

No. 747,850.

PATENTED DEC. 22, 1903.

A. BIHLMAN.
SPIRIT LEVEL.

APPLICATION FILED MAY 29, 1903.

NO MODEL.

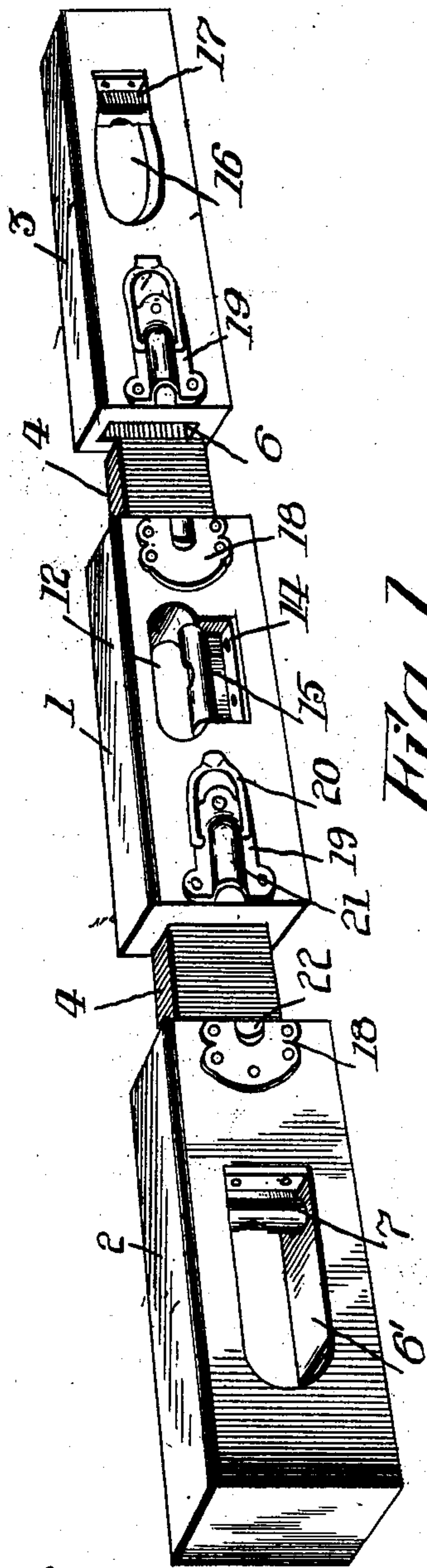


Fig. 1.

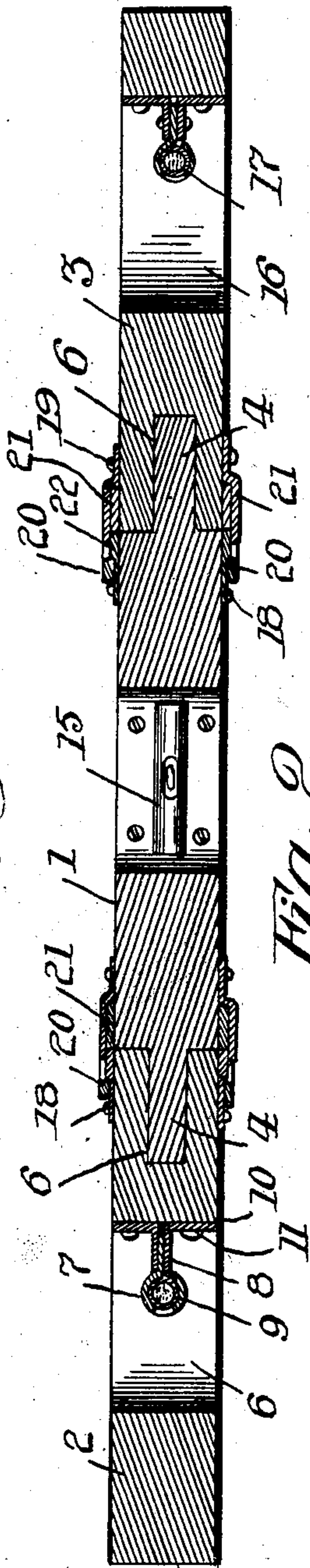


Fig. 2.

