

No. 824,525.

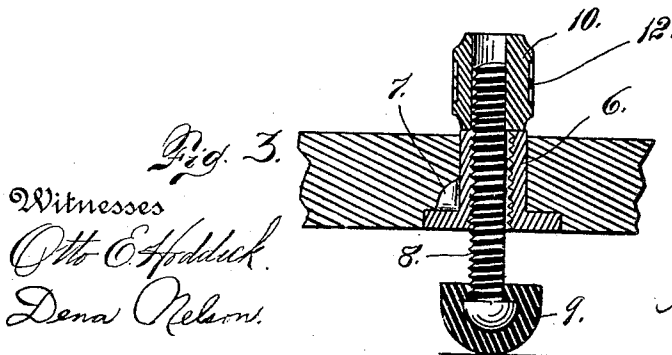
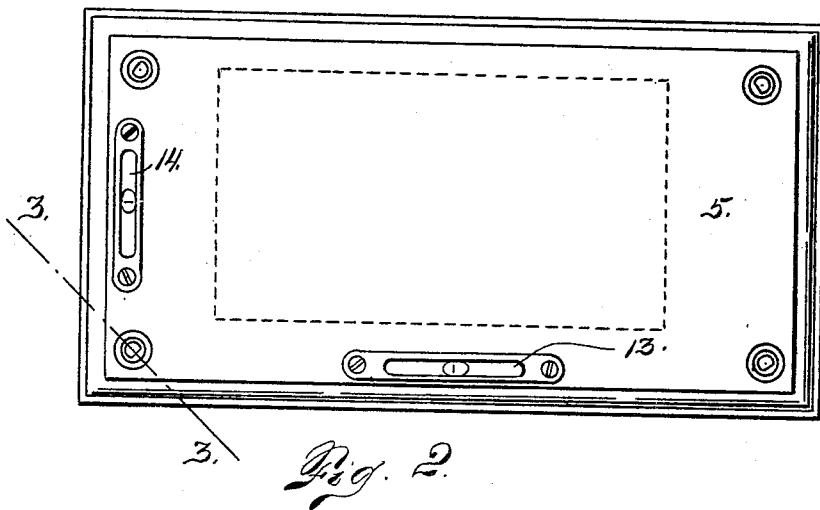
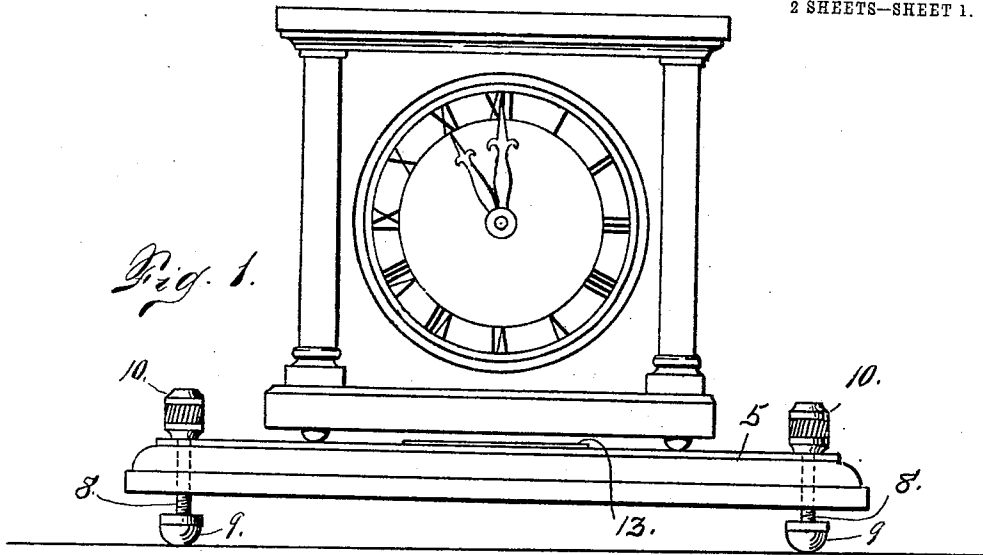
PATENTED JUNE 26, 1906.

O. L. BONNEY.

LEVELING DEVICE FOR CLOCKS AND SIMILAR INSTRUMENTS.

APPLICATION FILED SEPT. 5, 1905.

