

PATENT SPECIFICATION

(11)

1 440 095

(21) Application No. 37288/73

(22) Filed 6 Aug. 1973

(31) Convention Application No.

53 879

(32) Filed 22 Dec. 1972 in

(33) Italy (IT)

(44) Complete Specification published 23 June 1976

(51) INT. CL.³ A47F 7/28

(52) Index at acceptance
A4T 13N



(54) A DISPLAY STAND

(71) We, P. FERRERO & C. S.P.A., an Italian Joint Stock Company, of Piazza Pietro Ferrero 1, Alba (Cuneo) Italy, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to display stands for articles of parallelepipedic form, such as products packed in rectangular containers, the stands being particularly suitable for relatively flat containers for confectionery, and being of simple and strong construction. Display stands formed in accordance with the invention are capable of holding products packed in rectangular packages in a way that permits the ready selection by a purchaser of the goods displayed.

According to the present invention, there is provided a display stand including a unitary body of plastics material having a base and an upright stand body, wherein the upright stand body comprises an even number of substantially equally spaced and substantially parallel intermediate strips of substantially flat construction, the lateral edges of which intermediate strips are each shaped as zig-zag lines in which similar length segments are perpendicular to each other, the segments of both edges of each strip being substantially symmetrically arranged with respect to a vertical longitudinal median plane of the stand, the upright stand body also comprising a pair of zig-zag edged substantially flat outer strips that are substantially parallel to said intermediate strips with each outer strip arranged near a corresponding outer one of the intermediate strips and spaced therefrom by a distance substantially equal to the spacing between said intermediate strips themselves, the zig-zag edges of said outer strips each comprising segments that are contained in planes

which also contain each second group of segments of the edges of said intermediate strips that diverge upwardly away from said longitudinal median plane and relatively perpendicular segments that are slightly downwardly offset from planes that contain each second group of segments of the edges of the intermediate strips which are downwardly divergent from said median plane, said upright stand body also comprising transverse partitions that are substantially perpendicular to said intermediate and outer strips and that project from the opposite faces of each of said intermediate strips towards neighbouring strips at said upwardly diverging segments of each of the opposite edges of said intermediate strips, the direction in which each partition extends at one edge of each intermediate strip being perpendicular to that in which extends a further partition arranged at the same level but at the other edge of the same intermediate strip and each partition (except the lowest partitions) bearing by its lower edge on a partition that lies beneath it and that has an opposite inclination with respect to the median plane of the stand, the partition and the strips together defining, at each side of said median plane, pockets capable of receiving articles of parallelepipedic form to be displayed.

One embodiment of the invention will now be more particularly described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a display stand in accordance with the invention for parallelepipedic products;

Figure 2 is a side view of the display stand shown in Figure 1;

Figure 3 is a front view of the display stand shown in Figure 1;

Figure 4 is a vertical section of the display stand of Figure 1, taken on the line IV-IV of Figure 3;

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Figure 5 is a plan view of the display stand shown in Figure 1;

Figure 6 is an exploded perspective view, to an enlarged scale, of upper parts of the display stand of Figure 1; and

Figure 7 is a transverse section of one sector plate of the embodiment of Figure 1 taken on the line VII-VII of Figure 2.

Referring to the drawings, the display stand comprises primarily a unitary plastics material body mounted on a lower base 1 which is a substantially rectangular plate and which has downwardly extending peripheral flanges at the edges thereof. A moulded upright columnar stand body that is generally indicated by the reference 3 has a foot 2 which projects upwardly from the centre of the base plate 1.

The stand body 3 comprises an even number (four) of similar upright flat intermediate strips 5, 5' that are parallel to one another and that are disposed in equally spaced apart relationship with each strip having opposite lateral zig-zag edges. The body 3 also comprises two narrower flat outer strips 4 which outer strips 4 also have zig-zag lateral edges parts of which are generally aligned with respect to the edges of the intermediate strips 5, 5'. The lateral edges of the intermediate strips are each shaped as zig-zag lines in which similar length segments 5a and 5b are perpendicular to each other, the segments 5a and 5b of both zig-zag edges of each intermediate strip being substantially symmetrically arranged with respect to a vertical longitudinal median plane M-M (Figures 2 and 4) of the stand. The outer strips 4 are substantially parallel to the intermediate strips 5, 5' with each outer strip 4 arranged near a corresponding outer one 5' of the intermediate strips, said outer strips 4 being spaced from the neighbouring intermediate strips 5' by a distance which is substantially equal to the spacing between the intermediate strips 5, 5' themselves. The opposite zig-zag lateral edges of the outer strips 4 each comprise segments 4a, the segments 4a being contained in planes which also contain each second group of segments 5a of the edges of the intermediate strips 5, 5' that diverge upwardly away from the median plane M-M, and also relatively perpendicular segments 4b, the segment 4b being slightly downwardly offset from planes that contain each second group of segments 5b of the edges of the intermediate strips 5, 5' which are downwardly divergent from said median plane M-M. It is emphasised that only every second group of segments 5a is coplanar with one of the segments 4a and that only every second group of segments 5b is nearly coplanar with one of the segments 4b.

