

(No Model.)

M. MARICHENSKI.

LAMP.

No. 262,804.

Patented Aug. 15, 1882.

FIG. 1.

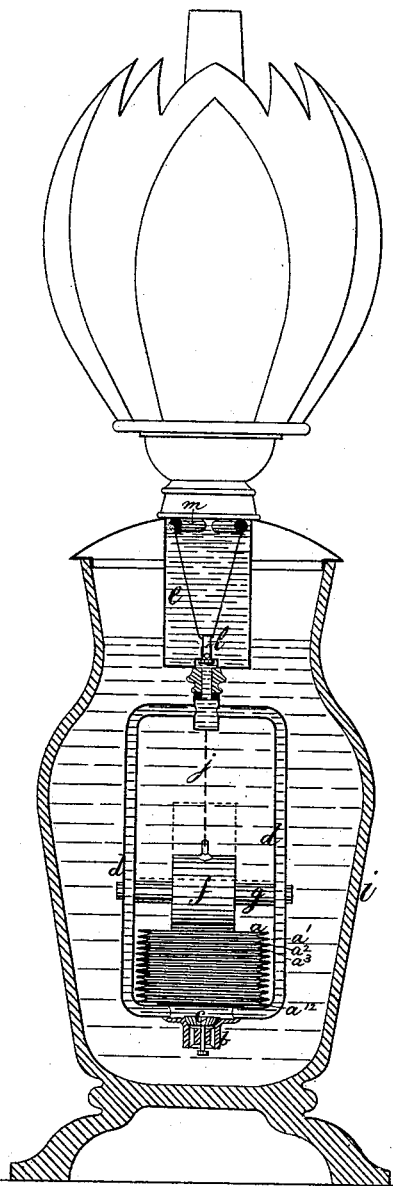
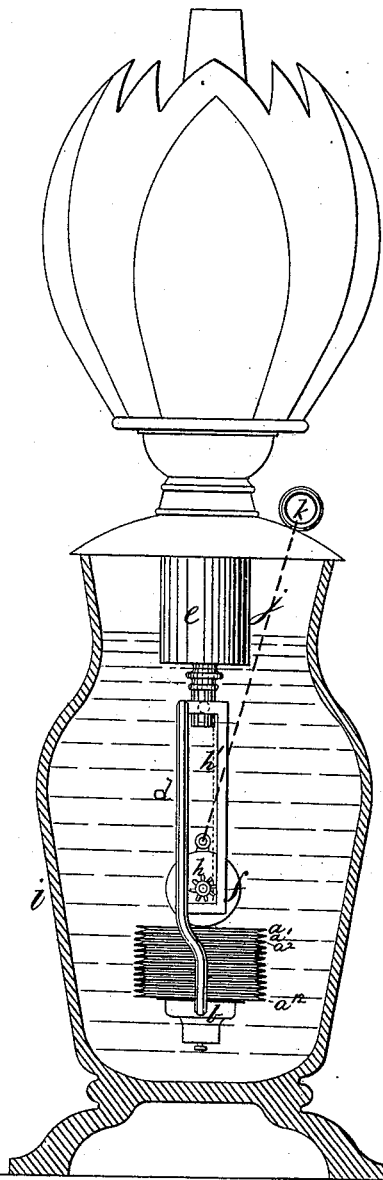


FIG. 2.



Witnesses:

August Peterson  
James H. Mandeville

Moska Marichenski  
by Louis Bagger  
his attorney

# UNITED STATES PATENT OFFICE.

MOSKA MARICHENSKI, OF LONDON, ENGLAND.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 262,804, dated August 15, 1882.

Application filed July 10, 1882. (No model.) Patented in England April 22, 1880, No. 1,659; in Germany December 29, 1880 No. 15,425; in France December 30, 1880, No. 140,436; in Belgium January 31, 1881, No. 53,590, and in Austria January 4, 1882.

*To all whom it may concern:*

Be it known that I, MOSKA MARICHENSKI, of London, England, have invented new and useful Improvements in Lamps, (for which I have obtained a patent in Great Britain, No. 1,659, bearing date April 22, 1880,) of which the following is a specification.

My invention relates to improvements in the construction and arrangement of petroleum or other mineral and vegetable oil lamps, whereby the oil is supplied to the reservoir containing the wick or wicks by a continued pressure, and a constant level maintained therein, which is not the case with lamps hitherto used.

It consists in the use of a pile or series of circular, square, or other shaped metal sheets or disks of suitable thickness, arranged together in pairs, one above the other, each pair being joined together by soldering or otherwise at their outer edges and each pair to the succeeding pair at their centers, a hole passing through the middle of the entire series of sheets or disks, except the uppermost. This pile or series of sheets or disks, when pulled out or expanded, assumes the form, as it were, of bellows, the bottom sheet of which is fixed air-tight in the upper or other suitable part of a reservoir, into which oil is admitted, and the bellows being pulled upward or expanded the oil finds its way into the bellows until they are sufficiently expanded. A spring or weight acting upon the top of the expanded bellows gradually closes them, thereby pressing the oil through a pipe or pipes leading from the bellows into the reservoir containing the wick or wicks in a continuous flow, which is regulated by an overflow or tap, or by a float acting upon a valve fixed in the rising pipe or pipes or in the bottom of the wick-reservoir.

