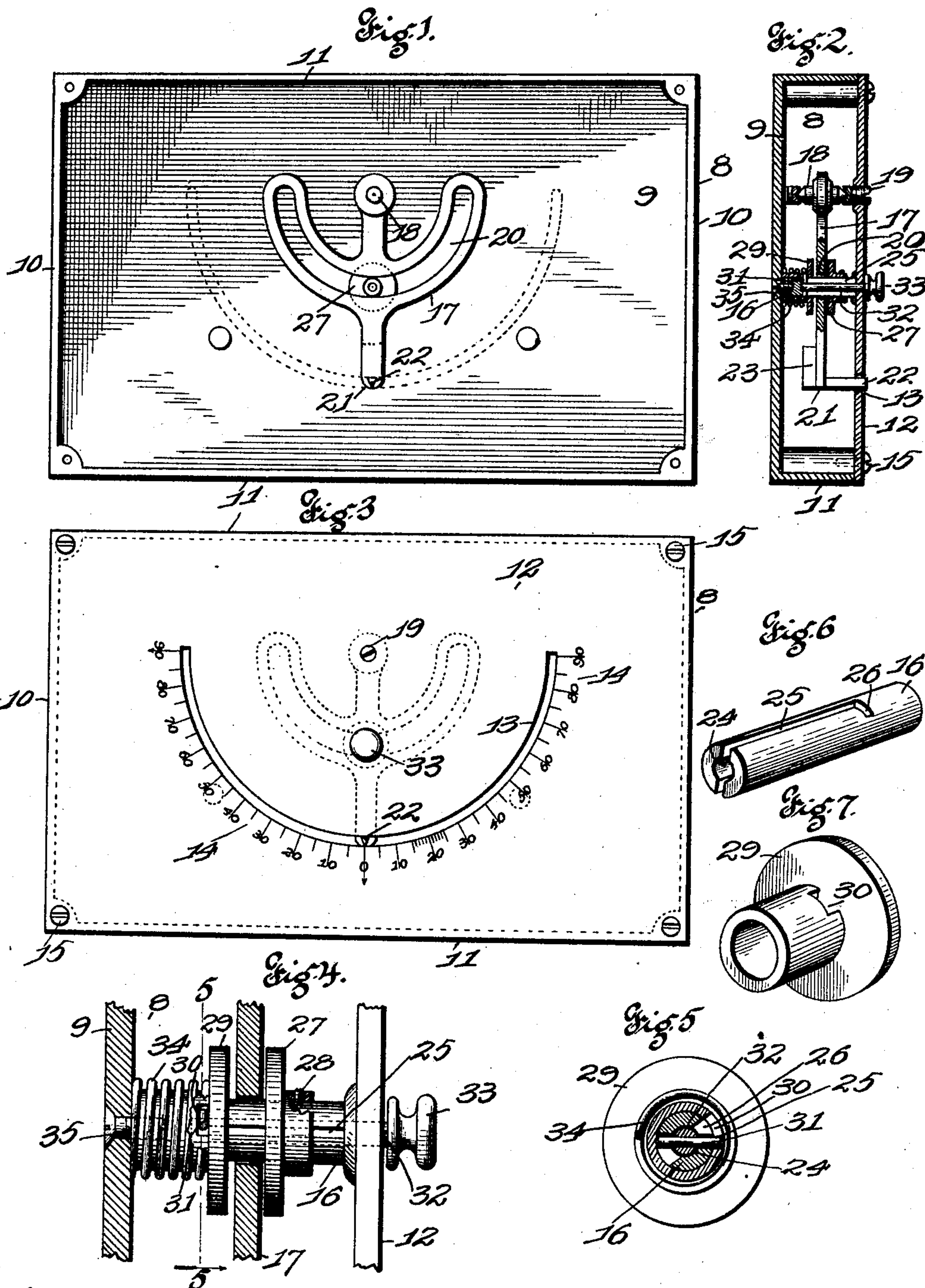


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W. F. FOSTER.
PLUMB LEVEL.

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Witnesses
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WILLIAM F. FOSTER, OF EAST ST. LOUIS, ILLINOIS.

PLUMB-LEVEL.

No. 836,024.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM F. FOSTER, a citizen of the United States, and a resident of East St. Louis, Illinois, have invented certain new and useful Improvements in Plumb-Levels, of which the following is a specification.

This invention relates to improvements in a plumb-level; and it consists of the novel arrangement, construction, and combination of parts, as will be fully hereinafter described and claimed.

The object of my invention is to construct a device provided with graduations indicating the degree of angle and having a pivotal pointer to indicate the angle of an article upon which the device is placed.

A further object of my invention is to provide a device that will indicate the degree of angle of any device upon which the instrument is placed.

