S. S. ST. HOOR.

HEATING AND ILLUMINATING DEVICE.

APPLICATION FILED JAN. 9, 1906.

913,068.

Patented Feb. 23, 1909.

3 SHEETS—SHEET 1.

Fig. 1.

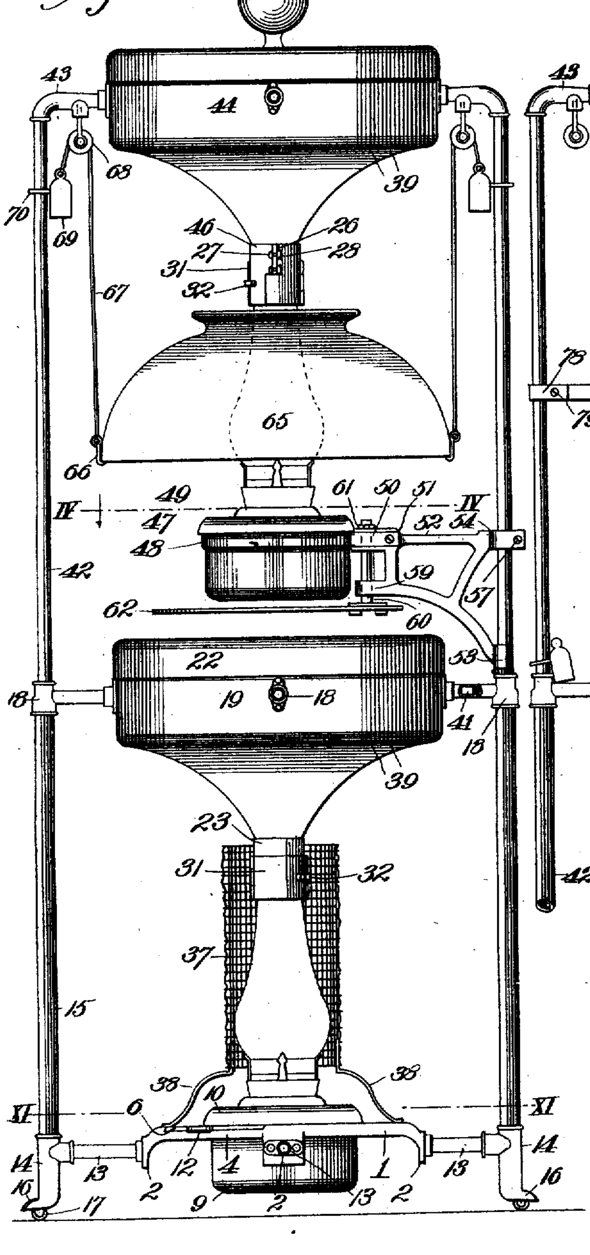
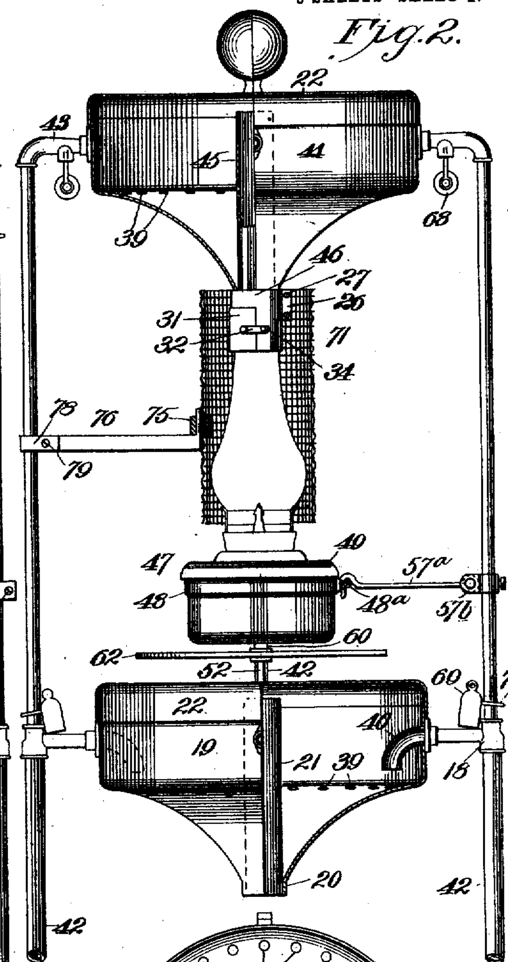


Fig. 2.



