J. SIEGLEY.
Bench-Plane.

No. 216,979. Patented July 1, 1879.

Fig: 1.

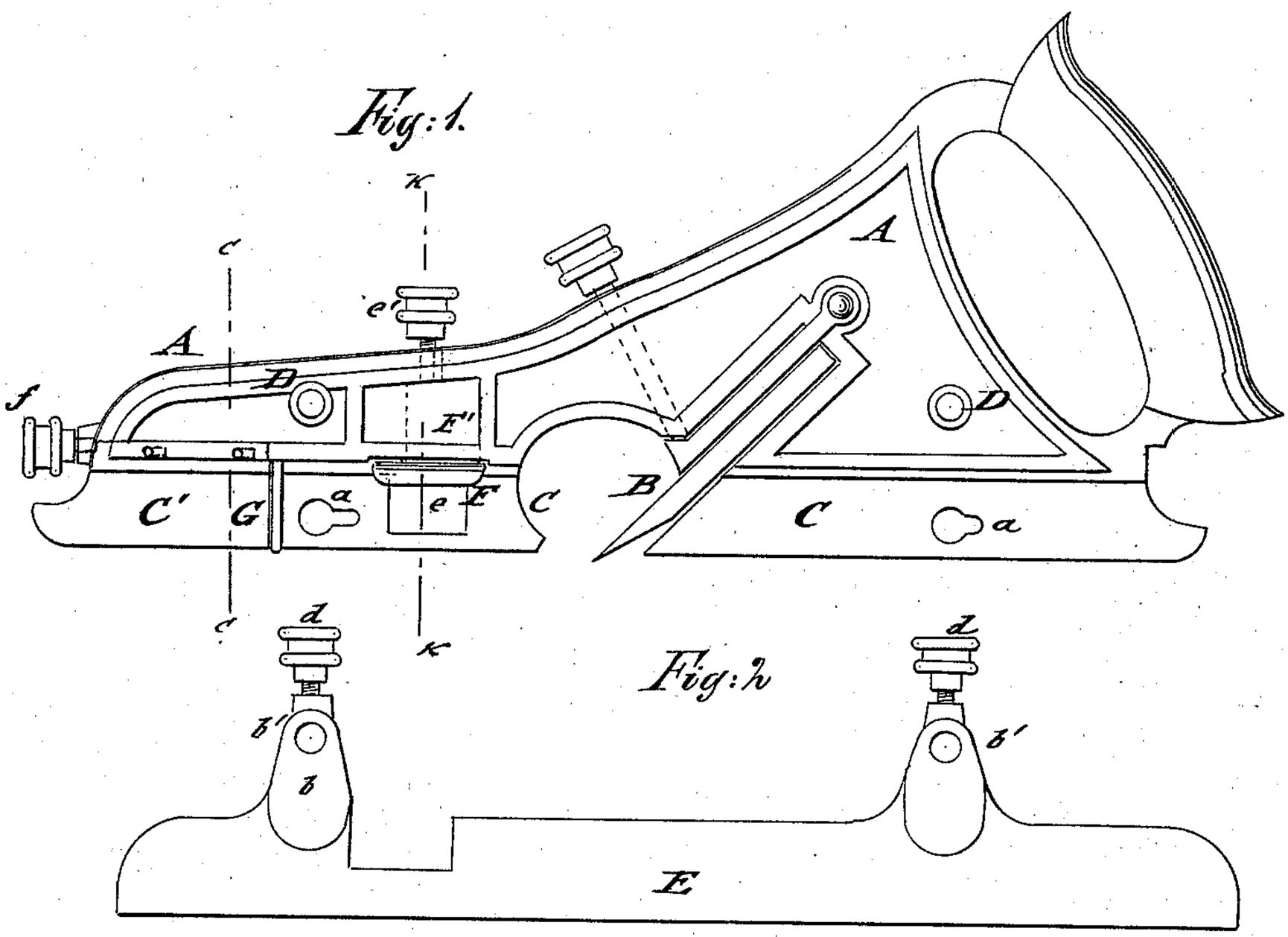

Fig: 2.

