W. W. Wakeman, Jr. & R. Ross,

Vapor Burner.

No. 61,288. Patented Jan. 15, 1867.

Fig: 1.

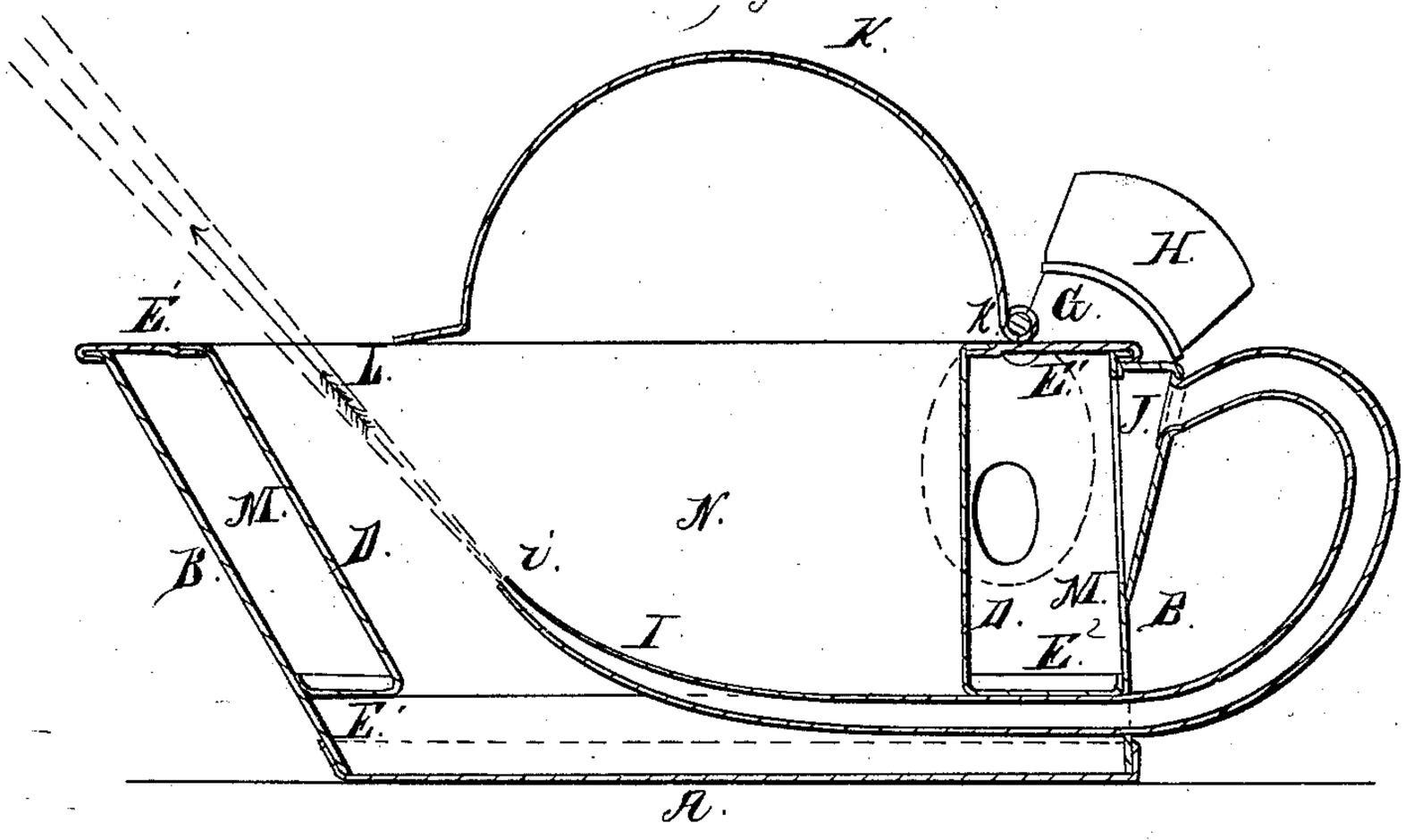
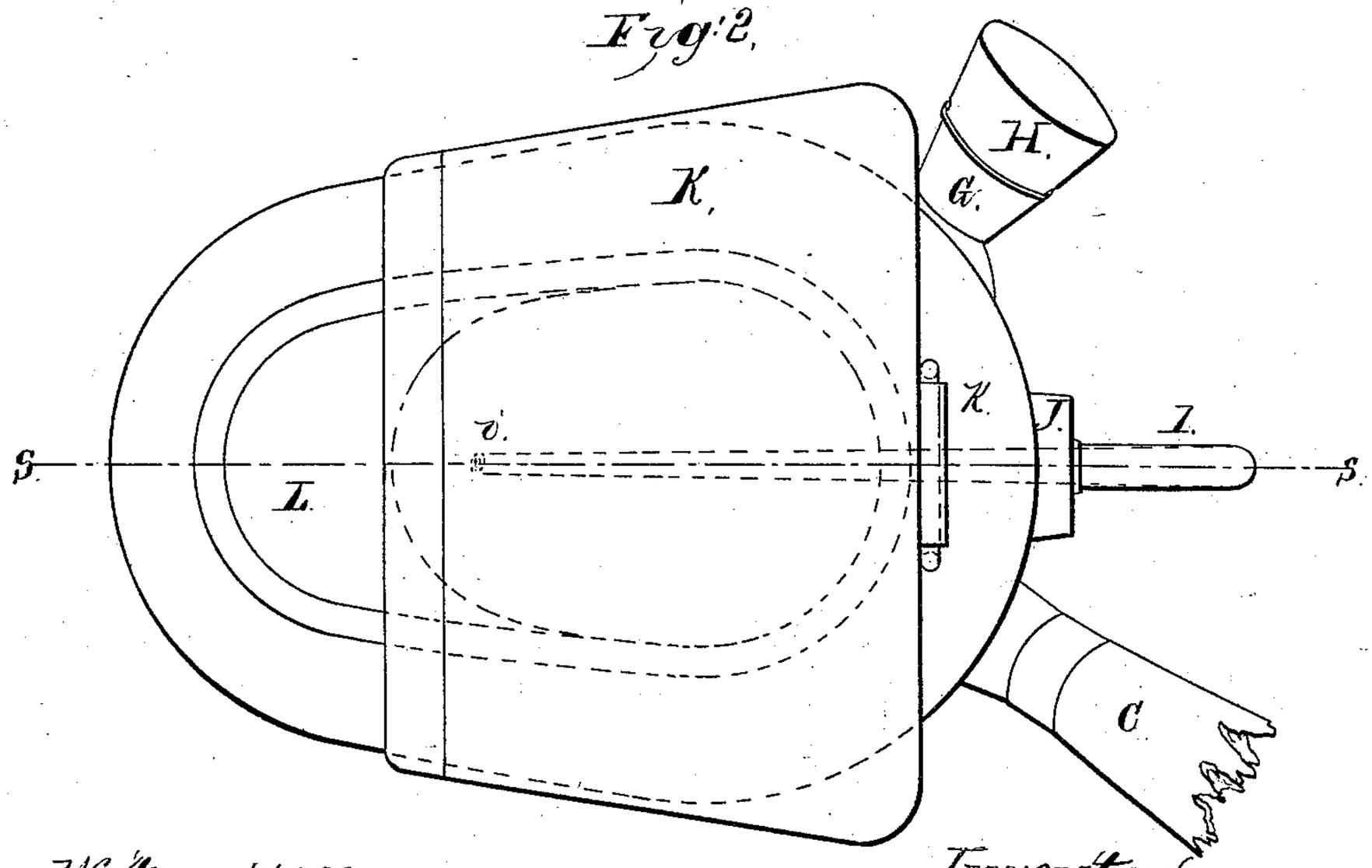


