M. WIEPCKE.

CEILING.

APPLICATION FILED MAY 23, 1921.

1,430,481. **Patented Sept. 26, 1922.**

2 SHEETS—SHEET 1.

Fig. 1.

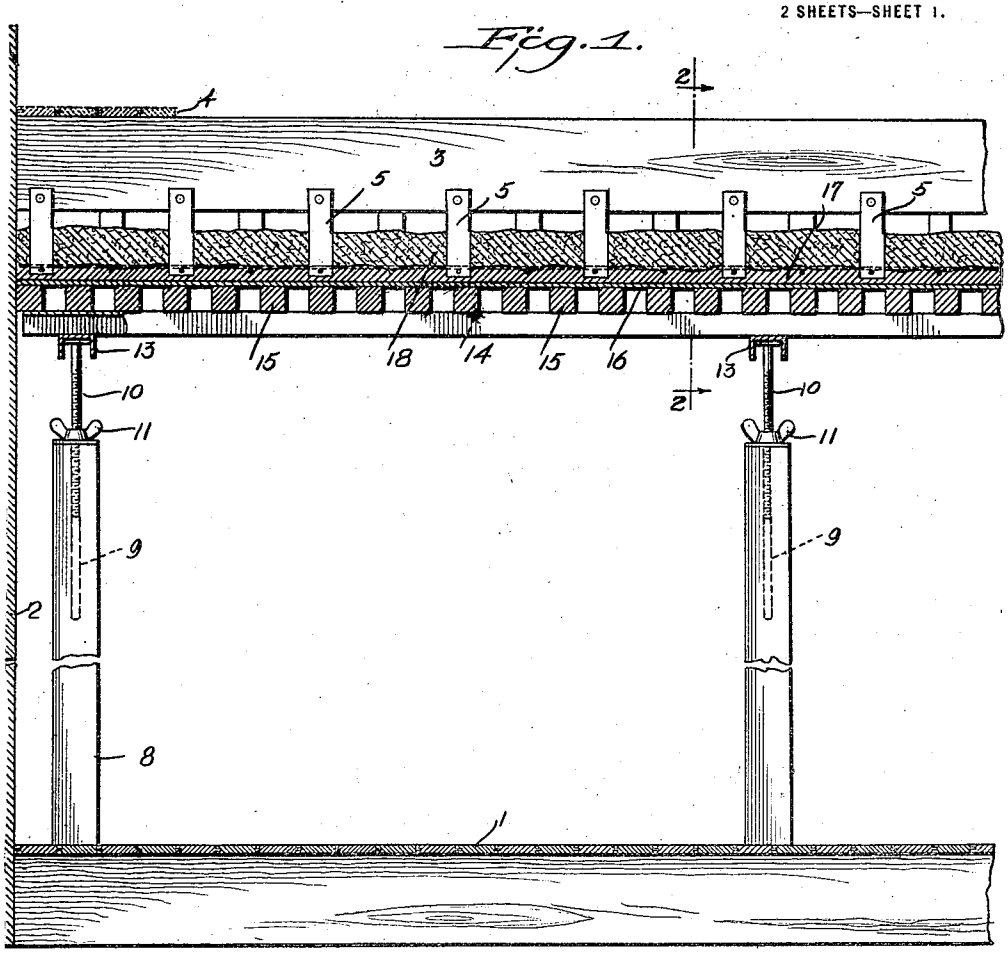


Fig. 2.

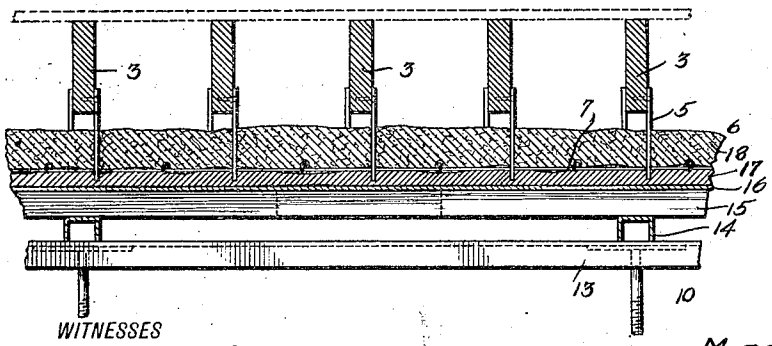
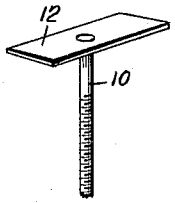


Fig. 3.



