May 14, 1946. F. STEMPFL 2,400,267

ELECTRIC LIGHTING FIXTURE

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Fig. 1.

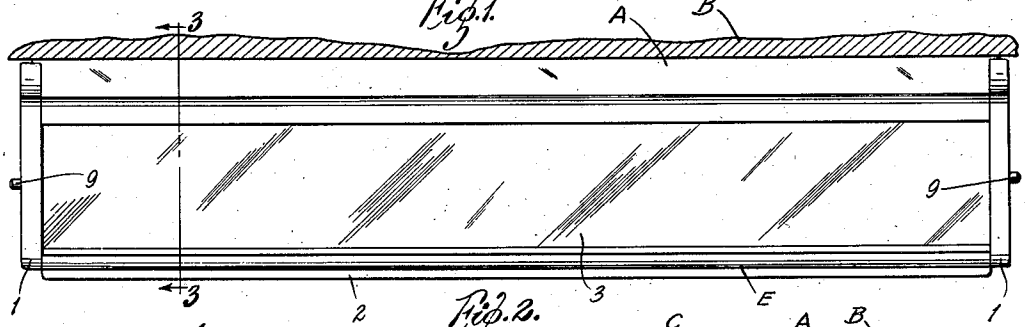


Fig. 2.

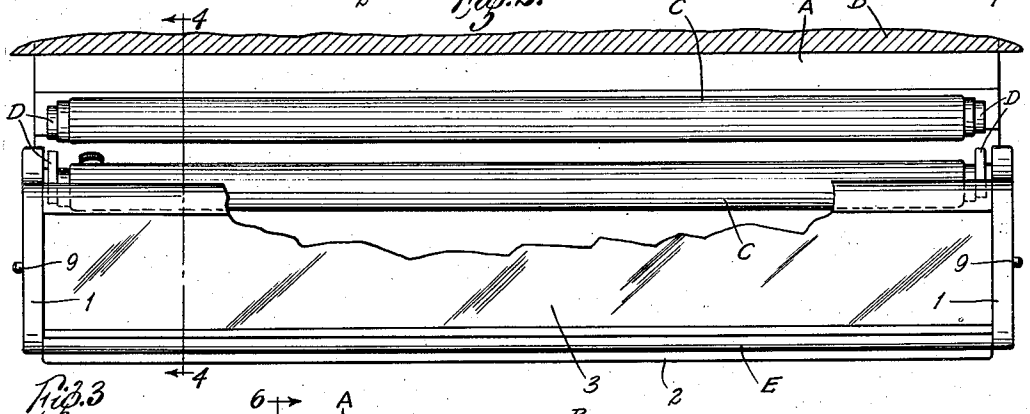


Fig. 3

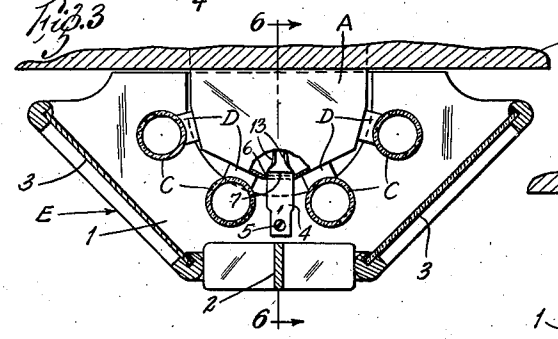


Fig. 4.

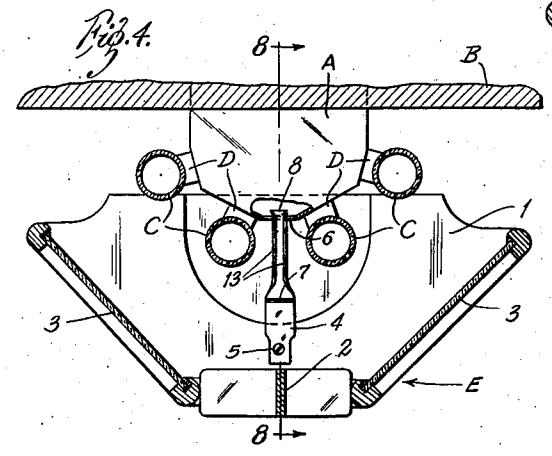
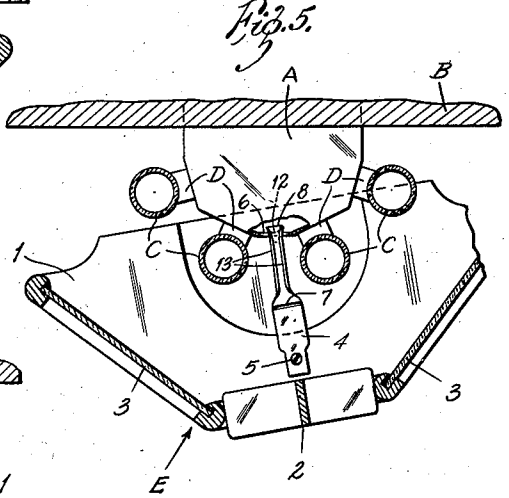


Fig. 5.