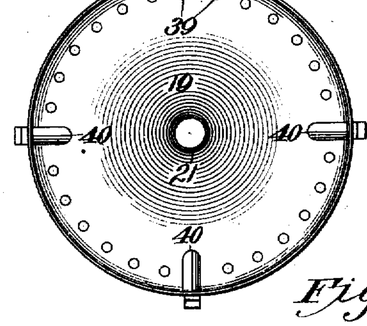


Fig. 3.

Witnesses

H. C. Rodgers.

Fred V. Griffith

Inventor

S. S. St. Hoor.

By, George J. Thorpe atty.

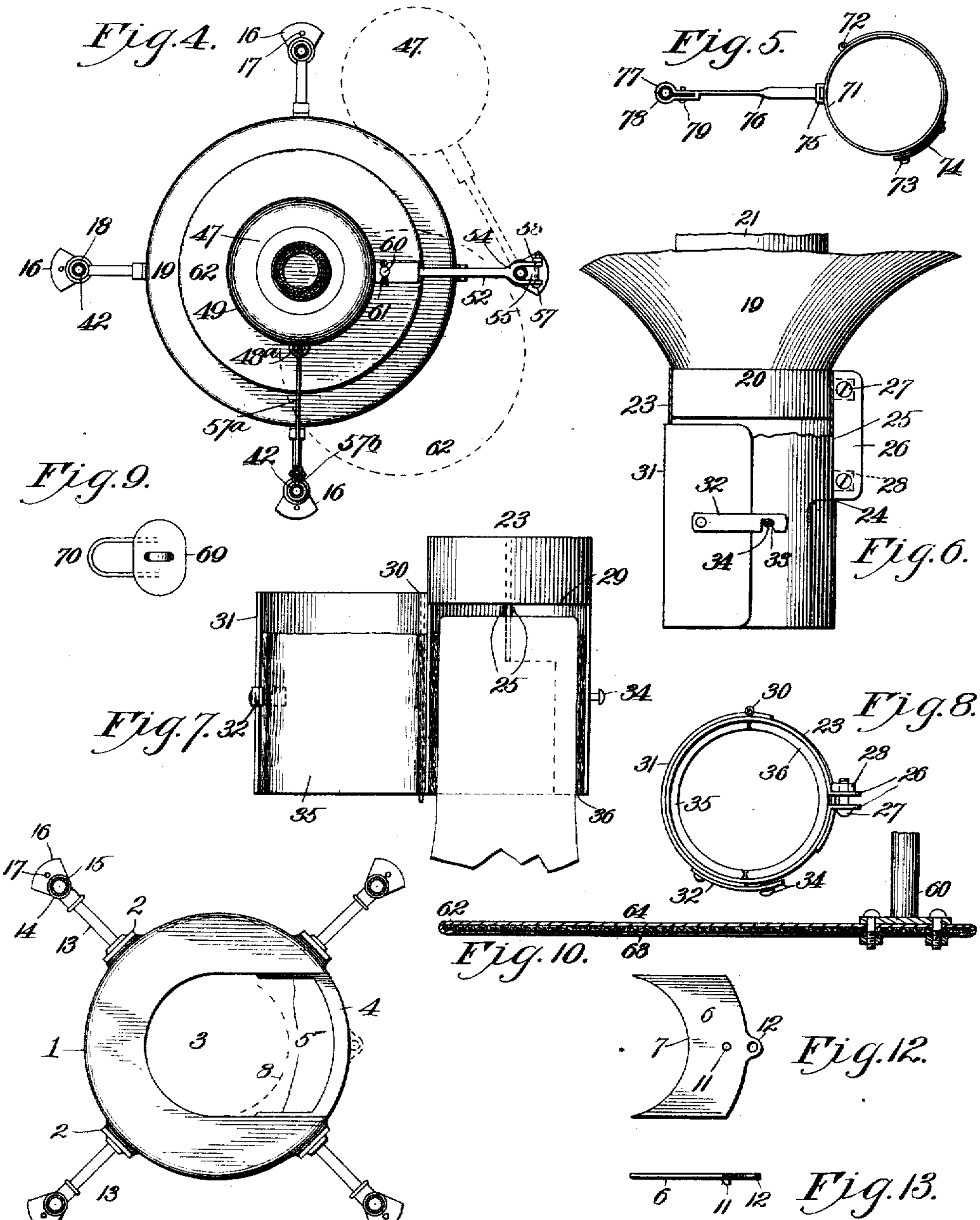
S. S. ST. HOOR.

