

UNITED STATES PATENT OFFICE.

GEORGE ARBUTHNOTT SMITH, OF ALBERNI, CANADA.

LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 692,081, dated January 28, 1902.

Application filed October 5, 1900. Serial No. 32,175. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ARBUTHNOTT SMITH, a citizen of the Dominion of Canada, residing at Alberni, in the Province of British Columbia, Canada, have invented a certain new and useful Lamp-Burner, of which the following is a specification.

My invention relates to improvements in oil-lamp burners of the class generally used either for lighting or heating; and my object is to insure a better spread and more uniform flame and to provide a means of lowering the flame when not in use while retaining a small igniting-flame or permitting the light to be extinguished altogether when desired. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view illustrating the preferred form of my invention as in use. Fig. 2 is a perspective view of the same as applied to the burner, a portion of the burner-hood being broken away to better illustrate the invention. Fig. 3 is a perspective view of the preferred form of my improvement. Fig. 4 is a detail view of a slight modification of the said invention. Figs. 5, 6, and 7 are views of three additional modified forms of my invention, each of which is specifically referred to hereinafter.

As my invention does not necessitate any alteration to the ordinary lamp-burner, I have shown its application thereto.

The device consists, essentially, of a spreader 1, which is a light bar of a length and width to correspond with the cross-section of the wick-tube and designed to rest on the top of the wick, which preserves a uniform outline to the exposed area of the wick when the lamp is burning, and thus dispenses with the necessity of trimming. This spreader-bar 1 when the wick is lowered to just within the tube A rests on the top edges of the same and effectually closes it, extinguishing the light save for the small igniting-flame, which is retained through the aperture 1^b in the spreader-bar 1. In Fig. 1 the ends of the spreader-bar are turned down, as 1^a, beyond the width of the wick and again to the horizontal, and having a quarter-twist given to them, as 2^a, they pass through the vertical slots B' in the burner-hood B, which slots con-

strain the bar to move in a vertical line and limit its extreme movement. Outside the burner-hood the ends of the bar may be turned at right angles, 2^x, to prevent end movement.

In Fig. 4 the spreader-bar 1 has the ends 1^a crimped in a right-angle fold 2^b of the guide-bar 2, which passes through the slots in the burner-hood as before.

Fig. 5 shows a modification on the design of the preceding one in that instead of the spreader 1 having an aperture 1^b it is made of two pieces, which when fixed to the guide-bar leave a space S between their inner ends, which serves the same purpose as the aperture in providing for the igniting-flame.

In the modification shown in Fig. 6 the spreader 1 is attached to the guide-bar 2, as before; but the guide-bar instead of being dependent on slots in the burner-hood is bent around to loosely inclose the wick-tube A and derives its guiding support from it. This is a particularly simple arrangement designed to be readily applied to existing lamps.

Fig. 7 illustrates another modification in which the spreader 1 and its guide 2 are cut from one blank, the pieces 1 and 2 being bent twice, as shown, to form the spreader, leaving an opening O for the flame. The part 2, sliding in proximity to the wick-tube, is steadied thereby and passing through the perforated burner-plate the projecting corners 2^c are bent out at right angles, and when lifted to the extreme height these engage the under side of the perforated plate and acting as hinges permit the spreader to be swung clear of the wick for cleaning, &c. The lift of the spreader is checked within the ordinary limits of use by reason of the portions 2 thereof engaging with the upper end of the slot B' in the hood when the forms of my device shown in Figs. 1 to 5, inclusive, are used. When the form of device shown in Fig. 6 is employed, any other suitable means may be used for checking the upper thrust of the device. In Fig. 7 the upper lift of the device is checked by 2^c 2^c engaging the apertured diaphragm of the burner.

It will be seen that in all these illustrations my device consists, essentially, of the spreader 1, resting on the top of the wick, by which the oil is made to burn in a spread flame, giving

a better illumination. This spreader 1 rises and falls with the movement of the wick, being guided and limited by the bar 2, so that the inconvenience and danger of turning the lamp up too far is prevented. When the wick is lowered carefully to the level of the top edge of the wick-tube, a small igniting-flame is retained, which is a convenience which will be appreciated by all who use oil-lamps. The lamp may be extinguished altogether by turning the wick farther down or by turning it suddenly down so far. The whole device is simple and inexpensive, and the facility it affords of ready application to existing lamps renders it attractive.

I am aware that prior to my invention devices have been employed to secure an igniting-flame; but they have been by means of a small-sized wick-tube. Attempts have been also made to apply extinguishers to lamps of the class referred to; but they have generally been operated by means of independent mechanism and not with the movement of the wick. I believe, however, I am the first to combine the several advantages enumerated with a means for improving the flame.

Having now fully described my invention, what I claim as new, and desire to be protected in by Letters Patent of the United States, is—

30 1. In a lamp-burner; an attachment to cooperate therewith, consisting of a flat bar adapted to rest upon the top of the wick, and to move vertically therewith, said bar having

its opposite ends extended to form guide members adapted to engage with the burner-hood, and stop portions on the burner-hood for limiting the upward movement of the bar, as specified. 35

2. The combination with the burner-hood, having vertical slots B'; of a bar adapted to rest on the wick, said bar having extensions adapted to project through the slots B', for the purposes described. 40

3. The combination with the burner-hood, having vertical slots B'; of a bar adapted to rest upon the wick, said bar having pendent portions to project down over the ends of the wick, and laterally-projecting members to extend through the slots B', said members having inturned ends, for the purposes specified. 45 50

4. An attachment for lamp-burners of the character described, comprising in combination, a burner-hood, said burner-hood having vertical guides, a bar adapted to rest upon the top of the wick, said bar having an opening, and provided with pendent portions 1^a, and outwardly-extending guide portions 2, said guide portions 2 being adapted to engage the vertical guides on the burner-hood, substantially as shown and for the purposes described. 55 60

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Witnesses:

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LEONARD FRANK.