2 SHEETS—SHEET 1.



Witnesses

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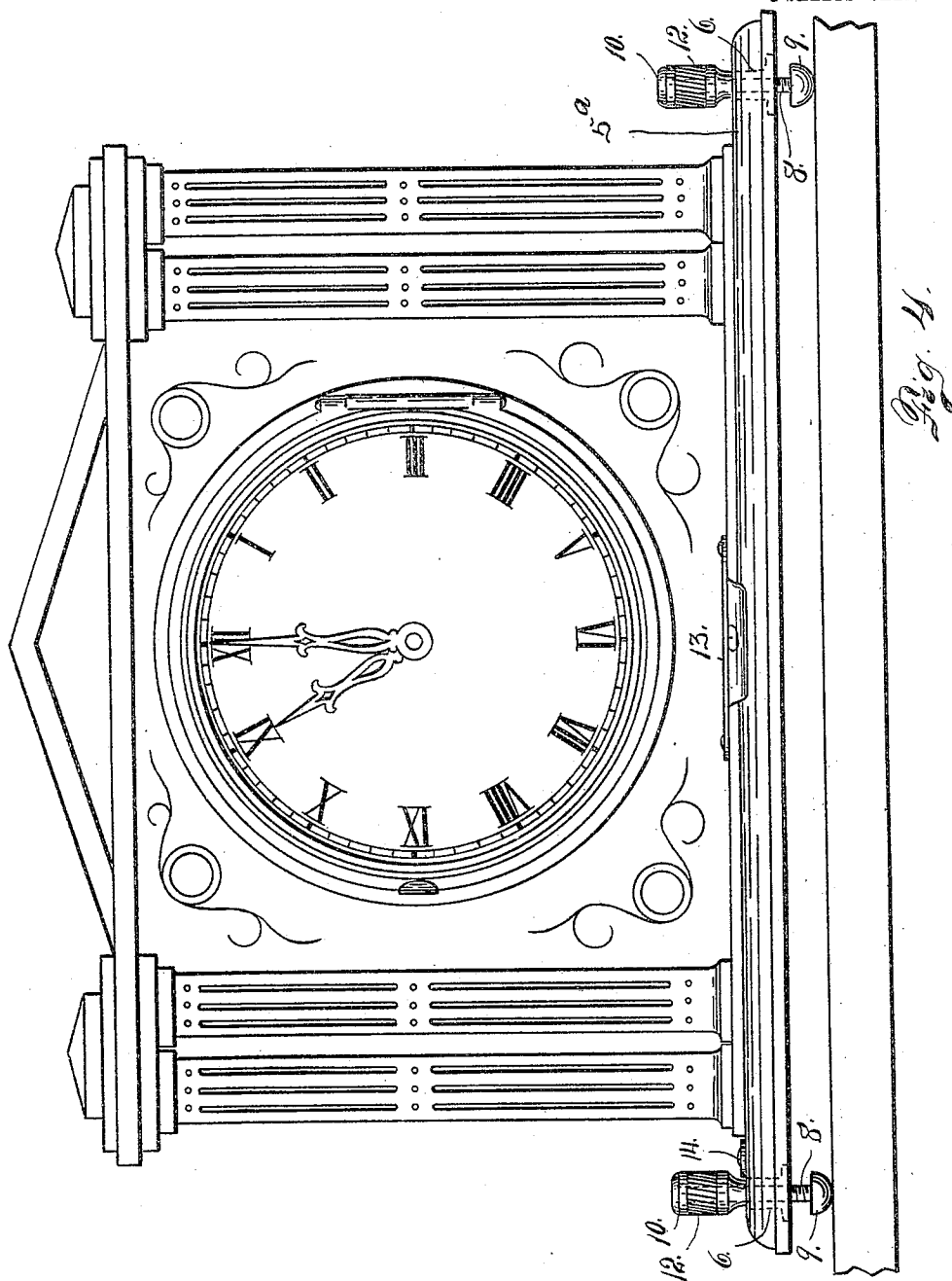
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*Otto E. Haddock.*  
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# UNITED STATES PATENT OFFICE.

OSCAR L. BONNEY, OF DENVER, COLORADO.

## LEVELING DEVICE FOR CLOCKS AND SIMILAR INSTRUMENTS.

No. 824,525.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed September 5, 1905. Serial No. 276,935.

*To all whom it may concern:*

Be it known that I, OSCAR L. BONNEY, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Leveling Devices for Clocks or Similar Instruments; and I do 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 the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in leveling devices for clocks or similar instruments.

