

Feb. 8, 1955

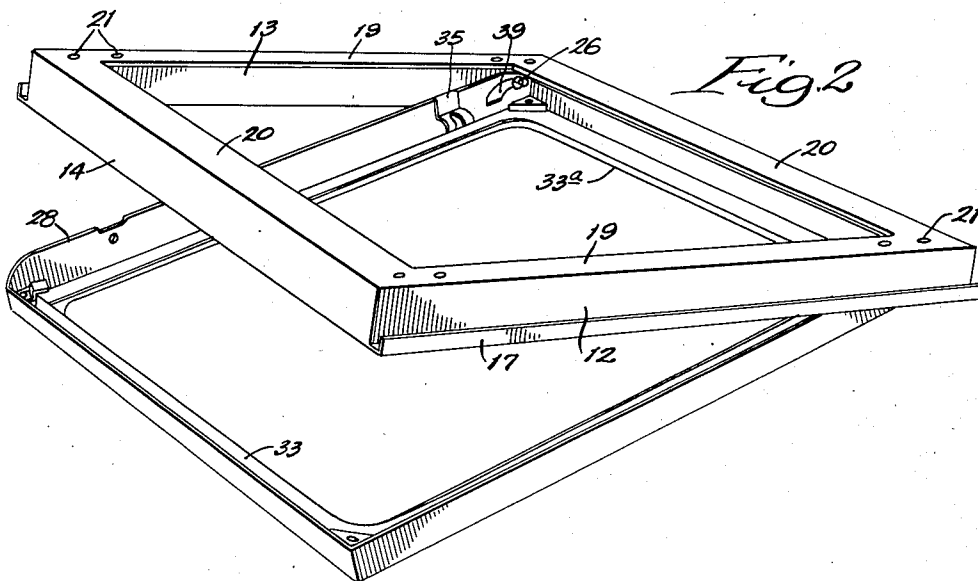
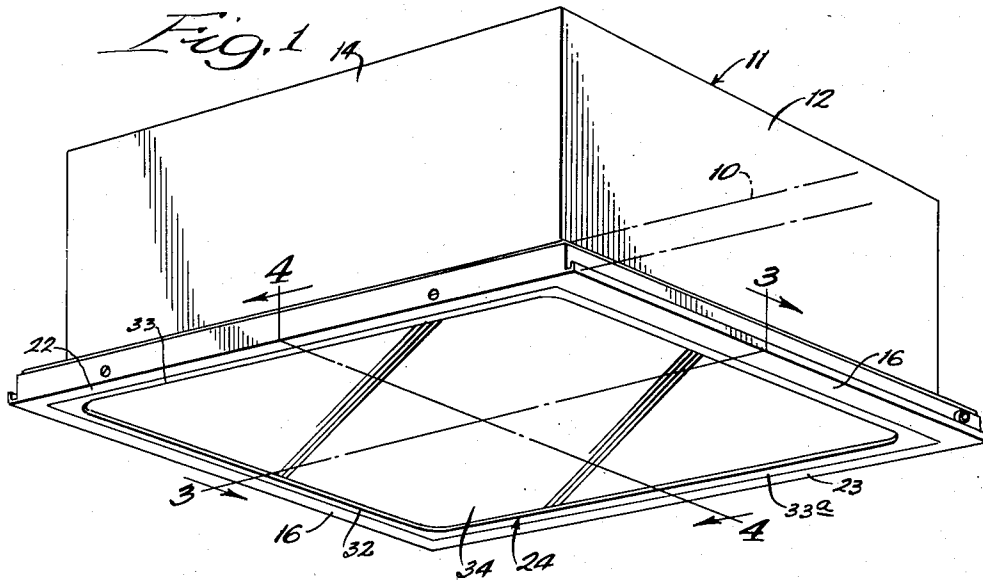
A. W. CARLSON

2,701,840

CEILING LIGHTING FIXTURE ASSEMBLY

Filed Aug. 29, 1952

2 Sheets-Sheet 1



INVENTOR:  
*Atlan W. Carlson,*  
BY  
*Dawson & Ooms,*  
ATTORNEYS.

