P. E. JOSEPH.

TABLE AND SUPPORT.

APPLICATION FILED JAN. 27, 1908.

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944,560.

Fig. 2

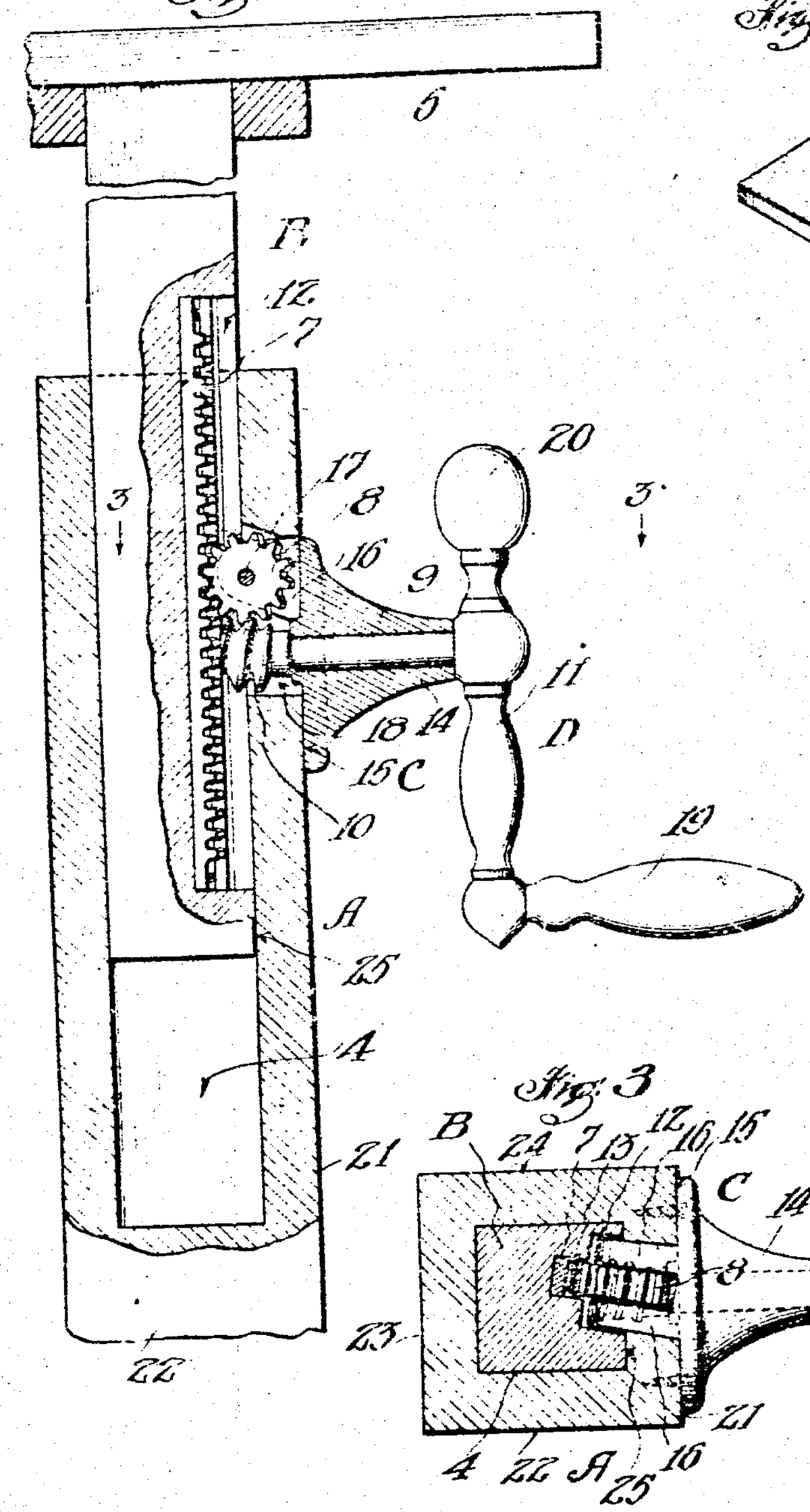

Fig. 1

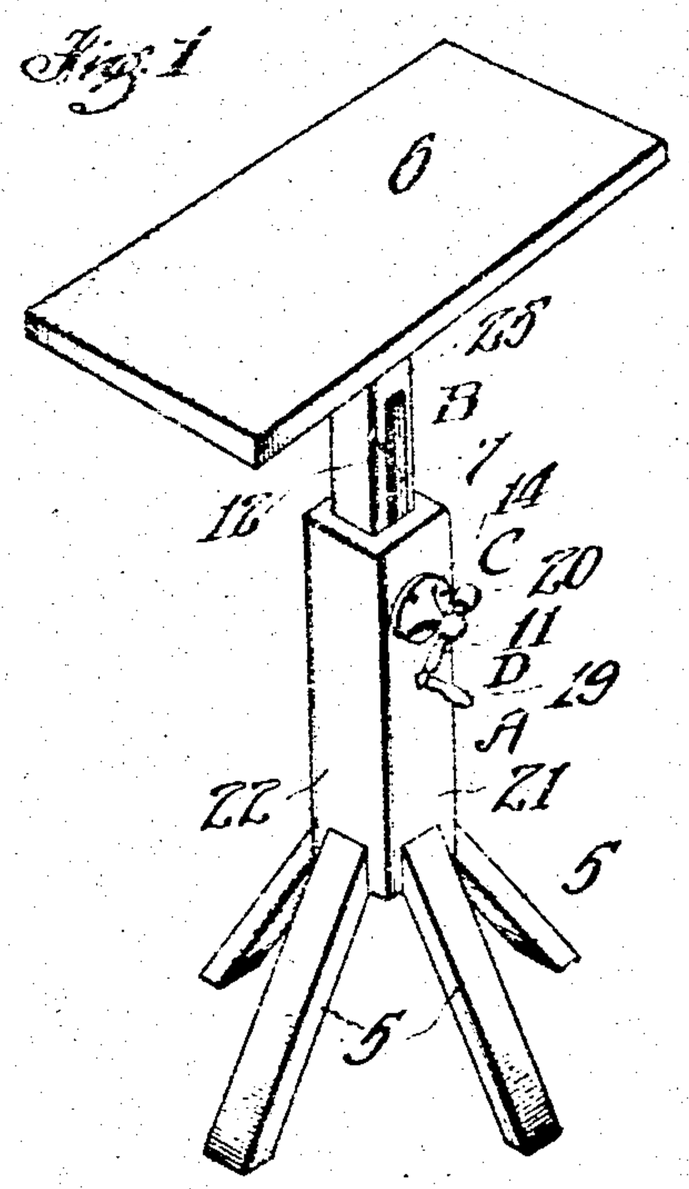

Fig. 3

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UNITED STATES PATENT OFFICE.

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TABLE AND SUPPORT.

944,560. Specification of Letters Patent. Patented Dec. 28, 1909.

Application filed January 27, 1908. Serial No. 412,950.

To all whom it may concern:

Be it known that I, PAUL E. JOSEPH, a citizen of the United States, residing at Waterman, in the county of Amador and State of California, have invented new and useful Improvements in Tables and Supports, of which the following is a specification.

This invention relates to tables and supports, and more particularly to adjustments for the same; and it has for its objects to provide improvements of this character whereby the parts or members of tables or other supports may be relatively moved or adjusted and maintained in the resultant position or positions consequent upon such relative movement or adjustment.

The invention has for its further particular objects the provision of improvements of the character described which shall be superior in point of inexpensiveness, relative simplicity, increased durability of construction and positiveness in operation, and general efficiency and serviceability, all in respect to the devices and constructions of the same general character heretofore devised.

The invention consists in the construction, provision, combination, association and application of parts, members and features, all as hereinafter described and shown in the drawings.

In the drawings:—Figure 1 is a perspective view of a table or support embodying the invention; Fig. 2 is an enlarged detail elevation, partly in section and partly broken away for clearance of illustration, of a position of the construction shown in Fig. 1, and embracing the improvements constituting the invention; and, Fig. 3 is a detail transverse sectional view, taken upon the line 3—3, Fig. 2, and looking in the direction of the appended arrows.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring with particularity to the drawing, the table or support embodying the invention, shown in full in Fig. 1, and fragmentarily in the other figures, comprises a relatively movable pedestal or base A and upright standard or leg B, the latter of which is shown as telescoping into a chamber 4 extending vertically in the former. The pedestal or base A is provided with suitable legs 5; and the standard or leg B carries a table-top or other element 6, of suitable or any preferred form or type.

The particular formation, construction, and relative arrangement of the parts or members above described and concerned structurally in the organization of the pedestal or base A and standard or leg B, and their respective adjuncts, have no significance pertinent to the invention, which latter comprises adjusting means C for relatively moving the pedestal or base A and the standard or leg B and maintaining the same in position of relative adjustment or consequent upon relative movement. Combined with the adjusting and locking means C are operating means D.

