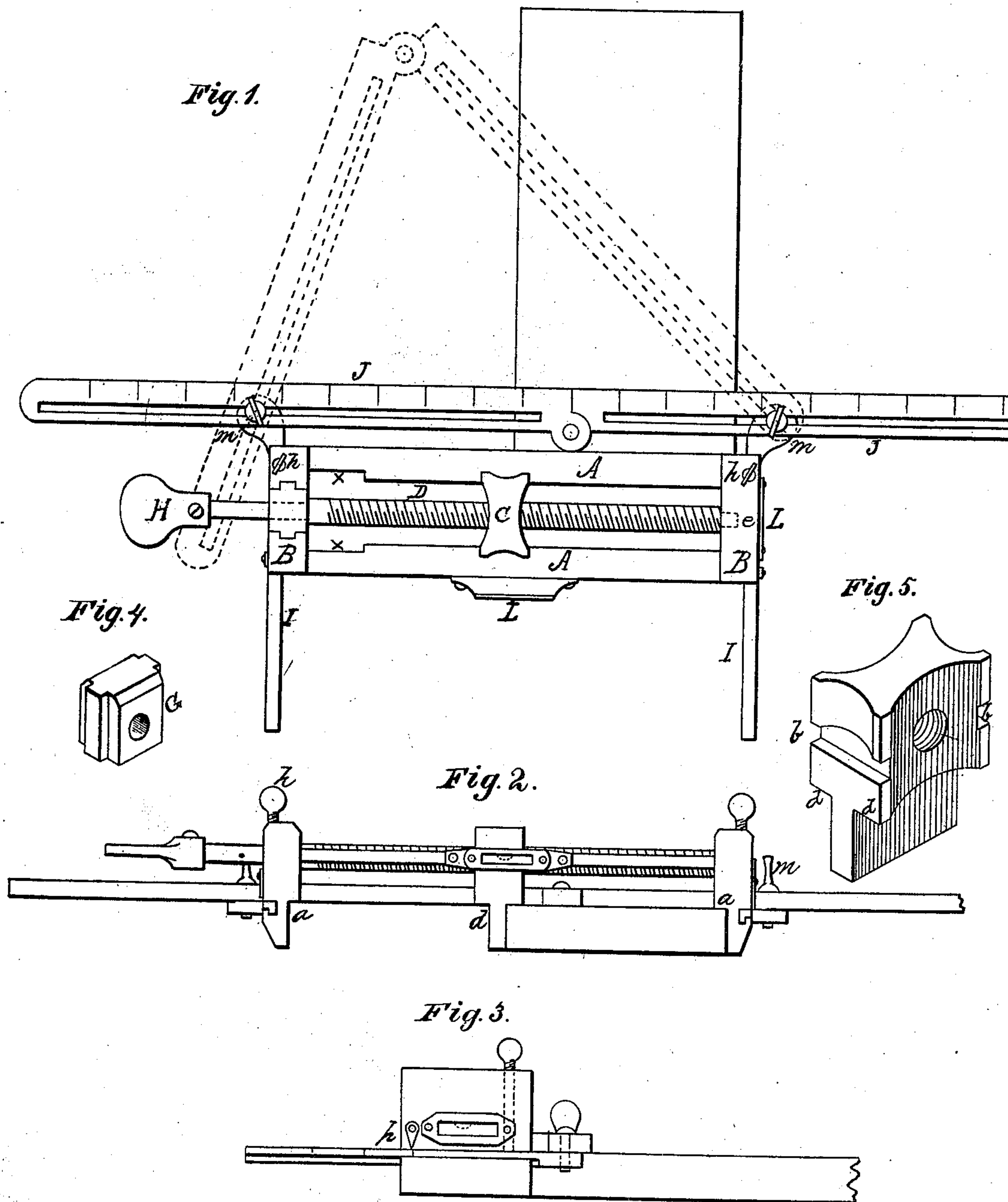


S. W. LLOYD.
COMBINED BEVEL, SQUARE AND LEVEL.

No. 176,870.

