

March 9, 1926.

1,576,289

T. H. LEDDEN

INCINERATOR

Filed April 9, 1925

2 Sheets-Sheet 1

Fig. 2.

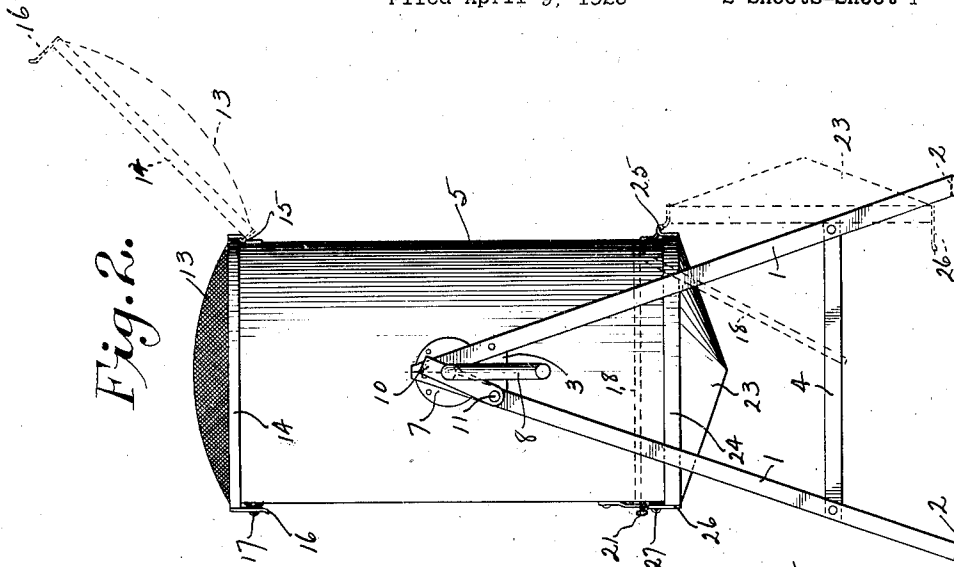


Fig. 5.

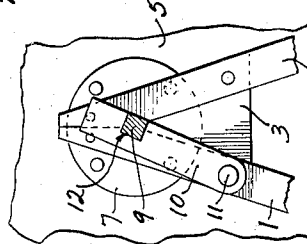
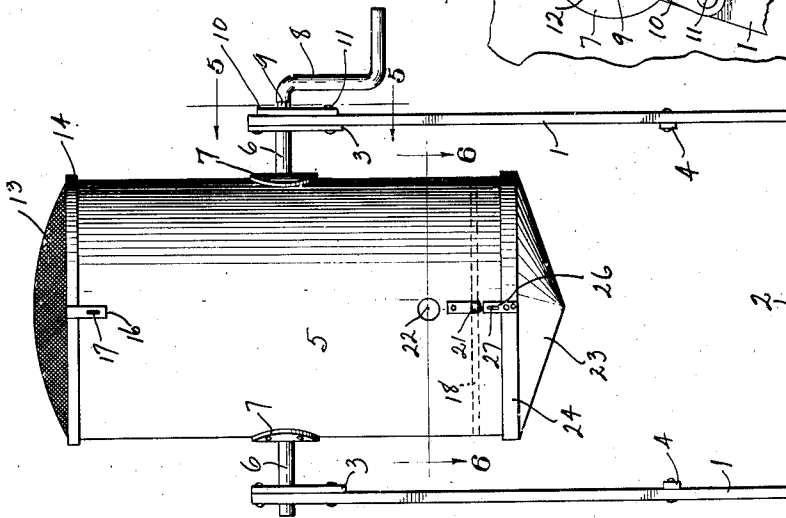


