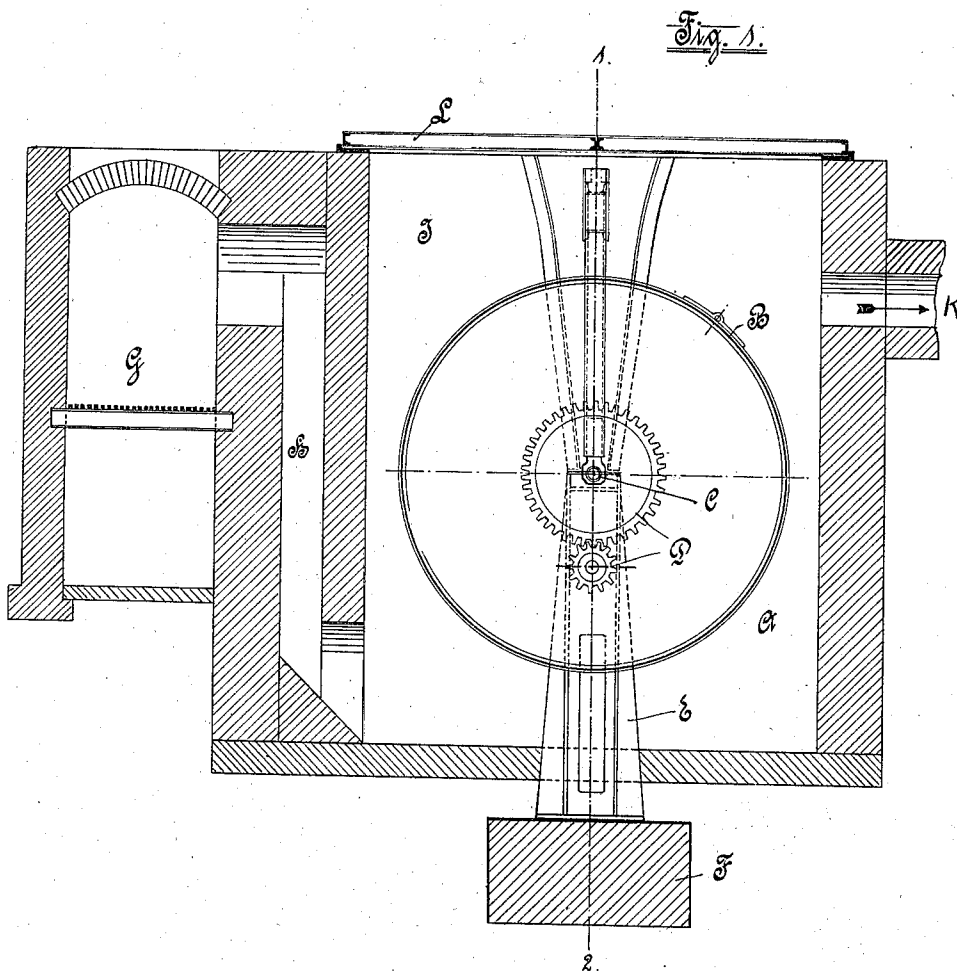


K. GOLDSCHMIDT & J. WEBER.
 FURNACE FOR HEATING OLD TINNED SHEET IRON BOXES AND THE LIKE TO RENDER THEM
 SUITABLE TO BE DETINNED.
 APPLICATION FILED APR. 8, 1908.

978,018.

Patented Dec. 6, 1910.

2 SHEETS—SHEET 1.



Witnesses
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Fig. 2.

1 = 2.

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2 SHEETS—SHEET 2.

