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(54) A backing wall structure preferably for sales and exhibition halls

(57) In, for example, radio and TV shops it is desirable to use a backing wall structure for carrying sales shelves and wall panels, behind which there is space for concealed drawing of various cables, which should then only cross the wall panels. Associated throughlet apertures therein are aesthetically undesired at places where they are not hidden by apparatus units on the shelves. According to the invention this problem is eliminated in that the panel plates (12) are freely pivotably suspended at their top edges and have a height dimension such that they depend to slightly below the top edge area of the respective underlying panel plates at the rear side thereof, whereby a throughlet opening, invisible from the front side, can be established only by a slight rearward pivoting of the actual panel plate. Several further advantages of this structure are disclosed.

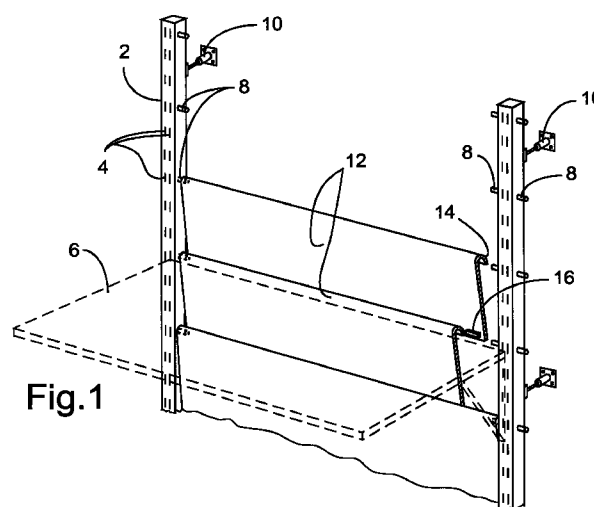


Fig.1

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Description

The present invention relates to a backing wall structure mainly for sales or exhibition halls for active electrical or electronic appliances, in particular for sound or picture reproduction. Such apparatuses may require certain cable connections for current and signal supply, and whenever a plurality of such apparatuses is placed in front of a backing wall it is a natural desire that these required cables can be drawn as hidden as possible behind the wall structure.

This requirement already has resulted in the development of special wall structures which comprise both vertical carrier posts for intermediate carrier shelves for the apparatuses and intermediate wall panels, which allow for a cable connection just behind the single apparatus units, but otherwise conceal the cables, see in particular WO 95/26150.

However, in the wall systems known so far there are still some drawbacks, partly in that the wall panels filling out the space between the posts should be designed and fixed so as to be strong enough to resist local pressure impacts, and partly in that they should be provided with throughlet holes or slots for the cables in such a manner that these holes or slots will be visible at places in which they are not visually covered by an apparatus unit right in front thereof. The requirement as to a good fixation is not too compatible with another desired property, viz. that the panel plates should preferably be easily de- and remountable for enabling reorganizations of the cable connections and the cable arrangement behind the panel wall.

With the present invention it has been realized that it is possible to widely improve these systems in a very simple manner, namely in that the panel plates, at their top edges, are suspended in a pivotable manner and extend downwardly therefrom to a bottom edge area located behind the top edge of the underlying panel plate. Hereby, more of the said drawbacks are countered at the same time, in that

- 1) the panel plates will not need to be fixed otherwise than by a simple suspension at their top edge, e.g. by a simple hooking up of a rearwardly bent over top edge area onto a carrier rod or only onto two opposed, lateral projections on the adjacent carrier posts;
- 2) the panel plates should not be designed with any particular strength, since by a local impression they can pivot freely rearwardly, i.e. without having to resist the impression;
- 3) the throughlet slots for the cables can be established according to requirements just by a slight rearward pivoting of the relevant panel plates, whereby the slots will be formed behind the top edges of the underlying panel plates and thus be invisible from the front side;
- 4) throughlet slots or holes will not appear at such

places where an apparatus unit is not present in front thereof; and

- 5) the panel plates according to item 1) may be readily detachable from their support, such that at any place they can easily be removed and remounted in connection with desired rearrangements of the cables and the connections behind the panel wall.

As the strength requirements of the panel plates are very modest, these plates may be designed as simple and inexpensive units of any suitable material, and they may in a realistic manner be produced and stocked in many different variants, e.g. with respect to structure or colour.

In the following the invention is described in more detail with reference to the drawing, in which:

- Fig. 1 is a perspective fractional view of a backing wall structure according to the invention;
 Fig. 2 is an end view thereof;
 Fig. 3 is an end view of a corresponding, free standing wall structure; and
 Fig. 4 is a perspective view of a modified panel plate.

