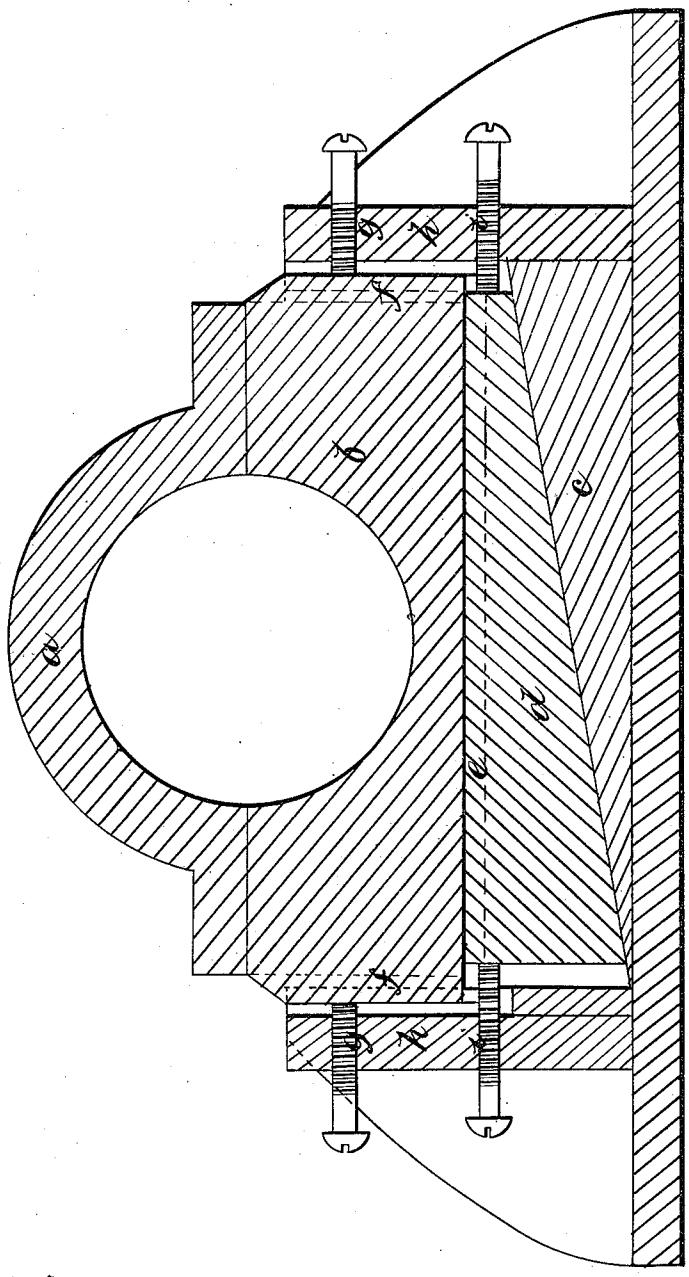
S. B. Dean.

Boring Cannon.

No. 40,824. Patented Dec. 8, 1863.



Witnesses.
S. M. McIntire
Franny Gould

Inventor.
S. B. Dean
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UNITED STATES PATENT OFFICE.

S. B. DEAN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR ADJUSTING ORDNANCE IN BORING-MILLS.

Specification forming part of Letters Patent No. 40,824, dated December 8, 1863.

To all whom it may concern:

Be it known that I, S. B. DEAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in the Means for Adjusting the Muzzle-Bearing of Ordnance in Boring-Mills; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

In finishing the large ordnance now in use in the United States—such as the fifteen-inch Rodman gun, for example—the outside of the muzzle end is first turned concentric with the central cavity left by casting, so as to constitute a journal which is made to rotate in a bearing as the gun revolves against a non-rotating but advancing boring-tool. Owing to the great weight brought upon this bearing—about fifteen tons—and the stress exerted thereupon in the boring operation, the bearing is apt to become worn or displaced out of line sometime during the boring operation, and it is for the purpose of readjusting the bearing at any time during the boring operation, when it may prove that the center of the gun and its muzzle bearing are out of the proper line, that my invention is made.

The drawing embodying and illustrating this invention is a longitudinal section in a vertical plane-cutting bearing in the center of its length.

a represents the cap of the bearing, and *b* the lower part thereof. These parts may be babbitted or arranged with brasses in any well-known way, my practice being to cast Babbitt metal in both parts of the bearing to fit a former, which is the exact counterpart of the gun-muzzle which is to be rotated in the bearing.

The stand or frame which contains the bearing and its means of adjustment has fixed upon its base an inclined plane, *c*, superposed on which is the wedge *d*, having its upper face a horizontal plane from which projects a tongue, *e*, which fits into a groove formed in the lower part, *b*, of the bearing, the object of this tongue and groove being to keep the wedge in its proper place relative to the frame and to the bearing. Similar tongues, *f*, project from each end of the lower part, *b*, of the bearing and fit in grooves formed in the uprights *h* of the frame. In these uprights screws *i* are arranged, so as to operate against each end of the wedge *d*. By means of these screws the wedge *d* can be moved longitudinally under the part *b* of the bearing in a direction at right angles to the bore of the gun, and thus the center of the bearing can be raised and lowered.

In the place of the screws *i*, wedges might be so arranged as to perform the function of said screws, which I deem the most convenient and preferable devices.

The wedge *d* is not so long as the space between the uprights of the frame, which leaves room for the described adjustment of *d*.

Between the uprights *h* of the frame room is afforded for the adjustment of the bearing by moving it from right to left, or vice versa, said movement being made or prevented by the screws *g*, which act on the lower part, *b*, of the bearing through the uprights of the frame. Wedges might be made to take the place of these screws *g*; but as before remarked the screws are deemed the most convenient devices.

The devices described are not necessarily limited to use with gun-muzzle bearings, but may be applied to the adjustment of heavy bearings used for other purposes.

I claim—

The arrangement of the bearing, the incline *c*, wedge *d*, screws *g* and *i*, and uprights *h*, or their equivalents, all operating together substantially as and for the purpose set forth.

Signed this 23d day of October, A. D. 1863.

S. B. DEAN.

Witnesses:

FRED. MONROE,

MARK EDSON.