Fig. 1



WITNESSES

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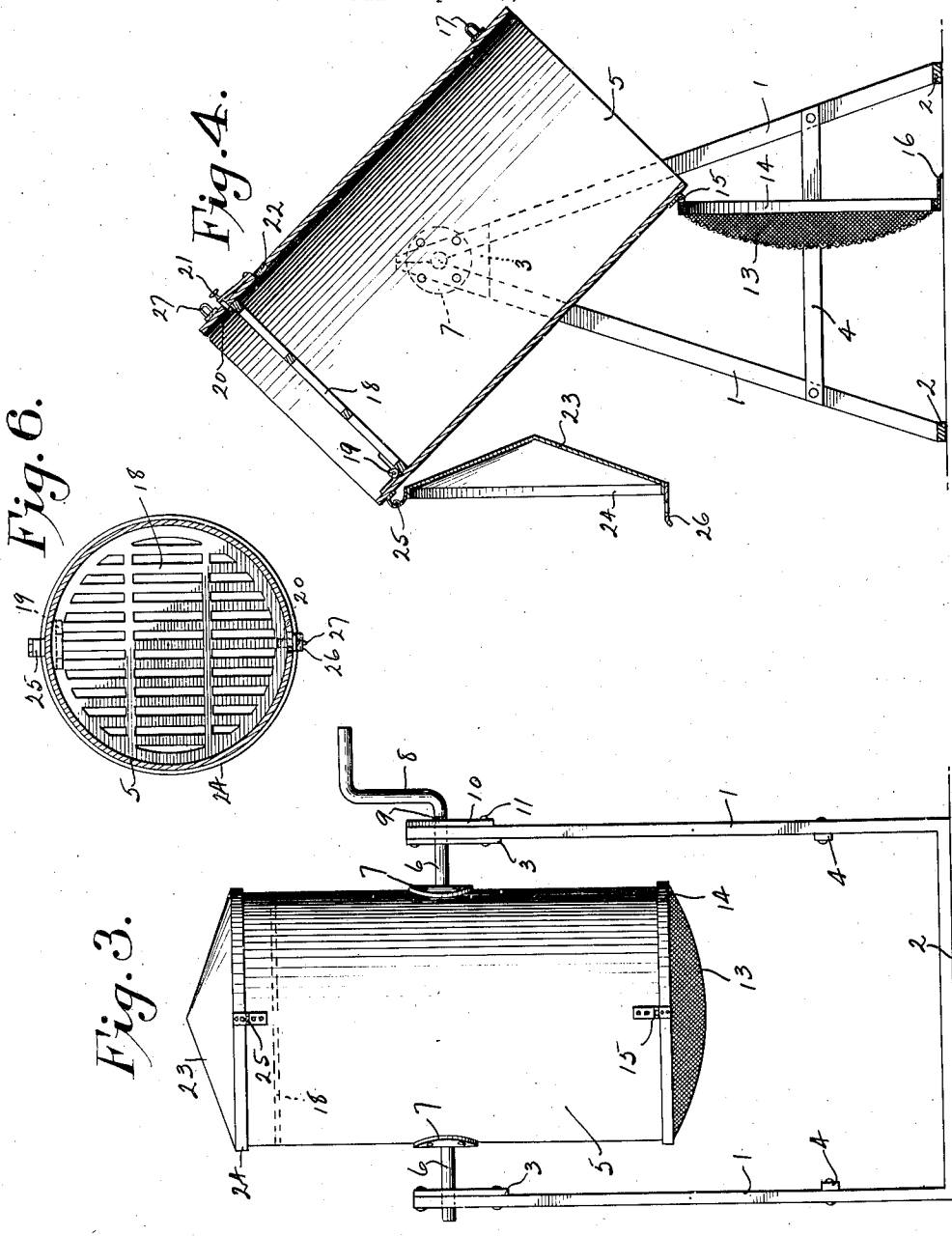
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UNITED STATES PATENT OFFICE.

THOMAS H. LEDDEN, OF RIDGWAY, PENNSYLVANIA.

INCINERATOR.

Application filed April 9, 1925. Serial No. 21,968.

To all whom it may concern:

Be it known that I, THOMAS H. LEDDEN, a citizen of the United States, residing at Ridgway, in the county of Elk and State of Pennsylvania, have invented new and useful Improvements in Incinerators, of which the following is a specification.

This invention relates to incinerators.

The object is to provide a simple and cheaply manufactured device for use in the destruction of rubbish or refuse of all kinds by burning, the device being especially designed for domestic use where relatively small amounts of matter require destruction, though the simple means employed is capable of being carried out on a larger scale.

Another object is to provide a device of this character which may be easily operated by hand to position the same for the reception of the matter to be destroyed, and to lock the same in such position, the outlet portion of the incinerator being provided with means for permitting the egress of smoke, etc. and preventing sparks from flying, the device being capable, when not in use, of being inverted and locked in such position, when the bottom of the device is located at the top and completely covers the same to shed rain water, etc. and thus protect the interior of the incinerator.

A full and complete understanding of the invention may be obtained from a consideration of the following detailed description, taken in connection with the accompanying drawings forming a part of this specification, it being understood that while the drawings show a practical form of the invention, the latter is not to be confined to strict conformity with the showing thereof, but may be changed or modified, so long as such changes or modifications mark no material departure from the salient features of the invention, as specifically pointed out in the appended claims.

In the drawings, in which similar reference characters designate corresponding parts throughout the several figures:—

Figure 1 is a front elevation of the improved incinerator.

Figure 2 is a side elevation of the same, the hinged top and bottom members being shown open in dotted lines.

Figure 3 is a view similar to Figure 1 the body being shown locked in inverted position as when the device is not in use.

