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Fälling

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[54] **APPARATUS FOR PREPARING ASHES IN CREMATORIES**

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[52] **U.S. Cl.** **110/3,** 27/1, 241/69, 241/171

[51] **Int. Cl.** **F23g 1/00**

[58] **Field of Search** 110/3; 241/69, 73, 171, 241/176, 165; 27/1, 2, 21

[56] **References Cited**

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Attorney, Agent, or Firm—Pierce, Scheffler & Parker

[57] **ABSTRACT**

Apparatus for preparing ashes in a crematory includes a casing to the lower end of which can be fastened an urn for receiving the ashes after they are ground in a rotatable drum located within the casing.

An ashpan from the crematory oven containing the ashes is inserted into the interior of the drum by way of a door on the casing, and when the drum rotates, the ashpan is turned upside down thus spilling the ashes into a perforated shell located within the drum and containing rolling bodies for grinding. The ground ashs pass downwardly and outwardly through the perforated shell and thence into the attached urn. In another embodiment, the ashpan itself forms part of the rotatable drum structure to which is attached a perforated cover, the rolling bodies for grinding being placed inside the ashpan before being inserted into the enclosing casing.

5 Claims, 4 Drawing Figures

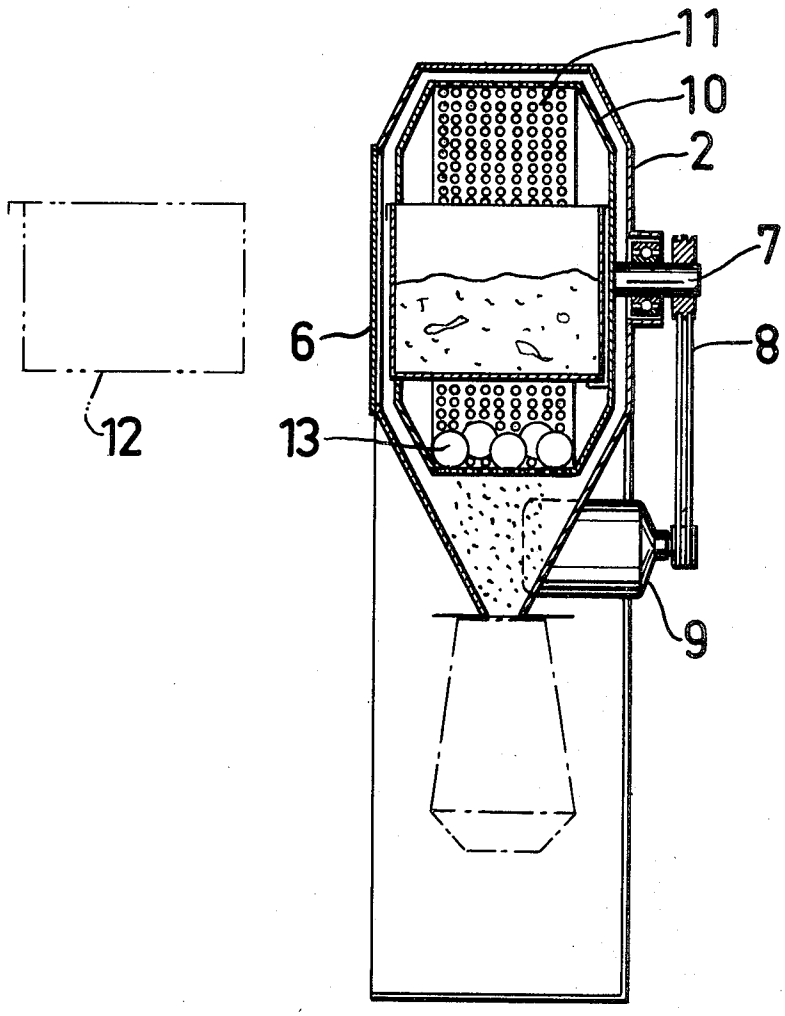


FIG.1

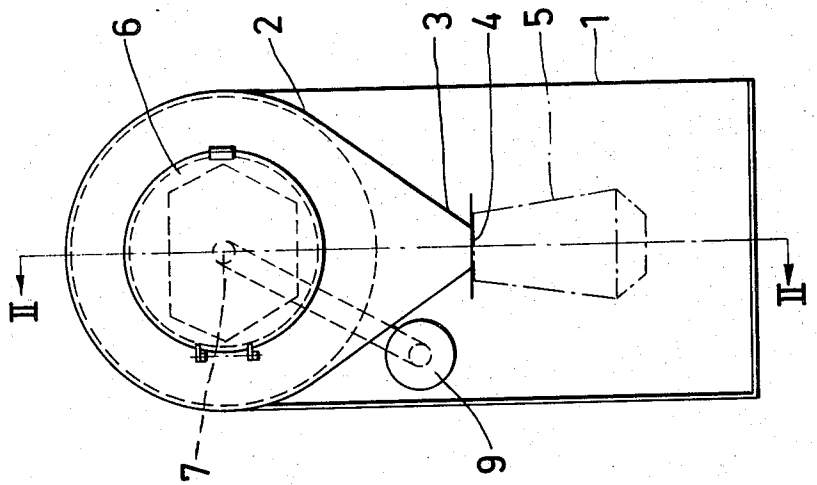


FIG.2

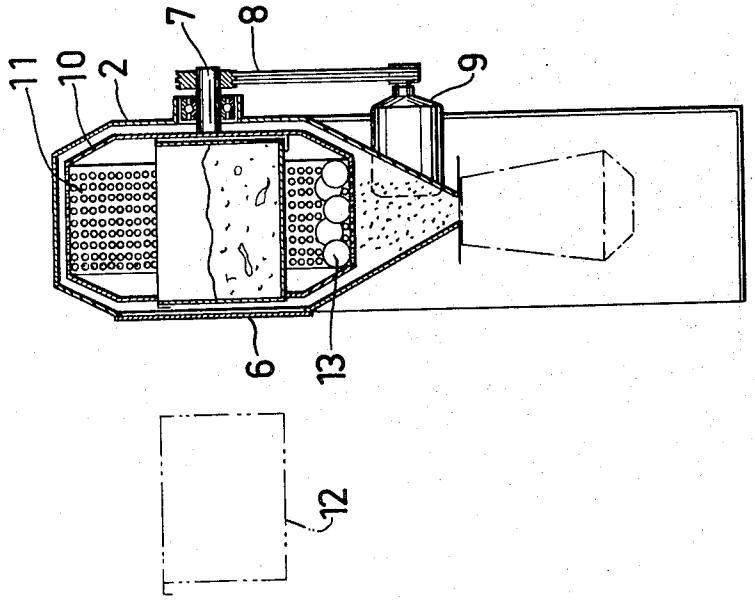


FIG. 3

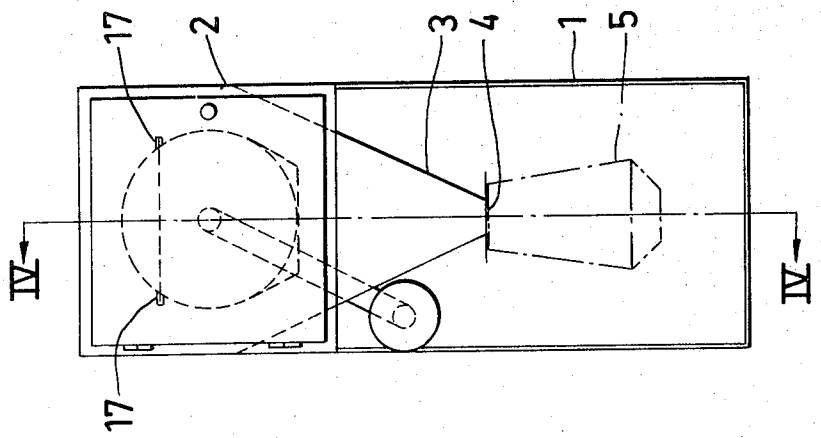
