

(Model.)

H. WELLS.

FARMER'S AND DRAINER'S COMBINED LEVEL AND PLANE TABLE.

No. 302,609.

Patented July 29, 1884.

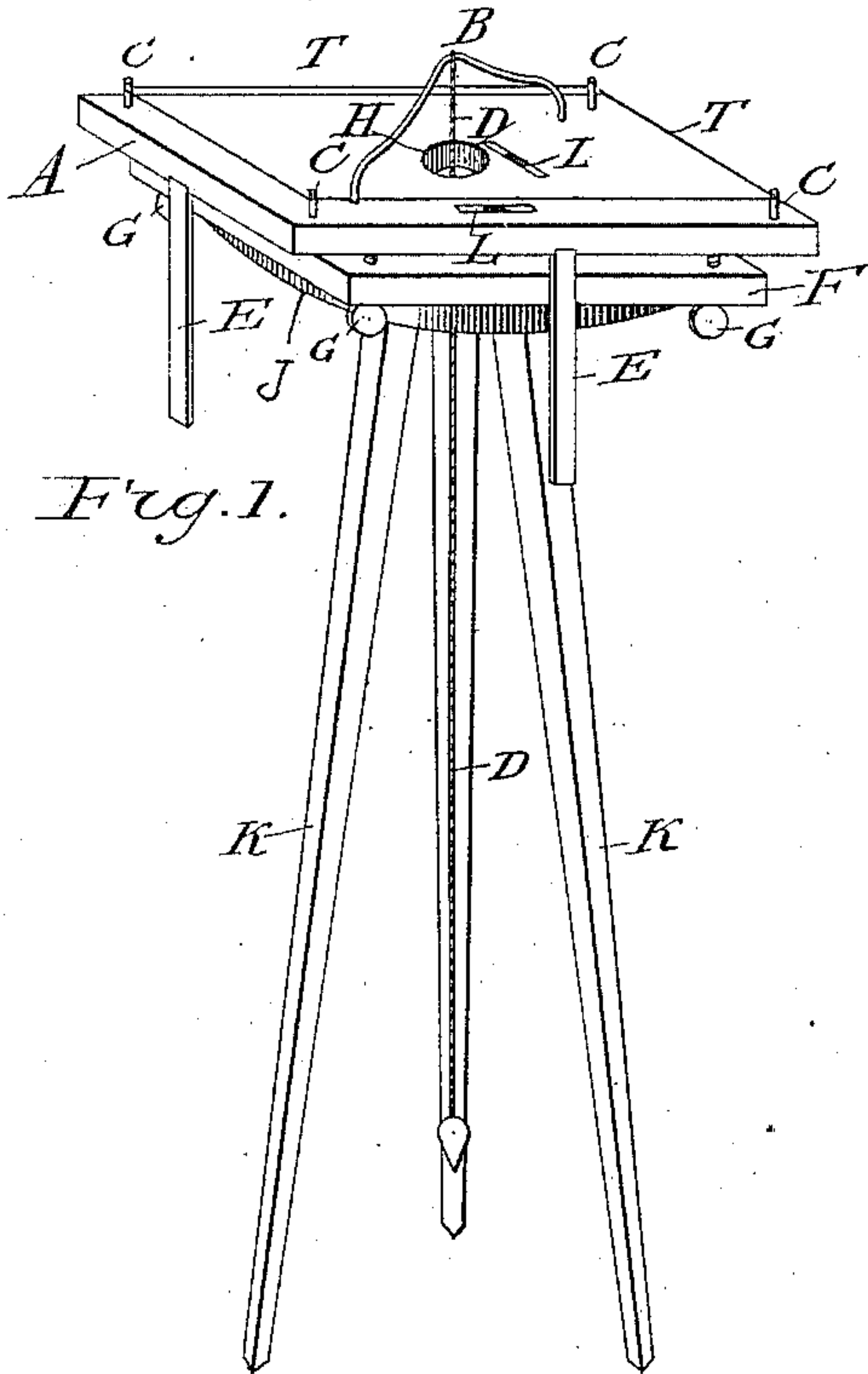


Fig. 1.

