L. BAILEY.

BENCH PLANE.

No. 185,280. Patented Dec. 12, 1876.

FIG. 1.

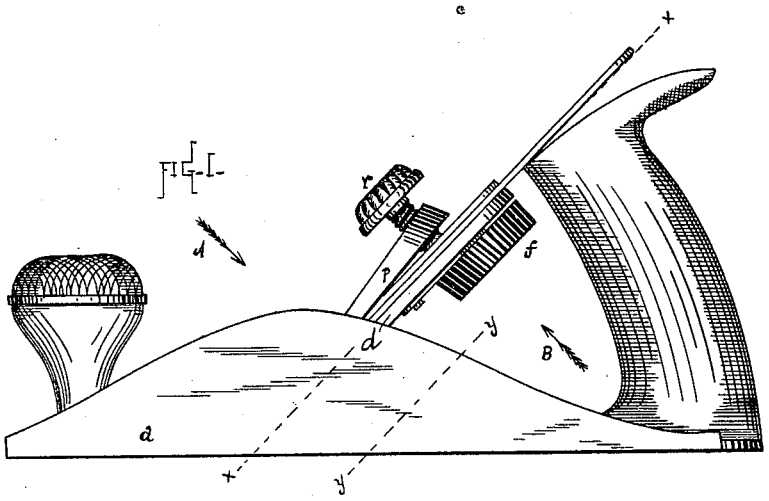


FIG. 2.

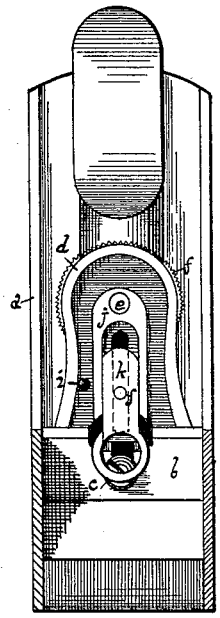


FIG. 4.

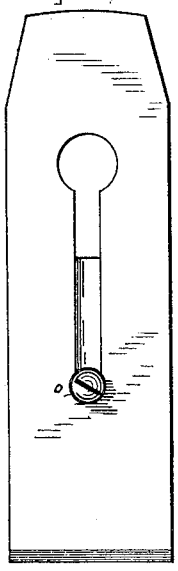
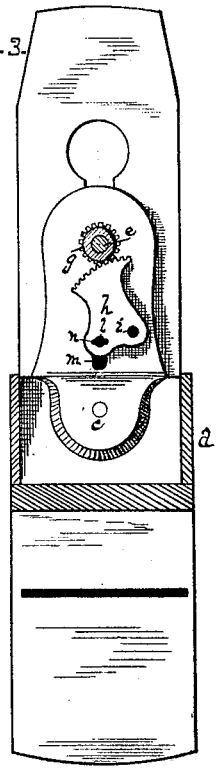


FIG. 3.



WITNESSES:

Robt. F. Gaylord.

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UNITED STATES PATENT OFFICE.

LEONARD BAILEY, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN BENCH-PLANES.

Specification forming part of Letters Patent No. **185,280**, dated December 12, 1876; application filed August 31, 1876.

To all whom it may concern:

Be it known that I, LEONARD BAILEY, of Hartford, in the county of Hartford and State of Connecticut, have invented an Improvement in Bench-Planes, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a side view of a plane bearing my improvements. Fig. 2 is a cross-section on plane *x x*, looking rearward, as denoted by arrow A, with the plane-irons and fastening-cap removed. Fig. 3 is a cross-section on plane *y' y'*, looking forward, as denoted by arrow B, with the operating-disk removed. Fig. 4 is a detail view of the rear side of the plane-irons.

The invention is an apparatus or attachment for moving the iron or chisel up and down within limits—that is, for adjusting the chisel.

The letter *a* denotes the body of an iron plane; *b*, the bed for the chisel, to the back of which, by screw *c*, is fastened the bed-elongation *d*. On shaft-pin *e*, which projects from the back side of elongation *d*, is hung, rotarily, the operating-disk *f*, by which I mean, the disk operated by the user in order to adjust the chisel. On the same shaft-pin, and rigid with the disk *f*, is hung the pinion *g*, meshing into the gear-segment *h*, hung on the pin *i*, projecting from the back of elongation *d*. In groove *i*, made in the front side of elongation *d*, lies and travels the slide *k*, and a pin, *l*, projecting rigidly from its back, runs through the mortise *m* in elongation *d*, and through the slot *n* in gear-segment *h*.

The head of screw *o*, which holds the two chisels together, lies in the round hole at the lower end of slide *k*, so that, when the chisels are in place, they and the slide must move together. By rotating the disk *f* one way or the other, the pinion *g* and gear-segment *h* are correspondingly rotated, and the pin *l*, and with it the slide *k* and irons or chisels, moved up or down correspondingly. When adjusted, the chisels are held to plane in a common manner by means of fastening-cap *p* and screw *v*.

I claim as my invention—

1. In combination, bed-elongation *d*, disk and pinion *f g*, gear-segment *h*, and pin *l*, all substantially as and for the purpose set forth.

2. In combination, disk and pinion *f g*, gear-segment *h*, and slide *k*, all substantially as and for the purpose set forth.

LEONARD BAILEY.

Witnesses:

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