

UNITED STATES PATENT OFFICE

1,961,934

LIGHTING FIXTURE

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Application June 6, 1932, Serial No. 615,590

10 Claims. (Cl. 240—6)

This invention relates generally to lighting fixtures, and more specifically to lighting fixtures of the type adapted for use in association with display cases and similar structures, the predominant object of the invention being to provide an improved lighting fixture of this type which is capable of performing its intended function in a very efficient manner.

It is well understood that display cases of the type employed in meat shops, grocery stores, and other sales establishments, are provided with electric lighting means which are arranged generally at the upper portions of the transparent front wall portions of the display cases for the purpose of casting light into the interiors of said cases so as to illuminate the goods displayed therein. The electric lighting means which heretofore were employed for this purpose did not function in the desired efficient manner, and I have therefore devised the improved structure disclosed in the present application which, briefly stated, comprises an elongated housing within which electric light producing elements are disposed. The elongated housing referred to is composed of a plurality of housing portions, the housing portions at opposite ends of the elongated housing being fixed and the intermediate housing portions being mounted for pivotal movement. The structure also includes suitable clip elements, which serve to retain the pivoted housing portions in their closed positions, and reflector elements which direct light into the interiors of the display cases.

An important feature of the invention arises from the fact that the improved lighting fixture is so constructed and arranged that fixtures of various lengths may be made up from standard stock parts which would be carried on hand by manufacturers of the improved fixture. In other words, display cases of the type with which my improved lighting fixture is used are made in various lengths, and lighting fixtures of the improved construction may also be made in different lengths to correspond to the various lengths of the display cases by employing housing portions of greater or fewer number in assembling the fixtures. Thus the necessity for a manufacturer to carry on hand a stock of lighting fixtures of various fixed lengths is eliminated, and the cost of providing display cases with lighting fixtures is very greatly reduced.

Fig. 1 is a front elevation of the upper portion of a display case with which one of my improved lighting fixtures is associated, portions of the lighting fixture being shown in section.

Fig. 2 is an enlarged cross-section on line 2—2 of Fig. 1.

In the drawing, wherein is shown for the purpose of illustration, merely, one embodiment of the invention, A designates the upper front portion of a display case, said display case being provided with a transparent front wall portion B which permits goods displayed within the case A to be viewed from without the case. The transparent front wall portion B of the case is preferably in the form of one or more sheets of glass which are held in place in the usual manner, and my improved lighting fixture, which is designated generally by the reference character F, is extended longitudinally of the transparent wall portion B, preferably at the top thereof.

Referring now to the lighting fixture F, said fixture includes a plurality of brackets 1 which are spaced longitudinally of the display case A and are secured to the front wall thereof at points immediately above the transparent wall portion B by suitable fastening devices 2. Each bracket 1 includes an upper portion 3 which contacts with the outer face of the front wall of the display case A and through which the fastening devices 2 pass, a portion 4 which extends outwardly from the lower end of the portion 3 at an approximate right angle with respect thereto, and a downwardly extended portion 5 having an inwardly inclined, lower portion 6. At the upper end thereof the portion 3 of each bracket 1 is provided with spaced apart ears 7 having aligned openings formed therethrough, and at the lower end of the portion 6 of each bracket 1 an enlarged portion 8 is provided through which an opening is formed. Each bracket 1 is provided with a strengthening web 9, as shown clearly in Fig. 2.

The lighting fixture F includes also an elongated housing 10 which extends longitudinally of the display case A, as shown in Fig. 1. The housing 10 is produced by a plurality of housing portions which are assembled in alinement so as to produce a continuous housing or trough, and as will be apparent on inspection of Fig. 1, the housing portions 10^a at opposite ends of the housing 10 are relatively short when compared with the intermediate housing portions 10^b. The housing portions 10^a are rigidly fixed to the front wall of the display case A by being secured to brackets 11, which are in turn secured to said front wall of the display case, and said housing portions 10^a are provided with end walls 12, as shown in Fig. 1, which close the housing 10 at the opposite ends thereof.

