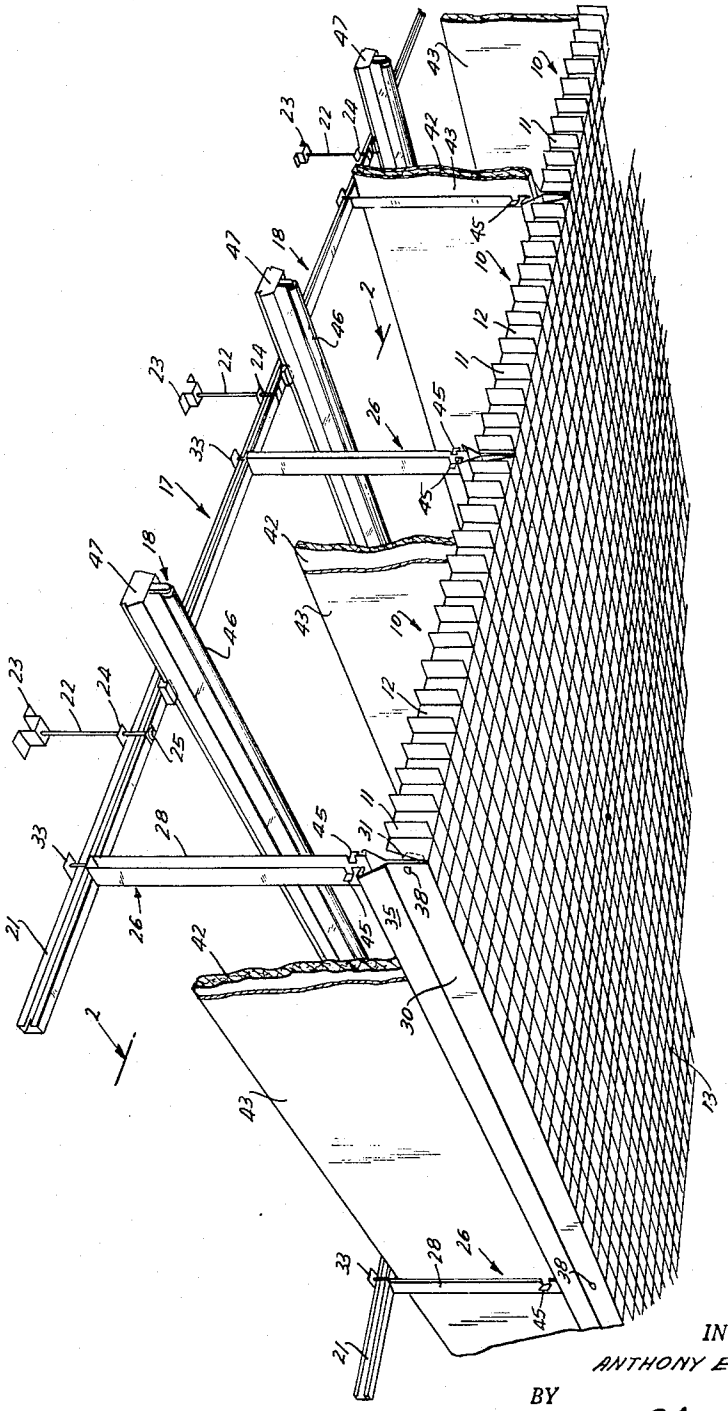
June 7, 1960 A. E. ZINGONE 2,939,543

LOUVERED CEILING CONSTRUCTION

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FIG. 1



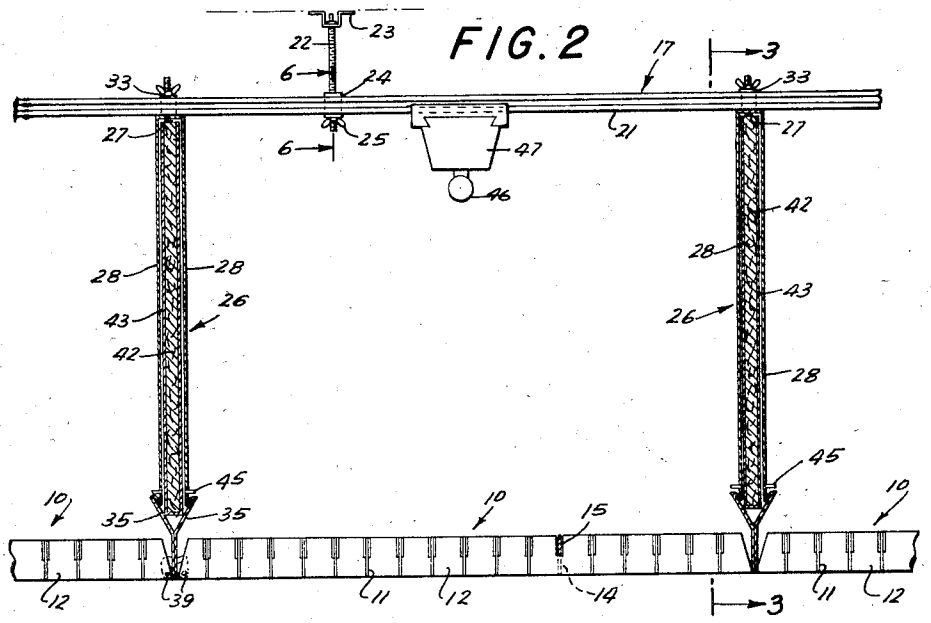
INVENTOR.
ANTHONY E. ZINGONE
BY
Clark & Att
ATTORNEYS

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LOUVERED CEILING CONSTRUCTION

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FIG. 2



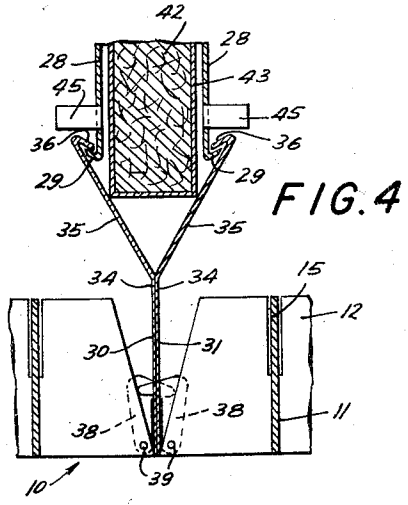


FIG. 4

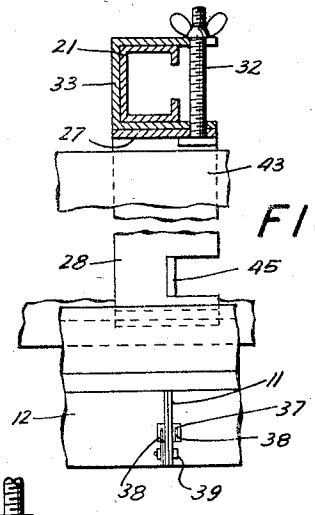


FIG. 3

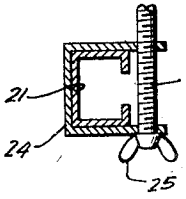


FIG. 6

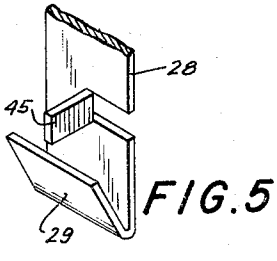


FIG. 5

INVENTOR.
ANTHONY E. ZINGONE
BY Clark, Utt
ATTORNEYS

United States Patent Office 2,939,543 Patented June 7, 1960

2,939,543

LOUVERED CEILING CONSTRUCTION

Anthony E. Zingone, Massapequa, N.Y., assignor to Neo-Ray Products, Inc., New York, N.Y., a corporation of New York

Filed Aug. 9, 1957, Ser. No. 677,336

3 Claims. (Cl. 181—33)

This invention relates to a louvered ceiling construction.

An object of the invention is to provide a louvered ceiling construction which presents an unbroken louvered pattern in all directions when viewed from below.

Another object of the invention is to provide a louvered ceiling construction of dropped formation having illuminating mounting means disposed so as to effect an even distribution of the light over the entire ceiling.

Another object of the invention is to provide a louvered ceiling construction composed of louver units arranged in parallel rows and with the units in each row disposed in abutting relation.

Still another object of the invention is to hingedly connect the louver units at each side for facilitating the cleaning of the units and for gaining access to the illuminating mounting means and lamps.

Still another object of the invention is to provide paneling arranged above the louvered ceiling construction for absorbing and deadening the sound waves passing through the louver units to thereby reduce noise in the room below the louvered construction.

