(No Model.)

E. A. HORNBOSTET.

BILLIARD TABLE LEVELER.

No. 338,667. Patented Mar. 23, 1886.

Fig. 1

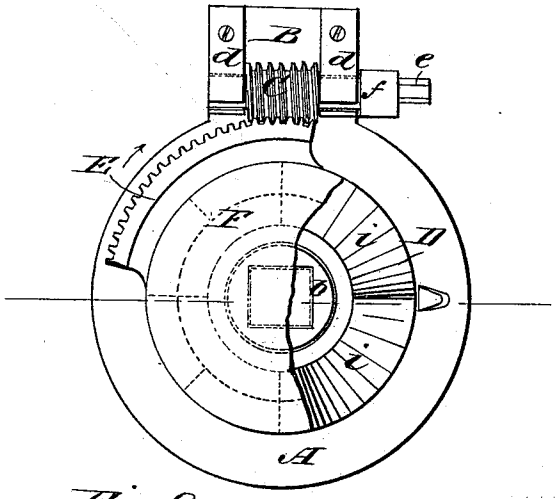


Fig. 2

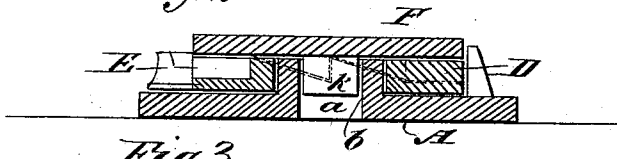


Fig. 3

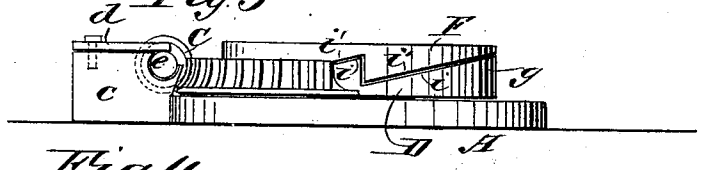


Fig. 4

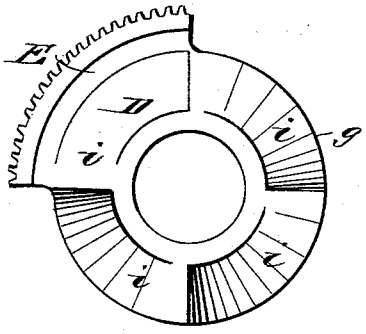
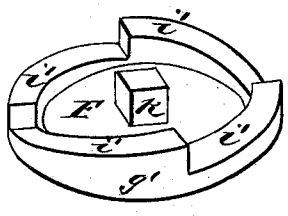


Fig. 5



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UNITED STATES PATENT OFFICE.

ERNST A. HORNBOSTET, OF OSKALOOSA, IOWA.

BILLIARD-TABLE LEVELER.

SPECIFICATION forming part of Letters Patent No. 338,667, dated March 23, 1886.

Application filed January 6, 1886. Serial No. 187,783. (No model.)

To all whom it may concern:

Be it known that I, ERNST A. HORNBOSTET, of Oskaloosa, in the county of Mahaska and State of Iowa, have invented a new and Improved Billiard-Table Leveler, of which the following is a full, clear, and exact description.

The object of my invention is to provide a step for billiard-tables, whereby the surface of the table may be quickly and accurately adjusted so as to be brought into a horizontal plane.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved leveler, a portion of the upper disk being cut away to disclose the construction of the parts. Fig. 2 is a central vertical sectional view of the device. Fig. 3 is a side view thereof; and Figs. 4 and 5 are views illustrating certain details of construction.

