May 9, 1950 M. H. KRUGER 2,507,308

HANGER ATTACHMENT FOR LIGHTING FIXTURES

Filed Sept. 14, 1945

Fig. 1.

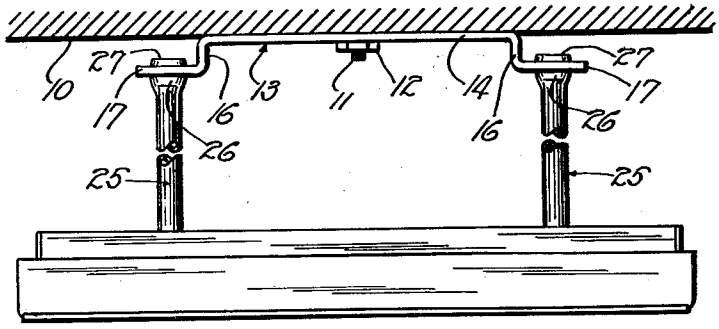


Fig. 2.

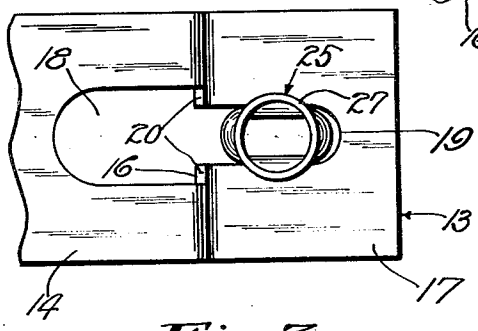


Fig. 5.

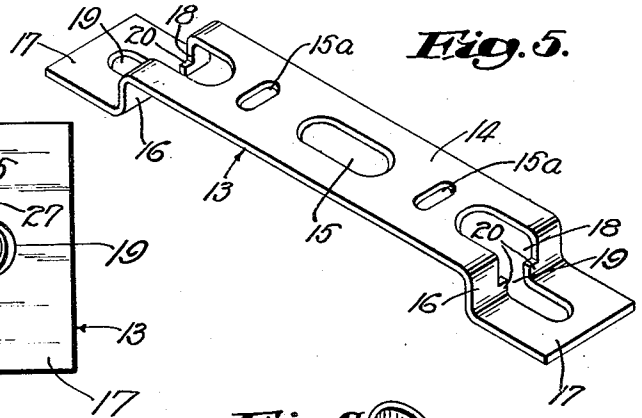


Fig. 3.

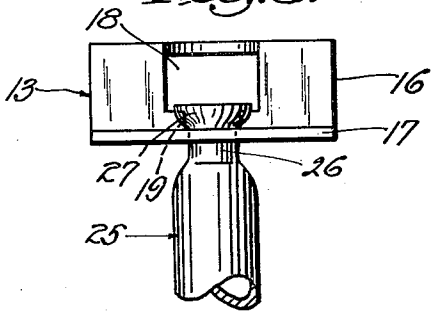


Fig. 6.

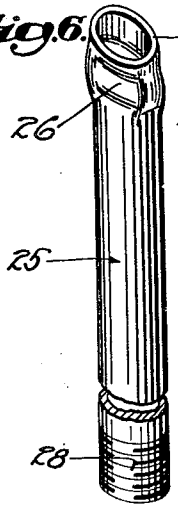
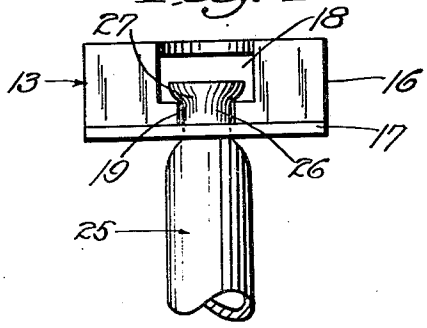


Fig. 4.