HEATING AND ILLUMINATING DEVICE.

APPLICATION FILED JAN. 9, 1906.

913,068. Patented Feb. 23, 1909.

3 SHEETS—SHEET 2.



Witnesses

H. C. Rodgers

Fred V. Griffith

Inventor

S. S. St. Hoor.

By George J. Thorpe

atty

S. S. ST. HOOR.

HEATING AND ILLUMINATING DEVICE.

APPLICATION FILED JAN. 9, 1906.

913,068.

Patented Feb. 23, 1909.

3 SHEETS—SHEET 3.

Fig. 14.

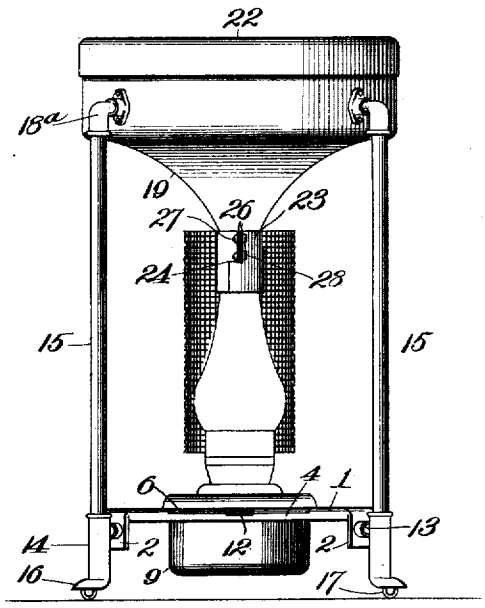


Fig. 15.

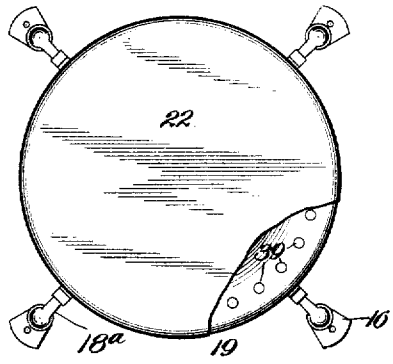
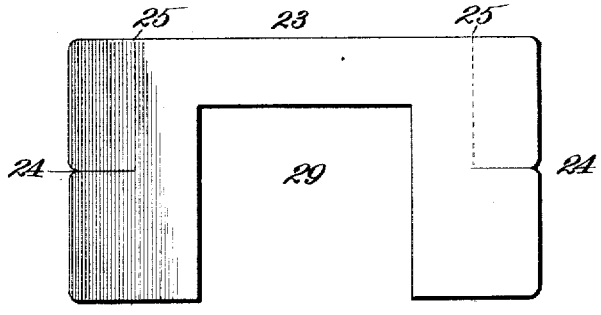


Fig. 16.

Fig. 17.



Witnesses

H. C. Rodgers

Fred. V. Griffith

Inventor

S. S. St. Hoor.

By. George H. Thorpe Atty.

UNITED STATES PATENT OFFICE.

SAMUEL S. ST. HOOR, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF TO MARY H. CLAGETT AND WILLIAM S. CLAGETT, OF KANSAS CITY, MISSOURI.

HEATING AND ILLUMINATING DEVICE.

