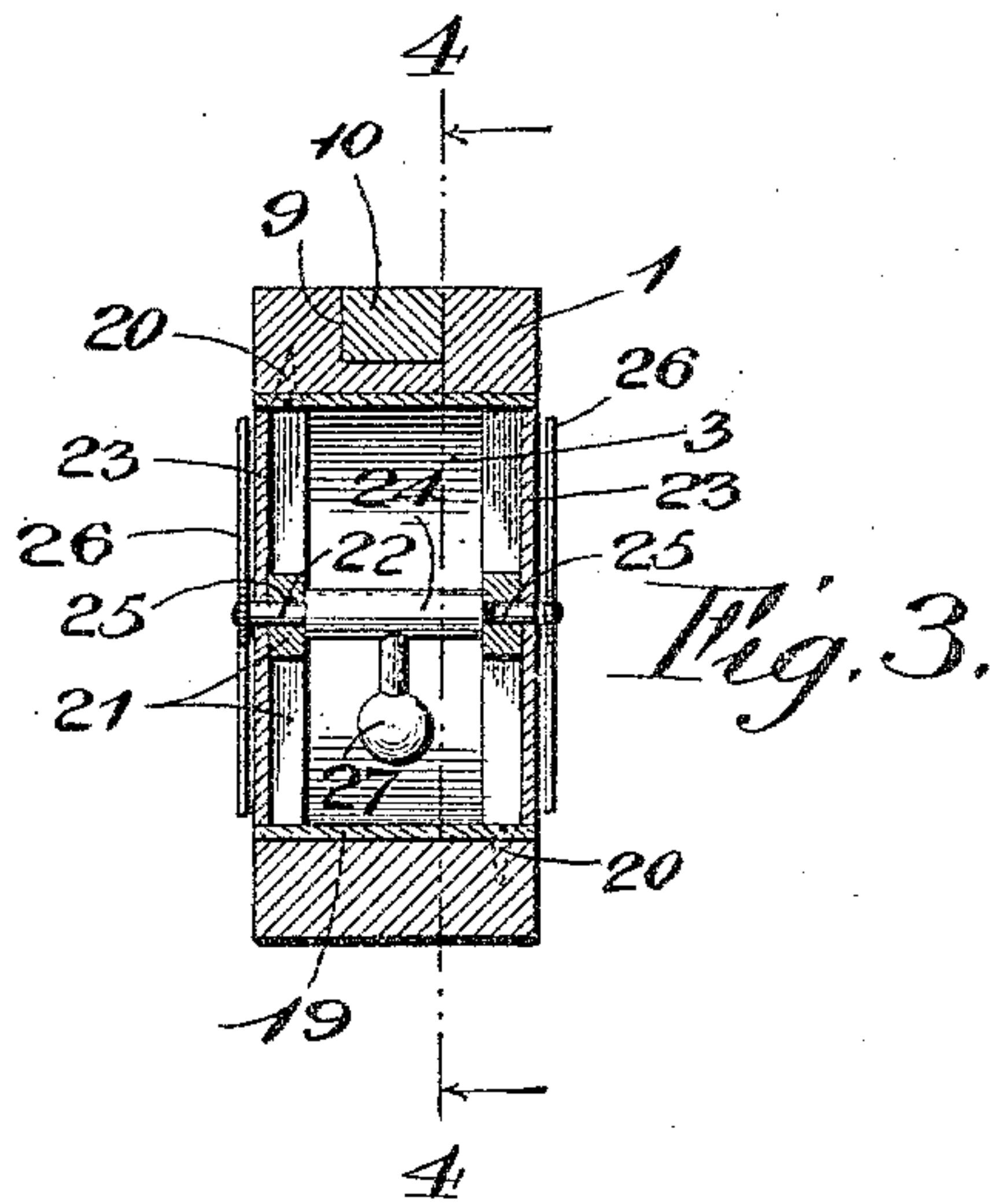
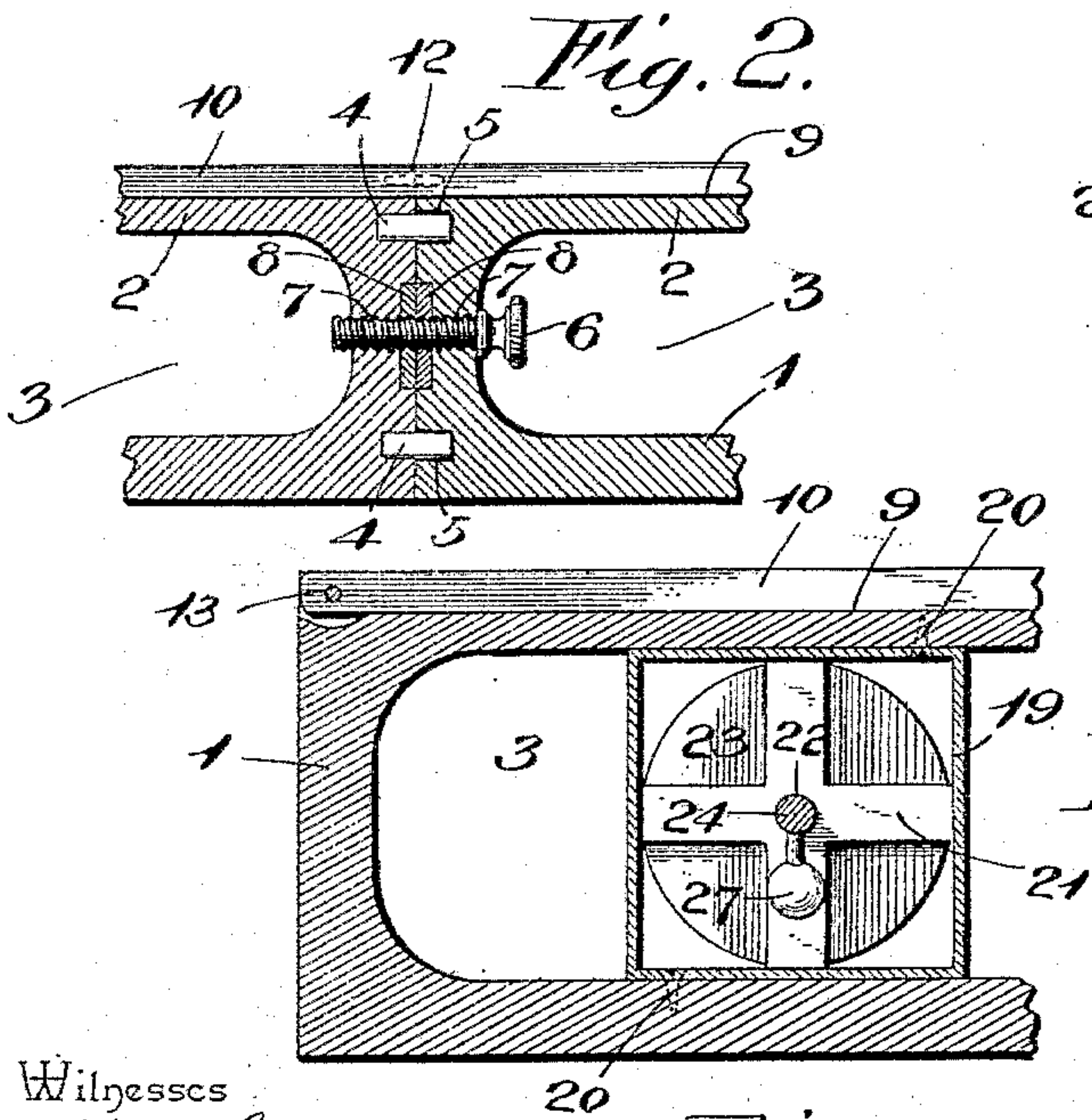
