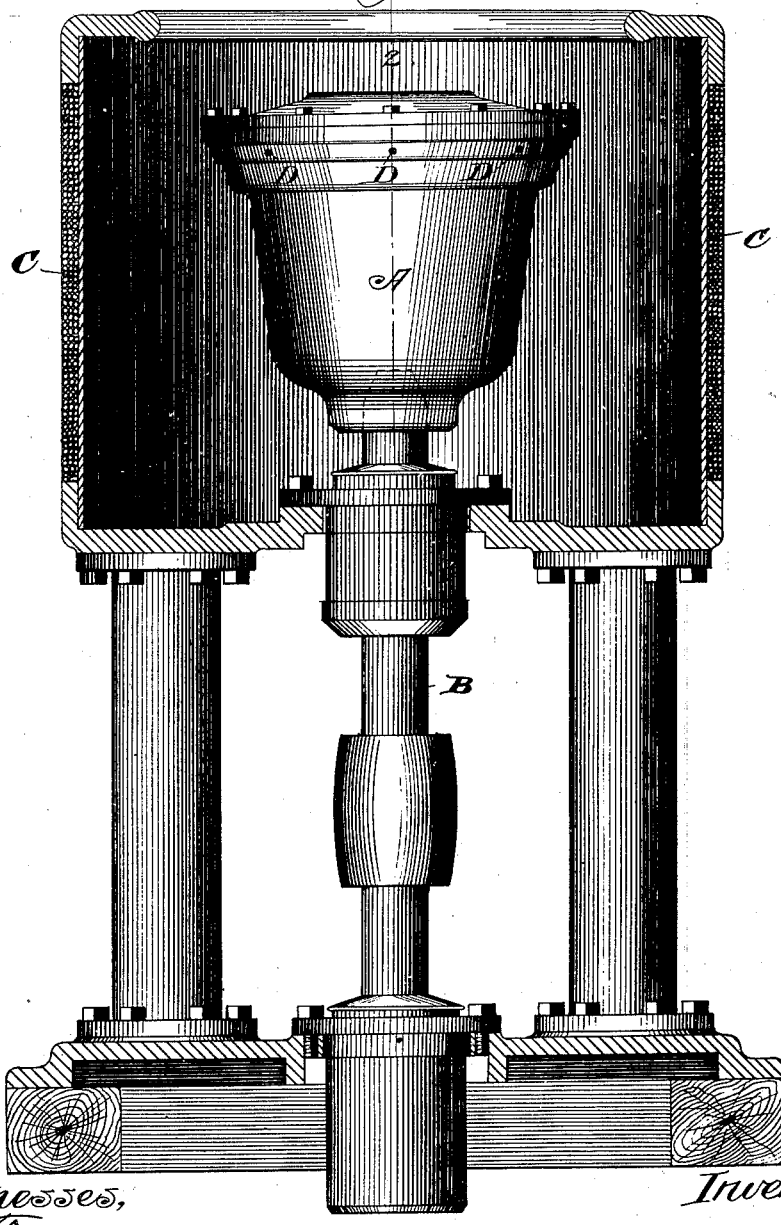
(No Model.) 2 Sheets—Sheet 1.

O. B. PECK.

CENTRIFUGAL ORE SEPARATOR.

No. 489,198. Patented Jan. 3, 1893.

Fig. 1.



Witnesses,
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

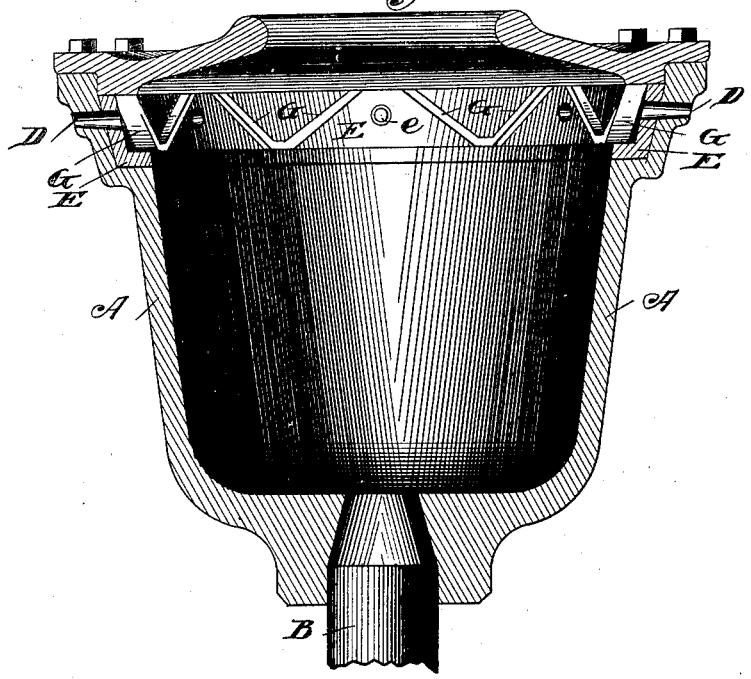
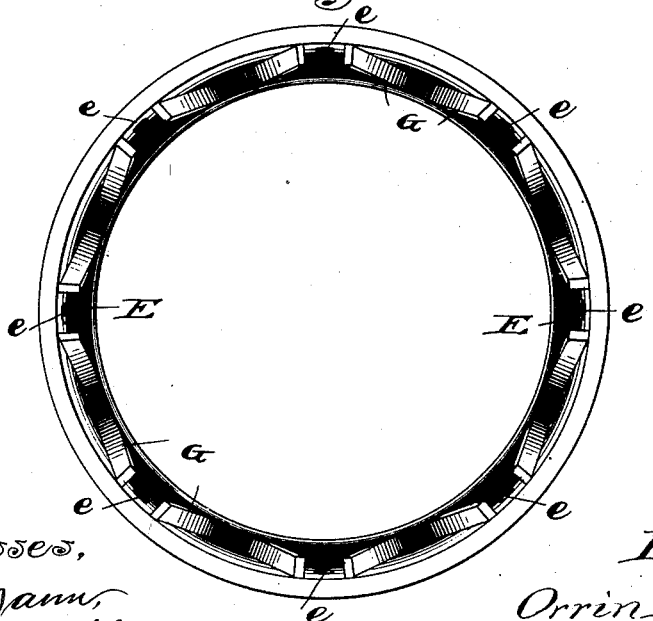


