

Sept. 14, 1954

A. E. ZINGONE
LOUVERED CEILING CONSTRUCTION WITH INTERENGAGING
LOUVER UNITS AND SIDE RAILS
Filed Oct. 18, 1949

2,689,026

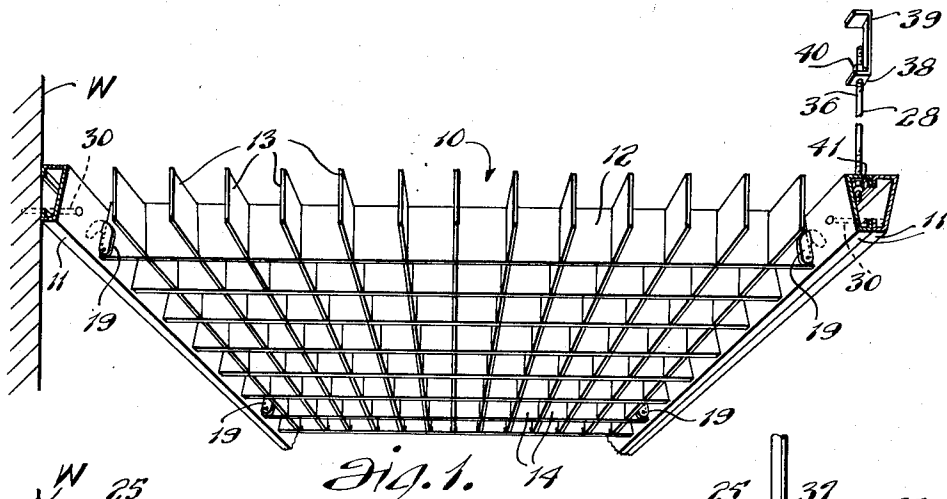


Fig. 1.

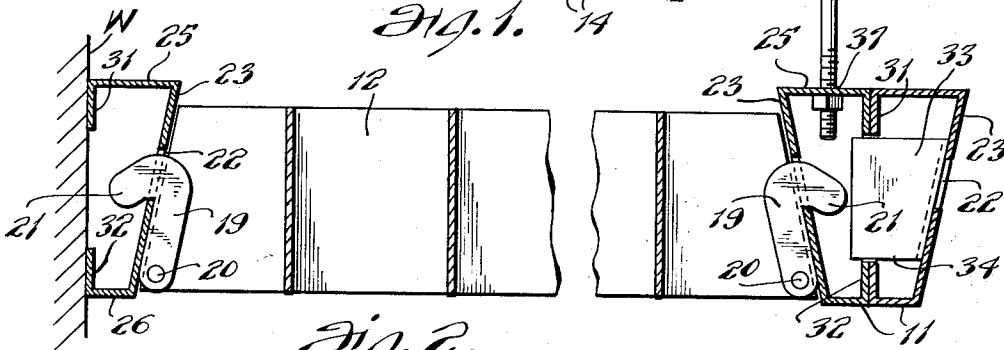


Fig. 2.

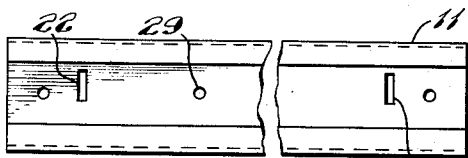


Fig. 3.

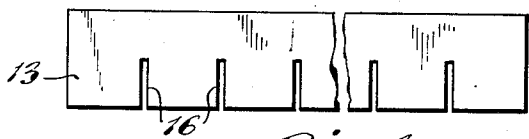


Fig. 4.

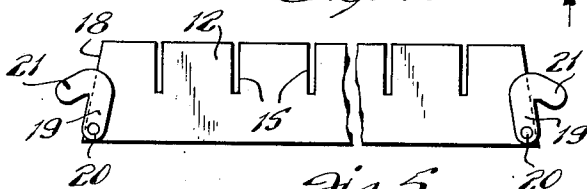


Fig. 5.

