Nov. 26, 1957 R. PIANA 2,814,341

BLIND MADE OF ELEMENTS OF PLASTICS FOLDABLE TO BELLOWS SHAPE

Filed Nov. 21, 1956

Fig.1

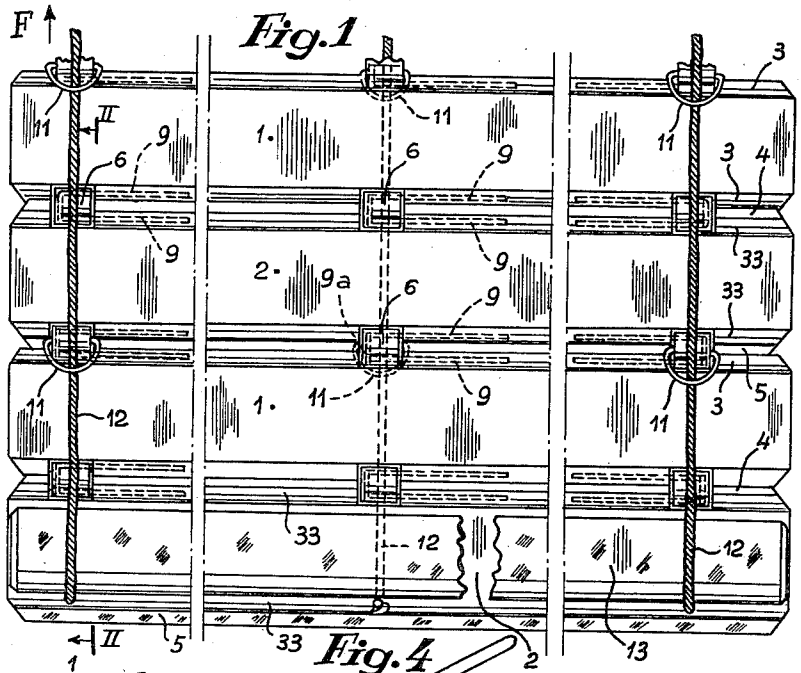


Fig.2

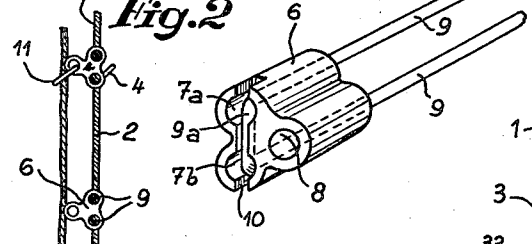


Fig.3

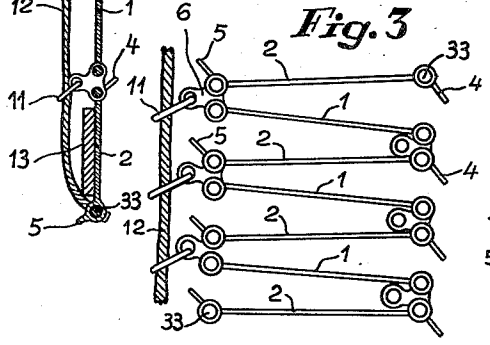
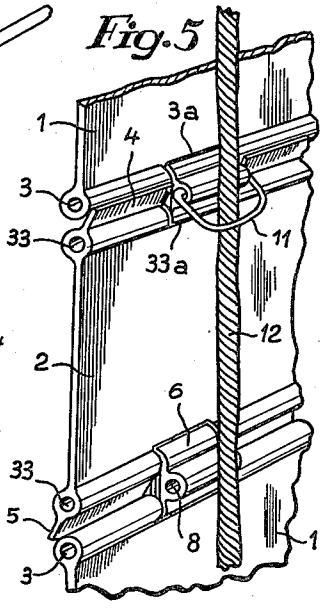


Fig.4

Fig.5



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BLIND MADE OF ELEMENTS OF PLASTICS FOLDABLE TO BELLOWS SHAPE

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2 Claims. (Cl. 160—229)

This invention relates to a blind made of elements of plastics foldable to bellows shape.

A purpose of this invention is to provide a blind of the type referred to above which is simple and cheap to manufacture and in which assembly of the component elements can be effected very quickly without the aid of special tools.

A further purpose of this invention is to provide a blind foldable to bellows shape in which both the slats and hinge members are made of or from structural members extruded from plastics.

A further purpose of this invention is to provide a blind foldable to bellows shape which, when in its extended position with its slats all situated in one and the same plane, fully intercepts light.

