

(No Model.)

A. M. WEATHERLY.

JOURNAL BEARING.

No. 318,334.

Patented May 19, 1885.

Fig. 1.

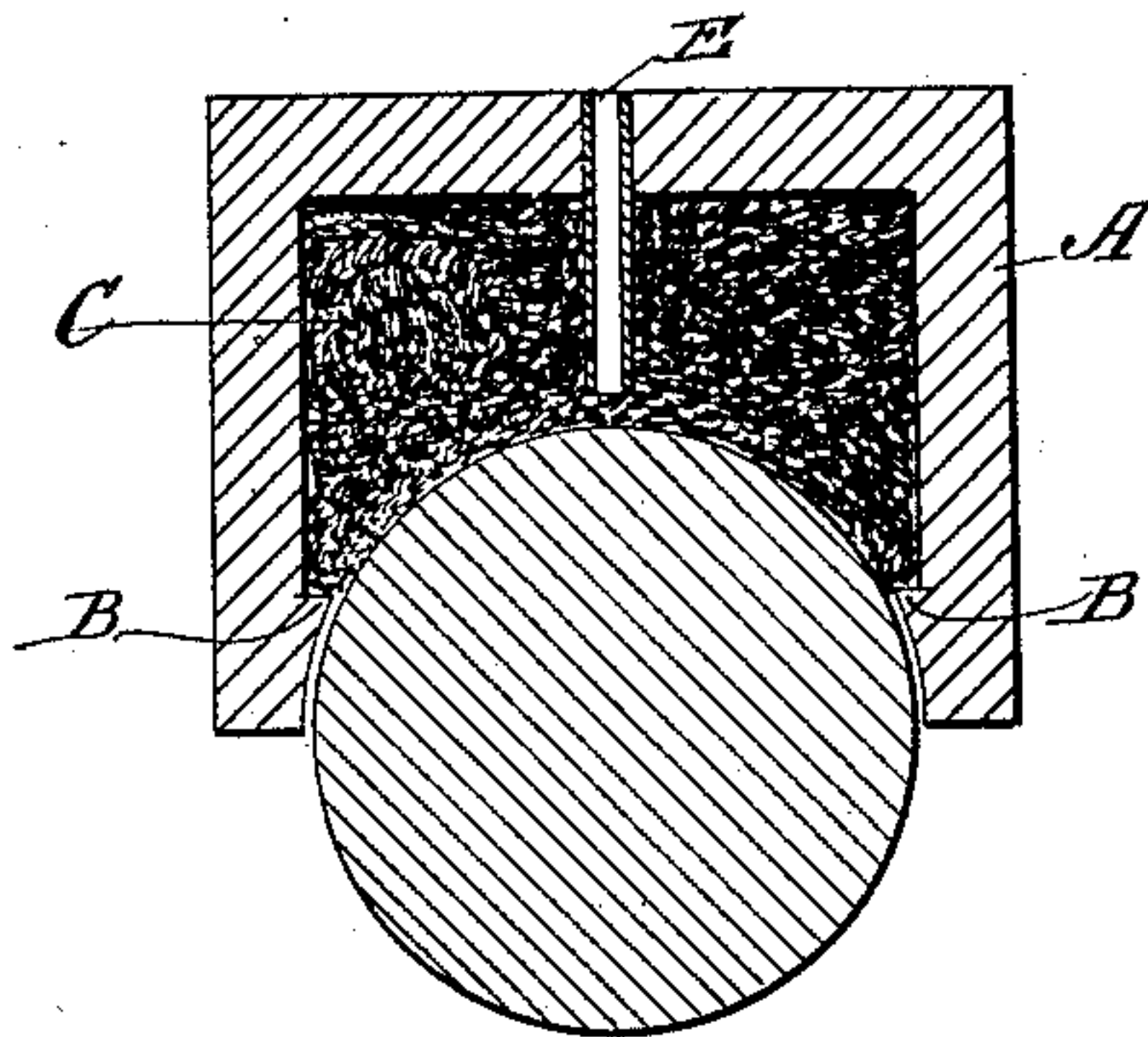
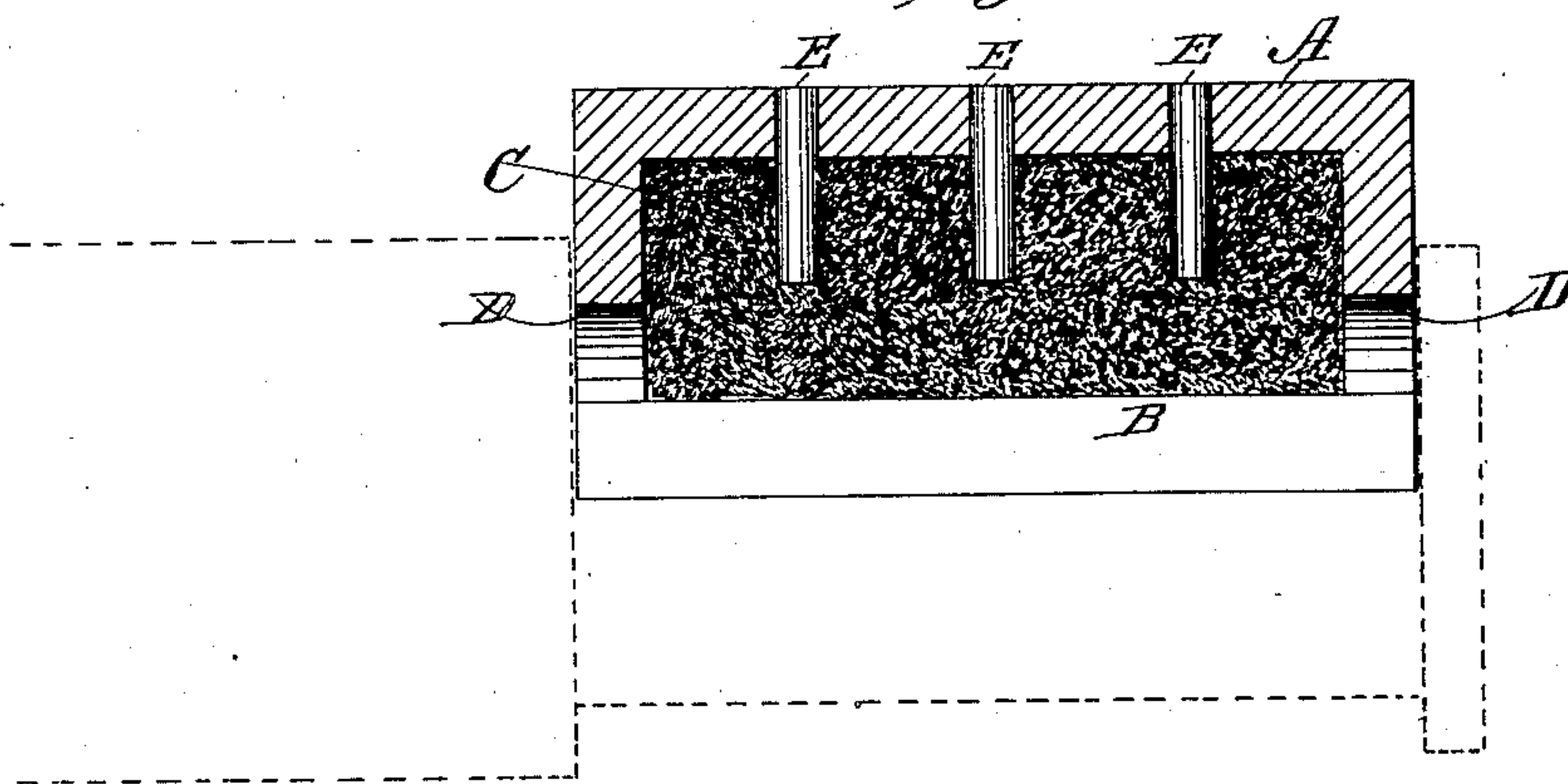


