April 5, 1927. 1,623,427

F. J. MANROCK

GRAVITY TABLE

Filed Jan. 22. 1926

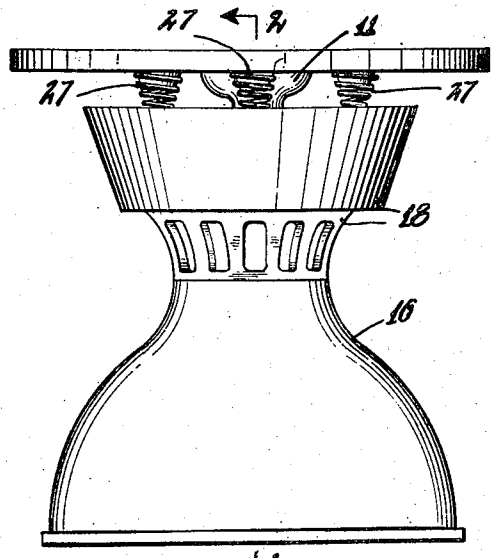


FIG. 1.

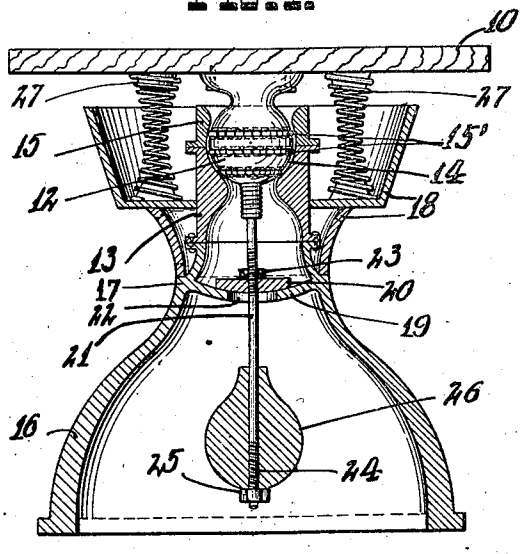


FIG. 2.

INVENTOR.
Frank J. Manrock
BY
ATTORNEY

Patented Apr. 5, 1927. 1,623,427

UNITED STATES PATENT OFFICE.

FRANK J. MANROCK, OF NEWARK, NEW JERSEY.

GRAVITY TABLE.

Application filed January 22, 1926. Serial No. 83,066.

This invention relates generally to tables used in dining rooms of ships or steamers and the like, the invention having more particular reference to a novel type of table. The invention has for an object the provision of an improved table which has a self-leveling or self-righting top.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

Fig. 1 of the drawing is a side elevational view of my improved self-leveling table.

Fig. 2 is a longitudinal sectional view taken on the line 2—2 of Figure 1.

As here embodied my improved self-leveling table comprises briefly a top 10 to which is rigidly attached at its center a supplementary top 11 having a spherical portion 12 formed at its lower extremity, the said spherical portion being a movable fit in the supplementary base 13 by means of the spherical aperture 14 formed in the said supplementary base and in the upper element 15 which is suitably attached to the said supplementary base 13, the upper element 15 being detachable to permit of assembling the device. As a means of insuring free and easy motion of the top 10, I have provided ball bearing as illustrated by the numeral 15′ on the accompanying drawing.

The base 16 is suitably attached to the supplementary base 13, and is provided with a flange 17 or any similar groove or protrusion located near its upper extremity to accommodate the lower portion of the cup shaped member 18, and a radial portion 19 to accommodate the adjustable block 20. The adjustable block 20 has a convex lower surface adapted to be disposed adjacent the concave upper surface of the radial portion 19. The force of friction between these two surfaces may be predetermined by adjustment of the nut 23 for the purpose of retarding the motion of the top. A plurality of springs 27 are interposed between the lower surface of the top 10 and the upper surface of the cup shaped member 18. The spherical portion 12 has a depending rod 21, centrally attached at its upper extremity, to the spherical portion 12, and has a threaded portion 22 at or near its center to accommodate the adustable block 20, and the locking nut 23. Its lower extremity has a similar threaded portion 24 to accommodate a second locking nut 25, which is provided as a means of holding the weight 26, which is a slidable fit on the rod 21, in any desired position at or near the lower extremity of the said rod.

It will be understood that my improved device may be made of any suitable materials, the exterior parts being made preferably of wood, and of any desired or suitable design and shape, the working parts being made preferably of metal.

It is obvious that I have provided a table having a top 10 which will always assume a level position, whether the base 16 is level or tilted for any reason, such as would occur should my improved self-leveling table be installed on board ship. It is further obvious that by means of the superimposed springs 27, the adjustable block 20 and the weight 26, the two later mentioned elements being adjustable as heretobefore mentioned, that the action or movement of the said top 10 may be readily altered or changed to meet all requirements.

While I have above described the preferred form, construction and arrangement of the several elements employed, it will be understood that the device, is nevertheless, susceptible of considerable modification therein, and I therefore reserve the privilege of resorting to all such changes as may be fairly embodied within the spirit and scope of the invention as claimed.

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

1. A self levelling table comprising a top horizontal member, a substantially spherical member mounted at the center of the bottom surface of said top member, a base for said table, a socket for said spherical member mounted on said base, a shelf disposed around said socket positioned below said horizontal top member, a plurality of spaced compression springs interposed between said shelf and said top member adapted to resiliently hold the latter in a substantially horizontal position, a depending rod secured to said spherical member, a weight adjustably mounted on the lower end of said rod and disposed within said base, a partition in said base having an upper concave surface and provided with an open-

ing to accommodate said rod, and a block having a lower convex surface adjustably mounted on said rod with its convex surface adjacent the concave surface of said partition for retarding the movement of said upper horizontal member.

2. A self levelling table comprising a top horizontal member, a base for supporting said top, a ball and socket joint connecting said base and said horizontal top member, a rod attached to the ball of said joint, a weight adjustably mounted on the end of said rod for normally retaining said top member in a horizontal position, resilient member for supporting said top member adapted to resist displacement thereof from a horizontal plane when weight is distributed unevenly upon said top member, and an adjustable friction block mounted on said rod adapted to frictionally engage a portion of said base for retarding movement of said top member.

In testimony whereof I have affixed my signature.

FRANK J. MANROCK.