

No. 741,406.

PATENTED OCT. 13, 1903.

A. J. MERCER.
SPIRIT LEVEL.

APPLICATION FILED MAY 13, 1903.

NO MODEL.

Fig. 1.

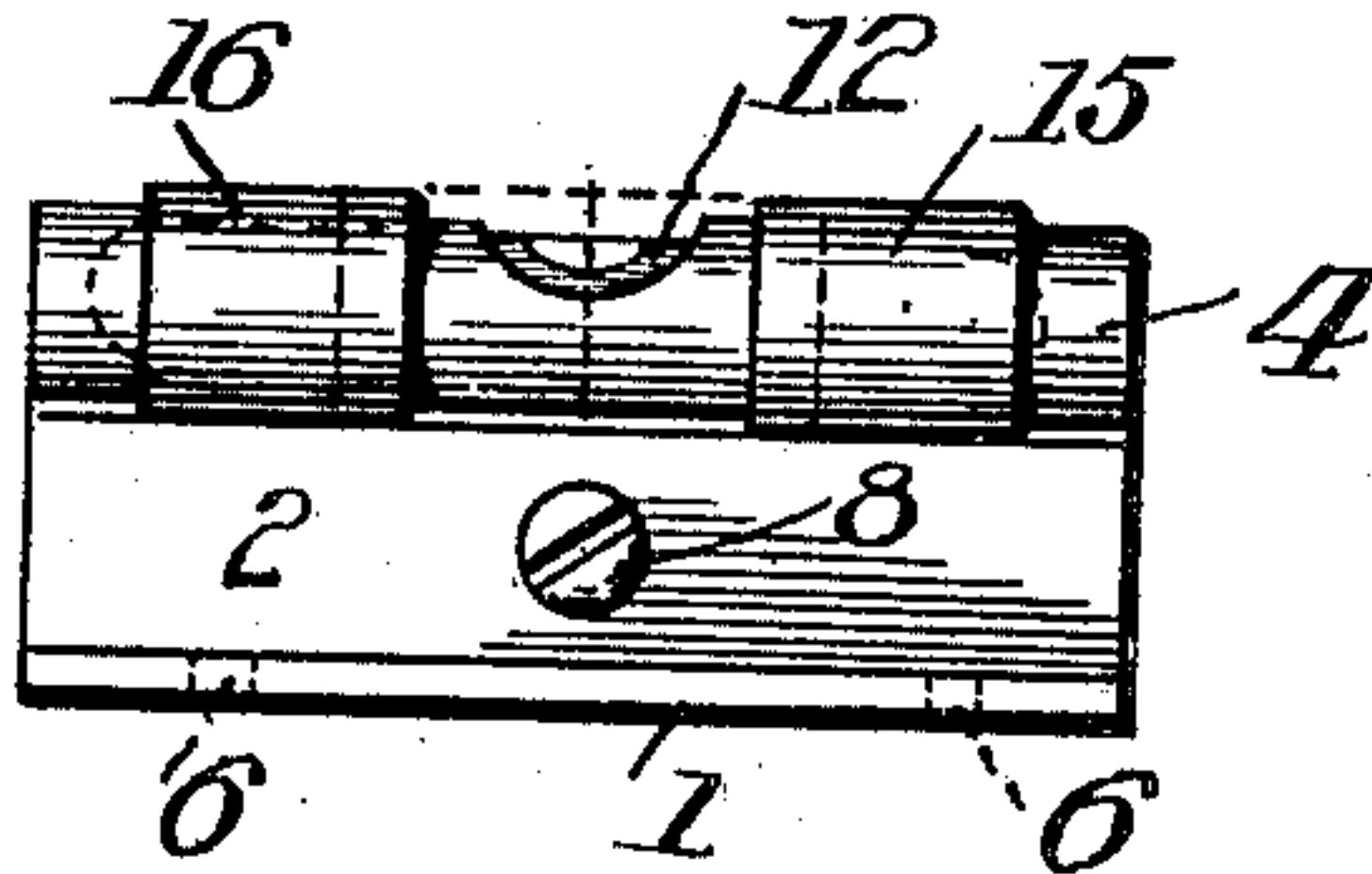


Fig. 2.

