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G. F. LENK

CHARGING HOPPER AND COVER FOR INCINERATORS

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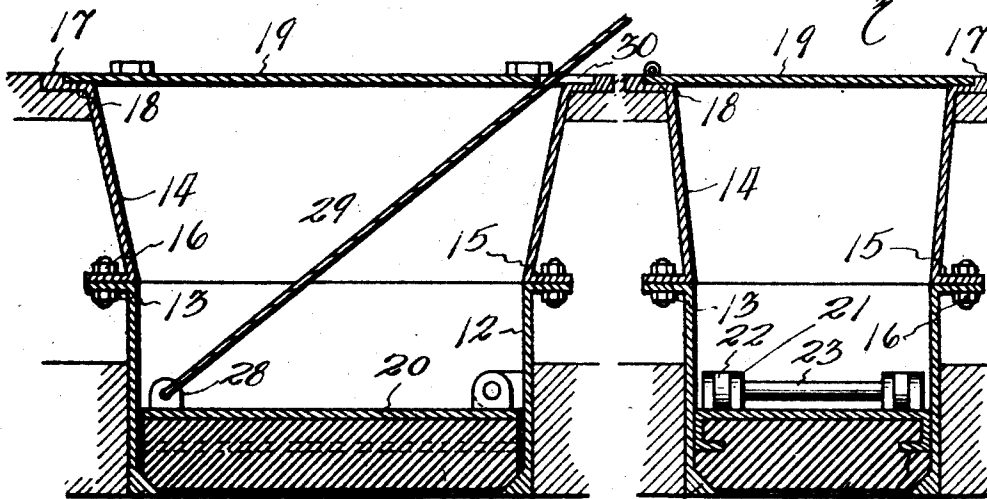
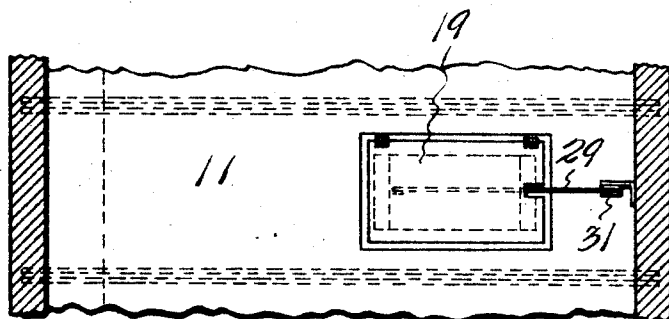
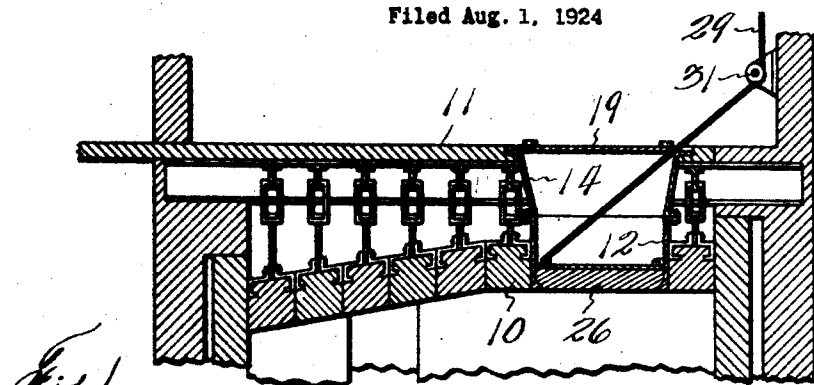


Fig. 4.

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UNITED STATES PATENT OFFICE.

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CHARGING HOPPER AND COVER FOR INCINERATORS.

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To all whom it may concern:

Be it known that I, GUS F. LENK, citizen of the United States of America, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Charging Hoppers and Covers for Incinerators, of which the following is a specification.

This invention relates to new and useful improvements in charging hoppers and covers for incinerators.

The object of the invention is to provide in combination with a fire arch or roof formed of right angular blocks, a flat sided hopper formed in two detachable sections, whereby the lower section not only will fit between the blocks, but may be removed and replaced when necessary without disturbing the remainder of the hopper or the roof.

Another object is to provide a closure mounted in the lower end of the hopper and hinged to swing upwardly when it is desired to charge the incinerator.

A further object is to provide a tile of fire resisting material removably held in a frame and forming the lower portion of the closure, whereby said tile may be readily replaced.

