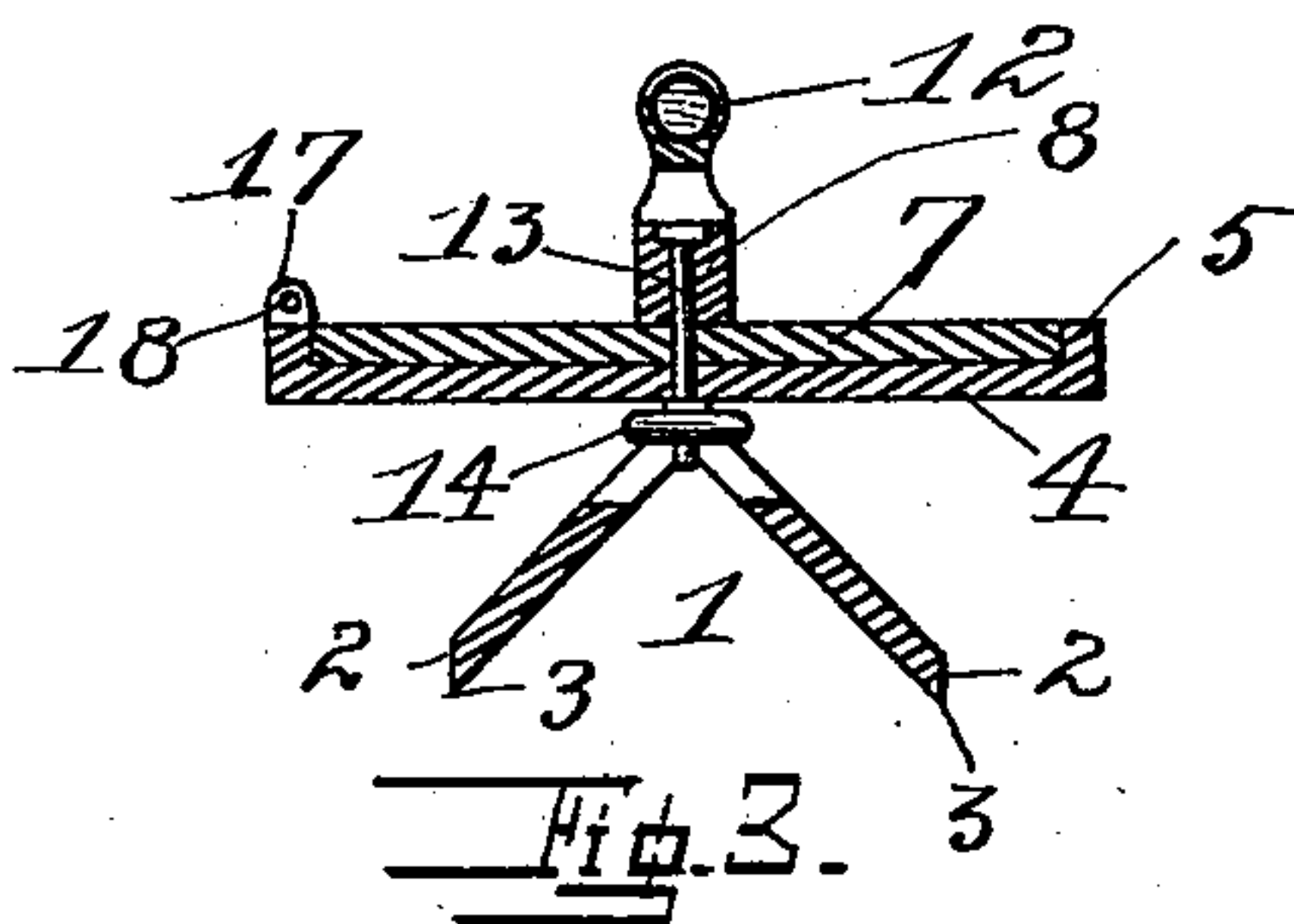