No. 913,068. Specification of Letters Patent. Patented Feb. 23, 1909.

Application filed January 9, 1906. Serial No. 295,226.

To all whom it may concern:

Be it known that I, SAMUEL S. ST. HOOR, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Heating and Illuminating Devices, of which the following is a specification.

This invention relates to heating and illuminating devices of that character in which one or more lamps are utilized as both the heating and illuminating medium and one or more drums are utilized for establishing a circulation throughout the room to bring the air therein to a uniform temperature.

The object of this invention is to produce a device of the character named which operates efficiently and reliably and embodies features of construction whereby the attendant is enabled to quickly and easily remove the lamp or lamps into or out of operative position, means for protecting the upper lamp where a pair are employed, from the heat of the lower drum, and means for adjusting the shield of the upper lamp to permit the latter to be disposed in or out of operative position.

With these and other objects in view as hereinafter appear the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1, is a side elevation of a device embodying my invention with the upper lamp equipped with a shade and the lower lamp with a screen or shield which is shown in section. Fig. 2, is a view of that portion of the device above the lower lamp; said figure being taken at right angles to Fig. 1 with the drums shown partly in central vertical section and with the upper lamp equipped with a screen instead of a shade. Fig. 3, is a plan view of one of the drums with its cap portion omitted. Fig. 4, is a horizontal section on the line IV—IV of Fig. 1. Fig. 5, is a plan view of the upper lamp screen as mounted on one of the standards—shown in section—of the device. Fig. 6, is an enlarged view partly in elevation and partly in vertical section of the upper drum and centering clamp for the chimney of the upper lamp. Fig. 7, is a side view of the same showing the clamp open and the upper end of the chimney therein. Fig. 8, is a plan view of the clamp. Fig. 9, is a plan view of one of the shade-balancing weights. Fig. 10, is an enlarged section of the disk for insulating the upper lamp from the heat arising from the lower drum. Fig. 11, is a horizontal section taken on the line XI—XI of Fig. 1, but with the lamp locking plate omitted. Figs. 12 and 13 are detail plan and side views respectively of the lamp locking plate. Fig. 14, is a side elevation of the one-lamp-type of construction. Fig. 15, is a plan view of the same with the drum broken away. Fig. 16, is a detail perspective view of a block forming part of the swing bracket for the upper lamp. Fig. 17, is a view of the blank which is bent to form the centering clamp.

In the said drawings, 1 indicates a circular base plate provided at equidistant points with depending lugs 2, preferably four in number and with a central opening 3, which is semi-circular at one end and is bridged at its other by a shelf portion 4 of the base, said shelf portion with the inwardly projecting cleat extensions 5 thereof occupying a slightly lower plane than the upper surface of the base in order to form a support for the plate 6, having its inner end provided with a semicircular cavity 7 which is adapted to coincide with the dotted line 8 of Fig. 11 and thus in conjunction with the semi-circular end of opening 3 form a circular opening, through which the bowl 9 of a lamp is adapted to depend, the flange 10 of said bowl resting upon the base and said plate to support the lamp reliably in position. To lock the lamp reliably in such position the plate is provided with a depending pin 11 to fit against the inner edge of the shelf portion 4 of the base, the plate being also provided with a perforated lug 12, to provide a handle for convenience in slipping said plate in or removing it from position.

13 indicates tubes extending radially outward from lugs 2 and connected by the vertically disposed couplings 14 to the tubular standards 15, the lower end of the couplings being formed with outwardly projecting flanges 16, which by preference are of orna-

mental appearance and to which are swiveled casters 17 in order that by pulling on one of the standards 15 the device may be easily moved from one part of the room to another.