The structure shown in Fig 1 comprises a row of vertical post beams 2 with holes 4 usable in a conventional manner for the mounting of carrier brackets for shelves 6 in desired levels. According to the invention, there is at either side of the posts 2 welded a number of interflashing, horizontal carrier pins 8. The posts 2 are fixed to a stable wall by means of length adjustable fixtures 10.

Between the posts 2 a number of filler plates 12 is provided, freely suspended on the respective pins 8, e.g. in that the plates as made in metal or plastic having an upper rearwardly bent-over edge portion 14 to be hooked onto the pins 8. The filler or panel plates 12 have a height which is slightly bigger than the vertical distance between the pins 8, whereby the plates, as shown, may extend obliquely downwardly and inwardly to a bottom edge area right behind the top of the underlying plate. Thus, each individual plate 12 will be free to pivot rearwardly about its top edge, and for avoiding rattling, small shock absorbing elements 16 are mounted at the overlapping areas. The presence of these elements may give rise to a narrow, vertically open slot between the lower end of a plate 12 and the rear of the bent-over top portion 14 of the underlying plate, but in general this slot will not be visible from outside.

The same will apply if this slot is made somewhat still broader, viz. if one or more cables 18 as shown in Fig. 2 are let out from the space behind the wall to an apparatus unit standing on a shelf 6 in front of this plate wall. It will be appreciated that such cables may be lead out anywhere in the wall system without the associated, slightly broader slot opening being visible from outside.

The plates 12 are readily unhooked from the pins 8, such that whenever and wherever it is desired, larger area portions of the wall may be uncovered, thus making the areas freely accessible for reorganization of the rear cables and connectors. The complete wall structure is easily reestablished by simple rehooking of the plates 12.

Fig. 3 shows a structure, in which the carrier posts have a depth dimension large enough to enable a free standing mounting for presentation of shelf carried apparatus units at both sides, supported by floor engaging foot portions 20. The resulting wall thickness is large enough to make space for the inwardly pivotable panel plates 12.

For the invention it is not a condition that the plates 12 should be uniform, as they may vary with respect to both look and size. In that connection it may be desirable, optionally, to use carrier posts having holes 4 also in the lateral sides, as the pins 8 may then be mounted on carrier brackets for engaging the holes for adaptation to different modular heights of the plates 12. Another possibility, though little attractive from an aesthetical point of view, will be to use pin carrying brackets for mounting in the holes 4 in the front side of the posts.

As shown in Fig. 4, it may be a preferred possibility that the plates 12 are made with a rear recess 22 along their bent-over top edges, either - as shown - by way of cutting or by a sharper bending over than at the side portions cooperating with the pins 8. Hereby permanent slots will be formed which, however, will not generally be visible, and which enable at least thinner cables to be drawn through without the cables holding the overlying plate swung rearwardly.

Even though it is most advantageous to arrange for the plates to be inwardly pivotable at their lower end, the invention will nevertheless comprise a construction in which the plates are outwardly pivotable. If the plates are arrestable or resiliently biased they may even be hinged at their lower edges, thus pointing upwardly from the pins 8 or from other suitable hinge means.

The pivot plates 12 themselves may be used for independent purposes at desired places of the wall, insofar as they are easily workable for special purposes, e.g. with mounting holes for instruments or lighting units or with holding means for CD cassettes.

Claims

1. Backing wall structure, in particular for sales and exhibition halls for operative electric or electronic appliances, and comprising panel elements enabling a throughlet of cable connections to apparatus units standing on shelves at the front side of the wall, the structure comprising carrier skeleton means for carrying the panel elements and the shelves, characterized in that the panel elements are fixed to the carrier skeleton means in being hinged thereto in such a manner that they are pivot-

able about one of their edge areas, preferably their top edge, and in that from that edge the panel elements extend to and slightly beyond the correspondingly hinged edge area of an adjacent panel element, preferably at the rear side thereof.

2. A wall structure according to claim 1, characterized in that the panel elements are hinged in an easily removable manner.
3. A wall structure according to claim 1, characterized in that the panel elements are made as lightweight plate members having a rearwardly bent-over top edge area which, at opposite side edges of the plate member, is hooked onto carrier pins protruding horizontally from the lateral sides of vertical carrier posts.
4. A wall structure according to claim 3, characterized in that the carrier pins are directly welded to the sides of the posts.
5. A wall structure according to claim 3, characterized in that between the bent-over edge portions at the side edges the top edge material is cut away or more sharply bent over such that a recess is provided along the major part of the length of the top edge.
6. A wall structure according to claim 1, characterized in that the panel elements are provided with shock absorbing spacer members between their overlapping areas.

