

April 8, 1930.

H. J. MELVILLE

1,753,210

WASTE RECEPTACLE

Filed Dec. 5, 1927

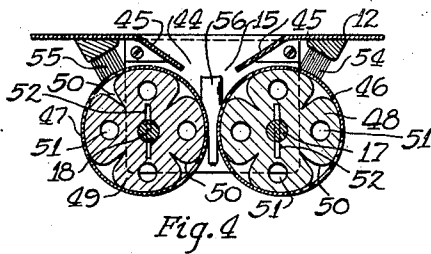


Fig. 4

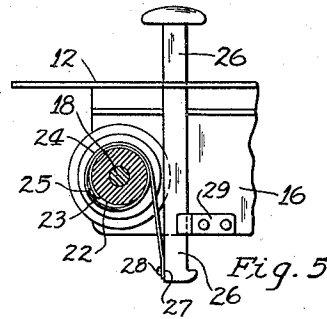


Fig. 5

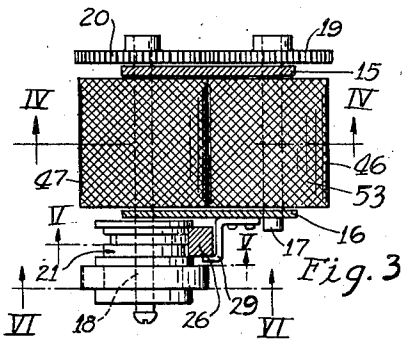


Fig. 3

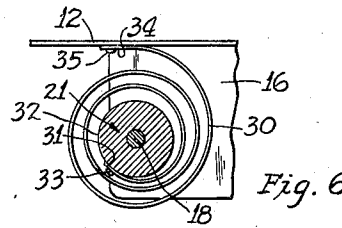


Fig. 6

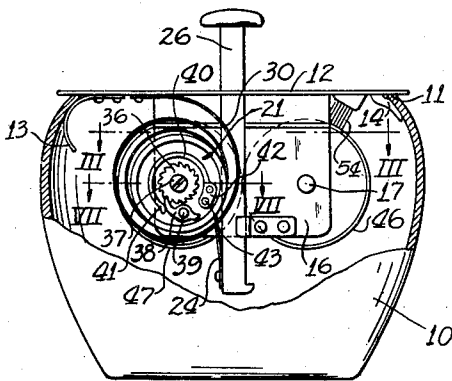


Fig. 1

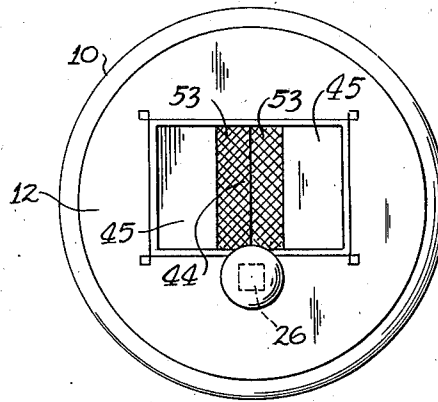


Fig. 2

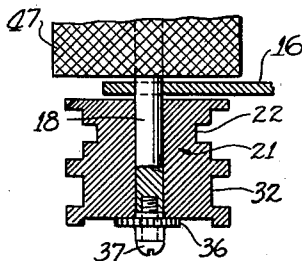


Fig. 7

Inventor
Herbert J. Melville
By *Charles M. Lloyd*
Attorney

UNITED STATES PATENT OFFICE

HERBERT J. MELVILLE, OF CHICAGO, ILLINOIS

WASTE RECEPTACLE

Application filed December 5, 1927. Serial No. 237,702.

This invention relates to refuse containers and more particularly to ash receptacles, although certain features thereof may be employed with equal advantage for other purposes.

It contemplates more especially the provision of means for effecting the concealment of refuse from sight simultaneous with the extinguishment thereof to avoid obnoxious odors as well as to avoid the sight thereof.

Ash receptacles of known construction are not effective in preventing obnoxious odors, and further do not serve to extinguish ashes so as to avoid smoke generation in proximity thereto. The fact is that known ash receptacles soon become obnoxious and most disagreeable owing to the smoldering contents thereof. As a consequence, these are not very desirable for domestic use in that the surrounding atmosphere is materially affected thereby. With the general indulgence in cigarette smoking by the fairer sex, much annoyance is caused by the refuse incident thereto, since such is most disagreeable, obnoxious, and unsightly. The present invention strives to conceal the refuse from view as well as preclude the generation of smoke or odors therefrom during the confinement thereof in a proper receptacle.

One object of the present invention is to simplify the construction and improve the operation of devices of the character mentioned.

