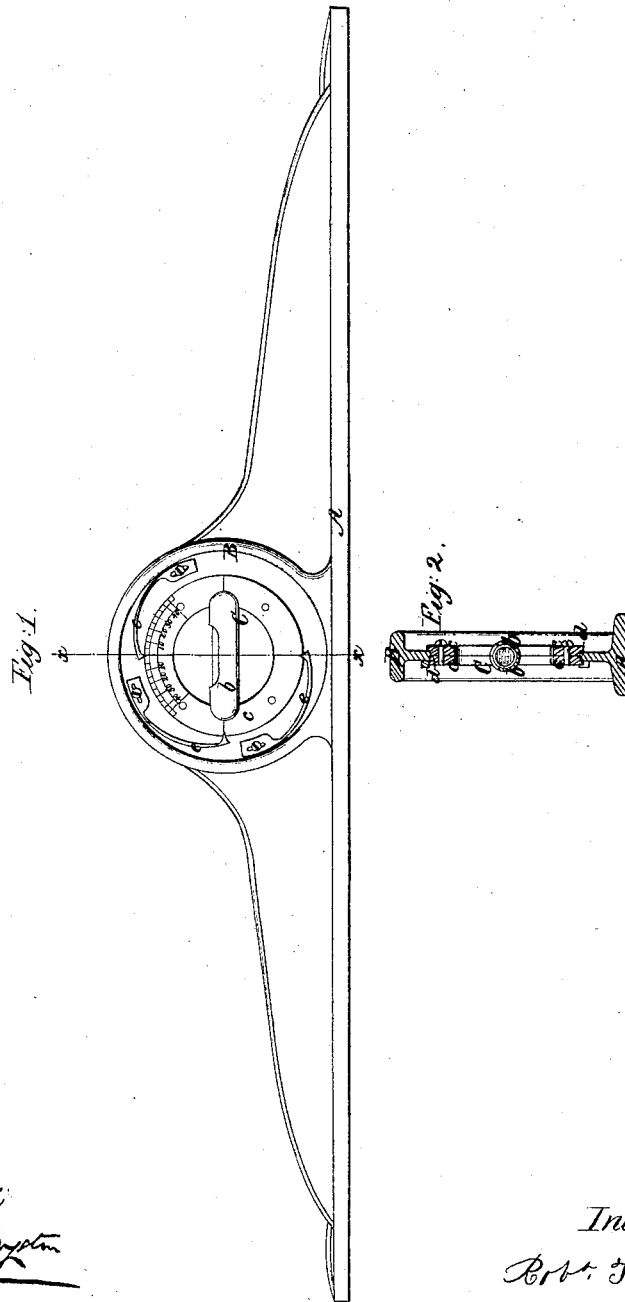


R. F. Burnett

Spirit Level.

N^o 49,710.

Patented Sep. 6, 1865.



Witnesses;
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IMPROVEMENT IN SPIRIT-LEVELS.

Specification forming part of Letters Patent No. 49,710, dated September 5, 1865.

To all whom it may concern:

Be it known that I, ROBERT T. BURNETT, of the city, county, and State of New York, have invented a new and useful Improvement in Spirit-Levels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a front elevation of this invention. Fig. 2 is a transverse vertical section of the same, taken in the plane indicated by the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to facilitate the operation of introducing the vial into the case of a spirit-level; and to arrange said case so that the vial can be readily adjusted to any desired angle.

The case is constructed of two trough-shaped boxes, each of which is cast solid with, or otherwise rigidly attached to, an annular flange in such a manner that when the two flanges are secured together the boxes form a firm and solid case for the vial, and by separating the flanges the boxes can be taken apart and the vial can be removed or a new vial introduced. The flanges are fitted into a circular socket which is secured to the straight-edge, so that the same, together with the vial, can be adjusted to any desired angle, and they are held in position by a set of spring-catches which drop into notches corresponding to the different angles for which the vial is to be adjusted.

A represents a straight-edge, made of cast-iron or other similar material, and provided with a circular socket, B, which is intended to receive the vial. In practice I make the straight-edge and the socket out of cast-iron, and strengthen the whole by a rib extending from the socket in both directions, as shown in Fig. 1 of the drawings. The vial is secured in a case, C, of brass or other suitable material, and this case is composed of two trough-shaped boxes, *b*,

each of which is arranged diametrically in an annular flange, *c*, as shown. When the two flanges are placed together and secured to each other by screws or other suitable means the boxes *b* form the case, which is capable to hold the vial, as shown in Fig. 2 of the drawings. Said flanges are provided with a groove, *b*, in their circumference, and this groove fits into an internal rim, *a*, of the socket B, so that said flanges, together with the case C, can be freely turned in either direction. Spring-catches *e*, which drop into notches in the edge of one of the flanges, serve to hold the case in the desired position, and said notches are so arranged that they correspond to the various angles to which the vial is to be set. The spring-catches are secured to the face of the rim *a* by means of screws *l*, which pass through slots in the catches, as clearly shown in Fig. 1 of the drawings, so that said spring-catches can be adjusted in either direction in order to accommodate their position to the correct angle desired.

This spirit-level is strong and durable. It is not liable to get out of truth, and if by some accident the vial breaks, the case can be readily opened to remove the broken vial and put in a new one, and after the new vial has been put in the level can be easily adjusted by shifting the spring-catches until they correspond to the new vial.

I claim as new and desire to secure by Letters Patent—

1. The case C, composed of two trough-shaped boxes arranged diametrically in annular flanges which are secured in the socket B, substantially as and for the purpose set forth.

2. The adjustable spring-catches *e*, in combination with flanges *c*, case C, and socket B, constructed and operating substantially as and for the purpose described.

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Witnesses:

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