No. 803,682. PATENTED NOV. 7, 1905.

E. W. FISHBURNE.

BALL BEARING CASTER.

APPLICATION FILED SEPT. 30, 1904.

Fig. 1.

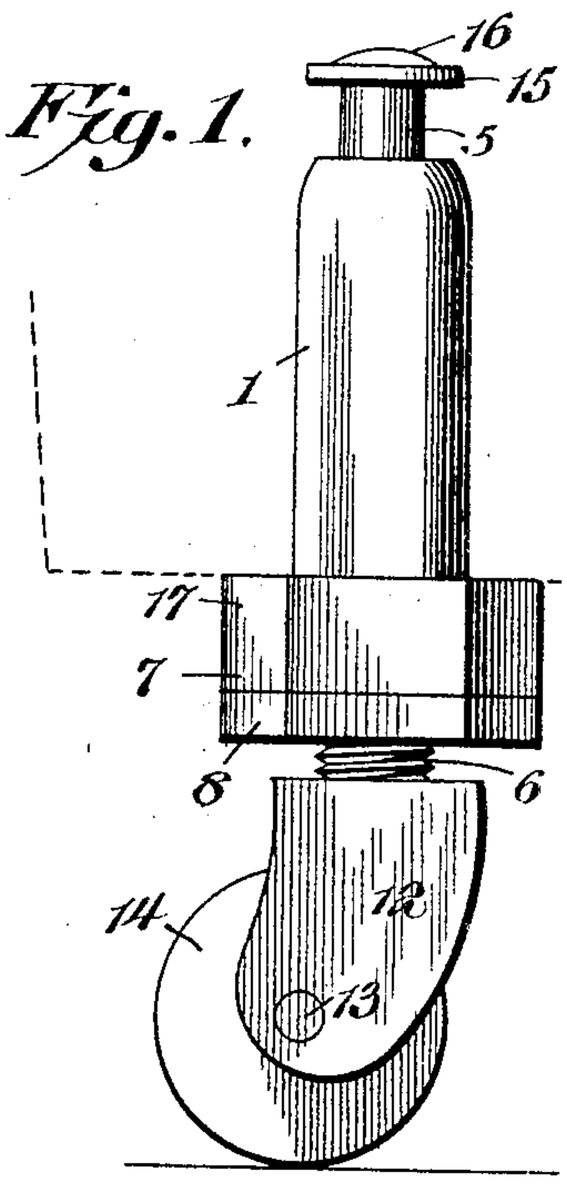


Fig. 2.

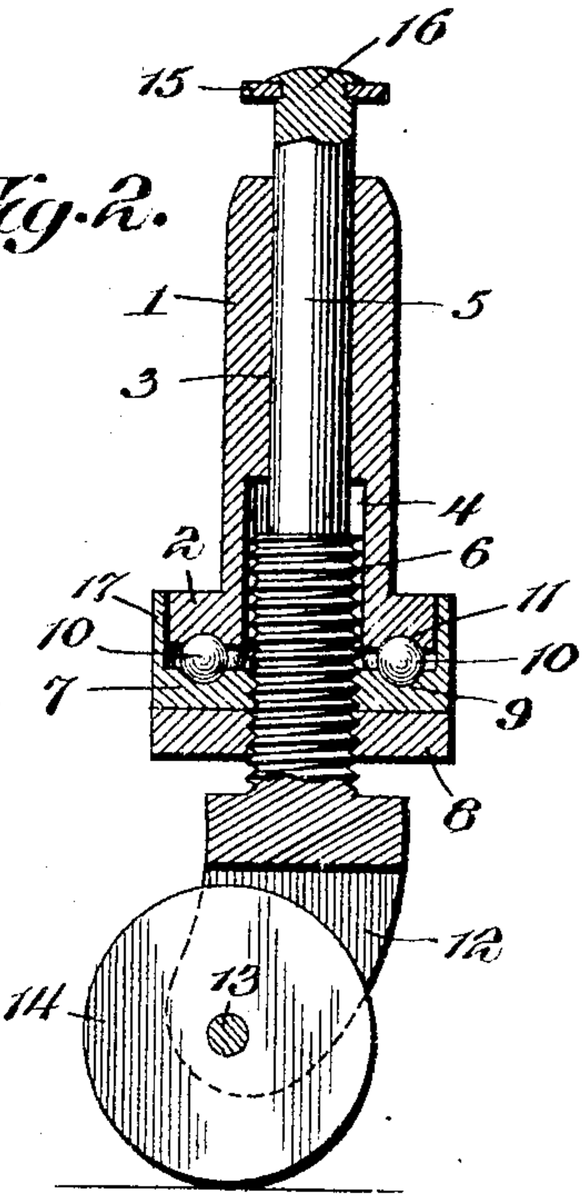


Fig. 3.