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Fig. 6.

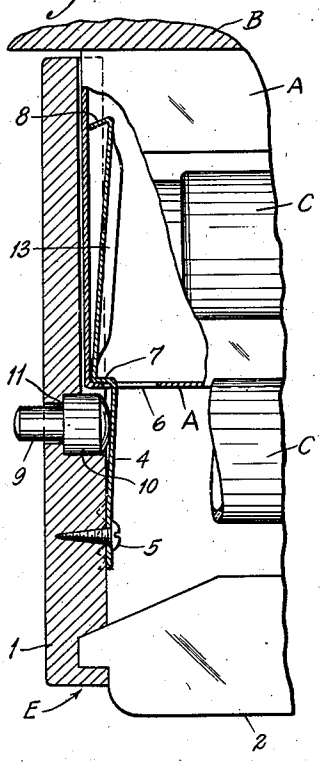


Fig. 7.

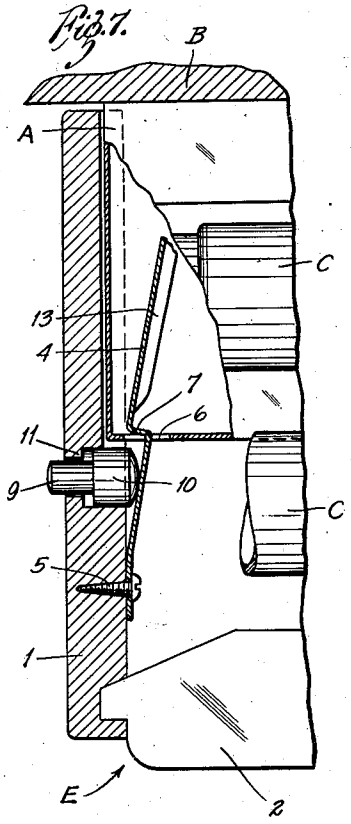


Fig. 8.

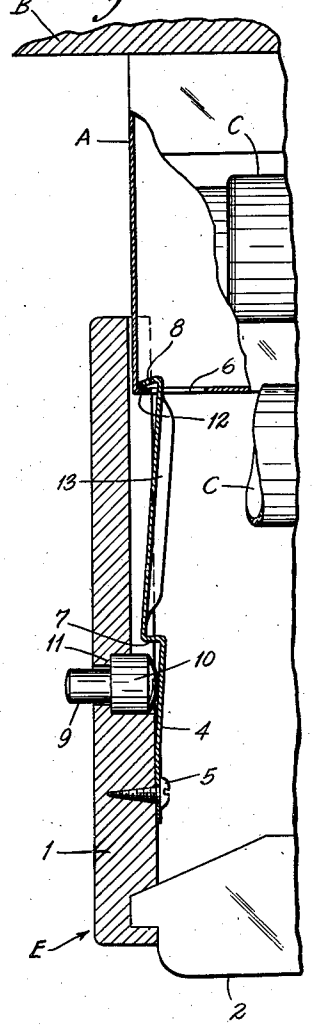
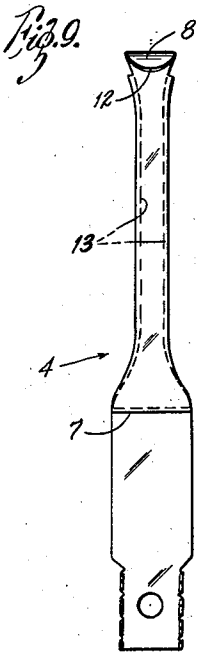


Fig. 9.



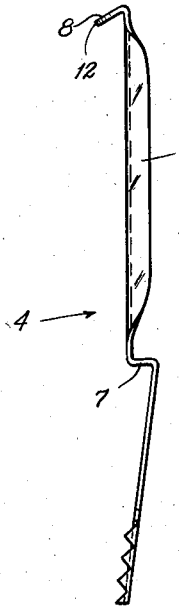


Fig. 10.