Still another object of the invention is to provide an improved louvered ceiling construction composed of parts which may be prefabricated so as to facilitate the erection and installation thereof.

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

In the drawings:

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

Fig. 2 is an enlarged fragmentary sectional view taken approximately on line 2—2 of Fig. 1.

Fig. 3 is a sectional view taken approximately on line 3—3 of Fig. 2.

Fig. 4 is an enlarged fragmentary sectional view of the louver units supporting construction.

Fig. 5 is a fragmentary perspective view of the lower end of one of the side walls of the upright members.

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

Referring to the drawings, the louvered ceiling construction provides an unbroken louvered pattern extending throughout the entire area below a ceiling. The louvered construction includes louver units **10** arranged in parallel rows with the louvers in each row being disposed in aligned relation. The units are constructed and arranged so that the same may be prefabricated to facilitate the installation thereof. Each of the units **10** consists of a plurality of vertically disposed longitudinally extending rows of transversely spaced plates **11** which are interfitted with a plurality of vertically disposed, transversely extending, longitudinally spaced plates **12** to thereby form a plurality of longitudinally and transversely extending rows of cells **13**, which open through the top and bottom of the unit. The longitudinally extending

plates **11** are formed with longitudinally spaced slots **14**, which open through the lower edges thereof and extend inwardly to approximately the centers of the plates respectively. The transversely extending plates **12** are provided with longitudinally spaced slots **15**, which open through the upper edges thereof and extend inwardly to approximately the centers of said plates respectively. The longitudinally and transversely extending plates are interfitted to dispose the slots **14** in engagement with the portions of the transverse extending plates below the slots **15** and the slots **15** in the transverse extending plates are in engagement with the portions of the longitudinally extending plates **11** above the slots **14** therein. The plates are secured together at their intersections and thereby connect all the plates together in unit formation.

The louver units **10** are supported below the ceiling of a room by means of structural framework **17** so as to provide a space above the units for illuminating means **18**. The said framework includes a plurality of spaced parallel channel members **21** which extend transversely from one side of the room to the other and are suspended in spaced relation from the ceiling by hanger rods **22** depending from brackets **23** affixed to the ceiling with the lower ends of the hanger rods engaging through apertures in the opposite sides of U-shaped clips **24**. The clips engage about the channel members with the protruding ends of the hanger rods engaged by wing nuts **25** for adjusting the elevation of the channel members. Supported by each of the channel members **21** at longitudinally spaced locations are upright members **26**. Each of the upright members **26** is formed of a strip of flat sheet metal which is bent to provide an end wall **27** and oppositely disposed side walls **28** having outwardly directed hooked lower ends **29**. The upright members are arranged in rows on the channel members **21** with the lower hooked ends thereof located above confronting sides of adjacent rows of louver units **10**. Supported on the hooked lower ends of each row of the channel members are mating plates **30** and **31**, which extend longitudinally between adjacent rows of louver units **10** and against which the ends of the plates **12** of the louver units abut.

The upright members **26** are affixed to the channel shaped members **21** by means of bolts **32** which extend through the end walls **27** of said upright members and through apertures in opposite sides of U-shaped clips **33** engaging about the channel shaped members. The plates **30** and **31** are formed with back to back planar lower portions **34** and with diverging upper portions **35** which are provided with inwardly directed hooked terminals **36**. The terminals **36** engage the hooked terminals **29** to thereby support the plates **30** and **31** in depending relation on the upright members **26**. The plates **30** and **31** are secured together and are provided with vertically disposed slots **37** located in longitudinally spaced relation for receiving the upper ends of latch members **38** connected to the endmost plate **12** of each of the louver units **10** on pivot pins **39** for supporting the rows of louver units between spaced sets of plates **30** and **31**. This permits of the swinging of the louver units **10** on the pivot pins **39** at either side of the units into depending relation for gaining access to the illuminating means **18** or to clean the units. The units may also be readily hooked to the supporting plates **30** and **31** or released therefrom.

The upright members **26**, together with the plates **30** and **31**, constitute a support for paneling **42**, which extends between the side walls **28** of each row thereof, with the lower end of the paneling supported upon the diverging portions **35** of the said plates **30** and **31**. The paneling being supported, as aforesaid, by each row of upright members provides longitudinally extending spaces above the rows of louver units with the illuminating means **18**

extending longitudinally of and medially above the rows respectively. The paneling 42 is made of Fiberglas enclosed in white plastic envelopes 43 and provides acoustical noise baffles, which reduce the noises passing through the louver units. This is effected by the sound waves striking the surface of the paneling or baffles being transmitted by diaphragmatic action of the plastic envelopes to the Fiberglas, whereby most of the energy of the sound waves is absorbed. The plastic envelope permits of the washing of the surfaces of the paneling for removing dust which may accumulate thereon.