The intermediate housing portions 10^b of the housing 10 are hingedly connected at the lower portions thereof to the lower ends of the brackets 1, said intermediate housing portions 10^b having 5 fixed thereto upstanding ears 12 that are provided with openings formed therethrough which are alined with the openings formed through the lower portions 8 of the brackets 1, and hinge pins 13 are extended through the openings in the 10 bracket portions 8 and ears 12 so as to hingedly secure the intermediate housing portions to the brackets. The fixed housing portions 10^a at the opposite ends of the housing 10 are provided with upstanding ears 12' which aid in supporting the 15 outermost hinge pins 13 (Fig. 1). The housing portions 10^a and 10^b in cross-section are of the shape illustrated in Fig. 2; that is to say, each of said housing portions is provided with a plurality of angularly arranged flat faces. Also, each 20 housing portion is provided with inwardly bent portions 14 and 14' at the upper and lower edges of said housing portions.

Pivotaly secured to the brackets 1 at the upper ends thereof is a plurality of clip elements 15, the 25 pivotal connection between the clip elements and the brackets being obtained by shaping the upper end portions of the clip elements to provide eyes and passing pins through openings formed through the spaced ears 7 of the brackets 1 and 30 through said eyes of said clip elements. At the lower end of each clip element 15 the material thereof is shaped to provide a curved gripping portion 16. The clip elements 15, which are formed of spring material, are shaped to correspond to the cross-sectional shape of the housing 35 portions of the housing 10, as shown in Fig. 2, and said clip elements are positioned at the points where ends of adjacent housing portions are located in close proximity to each other. The 40 arrangement of the clip elements and the widths thereof are such that when the adjacent housing portions are in their closed positions, as illustrated by full lines in Fig. 2, said clip elements may be moved to the full line position of Fig. 2 45 where they overlap edge portions of adjacent housing portions. Also, when so positioned the curved gripping portions 16 of said clip elements are positioned behind the bent portions 14' of the housing portions of the housing 10 and grip same, 50 whereby the clip elements are held in positions where they prevent the upper portions of the housing portions from swinging outwardly about their pivots to open positions.

Supported by the portions 4 of the brackets 1 55 is an elongated hollow structure 17 which provides a conduit for electrical conductors 18. The conduit 17 has fixed thereto a plurality of suitable sockets 19 with which electric lamps 20 are associated in the usual manner. The electric con- 60 ductors are, of course, connected to a suitable source of electrical energy (not shown) and to the sockets 19 so that the electric lamps will produce light. Fixed to a bracket 21 secured to each of the intermediate housing portions 10^b is 65 a reflector 22 which is associated with an adjacent electric lamp 20 in such manner that light from said electric lamp will be directed through the transparent wall portion B of the display case A, said reflectors being movable with said inter- 70 mediate housing portions when they are moved about their pivot points. The housing portions 10^b are provided with ventilation openings 23, as shown in Fig. 1.

When my improved lighting fixture is in use it 75 adds considerably to the appearance of the dis-

play case with which it is associated. Also, when it is desired to gain access to the electric lamps it is an extremely simple matter to disengage the gripping portions 16 of the clip elements and swing said clip elements upwardly about their 80 pivots, whereupon the intermediate housing portions may be swung downwardly about their pivots to the position indicated by dotted lines in Fig. 2.

It is plain from the foregoing that a lighting 85 fixture of any desired length may be produced by assembling the proper number of housing sections, brackets 1, and clip elements 15, hence, as already stated herein, the necessity for a manufacturer to carry in stock lighting fixtures of different fixed 90 lengths is eliminated.

It will be noted that each reflector 22 is spaced apart from the associated housing portion to provide a passageway 22' for air between the reflector and the housing portion. This arrangement is 95 important, inasmuch as it provides for the circulation of air through the passageway 22', which air tends to maintain the housing portion in a relatively cool condition.

I claim:

1. A lighting fixture comprising a supporting 100 bracket, an elongated housing portion, means for pivotaly attaching said housing portion to said supporting bracket, a clip for retaining said housing 105 portion in a predetermined position, said clip being of substantially the same shape as said housing and being adapted to completely embrace the housing, pivot means for pivotaly attaching said clip to said supporting bracket, and a light source within said housing portion. 110

2. A lighting fixture comprising a supporting 115 bracket, an elongated housing portion, means for pivotaly attaching said housing portion at one of its edges to said supporting bracket, a clip for retaining said housing portion in a predetermined position, said clip being of substantially 120 the same shape as said housing and being adapted to completely embrace the housing, pivot means for providing pivotal attachment for said clip at an end thereof to said supporting bracket, 125 the pivotally attached end of said clip being located adjacent to the free edge portion of said housing portion, and a light source within said housing portion.

