

Oct. 27, 1931.

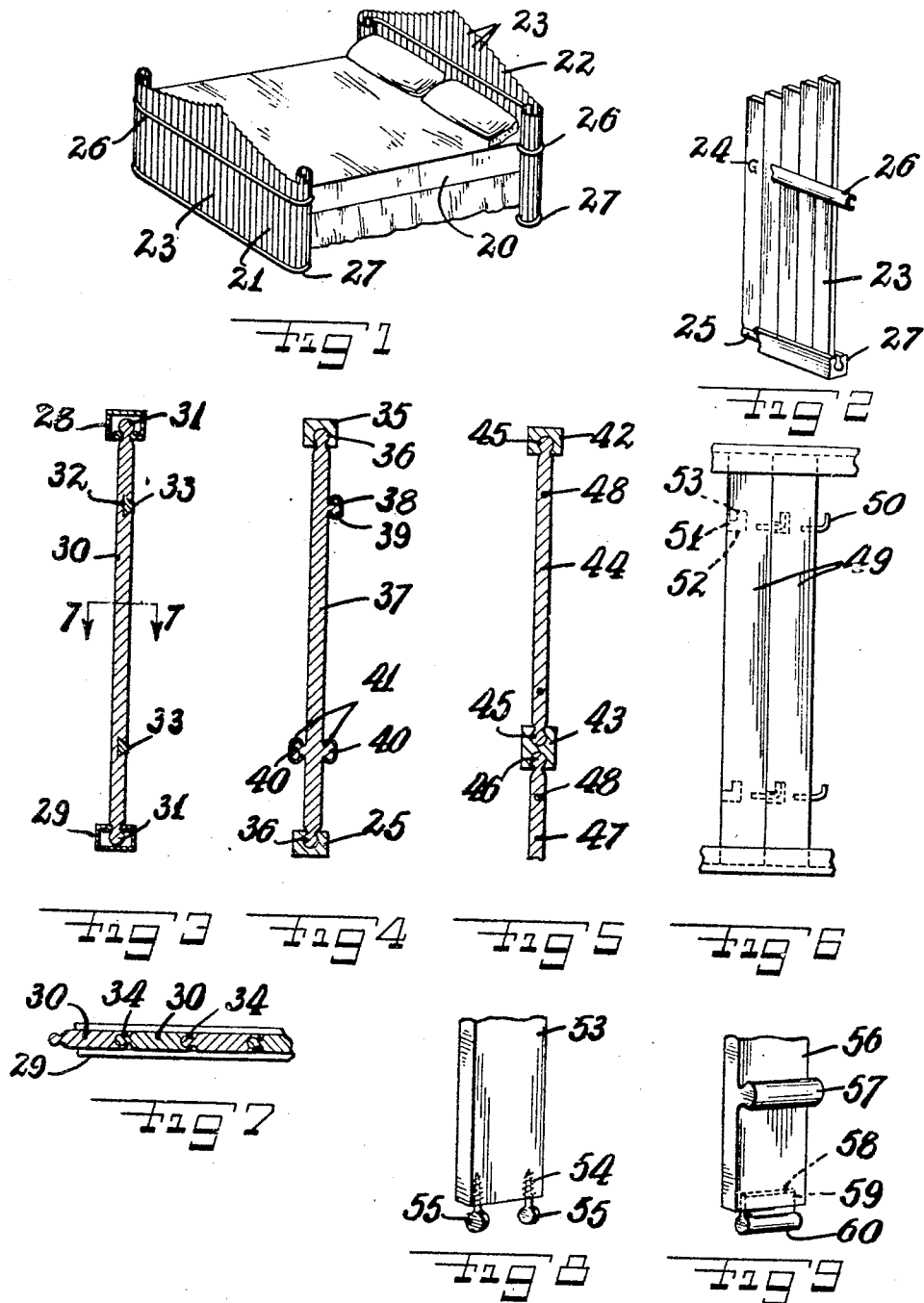
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1,829,366