Feb. 8, 1955

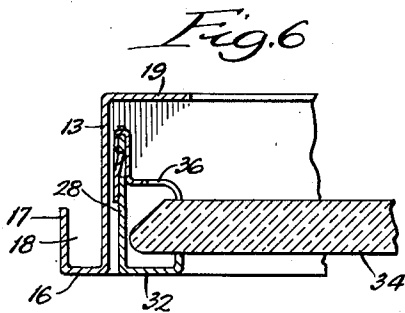
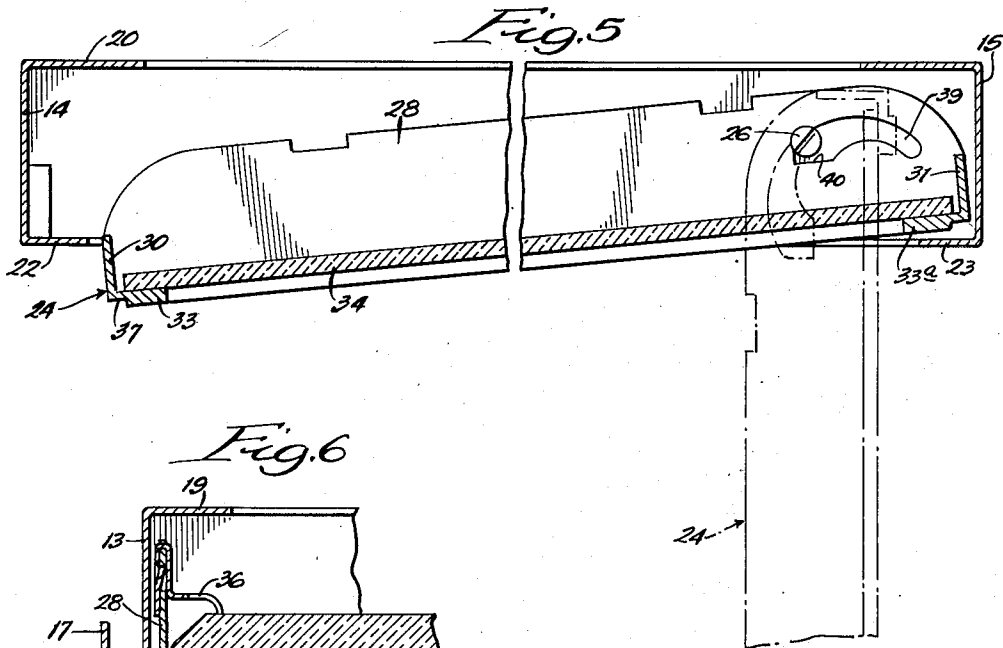
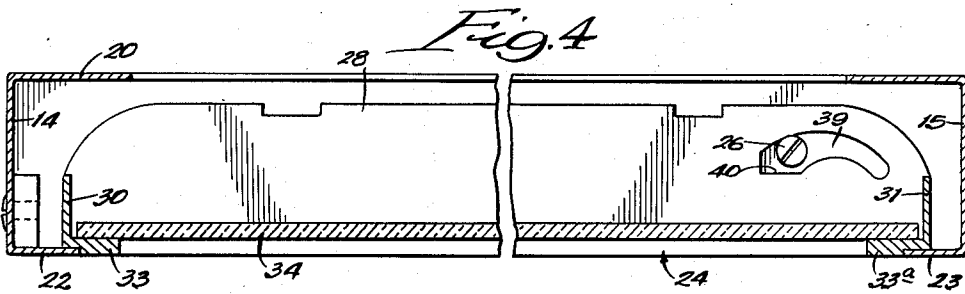
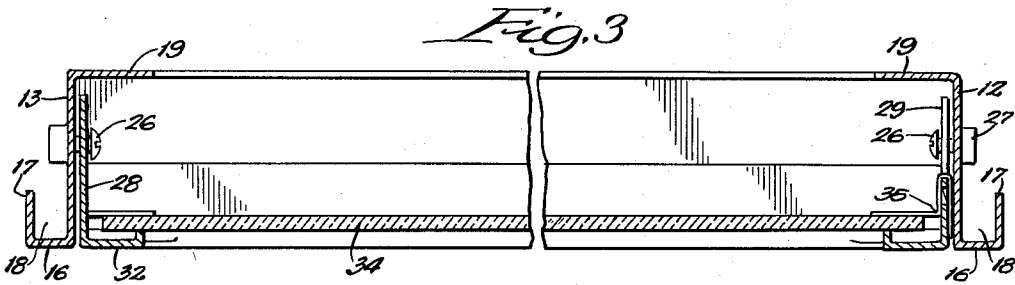
A. W. CARLSON

