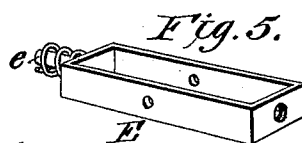
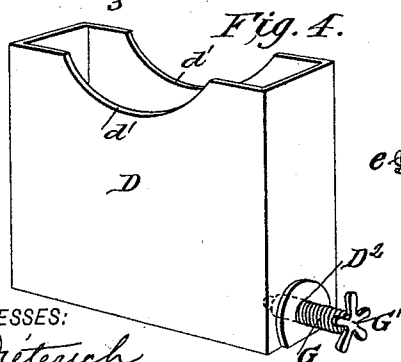
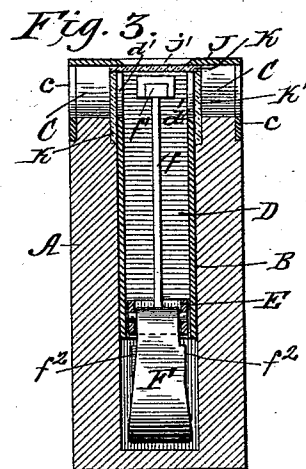
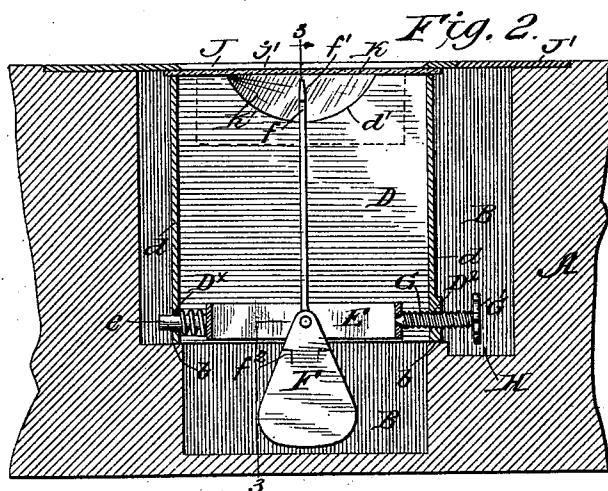
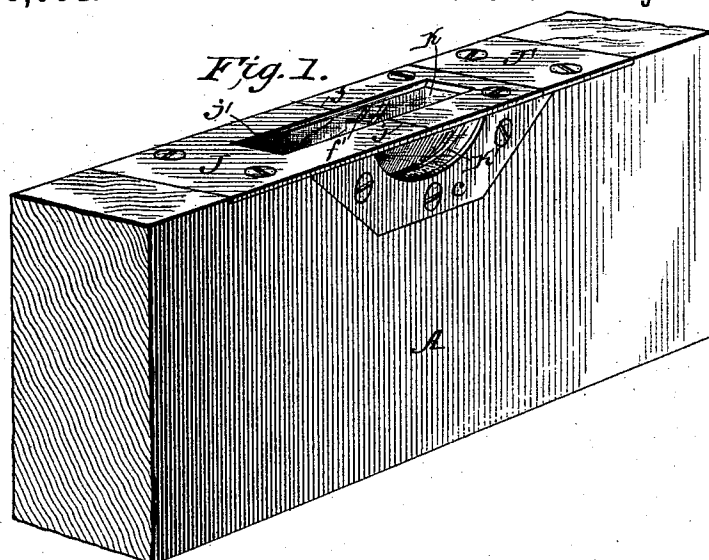


(No Model.)

L. J. ROGERS.
PLUMB LEVEL.

No. 498,084.

Patented May 23, 1893.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LEE J. ROGERS, OF POMONA, CALIFORNIA.

PLUMB-LEVEL.

SPECIFICATION forming part of Letters Patent No. 498,084, dated May 23, 1893.

Application filed December 6, 1892. Serial No. 454,288. (No model.)

To all whom it may concern:

Be it known that I, LEE J. ROGERS, residing at Pomona, in the county of Los Angeles and State of California, have invented a new and useful Improved Combined Plumb and Level, of which the following is a specification.