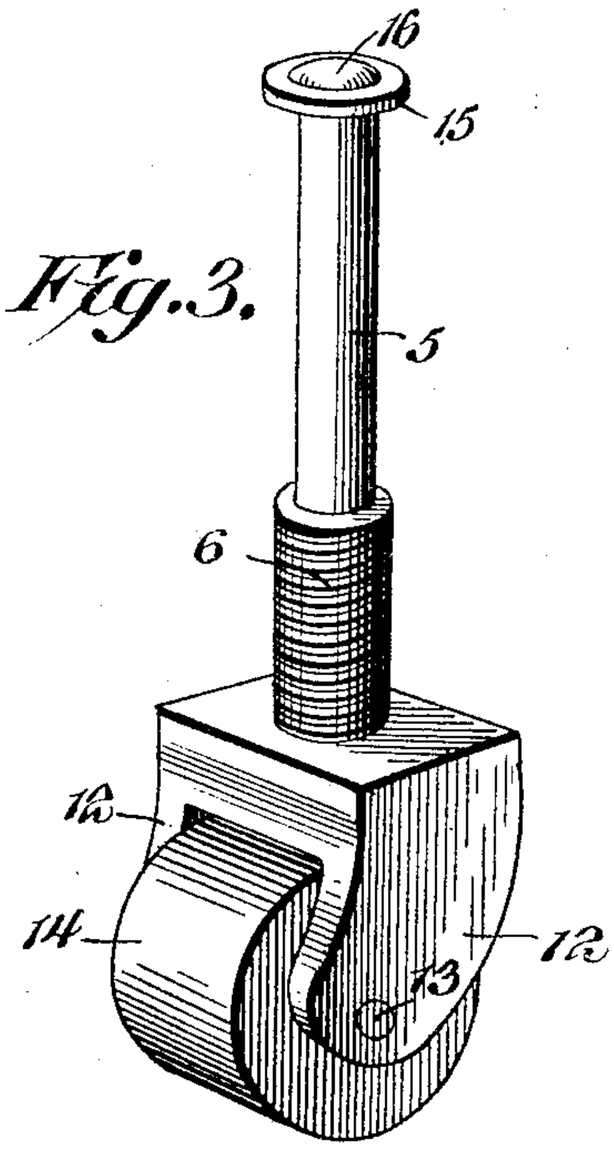


Fig. 5.

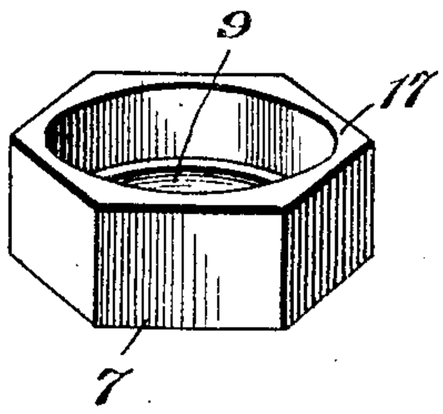
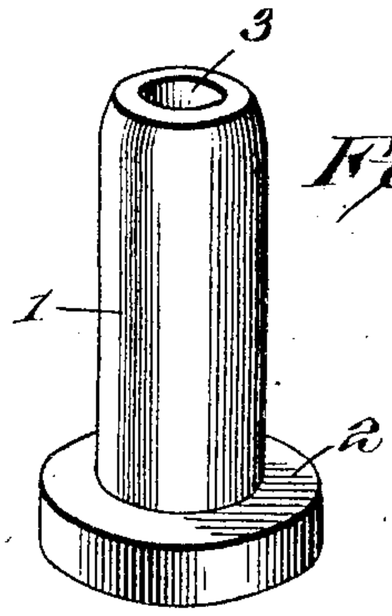


Fig. 4.



Witnesses

Howard D. Orr.

J. F. Riley

Edward W. Fishburne, Inventor,

By E. G. Siggers.

Attorney.

UNITED STATES PATENT OFFICE

EDWARD WINBURNE FISHBURNE, OF ROANOKE, VIRGINIA, ASSIGNOR OF ONE-FOURTH TO ORMOND HUMPHREYS, ONE-EIGHTH TO J. L. CALWELL, AND ONE-FOURTH TO S. W. HAIRSTON, OF ROANOKE, VIRGINIA.

BALL-BEARING CASTER.

No. 803,682. Specification of Letters Patent. Patented Nov. 7, 1905

Application filed September 30, 1904. Serial No. 226,720.

