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S. SEIDEN ET AL

LEVELING DEVICE

Filed April 9, 1926

Fig. 1.

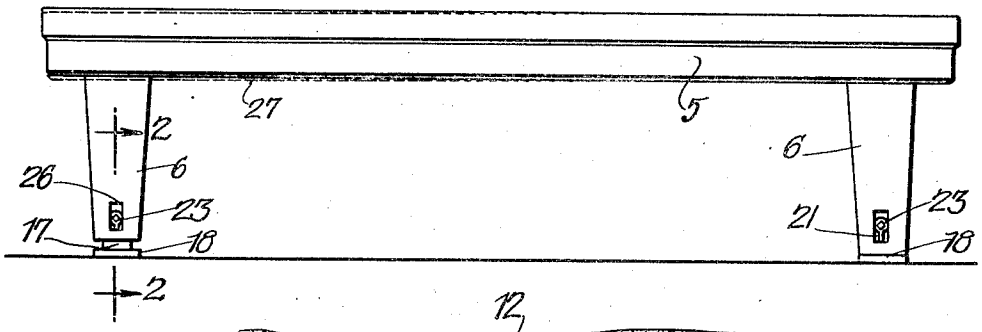
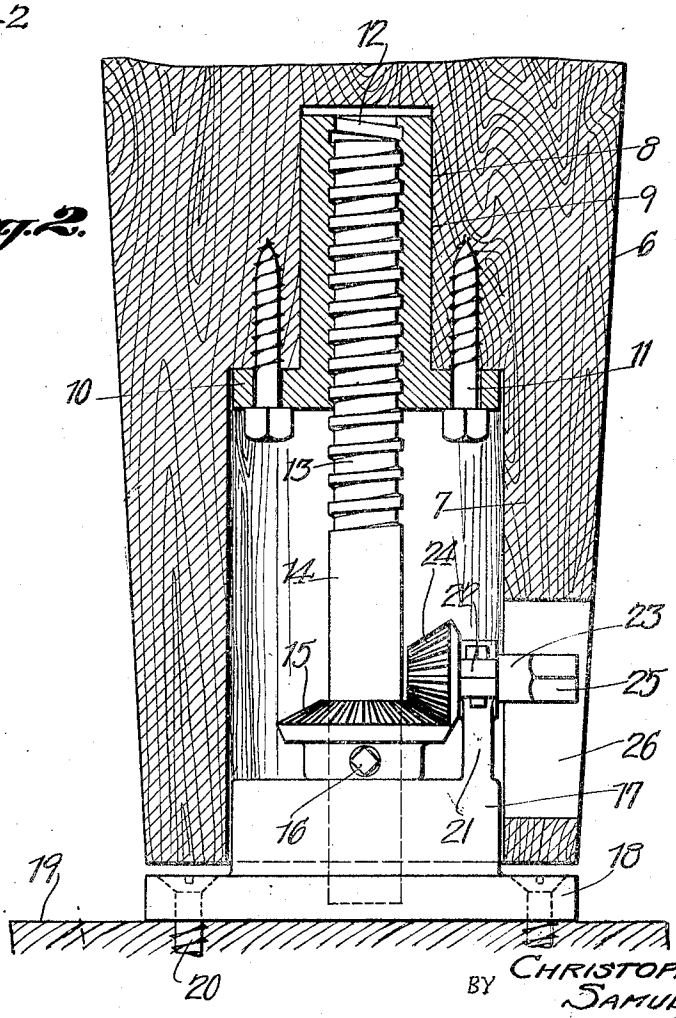


Fig. 2.



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UNITED STATES PATENT OFFICE.

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LEVELING DEVICE.

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This invention relates to leveling devices and in particular to a device adapted to level up billiard or game tables, and to anchor the same securely to the floor.

A particular object of the invention is to provide a convenient means whereby the legs of a table, particularly a billiard table, may be adjusted to level the table as is necessary in the playing of games.

A further object of the invention is to provide a simplified table raising mechanism which can be operated to adjust the height of all of the corners of the table without the necessity of chocking up the legs of the table, as has heretofore been the practice in order to make the table perfectly level.

A still further object of the invention is to provide a device for anchoring and leveling tables which embodies few parts and which can be made cheaply and which will not get out of order easily.

To enable others skilled in the art to fully comprehend the underlying features of our invention that they may embody the same in the various modifications in structure and relation contemplated, drawings depicting a preferred form have been annexed as a part of this disclosure and in such drawings similar reference characters denote corresponding parts throughout all of the views, of which,

Figure 1 is a view in side elevation of a billiard table or other like game table, having incorporated in the legs thereof our improved leveling device, and

Figure 2 is an enlarged sectional detailed view taken on the line 2—2 of Figure 1 showing the construction and operation of our improved leveling device.