My invention relates to a combined plumb and level and it consists in the peculiar and novel arrangement and combination of parts hereinafter fully described in the specification and particularly pointed out in the claims reference being had to the accompanying drawings in which—

Figure 1 is a perspective view of my improvement. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section of the same taken on the line 3—3 Fig. 2. Fig. 4 is a perspective view of the casing and Fig. 5 is a similar view of the adjustable bearing block hereinafter referred to.

Referring to the accompanying drawings the stock casing A (which may be formed of wood or metal) has a mortise or socket portion B, at the edges of the upper end of which are formed side openings C, which have metal guard plates *c* as shown.

Within the socket B is held a metal casing D open at its top and bottom; the end portions *d* of its lower edge resting on offsets *bb* in the bottom of the socket, curved recesses *d'* being also formed in the upper end of such casing D which register with the side openings C in the main casing A.

E indicates a bail portion fitted in the lower end of the casing D, for longitudinal movement, and in such bail is pivoted the plumb bob which is in the nature of a weighted pendulum F, the needle or pointer end *f* of which extends up to a point flush with the top of the casing D, it being formed with a head or indicator portion *f'*. The weight F which extends below the casing D and bail E has side lugs *f² f²* which act as stops to limit the swinging movement of the pointer *f* and prevents its striking the ends of the casing D.

The bail E the construction of which is most clearly shown in Fig. 4 has a projecting stud *e* at one end which fits an aperture D* in one end of the casing, its opposite end being supported by an adjusting screw G, which passes

through a threaded aperture D² in the opposite casing wall, such screw having a conical bearing connection at one end with the bail E, while its opposite end has a toothed wheel G'.

It will be noticed by reference to Fig. 2 that the socket B in the frame A, is of a greater length than the pendulum casing D, whereby a chamber H is formed into which the toothed wheel G' extends.

J indicates a cover plate which has the usual sight or gage mark *j*, and opening *j'*, such plate extending over the main or body portion of the socket B, and J' indicates a smaller plate which covers the chamber H, and K K' indicate the glass or other transparent material which covers the side and top openings as shown.

From the foregoing description taken in connection with the drawings it is thought the operation of my improved device will be readily understood. It will be noticed that by pivoting the pendulum or bob in the manner stated, the bearing of such pendulum can be quickly adjusted so that the index point of such pendulum will register true with the gage line on the upper plate, by simply turning the screw bearing or support G. This can be easily done at any time by simply removing the small plate J', and employing any suitable implement to turn the toothed wheel G', a tension spring being disposed about the member *e* to hold the bail E to any of its adjusted positions.

If desired the guard plates may be provided with suitably arranged indicator marks. By hanging the pendulum in the manner stated, it will always hang true to the center, and will not run off, like a "blubber" does.

By the use of this device it can be readily told how low or high the operator is, without waiting for a blubber to come into sight. The indicator will always work to the mark, and will not get out of order, and when once properly adjusted will stay true.

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

1. In a plumb and level the combination with the main stock casing having a socket B, a casing removably fitted in such socket, said

socket having side openings in the upper end of the stock, the gage plate J, and the smaller detachable plate J', of the casing D, the bail E held for longitudinal adjustment in the casing D the weighted plumb bob pivoted on such bail E and the adjusting screw G having a toothed wheel G' fitted in the socket b under the small plate J' all substantially as and for the purposes described.

- 10 2. In a plumb and level, the combination with the stock A having a socket B and the gage plate J and cap plate J' of the casing D, held in the socket B, the bail E having a stud

e fitted to slide in one end of the casing D, a screw G fitted in the opposite end of the casing and adapted to support the free end of the bail, the tension spring on the stud e the notched wheel G' on the screw, the pendulum F pivoted on such bail and having stops f' to engage the under face thereof, all substantially as and for the purposes described. 15 20

LEE J. ROGERS.

Witnesses:

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M. G. ROGERS.