2,701,840

CEILING LIGHTING FIXTURE ASSEMBLY

Filed Aug. 29, 1952

2 Sheets-Sheet 2



INVENTOR:  
*Allen W. Carlson,*  
BY  
*Dawson & Ooms,*  
ATTORNEYS.

1

2,701,840

## CEILING LIGHTING FIXTURE ASSEMBLY

Allan W. Carlson, Hinsdale, Ill., assignor to Curtis Lighting, Inc., Chicago, Ill., a corporation of Illinois

Application August 29, 1952, Serial No. 306,980

2 Claims. (Cl. 240—78)

This invention relates to a lighting fixture assembly and more particularly to a ceiling fixture adapted to be mounted on or substantially flush in a suspended or normal ceiling structure.

An object of this invention is to produce a new and improved ceiling lighting fixture of the type described and it is a related object to produce an assembly of the type described characterized by improved appearance by reason of the elimination or concealment of screws, nuts and latching devices visible in present structures.

Another object is to produce a lighting fixture of the type described which is simple in construction and which permits access to the interior thereof for cleaning, repair or replacement of parts without dismounting the fixture from its position of use or dismantling the fixture from its assembled relation.

A further object is to provide a ceiling lighting fixture of the type described which permits access to the interior thereof from the underside while in mounted relation to enable cleaning, repair or replacement of parts in a simple and expedient manner.

Other and further objects and advantages of this invention will hereinafter appear, and for purposes of illustration, but not of limitation, an embodiment of the invention is shown in the accompanying drawings in which—

Figure 1 is a perspective elevational view of a lighting fixture embodying features of this invention;

Figure 2 is a perspective view of the lighting fixture shown in Figure 1 in its open relation;

Figure 3 is a sectional elevational view taken along the line 3—3 of Figure 1;

Figure 4 is a sectional elevational view taken along the line 4—4 of Figure 1;

Figure 5 is a sectional elevational view corresponding to that of Figure 4, but illustrating the arrangement of parts in open position, and

Figure 6 is an enlarged sectional elevational view illustrating the mounting for the glass plate in the lighting fixture assembly.

As shown in the drawings, a lighting fixture embodying features of this invention for mounting in or on a ceiling 10 comprises a rectangular housing 11 formed of spaced vertical side walls 12 and 13 with interconnecting front and rear walls 14 and 15, respectively. The side walls are provided with an integral flange 16 extending outwardly from the lower edges thereof and having upturned ends 17 to define a channel groove 18 which assists in establishing a proper mounted relation in the ceiling structure. Flanges 19 and 20 extend inwardly a short distance all around from the upper edges of the side walls and from the front and rear walls to define a frame and they are provided with openings 21 adjacent the corner portions for fastening the housing into supports, as by means of screws or the like. The housing 11 is adapted to be substantially permanently mounted in or on the ceiling in position of use. A flange 22 and a flange 23 extend inwardly from the lower edges of the front and rear walls, respectively to provide rests for the swinging door 24, as will hereinafter be described. A pair of pivot pins, which may be in the form of screws 26 or the like, are fixed in cap members 27 to extend inwardly from the rearward and upper end portions of the side walls 12 and 13.

