(No Model.)

J. B. BARNES.

DOOR FOR CINDER BOXES.

No. 403,504. Patented May 21, 1889.

Fig. 1.

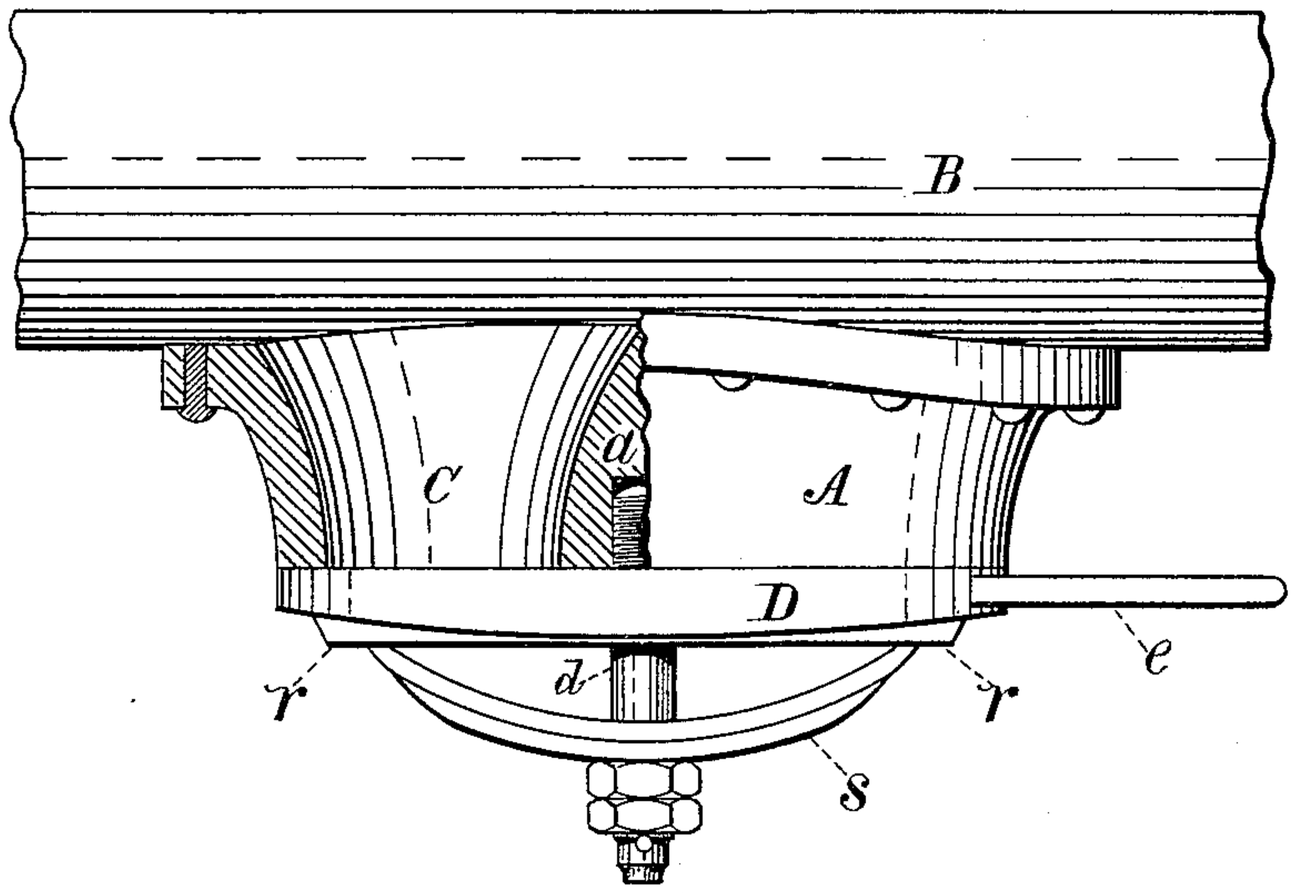
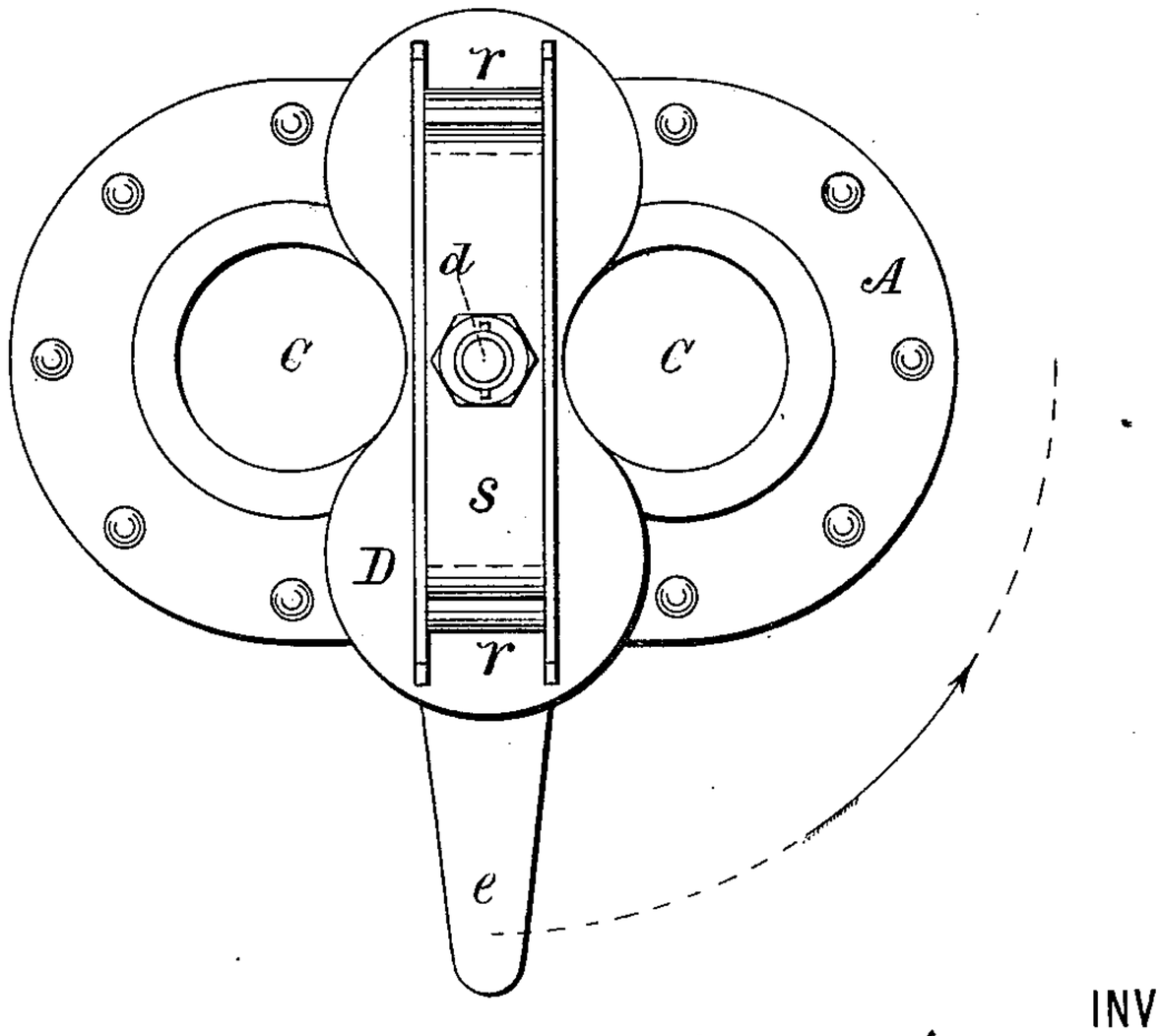