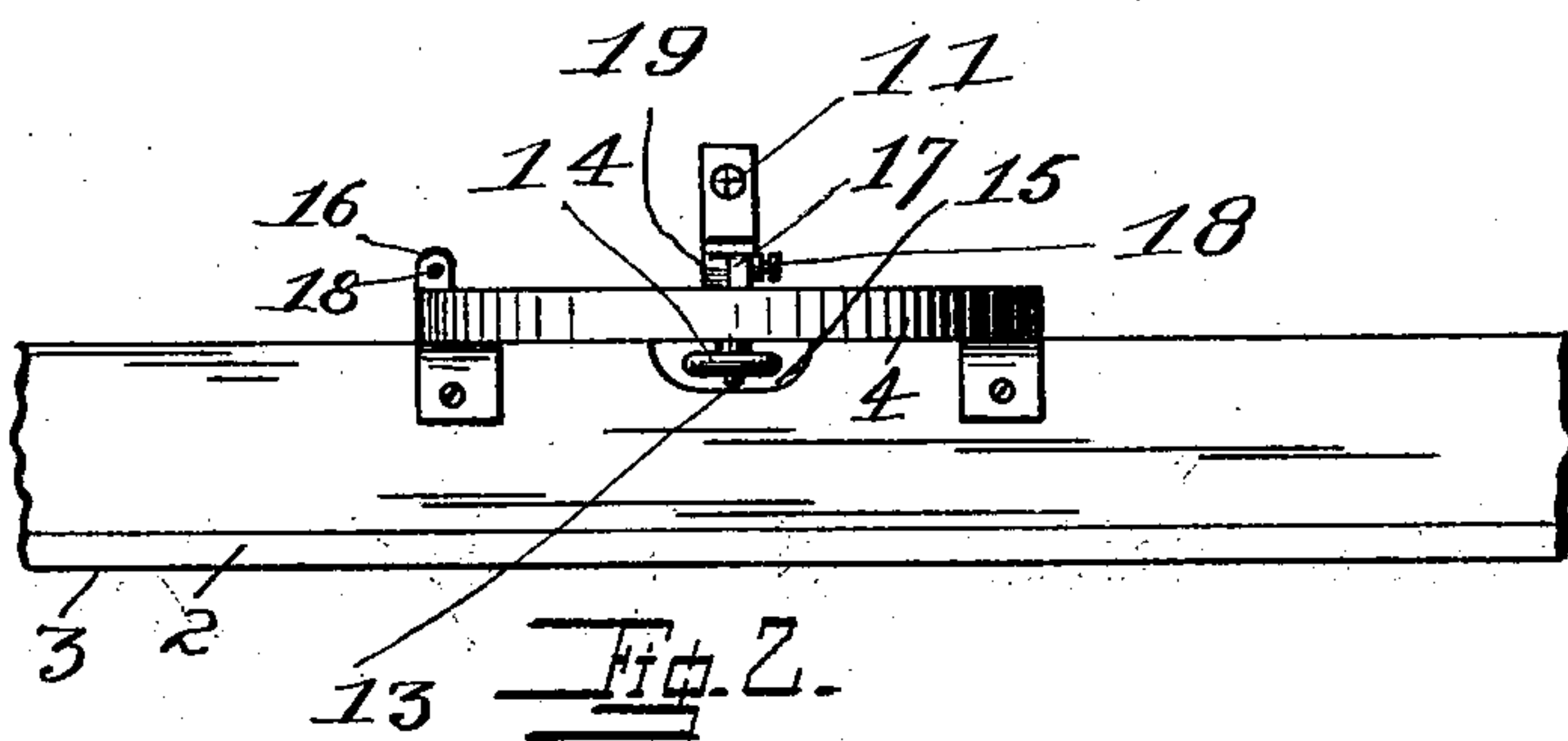