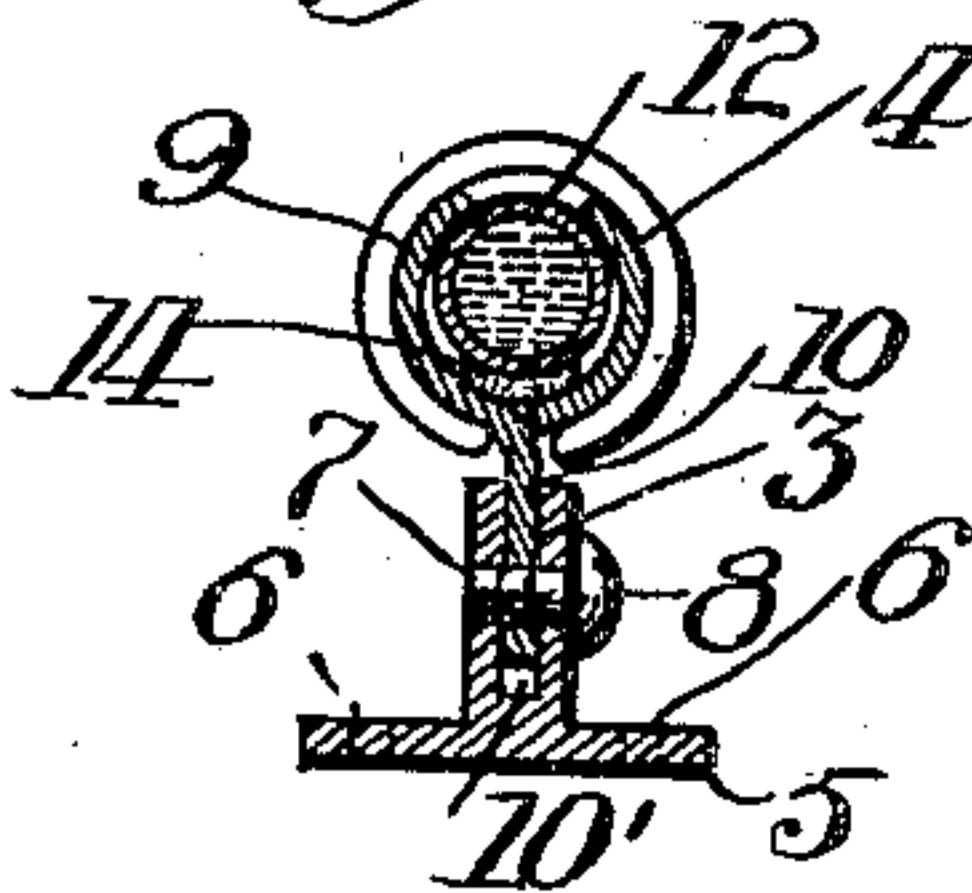


Fig. 5.

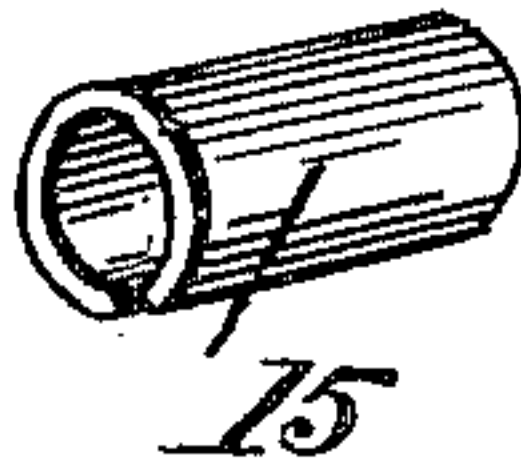


Fig. 3.