ENSEMBLE UNIT FOR FURNITURE AND THE LIKE

Filed Nov. 11, 1929

2 Sheets-Sheet 1



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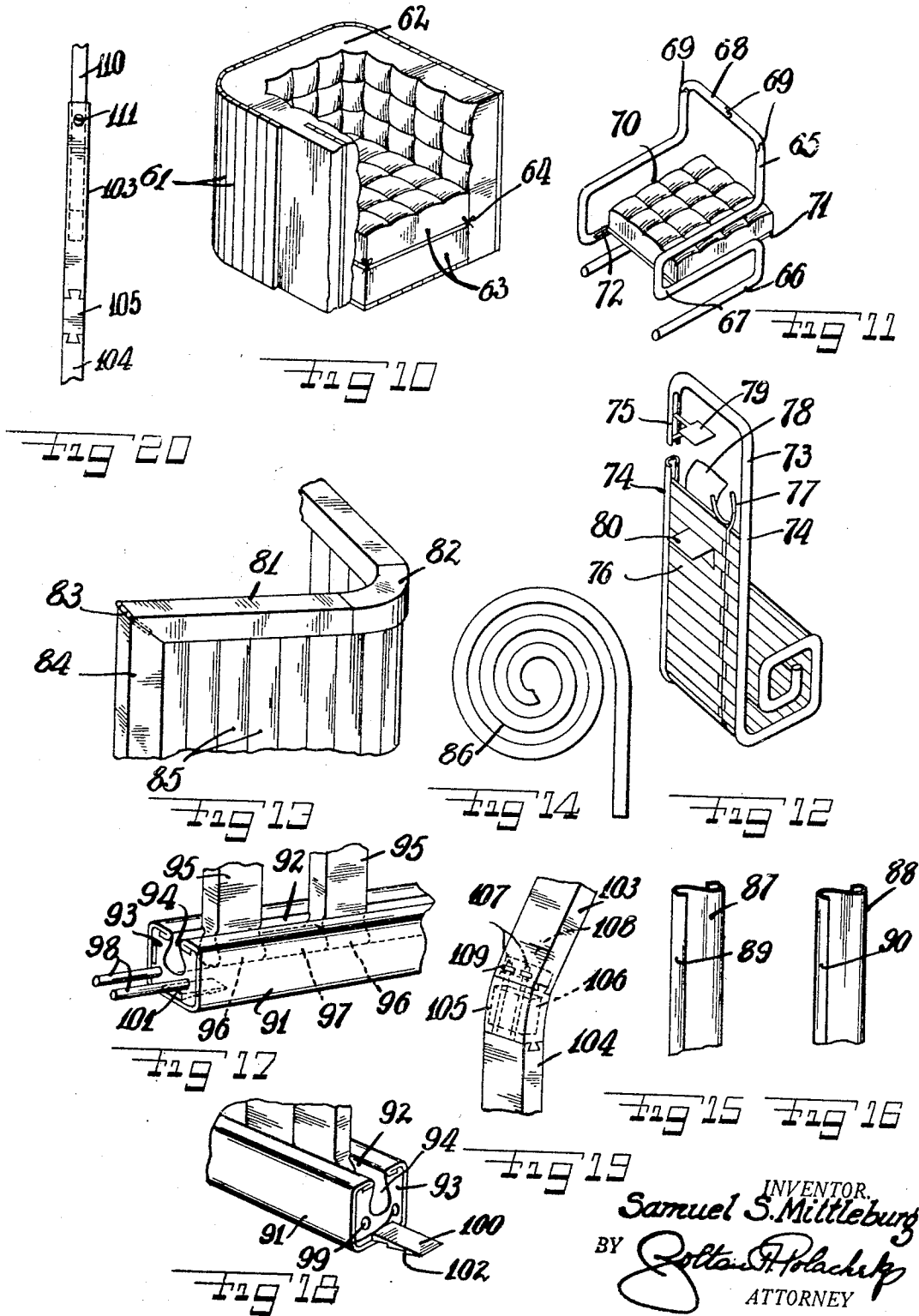
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ENSEMBLE UNIT FOR FURNITURE AND THE LIKE

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UNITED STATES PATENT OFFICE

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ENSEMBLE UNIT FOR FURNITURE AND THE LIKE

Application filed November 11, 1929. Serial No. 406,242.

