Sept. 25, 1923. 1,469,079

K. B. GLENN

FLOATING JEWEL BEARING

Filed Aug. 10, 1922

FIG. 1.

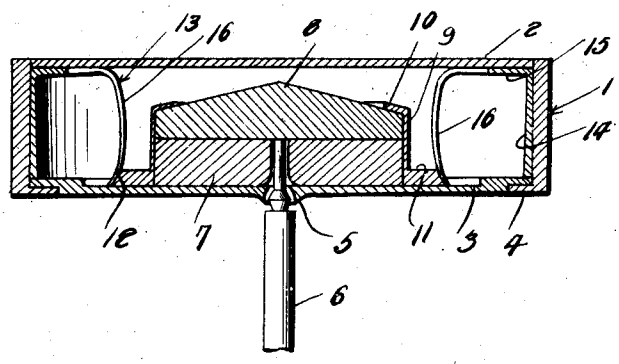
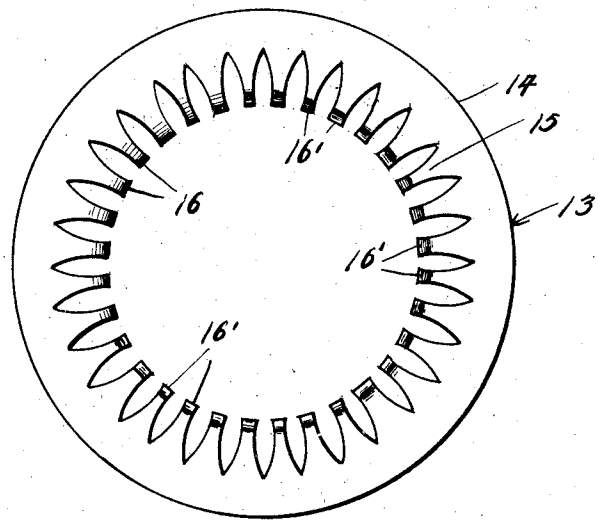


FIG. 2.



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UNITED STATES PATENT OFFICE.

KENNETH B. GLENN, OF AMBRIDGE, PENNSYLVANIA.

FLOATING JEWEL BEARING.

Application filed August 10, 1922. Serial No. 580,912.

To all whom it may concern:

Be it known that I, KENNETH B. GLENN, a citizen of the United States, residing at Ambridge, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Floating Jewel Bearings; 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 new and useful improvements in floating jewel bearings and more particularly to a device of the character described, illustrated, and claimed in my application filed February 3rd, 1921, and serially numbered 442,136 and has for its primary object the provision of an improved form of spring capable of absorbing shocks and jars both in horizontal and vertical directions, and which forms an integral part of a ring of the bearing or mounting.

Another object of this invention is the provision of a floating jewel bearing of the above stated character which will be simple, durable, and efficient, and which may be manufactured and sold at a comparatively low cost.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination, and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a vertical sectional view illustrating a floating jewel bearing constructed in accordance with my invention,

Figure 2 is a top plan view illustrating the combined spring and ring of the bearing.

Referring in detail to the drawings, the numeral 1 indicates the annular body which is closed by disks 2 and 3 and the latter named disk is supported by an annular flange 4 formed on the body 1. The disk 3 is provided with a spindle receiving opening 5 to receive the journal end of an ordinary balance staff or post 6. The journal end of the post or staff is rotatably supported by a hole jewel 7 and a cap jewel 8. The jewels 7 and 8 are mounted within a casing 9 of annular formation and has formed upon one edge a flange 10 that overlies a part of the cap jewel while the other edge has an angular flange 11 formed integrally therewith. The flange 11 is bent to form a spring engaging portion 12 adapted to engage a spring 13 which is formed integrally with a ring 14 and the latter is positioned between disks 2 and 3 and against the inner face of the body 1.

