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Weston

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[54] **DISPLAY DEVICE**

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[51] **Int. Cl.²** **E05B 73/00**

[58] **Field of Search** ..... 211/4, 40, 96, 110, 165, 211/168, 169, 170; 312/11, 12, 13, 14, 123, 130, 133, 138 A, 342, 345, 129, 132, 136

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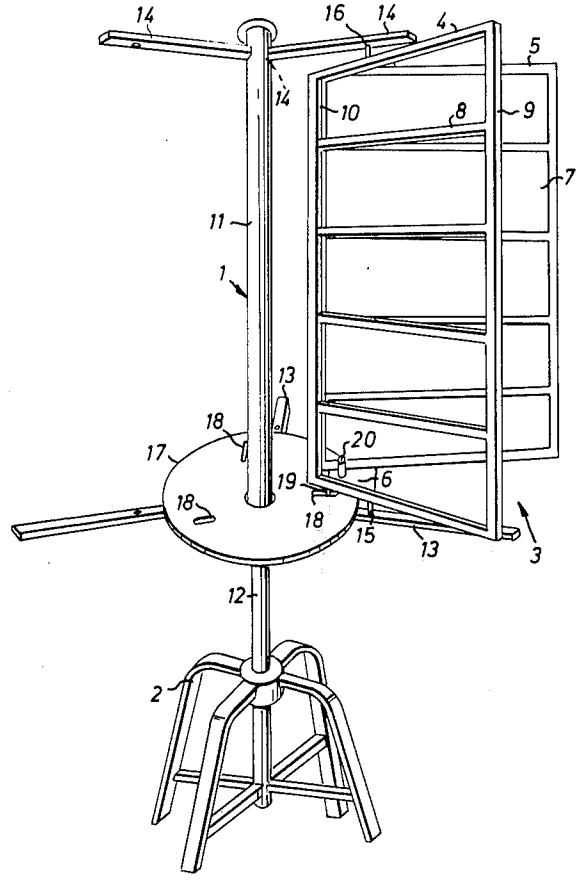
[57] **ABSTRACT**

A display device for articles such as audio cassettes and cartridges, the device having at least one wing-like member in the form of a generally rectangular frame for receiving said articles, the frame being pivoted relative to a blocking member so that in one limiting position of the frame the blocking member blocks a region of the frame from which said articles could otherwise be removed, and in another limiting position of the frame the said region is clear of the blocking member so as to allow said removal, the one and the other limiting positions being established by engagement between a pin projecting from the frame and a slot provided in a rotatable plate, locking means being provided for fixing the frame in said one position.