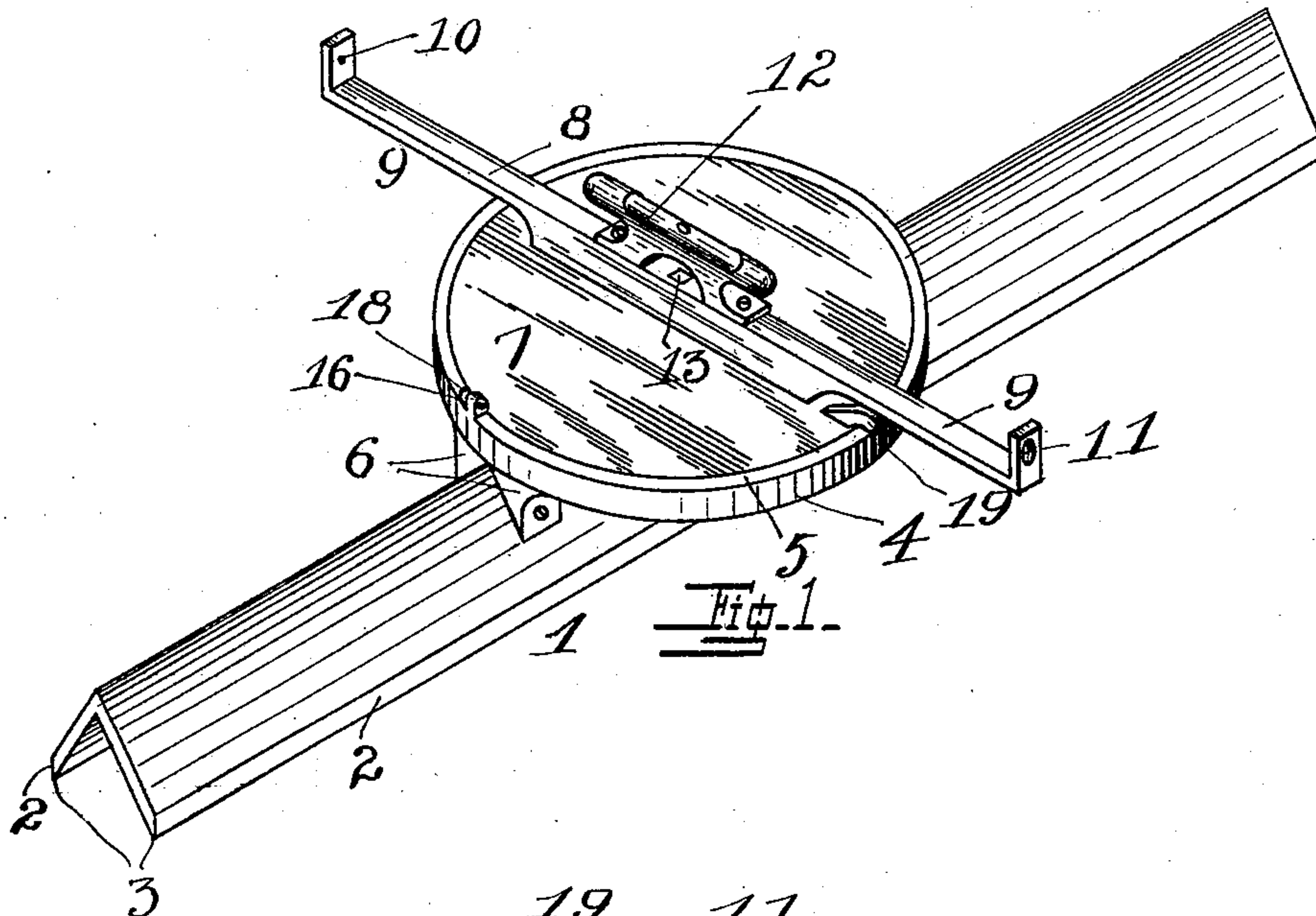