WITNESSES

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2 SHEETS—SHEET 2.

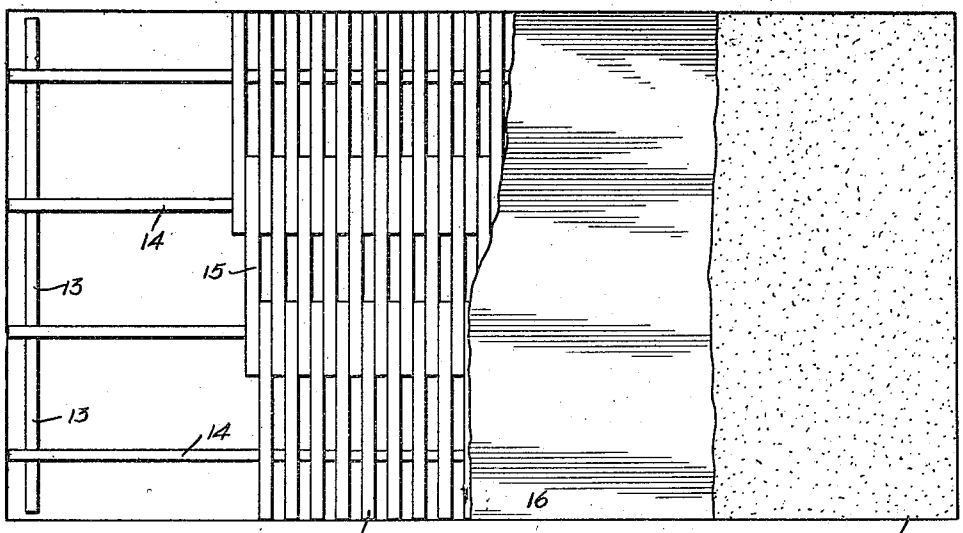


Fig. 4.

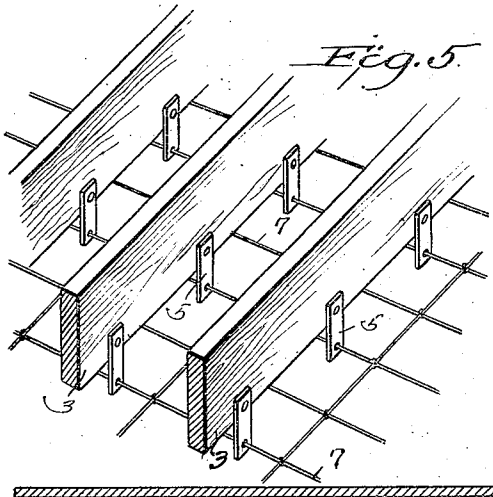


Fig. 5.

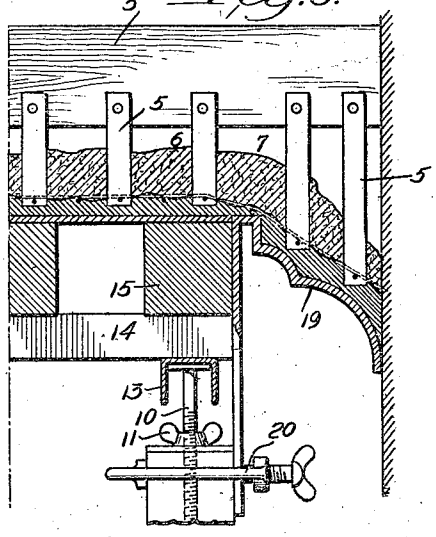


Fig. 6.

