

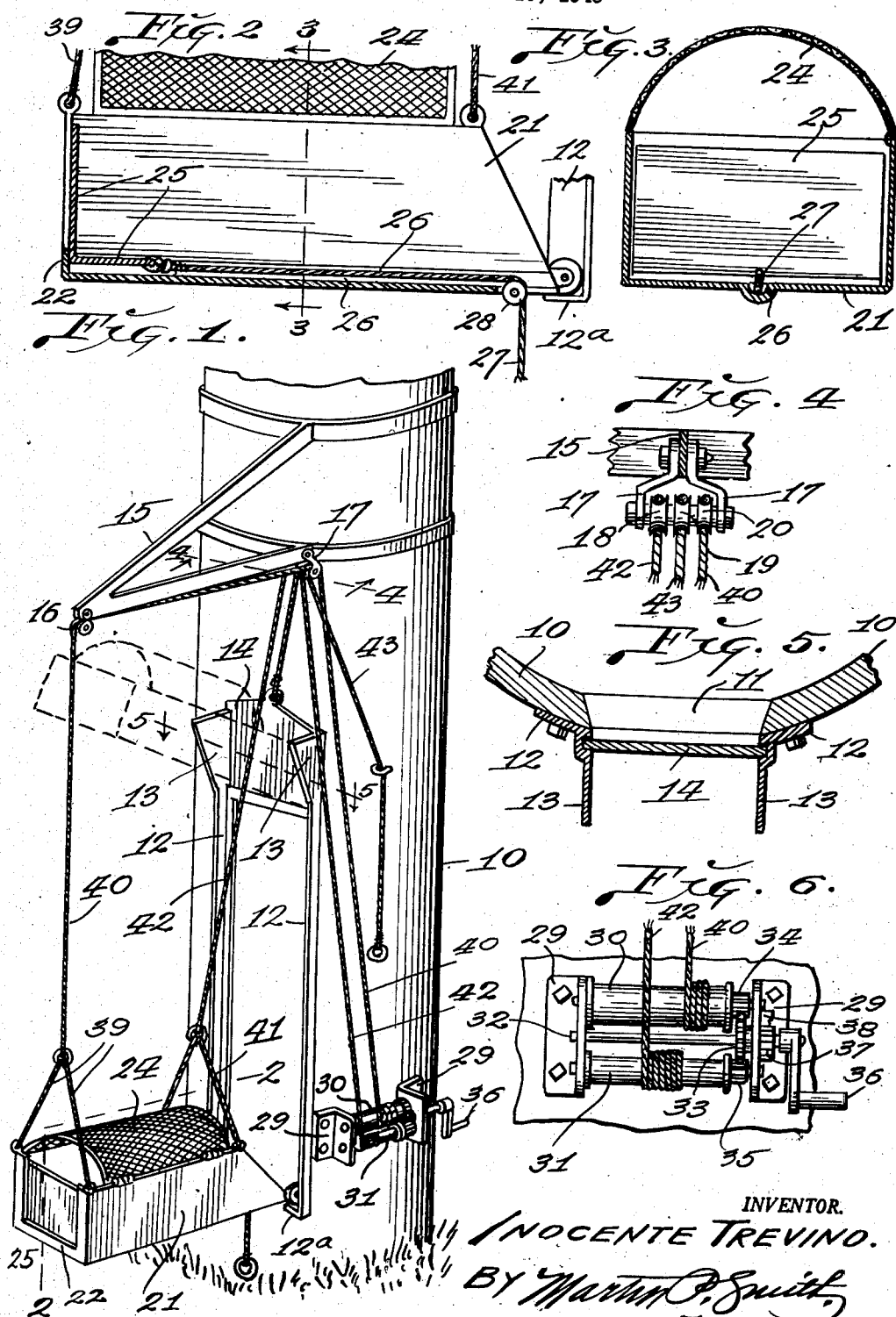
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INCINERATOR

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INCINERATOR

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1 Claim. (Cl. 214-120)

My invention relates to incinerators, particularly the larger sizes, used by factories, mills, packing establishments, motion picture studios and the like for burning large quantities of refuse and the principal object of my invention is to provide simple, efficient and easily operated means for delivering waste material to the charging door of the furnace and which latter, it will be understood in the larger sizes of incinerators, is located a considerable distance above the ground or floor upon which said incinerator rests.

A further object of my invention is to provide simple and effective means for preventing paper, leaves and other lightweight refuse from being blown away by the wind while discharging from the skip into the charging door of the incinerator.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts, which will be hereinafter more fully described and claimed and illustrated in the accompanying drawing in which:

Fig. 1 is a perspective view of an incinerator constructed in accordance with my invention.

Fig. 2 is a vertical longitudinal section taken on the line 2-2 of Fig. 1.

Fig. 3 is a cross section taken on the line 3-3 of Fig. 2.

Fig. 4 is detail section taken on the line 4-4 of Fig. 1.

Fig. 5 is an enlarged horizontal section taken on the line 5-5 of Fig. 1.

Fig. 6 is a front view of the skip hoisting gear.