Fig. 3.



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UNITED STATES PATENT OFFICE.

ORRIN B. PECK, OF CHICAGO, ILLINOIS, ASSIGNOR TO MELINDA PECK, OF SAME PLACE.

CENTRIFUGAL ORE-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 489,198, dated January 3, 1893.

Application filed April 24, 1891. Serial No. 390,328. (No model.)

To all whom it may concern:

Be it known that I, ORRIN B. PECK, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Centrifugal Ore-Separators, of which the following is a specification.

The object of my invention is to improve in certain particulars upon the construction of the revoluble vessel, and further, to provide means for insuring the even discharge of the material being treated in the vessel; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a vertical elevation partly in section of an apparatus provided with my improvements; Fig. 2 a vertical central section of the revoluble vessel taken in line 2 of Fig. 1; and Fig. 3 a plan view of the removable guide and wearing ring.

The revoluble vessel A is supported upon and revolved by the shaft B, and is preferably inclosed by a curbing C, as shown, or in any other way.

The preferable form of the vessel is shown more particularly in Fig. 2. In use the vessel is but slowly worn along the interior at the bottom and lower parts of the side, but near the upper end on the interior side, and more particularly in the vicinity of the discharge orifices D, the wear is very great, and it is therefore desirable to provide means for removing this part of the vessel from time to time, without necessitating the reconstruction of the entire vessel. To accomplish this, I provide a ring E, preferably of the form shown in Figs. 2 and 3, fitting the inside of the upper end of the vessel, which is preferably enlarged to receive it. The ring is of a size and shape to fit the vessel more or less closely, and is provided with holes *e*, corresponding in position with the discharge orifices D, so that when this ring is placed in the vessel, the holes in the ring shall correspond to or register with those in the vessel. When this ring becomes worn by use to such an extent as to be no longer properly serviceable, it may be taken out by first removing the cover F, and a new ring may be substituted therefor, the cover being afterward again fastened in place, thereby holding the ring in position. This ring is also preferably provided with a number of guide plates G, which may be made integral with the ring, or separate therefrom and fastened thereto, as may be desired. These plates are preferably made in the form shown in the last two figures of the drawings, there being one plate at either side of each of the holes, extending out from the surface of the ring a suitable distance, and inclining upward as shown, each pair of plates converging or approaching each other, and forming a channel contracting in width as it approaches the holes or orifices. By means of the channels formed by the plates, the material is guided or directed toward the discharge orifices, and the uniform and equal discharge of the material is facilitated thereby, and any uneven accumulation of the material prevented.

While I have shown the plates secured to the removable ring, the ring may be dispensed with, and the plates still used within the vessel to form the channels as before described.

I claim:

1. A vessel for the centrifugal treatment of powdered or finely divided substances for the separation of metallic or mineral-bearing particles, provided with discharge orifices, and channels for guiding the material to the discharge orifices, substantially as described.

2. In a vessel for centrifugally treating powdered or finely divided substances for the separation of metallic or mineral-bearing particles, provided with discharge orifices, plates forming channels for guiding the material to the discharge orifices, substantially as described.

3. In a vessel for the centrifugal treatment of finely divided substances for the separation of metallic or mineral-bearing particles, provided with discharge orifices, a removable ring fitting inside the vessel and having holes or openings corresponding to the discharge orifices, and a channel for guilding the material to the holes or openings, substantially as described.

4. In a vessel for the centrifugal treatment of powdered or finely divided substances for the separation of metallic or mineral-bearing particles, provided with discharge orifices, a removable ring fitting inside the vessel and having holes or openings corresponding to the discharge orifices, and plates forming channels for guiding the material to the holes or openings, substantially as described.

ORRIN B. PECK.

Witnesses:
THOMAS A. BANNING,
SAMUEL E. HIBBEN.