

(No Model.)

W. B. HOSFORD.  
JOURNAL BOX.

No. 472,729.

Patented Apr. 12, 1892.

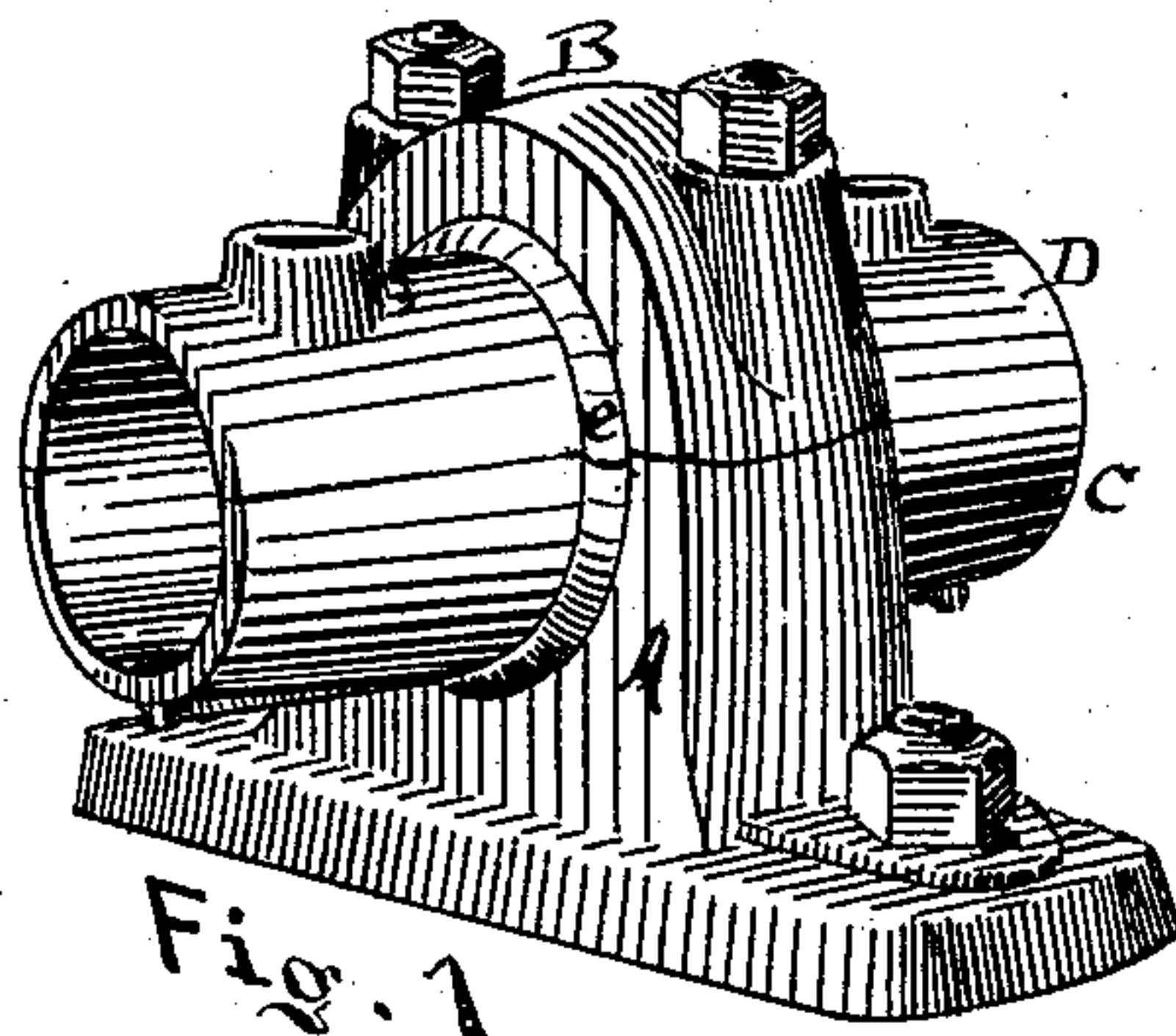


Fig. 1.