3. A lighting fixture comprising a supporting 130 bracket, an elongated housing portion, means for pivotaly attaching said housing portion at one of its edges to said supporting bracket, a clip for retaining said housing portion in a predetermined position, said clip being of substantially 135 the same shape as said housing and being adapted to completely embrace the housing, pivot means for providing pivotal attachment for said clip at an end thereof to said supporting bracket, the pivotally attached end of said clip being located adjacent to the free edge portion of said housing portion, a light source within said housing portion, and reflecting means associated with said light source.

4. A lighting fixture comprising a supporting 140 bracket, an elongated housing portion, means for pivotaly attaching said housing portion at one of its edges to said supporting bracket, a clip for retaining said housing portion in a predetermined position, said clip being of substantially 145 the same shape as said housing and being adapted to completely embrace the housing, pivot means for providing pivotal attachment for said clip at an end thereof to said supporting bracket, the pivotally attached end of said clip being lo- 150

cated adjacent to the free edge portion of said housing portion, a light source within said housing portion, and reflecting means associated with said light source and movable with said housing portion.

5 5. A lighting fixture comprising a supporting bracket, a plurality of elongated housing portions, means for pivotally attaching said housing portions to said supporting bracket, clip means for retaining said housing portions in their closed positions, means for pivoting said clip means to said supporting bracket, said clip means being of substantially the same shape as said housing and being arranged to completely embrace the housing, said clip means being adapted to overlap adjacent edge portions of proximate housing portions, and light-producing means within said housing portions.

20 6. A lighting fixture comprising supporting means, a plurality of elongated housing portions, means for pivotally attaching said housing portions to said supporting means, pivoted clip means for retaining said housing portions in their closed positions, said clip means being of substantially the same shape as said housing and being arranged to completely embrace the housing, said clip means being adapted to overlap adjacent edge portions of proximate housing portions, and light-producing means within said housing portions, the points at which said housing portions and said clip means are pivoted being at opposite sides of said housing portions.

35 7. A lighting fixture comprising supporting means, a plurality of elongated housing portions, means for pivotally attaching said housing portions to said supporting means, pivoted clip means for retaining said housing portions in their closed positions, said clip means being adapted to overlap adjacent edge portions of proximate housing portions, light-producing means within said housing portions, the points at which said housing portions and said clip means are pivoted being in opposed relation with respect to said housing portions, and fixed housing portions at opposite ends of said lighting fixture which co-operate with said pivoted housing portions to provide a continuous housing.

45 8. A lighting fixture comprising supporting means, a plurality of elongated housing portions, means for pivotally attaching said housing portions to said supporting means, pivoted clip means for retaining said housing portions in their closed positions, said clip means being adapted to overlap adjacent edge portions of proximate housing portions, light-producing means within said housing portions, the points at which said housing portions and said clip means are pivoted being in opposed relation with respect to said housing portions, and fixed housing portions at opposite ends of said lighting fixture which co-operate with said pivoted housing portions to provide a continuous housing.

tions to said supporting means, pivoted clip means for retaining said housing portions in their closed positions, said clip means being adapted to overlap adjacent edge portions of proximate housing portions, light-producing means within said housing portions, the points at which said housing portion and said clip means are pivoted being in opposed relation with respect to said housing portions, fixed housing portions at opposite ends of said lighting fixture which co-operate with said pivoted housing portions to provide a continuous housing, and reflecting means associated with said light-producing means.

9. A lighting fixture comprising supporting means, an elongated housing portion, means for pivotally attaching said housing portion to said supporting means, pivoted clip means for retaining said housing portion in its closed position, light-producing means within said housing portion, the points at which said housing portion and said clip means are pivoted being in opposed relation with respect to said housing portion, and fixed housing portions at opposite ends of said lighting fixture which co-operate with said pivoted housing portion to provide a continuous housing, said clip means being adapted to overlap adjacent edge portions of said pivoted housing portion and said fixed housing portions.

10. A lighting fixture comprising supporting means, an elongated housing portion, means for pivotally attaching said housing portion at one of its edges to said supporting means, a clip for retaining said housing portion in a predetermined position, said clip being of substantially the same shape as said housing and being adapted to completely embrace the housing, pivot means for providing pivotal attachment for said clip at an end thereof, the pivotally attached end of said clip being located adjacent to the free edge portion of said housing portion, a light source within said housing portion, reflecting means associated with said light source, said reflecting means being associated with said housing portion in spaced relation with respect to the wall thereof so as to provide an air passageway between said reflecting means and said wall of said housing portion, and means for securing said reflecting means to the spaced wall of said housing portion.

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