J. A. TRAUT.
Bench-Plane.

No. 219,186. Patented Sept. 2, 1879.

Fig. 1.

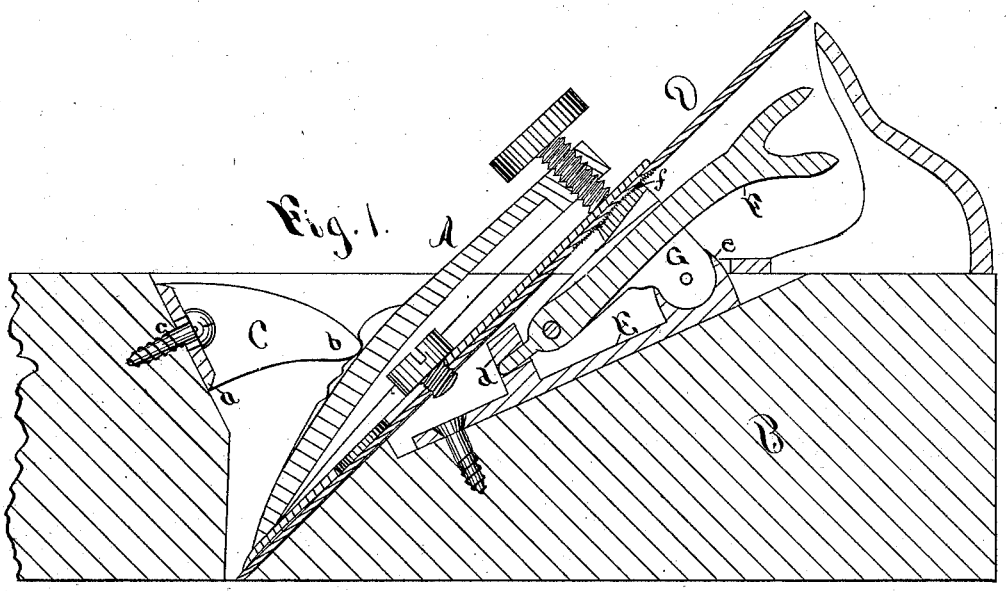


Fig. 2.

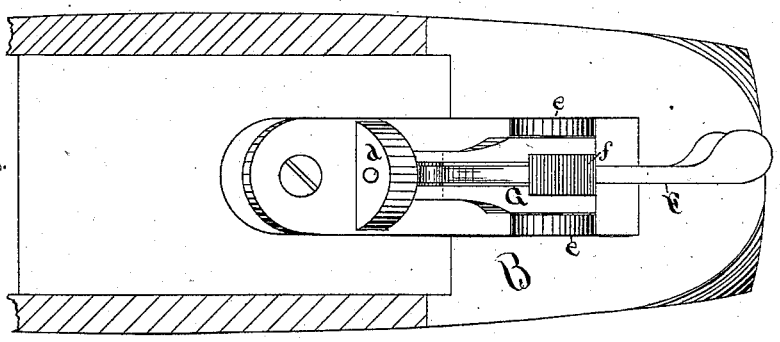
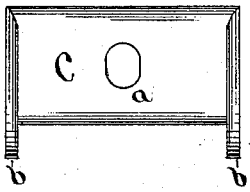


Fig. 3.



Witnesses.
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Inventor.
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UNITED STATES PATENT OFFICE.

JUSTUS A. TRAUT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO STANLEY RULE AND LEVEL COMPANY, OF SAME PLACE.

IMPROVEMENT IN BENCH-PLANES.

Specification forming part of Letters Patent No. **219,186**, dated September 2, 1879; application filed June 9, 1879.

To all whom it may concern:

Be it known that I, JUSTUS A. TRAUT, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Bench-Planes, of which the following is a specification.

In the accompanying drawings, Figure 1 is a central longitudinal section of a bench-plane which embodies my invention. Fig. 2 is a transverse section of the same, taken on a plane parallel with the plane-iron and just under it; and Fig. 3 is a side elevation of a detached part thereof.

The invention is principally designed for a cheap plane with a wooden stock.