The outer strips 4 and the intermediate

strips 5, 5' are connected together by transverse partitions 6 and 7 that are perpendicular to the intermediate and outer strips 4, 5 and 5' and that project from the opposite faces of each of said intermediate strips 5, 5' towards neighbouring strips at the upwardly diverging segments 5a of each of the opposite edges of the intermediate strips 5 and 5', the direction in which each partition 6 extends at one edge of each intermediate strip 5 or 5' being perpendicular to that in which extends a corresponding partition 7 that is arranged at the same level but at the opposite edge of the same intermediate strip 5 or 5'. It is noted that, in Figure 4, the partitions 6 and 7 appear to be at staggered horizontal levels whereas, in fact, each partition 6 or 7 has corresponding partitions 7 or 6 disposed at the same level but spaced therefrom in a direction perpendicular to the plane of Figure 4. Each of the partitions 6 and 7 (except the lowest partitions) bears by its lower edge on a partition 6 or 7 that lies beneath it and that has an opposite inclination with respect to the median plane M-M of the stand. The strips 4, 5 and 5' and the partitions 6 and 7 together define, at each side of the median plane M-M, pockets that are capable of receiving rectangular boxes A (Figure 4) which contain confectionery. The boxes A and display stands in accordance with the invention are preferably made for cooperation in such a way that their relative sizes necessitate slight force to insert one of the boxes A into one of the pockets. This may be brought about by disposing the partitions 6 and 7 in very slightly converging relationship in an inward direction from the mouths of the pockets and it is accordingly necessary that the boxes A of products to be displayed should be fitted carefully into the pockets. Clearly, it is not essential that the articles to be displayed should be boxes and the stand which is being described by way of example is equally capable of receiving and displaying other parallelepipedic articles of appropriate size. The partitions 6 and 7 are symmetrically inclined and parallel to the edge segments 4a, 4b, 5a and 5b of the strips 4, 5 and 5' so as to form the pockets in two groups, the pockets being closed at their bases and being disposed with their openings lying at the two opposite major faces of the stand. The pockets are all inclined in conformity with the alternate inclinations of the segments of the various strips such as the segments 5a and 5b of the intermediate strips 5 and 5'.

The pockets on each face of the stand all slope in the same direction and are arranged in horizontal rows that are staggered with respect to immediately overlying and/or underlying rows. The fact that the segments 4b of the edges of the outer strips 4

are downwardly offset to a small extent (see Figure 2) relative to every second group of segments 5b of the intermediate strips 5 and 5' allows better visibility of the boxes A that are placed in the pockets. The foot 2 which connects the upright stand body 3 to the base 1 is constituted in part by lower extensions of those two intermediate strips 5 that immediately neighbour a centrally located vertical plane (the plane of Figure 4) which is perpendicular to the median plane M-M at opposite sides of said centrally located vertical plane.

Uppermost downwardly divergent segments 5b' (Figure 2) of the opposite edges of the outermost intermediate strips 5' meet in the median plane M-M of the stand, corresponding uppermost transverse partitions 6' and 7' (Figures 1' and 3) ending at said plane and bearing upon their upper edges a central vertical plate 8, that is formed with an oblong aperture 9 and also a pair of plates 13 that are in the form of sectors of circles, each sector plate 13 being detachably connected to one of the opposite vertical outer edges 8a of the central vertical plate 8. The two outer intermediate strips 5' also support the plate 8 by way of tri-angular buttresses 10 that extend upwardly from the tops of said strips 5' to the side edges of the aperture 9. The apertured plate 8 serves as a handle by which the stand can be picked up and carried.

