

H. P. CAVARLY.
BUCKLE FOR WHITE LEAD MANUFACTURE.
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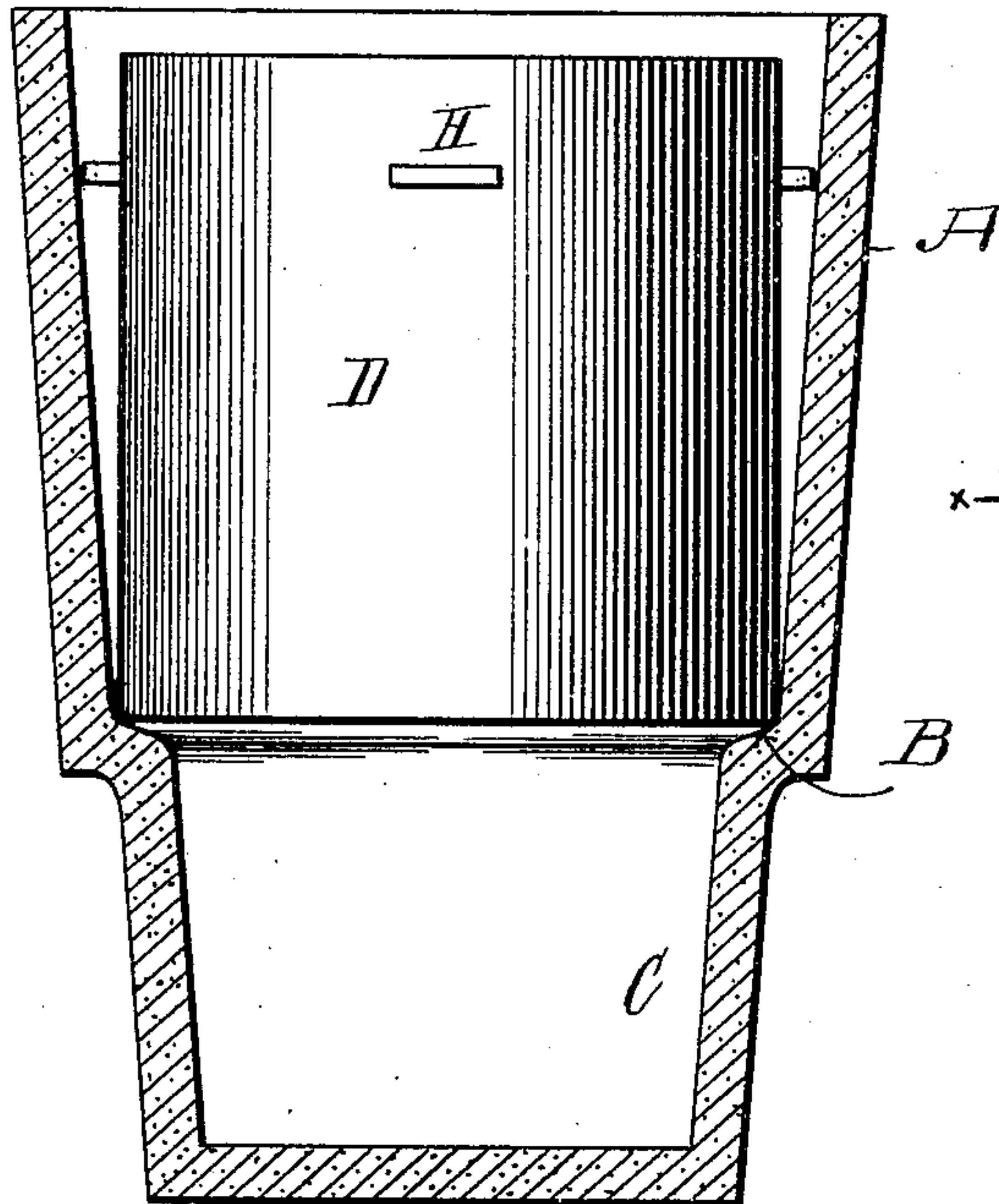


