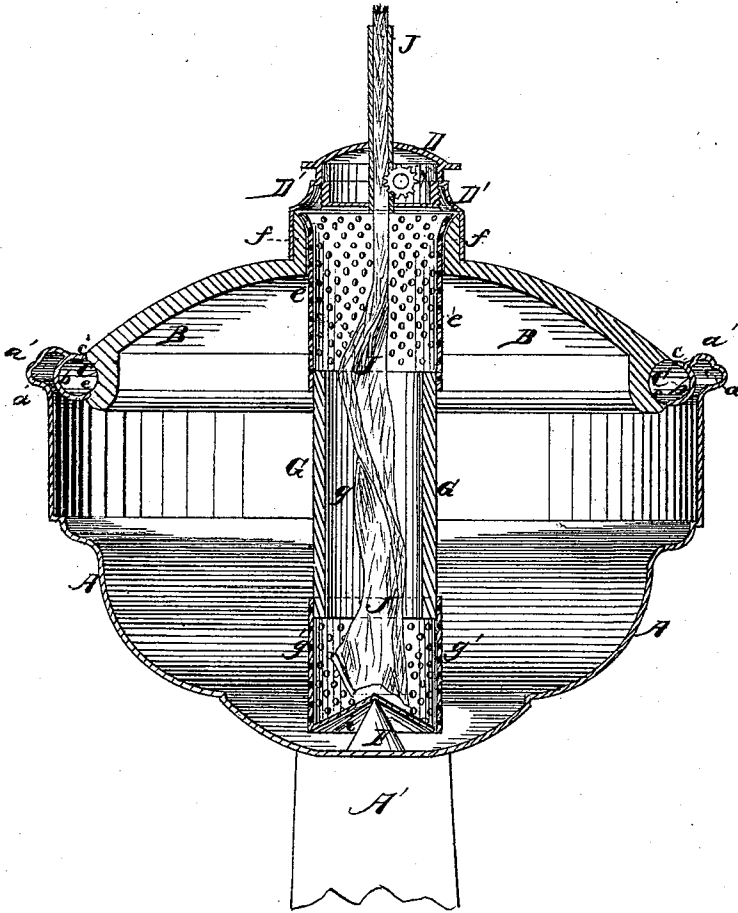


A. J. MARTIN.

Lamp.

No. 132,972.

Patented Nov. 12, 1872.



Attest,

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ABRAM J. MARTIN, OF CATSKILL, NEW YORK.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. 132,972, dated November 12, 1872.

To all whom it may concern:

Be it known that I, ABRAM J. MARTIN, of Catskill, in the county of Greene and State of New York, have invented certain Improvements in Lamps, of which the following is a specification:

This invention relates to that class of lamps in which the body of the oil-reservoir is made of metal and the top thereof of glass in such manner that the strength of the ordinary metal reservoir is, to all practical intents and purposes, combined with the facility for the examination of the internal parts of the lamp afforded in a reservoir made wholly of glass. The invention comprises certain novel means of providing a close and impervious joint between the metal and glass portions of the oil-reservoir; of providing against any fracture or material injury to the latter from accidental blows, falling, or other causes; of providing against the passage to or upon the sides or body of the reservoir of any oil that may be spilled upon the top of the same; and of providing against the twisting of the wick experienced with lamps of ordinary construction in the turning of the burner in attaching or removing the same from the oil-reservoir for cleaning, filling, etc.

The drawing is a vertical tranverse section of a lamp constructed according to my invention.

The oil-reservoir of the lamp is composed of two parts, the lower portion or body A, and the top B. The body A may be supported upon a standard, A', and base of any suitable form or character, and is made of sheet or other metal spun or otherwise wrought into shape. At its upper edge it is turned over or inward in such manner as to form an annular hollow fold, *a*, which constitutes, externally, a circumferential rib around the upper part of the body A, and which, internally, provides a groove or annular cavity, *b*, arranged around and concentric with the circumferential portion of the top B. This latter is made of glass of sufficient thickness, and may, more or less, correspond in configuration with the upper part of the oil-reservoir of an ordinary lamp made wholly of glass, and is furnished centrally with a burner constructed and applied in any usual or suitable manner. Near its periphery, and provided at its outer side, is a

