Apr. 17, 1923.

1,451,999

G. R. PERRY

FURNITURE LEVELING DEVICE

Filed Jan. 31, 1921

Fig. 1.

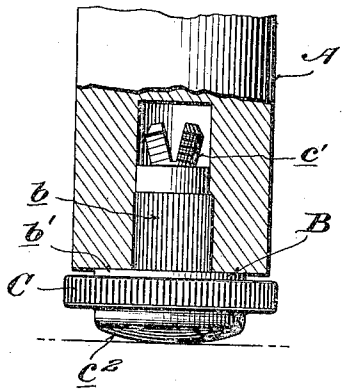


Fig. 2.

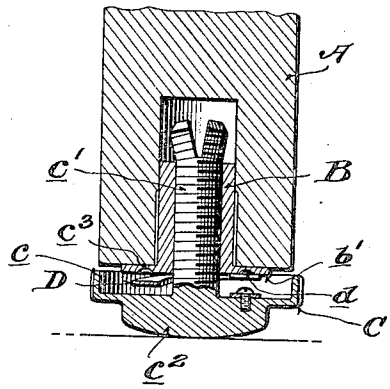


Fig. 3.

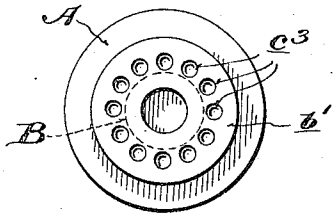


Fig. 4.

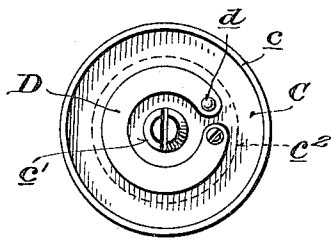


Fig. 5.

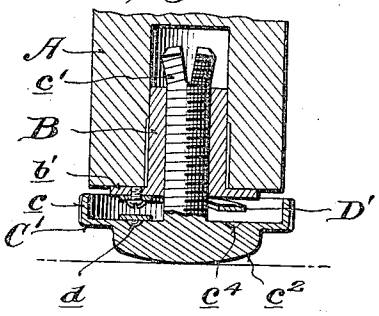


Fig. 7.

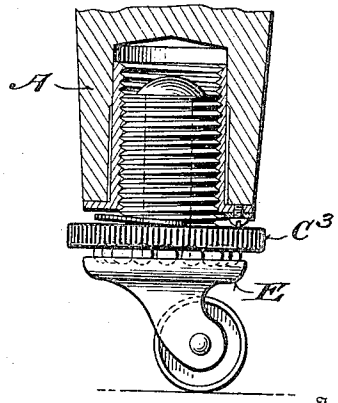
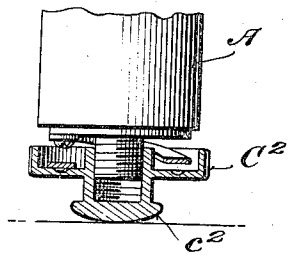


Fig. 6.



Inventor

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UNITED STATES PATENT OFFICE.

GEORGE R. PERRY, OF WASHINGTON, DISTRICT OF COLUMBIA.

FURNITURE-LEVELING DEVICE.

Application filed January 31, 1921. Serial No. 441,218.

To all whom it may concern:

Be it known that I, GEORGE R. PERRY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Furniture-Leveling Devices; 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.

This invention relates to means employed to vary the length of a table leg or support for a table, chair, or other article of furniture, in order to compensate for any differences in the length of the legs or inequalities in the surface of the floor or foundation upon which the legs of the table or other article of furniture may rest.

The primary object of the invention is to provide a furniture leveling device adapted for attachment to the legs of a chair or table or other article of furniture and operable by pressure of the sole of the shoe of a person standing beside or seated at the table or on a chair or other piece of furniture without requiring such person to lean over or stoop down for the purpose of adjusting the length of the leg of the table by hand, as is necessary in using furniture treads or levelling devices of a somewhat similar character as heretofore ordinarily constructed. A further object is to provide a simple, inexpensive, efficient and durable device of the character referred to, which will not be liable to get out of order and which may be easily applied to the leg of a table, chair or the like, and easily removed for renewal of a worn or broken part. Further objects are to provide means for automatically locking the revoluble element of the adjusting device, after rotation thereof to a sufficient extent to accomplish the desired adjustment, and holding it in a fixed position by frictional resistance until released by the application of foot pressure sufficient to overcome such resistance, together with means to prevent separation of the stationary and revoluble elements by undue rotation of the latter.