Another object is the provision of instrumentalities for removing refuse from sight and simultaneously effecting the extinguishment thereof.

Still another object is the provision of a receptacle which is normally closed but receptive of refuse responsive to an actuator which effects the extinguishment simultaneous with the removal thereof from sight.

A further object is the provision of confronting rolls constituting an orifice of a receptacle to admit refuse therein simultaneous with the extinguishment thereof.

A still further object is the provision of yieldably associated confronting rolls which are intergeared to extrude refuse there-

through responsive to the intermittent rotary movement thereof.

Still a further object is the provision of confronting rolls mounted in fixed axes in a manner to enable the yieldable relative support thereof to admit refuse therebetween responsive to imparting movement thereto.

Other objects and advantages will appear from the following description of an illustrative embodiment of the present invention.

In the drawing:

Figure 1 is a view in elevation of a device embodying features of the present invention, parts thereof being removed to clarify the showing;

Figure 2 is a plan view of the device disclosed in Figure 1;

Figure 3 is a sectional view taken substantially along line III—III of Figure 1;

Figure 4 is a sectional view taken substantially along line IV—IV of Figure 3;

Figure 5 is a sectional view taken substantially along line V—V of Figure 3;

Figure 6 is a sectional view in elevation taken substantially along line VI—VI of Figure 3; and

Figure 7 is a sectional view taken substantially along line VII—VII of Figure 1.

The structure selected for illustration comprises a receptacle 10 of any suitable construction preferably shaped to define a mouth 11 for receiving the refuse admitting instrumentalities therein. The mouth 11 of the receptacle 10 supports in this instance a substantially circular plate 12 which is provided with spring clips 13 in proximity to the periphery thereof to engage the inner surface of the receptacle mouth 11 so as to normally maintain the plate 12 in association therewith. As shown, the plate 12 has a depending lug 14 fixed thereto to guide the positioning of the plate 12 with respect to the receptacle 10. The spring clips 13, of course, maintain the position thereof without interfering with the relative disassociation of the plate 12 from the receptacle 10.

Spaced brackets 15 and 16 depend from the underside of the plate 12 to carry horizontally disposed shafts 17 and 18 within the receptacle 10, the shafts 17 and 18 being

horizontally journaled therein in fixed spaced relation so as to enable the rotation thereof. It is to be noted that the shafts 17 and 18 have the extremities thereof projecting beyond the brackets 15 and 16 to carry, in this instance, spur gears 19 and 20, respectively, exteriorly of the bracket 15 to mesh with each other so as to cause opposed rotation of the shafts 17 and 18 in unison.

- 10 The shaft 18 is longer than the shaft 17, and the extension thereof carries a hub 21 idling thereon in the customary manner, so that movement imparted thereto in a predetermined direction will cause corresponding
15 movement of the shafts 17 and 18 owing to a ratchet mechanism to be hereinafter described. To this end, the hub 21 is provided with an annular groove 22 which receives the extremity 23 of the spiral spring 24 fixed
20 thereto by means of a suitable fastener such as a rivet 25. The other extremity of the spiral spring 24 is fixed to an actuator bar 26 as at 27 by means of a fastener 28.

- The actuator bar 26 is reciprocable in a
25 vertical direction within guides 29 riveted or otherwise secured to the bracket 16 in any suitable manner. As a consequence, downward movement of the actuator 26 will cause the hub 21 to rotate in a clockwise direction,
30 thereby effecting opposed rotation of the shafts 17 and 18 in unison owing to the meshing gears 19 and 20 fixed thereto. The return of the actuator 26 to its original position is effected by means of the spiral spring
35 30 which has an extremity 31 thereof secured to the hub 21 in an annular groove 32 provided thereon for that purpose, a fastener 33 being employed to securely fix the spiral spring 30 to the hub 21. The other extremity 34 of
40 the spring 30 is fixed to the underside of the plate 12 by means of a fastener 35, thereby exerting sufficient tension to effect the return thereof to its normal position in conjunction with the urge exerted by the spring 24.

- 45 Intermittent rotation is imparted to the shafts 17 and 18 owing to a ratchet 36 secured to the extremity of the shaft 18 by means of an axially disposed stud 37. The ratchet 36 rests against the face of the hub
50 21 to cooperate with a pawl 38 pivoted at 39 to engage the teeth of the ratchet 36 so that the depression of the actuator 26 will cause the pawl 38 to engage the ratchet 36 to cause rotation of the shaft 18 in a clockwise direction. Corresponding rotation of the shaft 17
55 in an anti-clockwise direction is effected owing to the intermeshing gears 19 and 20 which are secured thereto. The pawl 38 is normally maintained in the path of the ratchet 36 to effect the engagement thereof
60 responsive to rotation in an anti-clockwise direction by virtue of an arcuate spring 40 having the extremity 41 thereof engaging the pawl 38. The other extremity 42 is fixed to
65 the face of the hub 21 by means of the fas-

teners 43 so that the pawl 38 will ride over the teeth of the ratchet 36 responsive to the return of the actuator 26 coincident with the idling of the hub 21 on the shaft 18, there being no movement of the shafts 17 and 18 during this interval. 70