Figure 4 is a vertical, longitudinal sec-

tion, the device being shown in tilted or inclined position as when dumping the charred or burned remains of the rubbish.

Figure 5 is a detail view of the locking means for holding the body of the incinerator in vertical position, said view being taken on the line 5—5 of Fig. 1.

Figure 6 is a detail horizontal section taken on the line 6—6 of Figure 1, showing the construction of the grate and the manner of mounting the same within the rubbish receptacle or body.

The invention is designed to provide a device especially for use by householders, storekeepers, etc. where it is desired to destroy quantities of papers, boxes, wrappers, cartons, sweepings or other débris, or even to destroy certain kinds of garbage, by a thorough incineration of the same with a minimum amount of danger by the fire or by sparks flying therefrom, the said device being equipped with means for holding the same in adjusted position for receiving and burning the charge of matter, with means for readily permitting the ignition of the same and for controlling the draft from beneath the fire, said holding means also serving to retain the device in inverted position while not in use, with the bottom acting as a cover to exclude rain, snow, etc.

Referring to the drawings, there is shown a base member or support formed of suitably heavy rod or bar iron bent to form pairs of legs 1, each pair of legs being formed of a separate piece and joined at their ends by a sill 2, to rest upon the ground and preferably formed integrally therewith. The legs are inclined, as viewed from the side, and approach each other at their upper ends in the form of a triangle and are there joined together by a plate 3 suitably riveted or otherwise secured thereto.

The legs are joined together near their lower ends by similar cross bars 4 to provide a rigid, substantial base member or support for the incinerator, and the aforesaid plates 3 are suitably apertured at the point of intersection of the legs 1 to provide bearing openings, for a purpose to be explained.

A cylindrical body member 5 formed of some suitable sheet metal is adapted to be mounted between the standards formed of the converging pairs of legs 1, and to be supported a considerable distance above the ground to be freely rotated, and to receive a vessel, such as a bucket, beneath the same,

when the incinerator is dumped after the contents have been thoroughly burned.

The body member 1 is normally open at each end, and is provided midway between
5 said ends with oppositely disposed trunnions 6, arranged radially to the body, and provided with attaching plates 7, which may be riveted or otherwise secured to the body. The trunnions are mounted for rotation in the aforesaid bearing openings in the plates 3, and one of the trunnions is provided with a crank 8 located at the outer side of its respective support, said crank being preferably formed by extending the
10 trunnion and bending the same into shape, though a separate crank may, of course, be secured thereto in the usual manner.

The trunnion having the crank is provided with a squared portion 9, in cross section, which is adapted to be engaged by a locking latch 10, formed of a strip of metal, pivoted at its lower end, as at 11, to one of the legs, 1, and having a three-sided slot or
20 opening 12 into which the squared portion of the trunnion enters, when the latch is swung downwardly to engage the same, as clearly shown in Figure 5 of the drawings. The squared portion is so arranged on the trunnion that when the inclined latch member is engaged therewith the longitudinal axis of the body member is substantially vertical, and the same may be locked with either end uppermost.

The body member is provided at its upper end with a foraminous closure 13 formed preferably of heavy, durable, wire screen or mesh, preferably bowed in concavo-convex form, and having its margins suitably secured to a surrounding ring 14, which is
40 hinged, as at 15, to the outer wall of the body member, thus permitting the closure to be swung open, as indicated in full lines in Figure 4 and in dotted lines in Figure 2. The ring 14 carries a spring tongue 16 at a point diametrically opposite to the hinge 15, said tongue having a slot for engagement with a staple 17, secured in proper position to the side of the body member, such engagement securely locking the closure in closed position, as shown in Figures 1, 2
50 and 3.

Arranged at the end of the body opposite to the foraminous closure, which may be either in the form of wire mesh as shown
55 and described or in the form of a perforated plate, is a grate 18 conforming to the shape of the body member and hinged, as at 19, to the inner wall thereof, the said grate 19 being secured to the same side of the body as the aforesaid hinge 15. The grate is held and supported by a spring actuated bolt 20 adapted to be pulled out of supporting position by a finger-hold 21 secured to the leaf spring, as clearly shown in Figure 4. The
65 spring having the finger hold 21 and the

bolt 20 is in vertical alinement with the aforesaid staple 17, and immediately above said spring is an ignition opening 22 formed in the side wall of the body member and slightly above the grate.

The lower end of the body member is adapted to be closed by a conical shaped cover or bottom 23, formed of sheet metal and having its central portion depressed as shown. The cover 23, which is imperforate
70 has a marginal flange 24 adapted to surround the end of the body member when closed, and said flange and body are provided with suitable coacting hinge elements 25 preferably located on the same side of the body as the aforesaid hinge 15. At a point diametrically opposite to said hinge the flange carries an upstanding tongue 26 having a suitable slot for engagement with a staple 27, arranged in vertical alinement
80 with the other fastening means and the spring actuated bolt for the grate.