It is well known that most clocks will not run unless they are properly leveled or so adjusted that they stand in a horizontal or approximately horizontal position. Great difficulty is often experienced in adjusting clocks on this account, since under ordinary circumstances no means are at hand to guide the operator in his work.

The object of my invention is to overcome this difficulty, and to this end a leveling device of special construction is applied to each corner of the base of the clock or to each corner of a false base upon which the clock rests. This leveling device consists of a bolt adapted to rotate in a nut embedded in the clock or base, a key being connected to rotate with the bolt and slidable longitudinally thereon. The key is applied to the upper protruding extremity of the bolt, while the lower extremity of the latter is embedded in rubber or other suitable material adapted to prevent the bolt from marring the shelf or other support upon which the clock stands. The clock or base, as the case may be, is provided with two spirit-level tubes located at one side and one end, respectively. By the use of these tubes and the adjustable bolts or screws the clock may be quickly and easily leveled, as will be readily understood.

Having briefly outlined my improved construction, as well as the function it is intended to perform, I will proceed to describe the same in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a front elevation of one form of my improved device with a clock in position thereon. Fig. 2 is a top plan view of the same shown in detail. Fig.

3 is a section taken through one of the leveling-screws on the line 3 3, Fig. 2. Fig. 4 is a front elevation of a clock having the leveling devices applied directly to the base thereof.

Attention is called to the fact that the only difference between the construction shown in Figs. 1 and 2 and that shown in Fig. 4 is that in Figs. 1 and 2 the clock is removably connected with the base, while in Fig. 4 the base to which the leveling devices are applied is part of the clock-frame.

The same reference characters indicate the same parts in all the views.

Referring first more especially to Figs. 1 to 3, inclusive, let the numeral 5 designate the base, which may be composed of any suitable material. This base will ordinarily be composed of wood and may be stained or otherwise prepared to match or harmonize with the main shelf or support upon which the base is to be placed. In each corner of the base is embedded a nut 6. This nut is so connected with the base that it cannot turn in the opening in which it is placed. To this end it is preferably provided with a thin projection 7 on one side, which enters the material, as wood, of the base and locks the nut against rotation. Threaded in this nut is a screw 8, which protrudes both above and below the base 5. The lower extremity of the screw is provided with a foot 9, composed of rubber or other suitable material, adapted to prevent the screw from marring the support upon which the base stands. The screw, as shown in the drawings, is flattened on one side to receive a key 10, having a counterpart opening adapted to receive the upper protruding extremity of the screw, which slides freely therein. By virtue of this construction the screw may be turned by rotating the key 10. To facilitate this adjustment, this key is preferably provided with a milled or knurled zone 12. Spirit-level tubes 13 and 14 are embedded in the side and end, respectively, of the base to aid the operator in the leveling operation. By virtue of these tubes he is able to accurately regulate the base or place it in a horizontal position.

From the foregoing description the use and operation of this form of my improved device will be readily understood. Assuming that the shelf is equipped with the leveling devices at the corners, as heretofore explained, it is only necessary to place it upon the main shelf or support. Then by observing the spirit-level tubes the operator may readily

adjust the platform or shelf to a horizontal position by the manipulation of the leveling-screws in the manner heretofore explained.

As heretofore intimated, the form of construction shown in Fig. 4, the leveling-tubes, and the adjusting-screws are applied directly to the clock-base, which is designated 5<sup>a</sup> in the drawings.

Having thus described my invention, what I claim is—

1. The combination with the base of a clock or similar instrument, of a nut embedded in the base in a manner to prevent rotation, a screw threaded in the nut and protruding both above and below the base, and a key having an unthreaded opening, applied to the upper threaded extremity of the screw and slidable freely on the threaded portion thereof, but connected therewith to cause the two parts to rotate in unison, the threaded portion of the screw extending above the

clock-base and the key being located at all times entirely above the said base.

2. The combination with the base of a clock or similar instrument, of a nut embedded in each corner of the base in a manner to prevent rotation, a screw threaded in the nut and protruding both above and below the base, and a milled key having an unthreaded opening, applied to the upper threaded extremity of the screw and slidable freely on the threaded portion thereof, but connected therewith to cause the two parts to rotate in unison, the key of each screw being located at all times entirely above the clock-base.

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

OSCAR L. BONNEY

Witnesses:

A. J. O'BRIEN,  
WM. I. MEAD.