This invention relates to new and useful improvements in an interchangeable, flexible, foldable, rollable and bendable ensemble unit of strips, bars and cushions.

5 The invention has for an object the provision of a device of the class mentioned which is of simple durable construction, dependable in use and efficient in action, and which can be manufactured and sold at a reasonable cost.

10 The invention proposes an ensemble unit for the forming of furniture and the like, comprising an interchangeable, flexible, foldable, rollable and bendable ensemble unit of strips, bars and cushions. It is proposed to
15 sell these parts in "knocked down" or in assembled form and therefore they will interest the home draftsman, the architect and the builder. When reproduced in miniature size, will serve as a most interesting method of
20 showing various uses that the unit can be put to, and will serve as a salesman's sample outfit or as a toy unit. In other words, the unit is a game for grown-ups in the large size, and a game for children when reproduced in
25 miniature size.

The unit includes the use of various strips and by using some of the strips inside of a cushion, with notched end projecting it can be engaged into any form of metal or wooden
30 frame. By using the strips outside of the cushion, more flexibility is obtained. The cushion can then fold and roll and the strips will be treated in a harmonious manner to become decorative.

35 By using various curved or bent grooved bars, the strips may be engaged therein and form an endless amount of novelty arrangements. All parts are so made that they will become a part of the unit but will not vary
40 from the basic purpose of being a flexible, bendable, foldable and rollable ensemble unit. The strips and bars can be used for making of articles as radiator covers, tables, benches, chairs, beds, furniture in general, sliding
45 doors, rolling panels, etc.

More specifically stated, the invention proposes the use of strips, bendable and rigid bars and cushions arranged so as to provide
50 and giving more comfort and applying many

new means of original ideas for the home-maker. The strips when used as a folding bed can be of pliable material acting as a spring board or a spring. It is proposed to provide
55 many different methods of tying the strips together to aid in its adaptability for the various units. Various ornamentations may be applied to the strips which can be arranged for view from one or both sides. The strips
60 may be connected to each other by wire or stringing, hook and eye methods, chain and interlacing methods, tongue and groove methods, glue backing methods and end stapling methods. In all these different arrange-
65 ments, care should always be taken to keep the purpose of the invention in mind, that is, to make a very flexible unit.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following
70 description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a
75 material part of this disclosure:—

Fig. 1 is a perspective view of a bedstead constructed according to this invention.

Fig. 2 is a fragmentary perspective view of the foot board of the bed.
80

Fig. 3 is a transverse vertical sectional view of flexible material for use according to this invention.

Figs. 4 and 5 are views similar to Fig. 3 but illustrating modifications.
85

Fig. 6 is a fragmentary front elevational view of material of modified form and constructed according to this invention.

Fig. 7 is a fragmentary horizontal sectional view taken on the line 7—7 of Fig. 3.
90

Figs. 8 and 9 are fragmentary perspective views of the bottom ends of strips constructed according to modified forms.

Fig. 10 is a perspective view of an easy chair constructed according to this invention.
95

Fig. 11 is a perspective view of another type of chair constructed according to this invention.

Fig. 12 is a perspective view of an adaptable sign unit.
100

Fig. 13 is a fragmentary perspective view of material for use in making the various articles.

Fig. 14 is a side view of the material shown in Fig. 13 but made into a roll.

Figs. 15 and 16 are fragmentary perspective views of modified strips.

Fig. 17 is a fragmentary perspective view of a bar and strips arranged according to this invention.

Fig. 18 is a fragmentary perspective view of another bar portion for connection with the bar shown in Fig. 17.

Fig. 19 is a fragmentary perspective view of one of the strips constructed according to modified form.

Fig. 20 shows a side view of form shown in Fig. 19, with a further developed form.

In Fig. 1 a bed 20 has been illustrated which is provided with a foot board 21 and a head board 22. Each of these boards consists of a plurality of vertical strips 23 of different heights and each provided with tongues 24 and 25 for engaging in bendable strips such as 26 and 27. The bendable strip 27 constitutes a base strip and is formed with a top groove for receiving the tongues 25 which are arranged upon the bottom ends of the strips. The tongues 24 are arranged upon the sides of the strips 23 and engage in grooves formed in the bendable bar 26. The other parts of the bed may be of conventional construction.