18 indicates a T-coupling Sheet 1, and 18a an L-coupling, Sheet 3, connecting to the upper end of standards 15 the circular drum 19 preferably of sheet metal; said drum being disposed centrally of and above the lamp and having its lower end of tapering or contracted form and terminating by preference in a cylindrical lip 20 in which is secured the lower end of a vertical tube 21, which terminates at its upper end just short of the preferably sheet metal cap 22 of the drum, said tube forming in practice a continuation or extension of the globe of the lamp, the latter being centered with respect to its globe extension 21, by means of a centering clamp constructed as follows:—A sheet of spring metal 23, slit horizontally at its ends as at 24, is bent to cylindrical form so that its ends below said slits overlap, its ends above said slits being bent on the vertical lines 25 so as to provide outwardly projecting ears 26 through which extend bolts 27 engaged at their ends by nuts 28. The upper end of this cylindrical centering clamp is fitted upon the depending lip 20 of the drum and the nuts are screwed home to secure the clamp rigidly to the drum. The cylindrical clamp is cut away between its overlapping ends so as to provide a large opening 29, for the lateral ingress and egress of the lamp chimney, which opening extends from a point contiguous to the lower end of the lip 20 to and through the lower end of the clamp and hinged as at 30 to the clamp at one vertical margin of said opening is a segmental door 31 which projects above the upper end of opening 29 so as to completely close the same and is provided with a pivoted latch 32 having a notch 33 to engage a headed pin 34 projecting from the clamp at the opposite side of said opening, the outer wall of the notch 33 being inclined as shown in Fig. 6, in order that the door as the latch is closed shall clamp its asbestos or equivalent lining 35 tightly against the globe, the uncut portion of the clamp being likewise provided with a lining 36 of the same material to clasp the opposite half of the globe and thus cause the clamp as a whole to engage the globe with an air-tight relation, the lamp being preferably of the center-draft type, such as the class of lamps known as Rochester lamps which are provided with circular wicks and take the air up through a central passage formed in the bowl, the details of construction being omitted because of well known construction, on which no claim is made.

The lamp of the single-lamp-type of construction, Sheet 3, and the lower lamp of the double-lamp-type of construction are inclosed by foraminous cylindrical screens or shields 37, as ordinarily said lamps are employed for heating purposes only, said screens or shields guarding against contact of one's feet with the lamps when placed upon the base to be warmed, said screens or shields being preferably supported by legs 38 resting upon the base.

The drum is preferably provided with a circular series of perforations 39, near the upper extremity of its downwardly tapering portion and depending into the lower drum of the double-lamp type of construction are a series of curved tubes 40 preferably three in number, their lower ends being contiguous to said series of apertures and their upper ends communicating with three of the inwardly projecting arms of couplings 18, the arm of the fourth coupling 18 being preferably plugged as at 41, (Fig. 1) to prevent the heat passing from the drum through said coupling.

42 indicates a series of tubes secured at their lower ends in couplings 18 and forming extensions of standards 15, the extension 42 connected to the plugged coupling being a "cold" tube in order to form a convenient handle for moving the device around the apartment, the other three tubes providing passages through which the hot air from the drum last referred to may pass upward and through the L-couplings 43 into the upper drum 44, which drum is a duplicate of drum 19 and therefore needs no detail description, it being understood of course that the "cold" tube 42, is likewise connected to the drum 44. Said drum furthermore is equipped with a lamp chimney extension 45 like the part 21 of the lower drum and with a centering clamp 46 precisely like that already described for the globe of the upper lamp 47, said upper lamp being supported in a ring 48 encircling its bowl below the flange 49 thereof, said ring terminating in outwardly projecting arms 50 engaging grooves 51 in opposite sides of the bracket 52 having a lower half-sleeve or bearing 53, journaled preferably on the "cold" standard extension and resting on the contiguous coupling 18 as shown in Fig. 1. The bracket is also provided with a bifurcated upper bearing arm 54 engaging said standard a bearing block 55 fitting in said bifurcated arm and also engaging said sleeve and provided with a transverse groove 56 engaged by a bolt 57 extending through the bifurcated bearing and retained in position by a nut 58. From the construction described it will be seen that the weight of the lamp holds the half sleeve or bearing 53 in reliable engagement with the standard extension engaged by said sleeve and that by the removal of bolt 57 the bracket and parts