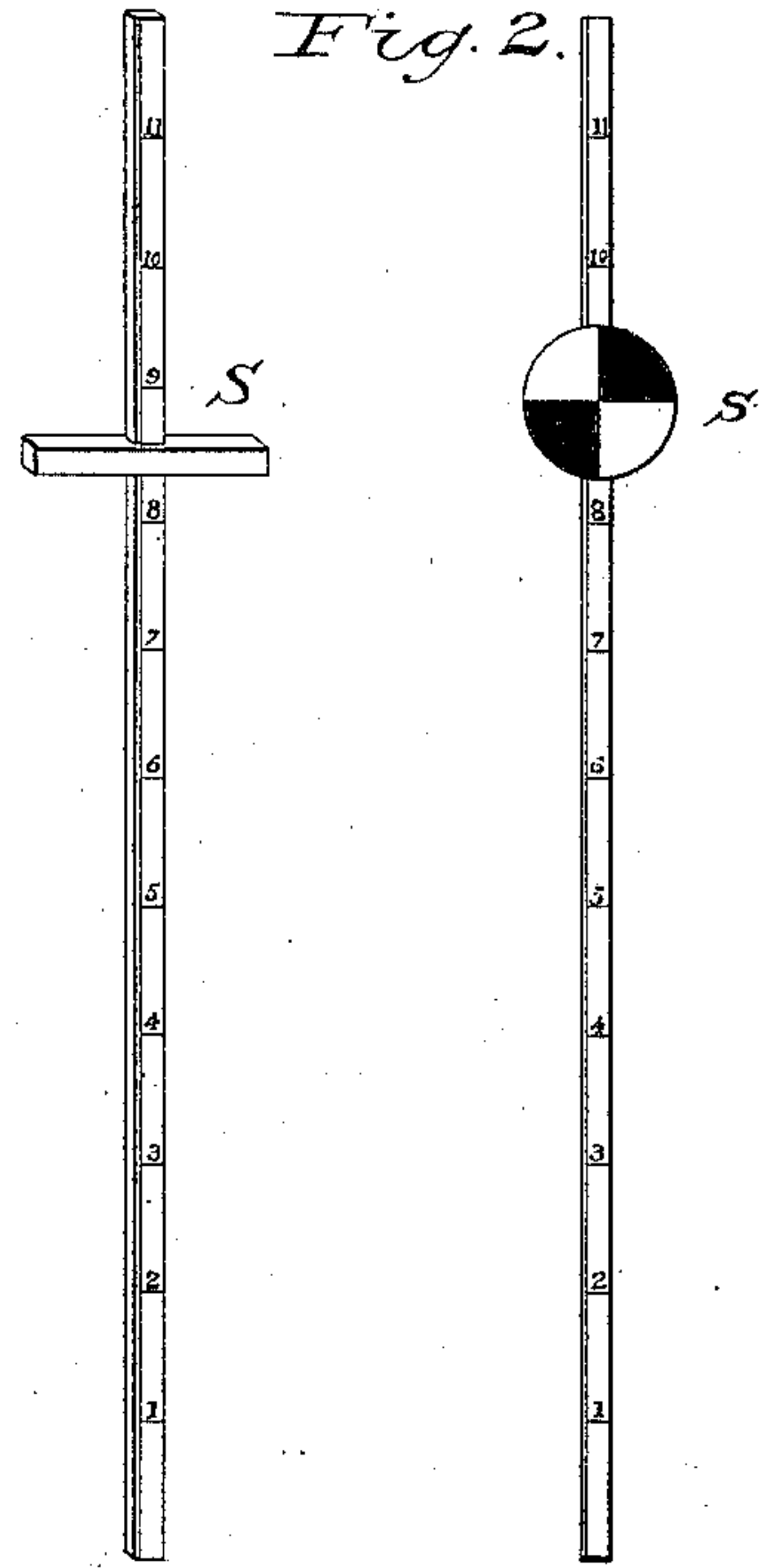


Fig. 2.