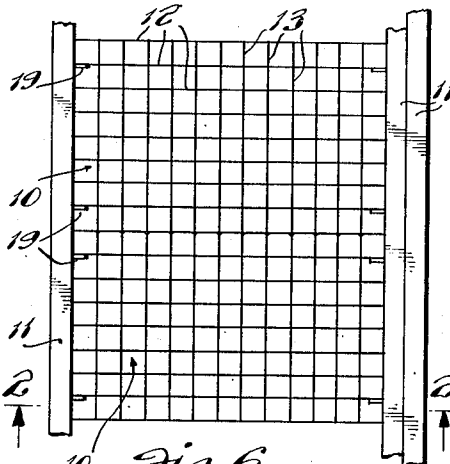


Fig. 6

INVENTOR.
ANTHONY E. ZINGONE
BY

Blank & Att
ATTORNEYS

UNITED STATES PATENT OFFICE

2,689,026

LOUVERED CEILING CONSTRUCTION WITH
INTERENGAGING LOUVER UNITS AND
SIDE RAILSAnthony E. Zingone, New York, N. Y., assignor to
Neo-Ray Products, Inc., New York, N. Y., a cor-
poration of New York

Application October 18, 1949, Serial No. 122,032

1 Claim. (Cl. 189—84)

1

This invention relates to a louvered ceiling construction composed of interengaging parts which permit of the convenient installation and assembly thereof.

The invention comprehends a louver unit and supporting rails therefor having interengaging means of connection which permits of the convenient assembly thereof while allowing for the removal of the unit for cleaning the same and for gaining access to the lighting fixtures.

Another object of the invention is to provide a louvered ceiling construction which is so constructed and arranged that the louver units may be prefabricated for facilitating the erection thereof and which is adapted to be supported by the side rails in aligned contiguous relation.

Still another object of the invention is to provide a louver unit of said character having pivotally connected latches which are adapted to engage in slots in the side rails for releasably supporting the unit in horizontal position.

Still another object of the invention is to provide a louver unit in which certain of the plates thereof are formed with upwardly converging opposite ends which are adapted to be secured between complementarily arranged side walls of the side rails to dispose the unit in horizontal relation between the side rails and to limit the upward movement thereof.

With the foregoing and other objects in view, reference is now made to the following specification and accompanying drawings in which the preferred embodiment of the invention is illustrated.

In the drawings:

Fig. 1 is a fragmentary perspective view of a louvered ceiling construction embodying the invention.

Fig. 2 is an enlarged fragmentary vertical sectional view taken approximately on line 2—2 of Fig. 6.

Fig. 3 is a view in side elevation of one of the side rails with parts broken away.

Fig. 4 is a view in elevation of one of the transversely extending louver plates.

Fig. 5 is a similar view of one of the longitudinally extending louver plates.

Fig. 6 is a bottom plan view of a fragmentary portion of the louvered ceiling construction.

Referring to the drawings by characters of reference, the louvered ceiling construction is made up of any desired number of individual louver units 10 which are of rectangular formation in plan and of any desired length and width and are supported on oppositely disposed side rails 11 to

2

provide any desired number of parallel rows of louver units with the louvers in each row disposed in aligned contiguous relation. The louver units are constructed and arranged so that the same may be prefabricated so as to facilitate the emplacement thereof and the louver units and side rails are formed with interengaging means to permit of the convenient removal of the units for cleaning the same and for gaining access to the lighting fixtures. The louver units are designed to reflect the angular rays of light from the lighting fixtures arranged above the louvers so as to reduce the glare therefrom and produce a milder light.

The louver unit 10 consists of a plurality of vertically disposed longitudinally extending spaced parallel plates 12 which are interfitted with and secured to a plurality of vertically disposed transversely extending spaced parallel plates 13 to form a plurality of longitudinally and transversely extending rows of cells 14 opening through the top and bottom of the unit. The longitudinally extending plates 12 are formed with longitudinally spaced slots 15 which open through the upper edges thereof and extend downwardly in parallel equally spaced relation to the transverse centers of the plates respectively. The transversely extending plates 13 are provided with longitudinally spaced slots 16 which open through the lower edges thereof and extend upwardly in parallel equally spaced relation to the transverse centers of said plates respectively. The transversely extending plates 13 are interfitted in right angular relation with the longitudinally extending plates 12 to dispose the slots 16 in the transversely extending plates 13 in engagement with the portions of the longitudinally extending plates 12 below the slots 15 therein and with the slots 15 in the longitudinally extending plates 12 in engagement with the portions of the transversely extending plates 13 above the slots 16 therein.