The first part of the invention relates to the manner of and devices for securing the cap A, which holds the plane-iron in place. B designates the stock, made of wood, and throated or mortised out for the plane-iron, like ordinary plane-stocks. C designates a frame composed of a slotted plate, *a*, and two arms, *b b*, with rounded ends. This plate extends laterally, so as to span the front of the mortise in the stock, and its arms extend backward by the sides thereof. This frame C is secured to the stock by means of a screw extending through the slot in the plate of said frame.

Notches are formed in the upper side of the cap A, near the edges, as shown in Fig. 1, which receive the ends of the arms *b b*, said arms, when the frame is secured, forming bearings for the cap to swing on, and to hold it against the plane-irons D when the screw *c* is tightened.

A cap swinging on bearings and provided with tightening-screw is not new with me; but the peculiar construction of these bearings enables me to dispense with a long iron frame upon the top of the stock, usually employed in wooden planes having such a cap, and, furthermore, the mortise in different stocks will vary somewhat, so that it is oftentimes desirable to secure the plate farther up or down upon the inclined side of the mortise, to bring the ends of the arms *b b* at the proper distance from the plane-iron. The slot in the plate of the frame enables this adjustment to be made, after which the screw is tightened to secure the frame in place.

The adjusting device which I employ in this style of plane is in the nature of an improvement upon the compound-lever adjustment patented to Henry Richards and myself in Reissue No. 7,565, dated March 20, 1877. A narrow mortise is made in the stock under the plane-iron D, in the middle of its width, and upon the bottom of said mortise I secure the base E of the adjusting device to the stock. This base has two standards or projections, *d e*, in the former of which is the fulcrum for the main lever F, and in the latter is one fulcrum of the angle-lever G. This angle-lever, as its name implies, has two arms, the outer end of one of which arms is pivoted to the standard *e*, and the outer end of the other arm is pivoted to the lever F, between its fulcrum and its free or handle end. This lever G is slotted longitudinally, so that the main lever passes through and works in said slot, the two opposite sides of the angle-lever being connected by a bridge or pad, *f*, as shown. The upper side of this pad is provided with fine transverse serrations, and the under side of the plane-iron is serrated in like manner. The top of the pad is slightly rounded. The position of the adjusting device upon the stock should be such that the serrated pad is nearly under or opposite the end of the tightening-screw *c*. In fact, one of the advantages of this construction of the compound lever is that the connection with the plane-iron may be directly opposite the tightening-screw, so that fine serrations may be employed without any danger of disengagement by the springing of the plane-iron, because the tightening-screw will not allow the iron to spring at that point.

The plane-iron is set in position with its end somewhere near the bottom face of the stock, and then its upper end is allowed to engage the serrated surface of the bridge on the angle-lever. The cap-plate is then placed and secured in position, as shown in Fig. 1. Pressing down upon the outer end of the main lever F will depress the arm of the angle-lever, which is pivoted to said main lever, causing the angle-lever to turn on its fulcrum in the standard *e*, when the bridge will be carried forward, and the plane-iron with it, to project its cutting-edge more or less, as may be desired.

The reverse movement of the lever draws the plane-iron backward.

I am aware that the plane-iron and various adjusting devices having coarse notches or serrations taking into each other at various points not opposite the tightening-screw have heretofore been used, and I hereby disclaim the same.

I claim—

1. In a bench-plane, the frame C, composed of slotted plate *a* and arms *b b*, in combination with an ordinary wooden plane-stock and holding-cap, substantially as described, and for the purpose specified.

2. In a bench-plane, the combination of the holding-cap having tightening-screw at its upper end, the plane-iron with fine serrations upon the under side, and an adjusting mechanism having a finely-serrated pad for engaging those in the iron, and with said pad located opposite the proper position for the tightening-screw, substantially as described, and for the purpose specified.

3. In a bench-plane, the combination of the base-plate E, the main lever F, pivoted thereto, and the angle-lever G, having one of its arms pivoted to said base-plate and the other arm pivoted to the main lever, and also provided with a device for connecting it with the plane-iron, substantially as described, and for the purpose specified.

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Witnesses:
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