In Fig. 3 a modified form of construction has been shown in which top and bottom bendable bars 28 and 29 respectively have been arranged for supporting a plurality of vertical strips 30. These bendable bars are of hollow construction and have turned in ends providing grooves so that the tongues 31 from the vertical strips may engage therein. In addition, the vertical strips 30 are formed with lateral grooves 32 engaged by bendable strips 33 for holding the parts together. The adjacent vertical edges of the strips 30 are arranged with ball and socket connections 34 so that the strips are connected and flexible at the same time.

In Fig. 4, top and bottom bendable strips 35 have been illustrated which are of solid construction and formed with grooves for receiving the tongues 36 of vertical strips 37. These vertical strips are provided with a horizontal top lateral tongue 38 engaged by a flexible grooved strip 39 and a bar of bottom horizontal lateral tongues 40 on opposite sides of the strips and each engaged by flexible, bendable groove strips 41.

In Fig. 5, another modified form has been shown in which there is a top bendable strip 42 and an intermediate bendable strip 43. Vertical strips 44 are provided with top and bottom tongues 45 engaging in the grooves of the horizontal strips 42 and 43. The horizontal intermediate strip 43 is also provided

with other grooves for receiving the tongues 46 of additional vertical strips 47. Wires 48 may be extended thru all of the strips for joining them in flexible fashion.

In Fig. 6, a modified means has been illustrated for joining the strips. The strips are indicated by reference numeral 49 and adjacent faces are arranged with hooks 50 and recesses 51, respectively. A hook 50 projects from one of the strips and engages in the recess 51 of an adjacent strip. The recess is formed with a horizontal portion 52 and a vertical portion 53 so as to maintain engagement of the hooks.

In Fig. 8, a modified form of vertical strip 53 has been illustrated which is provided with screws 54 having heads 55 constituting the tongue structures for engaging within the grooves of the bendable strips. As shown, the heads 55 are circular in transverse cross section. In Fig. 9, a vertical strip 56 has been illustrated formed with a lateral horizontal tongue 57 and with a bottom recess 58. A guide element 59 is engaged within the recess 58 and is formed with a circular portion 60 constituting a tongue.

In Fig. 10, a chair has been shown which consists of a plurality of vertical strips 61 attached upon cushion material 62. This material is arranged upon one side of the strips and as shown is bent so as to form the sides and back of the chair. Horizontal material 63 similar to the material just described is arranged within the sides of the chair and constitutes the seat portion. Strings 64 are connected for holding the seat portion and the sides of the chair together. This material used in the formation of the chair may be sold by the yard or foot. The strings 64 may be opened and the chair disassembled and the parts used as a mattress or a cushion.

In Fig. 11, a chair has been illustrated consisting of a frame 65 formed of bendable grooved bars shaped to present support feet portions, seat support portions 67 and a seat back portion 68. Hinges 69 are arranged in the frame so that the frame may be collapsed when desired. A cushion 70 is arranged with its strips 71 slightly projecting and engaging in the grooves 72 formed in the frame structure. If desired the cushion may be removed and the frame collapsed.

In Fig. 12, a sign has been shown which consists of a frame 73 having vertical sides 74 formed with grooves 75 and supporting a plurality of horizontal strips 76. The ends of the strips engage within the grooves and the strips may be flexibly connected by woven ribbons 77. A canvas glued back 78 is also shown attached upon the horizontal strips. Brackets 79 and 80 may be supported upon the sign. The lower portion of this sign is rolled to indicate that it is quite flexible.

In Fig. 13, a horizontal groove bar 81 has

been illustrated provided with an elbow portion 82 so as to be in bent condition. A hinge 83 connects with one end of the bar 81 and pivotally supports a vertical groove bar

84. A plurality of vertical strips 85 are engaged within the grooves of the bar and constitute flexible material according to this invention. In Fig. 14, material 86 constructed in a fashion similar to that shown in Fig. 13 is shown wound up in a roll ready for commercial sale by the foot or yard.