A preferred particular form of construction, provision, combination and relative arrangement and association of parts, members and features constituting the invention is as follows: The adjusting and locking means C, in combination with the operating means D, comprise a toothed member or rack 7 upon the standard or leg B, a toothed member or pinion 8 connected with the pedestal or base A, a shaft 9 connected with the pedestal or base A and carrying a worm 10, and a crank 11 connected with the shaft 9. The shaft 9 and worm 10 have a common axis. The standard or leg B is provided with a longitudinal or vertical chamber 12 having a recess 13 offset therefrom and of coextensive formation; the chamber and recess being formed angularly in the standard or leg B with respect to one face thereof; and the rack 7 is suitably secured within the recess 13, with its teeth extending serially longitudinally of the standard or leg B; whereby the operative face of the rack 7 lies in a plane at an angle with the plane of the face of the standard or leg B through which the chamber 12 and recess 13 are produced. The shaft 9 is journaled in a bracket or sleeve 14, one face of which, namely 15, fits against and is applied to a face of the pedestal or base A. Formed upon or secured to the bracket or sleeve 14, at the face 15 thereof, are two spaced lugs or heads 16 between which is rotatively mounted the pinion 8, by means of a transverse bearing or pin 17. The worm 10 is applied to the inner end of the shaft 9, beneath the pinion 8, and meshes therewith. The pedestal or base A is provided with a transverse chamber or

meshes therewith. The pedestal or base A is provided with a transverse chamber or opening 18 inwardly of or beneath the face 15 of the bracket or sleeve 14, and communicating with the chamber 12. The lugs or heads 16, the pinion 8 and the worm 10 lie within the chamber or opening 18 and project therefrom into the chamber 12, the pinion 8 meshing with the rack 7. The lugs or heads 16 project angularly from the face 15 of the bracket or sleeve 14, so that the pinion 8 has a true mesh with the rack 7 and with the worm 10; there being an angularity between the axis of the worm 10 and a line diametrical of the pinion 8 and cutting the face of the rack 7, which angularity is equivalent to the pitch of the worm 10. The relative arrangement in respect to angularity, concerned in the positioning of the rack 7 and pinion 8 with respect to the worm 10, as above described, permits of a true mesh of the pinion with the worm; and the direct face-to-face arrangement of the pinion and rack cause a true mesh of the same; the operative connection of the rack pinion and worm being thus perfect and insuring the highest working efficiency.

The crank 11 upon the outer end of the shaft 9 is provided with a handle 19 and a counter-weight 20 for the same, the latter balancing each other in their torsional effect upon the shaft 9.

The pedestal or base A is shown as rectangular in form, comprising four sides or members 21, 22, 23, and 24 surrounding and closely fitting a rectangular standard or leg B. The side or member 21 is that to which the face 15 of the bracket or sleeve is secured, the standard or leg B having a side or face 25 through which the chamber 12 is formed.

The operation, method of use and advantages of the improvements constituting the invention will be readily understood from the foregoing, taken in connection with the accompanying drawings and the following statement:—The pedestal or base A and the standard or leg B which telescopes into the former, may be relatively moved by the adjusting means C to position the table-top 6 as desired; and said adjusting means C will serve as locking means to prevent further relative movement of the pedestal or base A and standard B until the adjusting means C are again actuated, such actuation being performed by the operating means D. The handle 19 is properly balanced by the counter-weight 20, whereby the crank 11, and the aforementioned parts of the operating means B exert no torsional or unbalancing effect upon the shaft 9, the pinion 8 and the rack 7, to inadvertiently affect the same. The true mesh of the pinion 8 with the rack 7 and with the worm 10, due to the angularity between the axis of the worm 10 and a line diametrical of the pinion 8 and cutting the face of rack 7, which angularity is equivalent to the pitch of the worm 10, results in the highest working efficiency of the adjusting means C and the operating means D, insuring easy manipulation of these elements. It will be noted that the pinion 8, together with the lugs or heads 16, are carried by the bracket or sleeve 14, as well as are the shaft 9, the worm 10, and the crank 11 together with the counter weight 20 and the handle 19. All of these parts and members may thus be installed in operative position in connection with the pedestal or base A, and removed from such position in one operation; and the rack 7 may be conveniently installed for use and removed for replacement or repair as desired; all to the end that the parts and features embodying the invention are susceptible of simple and convenient assembling and disassembling.

The entire provision, relative arrangement and inter-operation of parts, members and features is conducive of inexpensiveness and simplicity in construction, durability, facility of operation and general efficiency.

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

The combination, with two relatively movable members consisting of a pedestal and a standard slidably fitting a chamber in the same; of a rack secured to said standard at an angle to one face thereof; a bracket secured to said pedestal and provided with heads projecting angularly from the face of the bracket which contacts with the pedestal and into said chamber in the pedestal; a pinion mounted between the heads and meshing with the rack, and a shaft mounted in said bracket and provided with a worm meshing with said pinion, said shaft and said worm having a common axis, the axis of said shaft extending at an angle to a line diametrical of said pinion equivalent to the pitch of the worm; whereby said pinion has true mesh with both said worm and said rack; and operating means for said shaft.

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

PAUL E. JOSEPH.

Witnesses:
WM. T. RANDALL,
MAX O. CONGER.