

(No Model.)

B. BROWER.
REVOLVING BOOKCASE.

No. 559,161.

Patented Apr. 28, 1896.

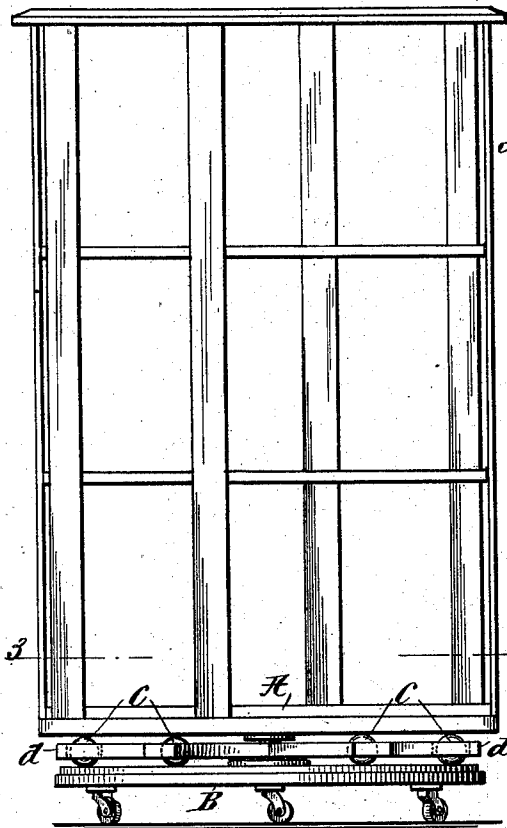


Fig. 1.

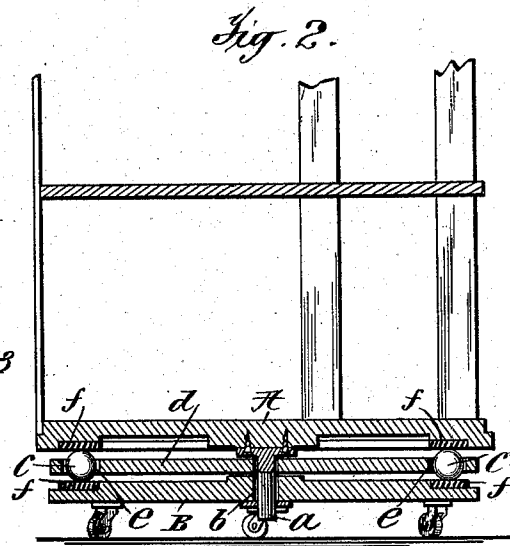


Fig. 2.

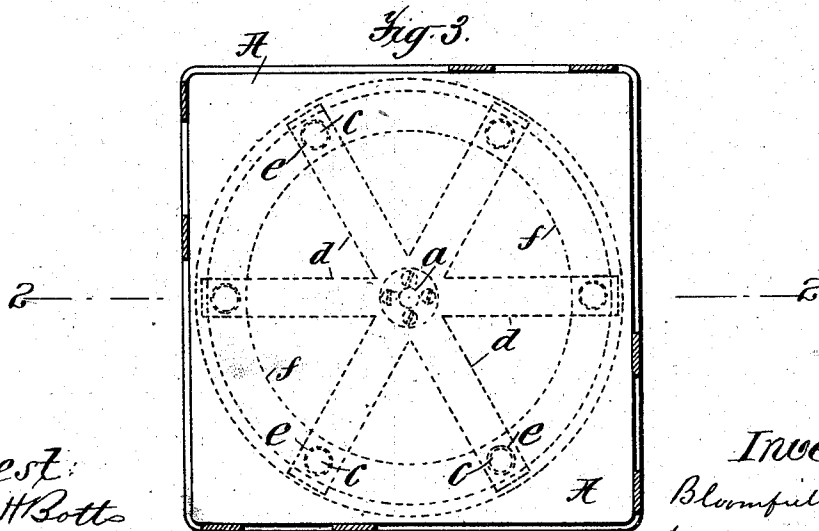


Fig. 3.

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UNITED STATES PATENT OFFICE.

BLOOMFIELD BROWER, OF NEW YORK, N. Y.

REVOLVING BOOKCASE.

SPECIFICATION forming part of Letters Patent No. 559,161, dated April 28, 1896.

Application filed October 13, 1894. Serial No. 525,792. (No model.)