In the operation of the incinerator, the device is turned with the grate located in the lower portion of the body, and locked in such position by means of the latch 10 engaging the squared portion of the trunnion 6, such turning action being effected by means of the crank. The foraminous cover 13 is now released and thrown back to the position indicated in dotted lines in Figure 2, when the trash, rubbish or other refuse matter to be burned is placed in the upper end of the receptacle to fall and rest upon the grate at the lower end thereof. Considerable matter may be stuffed into the receptacle and be made to burn, or a small quantity thereof may as readily be consumed by means of the control of the draft to be had through the opening or closing of the imperforate cover
100 23. If the matter be wet or damp paper, cartons, sweepings, leaves or dried grass, etc., and if the receptacle be stuffed full, it sometimes becomes necessary to release and lower the imperforate bottom 23, as indicated in dotted lines in Figure 2, when the full power of the updraft will be allowed through the charge and out through the foraminous cover 13, which will at such times permit the outlet of the smoke and retain the sparks. When a small quantity of rubbish of a dry nature is to be incinerated, it may not be necessary to open the lower end of the device, when the air necessary for combustion may enter through the ignition opening 22. At other times it may be desired to stir the contents of the receptacle to promote combustion, and this may be done while the cover 13 is thrown back. In addition to this, the bottom 23 may be lowered for dumping the ashes, etc., below the grate without tilting or inverting the body member and at the same time the grate itself may be swung downwardly, by releasing the bolt 20, to allow the entire amount
125 130

of residue to fall into a bucket or other receptacle (not shown) and be carried away. If, however, the receptacle or body member 5 still contains a considerable amount of residue above the grate after the fire has burned out, the latch 10 is released and the body tilted, as shown in Figure 4, the closure 13 released and swung downwardly, when the remaining residue will fall upon the the ground or into said receptacle. When not in use, the device is locked, as in Figure 3, when the cover or bottom 23 serves to keep the receptacle in dry condition.

From the foregoing it will be seen that 15 a simple, cheaply manufactured, and strong and durable incinerator has been provided, which may be easily and quickly operated to consume rubbish or the like, complete control of the fire being maintained with ample protection against flying sparks.

What is claimed is:—

1. An incinerator comprising an open-ended body member, a hinged imperforate bottom at one end of said member, a grate 25 secured within said member adjacent to said bottom, means for pivoting the body member to permit said member to be tilted, means for locking the same with either end uppermost, and a hinged foraminous top closure at the other end of the body member to permit the passage of smoke and prevent the escape of sparks while in use and to be swung open for dumping when the body member is tilted, said imperforate bottom serving as a rain deflector when the 35 body member is adjusted with the lower end uppermost.

2. An incinerator comprising an elongated, cylindrical body, a conical shaped, imperforate bottom hinged to one end of the body, means for holding the same closed, a grate secured in the body adjacent to said bottom, means for intermediately pivoting the body to permit the body to be tilted 45 and means for locking the same with either end uppermost, and a wire mesh top closure hinged to the other end of the body to permit the passage of smoke and prevent

the passage of sparks while in use and to be swung open for dumping when the body 50 is tilted, said conical-shaped bottom serving as a rain deflecting cover when the body is locked in reversed position and not in use.

3. An incinerator comprising a cylindrical open-ended body member, opposite outstand- 55 ing trunnions carried by the body midway between its ends, standards for rotatably receiving the trunnions and supporting the body above the ground, a grate hinged in the body adjacent to one end and constituting the lower end when in use, a hinged imperforate closure fitting said end to permit draft below the grate when opened and adapted to form a cover when the body is inverted, and a foraminous closure hinged to 65 the other end to permit updraft through the grate and to permit dumping the body when the latter is tilted.

4. An incinerator comprising a tubular body member open at each end, opposed 70 trunnions secured on the exterior of the body midway between the ends thereof, a stand having bearings for the trunnions to rotatably support the body above the ground, a latch mounted on the stand for coaction 75 with one of the trunnions to lock the body from movement, a crank carried by one of the trunnions for reversing or rotating the body, a foraminous head hinged to the upper end of the body, when in use, to provide 80 draft and the egress of smoke and prevent passage of sparks and to permit dumping of the body when inverted, a grate hinged within and near the lower end of the body and adapted to swing downwardly to dump 85 the same, means for holding the grate closed, a conical-shaped bottom hinged to the lower end of the body below the grate and adapted to be opened to create draft or to be locked closed to shed rain when the body is locked 90 in inverted position and not in use.

In testimony that I claim the foregoing as my own I have hereto affixed my signature.

THOMAS H. LEDDEN.