2 Claims, 2 Drawing Figures



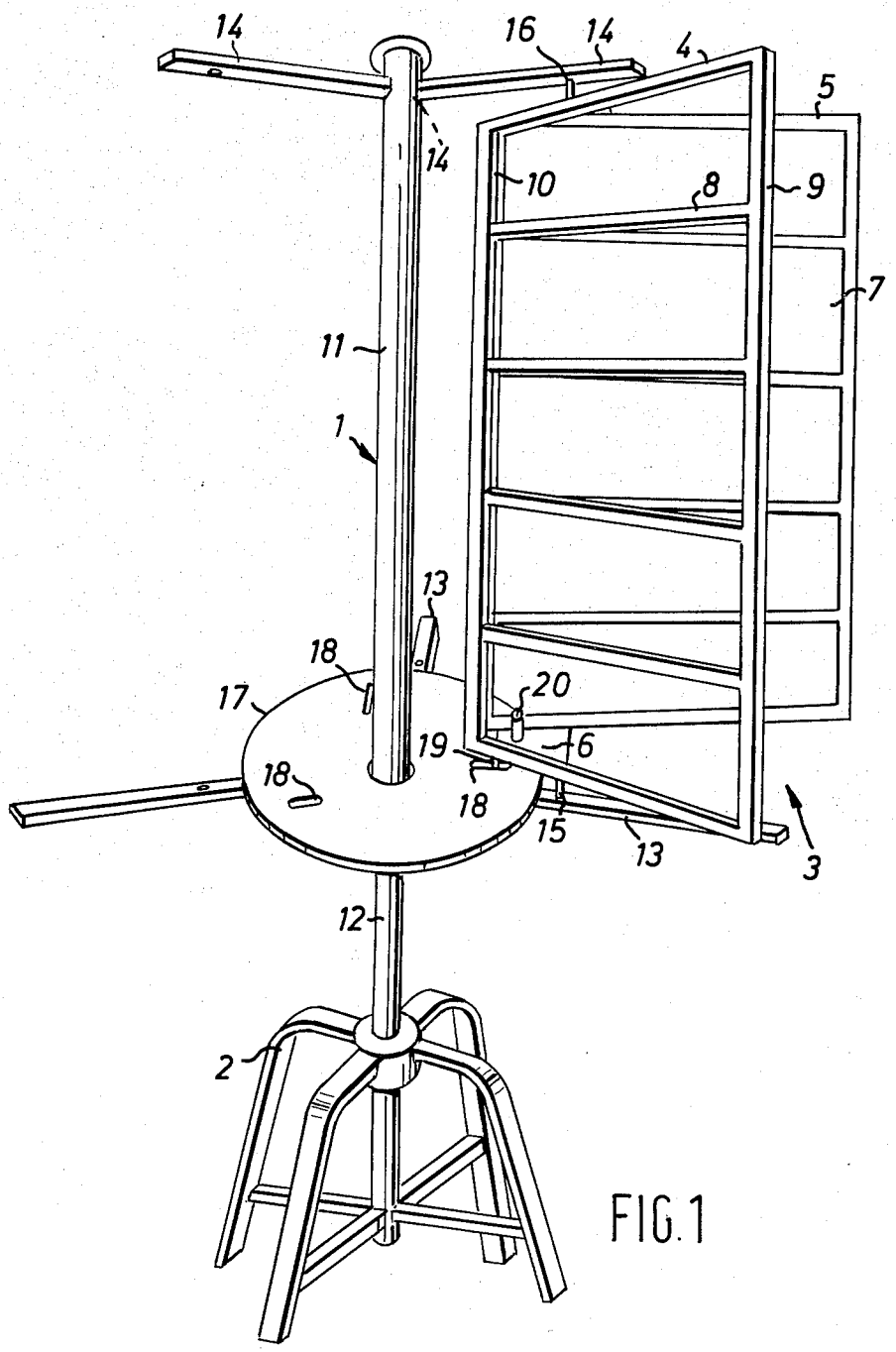


FIG.1

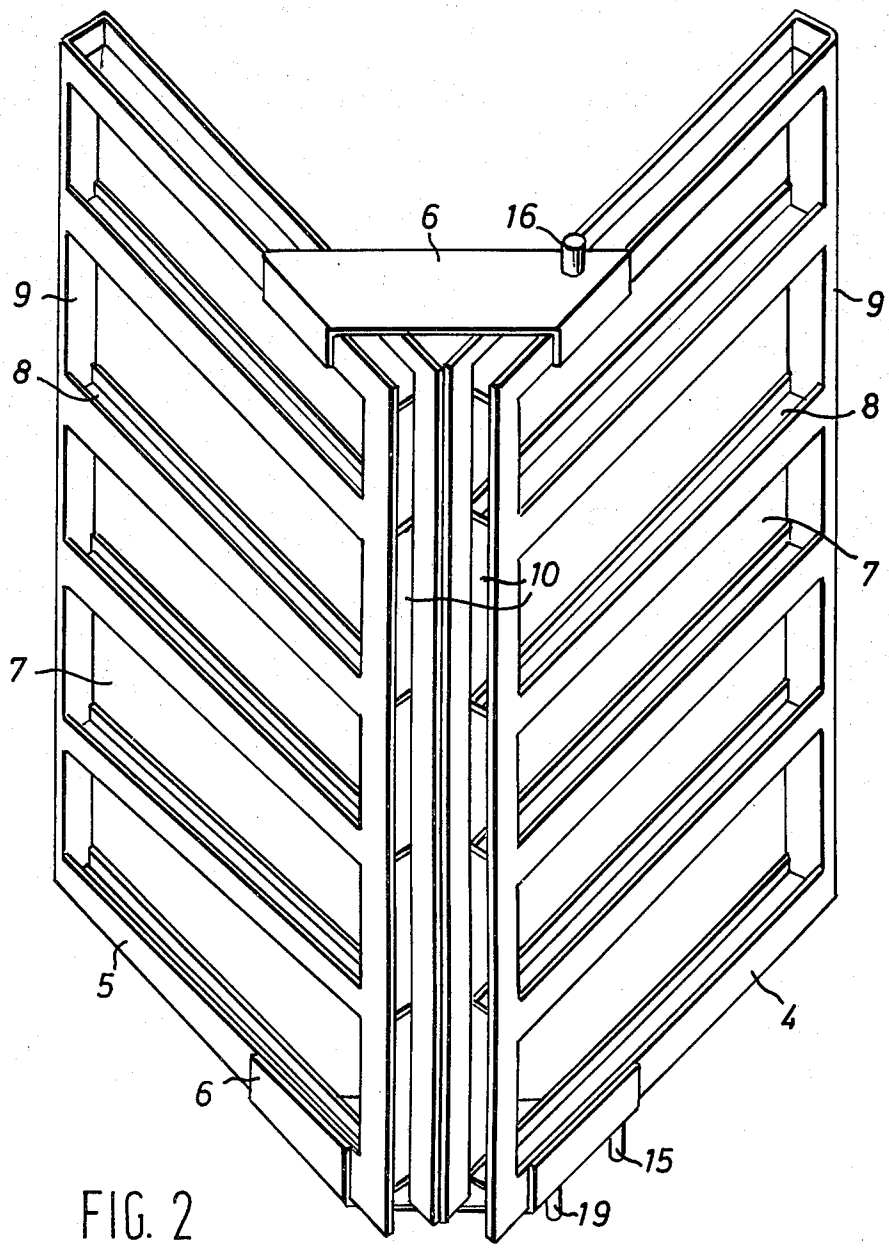


FIG. 2

DISPLAY DEVICE

BACKGROUND OF THE INVENTION

This invention relates to display devices for displaying articles in such a manner as to prevent their unauthorised removal from the display device. More particularly, the invention relates to a display device for audio cassettes and/or cartridges.

It is desirable to be able to display audio cassettes and cartridges, or other articles, in such a manner that they can be readily perused by a prospective purchaser without, however, being removed by the prospective purchaser from the display device.

SUMMARY OF THE INVENTION

Thus, it is a purpose of this invention to provide a display device which enables articles such as audio cassettes and/or cartridges to be displayed while at the same time the unauthorised removal of said articles is prevented.

According to the present invention there is provided a display device comprising a wing-like member in the form of a generally rectangular frame for receiving articles to be displayed, the wing-like member being pivotally mounted on a supporting structure about an axis substantially parallel to the plane of the wing-like member, by pivot means so arranged that the axis intersects two oppositely disposed edges of the frame, said axis being parallel to the other two edges of the frame, the frame having an opening or openings at one of said other edges through which the said articles can be inserted or removed, the supporting structure carrying a rotatable plate having a slot therein which is engaged by a pin extending from one of said oppositely disposed edges of the frame at a region of said one edge located between said blocking member and said pivot axis, said plate, said slot and said pin constituting means for limiting the pivotal movement of the frame between one limiting position and another so that in one limiting position the said opening or openings are blocked by the said one frame edge being in the proximity of a blocking member, whereas in the other limiting position the said one frame edge is clear of the blocking member, thus rendering the articles free for removal, locking means being provided for fixing the frame in its said one limiting position.