Fig: 10

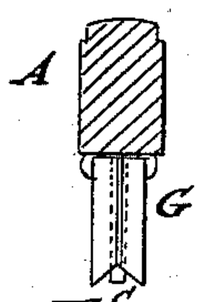

Fig: 11.

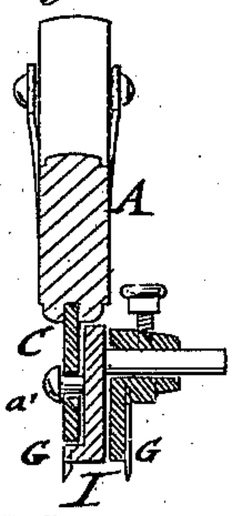

Fig: 3

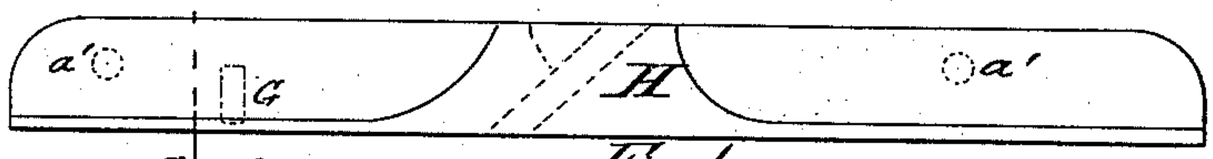

Fig: 4.

Fig: 6.

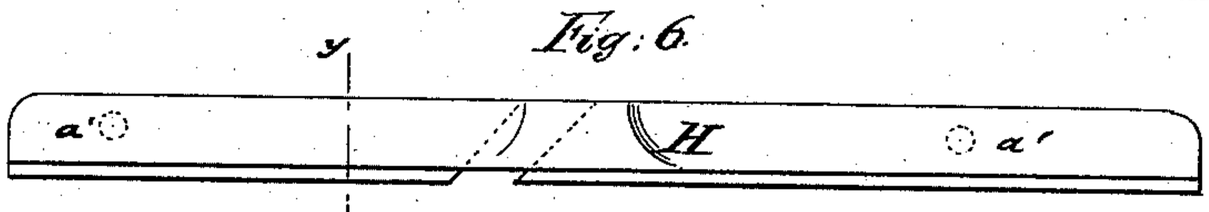

Fig: 12.