Patented May 2, 1876.



Witnesses:
Geo. A. Bigelow.
James H. Marr Jr.

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UNITED STATES PATENT OFFICE.

SAMUEL W. LLOYD, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN COMBINED BEVELS, SQUARES, AND LEVELS.

Specification forming part of Letters Patent No. **176,870**, dated May 2, 1876; application filed April 4, 1876.

To all whom it may concern:

Be it known that I, SAMUEL W. LLOYD, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Combined Tool; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a combination instrument for the use of carpenters and others, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a plan view of my invention. Fig. 2 is a side view, and Fig. 3 an end view, of the same. Figs. 4 and 5 are perspective views of detached parts thereof.

A A represent two parallel bars, which are mortised and securely fastened into heads or end pieces B B, thus forming the rectangular frame of my combination instrument. The lower ends of the heads B are formed on their inner sides with a horizontal shoulder or offset, *a*, and their outer sides with an L-shaped or other suitably-shaped groove. C represents a division-block, formed with grooves *b b* in its sides, to slide over the inner edges of the parallel bars A A, and the lower end of said block is formed with a shoulder or offset, *d*, on each side. Through this block is a hole with female screw-threads for the passage of the screw D, one end of which is formed with a tenon, *e*, to be inserted in a corresponding hole in one of the end pieces or heads B, while a shouldered shank at the other end passes through a box or bearing, G, and said box inserted in the opposite head, and held therein by tongues and grooves, as shown. On the end of this shank is a removable handle, H. The division block or nut C is inserted between the bars A A at one end of the frame, where said bars are cut out, as shown at *x x*, for that purpose. In the grooves on the outer sides of the heads A A are inserted correspondingly-shaped slides I I, which are held

at any point desired by means of set-screws *h h*. The front ends of these slides are enlarged and curved slightly outward, and upon the same is placed a rule made in two parts, J J, hinged together in the center. The two parts of the rule are slotted longitudinally, and held to the ends of the slides I I by set-screws *m m*, passing through said slots into the slides. In the center of one of the side bars A, and in one of the heads B, are inserted spirit-levels L L, which completes the combination instrument.

This instrument may be used for a variety of purposes, and it is fastened upon a board, between the division-block C and either one of the heads B, by means of the screw D, which screws up said division-block to clamp it on the board, the shoulders *d* and *a* resting on said board, as shown in Fig. 2. The jointed rule J J is then adjusted, as indicated by dotted lines in Fig. 1, to lay off a beveled or miter joint at any angle desired from one side, and to lay off from the other side the instrument is changed to bring the board on the other side of the division-block C, and adjusting the rule in the opposite direction, according to the graduations thereon.

The instrument can, of course, be used as a rule by fastening the two parts J J extended on a line, as shown, and, by means of the spirit-levels L L, it can be used as a plumb and level. When it is desired to use it as a square, the rule is moved to one side, and one part J is turned alongside one of the heads B, and fastened by its set-screw *m*, while the other part J is fastened by its set-screw, and the slide I on that side is moved out to bring the outer edges of the two parts J J at right angles with each other, when the two slides are fastened by their set-screws *h h*. These slides I are also graduated, and stationary indexes or pointers *p* are attached to the sides of the heads B. When, for any purpose, it is necessary to remove the division-block C and screw D, said screw is turned so as to move the block to the points *x* on the bars A, when the screw, block, and box G can easily be lifted out.

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

1. The parallel side bars A A, grooved and shouldered heads B B, grooved and shouldered division-block C, tenoned screw D, and box G, all constructed and combined substantially as and for the purposes herein set forth.

2. The jointed rule J J, having its parts slotted longitudinally, and adjusted by set-screws *m* on the slides I I, as and for the purposes herein set forth.

3. The combination of the frame A B, division-block C, screw D, slides I I, jointed rule

J J, and levels L L, all constructed and arranged substantially as and for the purposes herein set forth.

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

SAMUEL W. LLOYD.

Witnesses:

GEO. S. BIGELOW,

JAMES H. MARR, Jr.