In a preferred arrangement, a plurality of said wing-like members are provided, disposed in a rotatable turret-like arrangement, as will be seen from the following description of a particular embodiment. However, it should be understood that a single wing-like member is also within the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

There follows a detailed description of the preferred embodiment to be read with reference to the accompanying drawings which are given by way of example and in which:

FIG. **1** is a perspective view of a display device, shown with only one of its three wing-like members in position, in order to make the structural arrangement clearly visible; and

FIG. **2** is a perspective view of one of the wing-like members, to a larger scale than FIG. **1.**

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, like numerals represent like elements throughout the two views, the display device comprises a supporting structure **1** mounted on a stand **2,** the supporting structure carrying three wing-like members **3,** only one of which is illustrated so as not to obscure the clear showing of the various elements of the device. Each wing-like member **3** is in the form of a V-shaped assembly of two frames **4** and **5** fixed together by plates **6** so that their general planes intersect.

The frames may be made of metal or plastics material and each frame has a plurality of compartments **7** in which articles to be displayed are provided, for example audio cassettes and/or cartridges. The compartments **7** are closed at the top and bottom by channel-shaped portions **8** of the frames and are closed at one end by an end portion **9** of the frame. The compartments **7** are open at their other end **10,** the openings allowing insertion and removal of the articles from the compartments **7.**

The supporting structure **1** comprises a tubular post **11** which is rotatably mounted on a column **12** forming part of the stand **2.** Three arms **13** extend radially outwardly from a lower region of the tubular post **11,** and three arms **14** extend radially outwardly from an upper region thereof.