circumferential groove, *c*, which, when the parts A and B are in proper position, is in immediate proximity and opposite to the groove *b* of the body A. The two grooves and all the intermediate space is filled, as indicated at C, by an annular packing of plaster of Paris or equivalent cement applied in a plastic condition, and, on hardening, serving to firmly unite the body A and top B, and to form a tight and impervious joint between them. As thus constituted the oil-reservoir has its lower portion, which is the most exposed to injury from accidental concussion, of metal, and is thereby enabled to resist even uncommonly severe usage, and to require no unusual care in preserving it from liability to accident; at the same time the top of the said reservoir, being of glass, allows the interior of the body to be seen and examined with a convenience practically equal to that experienced with lamps having their oil-reservoirs wholly of glass, so that the height of the oil in the reservoir, the condition and position of the wick, the relative cleanliness of the interior, or the presence of foreign matters may be detected at a glance. Of course the lower or peripheral portions of the top B, embraced within the body A, as previously described, may be extended to any desired depth or distance below the upper edge of such body. The turned upper edge of the body A forming the rib or fold *a*, provides a hollow metallic cushion surrounding the edge or periphery of the glass top, and extending outward beyond the lower or more cylindrical portions of the body A. From this it follows that should the lamp be dropped or over-set the elastic hollow rib or cushion aforesaid will come in contact with the floor or other obstruction upon which it falls, and, breaking the force of the jar or concussion upon the glass, will preserve the same from fracture. The yielding or elastic character of the bearing also afforded by this means to the glass top provides further for any changes which may take place in the glass top B from the variations in temperature to which it is exposed by its contiguity to the burner attached thereto. The rib, fold, or annular projection *a*, which may, when desired, be formed by turning the metal outward instead of inward, is, furthermore, made the most elevated at its exterior, as shown at *a'*, in such wise that the

inner or depressed portion *c'* forms an annular trough around the exposed upper surface of the top B, and continuous therewith, so that any oil which in the use or manipulation of the lamp may be spilled upon the top will be caught or arrested by the trough, and prevented from flowing down upon the sides of the body A. By this means the trouble of keeping clean the external surface of the lamp is much diminished, and the hand, in grasping the lamp, is not liable to become soiled by contact with a film of oil, as frequently occurs with lamps where no provision is made against the spread of oil from the upper part of the oil-reservoir. The base shell *D'* of the burner D has fixed within it the neck *f* of the top B, the upper edge of this neck being, when desired, beveled internally. Provided in the bottom of the body A, with its apex in the axial line of the neck *f*, is a conical bearing, F. G is the wick-receiver or safety-tube, of cylindrical form, provided in its lower end with a conical recess, *h*, into which fits the bearing F. The upper end portion of the wick-receiver extends into the neck *f*, and its upper extremity may be slightly flared outward into the space afforded by the bevel of the neck. The upper and lower parts *e'* *g'* of this cylindrical wick-receiver are of perforated sheet metal, fitted in any suitable manner to a central section, *g*, of glass, the perforated metal affording free ingress of the oil to the wick, and the glass affording a full view of the length of the wick within the receiver, and its position therein. The ease with which the wick may thus be examined of course conduces much to the convenience of keeping the lamp in order—for example, in the replacement of the wick before it becomes too short, &c. The wick-receiver may, when desired, be made wholly of glass or other transparent material, care being had to provide for the free passage of the oil into the same. The wick-receiver G, being supported at bottom on the conical bearing F, and being loose at its top within the neck *f*, is capable—being at the same time maintained in proper vertical position—of an axial or rotatory movement, so that when the flat wick J, depending from the burner, and situate within the receiver G, is turned or rotated by the movement of the burner D in screwing the same upon or unscrewing it from the base shell *D'*, the wick, instead of twisting upon itself will, by its contact with the receiver, turn

the latter as with a swivel movement, and be thereby caused to keep its straight condition, free from kinks or convolutions, which, if formed, as frequently occurs with lamps having fixed wick-receivers, would materially impair the free upward movement of the wick when acted upon by the usual feed-wheel *x* or its equivalent to bring the proper portion or length of wick above the wick-tube of the burner to secure the requisite size or brilliancy of flame.

What I claim as my invention is—

1. The combination of the metallic body A, formed with an internal annular groove at or near its upper edge, the glass top B formed with an external annular groove at its outer periphery, and the intermediate packing C of cement, the whole arranged substantially as and for the purpose specified.

2. The hollow annular rib or fold *a*, provided upon the upper edge of the metallic body A in such a manner as to embrace the glass top B, and to project beyond the sides of the main portion of the aforesaid body, substantially as herein set forth, whereby the glass is protected from accidental fracture, either from concussion or from the effects of sudden changes of temperature.

3. The metallic body A, folded at its periphery upon the circumferential edge of the glass top B, so as to provide an annular trough, *c'*, at such edge of the top B, substantially as and for the purpose herein set forth.

4. The arrangement, within the oil-reservoir, and in suitable relation with the burner connected therewith, of the wick-receiver G, capable of rotation upon its vertical axis, whereby is avoided all kinking or twisting of the wick when the burner is turned in attaching the same to or removing it from the oil-reservoir, substantially as herein set forth.

5. The arrangement of the wick-receiver G, formed with a recess, *h*, in its lower end upon the conical bearing E, and with its upper end loose within the neck of the top B, substantially as herein set forth, whereby the said wick-receiver is securely retained in appropriate relation to the burner, at the same time that full provision is made for its free and facile rotation when desired.

ABRAM J. MARTIN.

Witnesses:

B. C. GREGORY,
WM. E. SMITH.