Fig: 2.



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WILLIAM W. WAKEMAN, JR., OF NEW YORK, AND RICHARD ROSS, OF BROOKLYN, NEW YORK.

Letters Patent No. 61,288, *dated January* 15, 1867.

IMPROVED PAINT BURNER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, WILLIAM W. WAKEMAN, Jr., of the city and county of New York, and RICHARD ROSS, of Brooklyn, in the county of Kings, and State of New York, have invented a certain new and improved Instrument or Apparatus for Burning Paint from walls, vessels, and the like; and we do hereby declare that the following is a full and exact description thereof.

Our apparatus operates by projecting the flame of alcohol or other inflammable fluid upon the paint; and is in such form as to allow the flame to be projected obliquely upward, in a concentrated condition, like a blow-pipe flame. It involves no necessity for working parts. The whole is performed by the aid of a vessel having parts and passages peculiarly formed and arranged. The vessel is by preference provided with a cover, which may be turned on a hinge or removed altogether, and which is adapted to allow an influx of air to mingle with the vapor rising from the alcohol or other combustible fluid.

We will first describe what we consider the best means of carrying out our invention, and will afterward designate the points which we believe to be new. The accompanying drawings form a part of this specification.

Figure 1 is a longitudinal vertical section on the line S S, in fig. 2.

Figure 2 is a plan view of our apparatus.

A is the bottom, and B the outer wall or outer surface of the sides of the vessel. The form of the vessel seen in plan is quite elongated and egg-shaped, being smallest at the end farthest from the handle. C indicates the handle, and may be of any length and character desired. D is an inner wall parallel to the outer wall B, and extending down from the top of the vessel, nearly, but not quite, to the bottom A. E^1 and E^2 form respectively the top and bottom pieces, which extend outward from the upper and lower edges of the inner wall D, and join this wall tightly and firmly both at the top and bottom of the inner face of the outer wall B. G is a neck controlled by the stopper H, which communicates with the space between the inner wall D and the outer wall B. I is a slender pipe which extends from a small chamber, J, at the larger end of my apparatus, and bending downward and inward passes into the vessel through the outer wall B, and terminates with an open end slightly contracted at the point indicated by *i* near the centre of the apparatus. K is a partial cover hinged to the upper edge of the vessel at the point *k*, with large spaces to admit air under it as represented. Any ordinary fastening may be provided for holding down this cover, or it may be left without fastening, as may be preferred. We prefer to make the main portion of the apparatus of sheet copper soldered with hard solder.

Operation.

We introduce sufficient alcohol to fill the chamber M, between the interior wall D and exterior wall B, and stop the mouth G tightly with the cork H, or by a screw-cap or other convenient substitute. We then introduce a quantity of alcohol into the interior space N, and ignite the latter, holding the cover open. The heat in a little time communicates through the interior wall D to the alcohol in the chamber M, and raises a vapor, which rushes out with violence through the pipe I. The mouth *i* of this pipe, being in a central position in the space N, allows the entire apparatus to be tilted within considerable limits without causing the alcohol contained in the cavity M to overflow it. The cover is now shut and the issuing vapor rushes with violence in an inclined direction indicated by the arrow, and passes out through the orifice L, projecting a stream of flame through the orifice upon any painted wall or other surface to which the apparatus is presented. The apparatus may be moved rapidly over a large surface, and will blister the paint and sufficiently decompose it to allow its ready removal with a scraper. The elongated form of the apparatus, and the narrowing of the same at the end from which the flame is projected, allows the flame to be thrown in a very concentrated form, and at a quite oblique angle from the vessel, while the vessel presents but a small area and requires but a small quantity of alcohol, and may be tilted to a considerable extent without deranging its action. The cover encloses the frame and protects it from the influence of wind, etc., and provides a just sufficient opening through the space for the exit of the flame, and through the channels under each side for the ingress of air. The cover also serves the important function of protecting all of the upper open side of the vessel, excepting the small area from which the jet of flame is driven, so that the scrapings of paint falling upon it will not enter. The small area beyond the cover is protected from

the ingress of paint or other foreign matter by the vigor with which the jet of burning vapor and air issues. In case theforce of the issuing gaseous matter is not sufficient to throw off foreign matter thus falling, the quantity received through the limited area exposed is so small as to be of little importance.

Having now fully described our invention, what we claim as new therein, and desire to secure by Letters Patent, is as follows:

1. We claim the within-described apparatus adapted for projecting flame obliquely in a central stream upon painted surfaces, and allowing of being moved about and tilted, substantially as and for the purpose herein set forth.

2. We claim the cover K *k*, in combination with the dish formed and provided as above represented, and adapted to receive sufficient quantities of air at the sides and to expose only a small area of the upper surface of the vessel through which the jet of flame may issue, substantially as and for the purpose herein specified.

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