Fig. 2.



WITNESSES:

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JOSHUA B. BARNES, OF SPRINGFIELD, ILLINOIS.

DOOR FOR CINDER-BOXES.

SPECIFICATION forming part of Letters Patent No. 403,504, dated May 21, 1889.

Application filed February 25, 1889. Serial No. 301,074. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA B. BARNES, of Springfield, in the county of Sangamon and State of Illinois, have invented a new and Improved Door for Cinder-Boxes; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in doors for cinder-boxes for locomotive-engines, my object being to provide a large outlet in the bottom of the smoke-box, by which the cinders and other waste products of combustion may be more readily and quickly discharged than heretofore.

The device by which I accomplish this end is fully explained in the following specification, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the dump, shown in connection with a portion of the bottom of the smoke-box of a locomotive-engine, one-half of the immovable part of the dump being shown in section taken in the line *x x*, Fig. 2, the movable part or door being shown in full and in the position closing the discharge-orifices. Fig. 2 is a bottom view of the dump, representing the discharge-orifices open.

In the drawings, A represents an oblong casting bolted or riveted to the bottom of the smoke-box and provided with two large funnel-shaped circular openings, C C. Secured centrally in the partition *a*, between the two outlet-orifices, is a stud, *d*, upon which is pivoted, so as to vibrate in a horizontal plane through an arc of a quarter of a circle, as indicated by an arrow in Fig. 2, a door, D, of the form shown, and provided with a handle, *e*, the upper face of said door, and likewise the lower face of the casting A, being dressed perfectly true and smooth, so that the former will revolve or slide freely yet air-tight in contact with the latter.

To sustain the door D with the requisite pressure against the lower faces round the discharge-orifices, a bow-spring, S, is centrally journaled upon the stud *d*, its ends resting in grooves *r r*, provided for their reception in the under side of the outlet-door, so as to insure the turning of the spring with the door. To sustain said spring and regulate its upward pressure against the door, the stud *d* is provided with lock-nuts, as shown in Fig. 1.

It will be observed that the outlets or discharge-orifices C C are separated by a partition of such thickness as not only to admit of the insertion of the stud *d*, but so that when the door is turned from the position shown in Fig. 1 to that shown in Fig. 2 the central part of the door will offer no obstruction to the discharge-orifices, but leave them full open, as shown in Fig. 2.

The several details of my device being as described, and the door D closed, as shown in Fig. 1, when it is desired to discharge the cinders and other waste matter from the smoke-box it is only necessary to turn the door D into the position shown in Fig. 2, thus opening to their fullest extent the two discharge orifices, which, being conical or funnel shaped, facilitates and expedites the operation of discharging the contents of the smoke-box.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

A cinder-dump consisting of a casting secured to the bottom of the smoke-box, and having two circular and funnel shaped outlets closed and opened by a door centrally pivoted upon a stud rigidly secured in the partition between the outlets, said door being adapted to swing round in the plane in which the edges of the discharge-orifices lie, so as to close or open said orifices, and a spring pivotally secured upon the same stud as the door and adapted to sustain the latter against the edges or faces of the two outlets or discharge-orifices by lock-nuts upon the stud upon which the spring is pivoted, all of said parts constructed, combined, and adapted to operate substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of January, 1889.

JOSHUA B. BARNES.

Witnesses:
S. W. JEFFERY,
A. B. MARS.