Referring by numerals to the accompanying drawing which illustrates a preferred embodiment of my invention, 10 designates the incinerator body usually formed of concrete, brick, sheet metal or the like and having a charging opening 11 generally located a substantial distance above the base of the incinerator body in order to provide a combustion chamber of ample proportions below said charging opening.

Secured on the outer face of the incinerator body to the sides of the opening 11 are vertically disposed parallel angle bars 12 which serve as tracks for the rollers of the skip or charging receptacle and immediately to the sides of opening 11, these bars are provided with outwardly projecting plates 13 which function as wind shields.

Arranged to slide freely between the inner portions of plates 13 is a metal door 14 which normally closes the charging opening 11. Suitably secured to body 10 and projecting outwardly

therefrom above opening 11 is an arm 15, in the outer end of which is mounted for operation, a grooved pulley 16.

Suspended from the inner end portion 15 is a hanger 17 in which is journaled for independent rotation three grooved pulleys 18, 19 and 20 (see Fig. 4).

The skip or charging receptacle is a boxlike member 21 preferably formed of sheet metal, open at both ends and provided on its outer end with inwardly projecting flanges 22.

Mounted on the lower front carriers of the skip are rollers 23 which traverse the rails 12 and the latter are provided at their lower ends with stops 12a which limit the downward travel of said rollers and the skip.

Mounted on top of the skip is a hinged cover 24 of wire netting or the like. Arranged to slide lengthwise within the skip is an L-shaped member 25, the upright portion of which serves as a closure for the outer end of the skip, and when the skip is loaded and said member is drawn forwardly therethrough, the contents of said skip will be discharged from the forward end thereof.

Formed in the bottom of the skip is a longitudinally disposed groove 26 for the accommodation of a cable 27, one end of which is connected to the base of member 25 and the opposite end portion passing over a pulley 28 which is journaled in the forward end of the bottom of the skip, with a portion of said cable depending from said skip. This cable provides means for pulling member 25 forwardly through the skip when discharging the contents thereof through opening 11 into the incinerator.

Mounted on the lower portion of the incinerator body are brackets 29 in which are mounted for rotation a drum 30 and a smaller drum 31, with a shaft 32 journaled for rotation between said drums.

A gear wheel 33 on shaft 32 engages pinions 34 and 35 on drums 30 and 31 respectively, and on one end of said shaft 32, is mounted a crank handle 36. Shaft 32 carries a ratchet wheel 37 which is engaged by a pawl 38 on the adjacent bracket 29, thus providing means for holding the skip when elevated to discharging position.

Branches 39 of a cable 40 are connected to the rear upper corners of skip 12 and said cable extends upward over pulley 16 thence toward the incinerator over pulley 20 and thence down to drum 30.

Branches 41 of a cable 42 are connected to the front upper corners of the skip and said cable

extends upward, thence over pulley 18 and thence downward to the small drum 31.

A cable 43 has one end connected to the upper end of door 14 and extends therefrom upward over pulley 19 and thence downward through a fixed loop or ring 44 to a point above the skip actuating gear.

In the use of my improved incinerator, the skip in its lowermost position is filled with refuse and the cover 24 closed thus preventing lighter parts of the load such as paper and leaves from being blown away by the wind.

Previous to the loading of the skip, member 25 is moved to the rear end thereof against flange 22, thus forming a rear wall for the receptacle.

While being loaded the skip may occupy a substantially horizontal position or an inclined position with its rear end lower than its forward end. After being filled, the skip is elevated by actuating crank 32, which through gear 33 and pinions 34 and 35 rotates drums 30 and 31 thereby winding cables 40 and 42 respectively thereon.

During this elevation of the skip the rollers 23 traverse the rails 12 and due to the difference in the sizes of drums 30 and 31, cable 48 winding onto the large drum 30 will travel faster than cable 42 attached to the forward end of the skip so that, as it moves upward, the skip will be tilted with its rear end higher than its forward end, as the latter is brought into position opposite the charging opening 11.

Cable 43 is now pulled down to elevate door 14 after which cable 27 is pulled down to move member 25 forwardly through the skip and thereby

feed all of the refuse from said skip through opening 11 into the incinerator.

While the skip is elevated as just described it is so held by the ratchet and pawl associated with crank shaft 32. The windshield 13 prevents paper, leaves and other lightweight refuse from being blown out of the forward portion of the skip while in load discharging position.

After the charging operation as just described has been accomplished, the skip is lowered to its normal position and member 25 is returned to the rear end of said skip and thus the latter is ready to be reloaded.

Thus it will be seen that I have provided an incinerator which is simple in structure, inexpensive of manufacture and very effective in performing the functions for which it is intended.

It will be understood that minor changes in the size, form and construction of my improved incinerator may be made and substituted for those herein shown and described without departing from the spirit of the invention, the scope of which is set forth in the appended claim.

I claim as my invention:

In a hoist for delivering material to an elevated opening, a skip open at both ends, an L-shaped member arranged to slide lengthwise within said skip, which member when at its rearward limit of movement closes the rear end of said skip, a flexible member secured to the forward end of said sliding member and extending lengthwise through said skip for drawing said member to the forward end of said skip and a hinged cover for said skip.

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