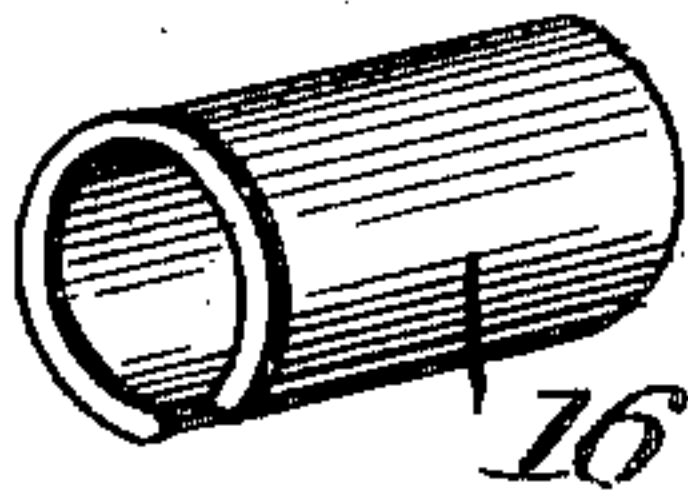


Fig. 4.

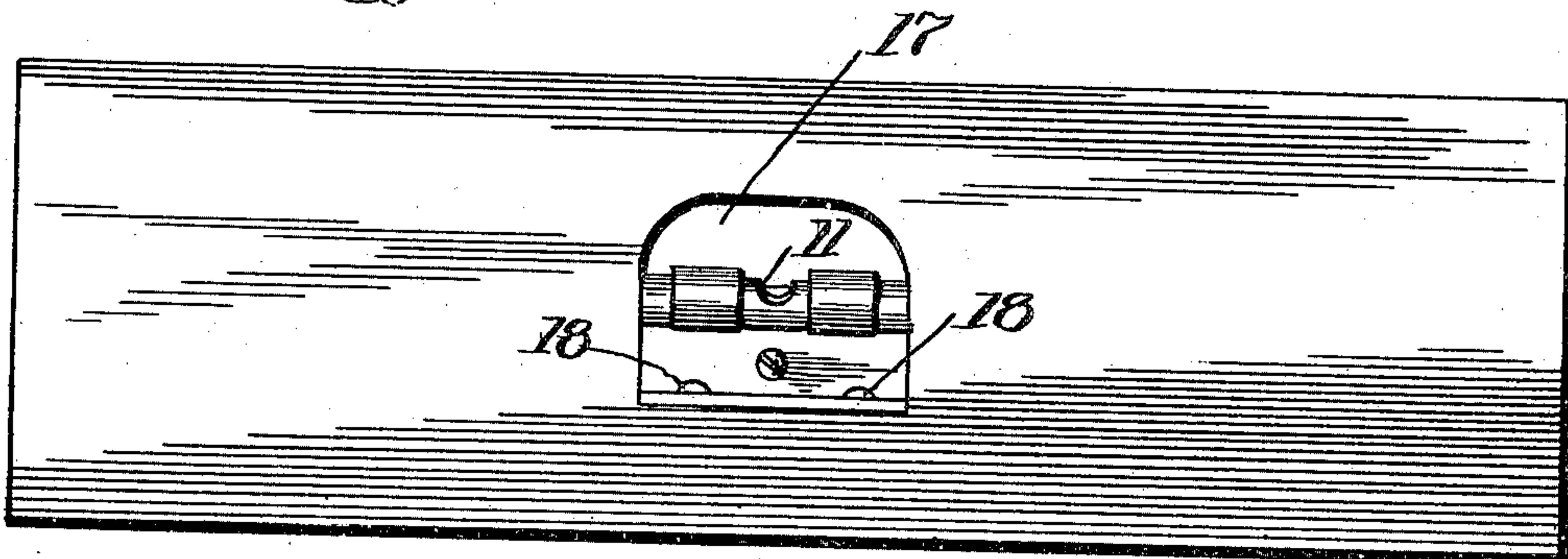
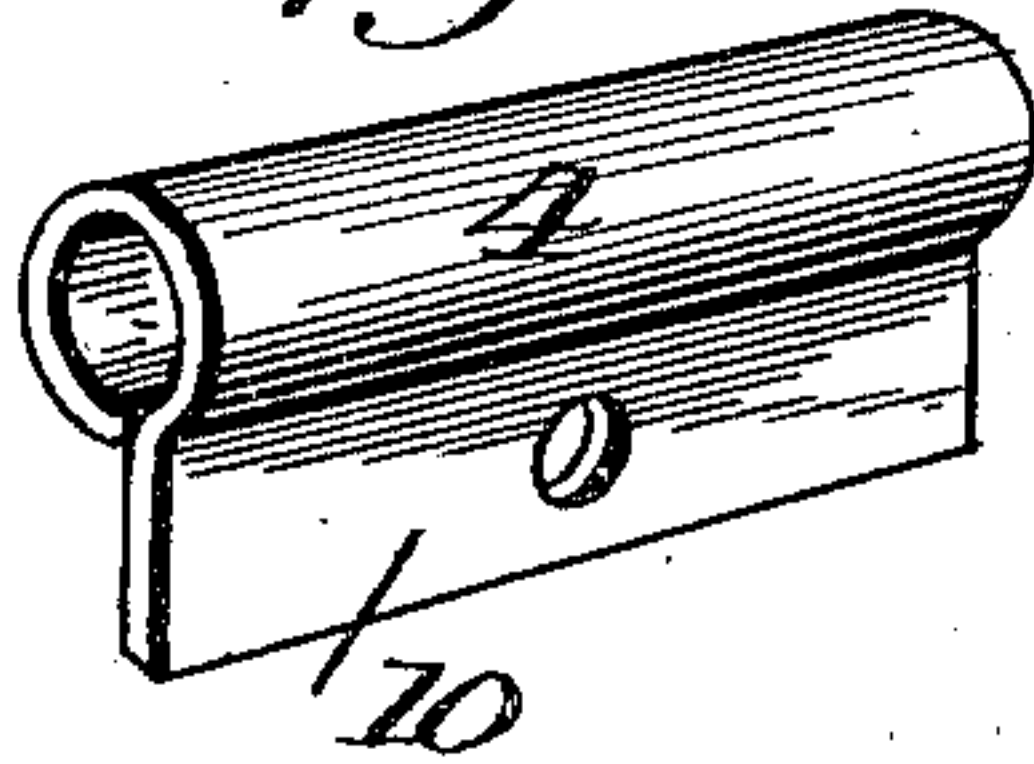