A further purpose of this invention is to provide a blind in which the interconnection of the slats is effected on assembly by causing hinge members to snap into recesses in the slats, said hinge members comprising a body of plastics and a forked wire component, said body being of such shape as to prevent after assembly any axial displacement of the wire component.

A still further purpose of this invention is to provide a blind of the type referred to above in which the hinge members are so shaped as to serve also as supports for the guide rings for the blind operating ropes.

These and further objects of this invention will be understood from the appended specification referring to the accompanying drawings, wherein:

Figure 1 is an elevational view of a blind portion in an extended condition,

Figure 2 is a sectional view on line II—II of Figure 1,

Figure 3 is a cross sectional view on an enlarged scale of the blind in its folded condition;

Figure 4 is a perspective view of a hinge member, and

Figure 5 is a perspective view of a blind portion in its extended condition.

The improved blind comprises a plurality of slats **1** alternating with slats 2, all the slats being made from plastics. The slats **1** are in the form of extruded structural members comprising a flat central portion and two tubular longitudinal edges **3**. The slats **2** differ from slats **1** in that their two longitudinal edges denoted by **33** are each formed with a wing denoted by **4** and **5**, respectively. The wings **4**, **5** are oppositely inclined with respect to the plane of the flat central portion of the slat **2** and come in the extended condition of the blind (Figure 5) tangentially of the edges **3** of the two adjacent slats **1**.

The slats **1** and **2** are formed with notches **3***a*, **33***a*, respectively, in their tubular longitudinal edges **3**, **33**. The opposite notches in the adjacent slats **1** and **2** of the blind receive hinge members **6** formed by cutting structural members extruded from plastics of a three-lobed cross-sectional shape. The three lobes of the members **6** are each longitudinally bored, the axes of the three

bores being arranged along the edges of an isosceles prism. Two, *7a*, *7b*, out of said bores receive a U-shaped member preferably made of wire comprising two branches **9** and a cross member *9a*. The two branches **9**, which are materially smaller in length than the spacing of the notches in each slat, are inserted by their portion extending beyond the member **6** into the tubular edges **3**, **33** of two adjacent slats **1**, 2 of the blind, thereby forming an articulated joint.

The hinge members for the slats snap into the notches in the slats through the resilient deformability of both the blind slats and cross members *9a*. Each cross member *9a* is seated in a slot **10** cut in one end of each hinge member **6**.

The third hole denoted by 8 in the hinge members **6** serves for engaging the adjacent inturned ends of split rings **11** through which ropes **12** extend, said ropes being anchored at their lower end to the lowermost slat **2** which is provided with a reinforcing weighting strip **13**.

The ropes **12** travel at the top in a known manner not shown on the drawing over idle rollers carried by the top girder supporting the blind.

The split rings **11** are conveniently provided, as shown on the drawing, on every other member **6** in each vertical row, the ropes **12** being alternately arranged on opposite faces of the blind.

On pulling by means of the ropes **12** upwardly, that is, in the direction of the arrow F in Figure 1, the blind is folded bellows-like as shown in Figure 3.

The inclined wings **4** and **5** on the blind slats **2** prevent in the stretched condition of the blind access of light through the slats, the arrangement of the wings being, however, such as to avoid any interference on folding of the blind.

On the drawing the lowermost slat of the blind has been shown for the sake of simplicity identical with the remaining blind slats **2**; however, the lower wing **5** can be omitted from said lowermost slat.

What I claim is:

1. Blind foldable to bellows shape comprising a plurality of slats in the form of structural members extruded from plastics, each comprising a flat central portion and two tubular longitudinal edges formed with spaced notches, hinge members inserted in opposite notches in adjacent slats, said hinge members comprising a body in the form of a structural member extruded from plastics of a three-lobed cross sectional shape, each lobe being longitudinally bored, and a U-shaped wire component, the branches of which are materially shorter than the spacing of two contiguous notches in each slat and are inserted in two of said longitudinal bores, its cross member being seated in a slot cut in one of the ends of said body, the ends of said branches of the U-shaped component extending beyond said body being fitted into the tubular longitudinal edges of two adjacent slats, split-ring shaped members being inserted in the third longitudinal bore in said bodies and serving as a guide for the ropes operating the blind.

2. Blind as claimed in claim 1, in which the tubular longitudinal edges of every other slat are provided with longitudinal wings oppositely inclined with respect to the flat central portion of the slat so as to come in the extended blind condition tangentially of the longitudinal edges of the two adjacent slats.

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