Each wing-like member **3** is pivotally mounted on the supporting structure **1** by pivot pins **15** and **16** which extend from the frame **4** of the wing-like member **3** into suitable apertures in one of the arms **13** and one of the arms **14,** respectively. The positions of the pivot pins **15** and **16** on the frame **4** are such that the wing-like member **3** can be swung so that the open ends **10** of the compartments **7** of the frames **4** and **5** can be brought into close proximity to the tubular post **11** so that the post **11** blocks access to the compartments **7,** or that the said open ends **10** can be moved away from the tubular post to a sufficient extent to allow insertion and removal of the articles in the compartments **7.**

A rotatable plate **17** is seated on the radial arms **13,** this plate having three cam slots **18** into which pins **19** from each respective frame **4** extend. The slots **18** are offset from a radial position, and it will be seen from FIG. **1** of the drawings that if the wing-like member **3** is swung about the pivot axis defined by the pivot pins **15** and **16,** the pin **19** imposes a rotary movement on the plate **17.** This rotary movement is limited by the slot **18** in which the pin **19** engages and consequently, if one of the wing-like members **3** (only one being shown in the drawings) is swung in this way, the rotation of the plate **17** will cause the other two wing-like members to perform equivalent and corresponding swinging movements, as a result of the drive imparted to them from the rotatable plate **17** by way of their pins **19.**

The slots **18** are so arranged that in one of the limiting positions of movement of each wing-like member, the openings **10** of the frames are close to the tubular post **11** so that the post exerts a blocking action, preventing removal of the articles from the compartments **7,** whereas the other limiting position, as discussed above, is such that the compartments **7** are clearly accessible.

It will be seen that the wing-like members can be swung from one limiting position to the other, only when the rotatable plate **17** is free for rotation. Locking

means are provided for preventing rotation of the plate **17** relative to the wing-like members and relative to the supporting structure **1,** at times when removal of articles from the compartments **7** is to be prevented. These locking means are in the form of a key-operable lock **20** mounted on one of the plates **6** and having a bolt or pin engageable in an opening in the rotatable plate **17** when the key is operated while the wing-like member in its limiting position in which the openings **10** of the compartments **7** are in close proximity to the tubular post **11.**

It will be seen that the supporting structure **1,** fitted with the rotatable plate **17** and the three wing-like members **3,** can be rotated as a unit on the column **12,** thus allowing convenient perusal of the articles, for example audio cartridges and/or cassettes, contained in the compartments **7.** If desired, two such units may be mounted on a single column, each by means of its tubular post **11,** suitable thrust bearings being provided to allow easy relative rotation of the two units. In such a case, the compartments **7** of one of the units may be dimensioned for containing audio cartridges and the compartments of the other unit may be dimensioned for containing audio cassettes.

Modifications are possible. For example the wing-like members may each comprise only a single frame, and there may be less than three or more than three wing-like members. However, it has been found convenient for the arrangement to be in the rotatable turret-like form described above, and for there to be three wing-like members each composed of two frames disposed at approximately 60° to each other.

I claim:

1. A display device comprising a wing-like member in the form of a generally rectangular frame for receiving articles to be displayed; a supporting structure; a rotatable plate carried by said supporting structure; a slot in said rotatable plate; pivot means pivotally mounting said wing-like member about an axis substantially parallel to the plane of the wing-like member, with said axis intersection two oppositely disposed edges of the frame and being parallel to the other two edges of the frame; openings at one of said other edges of the frame through which the said articles can be inserted and removed; a blocking member; a pin extending from one of said oppositely disposed frame edges of said wing-like member at a region of said one edge located between said blocking member and said pivot axis, said pin extending into said slot; said rotatable plate, said slot and said pin constituting means for limiting the pivotable movement of said frame between one limiting position and another limiting position so that in said one limiting position the said openings are blocked by the said one frame edge being in the proximity of the blocking member, whereas in the other limiting position the said one frame edge is clear of the blocking member, thus rendering the articles free for removal; and locking means for fixing the frame in its said one limiting position.

2. A display device according to claim **1,** wherein a plurality of the wing-like members are provided, each similarly pivotally mounted on the said supporting structure, each having a pin equivalent to said pin, said rotatable plate having one said slot for each pin, the pins, the slots and the rotatable plate constituting means linking all of the wing-like members for joint movement.

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