As shown, the plate 12 is provided with an orifice 44 defined by inclined flanges 45 struck therefrom to guide refuse there-through. In order to normally maintain the orifice 44 closed, a pair of rolls 46 and 47 are mounted on the shafts 17 and 18, respectively, there being a yieldable support constituting, in this instance, rubber cores 48 and 49 interposed between the shafts 17—18 and the rolls 46—47 to serve as a resilient support therefor. The cores 48 and 49 are preferably slitted as at 50 about the periphery thereof and further are provided with holes 51 or other suitable expedients to increase the resiliency thereof, thereby enabling the rolls 46 and 47 to normally confront each other so as to be capable of separation against the urge of the resilient cores 48 and 49. 75 80 85

With this arrangement, the fixed shafts 17 and 18 may be intergeared and the rolls 46 and 47 yieldably supported with respect to each other to admit refuse of any thickness therebetween for extrusion therethrough within the receptacle 10 when deposited in the orifice 44. The extrusion occurs responsive to the depression of the actuator 26 which causes rotary movement of the rolls 46 and 47. In order to preclude slippage between the shafts and rolls, pins 52 are disposed diametrically through the shafts 17 and 18 to penetrate the cores 48 and 49 so that movement thereof will be effected in unison with the shafts 17 and 18. Obviously, the deposition of refuse in the orifice 44 will cause the guides 45 thereof to deposit the refuse on the rolls 46 and 47, and the depression of the actuator 26 will effect the rotation thereof to extrude the refuse therebetween into the receptacle 10. 90 95 100 105 110

The resilient urge created by the cores 48 and 49 effects the engagement of the refuse such as cigarettes by the surfaces of the rolls 46 and 47 to effect extinguishment simultaneous with the extrusion thereof between the rolls 46 and 47 into the receptacle 10. The surfaces of the rolls 46 and 47 are preferably knurled as at 53 to enable a more effective gripping action on the refuse deposited thereon. To preclude the refuse from sticking to the surface of the rolls 46 and 47 so as to reappear within the orifice 44, scrapers such as brushes 54 and 55 are secured to the underside of the plate 12 so that the bristles thereof will normally contact with the surface of the rolls to remove the refuse adhering thereto for the delivery thereof within the receptacle 10, thereby avoiding odors, and other undesirable effects which would otherwise be 115 120 125 130

created by the reappearance of the refuse or parts thereof within the orifice 44.

In order to maintain the rolls 46 and 47 in a predetermined minimum spaced relation so as to enable the more effective grip of the refuse thereby, a member 56 is fixed to the bracket 15 for interposition between the rolls 46 and 47 to maintain them in relatively spaced relation; however, this is not entirely necessary and may be dispensed with as commercial practice may dictate. It will be apparent from the above description that a novel receptacle has been provided which conceals the refuse from sight, extinguishes ignited parts thereof, and precludes obnoxious odors exteriorly of the receptacle 10. The mere depression of the actuator 26 effecting opposed rotation of the rolls 46 and 47 to extrude the refuse therethrough from sight, thereby maintaining the premises clean at all times and free from obnoxious odors.

Various changes may be made in the embodiment of the invention herein specifically described without departing from or sacrificing any of the advantages thereof as defined in the appended claims.

I claim:

1. The combination with confronting rolls, relatively fixed shafts for carrying said rolls, means for yieldably supporting said rolls in confronting relation, means for actuating said rolls to extrude refuse therethrough and simultaneously effect the extinguishment thereof, and ratchet means operatively associated with said actuating means to impart intermittent movement in one direction to said rolls responsive to said actuating means.

2. The combination with a receptacle, of a pair of confronting rolls mounted thereon, relatively fixed shafts to maintain said rolls in position, resilient means effective to yieldably maintain said rolls in relative confronting relation to admit refuse therebetween, a reciprocable actuator for imparting movement to said rolls, and means interposed between said rolls and actuator to impart intermittent rotation in one direction thereto responsive to the reciprocation of said actuator.

3. An ash receptacle comprising confronting rolls, fixed shafts for supporting said rolls, intermeshing gears on said shafts, means for actuating said rolls in unison, means for yieldably sustaining said rolls relative to said shafts, ratchet means for intermittently rotating said rolls in one direction responsive to said actuating means, and scrapers for said rolls.

HERBERT J. MELVILLE.