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UNITED STATES PATENT OFFICE

2,400,267

ELECTRIC LIGHTING FIXTURE

Frederick Stempfl, Wellston, Mo., assignor to Day-Brite Lighting, Inc., St. Louis, Mo., a corporation of Missouri

Application March 3, 1944, Serial No. 524,878

6 Claims. (Cl. 240—78)

This invention relates to electric lighting fixtures, particularly fluorescent lighting fixtures of the kind having removable light modifying covers or troughs for the lamps. The principal object of the invention is to provide quick detachable fastening means for the removable lighting trough that will permit said trough to be entirely removed from the fixture or lowered relative thereto to allow access to the interior of the trough for the purpose of inspection, cleaning or lamp removal. The invention consists in the electric lighting fixture and in the construction, combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a side elevational view of an overhead fluorescent lighting fixture embodying my invention,

Fig. 2 is a view similar to Fig. 1, showing the lighting trough in lowered position,

Fig. 3 is a vertical cross-section on the line 3—3 in Fig. 1,

Fig. 4 is a similar cross-sectional view on the line 4—4 in Fig. 2,

Fig. 5 is a view similar to Fig. 4, showing the lowered trough in tilted position,

Fig. 6 is an enlarged fragmentary vertical longitudinal section on the line 6—6 in Fig. 3,

Fig. 7 is a view similar to Fig. 6 showing the spring hanger clip in position to permit downward movement of the lighting trough relative to the wiring housing,

Fig. 8 is an enlarged fragmentary central longitudinal section on the line 8—8 in Fig. 4,

Fig. 9 is an elevational view of the operative side face of one of the suspension or hanger clips for the lighting trough; and

Fig. 10 is a side edge elevational view of said clip.

In the accompanying drawings, my invention is shown embodied in a fluorescent lighting fixture comprising an upper wiring housing A that is fixedly secured in any desired manner (not shown) to a ceiling, beam or other overhead support B; tubular lamps C supported exteriorly of said wiring housing by means of suitable lampholders D projecting therefrom near the ends thereof, and a lower light modifying member in the form of a trough or channel E which embraces said wiring housing and lamps and is provided with end walls 1, a louvered bottom 2 and upwardly diverging light transmitting side panels 3. The fluorescent lighting fixture thus far described is of well known construction and it is considered unnecessary to illustrate it in detail.

The lighting trough E is removably suspended from the fixed overhead wiring housing A at opposite ends of the fixture by means of suspension or hanger clips 4 of spring metal. Each of the clips 4 has its lower end portion secured flatwise to the inner face of the end wall 1 of the lighting trough E by means of a screw 5 or other fastener. The remaining, upper portion of the spring clip 4 is free of the end wall 1 of the lighting trough E and is adapted to extend upwardly into the wiring housing A through an opening 6 in the bottom thereof. The free resilient portion of the clip 4 is offset outwardly intermediate its ends towards the end wall 1 of the wiring housing A to form a hook-like portion 7; and the free resilient portion of said clip has its upper end bent in the direction of said end wall to form an upper hook 8.

In the normal or fully raised position of the lighting trough E, the intermediate shoulder or hook 7 of the spring clip 4 snaps over the edge of the opening 6 in the wiring housing A and seats on the bottom thereof and thus serves to support said lighting trough in such position. When, however, the free portion of the clip 4 is pressed inwardly to move the intermediate shoulder or hook portion 7 thereof clear of the edge of the opening 6, the lighting trough E may be lowered away from the wiring housing A until the hook 8 at the upper end of said clip snaps over said edge of said opening, thereby suspending said lighting trough from said wiring housing at a lower elevation. In this lowered position of the lighting trough E, sufficient space is provided between the latter and the wiring housing A to allow access to the fixture for the purpose of cleaning the parts and inspection and removal of the lamps. When it is desired to mount and dismount the lighting trough E, said clip is forced inwardly far enough to swing the vertically spaced hooks 7 and 8 thereof clear of the edge of the opening 6 in the bottom of the wiring housing A so that said hooks will pass through said opening.

The clip 4 is made of spring metal and, after mounting, is placed under tension so that it always tends to swing outwardly in the direction of the end wall 1 of the lighting trough E. The spring clip 4 is released from the edge of the opening 6 in the bottom of the wiring housing A by means of a push button 9 that is mounted in the end wall 1 of the lighting trough E in a position to be pushed inwardly against said clip to swing the hooks 7 and clip clear of said edge of said opening. The push button 9 is slidably sup-

ported in a horizontal bore provided therefor in the end wall 1 of the lighting trough E and is retained in said bore by the suspension clip 4 and an enlarged inner end portion 10 of said button that abuts endwise against an annular shoulder 11 formed in said bore by a counterbore at the inner end thereof. As shown in Fig. 9 of the drawings, the hook 8 at the upper end of the spring clip 4 terminates in a convex edge 12, which, in the lowered position of the lighting trough E, permits said trough to be rocked sidewise to increase the space between the wiring housing and lighting trough on one side of the fixture. The free portion of the suspension clip 4 is of reduced width above the hook 7 to permit swinging movement of said clip in the opening 6 in the bottom of the wiring housing A in the lowered position of the lighting trough E; and the narrow portion of said clip is stiffened by side flanges 13.