To all whom it may concern:

Be it known that I, EDWARD WINBURNE FISHBURNE, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented a new and useful Ball-Bearing Caster, of which the following is a specification.

The invention relates to improvements in ball-bearing casters.

The object of the present invention is to improve the construction of ball-bearing casters and to provide a simple, inexpensive, and efficient one of great strength and durability designed for use on pianos, billiard and pool tables, and heavy articles of furniture and capable of enabling the same to be maintained in a level position on an uneven supporting-surface.

A further object of the invention is to provide a device of this character in which the spindle may be rotated freely in the sleeve or bushing without affecting the adjusting means.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a front elevation of a ball-bearing caster constructed in accordance with this invention. Fig. 2 is a vertical sectional view. Fig. 3 is a detail perspective view of the spindle. Fig. 4 is a similar view of the sleeve or bushing. Fig. 5 is a detail perspective view of the bearing-nut.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a sleeve or bushing provided at its lower end with a flange 2 and having an upper bearing portion 3 and a lower counterbored portion 4, as clearly shown in Fig. 2 of the drawings. The sleeve or bushing, which is adapted to be arranged within an opening or socket of a leg of a piano, billiard or pool table, or a heavy article of furniture or the like fits on a spindle 5, having a smooth upper bearing portion, and is provided with an enlarged lower threaded portion 6. The enlarged threaded portion is adapted to extend into the lower counterbored portion 4 of the sleeve or bushing, and it receives a bearing-nut 7 and a lock-nut 8, which is located beneath the bearing-nut. The bearing-nut 7, which engages the threads of the spindles, is provided with an annular groove 9, forming a race for an annular series of balls 10; but any other suitable antifriction devices may be employed, as will be readily understood. The antifriction-balls are interposed between the bearing-nut and the lower end of the sleeve or bushing, which is provided in its annular projecting flange 2 with a groove 11, which receives the upper portion of the antifriction-balls and which forms a race for the same. The nuts are of hexagonal or other polygonal form to enable them to be readily engaged by a wrench, and the upper or bearing nut 7 is adapted to be adjusted for raising and lowering the bushing and the article supported by the same, whereby a piano, table, or other article may be maintained in a level position on an uneven supporting-surface. After the bearing-nut has been adjusted and the lock-nut is screwed against the same it is adapted to prevent the same from being accidentally rotated independently of the spindle by any rotation of the same or the antifriction devices.

The spindle, which may rest directly upon the floor when a rigid support is desired, may be provided with projecting ears or flanges 12, having perforations for a pivot 13, upon which is mounted a roller 14. The roller 14 and the ears may be of any desired construction, as will be readily understood.

The upper end of the spindle is provided with a collar or flange 15, preferably formed by a disk or plate having an opening to receive a reduced portion 16 of the spindle. The reduced portion 16 may be headed to retain the collar or disk on the spindle; but any other suitable means may be employed for this purpose. The weight of the article supported by the sleeve or bushing is sufficient to hold the same firmly against the supporting antifriction devices. In order to protect the antifriction devices from dust, the bearing-nut is provided with an upwardly-extending flange 17, forming a socket into which the lower end of the bushing extends.

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

1. A device of the class described, comprising a spindle having an upper bearing portion and a lower threaded portion, said spindle being longitudinally adjustable to raise and lower the article to which the device is applied, a sleeve or bushing fitted on the spindle, a bearing-nut engaging the threaded portion of the spindle and having a socket receiving the lower end of the sleeve or bushing, and a lock-nut engaging the bearing-nut.

2. A device of the class described, comprising a spindle having an upper bearing portion and a lower threaded portion, said spindle being longitudinally adjustable to raise and lower the article to which the device is applied, a sleeve or bushing fitted on the upper bearing portion and provided at its lower end with a ball-race, a bearing-nut engaging the threaded portion of the spindle and adjustable thereon and provided with a ball-race, antifriction-balls arranged in the said races, and means for locking the bearing-nut in its adjustment.

3. A device of the class described, comprising a spindle having an upper smooth bearing portion and a lower threaded portion, said spindle being longitudinally adjustable to raise and lower the article to which the device is applied, a sleeve or bushing fitted on the smooth portion of the spindle and provided at its lower end with an outwardly-extending flange having a ball-race, a bearing-nut engaging the threaded portion of the spindle and having a ball-race and provided with a flange forming a socket to receive the lower end of the sleeve or bushing, antifriction-balls arranged in the said ball-races, and a lock-nut arranged on the threaded portion of the spindle and engaging the bearing-nut.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD WINBURNE FISHBURNE.

Witnesses:
DAISY TENCH,
R. C. ROYER.