The means that detachably connects the sector plates 13 and the central vertical plate 8 comprises an elongate projection 14 on each sector plate 13, said projections 14 being disposed on the median plane M-M, which is also a plane of symmetry of the sector plates 13, and extending from the downwardly directed apices of the sector plates 13 with each of the projections 14 having a transverse wall 14a at its upper end that is spaced from the corresponding apex and a pair of longitudinal side walls 14b that define, together with the corresponding sector plate 13, a groove 14c (Figure 6) that is open at the lower end thereof that is opposite to the transverse wall 14a. The side of each groove 14c that is opposite to the corresponding sector plate 13 has a width which is at least equal to the thickness of the corresponding edge 8a of the vertical central plate 8, the upper transverse wall 14a of each projection having formed therein a notch 15 (Figure 7) that is adjacent to the corresponding sector plate 13 and the side walls 14b being formed, at their lower ends that are opposite to the upper transverse wall 14a, with notches 16 that are adjacent to the sector plate 13 concerned. The side edges 8a of the central vertical plate 8 have cut therein, near their tops, elongate slot-like openings 11 (Figure 6) that communicate with the actual outer

edges themselves through passages 11a that are narrower than the lengths of the openings. Teeth are thus defined that are capable of engaging into the notches 15 in the transverse walls 14a of the elongate projections 14 on the sector plates 13. The side edges 8a of the plate 8 also have formed thereon lateral projections 12 that are capable of engaging in the aforementioned notches 16 that are formed in the longitudinal walls 14b of the elongate projection 14 corresponding to each sector plate 13. The two sector plates 13 can thus be mounted on the stand for aesthetic and advertising purposes.

When the described and illustrated display stand is set up and is ready for use, the boxes A that are displayed thereon project symmetrically from the two major faces of the upright stand body 3 and can be extracted readily from the pockets in which they are lodged.

WHAT WE CLAIM IS:—

1. A display stand including a unitary body of plastics material having a base and an upright stand body, wherein the upright stand body comprises an even number of substantially equally spaced and substantially parallel intermediate strips of substantially flat construction, the lateral edges of which intermediate strips are each shaped as zig-zag lines in which similar length segments are perpendicular to each other, the segments of both edges of each strip being substantially symmetrically arranged with respect to a vertical longitudinal median plane of the stand, the upright stand body also comprising a pair of zig-zag edged substantially flat outer strips that are substantially parallel to said intermediate strips with each outer strip arranged near a corresponding outer one of the intermediate strips and spaced therefrom by a distance substantially equal to the spacing between said intermediate strips themselves, the zig-zag edges of said outer strips each comprising segments that are contained in planes which also contain each second group of segments of the edges of said intermediate strips that diverge upwardly away from said longitudinal median plane and relatively perpendicular segments that are slightly downwardly offset from planes that contain each second group of segments of the edges of the intermediate strips which are downwardly divergent from said median plane, said upright stand body also comprising transverse partitions that are substantially perpendicular to said intermediate and outer strips and that project from the opposite faces of each of said intermediate strips towards neighbouring strips at said upwardly diverging segments of each of the opposite edges of said intermediate strips, the direction in which each partition extends at one



are downwardly offset to a small extent (see Figure 2) relative to every second group of segments 5b of the intermediate strips 5 and 5' allows better visibility of the boxes A 5 that are placed in the pockets. The foot 2 which connects the upright stand body 3 to the base 1 is constituted in part by lower extensions of those two intermediate strips 5 that immediately neighbour a centrally located vertical plane (the plane of Figure 4) which is perpendicular to the median plane M-M at opposite sides of said centrally located vertical plane.

Uppermost downwardly divergent segments 5b' (Figure 2) of the opposite edges of the outermost intermediate strips 5' meet in the median plane M-M of the stand, corresponding uppermost transverse partitions 6' and 7' (Figures 1' and 3) ending at said plane and bearing upon their upper edges a central vertical plate 8, that is formed with an oblong aperture 9 and also a pair of plates 13 that are in the form of sectors of circles, each sector plate 13 being detachably connected to one of the opposite vertical outer edges 8a of the central vertical plate 8. The two outer intermediate strips 5' also support the plate 8 by way of tri-angular buttresses 10 that extend upwardly from the tops of said strips 5' to the side edges of the aperture 9. The apertured plate 8 serves as a handle by which the stand can be picked up and carried.