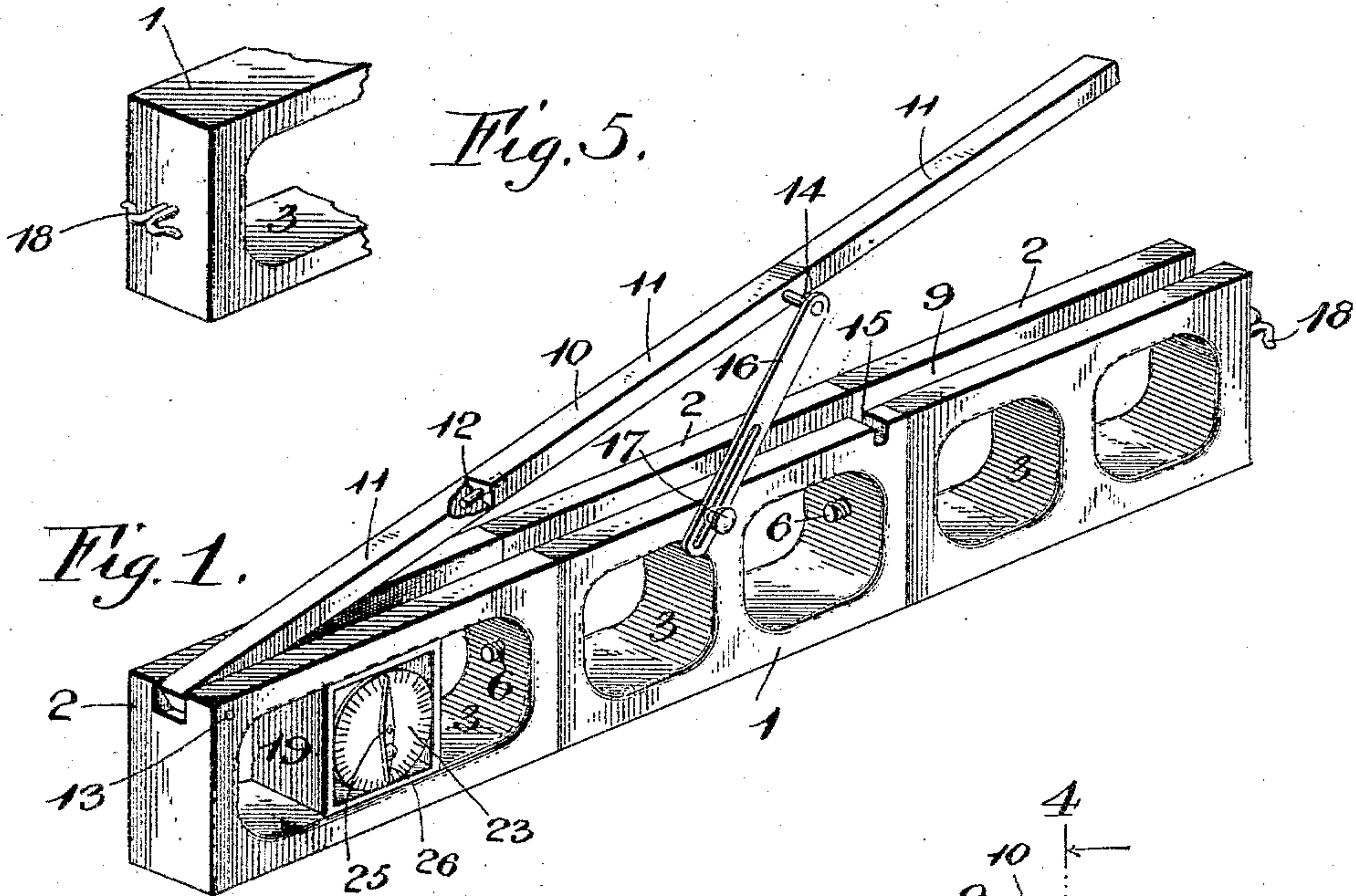