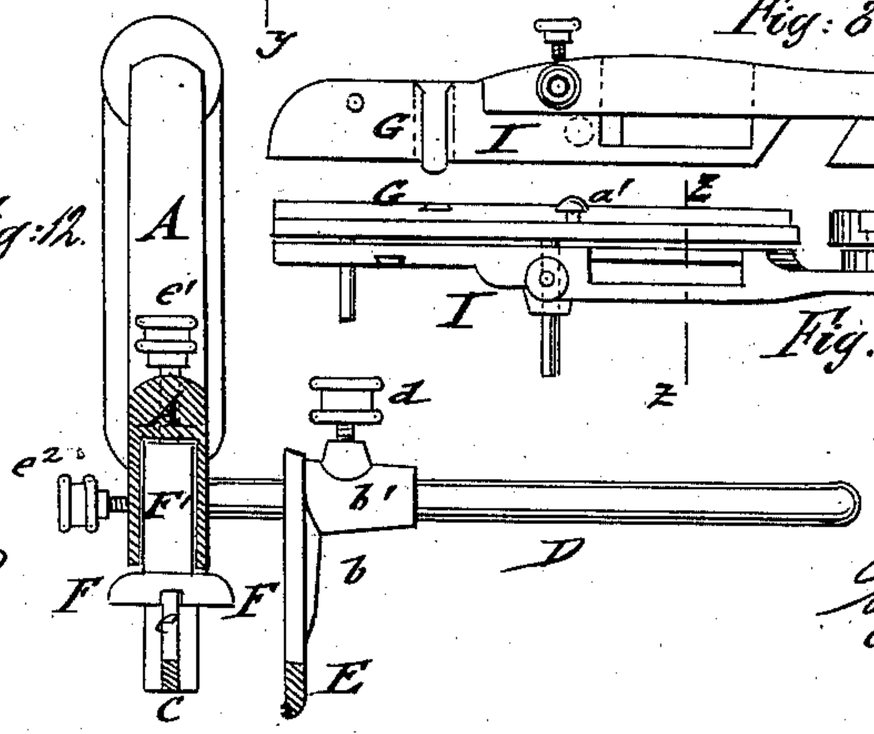

Fig: 5

Fig: 7.

Fig: 8.

Fig: 9

Witnesses:
Carl Kayser.
R. Kayser.

Inventor.
Jacob Siegley
by Paul Goepel.
Attorney.

UNITED STATES PATENT OFFICE.

JACOB SIEGLEY, OF NEW YORK, N. Y.

IMPROVEMENT IN BENCH-PLANES.

Specification forming part of Letters Patent No. **216,979**, dated July 1, 1879; application filed December 6, 1878.

To all whom it may concern:

Be it known that I, JACOB SIEGLEY, of the city, county, and State of New York, have invented certain new and useful Improvements in Combination Bench-Planes, of which the following is a specification, reference being had to the acompanying drawings, in which—

Figure 1 represents a side view of my improved bench-plane arranged as a plow. Fig. 2 is a side view of the gage or fence used therewith. Figs. 3, 4, and 5 are, respectively, a side view, top view, and vertical transverse section on line *x x*, Fig. 3, of the bead-plane to be used in connection with the stock of the bench-plane. Figs. 6 and 7 are a side view and a cross-section on line *y y*, Fig. 6, of a scratch-bead plane. Figs. 8, 9, and 11 are, respectively, a side view, top view, and vertical transverse section on line *z z*, Fig. 9, of the "dado" or rabbeting attachment; and Figs. 10 and 12 are vertical transverse sections on lines *c c* and *k k* of the plane arranged as a plow or grooving-plane.

Similar letters of reference indicate corresponding parts.

This invention refers to such improvements in the bench-plane for carpenters' use that the same may be used with greater facility either as a plow, bead-plane, scratch-bead, or dado or rabbeting plane for the different purposes of grooving, beading, and rabbeting, the parts of the plane and interchangeable attachments being so constructed as to take up much less room in the tool-chest than the common wooden planes in use. The different parts are also quickly adjusted on the main stock, and the work accomplished in a more perfect and accurate manner without any sandpapering or finishing of the edges.

The various attachments to the plane answer to all requirements of the work, and are, by the simpler, stronger, and more compendious shape, more convenient in use and less expensive than the different sizes of wooden planes at present employed.

The invention consists of a main stock having a laterally adjustable and detachable side gage or fence, a vertically-adjustable double stop-gage, and interchangeable advance or lead cutters.

To eye-slots of the blade of the stock are locked the different sizes of bead-planes, scratch-beads, and the dado or rabbeting plane, which are all provided with advance cutters for preventing the tearing of the edges by the cutters.

The dado is laterally adjustable to different sizes, and may, as well as the scratch-beads, be used in connection with the side gage and double-stop gages of the stock.

Referring to the drawings, A represents the stock of my improved bench-plane, which is made of iron or other suitable metal, with the customary handle and inclined bearing-surface for the detachable plow or grooving-iron B. The latter is secured to its bearing-surface by a pivot, lever, and clamp-screw, (shown in Fig. 1,) as commonly used in iron planes. Into the grooved bottom part of the stock is firmly secured the blade C, which extends throughout the whole length of the stock, and is recessed in suitable manner for the plow and other parts.

The blade C is provided with two or more eye-slots, *a*, which serve for admitting the heads of the locking-studs *a'* of the bead-planes, scratch-beads, rabbeting-planes, and other attachments to be used in connection with the plow-stock A.