The side walls 28 of the upright members 26 have outstruck tongues 45 which are cut from the body thereof and bent outwardly into overlying relation with the hooked terminals 36 to thereby retain the plates 30 and 31 in supported relation on the upright members 26.

The illuminating means 18 may be of any preferred type and as illustrated the same consists of fluorescent lamps 46 supported by and depending from housings 47 extending longitudinally of each row of louver units 10 and supported by the channel members 21. This positions the lamps 46 in spaced relation above the louver units 10 whereby the light rays therefrom are directed downwardly through the cells 13.

It would be understood that the framework supporting the louver units 10 may extend from one side of the room to the other and from one end thereof to the other to support a plurality of rows of louver units 10 which presents an unbroken louver pattern in all directions over the entire ceiling. Furthermore, all the parts of the framework and the louvers may be prefabricated and conveniently assembled and erected.

While the preferred form of invention is shown and described herein, it is understood that the same is not so limited but shall cover and include any and all modifications of the invention which fall within the purview of the claims.

What is claimed is:

1. In a louvered ceiling construction, parallel rows of louver units arranged with a plurality of louver units in each row disposed in aligned relation, each of said louver units consisting of vertically disposed longitudinally and transversely arranged rows of intersected plates providing longitudinally and transversely disposed rows of cells opening through the top and bottom of the unit, means for supporting said rows of louver units below the ceiling of a room consisting of spaced parallel upper frame members, hanger bars affixed to the ceiling and to said upper frame members, a plurality of upright members arranged in rows and depending from said upper frame members, each of said upright members including spaced parallel side plates having hooked lower ends, lower frame members extending longitudinally of the parallel rows of louver units respectively, each of said lower frame members including two plates having parallel longitudinal extending lower portions disposed in side by side engagement and having outwardly diverging longitudinally extending upper portions provided with inwardly directed hooked terminals disposed in engagement with the hooked lower ends of the said upright members, and means carried by said louver units engaging said lower frame members for supporting said louver units in planar relation.

2. In a louvered ceiling construction, parallel rows of louver units arranged with a plurality of louver units in each row disposed in aligned relation, each of said louver units consisting of vertically disposed longitudinally and transversely arranged rows of intersected plates providing longitudinally and tranversely disposed rows of cells opening through the top and bottom of the unit, means for supporting said rows of louver units below the ceiling of a room consisting of spaced parallel upper frame members, hanger bars affixed to the ceiling and to said frame members, a plurality of upright members arranged in rows and depending from said frame members, each of said upright members including spaced parallel side plates having hooked lower ends, lower frame members extending longitudinally of the parallel rows of louver units respectively and having hooked upper ends engaging the hooked lower ends of said upright members, means carried by said louver units engaging said lower frame members for supporting said louver units in planar relation, and paneling extending between the side plates of each row of upright members and supported upon the lower frame members to thereby subdivide the space above the louvered ceiling construction, and said paneling providing acoustical noise baffles for deadening the sound waves passing through the louver units to reduce noise in the room below the louvered ceiling construction.

3. In a louvered ceiling construction, parallel rows of louver units arranged with a plurality of louver units contained in each row and disposed in aligned relation, each of said louver units consisting of intersecting plates providing rows of cells opening through the top and bottom of the unit, means for supporting said rows of louver units below the ceiling of a room including spaced parallel upper frame members, means affixed to the ceiling and to said frame members, for supporting the same, a plurality of upright members arranged in rows and secured to said frame members in depending relation, each of said upright members including spaced parallel side plates, lower frame members extending longitudinally of the parallel rows of louver units respectively and each having diverging upper side portions affixed to the lower ends of the side plates of the upright members, means carried by said louver units engaging said lower frame members for supporting said louver units in planar relation, and paneling extending between the side plates of each row of upright members and supported upon the diverging side portions of said lower frame members to thereby subdivide the space above the louver units, and said paneling providing acoustical noise baffles for deadening the sound waves passing through the louver units to reduce noise in the room below the louvered ceiling construction.

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