

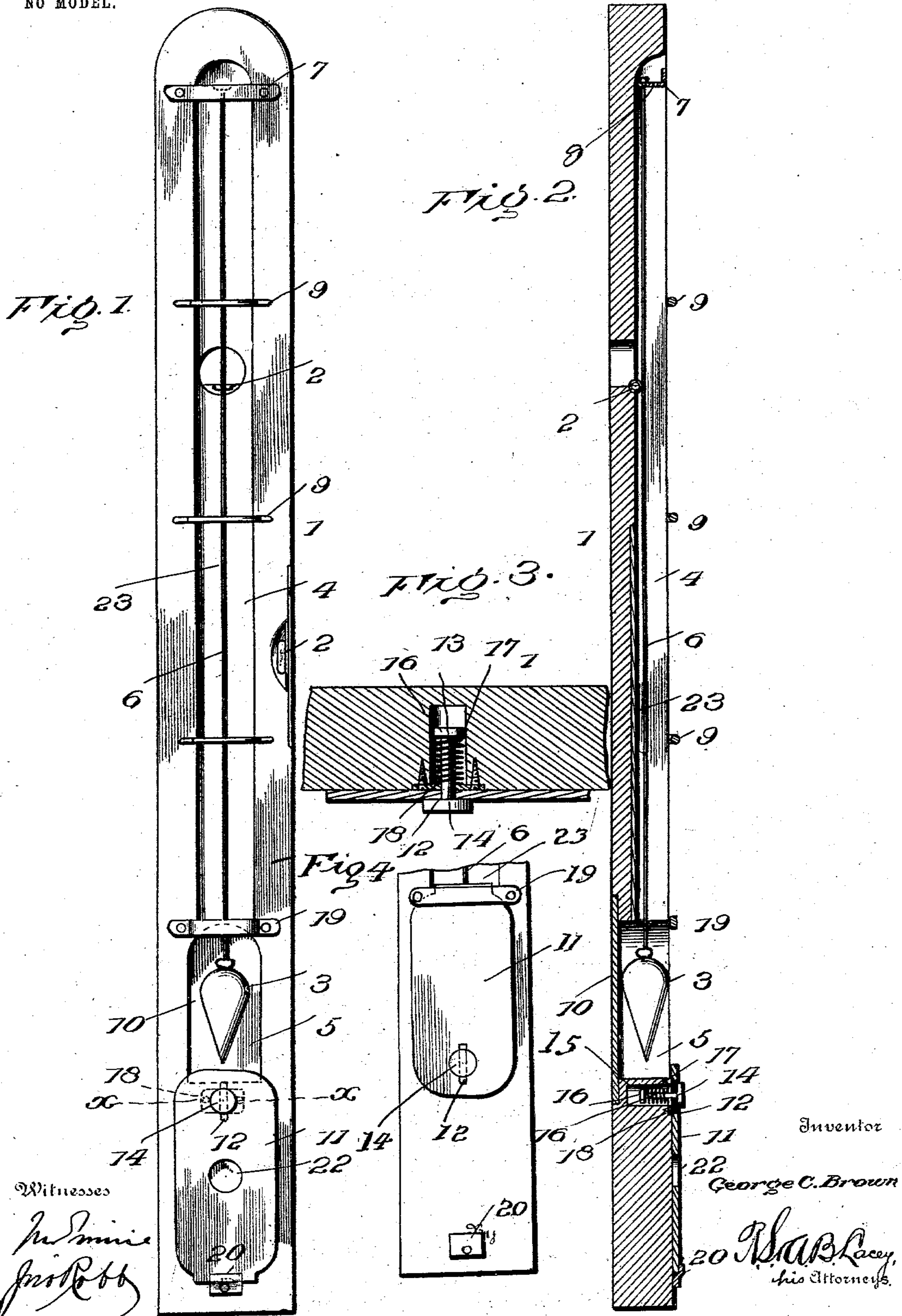
No. 753,354.

PATENTED MAR. 1, 1904.

G. C. BROWN.
PLUMB AND LEVEL.

APPLICATION FILED MAY 1, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

GEORGE C. BROWN, OF FORT GAINES, GEORGIA.

PLUMB AND LEVEL.

SPECIFICATION forming part of Letters Patent No. 753,354, dated March 1, 1904.

Application filed May 1, 1903. Serial No. 155,166. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. BROWN, a citizen of the United States, residing at Fort Gaines, in the county of Clay and State of Georgia, have invented certain new and useful Improvements in Plumbs and Levels, of which the following is a specification.

Heretofore measuring instruments of the type embodying the combination of a spirit-level and plumb-bob have been used, if used at all, under disadvantage owing to the fact that the bob not being secured invariably interferes with the working of the spirit-level, being in the way and otherwise an impediment.

It is the object of this invention to provide an instrument overcoming the objections above noted and of such a structure that the plumb-bob may be disposed so as to entirely obviate the difficulties in manipulation heretofore enumerated.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the device, showing the pivoted plate uncovering the opening. Fig. 2 is a longitudinal sectional view of the improved plumb-level. Fig. 3 is a transverse sectional view on the line X X of Fig. 1. Fig. 4 is a view, parts broken away, showing the lock-plate closing the transverse opening in the stock and locking the plumb-bob thereto from movement thereon.

Corresponding and like parts are referred to in the following description and indicated in all views of the drawings by the same reference characters.

