

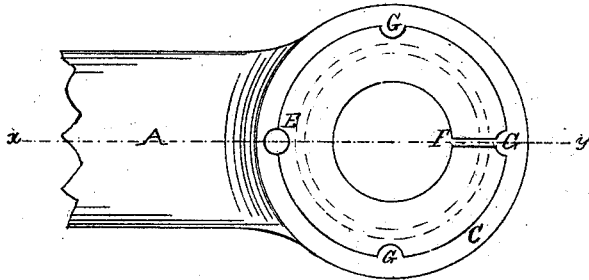
*M.C. Bullock,*

*Journal Bearing.*

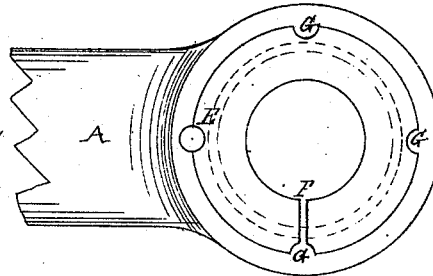
*No. 113739.*

*Patented Apr. 18. 1871.*

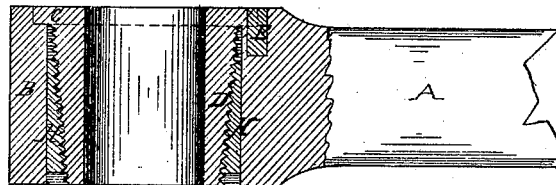
*Fig. 1.*



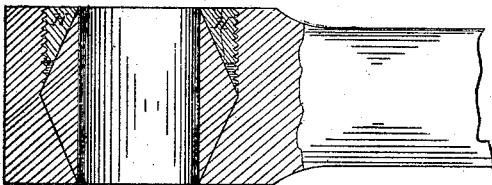
*Fig. 2.*



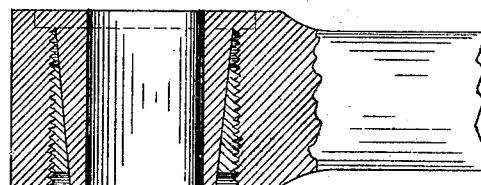
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Witnesses*

*Comptrol Wright*  
*Thos. A. Smith*

*Inventor*  
*M. C. Bullock,*  
*by his Atty,*  
*Horace Brinney: Fed.*

# UNITED STATES PATENT OFFICE.

MILAN C. BULLOCK, OF POTTSVILLE, ASSIGNOR TO HIMSELF AND SAMUEL E. GRISCOM, OF MAHANOEY PLAIN, PENNSYLVANIA.

## IMPROVEMENT IN SELF-CENTERING BOXES OR BEARINGS.

Specification forming part of Letters Patent No. 113,739, dated April 18, 1871.

*To all whom it may concern:*

Be it known that I, MILAN C. BULLOCK, of Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improved Self-Centering Box or Bearing; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use my invention, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figures 1 and 2 are side views of my invention; Fig. 3, a sectional view thereof, taken on the line *x y*, Fig. 1; and Figs. 4 and 5 are similar sections, showing modifications of construction.

The same parts are denoted by the same letters in all the figures.

This invention is especially applicable to bearings which must be kept always at equal distances apart; and I have accordingly represented it as applied to the side rod of a locomotive-engine, although it may be used in connection with various kinds of machinery, such as trunnions of oscillating engines, journals for crank-pins, stuffing-boxes, cross-head guides, pumps, or any machinery where lost motion is to be taken up.

A in the drawings represents part of the side rod of a locomotive-engine, the annular head of which, B, is counterbored to receive the flange C of the box D or bearing of the wrist-pin. A dowel-pin, E, is driven or screwed into the head B, so as to project into the counterbored portion, but not beyond the interior surface of the head, as shown in Fig. 3. The box D is in one piece, of annular shape, and cut through, as shown at F. Its flange C is notched, as at G G, to fit the dowel-pin E, by which the box is held in position. The outer surface of the box is tapered in conical form, and has a screw-thread on it to fit the corresponding female screw on the interior surface of the annular nut H, which last-mentioned surface is tapered to correspond with the outer surface of the box. The nut H is shorter than the box, and its outer surface is cylindrical and fits closely into the head B. The end farthest from the flange C is

made with holes or mortises, to which a wrench or spanner may be applied to turn the nut.

In the operation of these devices, as often as the box becomes worn the nut is turned so as to bind the box to the wrist-pin and take up lost motion, and as the nut is shorter than the box this operation may be repeated several times before its end is screwed up against the flange C, which limits the movement on the box. After this limit has been reached, when the box again becomes worn it is loosened from the head and turned one-quarter round, till the next notch G comes against the dowel-pin, when the flange is replaced in the counterbore of the head and the box held by the dowel-pin, as before. The positions of the box before and after this adjustment are shown in Figs. 1 and 2, respectively, and the adjustment may evidently be repeated in the same manner.

Fig. 4 represents a modified form of construction, in which the outer tapering surface of the box and the corresponding inner surface of the nut are both made smooth, the screws being cut on the outside of the nut and the inside of the head. Fig. 5 represents another modification, in which the flange on the box is dispensed with.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The box D, constructed in one piece and cut through, as shown.
2. The box D, constructed with a single flange, by means of which it is adjusted, as described.
3. The combination, operating as described, of the nut H with the box D, constructed in one piece and cut through, as shown.
4. The combination, operating as described, of the box D, constructed with key seats or notches G G, and the key or dowel-pin E.
5. The arrangement of the counterbored head, the box constructed with a single flange, and the nut.

M. C. BULLOCK.

Witnesses:

WM. R. WRIGHT,  
C. WHEELER, Jr.