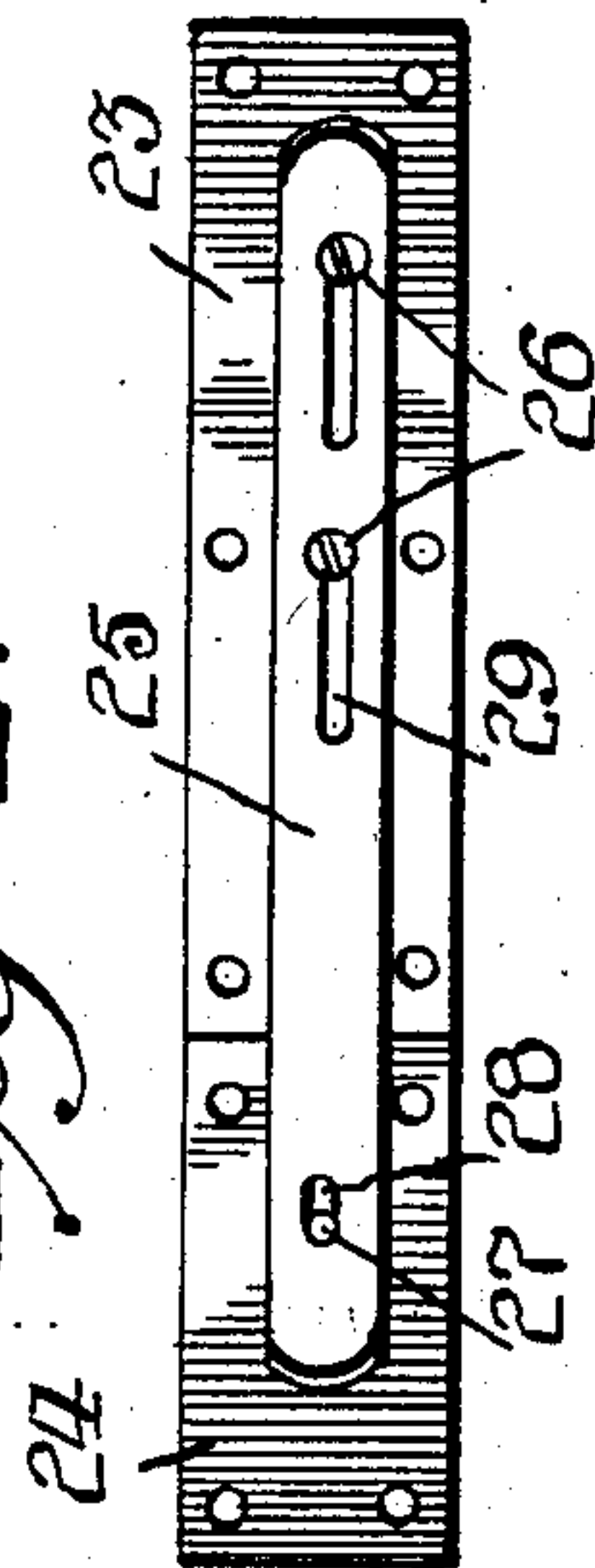


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

ALEXANDER BIHLMAN, OF PITTSBURG, PENNSYLVANIA.

SPIRIT-LEVEL.

SPECIFICATION forming part of Letters Patent No. 747,850, dated December 22, 1903.

Application filed May 29, 1903. Serial No. 159,352. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER BIHLMAN, 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 spirit-levels, and has for its object the provision of novel means whereby a level may be constructed in a manner that will permit the same to be easily placed in a workman's kit.

15 Another object of the present invention is to construct a level such as are commonly used by stone-masons and the like in a number of separable sections that will allow the level to form a compact package that may be conveniently carried.

20 My invention further aims to provide a level the sections of which may be readily connected, securely locked, and easily disconnected when desired; furthermore, one that will be extremely simple in its construction, strong, durable, comparatively inexpensive to manufacture, and highly efficient in its operation.