Referring to the drawings in detail 5 indicates the body or bed of a billiard or other game table of heavy construction having the supporting leg members 6. It has always been a problem to accurately adjust a billiard table so that the surface thereof is perfectly level and in order to do this various means have been resorted to, such for instance, as putting small blocks under the legs of the table and other such devices that will bring the table at the corners thereof to the required height to make the bed of the table perfecly level, so that balls or other game pieces thereon will have free and unrestricted movements thereacrosss, and to this end we provide in each of the legs 6 of the table a centrally disposed inwardly extending bore 7, the upper end of which terminates in a bore 8 of substantially smaller diameter in which is adapted to be held the internally threaded sleeve member 9, which is provided at its lower end with a flange 10, through which are adapted to pass the wood screws 11 whereby the flange 10 will be bound against the inner end of the bore 7 and the sleeve 9 will be held securely in place within the bore 8. This sleeve member 9 has operating through the internally threaded bore 12 thereof, the threaded end 13 of a jack screw 14, the lower end of which passes through a beveled gear 15 and is secured thereto, through the medium of the set screw 16 carried by said bevel gear 15. The jack screw 14 is journaled at its lower end in a suitable base 17 which is preferably formed integral with a base plate 18 and is of substantially the same diameter as the internal bore 7 in the table legs, whereby the lower end of the table will have sliding movement longitudinally of said base 17 and will be guided thereby in its vertical movement. The base plate 18 may be square or round, depending upon the shape of the table legs 6 and said base plate is of substantially the same diameter as the lower edge of the table legs and forms therefore a support upon which the table leg rests when the same is in its lowered position. The base plate 18 may be suitably secured to the flooring 19 by the screws 20.

The base 17 is provided at one side with an upstanding bracket 21 which forms a bearing at its upper end as at 22 for the pinion carrying shaft 23, which is journaled therein and which carries at its inner end the pinion 24 which meshes with the beveled gear 15. The outer end of the pinion carrying shaft 23 is squared as at 25 so that it may be engaged by a suitable socket wrench for manipulation, the end of the shaft being disposed in a suitable opening 26 formed in the legs of the table adjacent the bracket and arranged so that a socket wrench or brace can be applied to the shaft 23 to cause operation of the beveled gear 15 through the pinion 24 to cause operation of the jack screw in the sleeve 8 to raise or lower the table as desired.

It will be evident therefore that we have provided an improved table anchoring and

leveling device which can be manipulated to give a fine adjustment in the height of one corner of the table and which as shown by the dotted line 27, in Figure 1, can be arranged to bring the table down or up to a perfectly level position.

It is also evident that we have provided for heavy tables, such as billiard tables, a suitable adjusting device which can be manipulated with a suitable socket wrench or brace member so that the table can be raised with a minimum of effort due to the ratio of the operating gears and jack.

While we have illustrated and described our invention with some degree of particularity, we realize that in practice various alterations therein may be made. We therefore reserve the right and privilege of changing the form of the details of construction or otherwise altering the arrangement of the correlated parts without departing from the spirit of the invention or the scope of the appended claims.

Having thus described our invention what we claim as new and desire to secure by United States Letters Patent is:

1. The combination with the leg of a table having a bore in the lower end thereof and an opening adjacent said bore, of an elongated sleeve in the bore fixed to said leg, a screw operable in said sleeve, means disposed in said opening for operating said screw to cause vertical movement of the table, a base for keeping the screw in vertical alignment, the base having an upwardly disposed extension which fits snugly within the bore and serves as a guide for the leg during its movement and an extended foot portion on said base adapted to be secured to the floor to form an anchor for the table and a bracket associated with the base and arranged to support the screw operating means.

2. The combination with the leg of the table having a bore in the lower end thereof and a reduced bore extending further into the leg of the table, of a flanged, elongated, internally threaded sleeve seated in said extended bore, a screw operable in said sleeve, a base in which the lower end of the screw is journalled, said base having a foot portion upon which the lower end of the table leg may rest and having an upwardly projecting portion adapted to fit into the lower bore of the leg to guide the vertical movement of said leg, a bracket on said projecting portion, a gear combination carried by the bracket and the screw through which the latter can be operated to raise and lower the table, and means for fastening the base foot portion to the floor whereby the same forms an anchor for the legs of the table.

3. A leveling and anchoring device for the leg of a table comprising a base member having a foot portion adapted to be secured to the floor and to form a rest for the lower end of the table leg, an extended guide portion on the base, a bracket on the guide portion, said table leg having a bore of slightly larger dimension than said guide portion whereby the leg can move thereover and be guided thereby, the bore having an extended portion of lesser dimension, a flanged sleeve in said last mentioned bore, a shaft seated in the base member and having threaded connection with the sleeve, a shaft carried by the bracket, the table leg having a side opening into which the shaft extends, the opening being arranged to accommodate the movement of the table leg, and a gear connection between the shaft whereby the first mentioned shaft is operated through said sleeve to raise and lower the table leg.

In testimony whereof we affix our signatures.

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