carried thereby can be totally disconnected from the device. At the inner end said bracket is provided with an arm 59 and journaled therein and also in the bracket arm vertically above is a rod 60, a spring cotter 61 retaining said rod in position. Secured to the lower end of said rod and adapted to be interposed between the lower drum and the lamp so as to permit the air of the room to circulate between it and said drum and lamp is a disk 62, to insulate the upper lamp from the heat arising from the lower drum as otherwise the heat arising from said drum would be sufficient at times to boil the oil in the upper lamp. This insulating disk preferably consists of a sheet of asbestos 63 preferably covered by zinc 64, the latter being employed simply to give a finish to the asbestos disk as without it such asbestos would become unsightly through discoloration caused by dust settling upon it. As supported it is obvious the disk can be swung from beneath the lamp as indicated by dotted lines in Fig. 4. The upper lamp furthermore can be swung outward from under the upper drum as also indicated by dotted lines in Fig. 4, the swing bracket 52 turning upon the "cold" standard extension. In this connection it will be noticed by reference to Fig. 1, that the hinged door of the outer centering clamp is so disposed that when open the upper end of the globe can swing in or out of the same through the opening 29 thereof.

65 indicates a shade for the lamp resting on the hooks 66 attached to the lower ends of chains or cables 67 running over sheaves 68, pendently supported as shown or otherwise from elbows 43, the opposite ends of said chains or cables being attached to weights 69, provided with eyes 70 slidingly encircling the standard extensions, the weights acting as a counterbalance for the globe so that the latter may be supported at the desired elevation. When it is desired to swing the lamp from under the upper drum in a manner hereinbefore explained, the shade is pushed upward until its upper end comes in contact with and incloses a portion of the tapering lower end of the drum. When so disposed the shade provides room for the door of the upper centering clamp to be opened and the chimney to be removed from the lamp preliminary to swinging it from under the shade and drum, it being obvious of course that the parts may be so proportioned as to enable the operator to raise the shade until it clears the plane of the top of the globe so as to permit the lamp to be swung from beneath without necessitating the removal of the globe. When the upper lamp is to be used to disseminate light rather than to deflect it downward for reading or analogous purposes, the shade may be entirely removed after first swinging the lamp aside as explained, the chains or cables being preferably detached from the weights and the latter permitted to slide down upon the posts until arrested by obstructions in their paths.

If desired the light from the upper lamp can be softened by inclosing it in a foraminous cylindrical screen 71, consisting of two semicylindrical halves hinged together as at 72, one of the halves having a headed pin 73 to be engaged by a pivoted latch 74 carried by the other half. This screen may be provided with a loop 75 adapted to engage the upper turned end of an arm 76 terminating in a half loop 77, which in conjunction with the cap 78 clamped as at 79 to the arm 76, serves to embrace one of the standard extensions for the purpose of supporting the screen 71 at the desired height. This screen is so disposed that when opened the lamp may be swung into or out of the same as will be readily understood.

In operation the chimney extensions 21 and 45 provide a powerful draft and discharge the heat and products of combustion from the lamp against the caps of the drums, which caps become so hot that the lower drum as has been demonstrated in practice can be used for cooking purposes when the bracket 52 is swung to one side. The heat is so intense in the drums that the odors arising from the oil are consumed so that practically purified air is discharged downward through the circular series of apertures of the drums and thus establishes a circulation which quickly brings the air in the room to a uniform temperature. A portion of the heat and purified air from the lower drum also circulates up through tubes 40 and the unobstructed couplings and standard extensions and is discharged into the upper drum so that the two drums coöperate in establishing the circulation of air in the room, it being obvious of course that if desired in the double-lamp-type of construction the lower drum need not be provided with the perforations 39 so that all of the heat generated except that produced by radiation shall be discharged through the apertures of the upper drum into the room.

As a precautionary measure against swinging or swaying movement of the lamp particularly when the device is being moved from one point of a room to another, I provide an anchor consisting of an eye 48^a formed on band 48, a hook 57^a engaging said eye, and a bracket 57^b adjustably mounted on one of the standard extensions and forming a pivotal support for the hook. Before the lamp can be swung into or out of operative position with respect to the

upper drum the hook must of course be disengaged from the eye.