Inventor:
Michael Henry Kruger
By Dike, Calver + Foster
Attorneys

Patented May 9, 1950

2,507,308

UNITED STATES PATENT OFFICE

2,507,308

HANGER ATTACHMENT FOR LIGHTING FIXTURES

Michael H. Kruger, Malden, Mass., assignor to A. L. Smith Iron Company, Chelsea, Mass., a corporation of Massachusetts

Application September 14, 1945, Serial No. 616,327

4 Claims. (Cl. 248—345)

1

This invention relates to hanger attachments for lighting fixtures, and particularly for fluorescent lighting fixtures. Fluorescent lighting fixtures, particularly in commercial installations, are ordinarily heavy structures with heavy frames and reflector, which are suspended on long hangers from a ceiling. The hangers are ordinarily bolted rigidly to both ceiling strap and fixture, and cannot be readily assembled or disassembled, and over a long period may become unscrewed, dropping or damaging the fixture.

My hanger attachment is designed to overcome the defects and disadvantages of previous structures, will permit the fixture to swing on the hanger, is readily assembled and disassembled, is positively locked against turning movement and cannot become unscrewed from the fixture. At the same time the structure is simple and inexpensive to construct, install and maintain.

Before explaining in detail the present invention it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation, and it is not intended to limit the invention claimed herein beyond the requirements of the prior art.

Other objects and advantages of the invention will appear in the following specification in connection with the accompanying drawings, in which

Fig. 1 is a front elevation showing the hanger attachment in use;

Fig. 2 is a plan view of a part of the attachment;

Figs. 3 and 4 are end elevations showing the hanger in locked and unlocked position respectively; and

Figs. 5 and 6 are perspective views of the strap and hanger rod separately.

In the drawings 10 represents an electrical outlet connection from which the hanger and lighting fixture is suspended in any suitable manner as by fixture stud 11 and nut 12 secured to strap 13. Strap 13 comprises a flat piece 14 preferably of sheet metal, having a central aperture 15 for receiving an attaching stud, such as fixture stud 11 and nut 12. Aperture 15 is preferably elongated to permit centering of the attachment with respect to the area it is to occupy. Apertures 15a are also provided for receiving aligning studs (not

2

shown). Strap 13 is bent down or offset at the ends thereof to extend at a lower plane from the main portion 14, comprising side walls 16 and ends 17. Two slots 18 and 19 are formed in side walls 16, slot 19 being narrower than slot 18 and forming in effect one T-shaped slot therein, with the upper slot 18 extending longitudinally into the narrower slot 19 formed in each end portion 17. The side walls 16 adjacent narrower slot 19 form in effect a pair of end abutments 20 which serve to prevent hanger tube 25 from sliding out of slots 19, once they have been inserted, as described below. A pair of hanger tubes 25, which are preferably hollow to permit insertion of wires, are arranged to be appended from strap 13 at the offset ends 17 thereof, and have flat parallel grooves 26 formed in the top end of each rod of the approximate width of slots 19, providing in effect a T-shaped head 27 on the tubes 25. Grooves 26 formed in top ends of each tube 25 are high enough to permit heads 27 to pass over abutments 20 on side walls 16, when appending the tubes 25 from straps 13 by inserting their heads 27 through slots 18 and 19. The bottom ends of each tube 25 are screw-threaded as at 28 for screwing into complementary threaded portions of the lighting fixture (not shown) which is appended from the tubes 25.

The tubes 25, having been screwed into the lighting fixture at their bottom ends 28, as described, and the strap 13 having been firmly secured to the electrical outlet, as by fixture stud 11 and nut 12, the heads 27 of tubes 25 are then passed through slots 18 and 19 formed in side walls 16 and moved outwardly toward the ends of strap 13, whereby grooves 26 become inserted in slots 19 in the end portions 17. Tubes 25 are then prevented from sliding out of slots 19 by abutments 20 on side walls 16, but can be moved out by lifting them, so that heads 27 will pass through slots 18 and 19 formed in side walls 16 over abutments 20 thereon, for the purpose of disassembling the fixture. At the same time, the flat grooves 26 in the top of tubes 25, when held in the slots 19 in the ends 17 of strap 13 prevent the tubes from turning or twisting, and becoming unscrewed from the appended fixture, which has been a defect in previous constructions. Rigidity in a hanger attachment for lighting fixtures is a disadvantage, however, and the same construction of slots 19 in the strap 13, whereby tubes 25 are appended therefrom by grooves 26 formed in the tops of said tubes 25, permits the lighting fixture to sway and yield laterally without injury to the fixture and hanger parts. Frequently the