In the drawings, Figure 1 is a plan view of my invention with the cover removed. Fig. 2 is a vertical cross-sectional view taken through the center of my device. Fig. 3 is a plan view of my invention. Fig. 4 is an enlarged detail view of the locking mechanism for retaining the pivotal pointer in position, parts of the device being shown in section. Fig. 5 is a detail sectional view taken on the line 5 5 of Fig. 4. Fig. 6 is a detail perspective view of the post made use of in connection with my invention. Fig. 7 is a detail perspective view of a bushing used in connection with my locking mechanism.

Referring to the drawings in detail, 8 indicates a casing consisting of a rear wall 9, end walls 10, top and bottom walls 11, and a cover 12. In the cover 12 is formed a curvilinear slot 13, the edge of which is provided with the graduations 14, which indicate the various angles arranged from "0" to "90" both to the right and left. The cover 12 is retained in position upon the casing 8 by screws 15, and the central portion of the cover is supported and held in rigid position by means of the post 16.

Within the casing is pivotally arranged a pointer or indicator 17, its pivotal portion being provided with a pair of projecting conical bearings 18 and adjustably retained in position by means of a screw 19, carried in the cover 12. The indicator 17 is provided with a curvilinear slot 20, through which projects the post 16, and the purpose of the slot 20 is to permit the indicator 17 to freely

swing from "0" to the graduation "90." The lower end 21 of the indicator is provided with a right-angular projecting point 22, which projects through the curvilinear slot 13, formed in the cover, and at the rear of the point secured to the end 21 is provided a weight 23.

The post 16 is provided with a bore 24 and also with a slot 25, extending partly through out its length and provided with a right-angular portion 26. Upon the post 16 I provide a washer 27, which is adjustably secured upon the same by means of the gib-screw 28. Upon the post 16 and on the opposite side of the indicator I provide a bushing 29, which is also provided with a slot 30, which is to be brought in alinement with the portion 26 of the slot 25 of the post and in which operates the pin 31, carried by the push-rod 32. The push-rod 32 is inserted in the bore 24 of the post, its outer end provided with the knob 33 and by which the push-rod is rotated, bringing the pin 31 in alinement with the slot 25 of the post and to shift said pin in the projecting portion 26 when it is desired to retain the bushing in an unlocked position, as shown in Fig. 4. Upon the bushing I provide an expansive spring 34, the purpose of which is to compress the bushing against the indicator when the knob 33 is turned sufficiently to bring the pin 31 in alinement with the slot 25 and retain the indicator in position at the angle at which it sets.

The slot 30, formed in the bushing, is to permit the pin 31 to have lateral motion without revolving the bushing and will retain the same in locked position. The bushing when locked against the indicator is released by pressure being imparted upon the knob 33, causing the pin 31 to press against the rear surface of the slot 30, compressing the spring and by a slight turn of the knob will hold the same in its position. The post 16 is held secured to the cover by solder or the like and is held to the rear wall by means of the screw 35.

The operation of my invention is as follows: The device is constructed rectangular in form, and to ascertain an angle at which an object is set the device is placed thereon and the pivotal indicator, which will normally hang in vertical position, will indicate upon the graduations, by means of the point 22, the degree. When it is desired to set the device at the angle designated, the knob 33 is so turned as to bring the pin 31 in alinement

with the slot, whereupon the expansive spring will move the bushing 29 against the indicator and bind it between the bushing and the washer 27.

5 Having fully described my invention, what I claim is—

1. In a plumb-level, the combination of a housing having one straight edge and provided with a back member and a cover member, the cover member being provided with a
10 curvilinear slot, a pivotally-mounted slotted arm mounted between said back member and cover member, and provided with an outwardly-projecting point extending into
15 said curvilinear slot, and a locking means passing through the slotted arm whereby said arm may be fixed at any predetermined pitch, substantially as specified.

2. A plumb-level comprising a housing, an
20 arm provided with a curvilinear slot pivotally mounted in said housing, one side of said housing provided with a curvilinear slot and a scale, a pointer mounted on the free end of the pivotal arm and operating in the curvi-
25 linear slot of the housing, a locking device lo-

cated within the housing and passing through the curvilinear slot of the pivoted arm to hold said arm in locked position at any predetermined pitch, and when released to permit the arm to have free movement, substantially as specified. 30

3. A device of the class described comprising a housing, a pivotally-mounted slotted arm located within the housing, one side of
35 said housing provided with a curvilinear slot and a scale, a post located within the housing and passing through the slot of the arm, a stationary washer located to one side of the arm, a bushing located upon said post to the
40 other side of the arm, and a means for locking and releasing of the bushing to retain the arm in a locked position and to release said
arm, substantially as specified.

In testimony whereof I have signed my name to this specification in presence of two
45 subscribing witnesses.

WILLIAM F. FOSTER.

Witnesses:

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