J. L. GREENE.

COMBINED LEVEL AND PLUMB.

APPLICATION FILED OCT. 10, 1908.

928,600. Patented July 20, 1909.

Fig 1.

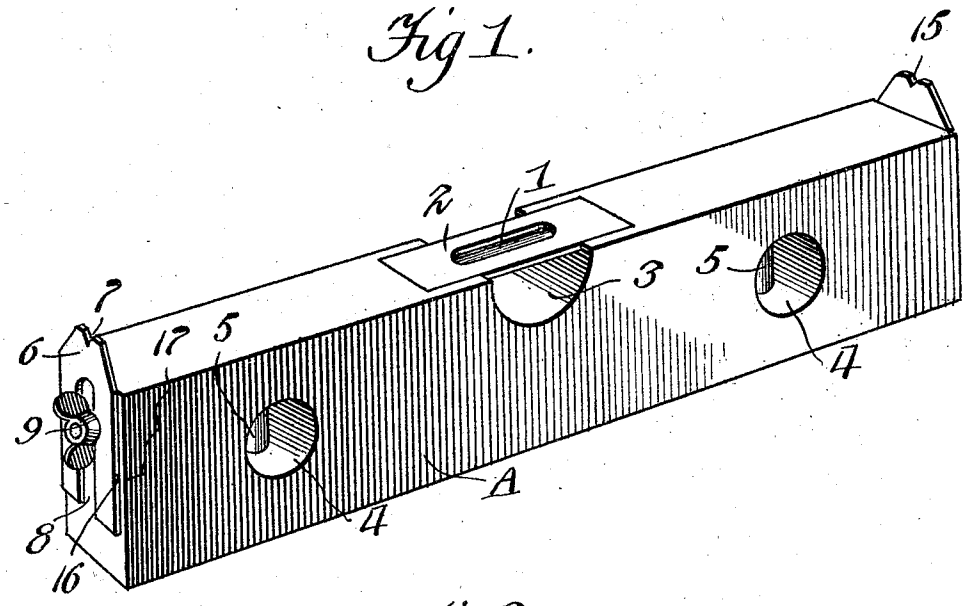
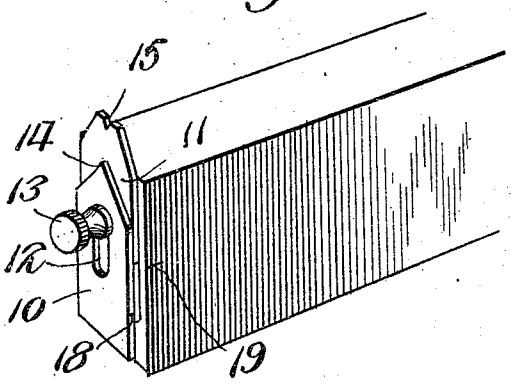



Fig 2.




Witnesses

Hugh H. Ott

6 Broadway

Inventor

James L. Greene

By Victor J. Evans

Attorney

ANDREW, B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

JAMES L. GREENE, OF BURNSVILLE, WEST VIRGINIA.

## COMBINED LEVEL AND PLUMB.

No. 928,600. Specification of Letters Patent. Patented July 20, 1909.

Application filed October 10, 1908. Serial No. 457,142.

*To all whom it may concern:*

Be it known that I, JAMES L. GREENE, a citizen of the United States, residing at Burnsville, in the county of Braxton and State of West Virginia, have invented new and useful Improvements in Combined Levels and Plumbs, of which the following is a specification.

This invention relates to a combined plumb and level of that type provided with right-angularly disposed vials each containing an air bubble whereby the horizontal and perpendicular lines of objects can be readily ascertained.

The invention has for one of its objects to improve and simplify the construction of such devices so as to be accurate, convenient and reliable in use.

Another object of the invention is the provision of a sighting attachment attached to the ends of the stock of the device whereby the same level can be obtained at distant points without the need of marking lines.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claim appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention, Figure 1 is a perspective view of the combined level and plumb device with the sighting attachment applied thereto. Fig. 2 is a perspective view of one end of the stock of the device showing separate sight members thereon.

Similar reference characters are employed to designate corresponding parts throughout the views.

Referring to the drawing, A designates the stock of the instrument which may be made of wood or metal and of any approved design. In the top surface of the stock at the center thereof is a level vial 1 of the bubble type that is exposed through a slotted plate 2 and the stock is provided with a notch 3 whereby the vial 1 can be observed from either side of the stock. Adjacent the ends of the stock are transverse apertures 4 through which extend diametrical vials 5 to be used in obtaining a plumb or perpendicular line. In obtaining horizontal lines, the stock is placed upon the beam or other object to be leveled, and the same is trued by the position of the bubble in the vial 1. In obtaining plumb lines, the stock is placed vertically against the upright or other object to be trued with either end of the stock uppermost, and the true position of the upright is obtained by means of the bubble in either of the vials 5.

In order that the device may be used for sighting purposes whereby the same level at remotely separated points can be determined, sighting members are attached to the ends of the stock. The sighting member 6 at the front end of the stock consists of a flat plate bearing against the end face of the stock and having in its top an open sight or notch 7, and the plate is provided with a longitudinal slot 8 through which passes a fastening or clamping screw 9 for clamping the plate to the stock. On the opposite end of the stock may be provided separate sighting members 10 and 11 that are provided with slots 12 through which extends a clamping screw or fastening 13 for securing the plates frictionally against the end face of the stock and against each other. The plate 10 is formed with a sighting point 14 at its upper end, while the plate 11 has a sighting notch 15 and one plate or the other may be used to suit the fancy of the user. The plates are of such length that when the sighting attachment is not used, they can be lowered so that the upper ends will be below the top surface of the stock A so as not to be in the way or catch objects in handling of the instrument and also prevent the plates from being bent by the dropping of the instrument. When the sighting attachment is to be used, the fastenings are unclamped and the front sight member raised until its index line 16 is opposite the index line 17 on the side of the stock A. After being thus positioned, the clamping screw 9 is again fastened so as to rigidly hold the sighting member in place. Either of the sight members 10 or 11 is similarly adjusted so that its upper end will project above the top surface of the stock A, and when the index line 18 thereof is opposite the index line 19 of the stock, the clamping screw 13 is fastened.

In using the instrument for sighting, it is placed so that the line of vision passing through the peep notches 7 and 15 will strike the object to be marked and the point

where the line of vision intersects the object will be the level desired.

The fastenings 13 serve as pivots on which the plates can be reversed so as to throw the sights to the top or bottom of the stock so that sighting can be done along the bottom of the stock as well as along the top.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the appended claim.

Having thus described the invention, what I claim is:—

In an instrument of the character described, the combination of a stock provided with longitudinally and transversely arranged leveling and plumbing devices, a sight member at one end of the stock, and sight plates at the opposite end of the stock, the one provided with a notch in its end and the other terminating in a point, either plate adapted to be projected into operative position and the several plates having longitudinal slots, and set screws for securing the sight plates to the stock in an adjustable position.

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

JAMES L. GREENE.

Witnesses:
L. L. McKinney,
M. P. Griffin.