From the above description it will be apparent that I have produced a heating and illuminating device embodying the features of advantage enumerated as desirable and which obviously may be modified in various particulars without departing from the principle of construction involved.

Having thus described the invention what I claim as new and desire to secure by Letters Patent, is:—

1. A device of the character described, comprising a series of standards, a base carried thereby, a heater rigid with the base and provided with a chimney, a drum rigid with the standards and provided with one or more holes, and a centering clamp carried by the drum to externally embrace the chimney and having a side opening for the ingress and egress of the latter and a door to cover or uncover said opening.

2. A device of the character described, comprising a series of standards, a base carried thereby, a heater rigid with the base and provided with a chimney, a drum rigid with the standards and provided with one or more holes, a centering clamp carried by the drum to externally embrace the chimney and having a side opening for the ingress and egress of the latter and a door to cover or uncover said opening, and a tube in the drum to form a chimney extension for the lamp and located vertically above the latter.

3. A device of the character described, comprising a series of standards, a base carried thereby, a heater upon the base, provided with a chimney; a drum rigid with the standards and having a downwardly tapering lower portion and provided with downwardly opening holes, and a centering clamp depending from the tapered portion of the drum and having a side opening, a door controlling the same, and means to lock said door and cause the clamp to press tightly upon the chimney.

4. A device of the character described, comprising a series of standards, a base carried thereby, a heater rigid with the base and provided with a chimney, a drum rigid with the standards and provided with one or more holes, a centering clamp carried by the drum to embrace the chimney and having a side opening for the ingress or egress of the latter and a door to cover or uncover said opening, and a compressible non-combustible lining for the clamp to establish a tight joint between the latter and the chimney.

5. In a device of the character described, a series of standards a drum carried thereby and provided with downwardly tapering portion and a series of holes, a centering clamp depending from the drum and having a side opening and a door controlling the same, a base carried by the standards below the drum and provided with an opening, a heater resting upon the base and depending through the opening and disposed vertically under the drum and having a chimney embraced by the centering clamp and its door, and a removable plate secured in the opening of the base outward of the heating device to hold the latter against lateral movement.

6. A device of the character described, comprising a series of standards, a base carried thereby, a heater rigid with the base and provided with a chimney, a drum rigid with the standards and provided with one or more holes, a centering clamp carried by the drum to externally embrace the chimney and having a side opening for the ingress or egress of the latter and a door to cover or uncover said opening, and a screen or shield surrounding the chimney of the lamp and supported by the base.

7. In a device of the character described, a centering clamp consisting of a resilient plate bent to cylindrical form, having the lower portion of its ends overlapping and the upper portion of its ends projecting outward in the form of ears and having an opening in its lower end, means for pressing said ears toward each other, a door to close said opening, and means for securing said door in its closed position.

8. In a device of the character described, a centering clamp consisting of a resilient plate bent to cylindrical form having the lower portion of its ends overlapping and the upper portion of its ends projecting outward in the form of ears and having an opening in its lower end, means for pressing said ears toward each other, a door hinged to the clamp at one side of said opening, a pin projecting from the clamp at the opposite side of said opening, and a latch-rod carried by the door, and provided with a notch engaging said pin.

9. In a device of the character described, a centering clamp consisting of a resilient plate bent to cylindrical form having the lower portion of its ends overlapping and the upper portion of its ends projecting outward in the form of ears and having an opening in its lower end, means for pressing said ears toward each other, a door hinged to the clamp at one side of said opening, a pin projecting from the clamp at the opposite side of said opening, and a pivot-rod carried by the door, and provided with a notch engaging said pin; said notch having an inclined wall to act as a cam on said pin to press the lower portion of the clamp and the door thereof inwardly.

10. In a device of the character described, a series of standards, a drum rigid therewith and provided with a downwardly ta-

pering portion and one or more holes, a lamp supported by said standards and having its chimney adapted to discharge into the drum through its tapered lower portion, and a counterbalanced vertically adjustable shade for the lamp chimney.