Fig. 6.

Witnesses:
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UNITED STATES PATENT OFFICE.

ALLEN J. MERCER, OF PITTSBURG, PENNSYLVANIA.

SPIRIT-LEVEL.

SPECIFICATION forming part of Letters Patent No. 741,406, dated October 13, 1903.

Application filed May 13, 1903. Serial No. 156,956. (No model.)

To all whom it may concern:

Be it known that I, ALLEN J. MERCER, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Spirit-Levels, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in levels, and more particularly to that class known as "spirit-levels."

15 The object of my invention is to provide an improved level or leveling device embodying means whereby the level-glass ordinarily used may be protected from injury.

A still further object of my invention is to provide a level having a separate level-casing adjustable for the purpose of precision in construction, whereby the same may be always kept in alinement with the base thereof.

25 A further object of my invention is to provide a level which will be extremely simple in construction, strong, durable, and highly efficient in operation.

Briefly described, my invention consists of providing a T-shaped base having a groove in its vertical portion wherein I secure a tubular portion which carries the glass level, and upon this tubular portion I secure two telescopic tubular members, which are adapted to be closed when the same is not in use, thereby protecting it from injury.

35 In describing the invention in detail, reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

45 Figure 1 is a side elevation of my improved level. Fig. 2 is a vertical sectional view thereof. Fig. 3 is a perspective view of one of the telescopic members. Fig. 4 is a perspective view of the level-casing. Fig. 5 is another perspective view of another of the telescopic members. Fig. 6 is a view showing my improved level secured in the block of wood, which is the common form of level now in use.