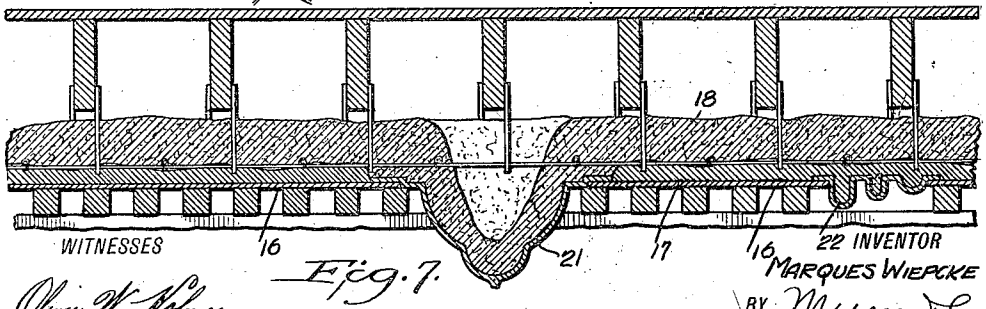


Fig. 7.

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UNITED STATES PATENT OFFICE.

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CEILING.

Application filed May 23, 1921. Serial No. 471,712.

To all whom it may concern:

Be it known that I, MARQUES WIEPCKE, a citizen of Brazil, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Ceiling, of which the following is a full, clear, and exact description.

This invention relates to ceilings and the method of forming the ceilings and has for an object to produce an improved construction which may be readily placed in position and which will form a substantially sound proof structure.

Another object in view is to provide a ceiling formed with reinforcing members and retaining members co-acting therewith which act as means for spacing the ceiling from adjacent structures.

A still further object is the method of setting up a support and then casting a ceiling on the support in such a manner that certain parts of the ceiling will be connected with the floor members of the building.

In the accompanying drawings—

Figure 1 is a longitudinal vertical section through part of a room disclosing a ceiling and supporting scaffolding embodying the invention.

Figure 2 is a sectional view through Figure 1 approximately on line 2—2.

Figure 3 is a detail perspective view of an elevating screw embodying certain features of the invention.

Figure 4 is a broken away top plan view of a ceiling showing part of the scaffolding and how the matter is applied thereto.

Figure 5 is a perspective view of a number of floor joists and reinforcing elements connected therewith.

Figure 6 is a fragmentary sectional view showing a cornice and part of the ceiling, the same embodying certain features of the invention.

Figure 7 is a view similar to Figure 2 but showing how ornamental center and side pieces may be connected with the ceiling.

Referring to the accompanying drawings by numeral, 1 indicates a floor of a room and 2 one of the walls thereof while 3 indicates the joists of the floor above. In the present invention it is aimed to place the ceilings in position for each room before the flooring 4 has been placed in position though after the joists 3 are properly arranged. In carrying out this idea according to the present invention a number of depending plates or strips 5 are secured to the respective joists 3 by nails or otherwise, so that the apertures therein will be in the same horizontal plane. Wires 6 are positioned to extend through the various plates 5 as shown in Figure 5 and then transverse wires 7 are laid thereover for forming a rather open net work which is to act as metal reinforcement for the ceiling. Preferably in providing this net work of wires the various plates 5 are threaded over certain of the wires and then secured in place, after which some transverse and some longitudinal wires are positioned as shown in Figure 5 and secured by any desired number of tie wires 5′. In the drawing a tie wire has been shown at each crossing of the wires but this is ordinarily not necessary as an occasional tie wire will answer the purpose.