(No Model.)

H. B. CAMPBELL.  
SHAFT SETTING DEVICE.

No. 521,306.

Patented June 12, 1894.



Witnesses

L. F. Hayden.

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Inventor

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# UNITED STATES PATENT OFFICE.

HUMPHREY B. CAMPBELL, OF ATLANTA, GEORGIA.

## SHAFT-SETTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 521,306, dated June 12, 1894.

Application filed June 26, 1893. Serial No. 478,926. (No model.)

*To all whom it may concern:*

Be it known that I, HUMPHREY B. CAMPBELL, a citizen of the United States of America, and a resident of Atlanta, in the county of Fulton and State of Georgia, have made a certain new and useful Device for Setting Shafting, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to levels, having for its specific object the production of a level such as will be adaptable with a high degree of accuracy to the leveling and paralleling of shafting, placing of pulleys thereon, and the setting of machinery, the invention consisting of a certain new and useful construction, hereinafter fully specified and claimed.

In the accompanying drawings, Figure 1 is a perspective view of the device showing same fully assembled and in working order. Fig. 2 is a side elevation of the device, the parts being in the positions shown in Fig. 1. Fig. 3 is a cross-section of the device centrally of the circle thereof, when the level is turned parallel to the V-base, showing particularly the manner of bolting the device together and of holding the parts firmly in any set position.

In the figures like reference characters are uniformly employed in the designation of corresponding elements of construction in all the views.

1 is the base which is of metal and in the form of an inverted letter V, machined straight and to the proper angle on its inner sides, and having the outer faces 2, machined on the extreme lower edges, whereby the lower corners 3 are perfectly parallel, as well as the other parts just mentioned. Made integrally with said base, or suitably joined thereto is a circle 4, which is provided with an upwardly projecting annular flange 5, and should have braces 6 under same for sake of strength and stability. Said circle 4 should be nicely machined on its top side, so as to occupy the proper position relatively to the V-base 1, and a disk 7 is fitted therein so

as to move freely but not loosely therein, the flange 5 holding same in the proper place whether the bolt hereinafter described is tightened or not. If desired an outwardly projecting flange may be made on the said disk and fitted to cover the joint between same and the flange 5 and thus exclude dust but this would be one of the complements of a more costly instrument and would probably be accompanied by a greater excellence of finish and adjustments than would be necessary to the proper operation of the device for ordinary purposes. The leveling instrument 8 is secured centrally to the upper side of the disk 7 in any desired manner and consists of arms 9 arranged radially thereof each carrying a centering device, such as, for instance, a pin-hole 10 or crossed threads 11, while mounted on the middle of the top thereof is a spirit level 12. A bolt 13 passes downwardly through the arms 9, disk 7, and circle 4, centrally thereof, and a nut 14 is screwed onto its lower screw-threaded end whereby said bolt may be tightened, a notch 15 being cut in the top corner of the V-base to permit said nut to be placed. Projecting upwardly from the top of the flange 5 are two lugs 16 and 17, each of which is provided with an adjusting screw 18. A lug 19 on the disk is adapted to contact with the end of either of said screws according to its direction of movement as said disk is revolved, and be stopped thereby in such a position that the level is either at a right angle to the V-base or parallel thereto, the screws 18 being adjustable in order that this stopping point may be made to be exactly in the proper position.

The operation of this device is as follows:— To set shafting parallel, the device is placed on the shaft already set and a mark is made on said shaft directly under the center of the V-base. Then sight through the leveling tube to a point on the countershaft to be set and make a mark at the point sighted. Move the level from the shaft where it now is to the counter shaft (or shaft being set) and sight at the mark on the shaft already set, the mark on the shaft whereon the device is now placed being directly under the center of the V-base. Any difference from the parallel of the two shafts will be indicated by



the second sighting just described locating some other point on the main-shaft than the point first marked. The sighting part of the instrument must be set at a right angle to the base for this operation, as well as that of setting pulleys and machinery to make belts run in truth, in which latter cases the device is set on the shaft to be belted from and is sighted at the pulley to be set.

15 In centering hangers in extending a line of shafting the device is set on the shaft already hung and the level moved on its base so as to be parallel to the said shaft, after which the hangers are sighted as placed in position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

20 1. In a shaft-setting device, the base formed in the shape of an inverted V, a plate secured to the apex thereof, perforated in its center, a second plate seated and adapted to revolve upon said first plate, a bolt adapted to pivot and tighten said plates, and a level and sight-

ing device mounted on said pivoted plate, 25 substantially as and for the purpose specified.

2. In a shaft setting device, a base formed of a long casting in the form of an inverted V, and a leveling and sighting device revoluble 30 on an axis perpendicular thereto, substantially as and for the purpose specified.

3. In a shaft-setting device, a base formed in the shape of an inverted V, a circular plate secured to the top side thereof and a 35 flange extending upwardly around the edge of said circular plate, a disk fitting on said plate within said flange carrying sighting device on its upper side, and a bolt passing through said disk and plate, substantially as 40 and for the purpose specified.

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

HUMPHREY B. CAMPBELL.

Witnesses:

A. P. WOOD,  
HARDIE L. KEITH.