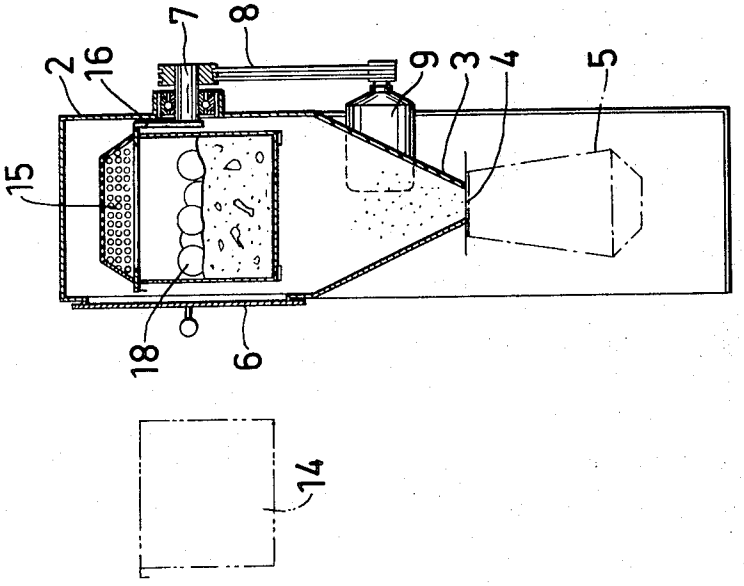


FIG. 4



APPARATUS FOR PREPARING ASHES IN CREMATORIES

This invention relates to an apparatus for preparation of ashes in crematories and comprises a rotary grinding drum with grinding bodies.

It is known to use a ball mill for grinding ashes from a crematory oven in order to obtain ashes in such a state that they can be discharged into an urn. According to the conventional method, the ashes in the crematory oven were collected in an ashpan, and the ashpan was thereafter emptied into the grinding drum of a ball mill for grinding. After completed grinding, the grinding drum had to be opened in order to pick out the grinding bodies and metal objects such as hinges and fittings, which had followed with the ashes out of the crematory oven. Subsequent to this picking of said objects, the ground ashes could be discharged into an urn.

Against this background of the method described above, the present invention has as its object to render manual handling of the ashes unnecessary and to simplify the construction of the ball mill. For achieving this object, the invention has been given the characterizing features defined in the attached claims.

The invention is described in greater detail in the following by way of two embodiments, with reference to the accompanying drawings, in which

FIG. 1 shows a front view of an apparatus for preparation of ashes according to the invention,

FIG. 2 shows a section along the line II—II in FIG. 1,

FIG. 3 shows another embodiment of the apparatus for preparation of ashes in a front view, and

FIG. 4 shows a section along the line IV—IV in FIG. 3.