Fig. 2.



WITNESSES:

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JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 318,334, dated May 19, 1885.

Application filed February 10, 1885. (No model.)

To all whom it may concern:

Be it known that I, ALVIS MARTIN WEATHERLY, a citizen of the United States, residing at Selma, in the county of Dallas and State of Alabama, have invented certain new and useful Improvements in Journal - Bearings, of which the following is a description.

This invention relates to that class of devices which are used to serve as substitutes for solid metal in journal-bearings; and its object is to provide a porous compound substance of sufficient density to support the required weight without yielding so much as to be impracticable. To this end my invention consists in the construction and combination of parts forming a journal-bearing, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse vertical section, and Fig. 2 is a longitudinal vertical section, of a journal-bearing corresponding to my invention.

A represents a box of brass or other metal, provided, as usual, with flanged edges B to retain the lining. It has been common heretofore to line journal-boxes with soft-metal composition; but such soft metal, when once shaped, remains in that shape until it is worn out of shape in use. It is not in any respect elastic or yielding to the form of the journal. For this permanent metal I substitute asbestos, C, in a fibrous condition compressed into the box to such a degree as to form a bearing sufficiently rigid to prevent the weight resting on the journal from pressing the journal against the box at D. Fibrous asbestos will admit this degree of compression without losing its elasticity and without losing its porosity. I partially fix the asbestos in the form fitting the journal by mixing and intimately combining therewith white lead and oil of the consistency in which white lead is usually sold on the market for a paint. The oil in the paint will at first serve as a lubricator, and when this oil

is driven out by the lubricating-oil which is in general use the lead will not become rigid and dry, and the combined asbestos and lead will still be sufficiently porous, so that the oil may penetrate it and pass through to oil the journal at every pore of the bearing.

To prevent the possibility of entirely stopping the passage of oil in bearings subject to great weight—such as in the journals of engine-wheels—I provide a series of brass or other metallic oil-tubes, E, extending from the box A nearly through to the inner face of the asbestos and lead C toward the journal-bearing. Through these tubes the oil may be introduced, as usual, and when it enters the bearing proper will soak it up.

Other fibrous material—such as cotton waste—has before been used as a mere wick to draw oil up from a reservoir below to a journal; but such fibrous material did not serve in any respect as a bearing for the journal, and it would be impossible for such fibrous material to serve this purpose, from the fact that the friction and pressure of the journal on the cotton in service would quickly ignite the cotton. For this reason asbestos as a non-combustible fibrous material is indispensable to my invention. My bearing may be placed either side up, so as to rest upon the journal, or so as to support the same in order that it may be adapted for use with car-wheel journals, or with shafting, &c.

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

The combination of a metallic box, A, a series of oil-tubes, E, extending within the box from its exterior, and a composition of asbestos and white lead filling the box between the tubes and shaped on its inner face, substantially as described, to constitute a journal-bearing.

ALVIS MARTIN WEATHERLY.

Witnesses:

C. H. MYATT,
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