The longitudinally extending plates 12 have upwardly converging opposite ends 18 and two of said plates which engage in the endmost slots 16 have latches 19 pivoted thereto adjacent the opposite ends thereof on pivot pins 20. The said latches are provided with downwardly directed terminals 21 adapted to releasably engage in slots 22 in the side walls 23 of the oppositely disposed side rails 11 for releasably supporting the louver unit in horizontal position therebetween.

The side rails are of any preferred length and are adapted to be arranged in spaced parallel relation throughout the area to be provided with

3

the louvered ceiling construction for supporting the louver units 10 in parallel rows. The side rails are each formed with upper and lower flanges 25 and 26 which extend outwardly in parallel relation from the upper and lower ends of the side wall 23 thereof. The upper flange 25 is relatively wider than the lower flange 26 to dispose the side wall 23 in angular relation corresponding to the inclination of the ends 18 of the longitudinally extending plates 12. This permits of the swinging of the louver unit on the pivot pins 20 at either side thereof to depending relation for cleaning the unit or gaining access to the lighting fixtures arranged thereabove. For this purpose the latches 19 on either side of the louver unit may be released from latched engagement with its side rail.

The side rails are provided with longitudinally spaced apertures 29 for receiving screws or equivalent fastening means 30 for fastening the side rails against the wall W of the building or room with the upper and lower rims 31 and 32 extending inwardly from the flanges 25 and 26 of the side rails disposed in abutting relation against the said wall. The screws 30 are also adapted to secure the side rails in back to back relation between adjacent rows of louver units with the inwardly directed rims 31 and 32 located in abutting relation. In order to automatically align the side rails 11 in back to back relation, longitudinally spaced brackets 33 are secured against the inner faces of the side walls 23 with the right angularly related wings 34 projecting through the openings between the confronting edges of the inwardly directed rims 31 and 32 as indicated in Fig. 2 of the drawings.

The hangers 28 each include a rod 36 having threaded upper and lower ends which are adapted to engage through openings 37 and 38 in the top flanges 25 of the side rails and in the flanged lower ends of brackets 39 affixed to the ceiling of the building or room with the threaded ends of the rod engaged by nuts 40 and 41 for supporting the side rails and permitting of adjustment of the side rails in elevation.

What is claimed is:

A hinged louvered ceiling construction providing a continuous unbroken louver pattern consist-

4

ing of louver units disposed in end to end relation, oppositely disposed side rails, a plurality of louver units arranged between said side rails and with the under side of the units located substantially flush with the under side of the side rails, said louver units each consisting of vertically disposed rows of intersecting plates providing longitudinally and transversely disposed rows of cells opening through the top and bottom of the unit, one of said rows of plates extending longitudinally of and parallel to said side rails and the other of said rows of plates extending transversely between said side rails and each of the plates of the last mentioned rows of plates having upwardly converging ends, said side rails having longitudinally spaced parallel slots opening therethrough with the slots in one of the side rails being disposed in confronting relation with the slots in the other side rail, latch elements pivoted at their lower ends to the sides of certain of said transversely extending plates with the pivotal connections being located adjacent the bottom edges of the plates, and said latch elements having downwardly directed terminals at their upper ends engaging through said slots and supporting the units in horizontal relation between the side rails and the upwardly converging ends of the transversely extending plates permitting of the downward swinging of the louver units about the pivotal connections of the latch elements at either side of the units when the latch elements on the opposite side thereof are disengaged from the slots.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,941,589	Wellons	Jan. 2, 1934
2,070,150	Venzie	Feb. 9, 1937
2,102,086	Mueller	Dec. 14, 1937
2,396,735	Leigh	Mar. 19, 1946
2,464,442	De Roo	Mar. 15, 1949

OTHER REFERENCES

Benjamin "Sky-Glo" Louver System, Benjamin Catalog, May 17, 1948, pages 506 and 509 relied upon.