11. In a device of the character described, a series of standards, a drum rigid therewith and provided with a downwardly tapered portion and one or more holes, a lamp supported by said standards and having its chimney adapted to discharge into the drum through its tapered lower portion, a shade surrounding the lamp chimney, sheaves supported from the standards, counterbalance weights slidingly carried by the standards, and flexible connections engaging said sheaves and connected at their opposite ends to said counter balance weights and said shade.

12. In a device of the character described, a series of standards, a drum carried thereby and having a downwardly tapering lower portion and one or more holes, a centering clamp depending from the tapered portion of the drum and having a side opening and a door controlling the same, a swinging bracket mounted on one of the standards, and a lamp carried thereby and adapted to be moved so that the upper portion of its chimney shall enter or leave said centering clamp, through said opening.

13. In a device of the character described, a series of standards, a drum carried thereby and having a downwardly tapered lower portion and one or more holes, a centering clamp depending from the tapered portion of the drum and having a side opening and a door controlling the same, a swinging bracket mounted on one of the standards, a lamp carried thereby and adapted to be moved so that the upper portion of the chimney shall enter or leave said centering clamp through said opening, a vertically adjustable shade encircling the lamp chimney, and means for counterbalancing said shade to hold it at the desired elevation.

14. In a device of the character described, a series of standards, a heater carried thereby, a drum carried by said standard and adapted to receive the heat and other products of combustion from the heater and provided with one or more holes, a series of extensions for said standards, one or more of such extensions communicating with said drum, a drum carried at the upper ends of said extensions and communicating with the opposite ends of the extensions communicating with the lower drum, and also provided with one or more holes, and a downwardly tapering central portion, a centering clamp depending from the lower end of the upper drum, provided with a side opening and a door controlling the same, and a swing bracket mounted on one of the standard extensions and provided with a lamp having its chimney engaged by the centering clamp.

15. In a device of the character described, a series of standards, a heater carried thereby, a drum carried by said standards and adapted to receive the heat and other products of combustion from the heater and provided with one or more holes, a series of extensions for said standards, one or more of such extensions communicating with said drum, a drum carried at the upper ends of said extensions and communicating with the opposite ends of the extensions communicating with the lower drum, and also provided with one or more holes, and a downwardly tapering central portion, a centering clamp depending from the lower end of the upper drum, provided with a side opening and a door controlling the same, a swing bracket mounted on one of the standard extensions and provided with a lamp having its chimney engaged by the centering clamp, and a heat insulator interposed between the lower drum and the lamp above the same.

16. In a device of the character described, a series of standards, a heater carried thereby, a drum carried by said standards and adapted to receive the heat and other products of combustion from the heater and provided with one or more holes, a series of extensions for said standards, one or more of such extensions communicating with said drum, a drum carried at the upper ends of said extensions and communicating with the opposite ends of the extensions communicating with the lower drum, and also provided with one or more holes and a downwardly tapering central portion, a centering clamp depending from the lower end of the upper drum, provided with a side opening and a door controlling the same, a swing bracket mounted on one of the standard extensions and provided with a lamp having its chimney engaged by the centering clamp, and a heat insulator interposed between the lower drum and the lamp and pivoted near its circumference so as to be capable of swinging from under the lamp.

17. In a device of the character described, a series of standards, a heater carried thereby, a drum carried by said standards and adapted to receive the heat and other products of combustion from the heater and provided with one or more holes, a series of extensions for said standards, one or more of such extensions communicating with said drum, a drum carried at the upper ends of said extensions and communicating with the opposite ends of the extensions communicating with the lower drum and also provided with one or more holes and a downwardly

tapering central portion, a centering clamp depending from the lower end of the upper drum, provided with a side opening and a door controlling the same, a swing bracket mounted on one of the standard extensions and provided with a lamp having its chimney engaged by the centering clamp, and a heat insulator pivotally supported by said swing bracket and interposed between the lamp carried by the latter and the lower drum.

In testimony whereof I affix my signature, in the presence of two witnesses.

SAMUEL S. ST. HOOR.

Witnesses:
H. C. RODGERS,
G. Y. THORPE.