The invention will first be hereinafter more particularly described, with reference to the accompanying drawings, which are to be taken as a part of this specification, and then pointed out in the claims at the end of the description.

In said drawings,

Fig. 1 represents a sectional side elevation of the lower end of the leg of a table, chair or other piece of furniture, equipped with a leveling device embodying my invention;

Fig. 2 is a vertical sectional view of the same taken on a line about midway of Fig. 1;

Fig. 3 is an inverted plan view of the fixed element of the leveling device shown in Figs. 1 and 2;

Fig. 4 is a plan view of the revoluble element;

Fig. 5 represents a vertical sectional view of a modified form of the device;

Fig. 6 is a side elevation partly in section of another modification; and

Fig. 7 is a vertical sectional view of an additional modification as applied to a furniture leg equipped with my improved leveling device and supported on a caster wheel with ball bearings.

Referring to said drawings, in which the same reference letters are used to denote corresponding parts in different views, the letter A may denote the leg of a table, chair, or other article of furniture, having a socket or recess therein in which is driven an interiorly threaded socket member B of my leveling device, said member B having an externally nurled or milled shank or body portion b to prevent rotation and also having a flange b^1 which fits against the lower end of the leg and, if desired, may be apertured for the insertion of a pin or screw therethrough for securing it to the lower end of said leg. The letter C denotes the revoluble member of the leveling device, which is preferably of disk-like form having an upturned marginal flange c, the exterior surface of which is milled or roughened for contact with the sole of the shoe of a person standing beside or sitting at a table or upon a chair to the legs of which my improved leveling device is attached. The member C has a threaded shank or screw c^1 adapted to be screwed into the interiorly threaded socket member B and adjusted for varying the length of the leg, being held at different elevations by the screw threads, and locked after adjustment by means hereinafter described. The disk-like member C is preferably formed or provided on the underside thereof with a centrally disposed boss or protuberance c^2 which is preferably

rounded and adapted to rest upon the floor or other support on which the table or chair rests to enable the latter to be slid over the surface of the floor without undue friction and at the same time provide, as it were, a pivot on which the revoluble disk-like member C may rotate. To prevent the revoluble member from being disconnected by turning it further than is necessary to effect the required adjustment or variation of the length of the table leg, the free end of the shank is split and screwed into the socket member B so as to project beyond the latter member and the split portion of its projecting end is spread apart, as shown, so that it cannot be unscrewed under ordinary conditions or without applying considerable force sufficient to compress the split end. Between the revoluble and fixed members B and C is placed a spring D, preferably consisting of a flat steel strip, fastened at one end to either the revoluble member of the device, as shown in Figs. 1 to 4, or to the fixed member, as shown in Figs. 5 and 7, and having on its free end a stud or protuberance d adapted to enter any one of a series of depressions or notches c^3 in the flange b^1 of the fixed element B or similar depressions c^4 in the upper surface of the revoluble disk-like member C^1 (Fig. 5) so as to normally hold the revoluble element stationary and yieldingly lock and resist rotation thereof while permitting rotation when sufficient force is applied thereto to overcome such resistance. It will be observed that the rotatable member or adjusting element is arranged close to the floor and in close proximity to the lower end of the table or chair leg, so as to adapt it to be easily engaged by the sole of the shoe of a person standing beside or sitting at the table or on a chair or other piece of furniture equipped with the leveling device. Preferably the revoluble member C is circular in form and of such size that its periphery extends slightly beyond the surface or periphery of the leg to which it is attached in order to facilitate contact thereof with the sole of a shoe resting on the floor and pressing thereon so as to rotate the same and effect the desired adjustment.

In Fig. 6 I have shown a modification in which the revoluble element C^2 is formed with a socket to receive a screw fixed on the lower end of the leg.

In Fig. 7 I have shown a furniture leg supported on a caster wheel and equipped with my improved leveler constructed as hereinbefore described with a disk-like revoluble element C^3 the entire revoluble element including its externally threaded shank portion being centrally bored to permit the insertion of the shank member of an ordinary caster, said disk-like portion of the revoluble element C^3 having a ball race or groove on its underside and a series of balls running in said groove between it and the head-plate E of a caster wheel.

