Apr. 10, 1923 1,451,538

F. ENGEL

VENTILATOR

Filed Sept. 25, 1919

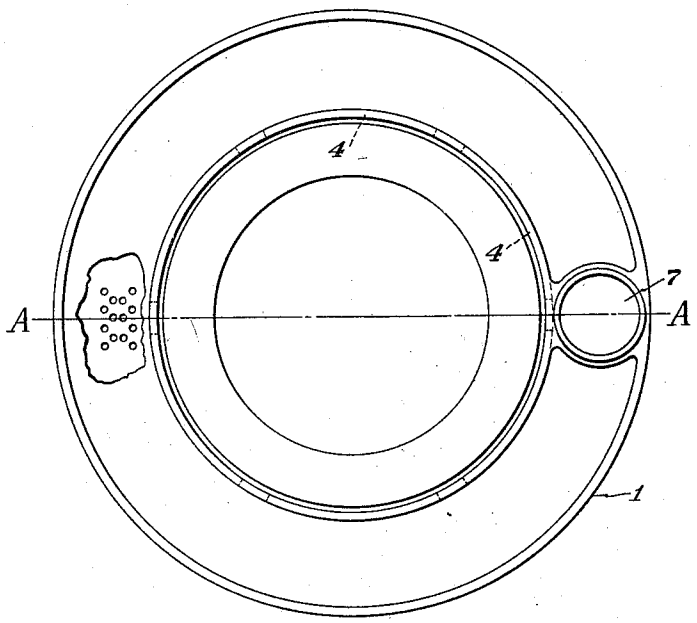


Fig. 1

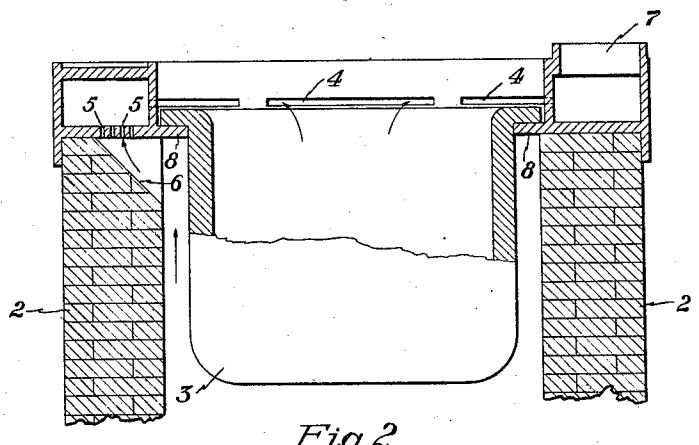


Fig. 2

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UNITED STATES PATENT OFFICE.

FRANK ENGEL, OF NIAGARA FALLS, NEW YORK, ASSIGNOR TO U. S. LIGHT & HEAT CORPORATION, OF NIAGARA FALLS, NEW YORK, A CORPORATION OF NEW YORK.

VENTILATOR.

Application filed September 25, 1919. Serial No. 326,114.

To all whom it may concern:

Be it known that I, FRANK ENGEL, a citizen of the United States, residing at Niagara Falls, in the county of Niagara and State of New York, have invented new and useful Improvements in Ventilators, of which the following is a specification.

The present invention relates to ventilators.

In many occupations in which workmen are required to work over pots of molten material, there is danger of noxious fumes entering the respiratory systems of the workmen and injuring their health. Systems of ventilation have been provided for such pots of molten material but render the work more difficult for the workmen.

An object of the present invention is to provide a simple and effective ventilator whereby noxious fumes may be led away to a safe place.

A further object is to provide a ventilator which will not interfere with the operations of the workmen.

Referring to the drawings—

Fig. 1 represents a top plan view of a ventilator according to the present invention.

Fig. 2 represents a view in sectional elevation along the line A—A of Fig. 1.

A ventilator according to the present invention is indicated as a whole by the numeral 1. This ventilator 1 is shown as being annular in configuration. It will be understood, however, that any other configuration may be used if preferred. The numeral 2 indicates the wall of a fire box. The ventilator 1 is mounted upon the top of a wall 2. This ventilator is shown as supporting the melting pot 3.

The ventilator 1 may be described as being of frame-work construction, providing a passage-way which extends around the upper edge of the pot 3. The frame-work provides an annular box-like construction having apertures 4, 4, opening toward the center thereof adjacent to the top edge of the pot 3. The bottom portion of the annular frame-work is provided with apertures 5, 5 through which the heating gases may pass. For the purpose of providing a passage-way for said heating gases, the top portion of the wall 2 may be beveled off as shown by the numeral 6, whereby the heating gases may pass into the ventilator as indicated by the arrows. The ventilator is provided with an aperture 7 which may be connected to an exhaust tube whereby the gases may be led off from the interior of the ventilator. The ventilator is provided with an internal flange 8 which provides a convenient seat for the pot 3.

The mode of operation of a ventilator according to the present invention will be at once understood. If the pressure at the aperture 7 is reduced by means of an exhaust fan or other means, any fumes which are emitted from the pot 3 will at once pass through the apertures 4, 4 into the ventilator and will be drawn off through said aperture 7. Furthermore, the heating gases from within the wall 2 of the fire box will be drawn through apertures 5, 5 and out through aperture 7. The annular box-like construction provides an open space giving access to the pot throughout the entire upper surface thereof, whereby the workman may dip into the pot without interference. The fumes from the fire box and from the pot will be effectually exhausted through the ventilator, thereby reducing the danger to the health of the workman to a minimum.

One embodiment of the present invention has been described in detail. Many modifications will occur to those skilled in the art. It is intended in this patent to cover all such modifications that come within the scope of the invention as defined by the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States, is—

1. In combination, a pot, a framework having an opening in its center within which said pot is adapted to fit, said framework forming an enclosed passageway extending around the top edge of said pot, said framework having apertures adjacent to the top edge of said pot, and an exhaust aperture through which fumes may be drawn off.

2. In combination, a fire box wall, a pot and a ventilator supported by said wall, said ventilator comprising a framework forming a passageway surrounding the upper edge of said pot, said framework having apertures communicating with said passageway from between said wall and said pot and from points adjacent to the top of said

pot and also having an exhaust aperture through which fumes may be drawn off from said ventilator.

3. In combination, a fire box wall, an annular framework fitting thereto and providing an enclosed passageway, a pot fitting within said annular framework, said framework having apertures adjacent to the edge of said pot, said framework also having apertures connecting with the space between said wall and said pot, and an exhaust aperture through which fumes may be exhausted from said framework.

In witness whereof, I have hereunto subscribed my name.

FRANK ENGEL.