The means that detachably connects the sector plates 13 and the central vertical plate 8 comprises an elongate projection 14 on each sector plate 13, said projections 14 being disposed on the median plane M-M, which is also a plane of symmetry of the sector plates 13, and extending from the downwardly directed apices of the sector plates 13 with each of the projections 14 having a transverse wall 14a at its upper end that is spaced from the corresponding apex and a pair of longitudinal side walls 14b that define, together with the corresponding sector plate 13, a groove 14c (Figure 6) that is open at the lower end thereof that is opposite to the transverse wall 14a. The side of each groove 14c that is opposite to the corresponding sector plate 13 has a width which is at least equal to the thickness of the corresponding edge 8a of the vertical central plate 8, the upper transverse wall 14a of each projection having formed therein a notch 15 (Figure 7) that is adjacent to the corresponding sector plate 13 and the side walls 14b being formed, at their lower ends that are opposite to the upper transverse wall 14a, with notches 16 that are adjacent to the sector plate 13 concerned. The side edges 8a of the central vertical plate 8 have cut therein, near their tops, elongate slot-like openings 11 (Figure 6) that communicate with the actual outer

edges themselves through passages 11a that are narrower than the lengths of the openings. Teeth are thus defined that are capable of engaging into the notches 15 in the transverse walls 14a of the elongate projections 14 on the sector plates 13. The side edges 8a of the plate 8 also have formed thereon lateral projections 12 that are capable of engaging in the aforementioned notches 16 that are formed in the longitudinal walls 14b of the elongate projection 14 corresponding to each sector plate 13. The two sector plates 13 can thus be mounted on the stand for aesthetic and advertising purposes.

When the described and illustrated display stand is set up and is ready for use, the boxes A that are displayed thereon project symmetrically from the two major faces of the upright stand body 3 and can be extracted readily from the pockets in which they are lodged.

WHAT WE CLAIM IS:—

1. A display stand including a unitary body of plastics material having a base and an upright stand body, wherein the upright stand body comprises an even number of substantially equally spaced and substantially parallel intermediate strips of substantially flat construction, the lateral edges of which intermediate strips are each shaped as zig-zag lines in which similar length segments are perpendicular to each other, the segments of both edges of each strip being substantially symmetrically arranged with respect to a vertical longitudinal median plane of the stand, the upright stand body also comprising a pair of zig-zag edged substantially flat outer strips that are substantially parallel to said intermediate strips with each outer strip arranged near a corresponding outer one of the intermediate strips and spaced therefrom by a distance substantially equal to the spacing between said intermediate strips themselves, the zig-zag edges of said outer strips each comprising segments that are contained in planes which also contain each second group of segments of the edges of said intermediate strips that diverge upwardly away from said longitudinal median plane and relatively perpendicular segments that are slightly downwardly offset from planes that contain each second group of segments of the edges of the intermediate strips which are downwardly divergent from said median plane, said upright stand body also comprising transverse partitions that are substantially perpendicular to said intermediate and outer strips and that project from the opposite faces of each of said intermediate strips towards neighbouring strips at said upwardly diverging segments of each of the opposite edges of said intermediate strips, the direction in which each partition extends at one

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edge of each intermediate strip being perpendicular to that in which extends a further partition arranged at the same level but at the other edge of the same intermediate strip and each partition (except the lowest partitions) bearing by its lower edge on a partition that lies beneath it and that has an opposite inclination with respect to the median plane of the stand, the partitions and the strips together defining, at each side of said median plane, pockets capable of receiving articles of parallelepipedic form to be displayed.

2. A display stand as claimed in claim 1, wherein the intermediate strips immediately neighbouring opposite sides of a central plane of the stand that is perpendicular to said median plane are formed with lower extensions which afford parts of the base.

3. A display stand as claimed in claim 1 or 2, wherein the uppermost downwardly diverging segments of the opposite edges of the intermediate strips meet in said median plane of the stand, the uppermost transverse partitions ending at said plane and bearing upon their upper edges a central vertical plate, provided with a rectangular aperture, and a pair of plates in the form of sectors of circles, each sector plate being detachably connected to one of the opposite vertical external edges of said central vertical plate, the means connecting said plate and sector plates comprising an elongate projection on each sector plate lying in a plane of symmetry of the latter and extending from the apex of the sector plate, each of said projections having a transverse wall at its end spaced from said apex and a pair of longitudinal side walls defining together, and with the corresponding sector plate, a groove that is open at its end opposite said

transverse wall and, at its side opposite to the corresponding sector plate, the width of said groove being at least equal to the thickness of the edges of said central vertical plate, the transverse wall of each projection having formed therein a notch adjacent the corresponding sector plate and said side walls having formed, at their ends that are opposite to said transverse wall, notches adjacent to said sector plate, the side edge regions of said central vertical plate having cut therein, near their tops, elongate openings communicating with the edges themselves through passages that are narrower than the lengths of said openings, thereby defining teeth capable of engaging into the notches in said transverse walls of the elongate projections on the sector plates, said side edge regions having further formed thereon lateral projections that are capable of engaging in the notches formed in said longitudinal walls of the elongate projections of the sector plates.

4. A display stand substantially as hereinbefore described with reference to, and as shown in, the accompanying drawings.

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