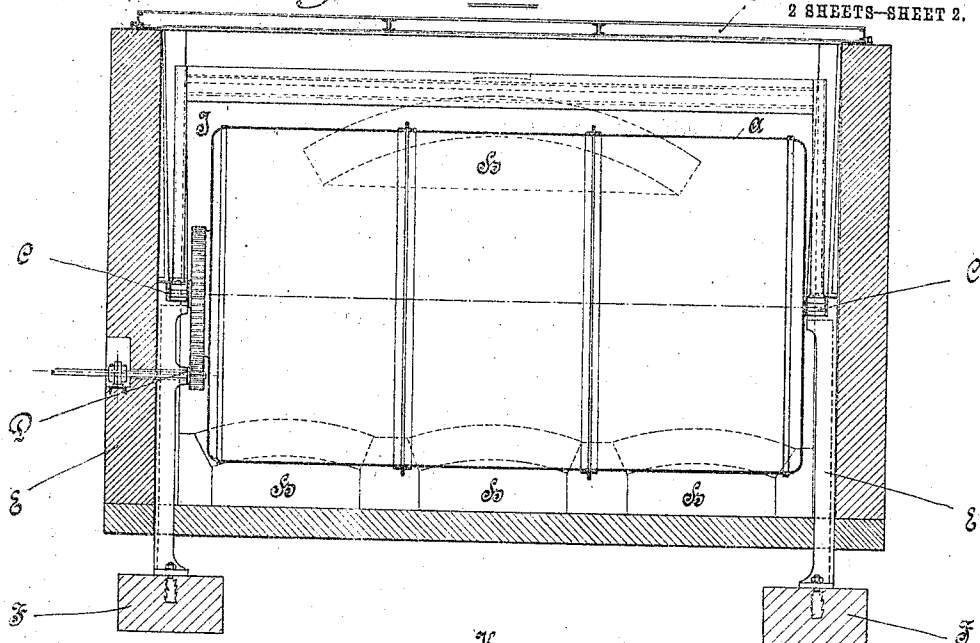
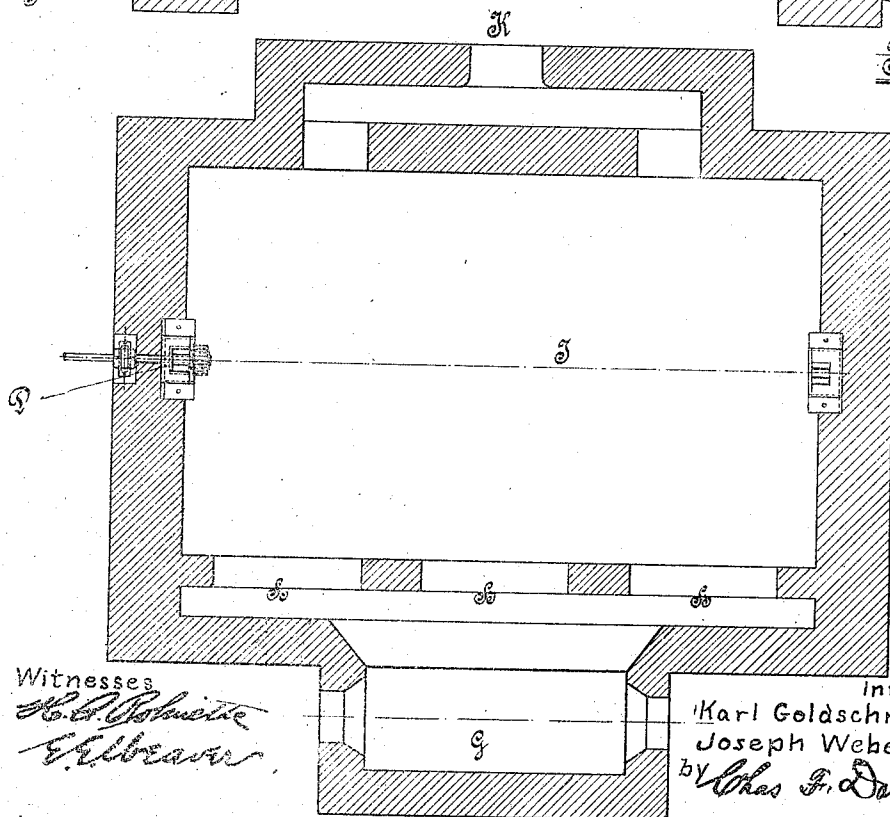


Fig. 3.



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UNITED STATES PATENT OFFICE.

KARL GOLDSCHMIDT AND JOSEF WEBER, OF ESSEN-ON-THE-RUHR, GERMANY, ASSIGNORS TO GOLDSCHMIDT DETINNING COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

FURNACE FOR HEATING OLD TINNED SHEET-IRON BOXES AND THE LIKE TO RENDER THEM SUITABLE TO BE DETINNED.

978,018.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed April 8, 1908. Serial No. 425,948.

To all whom it may concern:

Be it known that we, KARL GOLDSCHMIDT and JOSEF WEBER, subjects of the King of Prussia, German Emperor, and residents of Essen-on-the-Ruhr, German Empire, have jointly invented a new and useful Furnace for Heating Old Tinned Sheet-Iron Boxes and the Like to Render Them Suitable for Being Detinned, of which the following is an exact specification.

There have been described several devices for heating tinned sheet iron objects for the purpose of removing either the solder or the solder together with the tin. From all of them the present invention differs inasmuch as the cylinder, in which the articles to be detinned are exposed to heat, is transportable in such a manner that the cylinder with its contents may previously be treated according to Letters Patent No. 836,028 in a vat with hot alkaline solution and then in a basin filled with water and from thence brought into the furnace.