To all whom it may concern:

Be it known that I, BLOOMFIELD BROWER, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Revolving Bookcases, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention relates to improvements in bookcases, racks, and the like provided with supporting-bases, upon which they revolve, said constructions being commonly termed "revolving" bookcases, &c., it being the object
15 of the present invention to so improve such constructions that the friction between the bookcase proper and its supporting-base will be reduced to a minimum.

As a full understanding of the present invention can best be given by an illustration and a detailed description of a construction embodying the same, such description will now be given in connection with the accompanying drawings, in which—

25 Figure 1 is a side elevation of a revolving bookcase and its supporting-base provided with the improvements constituting the present invention in their preferred form. Fig. 2 is a central vertical section of the same, taken on the line 2 2 of Fig. 3. Fig. 3 is a horizontal section on the line 3 3 of Fig. 1.

In said drawings, A represents a revolving bookcase, and B its supporting-base, the case A being provided with a central standard *a*, entering a corresponding central opening *b* in the supporting-base B. The supporting-base is provided with the usual casters or rollers, as shown; but this is immaterial to the present invention.

40 The general construction of revolving bookcases as thus far described is a familiar one. In such constructions, as heretofore most commonly used, the standard *a* has in some cases formed the sole support for the bookcase, which is sustained by the standard out of contact with the supporting-base, and in other cases the standard merely acts as the pivot for the bookcase, the hub of which then rests upon a central hub in the supporting-base, with which it contacts as it is revolved.

The first construction referred to is objectionable because under heavy weight or an un-

equal distribution of weight the bookcase tilts and the standard binds against the sides of its opening and thus increases the friction and renders the revolution of the bookcase on its base difficult, and in some cases, particularly if the supporting-base be long and slender, the standard is liable to become bent and to thus throw the bookcase out of true vertical position.

In the second case referred to, where the bookcase rests upon the supporting-base and makes contact therewith as it is revolved, the same objections exist as in the first case, though possibly not to the same extent, and it is otherwise objectionable, as, because of the contact of the case and base, the friction between the two is always great. Some attempts have heretofore been made to overcome these difficulties; but none of them have been altogether successful. This end, however, is attained in the present case by interposing between the bookcase and its base balls *c*, grouped about the standard at some distance therefrom and preferably, as shown, near the edge of the bookcase. The balls are held in position and maintained equidistant from each other by a holder *d*, loosely mounted upon the standard *a*, so as to oscillate freely as the bookcase is revolved, and provided with openings *e* for containing the balls. The balls are of such diameter that when in position between the case and base they will sustain the case out of contact with the holder, so that the latter will thus be perfectly free. The balls *c* will preferably be of glass, and to provide against possible wear of the bookcase or base by the balls those parts of the case and base with which the balls contact are provided, preferably, with circular ways *f*, of compressed fiber or other suitable material capable of withstanding considerable pressure. Six balls *c* are preferably employed; but the number may be varied as desired.

From the foregoing it will be observed that the bookcase being maintained out of contact with the base all friction between these parts is avoided, and that the balls *c* being equidistant the bookcase is equally supported on all sides, and any tendency on the part of the case to tilt, and thus cause the standard *a* to bind against the walls of its opening *b*, is prevented. The only points at which friction

can occur, therefore, are between the balls and the case and base, and, as the balls are loosely mounted in their holder *d* and the latter is in turn loosely mounted on the standard, such friction will be but very slight.

What is claimed is—

1. The combination with a bookcase or the like and a supporting-base upon which the case is mounted to revolve, of a loosely-journaled holder oscillating horizontally between the base and case and provided with a plurality of openings each provided with a ball loose within the opening and disconnected from the holder, said balls forming bearings for the case and base, substantially as described.

2. The combination with a bookcase or the like and a supporting-base upon which the case is mounted to revolve by means of a vertical standard upon the one member entering a corresponding opening in the other member, of a holder between the case and base journaled loosely upon the standard and provided with a plurality of openings, each provided

with a ball loose within the opening and disconnected from the holder, said balls forming bearings for the case and base, substantially as described.

3. The combination with a bookcase or the like and a supporting-base upon which the case is mounted to revolve by means of a vertical standard upon the one member entering a corresponding opening in the other member, of a holder between the case and base journaled loosely upon the standard and provided with a plurality of openings, each provided with a ball loose within the opening and disconnected from the holder, said balls forming bearings for the case and base, the faces of the case and base which bear against the balls being plain, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BLOOMFIELD BROWER.

Witnesses:

J. J. KENNEDY,
T. F. KEHOE.