In order that my invention may be well understood, I shall now proceed more particularly to describe the same, reference being made to the accompanying drawings, like letters of reference indicating corresponding parts in both figures.

Figure 1 is a front sectional elevation of an oil-lamp and its apparatus constructed according to my invention, and Fig. 2 a side sectional elevation thereof.

$a, a', a^2$  represent a pile or series of circular, square, or other shaped metal sheets or disks

of suitable thickness, arranged together in pairs, one above the other, each pair being joined together by soldering or otherwise at their outer edges and each pair to the succeeding pair at any suitable radial distance from their centers, a hole consequently passing through the middle of the entire series of sheets or disks, except the uppermost,  $a$ . The various sheets or disks  $a, a', a^2$ , when pulled out or expanded, assume the form, as it were, of bellows. To the bottom sheet or disk,  $a^{12}$ , is attached a valve-box,  $b$ , containing the valve  $c$ , which admits the oil to the interior of the bellows, as hereinafter more particularly described.

$d, d$  are pipes branching from the valve-box  $b$  and rising on each side of the bellows to the reservoir  $e$ , which contains the wick or wicks of the burners.

$m$  is a float, which rises with the oil as the latter passes through the hollow stem of the valve  $l$  into the reservoir  $e$  until the oil has reached a certain level, when the float  $m$ , pulling up the valve  $l$ , closes it, and so prevents any further passage of oil into the reservoir  $e$ . As the oil is burned at the wick it falls in the reservoir  $e$ , and the float  $m$  allows the valve  $l$  to drop or open, when the oil is again forced through its hollow stem into the reservoir  $e$  by the bellows, and so on until the latter are fully closed and exhausted of their contents, when they are again pulled up or expanded by the chain  $j$  and the operation repeated; or in lieu of the valve  $l$ , as shown, an ordinary valve, tap, or other device may be used for regulating the pressure or flow of the oil into the reservoir  $e$ .

In lieu of making the expanding portion of the bellows of a series of sheets or disks, as described, it may be stamped or otherwise manufactured out of one piece of metal, corrugated and shaped to give the desired action; or the bellows may be made of any other material, as found most suitable.

Among the advantages of my invention are that the burner or wick-reservoir can always be kept full of oil, whereby the light is maintained at its maximum and normal intensity instead of diminishing as the oil is consumed, according to the present system; also, that a vase-lamp of ordinary size with my invention

applied need only be replenished once in several days instead of daily, as is now the case.

At the top of the bellows is a spring or weight, *f*, which normally tends to keep the bellows closed, or in their lowest position, as shown, and at each end of the axle *g* of the spring *f* is a toothed pinion, *h*, gearing into the upright racks *h'*, Fig. 2, the whole apparatus here described being placed in or inclosed by the vase *i*, containing the oil for the consumption of the lamp.

*j* is a chain or cord attached to the case of the spring *f*, and passing upward through the cover of the vase *i*, where it terminates in a ring or handle, *k*. On pulling up the case of the spring *f*, by means of the chain or cord *j*, the spring *f* is coiled or brought into a state of tension by the revolution and consequent travel of its toothed pinions *h* along the racks *h'* at the same time the bellows are pulled up or expanded into the position shown by dotted lines in Fig. 1, and the oil being drawn through the valve *c* by the vacuum so induced, fills the interior of the bellows until they are fully expanded, when the spring *f* is released, and pressing upon the bellows gradually closes them, forcing the oil through the pipes *d d* into the reservoir *e* to the wick or wicks of the burners.

For regulating the pressure or flow of the oil from the bellows and maintaining a constant level of the same in the reservoir *e*, there

is fitted into that part of the pipes *d d* immediately communicating with the reservoir *e* a specially-constructed valve, *l*, having a hollow stem, which is perforated in its circumference to allow of the passage of the oil to its interior. To this hollow stem is connected a float, *m*, made of glass, metal, or other suitable material.

I claim as my invention—

1. As an improvement in lamps, the combination, with the oil-reservoir *i*, of the bellows *a a' a''*, with their valve-chamber *b*, valve *c*, and discharge-pipes *d d*, and mechanism for operating said bellows, substantially as set forth.

2. In a lamp, the combination of the upper or wick reservoir, *e*, having automatic valve *l*, feed-pipes *d d*, valve-chamber *b*, and valve *c*, bellows *a a' a''*, and suitable mechanism for operating said bellows, substantially as set forth.

3. The improved self-feeding lamp herein shown and described, composed of the reservoir *i*, inside reservoir, *e*, having automatic valve *l*, feed-pipes *d d*, bellows *a a' a''*, spring *f* for operating the bellows, and mechanism for winding the spring, the whole constructed and combined to operate substantially in the manner and for the purpose herein shown and specified.

MOSKA MARICHENSKI.

Witnesses:

E. J. HUGHES,

FRANK. G. HUGHES.