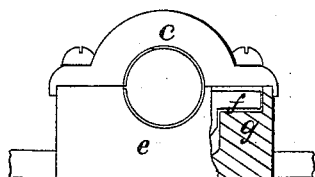
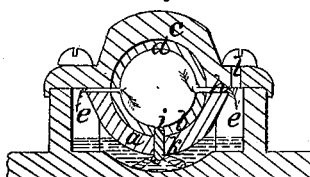


*Rice & Millen,*  
*Journal Box,*  
*No 46,823, Patented Mar. 14, 1865.*

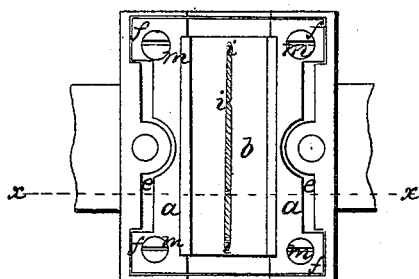
*Fig. 1.*



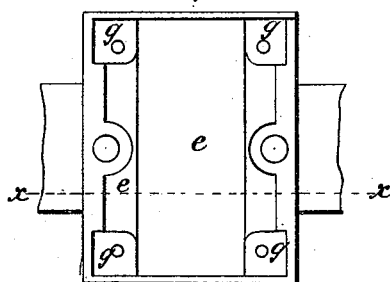
*Fig. 5*



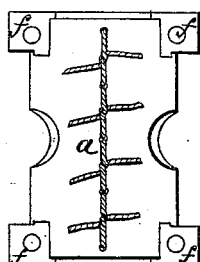
*Fig. 2*



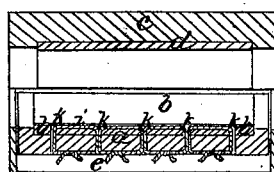
*Fig. 6*



*Fig. 3*



*Fig. 4*



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*M. J. Rice*  
*co. H. Miller*  
*by their Atty*  
*W. B. Cady*

*Witnesses*

*Francis Gould*  
*Albert F. Hall.*

# UNITED STATES PATENT OFFICE.

MATTHIAS J. RICE AND W. H. MILLEN, OF BOSTON, MASSACHUSETTS.

## IMPROVED JOURNAL-BOX.

Specification forming part of Letters Patent No. 46,823, dated March 14, 1865.

*To all whom it may concern:*

Be it known that we, MATTHIAS J. RICE and W. H. MILLEN, both of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Journal Box; and we do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of our invention sufficient to enable those skilled in the art to practice it.

Our invention consists in the peculiar construction and arrangement of the lower half of the journal-box with reference to an oil-reservoir and lubricating-passages connecting therewith.

Figure 1 of the drawings represents an end view of a journal-box embodying this invention. Fig. 2 is a top view, and Fig. 3 a bottom view, of the lower half thereof. Fig. 4 is a vertical, central longitudinal section of the same; Fig. 5, a cross-section in the line *x x* of Fig. 2; Fig. 6, a top view of the oil-reservoir.

*a* denotes the lower half of the box; *b*, the bearing-surface or babbiting thereof; *c*, the cap, and *d* the babbiting within the same. The piece *a*, constituting with its babbiting the lower half of the box, is set within an oil-reservoir, *e*, projections or ears *f f* resting upon seats *g g* in the reservoir, serving to support such part of the box in position, and so as to leave an oil-space in the reservoir extending under and up by the sides of the box, as seen in Fig. 5. The part *a* is so constructed or arranged that its top surface is not flush with the top of the casing or reservoir *e*, but is sunk a little below the same, so as to leave a space, *h*, between said top surface and the cap *c*. A narrow channel, *i*, extends lengthwise along the bottom of the babbiting or bearing-surface *b*, and perforations *k* extend from this channel through the box, opening into the oil-reservoir *e*. In this channel and through these perforations wicking or other similar fibrous material is placed, there being a separate piece of wicking running through each two adjacent perforations, or a continuous line of the same, extending through them successively, in either case, however, the wicking filling the channel *i* to such extent as to lubricate the whole length of the shaft in contact with the bearing-surface *b*. The reservoir *e* being supplied with oil so as to come in contact with the wicking below the box,

the oil will be taken up by capillary attraction, saturating the whole length of wicking and keeping it saturated as the oil is removed by the surface of the shaft rotating in juxtaposition therewith. The oil-channel is made of such depth as to keep the wicking flush with the adjacent bearing-surface of the babbiting, and the shaft is kept evenly and continuously lubricated. This arrangement of the oil-passages and the wicking is far preferable to an arrangement of a series of lateral chambers extending up through the box and babbiting, as said chambers diminish to a material extent the length of bearing-surface of the shaft in contact with the babbiting, and do not lubricate the shaft evenly or in all its parts. The excess of oil taken up by the shaft is deposited from along the side of the shaft upon the top surface of the lower half, *a*, of the box and flows through the space *h* and back into the oil-reservoir in the direction of the arrows seen in Fig. 5, thus preventing flow of such oil beyond the boundaries of the box. To supply the reservoir with oil, a passage, *l*, leads through the cap into the reservoir, as seen in said Fig. 5.

By the arrangement of the lower part of the box within the reservoir *e*, as described, and dropping its upper surface below the plane of the top of the reservoir we are enabled to give it a capability of adjustment with respect to the bearing-surface *b*. As the babbiting becomes worn, washers or risers are placed between the adjacent surfaces of the ears *f f* and seats *g g*, so as to elevate said bearing-surface and keep the shaft or arbor in true position.

The part *a* is shown as confined in position in the oil-reservoir by screws *m*, and by removing the same the box may be taken from the reservoir to allow the same to be cleaned or to permit the box to be rebabbited.

We claim—

The combination of the oil-reservoir *e*, movable bearing *b*, and oil-passages *k*, arranged with respect to each other substantially as specified.

In witness whereof we have hereunto set our hands this 11th day of November, A. D. 1864.

MATTHIAS J. RICE.  
WM. H. MILLEN.

In presence of—

FRANCIS GOULD,  
ALBERT F. HALL.