The door or closure 24 comprises a rectangular member of substantially the same shape as the housing having vertically disposed side walls 28 and 29 spaced apart by

2

an amount slightly less than the corresponding walls of the housing and front and rear walls 30 and 31 spaced from each other by an amount greater than the distance between the inner ends of rests 22 and 23 but less than the distance between the rear wall 15 of the housing and the inner end of the front rest 22.

Flanges 32 and 33 extend inwardly from the lower edges of each of the walls to provide a support for a glass lens 34 which may be frosted or clear, or contoured to provide an attractive appearance and proper light transmission from a light source adapted to be illuminated within the housing. Instead of a lens or window of the type described, use may be made of other rigid panels formed of plastics, metal, wood or a door formed of similar materials with louvers and the like. While the lens or window 34 is dimensioned to be greater than the opening formed by the flanges 32 and 33, so that the edge portions rest upon said flanges, frictional members 35 are provided in the side walls with inwardly extending fingers 36 adapted resiliently to engage the upper surface of the lens, louver or both for maintaining a desired assembled relation.

Front flange 33 and rear flange 33<sup>a</sup> which extend inwardly from the lower edges of the front and rear walls, respectively, have recesses 37 formed in their undersides to extend inwardly from the edges by an amount to provide a spaced relation between the recesses which is slightly less than the distance between the inner edges of the flanges 33 and 33<sup>a</sup>, thereby to enable the door properly to be positioned within the housing in mounted relation as the rests 22 and 23 seat within the recesses to support the door in position of use. When it is desired to gain access to the interior of the housing, the rearward portion of the door is raised to enable flange 33<sup>a</sup> to clear rest 23 so as to enable rearward displacement of the door until the front wall 30 clears the inner edge of the front rest 22. The door can thereafter be rocked downwardly through the opening in the housing to permit access from the underside.

In order to provide for the desired movement without removal of the door from its assembled relation, a hinged assembly is provided consisting of an arcuate groove 39 in the upper rearward portion of each side wall 28 and 29, through which the pivot pins or screws 26 extend. Each groove is formed with a horizontally disposed elongate section 40 integral with the forward end. The section is dimensioned to be slightly greater in length than the amount that the door is adapted to be displaced between its mounted relation and its offset position for clearing the inner edge of the rest 22 when swinging the door to open position. The elongate portion of the groove is also vertically dimensioned to be slightly greater than the amount which the rearward portion of the door is raised to clear the flange 23 for enabling rearward displacement of the door for swinging to open position.

When in the normally closed position, as illustrated in Figure 4, the rests 22 and 23 extend into the recesses 37 to support the door without danger of inadvertent displacement or opening. When in this position, the pivot pin 26 extends through the opening at about the upper and rearward portion of the elongate grooves 40.

When it is desired to gain access to the interior of the fixture, it is only necessary to raise the rearward end portion of the door, as shown in Figure 5, by an amount permitted by the slot as the pivot pin 26 rises to engage the housing wall whereby the flange 33<sup>a</sup> clears the rest 23 to permit rearward displacement of the door until the pivot pin is engaged by the wall defining the forward end of the elongate slot 40, or until the rear wall 31 engages the wall 15. Under these circumstances, the front wall 30 clears the rest 22 and permits the door to be rocked downwardly through the opening about the pivot pin 26 to the position shown by the broken lines in Figure 5. Because of the arcuate character of the slot in which the pivot pins are slidable, the door is actuated in a forward direction responsive to its rocking movement to open position.

To return the door to closed position, it is only necessary to rock the door upwardly about the pivot pin whereby the door automatically shifts rearwardly to per-

3

mit the forward edge to be raised into the housing. When the wall 30 has cleared rest 22, the door may be shifted forwardly until the rearward flange 33<sup>a</sup> drops by gravitational force to seat rests 23 in recesses 37. Thereafter the forward end portion of the door may be lowered to rest position.