In the accompanying drawings forming part of this specification Figure 1 represents a cross section of the furnace with the cylinder, Fig. 2 a longitudinal section taken in the plane indicated by the line 1—2 of Fig. 1, Fig. 3 a horizontal section.

Similar letters refer to similar parts throughout the several views.

The transportable cylinder or drum A made of perforated sheet iron or wire-gauze and provided with a lid B for filling and emptying, rests with trunnions in bearings C and may be revolved around its shaft by means of a pinion or a suitable system of gearing D driven from outside the furnace. The supports E bearing the drum must be supported on a groundwork F separate from that of the furnace. From the fire-place G the fire-gases pass through channels H to the hearth-room I where they hit the lower part of the drum rotating in a direction opposed to that of the fire-gases. The surface of the drum may be provided with longitudinal projections which will give a whirling motion to the fire-gases during the rotation of the drum. In this way a rapid and uniform heating of the material contained in the drum is secured. The fire-gases escape through the channel K arranged in the upper part of the heating chamber. This chan-

nel is provided with a slide or similar device for regulating the passage of the fire-gases to the heating chamber and thus regulating the temperature therein. The upper part of the heating chamber is shut by means of a removable cover L for opening the hearth-room when the drum is brought into or taken out of the furnace. This cover may be composed of one or more pieces.

The following is a description of the course of operating with this furnace: The cover L being removed from the furnace for instance by means of a truck or crane, the drum A with the material to be treated is lifted by means of another truck or crane out of the washing tank into which it has been previously brought according to Letters Patent 836,028 and is put into the furnace, the latter being then closed by the cover L. The pinion is started and the drum begins to revolve, the fire-gases being whirled throughout the heating chamber by the motion of the drum. The solder which is melted off from the heated old tinned boxes, flows down and is collected on the sole of the hearth. After the contents of the drum being sufficiently heated, the passage of the fire-gases is shut off, the gearing is stopped, the cover of the furnace is lifted and the drum is taken out of the heating chamber; the material in the drum is then ready for further detinning-treatment.

Having thus fully described the nature of our invention, what we desire to secure by Letters Patent of the United States is:

1. In apparatus of the character described, a heating chamber, a rotatable article-container suspended within said chamber, and means for introducing heated air to said chamber in a direction tangential to the periphery of the container and substantially intersecting its path of movement.

2. In apparatus of the character described, a heating chamber, an article-container suspended within said chamber, means for introducing heated air to said chamber in a direction tangential to the periphery of the container and substantially intersecting its path of movement, and means for rotating said container in a direction to provide movements of the periphery in opposition to the direction of the introduction-flow of the heated air.

3. In apparatus of the character described, a heating chamber, an article-container suspended within said chamber, means for introducing heated air to said chamber in a direction tangential to the periphery of the container and substantially intersecting its path of movement, and means located without the chamber for rotating said container in a direction to provide movements of the periphery in opposition to the direction of the introduction-flow of the heated air.

4. In apparatus of the character described, a furnace, a heating chamber spaced from said furnace, a passage-way connecting the furnace and heating chamber, said passage-way opening into the chamber adjacent its bottom and having the top of the air inlet spaced from the bottom of the chamber, and a rotatable article-container suspended within the chamber and having the path of movement of its periphery extending into the plane of the top of said opening, whereby incoming air currents will substantially intersect the path of movement of the container.

5. In apparatus of the character described, a furnace, a heating chamber spaced from said furnace, a passage-way connecting the furnace and heating chamber, said passage-way opening into the chamber adjacent its bottom and having the top of the air inlet spaced from the bottom of the chamber, a controlling damper for said passage-way,

and a rotatable article-container suspended within the chamber and having the path of movement of its periphery extending into the plane of the top of said opening, whereby incoming air currents will substantially intersect the path of movement of the container.

6. In apparatus of the character described, a heating chamber, bearing brackets supported without said chamber and extending thereinto, an article-container mounted on said brackets, means located without said chamber for imparting a rotary movement to said container, and means for introducing heated air to said chamber in a direction tangential to the periphery of the container and substantially intersecting its path of movement.

7. In a furnace for heating old tin, sheet-iron boxes and the like preparatory to detinning, bearings supported in special ground work separate from that of the furnace, and a removable rotary cylinder arranged in said furnace and journaled in said bearings.

In witness whereof we have hereunto set our hands in the presence of two witnesses.

KARL GOLDSCHMIDT.
JOSEF WEBER.

Witnesses:

L. MAX WAHLGEMUTH,
E. ALDENDORFF.