My improved leveling device, constructed as described, while especially designed for leveling dining tables, victrolas and the like, is adapted for attachment to the legs of tables or chairs or any piece of furniture supported on legs or equivalent supports, and it may be constructed of any desired size, and of any suitable material, according to the desires of the manufacturer or user or the use to which it is to be put, and by its use a very nice adjustment of the table leg or the like may be secured to compensate for any inequalities in the length of the legs or in the surface of the floor on which the table rests. In using the word "table" herein and in the appended claims I desire it to be understood that it is not intended to limit the invention to such use, but to include any piece of furniture having legs or supports on which said leveling device may be used. It will also be understood that the form and arrangement of the rotating and stationary members and locking means may be varied without departing from the spirit and scope of my invention, and in some cases, the locking means might be omitted, though such means are desirable and necessary to produce more satisfactory results.

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

1. A furniture leveler of the character described, comprising an interiorly threaded socket member, a member carrying a screw partially split at its free end inserted in said socket; said member being revoluble and having a roughened surface adapted to contact with the sole of the shoe of a person standing beside or sitting at a table or on an article to which the leveler is attached, and a spring for automatically engaging and holding said revoluble member stationary, said spring being releasable by pressure tending to rotate said revoluble member.

2. A furniture leveler adapted for attachment to the leg of a table or the like, comprising an interiorly threaded socket member, a screw inserted in said socket and partially split at its free end and carrying at its other end a disk-like member having an exterior roughened surface adapted to contact with the sole of the shoe of a person standing beside or sitting at a table or on a chair equipped with said device, and means for automatically engaging and holding said disk-like member stationary in different positions, said means being releasable by pressure tending to rotate said disk-like member.

3. A furniture leveler adapted for attachment to the leg of a table or the like, com-

prising an interiorly threaded socket member, a screw inserted in said socket partially split at its free end and carrying a disk-like member having an exterior roughened surface adapted to contact with the sole of the shoe of a person sitting or standing beside a table or chair equipped with such device, said disk-like member having a centrally disposed button-like protuberance on the underside thereof adapted to rest and slide upon the floor, and a spring for automatically engaging and holding said disk-like member stationary in different positions, said spring being releasable by pressure tending to rotate said disk-like member.

4. A furniture leveling device adapted for attachment to the leg of a table or the like, comprising an interiorly threaded socket member, a member carrying a screw inserted in said socket; said member being revoluble, a disk-like element carried by the revoluble member having an exterior roughened surface adapted to contact with the sole of the shoe of a person sitting or standing beside a table or chair equipped with such device, and a spring fast at one end and having its free end adapted to automatically engage and hold said disk-like member stationary, said free end being releasable by pressure on said disk-like member.

5. A furniture leveling device adapted for attachment to the leg of a table or the like, comprising an interiorly threaded socket member, a member carrying a screw partially split at its free end inserted in said socket; said member being revoluble and carrying a disk-like element at the other end having an exterior roughened surface adapted to contact with the sole of the shoe of a person sitting or standing beside a table or chair equipped with such device, said disk-like element having on the underside thereof a centrally disposed button-like protuberance adapted to rest and slide upon the floor, and means adapted to yieldingly hold said disk-like element stationary by frictional resistance, said means being releasable by pressure sufficient to overcome said resistance.

6. A furniture leveler adapted for attachment to the leg of a table or the like, comprising an interiorly threaded socket member secured to the table leg, a revoluble disk-like member having a screw inserted in said socket and having an exterior surface adapted to contact with the sole of a shoe for imparting rotary movement thereto, and means for automatically engaging and holding said revoluble member stationary in different positions, said means consisting of a spring fastened at one end to one of said members, and having at its free end a stud adapted to frictionally engage any one of a series of depressions in the confronting surface of the other member.

7. A furniture leveler adapted for attachment to the leg of a table or the like, comprising an interiorly threaded socket member, a screw inserted in said socket having its end split and projecting beyond the end of the socket and spread apart to prevent the two parts from becoming disconnected and carrying a disk-like member having an exterior roughened surface adapted to contact with the sole of the shoe of a person standing beside or sitting at a table or on a chair equipped with said device.

8. A furniture leveler adapted for attachment to the leg of a table or the like, comprising an interiorly threaded socket member secured to the table leg, a revoluble disk-like member having a screw inserted in said socket and having an exterior roughened surface adapted to contact with the sole of a shoe for imparting rotary movement thereto, said disk-like member having a centrally disposed button-like protuberance on the under side thereof adapted to rest and slide upon the floor, means for automatically engaging and holding said revoluble member stationary in different positions, said means consisting of a spring fastened at one end to one of said members, and having at its free end a stud adapted to frictionally engage any one of a series of depressions in the confronting surface of the other member, said means being releasable by pressure tending to rotate said disk-like member.

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

GEORGE R. PERRY.

Witnesses:
ALFORD V. GUSTAFSON,
GORDON E. VARNEY.