Fig. 1

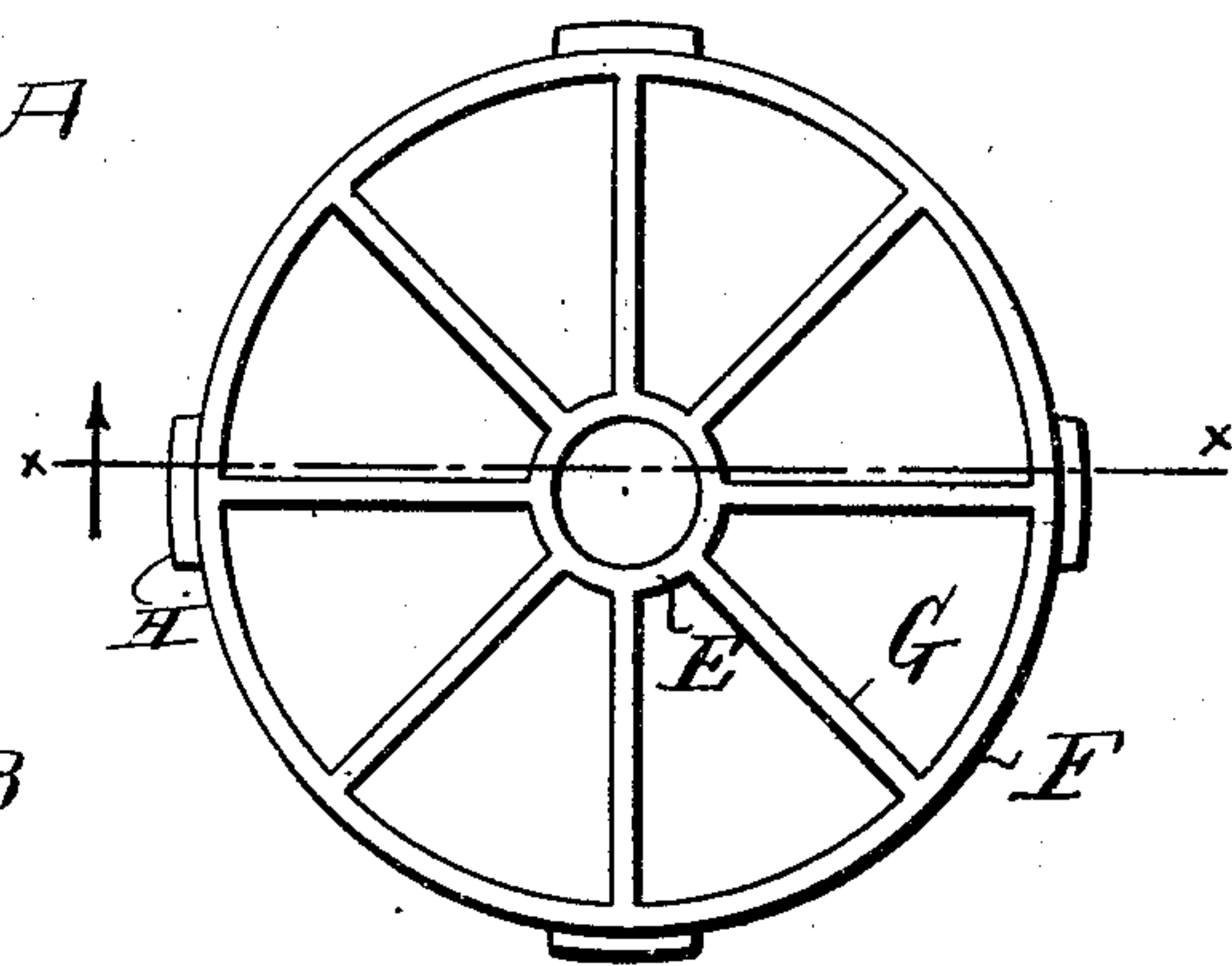


Fig. 2.