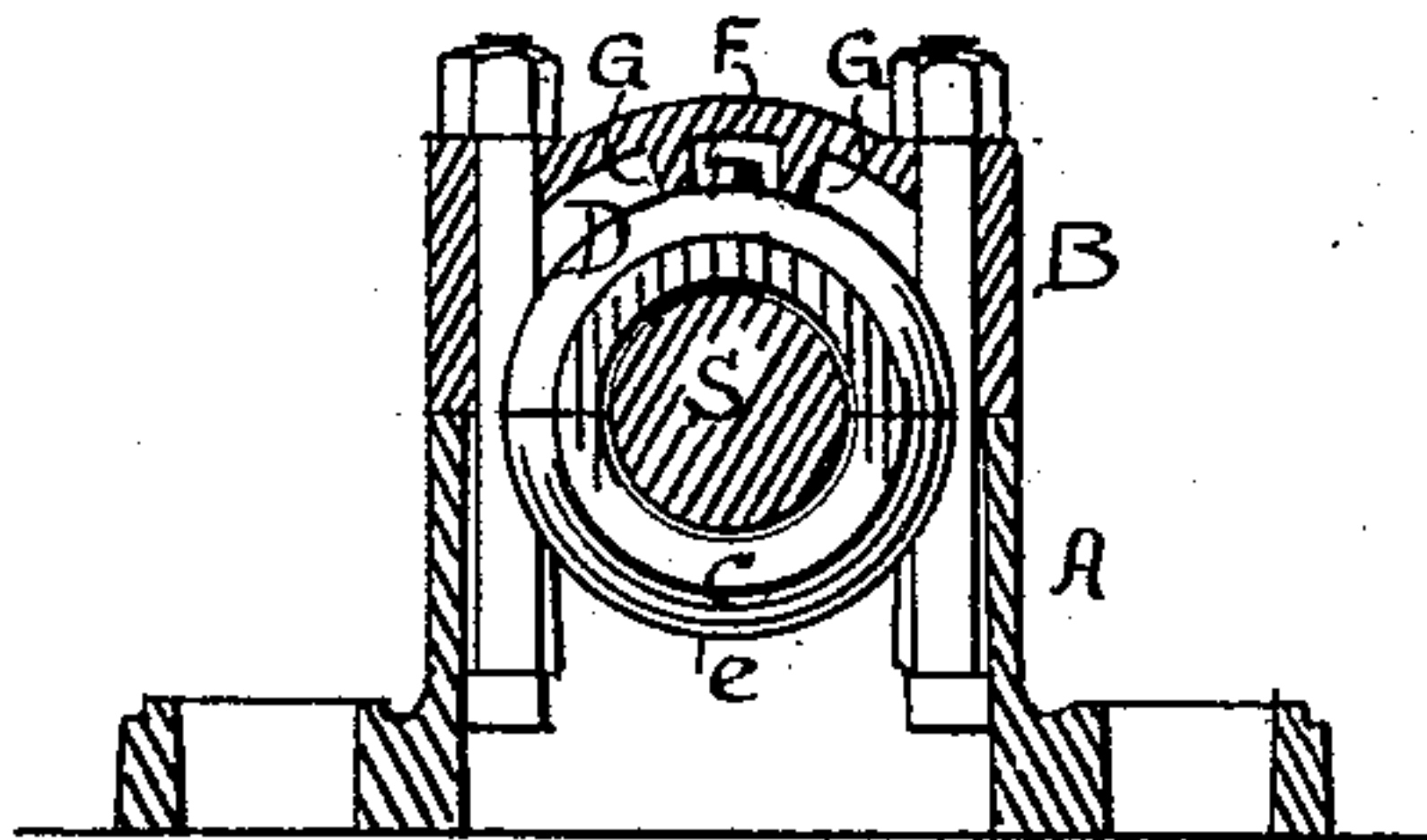


Fig. 2

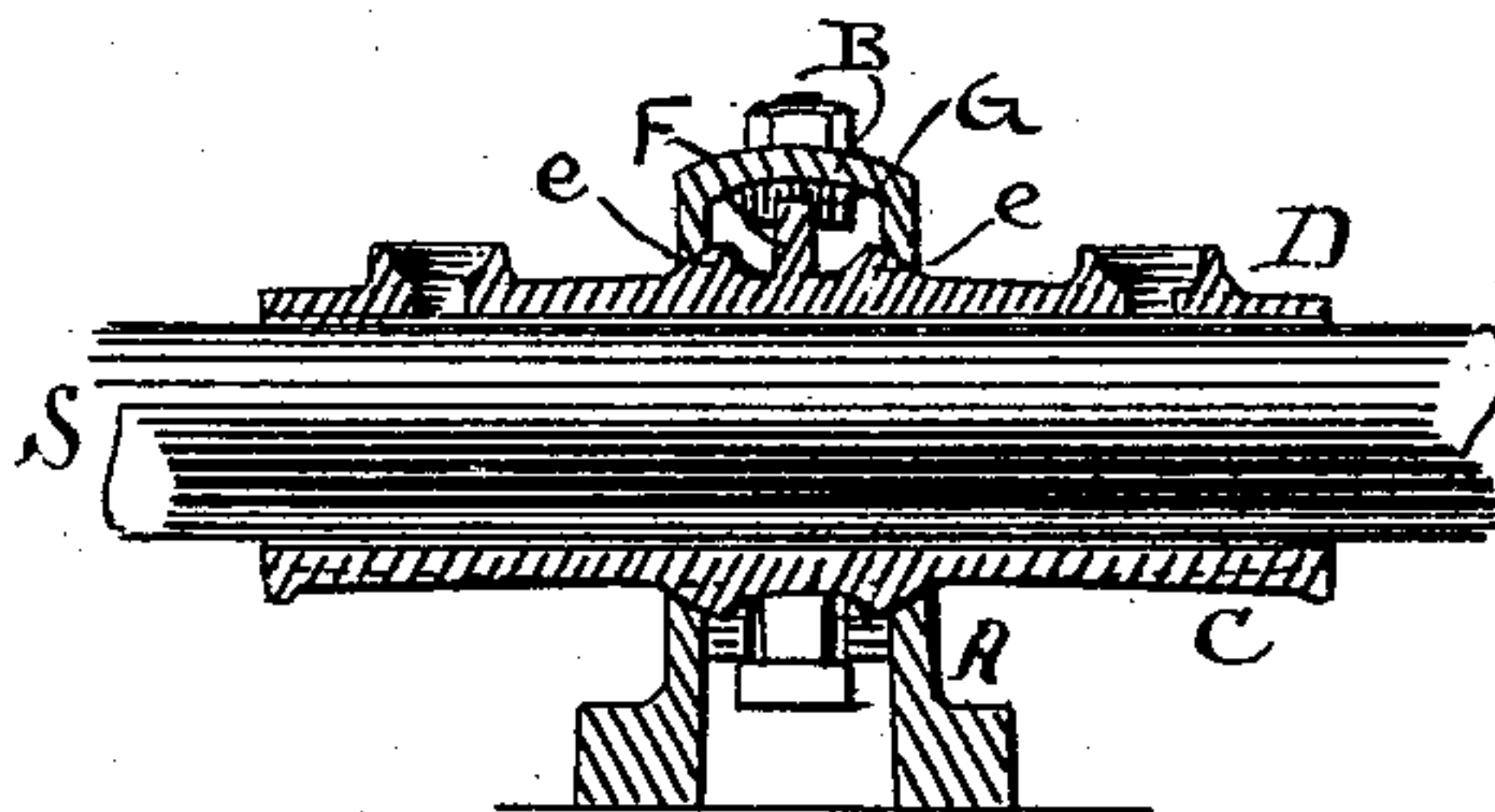


Fig. 3

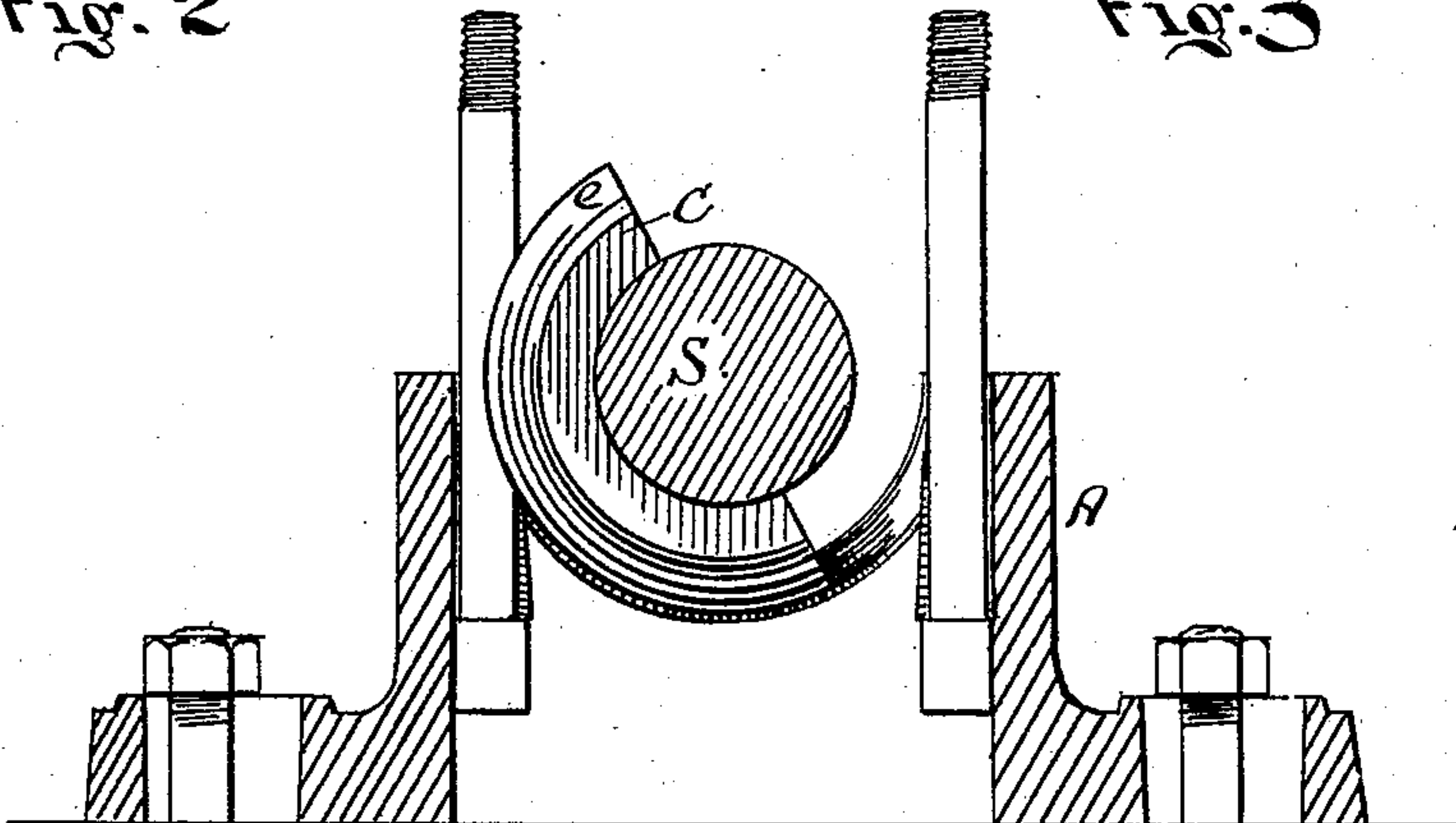


Fig. 4

Attest

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# UNITED STATES PATENT OFFICE.

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## JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 472,729, dated April 12, 1892.

