

J. HINKS.
Lamp-Wick Raiser.

No. 203,542.

Patented May 14, 1878.

FIG II

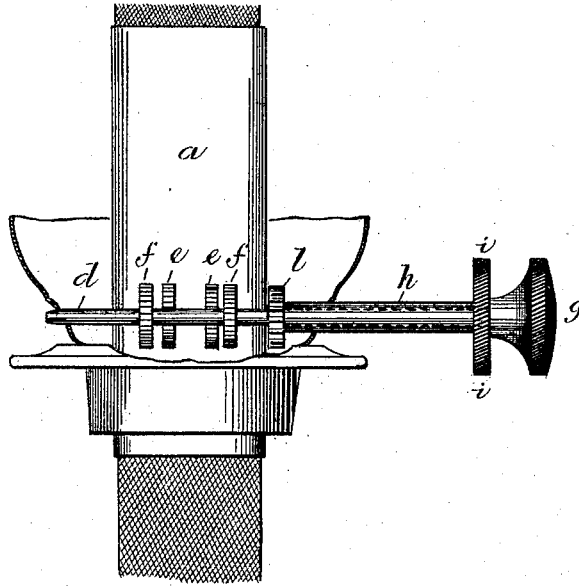
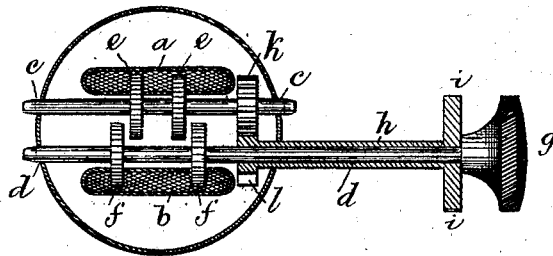


FIG I



Witnesses,
George Shaw
Richard Kerrett

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FIG III

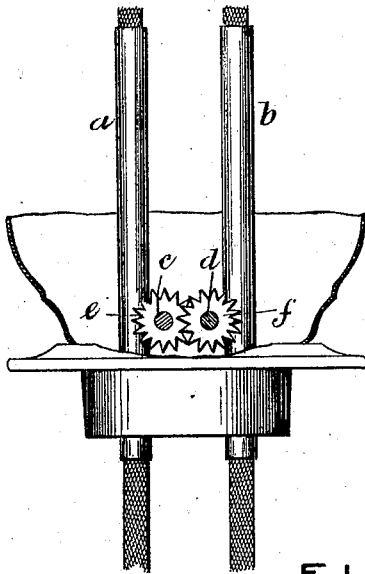


FIG IV

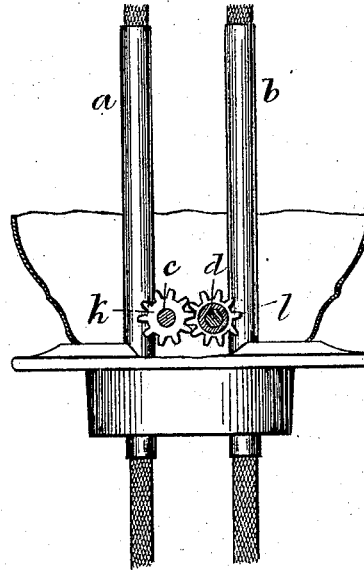


FIG V

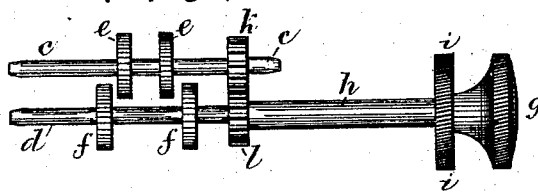


FIG VI

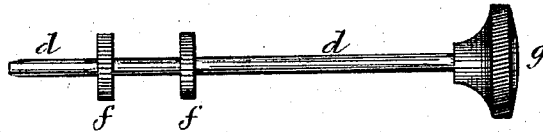
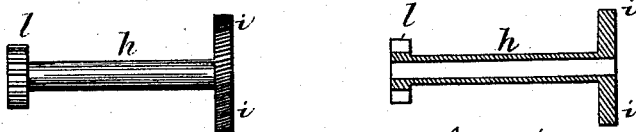


FIG VII



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UNITED STATES PATENT OFFICE.

JOSEPH HINKS, OF BIRMINGHAM, ENGLAND.

IMPROVEMENT IN LAMP-WICK RAISERS.

Specification forming part of Letters Patent No. 203,542, dated May 14, 1878; application filed April 25, 1878; patented in England February 12, 1878.

To all whom it may concern:

Be it known that I, JOSEPH HINKS, of Birmingham, in the county of Warwick, England, manufacturer, have invented new and useful Improvements in Lamps, which improvements are fully set forth in the following specification, reference being had to the accompanying drawing.

My invention has reference to lamps having double flat wicks; and consists of the mechanism hereinafter described for raising and lowering the said wicks.