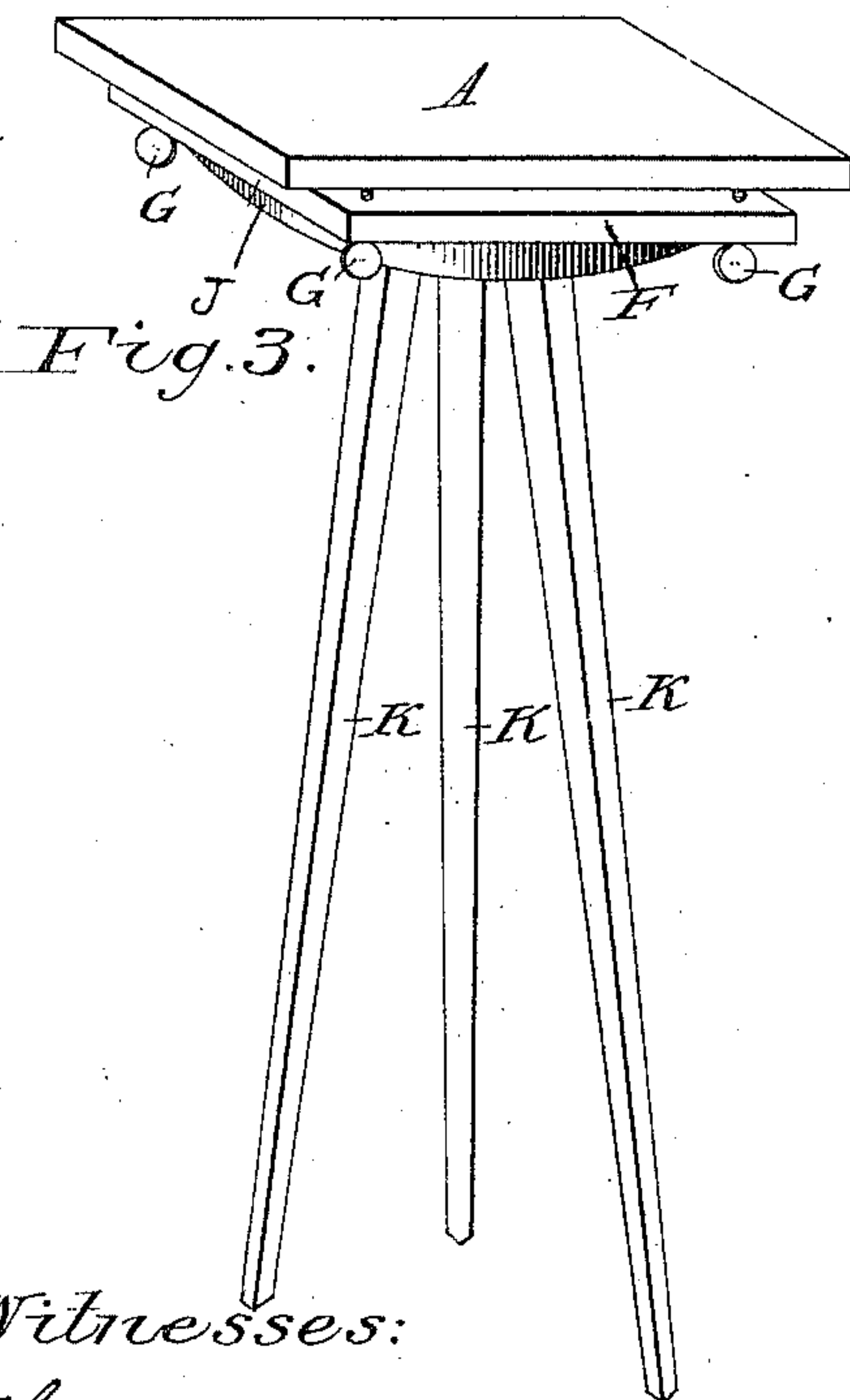


Fig. 3.