The foot-piece by which the adjustment is accomplished is clearly illustrated in the accompanying drawings, wherein A is a base plate or disk formed with a square central aperture, *a*, about which there is an upwardly-projecting and exteriorly-circular flange, *b*. This disk A is formed with an extension, B, that is provided with two upwardly-projecting pillars or lugs, *c c*, in which there are arranged the bearings for the shaft of a worm, C, said bearings being held in place by clips *d d*. The worm C and its shaft *e* are preferably integral, and said shaft is provided with a collar, *f*, arranged as shown best in Fig. 1, so that one of the journals of the shaft will be between the worm and the collar, from which it follows that the shaft will be held against longitudinal displacement. A second disk, D, formed with a central aperture arranged to fit over the hub or flange *b*, is provided upon its upper face with a ring, *g*, and the upper face of this ring is composed of a series of inclined planes, *i i i*, while from one side of the disk there projects a segmental toothed flange, E, arranged to be engaged by the coil of the worm C. This disk D is best shown in Fig. 4. A third disk, F, is formed with a central and downwardly-projecting post, *k*, arranged to fit snugly within the central aperture of the disk A, as best shown in Fig. 5, wherein it is shown with the lower side exposed to view. This disk F is also provided with a circular flange, *g'*, the under face of which is formed with a series of inclined planes, *i' i' i'*, that are equal in number and of the same contour as the planes *i* of the disk D, so that when the parts are placed in the position best shown in Fig. 3, the surfaces of the two sets of inclined planes will correspond. Such a device as I have described is placed under the foot of each leg of the table to be leveled, when by turning the worm C, which may be turned by fitting a socketed crank-arm to the extending end of the shaft *e*, the disk D may be moved in the direction of the arrow, thus raising the upper disk F, which is held against any circular motion by reason of the fact that its central post, *k*, engages with the socket of the base-plate A, and in this way a very accurate adjustment of the table may be obtained, it of course being understood that to lower the upper plate or disk, F, the direction of the movement imparted to the disk D is simply reversed.

Although I have described my invention as being used in connection with a billiard-table, it will of course be understood that the device could be used in connection with a printing-press or any other heavy article; and it will be seen that from the peculiar construction of the parts they are not liable to displacement on account of the vibration of the floor.

I am aware that a leveler for billiard-tables has been constructed with an externally-threaded base and an internally-threaded cap screwing on said base, the base and cap having projections on their upper and lower faces, respectively, and I do not claim such as of my invention.

I am also aware that a vertically-adjustable screw-rod has been placed in a billiard-table leg and provided at its upper end with a horizontal worm-wheel operated by a worm-shaft extending through the side of the body part of the table, and I do not claim such as of my invention.

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

1. In a billiard-table leveler, the combination, with a base plate or disk and an upper plate or disk, of an intermediate disk mounted on a central flange or hub, the upper and intermediate disks being provided with correspondingly-inclined faces and an actuating mechanism whereby the central disk may be turned about its axis, substantially as described.

2. In a billiard-table leveler, the combination, with a base-plate formed with a flange, *b*, of the plate D, formed to fit about said flange and being provided with inclined faces *i i* and a segmental rack, E, a plate, F, formed with inclined faces *i' i'* and post *k*, and a worm, C, all substantially as described.

3. In a billiard-table leveler, the combination, with a base-plate formed with a flange, *b*, and lugs *c*, of a plate, D, formed to fit about said flange, said plate being provided with inclined faces *i i* and segmental rack E, a plate, F, formed with inclined faces *i' i'* and a post, *k*, and a worm, C, formed with a collar, *f*, and mounted in bearings carried by lugs *c*, all substantially as described.

ERNST A. HORNBOSTET.

Witnesses:
E. A. PHELPS,
JACOB WEINTZ.

Correction in Letters Patent No. 338,667.

It is hereby certified that the name of the patentee in Letters Patent No. 338,667, granted March 23, 1886, for an improvement in "Billiard Table Levelers," was erroneously written and printed "Ernst A. Hornbostet;" that said name should have been written and printed *Ernst A. Hornbostel;* and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 20th day of April, A. D. 1886.

[SEAL.]

H. L. MULDROW,
Acting Secretary of the Interior.

Countersigned:

M. V. MONTGOMERY,
Commissioner of Patents.