It will be apparent from this description that there is provided a simple lighting fixture capable of preassembly mounting in position of use and which enables the door forming the underside of the fixture to be rocked between open and closed position to permit access to the interior of the fixture without disengagement of parts, and without the use of special tools. Thus, a lighting fixture of the type described may be assembled at distant stations for mounting in a ceiling structure, and opening and closing thereof in use may be effected in a simple and expedient manner. The elements may be cleaned without removal since full access to the interior can be had from below without the separation of parts thereby to eliminate the possibility of breakage or fallen glass.

A further advantage resulting from an assembly of the type described resides in the elimination of screws, hinges, latches and the like ordinarily visible from below to mar the appearance of the lighting fixture when in position of use.

It will be understood that changes may be made in the details of construction, arrangement and operation without departing from the spirit of the invention, especially as defined in the following claims.

I claim:

1. A ceiling lighting fixture comprising a rectangular housing having means for attachment to the ceiling structure in position of use, flanges extending inwardly from the lower edges of the front and rear walls of the housing to define an open space therebetween, a rectangular door shaped to correspond to that of the housing and having a length dimensioned to be greater than the distance between the inner ends of the flanges but less than the distance between the inner end of one flange and the wall from which the other extends whereby the door overlaps the flanges and rests thereon while in position of use and is able to clear one flange when shifted more completely toward the wall of the other whereby the door may be rocked through the space between the flanges of the housing between open and closed positions, recesses extending inwardly from opposite edges of the underside of the door and dimensioned to correspond to the spaced relation between the inner ends of the flanges thereby to provide a seat for said flanges when the door is in closed position, and means pivotally interconnecting the housing and door for maintaining the assembled relation during swinging movement of the door between open and closed positions, including an arcuate slot in one and a pin in the other of adjacent side walls in one end of the housing and door in which the pin is spaced from the forward end portion of the slot and spaced from the

4

lower edge thereof by an amount to permit the corresponding end section of the door to be raised from its seated position to clear the corresponding flange and in which the spaced relation of the pin from the forward edge of the slot is of a length greater than the width of the recess to enable the raised door to be displaced sufficiently rearwardly to clear the corresponding opposite flange for rocking movement through the opening in the housing between open and closed positions.

2. A ceiling lighting fixture comprising a rectangular housing having means for attachment to the ceiling structure in position of use, flanges extending inwardly from the lower edges of the front and rear walls of the housing to define an open space therebetween, a rectangular door shaped to correspond to that of the housing and having a length dimensioned to be greater than the distance between the inner ends of the flanges but less than the distance between the inner end of one flange and the wall from which the other extends whereby the door overlaps the flanges and rests thereon while in position of use and is able to clear one flange when shifted more completely toward the wall of the other whereby the door may be rocked through the space between the flanges of the housing between open and closed positions, recesses extending inwardly from opposite edges of the underside of the door and dimensioned to correspond to the spaced relation between the inner ends of the flanges thereby to provide a seat for said flanges when the door is in closed position, and means pivotally interconnecting the housing and door for maintaining the assembled relation during swinging movement of the door between open and closed positions, including an arcuate slot in one and a pin in the other of adjacent side walls in one end of the housing and door and in which the forward end portion of the arcuate slot is formed with a contiguous forwardly extending slot dimensioned to have a height greater than the depth of the recess and in which the pin is spaced from the bottom wall thereof when in closed position to permit the door to be raised from its seated position to clear the corresponding flange and in which the pin is spaced from the forward edge of the slot by an amount greater than the width of the recess to enable the raised door to be displaced rearwardly sufficiently to clear the corresponding flange for rocking movement through the opening in the housing between open and closed positions.

#### References Cited in the file of this patent

#### UNITED STATES PATENTS

|           |            |                |
|-----------|------------|----------------|
| 1,923,787 | Larsen     | Aug. 22, 1933  |
| 2,277,618 | Utter      | Mar. 24, 1942  |
| 2,329,268 | Heath      | Sept. 14, 1943 |
| 2,427,084 | Alderman   | Sept. 9, 1947  |
| 2,440,603 | Guth       | Apr. 27, 1948  |
| 2,579,015 | Schoenbrod | Dec. 18, 1951  |
| 2,587,920 | Stubbs     | Mar. 4, 1952   |