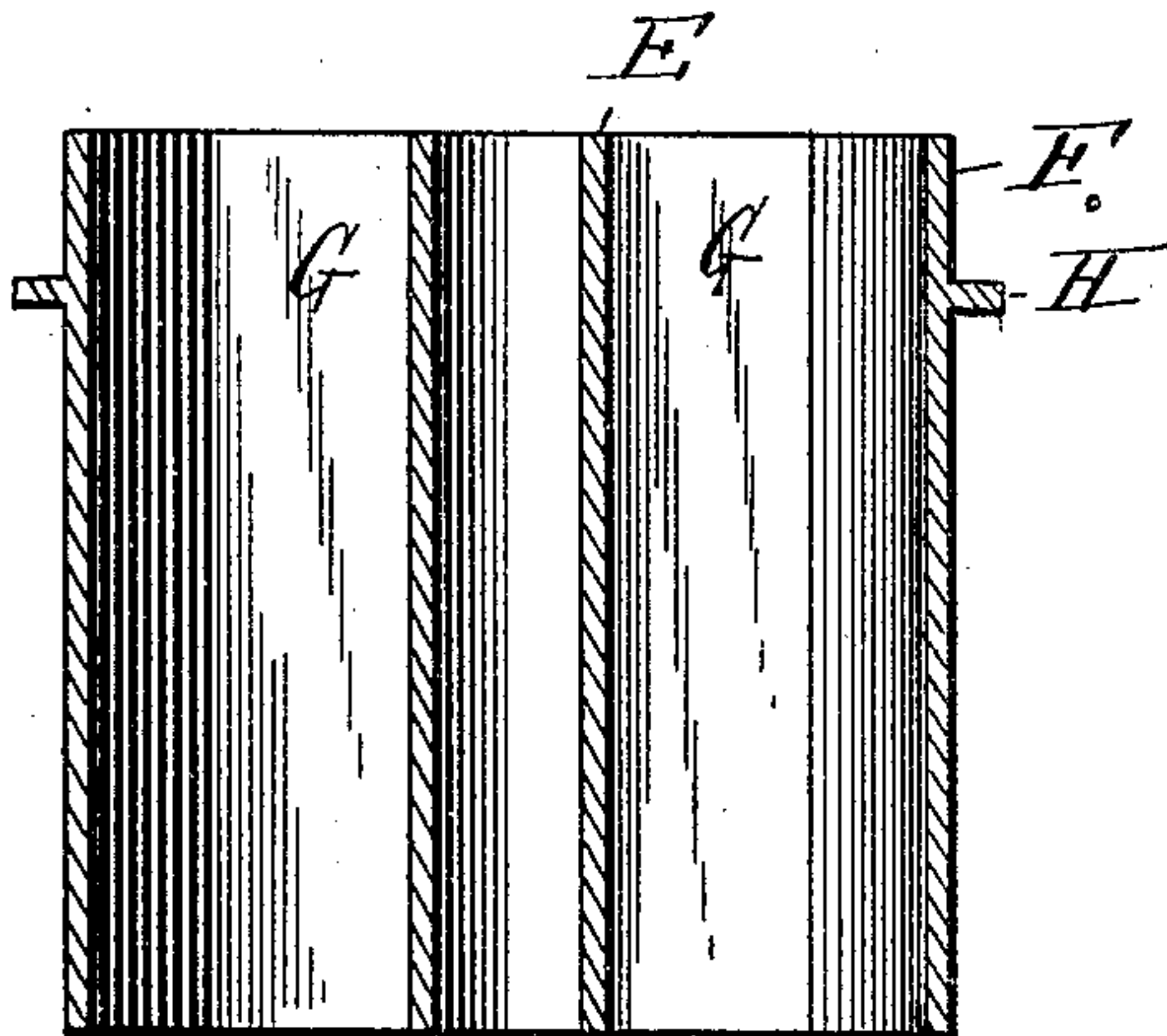


Fig. 3.

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UNITED STATES PATENT OFFICE.

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BUCKLE FOR WHITE-LEAD MANUFACTURE.

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Specification of Letters Patent.

Patented Aug. 1, 1911.

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To all whom it may concern:

Be it known that I, HAYWOOD P. CAVARLY, a citizen of the United States, residing at Richmond Hill, Long Island, in the county of Queens and State of New York, have invented a certain new and useful Improvement in Buckles for White-Lead Manufacture, of which the following is a specification.