At one side of the stock extend horizontal guide-posts D, which are permanently secured to the stock, for the laterally-adjustable side gage or fence, E. This gage or fence E is hung by arms *b*, with horizontal sleeves *b'*, to the posts D, and readily adjusted thereon to any distance from the stock, and then secured by set-screws *d*, as shown in Figs. 2 and 12. This side gage serves to guide the plow, bead, or rabbeting plane at the required distance from the edge, in the well-known manner in bench-planes.

The stock A is next arranged in front of the plow, with a double stop-gage, F, whose shank F' is vertically guided in recesses *e* of the stock and blade, and adjusted to any distance from the lower edge of the blade by a screw-nut, e^1, working on the threaded bolt end of the shank F'. The rigid position of the double stop-gage F is secured by a side set-screw, e^2, which prevents the gage from slipping while in use. The stop-gage extends at both sides of the stock-blade, and furnishes

thereby a steadier and more reliable gage than the single stop heretofore in use at one side of the stock. The stop-gage is grooved at the under side, the groove extending centrally through its entire length, so as to enable the adjustment of the stop-gage to a point below the recess of the blade.

By this quickly-adjustable and positively-secured stop-gage the work is accomplished in a more reliable and accurate manner, and, owing to the rigid hold in the body of the stock, any possibility of irregular work prevented.

The blade has a vertical recess in front of the stop-gage F for the advance cutters G, which are shown in Figs. 1 and 10. These advance cutters are secured by means of a clamping-screw, *f*, and the movable front portion, C′, of the blade C, the advance cutters being made of different sizes, corresponding to the different sizes of plows, so that each size of plow works with its corresponding size of advance cutter. The movable blade-section C′ is guided by slots on cross-pins of the stock, and firmly locked to the cutter G by the clamp-screw *f*. The advance cutters do away with the work of running a gage over the board, and prevent the plows from tearing the edges in cross-grain timber. This is an important time and labor saving attachment, as it produces smoother edges and dispenses with the sandpapering or otherwise finishing of the same.

By means of the eye-slots of the blade a series of interchangeable bead-planes and scratch-beads, H, and a dado or rabbeting plane, I, may be used in connection with the plow-stock A. The bead-planes and scratch-beads H are shown in Figs. 3 to 7, a full set going with each stock. These are, like the dado, made of suitable metal, so as to take up less room, and are also more durable than the wooden bead-planes, which take up a great deal of room in the tool-chest and wear out rapidly. The bead-planes and dado are, in the same manner as the plow, provided with advance cutters G, that serve for the same purpose as the advance cutters of the plow.

The dado or rabbet plane is made adjustable to from three-eighths of an inch to one and one-quarter inch in width, one section being locked to the blade C, while the other section is adjustable on rigid posts of the fixed section by means of sleeves and set-screws, like the side gage, E, as shown in Figs. 8 and 9, for cutters of varying sizes. Both sections have advance cutters G, as shown in Fig. 11, so as to lead the way for the main cutters. There may also be used, in connection with the stock, a set of hollows and rounds, as well as a set of smaller molding-planes, which feature is of special advantage for carpenters in smaller cities, away from the planing-mills.

The bench-plane, with its different attachments, is very handy and useful for all workers in wood, as it is less expensive, more durable, more compact, and better adapted in every respect to the different requirements of that trade.

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

1. The combination, in a bench-plane, of the stock A and blade C, having a movable front section, C′, with interchangeable advance cutters G, and with a locking clamp-screw, *f*, substantially as set forth.

2. The combination, with a plane-stock, A, and blade C, of a dado or rabbeting plane, I, which is locked, by a fixed plate having a longitudinal bottom shoulder, to the blade, and provided with a movable section or stock that is capable of adjustment on posts of the fixed plate, so as to receive different sizes of rabbeting-cutters, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 4th day of December, 1878.

JACOB SIEGLEY.

Witnesses:
PAUL GOEPEL,
ADOLF DENGLER.