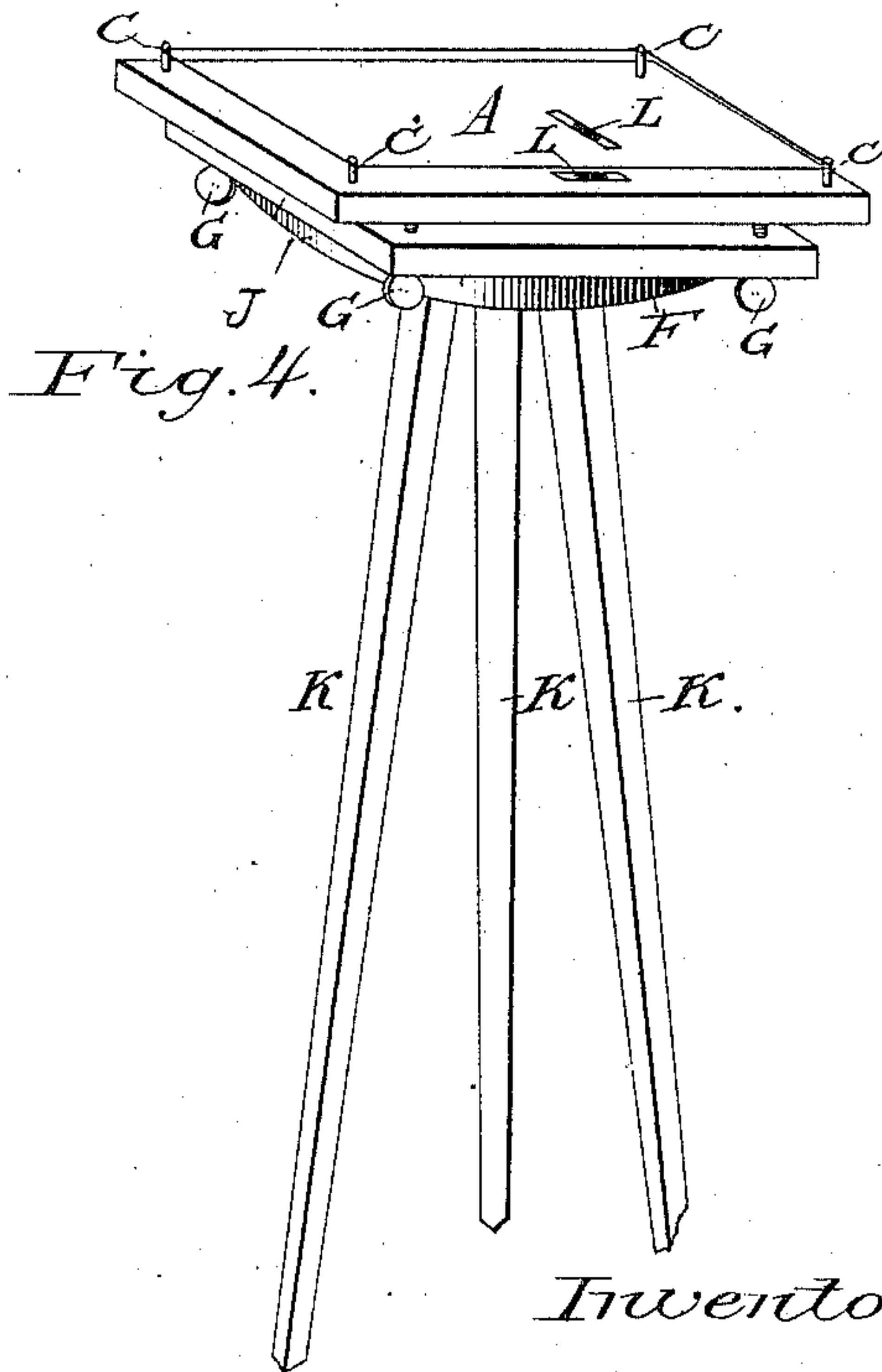


Fig. 4.