The apparatus for preparing ashes according to FIG. 1 comprises a stand 1, in which a casing 2 with a funnel-shaped lower portion 3 is mounted. Said lower portion 3 includes an opening 4, to which an urn 5 can be sealingly connected. The casing 2 has substantially drum shape and is provided at one end wall with a door 6. In the opposite end wall of the casing 2 an axle 7 is supported which by means of a belt transmission 8 is rotatable by an electric motor 9. See FIG. 2. Within the casing 2 a drum 10 with perforated shell 11 is mounted on said axle 7. Through the openable door 6 an ashpan 12 can be inserted through the corresponding end wall into the drum 10. The opening in the drum 10 corresponds in shape to the cross-sectional shape of the ashpan 12, and the length of the ashpan corresponds to the length of drum 10. The ashpan is upwardly open, and its width and height dimensions are substantially smaller than the diameter of the drum 10, so that a wide gap is formed between the outer surfaces of the ashpan 12 and the inner surfaces of the drum 10. Within this gap grinding bodies 13 are located. Upon rotation of the axle 7, the opening in the ashpan 12 will be directed downwards once per revolution, so that the ashpan is emptied of its content into the drum 10. The grinding bodies 13 effect thereafter the ashes emptied from the ashpan 12 to be ground against the drum 10 and, the shell 11 of the drum 10 being perforated, the ashes when assuming pulverized state gradually fall out through the perforations and pass downward through the casing 2 to the funnel-shaped end portion 3 and down into the urn 5.