(No Model.)

J. P. KANE.  
LEVELING TOOL.

No. 598,101.

Patented Feb. 1, 1898.



Inventor  
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Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN P. KANE, OF DAWSON, PENNSYLVANIA.

## LEVELING-TOOL.

SPECIFICATION forming part of Letters Patent No. 598,101, dated February 1, 1898.

Application filed February 27, 1897. Serial No. 625,414. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN P. KANE, a citizen of the United States of America, residing at Dawson, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Leveling-Tools, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to leveling-tools; and it has for its object to provide a new and useful tool of this character specially adapted for the use of masons.

15 To this end the invention contemplates the construction of a leveling-tool having simple and efficient means for indicating the exact pitch or degree that the wall or other object upon which the tool may be used is out of plumb, and also means for positively indicating the proper angle of batter-work in masonry or gable-work in building.

20 While the invention has for its object the construction of a leveling-tool intended to accomplish the results referred to, still another feature of the invention is to construct the tool in such a manner that the several parts thereof may be readily taken apart and placed together in a comparatively small compass, which parts can also be readily assembled 30 when it is desired to use the tool or instrument.

35 With these and other objects in view, which will readily appear as the nature of the invention is better understood the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

40 In the drawings, Figure 1 is a perspective view of a leveling-tool constructed in accordance with this invention, showing the pitch-bar supported in position for use. Fig. 2 is a longitudinal sectional view of a portion of the tool-body, showing the detachable connection between the contiguous ends of the body-sections. Fig. 3 is a cross-sectional view of the 45 tool-body at the point where the indicating device is housed. Fig. 4 is a detail sectional view on the line 4 4 of Fig. 3. Fig. 5 is a detail in perspective of the end portion of the tool-body provided with a double hook for the attachment of an ordinary plumb-line.

Referring to the accompanying drawings,

the numeral 1 designates a straight elongated tool-body formed of a plurality of duplicate alined sections 2, which are designed 55 to be detachably connected together at their contiguous or meeting ends, whereby the tool-body can be readily taken apart and placed within a small compass when not in use.