In constructing the said mechanism according to my invention I employ axes provided with pinions for raising and lowering the wicks, the said pinions acting on the wicks through slots or openings in the wick tubes or holders, as usual. Instead, however, of one of the said axes being between the wick-holders and the other on the outer side of one of the wick-holders, as usual, I place both the said axes between the wick-holders. I fix the pinions on their axes in different planes, so that the said pinions are not opposite to each other. By this means I am enabled to employ pinions of larger size than could be employed in the narrow space between the wick-holders if the pinions were opposite to each other. One of the pinion-axes projects to a convenient distance from the burner, and terminates in a milled head, by which it is turned. The other or second pinion-axis does not project to the outside of the burner. This second axis carries at its end a toothed wheel, which gears with a similar toothed wheel on a tube or tubular axis working on the first-named axis. This tubular axis passes to the outside of the burner, and terminates in a milled head of somewhat larger diameter than that of the first-named axis, and situated behind it. Both of the milled heads may, however, be made of the same diameter. By turning one or other of the milled heads, one or other of the wicks may be raised or lowered. The small front milled head is fixed on the end of one of the axes, and when that milled head is turned one of the wicks is directly raised or lowered. By turning the larger hind milled head its motion is transmitted through the tubular axis and the gearing described to the other axis, and the other wick is raised or lowered. By the

arrangement described the raising and lowering of each wick is effected by the turning of the respective milled heads in the same direction. As the two milled heads are concentric, and the larger one is immediately behind the smaller one, either the one or the other, or both simultaneously, can be operated upon by the thumb and finger, and the independent or simultaneous raising or lowering of the wicks effected.

I will now describe, with reference to the accompanying drawing, the manner in which my invention may be performed.

Figure 1 represents, in plan, a portion of a double burner of a volatile-oil lamp, the wick raising and lowering mechanism of which is constructed and arranged according to my invention. Fig. 2 is a vertical section of the same, taken in a direction parallel to the principal axis of the mechanism; and Figs. 3 and 4 are vertical sections of the same, taken in a direction at right angles to that in which the section Fig. 2 is taken, Fig. 3 being taken through the wick-pinions, and Fig. 4 being taken through the toothed gearing. Fig. 5 represents a plan of the wick mechanism detached, and Figs. 6 and 7 represent portions of the same detached.

The same letters of reference indicate the same parts in the several figures of the drawing.

a b are the two flat wick holders or cases combined in the same burner, each wick holder or case containing a flat wick, as usual. *c d* are the two parallel pinion-axes, situated and working between the two wick cases or holders *a b*, as best seen in Fig. 1. The axis *c* carries two pinions, *e e*, and the other axis, *d*, carries similar pinions *f f*, the said pinions *e e* and *f f* acting, through slots in the wick holders or cases *a b*, upon the respective wicks in the said holders or cases. The pinions *e e* on the axis *c* are fixed in different planes from those in which the pinions *f f* are fixed on the other axis, *d*. The pairs of pinions *e e f f* on their respective axes *c d* are not opposite each other, and consequently larger pinions can be employed in the space between the two cases *a b* than could be used if the pinions on one axis were opposite to those on the other axis.

The pinion-axis *d* (shown separately in Fig.

6) projects some distance from the burner, and terminates in the milled head *g* for turning it. Around the projecting or prolonged part of the pinion-axis *d* a hollow or tubular axis, *h*, is situated and works, the said hollow or tubular axis *h* being provided with a milled head, *i*, for turning it, the said milled head *i* being situated behind the milled head *g* of the prolonged axis *d*, so that both the said heads *g* and *i* may be grasped between the thumb and finger. The tubular axis *h* is shown detached in elevation and section in Fig. 7. The pinion-axis *c* carries near its end a toothed wheel, *k*, which gears with a similar toothed wheel, *l*, on the tubular axis *h*, working upon the prolonged pinion-axis *d*.

By turning the front milled head *g* of the axis *d* in one or other direction, the pinions *f f* raise or lower the wick in the wick-case *b*; and by turning the hind milled head *i* on the tubular axis *h* in one or other direction, its motion is transmitted, through the said tubular axis *h* and the toothed wheels *l k*, to the axis *c*, and the pinions *e e* on the said axis *c* raise or lower the wick in the wick-case *a*. By grasping the heads *g i* between the thumb and finger and simultaneously turning them in the same direction, the two wicks in the wick-cases *a b* may be simultaneously raised or lowered. Thus the two wicks in the wick-cases *a b* may be independently raised or lowered by the turning of one or other of the milled heads *g* or *i*; or the two wicks may be simultaneously

raised or lowered by the simultaneous turning in the same direction of both the said milled heads *g* and *i*, as will be understood by an examination of the drawing.

My invention is especially applicable to lamps burning volatile oils, but is also applicable to all lamps having double wick, whatever be the nature of the combustible burned in them.

Having now described the nature of my invention, and the manner in which the same is to be performed, I wish it to be understood that I claim as my invention—

The herein-described mechanism for raising and lowering double flat wicks of lamps—that is to say, the parallel pinion-axes of the wick raising and lowering mechanism placed between the two wick holders or cases of the burner, one of which pinion-axes is prolonged beyond the body of the burner, and has placed upon it a second or tubular axis, carrying on its end a toothed wheel, which gears with a toothed wheel on the other pinion-axis, both the ends of the prolonged and the tubular axis being provided with milled heads concentric with and situated near one another, so that either or both can be operated, substantially as herein shown and set forth.

JOSEPH HINKS. [L. S.]

Witnesses:

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Of 37 Temple Street, Birmingham.