25 With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts, to be hereinafter more particularly described, and specifically pointed out in the claim.

30 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—

35 Figure 1 is a perspective view of my improved level, showing the sections thereof disconnected. Fig. 2 is a central longitudinal sectional view showing the sections connected and locked together. Fig. 3 is a plan view of a modified form of locking means.

40 In the drawings, 1 indicates the central section, and 2 and 3 the two end sections, and the central section is provided with tongues 4, which are adapted to fit into recesses 5 and 6 of the end members 2 and 3, respectively. The tongues 4 of the central section 1 are

adapted to fit within these recesses snugly, and when the three sections are joined together, as illustrated in Fig. 2 of the drawings, a neat and smooth surface is provided, whereby the sides of each section will lie in a horizontal plane with each other. The end section 2 is provided with an opening located in the body portion thereof, this opening, as indicated by reference-numeral 6', being adapted to hold the vertical level-glass 7, which may be of the ordinary construction comprising a level-casing 8 and glass 9, this casing and glass being secured to the vertical side 10 of the opening 6 by means of the screws 11. In the middle section 1 I provide another opening, which is oblong in shape, the top part of this opening, as indicated by reference-numeral 12, being adapted to be used as a handle, if so desired, for carrying the level when the three sections are joined together or when the same is being used. The lower part of this opening, as indicated by reference-numeral 14, is adapted to receive and hold a level-glass 15, this glass being placed horizontally within the opening and on a horizontal plane to the top surface of the level. A similar opening 16 is also constructed in the third section 3, this opening having secured therein a vertical level-glass 17 to be used in a similar manner to the level-glass 7 secured in the opening of the first section. To secure these different sections together in a locked position, I may employ any desired locking means, and in carrying out my invention I have illustrated in the first two figures of the drawings the preferred form, which consists of the ordinary construction employed as "trunk" clasp. This construction consists in placing the female member 18 of the clasp upon one of the sections, and upon the other section I secure the male member 19, which carries the hook or loop 20, which when the sections have been joined together is adapted to be thrown over the raised portion 21 of the male member and the raised portion 22 of the female member, whereby the three sections, as illustrated in Figs. 1 and 2 of the drawings, will be prevented from becoming disengaged from each other, these sections being shown in a locked position in Fig. 2 of the drawings. I have also illustrated in Fig. 3 of the drawings a modified form of locking

means which consists of a clasp, the body portion 23 thereof being secured upon one of the sections of the level, and the other member 24 is secured upon the other section, and when the two members constituting the clasp are in a locked position, as illustrated in Fig. 3, a metallic strip 25, secured to the body portion 23 by means of the screws 26, is adapted to engage over a lug or pin 27, carried upon the member 24, a slot or aperture 28 being provided in the end of the metallic strip 25 to engage this pin. The metallic strip 25 is adjustable upon the body portion 23 by means of the slots 29 and the screws 26, and this metallic strip is preferably formed of a flexible material, whereby when the strip 25 is engaged over the pin 27 the same will be normally held in engagement.

It will be seen from Figs. 1 and 2 of the drawings that when my improved level has been joined together it will be impossible for any one of the sections to become disengaged from each other, a vertical movement of either one of the sections being prevented, owing to the construction of the tongues and recesses formed in the ends of the adjoining section. The recess being bounded by the four sides of the level it will be impossible for any swaying or side movement of any of the sections when the same have been once placed

together. The locking means now employed prevents either one of the sections from becoming disengaged from the other sections, thereby securely holding the sections together and preventing any longitudinal movement of either one of the sections.

It will be noted that various changes 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 Patent, is—

A level comprising three sections, the end sections being formed in their inner ends with openings, the intermediate section carrying tongues on its ends normally received in the openings of the said end sections, all of said sections being formed with openings intermediate their ends, means for securing said sections together, vertical level-glasses carried in the end sections and a horizontal level-glass carried in the intermediate section.

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

ALEXANDER BIHLMAN.

Witnesses:

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EMA E. POTTER.