Application filed December 30, 1891. Serial No. 416,547. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. HOSFORD, of Mishawaka, in the county of St. Joseph and State of Indiana, have invented new and useful Improvements in Journal-Boxes; and I do hereby declare that the following is a full and accurate description of the same, reference being had to the accompanying drawings, wherein—

10 Figure 1 is a perspective view of a pillow-block provided with my improvement. Fig. 2 is a central transverse section of the same. Fig. 3 is a central longitudinal section showing the manner of removing the lower box. 15 Fig. 4 is a central transverse section showing the manner of removing the lower box.

This invention relates particularly to that class of journal-boxes which are self-adjusting to the line of the shaft. These boxes are 20 frequently made with transverse rings, which on portions of their outer surface constitute concave segments of the same sphere fitted to corresponding concave surfaces of the pillow-block, so as to form therewith a ball-and- 25 socket joint for the journal-box, wherein it may have a universal movement to adjust its axis to the axis of the shaft.

Boxes of this kind require some device to prevent them from revolving with the shaft 30 and causing their plane of separation to depart from the corresponding plane of the pillow-block, which would prevent the removal of the upper half of the box. Such a device is a stud, always heretofore made a part of 35 the lower half of the box, projecting downward therefrom between lugs or other portions of the base of the pillow-block, so as to prevent rotation of the box without restraining its freedom of self-adjustment. This arrangement has an important and highly-inconvenient defect; and the object of my present improvement is to remedy said defect without impairing the efficiency of the device it- 40 self. The defect referred to is in the impossibility of removing the lower half of the box without first removing the shaft which rests in it, so that said box may be lifted straight upward from its seat in the pillow-block. When it is considered that this removal is of 45 frequent necessity for the purpose of renewing the babbitt lining, that the necessity is

liable to occur at any time by reason of the entrance of grit or other causes which cannot be foreseen or guarded against, and that the shaft with which pillow-block boxes are used 55 are commonly heavy, the inconvenience and expense of removing the shaft from all its bearing-boxes in order to get the lower half of one of said boxes out will be apparent to any one having practical acquaintance with 60 motive machinery, and correspondingly the advantage of a structure which will permit the removal of the shaft will be equally apparent.

My invention consists in a restraining-stud 65 projecting upward from the upper half of the box and suitable restraining lugs or surfaces on the inner surface of the pillow-cap, whereby while said upper part of the box and said cap are in place, both parts of the box will be re- 70 strained from revolution with the shaft from a position beneath to a position above the shaft. To accomplish this, it is necessary to provide some temporary support for the weight 75 of the shaft while the lower box is absent.

Having now clearly indicated the nature of my invention, I will describe the manner in which I have carried it into operation, without, however, intending to limit myself to the 80 exact details shown.

A is a pillow-block, and B is a cap for the same, secured in place by screw-bolts, as usual.

C and D are respectively the lower and upper parts of the bearing-box, their plane of separation being parallel with the axis of the 85 shaft and substantially coincident with the plane of separation between the pillow-block and its cap.

E E are the spherical segments, which constitute, with corresponding concavities of the 90 pillow-block and cap, a ball-and-socket joint for said box.

F is a stud projecting from upper part D of the box and resting loosely between lugs or plates G G, projecting downward from the 95 inner surface of the cap B. When the cap B has been removed, the part D of the box will then be free to be lifted off, uncovering the shaft and removing all impediments to a revolution of the part C of the box from beneath 100 to a position above the shaft, as shown in Fig. 4, when it may also be lifted free from the

shaft and may be replaced again beneath the shaft by movements in reverse order.

Having described my invention, I claim as new—

- 5 1. A self-adjusting journal-box provided with a removable cap having on its inner surface lugs or plates G, substantially for the purpose set forth, combined with a self-adjusting journal-box in two parts C D, as described,  
10 the part D being provided with a restraining lug or pin F, adapted to rest between said restraining lugs, plates, or surfaces and thereby

restrain the said box from revolution with the shaft, for the purpose set forth.

2. The pillow-block A and its cap B, provided 15 with the plates G G, pendent from the inner surface of said cap, combined with a self-adjusting journal-box C D, provided with a stud F, projecting upward from the upper part D of said box between said pendent plates.

W. B. HOSFORD.

Witnesses:

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D. O. FONDA.