However, before the net work of wire has been placed in position as shown in Figure 5, a scaffolding is arranged on floor 1 as shown in Figure 1. This scaffolding consists of any suitable number of supporting uprights 8 provided with bores 9 for receiving the ends of the respective lifting screws 10. Each of these screws is provided with a wing nut 11 whereby the screw may be moved upwardly or downwardly. Each of these screws is provided with a plate 12 on which a channel iron 13 is placed. On the various channel irons 13 transverse additional irons 14 are positioned, the channel irons 14 being of sufficient number to provide a proper foundation for the various bars 15 which are preferably wood and square in cross section. The bars 15 as shown in Figures 1 and 4 present an even foundation on which one or more strips of linoleum 16 are placed or some other suitable sheet material which will present a smooth upper surface and which will lie flatwise against the bars 15. After the linoleum 16 has been placed in position the wire net work as shown in Figure 5 is then provided as above described and when this has been properly provided, both the scaffolding and reinforcement are ready for the pouring action. A suitable finishing coat of plaster Paris or other material 17 is then poured onto the linoleum and allowed to spread out under the action of gravity. If desired, this spreading action may be assisted by a trowel or other instrument. When this layer has been properly placed in position a backing

layer 18 is poured, said backing layer merging into the layer 17 and submerging the wire mesh reinforcement as indicated in Figure 1 though preferably not extending to the lower surface of the joists 3. In this way the layers 17 and 18 are supported by the wire mesh which in turn is supported by the strips or plates 5 connected to the joists 3. After the layer 18 has been properly poured and distributed, if necessary the entire structure is left standing as shown in Figure 1 until these layers have properly set, after which, the scaffolding is removed including the layer of linoleum whereupon a smooth finished surface is presented.

In case the room is very large a number of blocks or strips of linoleum is used and usually there is a slight flange or bead formed between these strips of linoleum which must be cut off by a trowel or other instrument after the linoleum has been removed. The aggregate forming layer 18 may be made with a composition including hair of any desired kind or in fact may be made of any suitable composition or mixture and when properly cast will present an extremely strong ceiling which will support the weight of workmen if necessary.

Sometimes it may be desirable to provide a cornice for a room and when this is the case a cornice fitting 19 is provided as shown in Figure 6 which is clamped to one of the posts 8 or to some other part of the scaffolding by any suitable form of clamp 20. The plates 5 adjacent the corners 9 are made longer to substantially conform to the shape of the corners and the reinforcing wires are correspondingly positioned. Also, if desired, ornamentation may be made in the center of the room or a short distance from the side walls as indicated in Figure 7. In constructing the ceiling as shown in Figure 7 the ornamental member 21 is arranged in position and supported on the scaffolding below the wire mesh before any of the layers of plaster material have been placed in position. The side ornament 22 is also placed in position and supported by the scaffolding though preferably the linoleum 16 is cut away for accommodating the ornamentation 21 as well as the ornamentation 22 and the ornaments are usually supported entirely or somewhat by the linoleum. The casting then is made in the manner above described and by reason of the adhesive qualities of the layer 17 it will readily adhere to the ornamental members 21 and 22 so as to thoroughly support the same and in turn be supported by the layer 18.

After the two layers 17 and 18 have been deposited and allowed to set, either with or without the cornice 19 or the ornaments 21 and 22, the scaffolding is removed carefully and the linoleum 16 is finally removed carefully which may be readily done as it will usually peel off when the layer 17 has set. This is possible because the linoleum is smooth on the upper surface and consequently the layer 17 will not readily adhere thereto.

This construction of ceiling is very strong and also provides an air space below the joists and above the ceiling. This air space is important for many reasons, as for instance, it consists in preventing the spread of fire and provides a dead air space which will make a sound-proof construction very desirable in apartment houses and elsewhere. In Figure 1 of the drawing only a small space below the joists has been shown but it will be evident that this space may be large or small as desired.

What I claim is:—

In a ceiling of the class described, a plurality of hangers each consisting of a strip of metal, means connecting said hangers to a support, a reticulate suspended from said hangers, said reticulate consisting of a plurality of wires each extending parallel to the other and through a series of said hangers, and a plurality of wires extending across and secured to said first mentioned wires, a plastic body embedding said reticulate, and an ornamental finish on the under surface of said plastic body.

MARQUES WIEPCKE.