50 To put my invention into practice, I provide a T-shaped base 1, and in the vertical

portion 2 thereof is a slot or groove 3, and in said slot I preferably secure a level-casing 4. The base 5 of the T-shaped portion carries apertures 6 in its outwardly-extending flanges, and in the vertical portion thereof is a screw-threaded aperture 7, through which passes screw 8 in securing the level-casing 4 in position upon the same. This level-casing comprises a cylindrical casing which is formed of one piece of metal, one portion of the piece of metal being bent into a cylindrical casing, as indicated at 9, while the other portion thereof extends down vertically, forming a flange 10 of the casing 9, the casing 4 being cut away, as indicated at 11, whereby the level-glass will be exposed. In this level-casing I provide the ordinary level-glass 12, seated upon the felt cushion 14, whereby all jar or injury is prevented from the level-glass moving in the level-casing. Upon this level-casing I provide telescopic members 15 16, these members consisting of two metallic strips bent around to conform to said level-casing, whereby the telescopic members will snugly fit the level-casing, said members being adapted to slide upon the level-casing and be closed, as indicated in dotted lines in Fig. 1, when the level is not in use.

80 In Fig. 6 of the drawings I illustrate my improved level applied to the ordinary level-stock, an aperture 17 being provided therefor wherein I secure the level by means of the screws 18, passing through the aperture 6, formed in the outwardly-extending flanges of the T-shaped base 1. When my improved level is used in this form, as illustrated in Fig. 6, it is obvious that the base of the stock will have to be in alinement or parallel with the level in order that the exact degree of the plane may be accurately secured. The level-glass may be secured in the level-casing by any suitable means—such as cement, plaster-of-paris, or the like—whereby the same will be rigid, the level-glass being of the ordinary construction, having the usual space or bubble therein, and above said level-glass the transverse line denotes the center of the same, this transverse line being transverse of the glass, also of the cut-away portion 11 of the level-casing. In order to accurately adjust my improved level within the T-shaped base 1, the same is accomplished by the screw

8 and downwardly-extending portion 10 of the tubular casing being supported upon said screw and within the slot or recess 3, formed in the vertical portion of the T-shaped base, 5 this downwardly-extending flange or portion 10 not quite reaching the base of the slot or groove, as shown at 10', whereby the tubular casing may be adjusted to the accurate position of the level or parallel to the T-shaped 10 base.

While I have shown and described the above construction, it is obvious that I do not desire to limit myself to the exact construction shown and described, as various changes 15 may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters 20 Patent, is—

1. A level of the above-described character comprising a T-shaped base having a groove formed in its vertical portion, a cylindrical casing secured therein, a level-glass secured 25 within said tubular casing, said tubular casing being cut away so as to expose the central part of said level-glass, telescopic members carried upon said tubular casing and adapted to be closed when the same is not in 30 use, means whereby said level-glass may be accurately adjusted in said T-shaped base, substantially as described.

2. A level-glass comprising a T-shaped base, apertures formed in the outwardly-extending flanges of said base, a groove cut in 35 the vertical portion of said base, a cylindrical casing carried in said slot, a level-glass carried within said tubular casing, said tubular casing being cut away so as to expose the cen-

tral part of the level-glass, telescopic mem- 40 bers slidably mounted upon said tubular casing and adapted to be closed when the level is not in use, said tubular casing being secured in the slot or groove of the vertical portion of the T-shaped base whereby the same 45 may be adjusted to the plane or level corresponding to its base, and means whereby said level may be secured in the ordinary level-stock, substantially as described.

3. A level comprising a T-shaped base, said 50 base having outwardly-extending flanges, apertures formed in said flanges, a groove formed longitudinally in the vertical portion of said T-shaped base, a cylindrical casing having a downwardly-extending flange, said 55 flange having an aperture formed therein and corresponding to the aperture formed in the vertical portion of the T-shaped base, a level-glass carried within said tubular casing, said 60 tubular casing being cut away so as to expose the central portion of said leveling-glass, telescopic members cylindrical in form, said members being adapted to slide upon the tubular casing, a screw passing through the vertical 65 portion and the T-shaped base to the downwardly-extending flange of the tubular casing whereby the same may be adjusted to the level or plane corresponding with the T-shaped base, a cushion carried within the tubular casing for supporting the level-glass, 70 substantially as described.

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

ALLEN J. MERCER.

Witnesses:

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E. E. POTTER.