The spring 13 as above stated is formed integrally with the ring 14 and includes a horizontal portion 15 and a vertical portion 16. The portions 15 and 16 are severed at spaced intervals to form spaced leaves 16′. The slots or the severed portions of the spring extend into the horizontal portions and throughout the height of the vertical portion 16 of the spring so as to permit the leaves to have their ends free and are slightly curved and bear against the disk 3 to hold the latter in seated engagement with the flange 4. The leaves 16′ also engage the spring engaging portion 12 of the flange 11 so that the jewel casing 9 will be yieldably supported whereby shocks and jars to the spindle or post 6 in either a horizontal or vertical direction will be absorbed by the leaves.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination, and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention what I claim is:—

1. A floating jewel bearing comprising a body, a jewel supporting casing in said body, a ring carried by said body, tension means formed integrally with the ring and contacting with and yieldably supporting the casing.

2. A floating jewel bearing comprising a body, a jewel casing in said body and having a spring engaging portion, a ring in said body, and a spring formed integrally with the ring and engaging the spring engaging portion of the casing to yieldably support the latter.

3. A floating jewel bearing comprising a body, disks closing said body, a flange formed on said body and engaging one of the disks, a jewel casing in said body, a ring in said body and resting upon the last named

disk, and a spring formed integrally with the ring and engaging the last named disk to hold the same in engagement with the flange and engaging the casing to yieldably support the latter.

4. A floating jewel bearing comprising a body, a jewel casing in said body, a ring in said body, a spring member formed integrally with the ring and including horizontal and vertical portions, said horizontal and vertical portion being severed at spaced intervals to form leaves, said leaves engaging the casing to yieldably support the latter.

5. A floating jewel bearing comprising a body, a flange on said body, a disk supported by said flange, a jewel casing in said body, a ring in said body and supported by the disk, a spring formed integrally with the ring and including horizontal and vertical portions, said portions severed at spaced intervals to form resilient leaves, said leaves having their free ends bearing against the disk to hold the latter in seated engagement with the flange, a flange formed on the casing and engaged by the leaves to yieldably support said casing.

6. A floating jewel bearing comprising a body, a jewel casing in said body, an endless annular member in said body, a spring member formed integrally with the annular member and including horizontal and vertical portions, said vertical portion being severed at spaced intervals to form leaves, said leaves curving downwardly and outwardly and contacting with the jewel casing to support the same, said curved spring leaves serving to absorb shocks and jars imparted to the jewel casing in either a vertical or horizontal direction.

7. A floating jewel bearing comprising a body, a jewel casing in said body, an endless annular band in said casing, a spring member formed integrally with the annular member and including horizontal and vertical portions, said horizontal and vertical portions being severed at spaced intervals to form leaves, the vertical portions of said leaves curving downwardly and outwardly and contacting at their lower end portions with the jewel casing to support the same, said leaves serving to absorb shocks and jars imparted to the jewel casing in either a vertical or horizontal direction.

8. A floating jewel bearing comprising a body, a jewel casing in said body, an annular flange formed on said jewel casing and having a spring engaging portion, an endless annular member in said body, a spring member formed integrally with the annular member and including horizontal and vertical portions, said vertical and horizontal portions being severed at spaced intervals to form leaves, the vertical portions of said leaves curving downwardly and outwardly and contacting at their lower end portions with the annular flange formed on the jewel casing, said leaves serving to absorb shocks and jars imparted to the jewel casing in either a vertical or horizontal direction.

9. A floating jewel bearing comprising a body, a jewel casing in said body and arranged centrally thereof, an annular member in said body and contacting with the inner wall thereof, said annular member carrying a spring member, said spring member including a horizontal inwardly projecting portion and a vertically disposed downwardly and outwardly curved portion, said vertical and horizontal portions being severed at spaced intervals to form leaves, the vertical portions of said leaves contacting with the jewel casing to support the same centrally of the body, and said spring leaves serving to absorb the shocks and jars imparted to the jewel casing either in a vertical or in a horizontal direction.

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

KENNETH B. GLENN.

Witnesses:
C. A. CURL,
EDWARD THACKASEK.