The tool-body sections 2 are provided between their opposite side edges with openings or open spaces 3, which serve to materially lighten the body, and the contiguous or meeting ends of said sections have a detachable interlocking connection, which connection consists of short tenon-pins 4, projected from the end of one section, and mortise-notches 5, formed in the contiguous end of the adjacent section and receiving the said tenon-pins. 60 65 70

The tenon and mortise connections between the meeting ends of the body-sections 2 serve to maintain these sections in precise alinement, so that the continuity of the tool-body will be preserved while the same is in use; 75 but to provide for securely fastening the body-sections together to prevent their disengagement there are employed fastening screws or bolts 6, passing through registering openings 7 in the abutting ends of the body-sections 80 and engaging the threaded plates 8, permanently fitted in said abutting ends of the sections, such construction being plainly illustrated in Fig. 2 of the drawings. It will be seen that by the removal of the fastening 85 screws or bolts 6 the several sections of the body may be readily taken apart and compactly placed together in a comparatively small compass.

The sectional tool-body 1 is provided in one 90 of its side edges with a continuous groove 9, extended longitudinally from end to end thereof and adapted to snugly receive therein a sectional pitch-bar 10. The sectional pitch-bar 10 is of the same length as the sectional 95 tool-body 1 and is formed of a series of duplicate sections 11, having a detachable interlocking connection 12 at their contiguous ends, it being observed that the pitch-bar is formed of the same number of sections as 100 the tool-body, with the sections of the same length, so that when the pitch-bar is in its folded position and lies flush within the groove 9, forming a seat therefor, the sections of the



tool-body and of the pitch-bar will come apart together and will remain in proper position, so as to be assembled together at the same time without the necessity of separately assembling the tool-body and the pitch-bar sections.

The sectional pitch-bar 10 has a pivotal connection 13 at one end with the tool-body, and at an intermediate point said pitch-bar has an offstanding pin 14, adapted to seat itself in the notch 15, formed in one edge of the tool-body and having pivotally connected thereto one end of the longitudinally-slotted brace-bar 16, the longitudinal slot of which receives the said screw 17, which provides means for securing the pitch-bar at any adjusted angle, as clearly illustrated in Fig. 1 of the drawings.

The tool-body 1 is preferably provided at the side edge, opposite the edge in which the pitch-bar 10 is fitted, with inch-graduations, so that the same may be conveniently used as a rule, and at one end the said tool-body is provided with a double hook 18, in which a plumb-line may be secured when it is desired to use a line of this character in connection with the tool.

The level or inclination of the tool-body is indicated by means of an indicating device carried by one of the sections 2 of the tool-body, and this indicating device is housed within a rectangular casing 19. The rectangular casing 19 of the indicating device registers within the opening 3 of one of the end sections 2 of the tool-body, and it is secured in place by means of the screws or similar fasteners 20, passing into the body-section. The rectangular casing 19 is provided within its opposite ends with skeleton bearing-frames 21, having central bearing-openings 22 and having fitted to the outer sides thereof the dial-plates 23, provided with a series of graduations, preferably scaled to one-eighth of an inch. A pointer-shaft 24 is arranged inside of the indicator-casing 19 and is provided with opposite spindle extremities 25, projecting through the bearing-openings 22 and openings in the dial-plates 23 and having fitted thereto the double pointers 26, arranged to oscillate over the outer faces of the dial-plates and point to the graduations thereon to provide means for indicating the inclination or pitch of the tool. To provide for maintaining the necessary vertical disposition of the double pointers 26, the pointer-shaft 24 has connected therewith between its ends a pendent weight 27, which weight counterbalances the pointer-shaft and holds the pointers to a proper indicating position.

The herein-described tool may be used for the same purposes as all ordinary plumb-levels, but possesses the further advantage of being provided with a pitch-bar, which is used in conjunction with the tool-body and indicating device carried thereby to provide for adjusting the tool to any angle desired for batter-work in masonry and gable-work in building.

From the foregoing it is thought that the construction and use of the herein-described tool will be readily apparent without further description, and it will be understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a leveling-tool, a straight separable tool-body formed of a plurality of duplicate alined sections having a detachable interlocking connection at their abutting ends, said body being provided in one side with a continuous groove extending longitudinally from end to end thereof, separate fasteners detachably engaging with the interlocked abutting ends of the body-sections, and a folding pitch-bar having a pivotal connection at one end with the tool-body and formed of a plurality of alined sections corresponding in number and length to the sections of the tool-body, said pitch-bar being adapted to register flush within the groove of the tool-body, substantially as set forth.

2. In a leveling-tool, a straight separable tool-body formed of a plurality of duplicate alined sections detachably connected together at their abutting ends and having openings piercing the same, said body being provided in one side with a continuous groove extending from end to end thereof, an indicator device fitted inside of the opening of one of said body-sections, and a folding pitch-bar adapted to register within the groove of the tool-body and having a plurality of detachably-connected alined sections corresponding in number and length to the sections of the tool-body, substantially as set forth.

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

JOHN P. KANE.

Witnesses:

B. H. HODGE,  
GEO. W. BARBER.