the adjacent surface of the balls of the side shuttle B. As thus devised the latter performs the function of a thrust-bearing from the fact that all the outer lateral pressure or thrust upon the plane during the act of cutting or planing the stock is borne by the balls of the shuttle B, the weight of the plane at the same time being borne by the shuttle A.

In lieu of providing the plane with a single handle or grip located midway of its length, I prefer to employ two grips, g, each being positioned contiguous to the cutting point of the respective blade. As thus arranged the power or force exerted in manipulating the plane is applied immediately adjacent the cutter, thereby insuring more accurate results and preventing the plane from springing or moving outward slightly in a lateral direction when it engages the work.

After the two shuttle members A and B have been placed in the recessed extension of the main base member and properly adjusted with relation to the plane, the latter is next readily inserted endwise into the opening, the ribs p^3 and surface p^4 then being in sliding contact with the balls of the respective shuttles, also movable, the lip a^3 at the same time extending into the groove p^5 formed therefor in the back of the plane. A longitudinally extending stationary cover mem-

ber *c* serves to protect the top of the chamber or opening in which the shuttles are mounted.

In the improved joint-planer or tool illustrated herewith, the plane's longitudinal movement is double that of the shuttle's travel, since the balls of the latter are interposed between and being in continuous frictional contact with the movable plane and the stationary tracks. It may be added that the base *a* may be provided with a pair of pivoted "fences," *f*, constructed and mounted substantially as usual so as to swing within an arc of 90°.

The tool embodying my improvements, is simple in construction; not liable to get out of order; it is adapted to be adjusted with great accuracy; it is readily accessible for inspection and repairs; the stock or work can be jointed more quickly and with the expenditure of materially less power or force.

It may be stated that in case the stroke of the plane exceeds the movement provided or alotted for the shuttles the latter will be gently arrested by the respective end stops, the plane itself meanwhile readily sliding therebeyond on the balls.

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

The miter or bevel-plane herein described, the same consisting of a main table or base having a relatively deep front recessed part extending longitudinally thereof, a slidable cutting-plane tool having its lower portion laterally guided in and extending downward into said recess, and movable antifriction elements disposed between and bearing against the bottom and front faces of the plane's said lower portion and the adjacent inner surfaces of the walls of the recessed part, constructed and adapted to support the weight of the plane and at the same time to resist the outer lateral thrust of the tool.

In testimony whereof I have affixed my signature, in presence of two witnesses.

CHARLES R. LADEVEZE.

Witnesses:
GEO. H. REMINGTON,
CALVIN H. BROWN.