electrical outlet connection for such lighting fixtures is not precisely located for the area it is to occupy and elongated central aperture 15 in strap 13 permits relative adjustment of strap 13 with respect to such electrical outlet.

It will thus be seen I have devised a simple and inexpensive structure, having many advantages and which overcomes the defects of previous structures of this nature.

I claim:

1. In a hanger attachment for lighting fixtures, a strap having a central elongated aperture for attaching said strap to an electrical outlet, angled side walls extending downwardly adjacent the ends of said strap, and offset ends extending horizontally from said side walls, a T-shaped slot in said side walls, the bottom of the slot extending horizontally into said offset ends, a pair of tubular rods having parallel grooves adjacent the top ends thereof, and forming a T-shaped head thereon adapted to be passed through the slot in said side walls and into the slot in said offset ends, whereby said rods are held loosely suspended from the slot in said offset ends, and the side walls of said strap adjacent the lower end of said slot therein form abutments preventing said rods from sliding out of engagement with the slots in said offset ends.

2. In a hanger attachment for lighting fixtures, a strap having a central elongated aperture for attaching said strap to an electrical outlet, angled side walls extending downwardly adjacent the ends of said straps, and offset ends extending horizontally from said side walls, a T-shaped slot in said side walls, the bottom of said slot extending horizontally into said offset ends, a pair of tubular rods having parallel grooves adjacent the top ends thereof, and forming a T-shaped head thereon adapted to be passed through the slot in said side walls and into the slot in said offset ends, whereby said rods are held loosely suspended from the slot in said offset ends, and the side walls of said strap adjacent the lower end of said slot therein form abutments preventing said rods from sliding out of engagement with the slots in said offset ends, and said rods having means at their bottom ends thereof for detachably connecting said rods to a lighting fixture.

3. In a hanger attachment for lighting fixtures, a strap having a central elongated aperture for adjustably attaching said strap to an electrical outlet, angled side walls extending downwardly adjacent the ends of said strap, and offset ends extending horizontally from said side walls, a slot in said side walls, and a narrower slot formed in said side walls and extending horizontally into said offset ends, a pair of tubular rods having parallel grooves adjacent the top ends thereof, adapted to be passed through the slots in said side walls and the grooved portion thereof into the narrower slot in said offset ends, whereby said rods are held loosely suspended from the slot in said offset ends, and the side walls of said strap form abutments preventing said rods from sliding out of engagement with the narrower slots in said offset ends.

4. In a hanger attachment for lighting fixtures, a strap having a central elongated aperture for adjustably attaching said strap to an electrical outlet, angled side walls extending downwardly adjacent the ends of said strap, and offset ends extending horizontally from said side walls, a slot in said side walls, and a narrower slot formed in said side walls and extending horizontally into said offset ends, a pair of tubular rods having parallel grooves adjacent the top ends thereof, adapted to be passed through the slots in said side walls and the grooved portion thereof into the narrower slot in said offset ends, whereby said rods are held loosely suspended from the slot in said offset ends, and the side walls of said strap form abutments preventing said rods from sliding out of engagement with the narrower slots in said offset ends, and said rods having threaded portions at the bottom ends thereof for detachably connecting said rods to a lighting fixture.

MICHAEL H. KRUGER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
624,671	O'Brien	May 9, 1899
1,818,814	Riggs et al.	Aug. 11, 1931
1,824,708	Davis et al.	Sept. 22, 1931
2,093,997	Bramming	Nov. 16, 1937
2,336,414	Mitchell	Dec. 7, 1943