A construction designed to carry out the invention will be hereinafter described together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings, in which an example of the invention is shown, and wherein:

Fig. 1 is a partial transverse vertical sectional view of an incinerator equipped with a hopper and closure constructed in accordance with my invention.

Fig. 2 is a plan view of the same,

Fig. 3 is an enlarged vertical sectional view through the hopper and closure, and

Fig. 4 is a view at right angles to Fig. 3.

In the drawings the numeral 10 designates the roof of the burning chamber of an incinerator which is composed of square or rectangular blocks. Spaced above the roof is a floor 11 onto which the vehicle containing the matter to be dumped into the incinerator, is driven. The details of construction of these parts are unimportant.

My improved hopper comprises a lower rectangular collar 12 having perpendicular walls and provided with an outwardly directed marginal flange 13 along its upper

edge. The collar fits snugly between the blocks of the roof and is easily removed, the flange 13 is well above the said blocks. A flaring sleeve 14 forms the upper portion or member of the hopper. This sleeve has a marginal flange 15 around its lower edge resting upon the flange 13 and secured thereto by bolts 16.

The sleeve 14 has an outwardly directed flange 17 at its upper edge countersunk in the floor 11 and provided with a rectangular seat 18 contiguous to its inner edge. The hopper is shown as rectangular and on one of the longer sides, a flat cover 19 is hinged to lie flush in the seat 18. This cover is used merely to close the upper end of the hopper so that vehicles may pass thereover and to keep trash from falling into the hopper when the bottom of the hopper is closed.

For closing the bottom of the hopper and protecting the sleeve and collar from the flames, I provide a closure comprising a rectangular frame 20 arranged in the collar 12. The frame has upon its upper side or back, at one end, hinge lugs 21 and meshing with hinge lugs 22 on the rear end wall of the collar. A pintle 23 passes transversely through the lugs.

Along each side the frame has depending flanges 24 having inwardly directed lips or ribs 25 along their lower edges. This leaves the front and rear ends of the frame open and unobstructed, so that a tile 26 having longitudinal recesses for the flanges and lips, may be slid endwise, into the frame. The collar has an internal beveled bead 27 contiguous to the lower edge of the collar. The tile is made of fire clay or other fire resisting material, extends below the lips 25 and has its lower edge beveled to rest upon the seat formed by the bead 26.

The closure is hinged to swing upwardly and rearwardly in the hopper and upon its swinging end, has an ear 28 cast upon the back of the frame 20. A flexible connection 29 extends from the ear through a slot 30 in the cover 19 and behind a pulley 31 mounted on the wall of the incinerator house. It will be seen that the tile may be displaced endwise from the frame and a fresh tile substituted when necessary, without removing nuts, bolts and the like. When closed the tile is substantially flush with the roof 10.

When it is desired to charge the incinera-

tor the cover 19 is raised and the connection 29 pulled out of the slot 30. To open the closure the connection 29, is manipulated from the floor 11, to raise the tile 26, which will rest against the rear inclined end of the sleeve 14. After the charge is dumped through the hopper, the frame 20 is swung down and the cover 19 is closed. No block and tackle or other lifting means is required, other than the connection 29, thus it is not necessary to engage hooks or make other connections to raise the closure.

Various changes in the size and shape of the different parts, as well as modifications and alterations may be made within the scope of the appended claims.

What I claim, is:

1. In a charging hopper and closure for incinerators, a hopper composed of an upper flaring portion and a lower vertical-sided portion detachably fastened to the upper portion, inwardly directed lips at the lower edge of the lower portion of the hopper, and a closure hinged in the lower portion of the hopper and having a removable facing of refractory material resting upon the lips.

2. In a charging hopper and closure for

incinerators, a hopper composed of an upper flaring portion and a lower vertical-sided portion detachably fastened to the upper portion, inwardly directed lips at the lower edge of the lower portion of the hopper, a closure hinged in the lower portion of the hopper and having a removable facing of refractory material resting upon the lips, and a cover closing the upper end of the hopper.

3. In a charging hopper and closure for incinerators, a flaring upper hopper portion having an outwardly directed flange at its lower edge, a lower hopper portion having an outwardly directed flange at its upper edge, the flanges of the hopper portions being bolted together whereby the lower portion may be detached and replaced when burned out, lips directed inwardly from the lower edge of the lower portion of the hopper, and a closure having a facing of refractory material hinged in the lower portion of the hopper and resting upon said lips.

In testimony whereof I affix my signature.

GUS F. LENK.