After completed grinding, the ashpan 12 is taken out of the inner drum 10 and casing 2 whereafter the ashpan can be turned upside down and emptied of remaining heavy objects such as hinges and fittings, which were remaining in the ashpan. Certain objects may drop out of the ashpan, but they will stay in the inner drum and, thus, not follow along down into the urn.

In FIGS. 3 and 4 another embodiment of the invention is shown. It comprises in the same way as the aforedescribed embodiment a stand 1, a casing 2, a discharge funnel 3 to the casing 2, an opening 4 in said funnel 3, and an urn 5. The casing 2 has an openable door 6, and a rotary axle 7 supported in the casing 2 is driven by a belt transmission 8 by the electric motor 9.

At this latter embodiment, a grinding drum is formed of the ashpan 14 and a perforated cover 15. Said cover 15 is rigidly secured on the axle 7 by a holder 16, and the ashpan can be moved inwards beneath the cover by, for example, guide means 17 in the lower edges of the cover 15. The ashpan 14, thus, is shaped as a part of a drum, and the cover 15 completes the ashpan so as to form a drum rotating on the axle 7 within the casing 2. Before the ashpan is moved in within the opened door 6 and fastened below the perforated cover 15, grinding bodies 18 are laid in. Upon rotation within the casing 2 the ashes will be pulverized and fall out through the perforated cover 15 when this is directed downwards so that the ashes fall down into the funnel 3 and through the opening 4 down into the urn 5. After completed grinding, the ashpan 14 is lifted out of the casing 2, and the grinding bodies are picked out of the ashpan. Thereafter the ashpan is turned upside down and emptied of remaining ungrindable large objects such as hinges and thereafter repositioned into the crematory oven.

It is, thus, evident from the above description that the ashpan for the crematory oven is a part of the apparatus for preparing ashes in such a respect, that the person performing the cremation can move the ashpan directly out of the crematory oven and place it into the apparatus for preparing ashes without coming into contact with the ashes. One and the same crematory oven may also comprise several ashpans, so that during the period of a cremation in the crematory oven preparation takes place in the apparatus of ashes resulting from a preceding cremation in the oven. The opening 4 for the funnel portion 3 may also be arranged so that an urn of standard size can be sealingly connected to the opening by a single movement of the hand. Also this contributes to rendering the measures in connection with cremation to be carried out in a simpler and faster way.

What I claim is:

1. Apparatus for preparing ashes contained in an upwardly open ashpan of a crematory oven, which comprises

a casing, adapted to collect ground ashes;

said ashpan being detachably supported by a rotating means for rotation in said casing;

a rotary grinding drum mounted for rotation within said casing;

grinding bodies disposed in said drum;

said ashpan at least above its opening being separated from the interior of the casing by an arched portion of a perforated shell,

said shell forming the aforesaid rotating means supporting said ashpan.

2. Apparatus as defined in claim **1,** wherein the ashpan in its entirety is enclosed and supported by said drum, there being a wide gap between the wall of said drum and the outer surfaces and opening of the ashpan, in which gap the grinding bodies are disposed.

3. Apparatus as defined in claim **2,** in which said shell is perforated all around.

4. Apparatus as defined in claim **1,** wherein the curved portion of the perforated shell forms a cover to

the opening of the ashpan, and the side walls of the ashpan have the same radius of curvature as that of said curved portion, so that said portion and the ashpan together form a grinding drum for the grinding bodies and the ashes undergoing grinding.

5. Apparatus as defined in claim **1,** wherein the casing has a downwardly directed discharge opening for discharge of ground ashes, to which opening an urn can be sealingly connected.

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