The instrument consists of the usual form of stock or frame 1 and is provided with the ordinary forms of spirit-levels 2, which levels are designed to assist in ascertaining the perpendicular and parallel. The spirit-levels 2 are arranged one intermediate the end portions

of the stock or frame 1 and upon the edge thereof, the other likewise intermediate the end portions of the stock, but disposed upon the face thereof to cooperate after a manner with the plumb-bob 3 in securing the desired perpendicular. Upon the front face of the stock 1 is disposed a longitudinal recess 4, which extends from the upper end portion of the stock adjacent the lower portion thereof, finally merging into an opening 5, disposed transversely of the stock. The recess 4 receives the bob-line 6, which is suspended from the hanger-piece 7, removably secured to the stock at approximately the upper extremity of the recess 4. The hanger-piece consists of a metallic plate provided with a perforated lug 8, from which the line is suspended. The bob 3 is located within the opening 5, which latter is of a size sufficient to permit the necessary amount of movement thereof to accurately attain the result desired. A plurality of cross-bars 9 are secured in any suitable manner at intervals upon the face of the stock, being extended across the recess 4, so as to limit the movement in an outward direction of the bob-line 6. The opening 5 is closed upon the rear face of the stock 1 by a plate 10, which is flush with the body of the stock.

As premised hereinbefore, it is essentially important that some means be provided for locking the bob from movement when the spirit-levels alone are being utilized. For this purpose a movable plate 11 is employed to close the opening 5 upon the front face of the stock when the plumb is not being used. The plate 11 is provided at its lower portion with a slot 12, which receives the stem 13 of a spring-retracted head 14. The stem 13 is disposed within the transverse recess upon the stock 1, being provided at its inner end with an enlargement 16 and having a coil-spring 17 disposed around the body thereof. The coil-spring 17 is interposed between the enlargement 16 and the plate 18, which closes the recess 15, being perforated to receive the stem 13. The spring 17 normally holds the head 14 in contact with the movable plate 11, the tension thereof being sufficient to firmly hold the said plate in position. A keeper 19 is located approximate the point of merger of the recess 4 into the

opening 5, and this keeper is adapted to receive the upper end portion of the movable plate 11 therebeneath when the said plate is in a position closing the opening 5. When it is desired to use the plumb-bob 3, the movable plate 11 is given a longitudinal movement toward the base of the stock 1, said movement being permitted by the slot 12, and is then given a pivotal movement and reversed, with the upper end thereof toward the base of the stock and in engagement with a second keeper 20, which is suitably secured to the lower end portion of the said stock. In order to dispose the engaging end 21 of the plate 11 beneath the second keeper 20, the said plate should be given a longitudinal movement similar to that by which it was disengaged from the keeper 19 in a manner which will be readily apparent. In order to manipulate the plate 11, the same is provided with an opening 22, within which the finger of the operator may be placed, so as to either close or open the opening 5 when it is desired either not to use or to use the plumb-bob, as the case may be. To ascertain when the stock 1 has been arranged at the perpendicular, a marker-strip 23 is disposed within the recess 4 in parallel relation with the sides of the stock. This marker-strip 23 extends some distance intermediate the end portions of the stock and coöperates to indicate when the bob-line 6 is perpendicular. The movable plate 11 when closing the opening 5 bears against the bob 3 in such a manner that the same is held from movement of any sort within the opening and at the same time of course prevents the said bob from interfering with the proper use of the spirit-levels.

The plate 11 not only constitutes means for locking the bob in position, but, further, in closing the transverse opening 5 from the front of the stock prevents any foreign matter from getting into the said opening, which might by clogging the same or otherwise prevent the proper working of the plumb-bob 3 and cause consequent inaccuracy of the level. This is quite advantageous in that when the device is not being used there is no small likelihood of ingress of dirt or the like within the opening.

Having thus described the invention, what is claimed as new is—

1. In a device of the character described, the combination with a stock or frame, a plumb-

bob suspended thereon, and a lock-plate disposed upon the stock adjacent the plumb-bob and adapted to clamp the said bob against the stock or frame when the same is not in use. 55

2. In a device of the character described, the combination with a stock or frame, of a plumb-bob suspended thereon, a lock-plate pivoted to the stock or frame adjacent the bob and adapted to abut against the bob to clamp the same against the body of the stock or frame to prevent movement thereof. 60

3. In a device of the character described, a stock or frame having a transverse opening therein, a plumb-bob suspended upon the frame and disposed within the aforesaid opening, means for closing the opening upon the rear face of the frame, and a pivoted plate adapted to close the opening upon the front face of the frame or stock to lock the bob from movement thereon. 65 70

4. In a device of the character described, a stock or frame provided with a transverse opening therein, a bob suspended within the aforesaid opening, a plate for closing the opening upon the rear face of the stock and a co-operating plate pivoted to the stock or frame upon the front side thereof and adapted to close the opening aforesaid and to lock the bob from movement when same is not in use and to permit movement of the bob when manipulated so as to uncover the opening. 75 80

5. In a device of the class described, the combination of a stock provided with a longitudinal recess to receive the bob-line and having an opening at the lower portion thereof communicating with the said recess, a plumb-bob disposed within the opening, a plate closing the opening upon the rear face of the stock or frame and a second plate pivoted to the front face of the stock, said plate being provided with engaging means at the end opposite the point of pivot thereof, keepers disposed upon opposite sides of the opening and adapted to coöperate with the engaging ends of the pivoted plate when same is manipulated so as to uncover or close the opening. 85 90 95

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE C. BROWN. [L. S.]

Witnesses:

R. O. GISSENBAUER,
W. R. TENNILLE.