Witnesses:

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FARMER'S AND DRAINER'S COMBINED LEVEL AND PLANE-TABLE.

SPECIFICATION forming part of Letters Patent No. 302,609, dated July 29, 1884.

Application filed April 11, 1884. (Model.)

To all whom it may concern:

Be it known that I, HENRY WELLS, a citizen of the United States, residing at Zebulon, in the county of Pike and State of Georgia, have invented a new and useful Improvement in a Combined Level and Plane-Table, of which the following is a specification.

My invention relates to a combined level and plane-table; and it has for its object to provide a device of this character which shall be cheap and simple in its construction, and, further, to provide a device whereby a level may be quickly and accurately determined.

With these ends in view the invention consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of an instrument constructed in accordance with my invention. Fig. 2 is a view of the ordinary leveling-rod. Fig. 3 is another form of leveling-instrument, and Fig. 4 is a perspective view of still another form of instrument.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in the several figures, J represents a top or plank, which is supported by diverging legs or standards K, passing through openings in the said top J.

F represents a plate, which is preferably rectangular in form, and which rests or is seated on the top J, the ends of the legs K, as before mentioned, extending upwardly through openings in the top J and fitting recesses in the under side of plate F. Thus all movement of the said plate is prevented, and it is held firm and steady. In the adjacent corners of the plate F, equidistant from the edges thereof, are provided screw-threaded openings, in which are seated set-screws G, situated with their points or ends projecting upwardly, as shown.

A represents another top or plate, which is preferably somewhat larger than the plate F, said top A resting on the ends of the set-screws G, by which means it will be seen that it may be vertically adjusted. Upon the corners of the top A, equidistant from the edges

of the same, are provided screws C, which are so arranged that their heads will be on a horizontal plane with each other. In the slots or slits in the heads of said screws is attached a thread, T, which may be of fine wire, though the ordinary cotton or linen thread will be found to answer all purposes for which the same is intended. In the center of the top A is provided an opening, H, which registers with a similar opening in the top J and plate F for the passage of a plumb-line, D, which is secured at its upper end to a bracket, B, which is preferably constructed of stiff wire, though it may be constructed of cast-iron and secured to the top A by means of screws or other suitable fastening.

E represents strips or plates, which are mortised to the plate A on the under side thereof, and in such manner that the side and end strips will be on an exact plane with each other.

L represents two spirit-levels, which are disposed upon the top A, and preferably let in or mortised to the same, so that the top edge of the levels will be on a plane with the top of plate A.

The operation is as follows: The instrument is placed in the position desired, and in such manner that it will not shake or be unsteady; then find the height of the instrument on the rod S by placing said rod on the ground adjacent to the instrument, and sight across the threads from a distance of ten or twelve feet until the opposite threads are invisible or appear as a part of the thread nearest the operator; then raise the slide on rod S until the threads appear to center it; then tighten the slide by means of the set-screw, and you have the exact height. If it is desired to run parallel levels, like terraces, &c., raise the slide on the rod S, the number of feet or inches to indicate the fall wanted, if to be on lower ground, and lower slide, if to be on higher ground, than the instrument. For other kinds of work it is used in the same manner as the surveyor's level.

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

1. The combination, with the top J, supported by suitable legs, K, of a plate, F, and top A, having the downwardly - extending plates E, substantially as set forth.
- 5 2. The combination, with the top J, supported by suitable legs, K, of a plate, F, and top A, vertically adjustable, a bracket or support, B, and a plumb-line attached thereto, and extending through an opening, H, in the top plate, A, plate F, and top J, substantially as set forth.

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