The above described construction has several important advantages. It permits the lighting trough E to be quickly and easily locked to the wiring housing A, merely by entering the clips 4 in the slots 6 therein and pushing the lighting trough upwardly around said channel until the wide intermediate hooks or shoulders 7 snap over the edges of said slots. When it is desired to lower the lighting trough E for purposes of inspection, cleaning or lamp removal, the push buttons 9 at the ends of the lighting trough are forced inwardly to disengage the intermediate hooks 7 of the spring clips 4 from the edge of the slots 6 in the bottom of the wiring housing, thereby permitting said trough to drop downwardly until the hooks 8 at the upper ends of said clips snap over the edges of said slots. When it is desired to remove the lighting trough E entirely from the fixture, the pressure on the buttons 9 is continued until the upper hooks 8 of the clips 4 also clear the edges of the slots 6. The above self-locking quick-releasable suspension device is simple and inexpensive and can be quickly and easily incorporated in the fixture without material alteration thereof.

What I claim is:

1. An overhead electric lighting fixture comprising a fixed upper lamp supporting housing having an opening through the bottom thereof, a lower light modifying member and means for suspending said light modifying member from said lamp supporting housing at either of two elevations, said means comprising a spring clip fixed at its lower end to said light modifying member and having a free upper end portion extending upwardly through said opening, said portion of said clip having two vertically spaced laterally extending portions, one adapted to snap over the edge of said opening to hold said light modifying member at one elevation and the other adapted to snap over said edge to hold said light modifying member at the other elevation.

2. An overhead electric lighting fixture comprising a fixed upper lamp supporting housing, a lower light modifying member, means for securing said light modifying member to said housing, said means comprising a spring clip fixed to said light modifying member and having vertically spaced portions selectively engageable with said housing, whereby said lower light modifying member is adapted to be suspended from said housing at either of two elevations, and means mounted in said light modifying member and accessible from the exterior thereof for manually releasing said portions of said clip from said housing whereby said light modifying member is adapted to be entirely removed therefrom.

3. An overhead electric lighting fixture comprising a fixed upper wireway channel having an opening through the bottom thereof, a lower lighting trough, and a spring clip fixed at its lower end to said lighting trough and having a free upper end portion extending upwardly through said opening, said portion of said clip having two vertically spaced hook portions adapted to snap over the edge of said opening to thereby suspend said lighting trough from said wireway channel at either of two elevations.

4. An overhead electric lighting fixture comprising a fixed upper wireway channel having a slot through the bottom thereof, a lower lighting trough, and a spring clip fixed at its lower end to said lighting trough and having a free upper portion extending upwardly through said slot with vertically spaced hook portions adapted to snap over the edge thereof to thereby suspend said lighting trough from said wireway channel at either of two elevations, and manually operable means mounted in said lighting trough and accessible from the exterior thereof for moving said hook portions of said clip clear of said edge of said slot to permit passage of said clip therethrough.

5. An overhead electric lighting fixture comprising a fixed upper wireway channel having a longitudinal slot through the bottom thereof, a lower lighting trough, and a spring clip fixed at its lower end to said lighting trough and having a free upper portion extending upwardly through said slot with vertically spaced hook portions adapted to snap over the edge thereof to thereby suspend said lighting trough from said wireway channel at either of two elevations, and manually operable means mounted in said lighting trough and accessible from the exterior thereof for moving said hook portions of said clip clear of said edge of said slot to permit passage of said clip therethrough, said clip being shaped to prevent movement thereof crosswise of said slot in the operative position of the lowermost hook portion and to permit rocking movement of said clip crosswise of said slot in the operative position of the uppermost hook portion.

6. An overhead electric lighting fixture comprising a fixed upper wireway housing having an opening through the bottom thereof near each end, a lower lighting trough, a spring clip fixed to each end of said lighting trough and extending upwardly through said opening, said portion of said clip having two vertically spaced hook portions adapted to snap over the edge of said opening to thereby suspend said lighting trough through said wireway housing at either of two elevations, and a push button mounted in said end of said lighting trough and accessible from the exterior thereof for moving said hook portions of said clip clear of said edge of said opening to permit passage of said clip therethrough.

FREDERICK STEMPFL.