In the manufacture of white lead by the "Dutch" process as ordinarily conducted, the metallic lead is cast in flat perforated disks, commonly known as "buckles." These disks are placed or piled in earthenware pots, which pots contain, below the disks, a quantity of weak acetic acid, and are surrounded by tan bark. The well known corroding operation which ensues, converts the metallic lead into a basic carbonate which is the "white lead" of commerce. The use of these lead disks is objectionable for many reasons. Inasmuch as from ten to twenty of them must be placed in turn in each pot, much time and labor is required to insert them properly. They pack together or "set," lead surface to lead surface, thus covering large areas which ought to be exposed to the corroding gases: or, in other words, the maximum possible amount of corrosion surface is not attained. During the corrosion, as well as during setting, they are apt to expand and exert pressure on the pot walls sometimes sufficient to break the pots. In order to get the corroded lead out of the pots, it is necessary to hammer them, and that also results in breakage. As the thin buckles form layers more or less horizontal, and the openings in some buckles become covered by the solid portions of others, they retain drippings from the tan bark, and from the supporting floor of the series of pots next above in the stack, and hence the resulting white lead becomes stained and impure. I have discovered in actual practice, that all of these difficulties can be obviated by making the buckle of cast lead in elongated form, and seating the same on end upon the usual shoulder in the pot, so that all of its surfaces will be perpendicular to the base plane; and my invention, therefore, consists in a cast lead buckle thus formed, and also specifically shaped to secure the maximum corrosion surface, as more particularly hereinafter described and claimed.

In the accompanying drawings—Figure 1

is a vertical section of the usual earthenware corrosion pot, showing my elongated buckle in place on the shoulder therein. Fig. 2 is a transverse section of my buckle, and Fig. 3 is a section of the same on line x, x , of Fig. 2.

Similar letters of reference indicate like parts.

The corrosion pot A is of the usual earthenware type, having an internal shoulder B and a space C below the shoulder for the reception of weak acetic acid.

D is my improved buckle cast of lead preferably in tubular form, seated on end upon the shoulder B and, when a single buckle as here shown is used, approximately filling the pot above the shoulder. The preferred shape of said buckle, as here represented, comprises integrally a central tubular core E, an outer shell F coaxial with said core, and a plurality of radial partitions G connecting said core and shell and extending across the annular space between them. On the exterior of the shell spacing lugs H may be provided.

The following advantages and differences in operation result: 1. The pot can be filled at one operation, and all adjustment or careful packing of individual buckles is obviated. The saving of time and labor is material and reduces the cost of manufacture of white lead. 2. There is maximum exposure of lead surface during the corroding operation. 3. There is no pressure at any time on the sides of the pot, and hence no danger of pot breakage. 4. The corroding gases have free circulation to the lead surfaces. 5. The corroded lead is very easily removed without requiring any hammering of the pots. 6. All the corrosion surfaces are perpendicular to the base plane. Hence drippings are not retained upon them, and the white lead is not stained or contaminated. 7. The use of special machinery, such as is commonly employed for making the numerous disk buckles required, is rendered unnecessary. The buckle is produced by simple casting.

I claim:

1. A lead buckle cast in the form of a hollow cylinder.

2. A tubular cast lead buckle having a plurality of integrally formed longitudinal partitions.

3. A cast lead tubular buckle comprising a

central core, an inclosing shell, and a partition in the annular space between and connecting said core and shell.

4. A cast lead tubular buckle comprising a central core, an inclosing shell, and a plurality of partitions in the annular space between and connecting said core and shell.

5. A cast lead buckle comprising two coaxial tubes, and a plurality of partitions in the annular space between and connecting said tubes.

6. A cast lead buckle comprising two coaxial hollow cylinders, and a plurality of radial partitions in the annular space between and connecting said cylinders.

7. In combination with a corrosion pot, a cast lead buckle in tubular form having spacing lugs on its outer periphery adapted to engage with the wall of the pot.

8. In combination with a corrosion pot having an internal shoulder, a cast lead buckle in tubular form and of a diameter

adapting it to be seated on its end upon said shoulder.

9. In combination with a corrosion pot, a tubular cast lead buckle having a plurality of integrally formed passages perpendicular to the pot bottom.

10. In combination with a corrosion pot, a cast lead buckle in elongated form and having a plurality of passages disposed parallel to its longitudinal axis.

11. A tubular cast lead buckle having an axial core, and a plurality of plates extending therefrom.

12. A tubular cast lead buckle having an axial core, and a plurality of plates radiating therefrom.

In testimony whereof I have affixed my signature in presence of two witnesses.

HAYWOOD P. CAVARLY.

Witnesses:

GERTRUDE T. PORTER,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."