In Figs. 15 and 16, vertical strips 87 and 88 have been illustrated for use in lieu of the various vertical strips before recited. These strips distinguish from the other strips in that they have bent edges 89 and 90. The edges 89 have the corners square while the edges 90 are curved.

In Figs. 17 and 18, a detailed portion of a construction has been shown which consists of a metal casing 91 bent so as to provide a hollow, and an opening groove 92 communicating with the hollow. A filler 93 is engaged within the hollow and is formed with a groove 94 aligning with the groove 92. Vertical strips 95 have bottom tongues 96 engaged in the groove 94. Spacers 97 are arranged in the groove between the tongues 96 for holding the vertical strips in various spaced positions.

A means is provided for joining the bar shown in Figs. 17 and 18. This means consists of pegs 98 projecting from one of the sections and engageable in apertures 99 formed in the other of the sections. A lock tongue 100 also projects from one of the sections and is engageable in a hollow 101 formed in the other of the sections. The hollow and the lock tongue are formed with serrations 102 constituting gripping means.

In Fig. 19, a modified form of strip has been shown which is provided with an insert of exceptional flexible material. More specifically, the strip consists of a top strip section 103, a bottom strip section 104 and an elastic intermediate section 105 connected with each of said sections. Preferably the elastic section may be hollow as indicated by reference numeral 106 for adding to its flexibility. Threaded rods 107 pivotally connect at one of the sections, such as section 104 and extend thru the elastic section 105 and partially extend into a hollow 108 formed in the section 103. Nuts 109 threadedly engage upon the rods and project from openings in the sides of the section 103 so that upon rotation of the nuts the top strip section may be bent at various angles to the bottom strip section and the compressing of portions of the elastic intermediate section being depended upon to permit the bending. Strips thus constructed may be applied to all of the various forms in which this invention is usable and as previously described.

In Fig. 20, strip section 103 is provided

with an extendible extension 110 which may be secured together by set screw 111 or by any other suitable manner.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:—

1. In an ensemble unit of the class described, a hollow bar with a groove, a filler engaged in the hollow and having a groove aligning with said groove, vertical strips with tongues engaged in said grooves, spacers within the grooves for holding the strips in spaced condition, and means for joining sections of said bar, comprising projections on one of the sections and engageable in complementary openings in the other of the sections, and a lock tongue projecting from one of the sections engageable in an opening in the other of the sections.

2. In an ensemble unit of the class described, a hollow bar with a groove, a filler engaged in the hollow and having a groove aligning with said groove, vertical strips with tongues engaged in said grooves, spacers within the grooves for holding the strips in spaced condition, and means for joining sections of said bar, comprising pegs projecting from one of the sections and engaging in apertures in the other of the sections, and means for locking the sections together.

3. In an ensemble unit of the class described, a hollow bar with a groove, a filler engaged in the hollow and having a groove aligning with said groove, vertical strips with tongues engaged in said grooves, spacers within the grooves for holding the strips in spaced condition, and means for joining sections of said bar, comprising pegs projecting from one of the sections and engaging in apertures in the other of the sections, a lock tongue projecting from one of the sections and engaged in an opening in the other of the sections, and gripping means formed on the tongue.

4. In an ensemble unit of the class described, a hollow bar with a groove, a filler engaged in the hollow and having a groove aligning with said groove, vertical strips with tongues engaged in said grooves, spacers within the grooves for holding the strips in spaced condition, and means for joining sections of said bar, comprising pegs projecting from one of the sections and engaging in apertures in the other of the sections, a lock tongue projecting from one of the sections and engaged in an opening in the other of the sections, gripping means formed on the tongue, and complementary gripping means

formed in the opening engaged by the tongue.

5. In an ensemble unit of the class described, a hollow bar with a groove, a filler engaged in the hollow and having a groove aligning with said groove, vertical strips with tongues engaged in said grooves, spacers within the grooves for holding the strips in spaced condition, and means for joining sections of said bar, comprising pegs projecting from one of the sections and engaging in apertures in the other of the sections, a lock tongue projecting from one of the sections and engaged in an opening in the other of the sections, gripping means formed on the tongue, and complementary gripping means formed in the opening engaged by the tongue, said complementary gripping means formed in the opening engaged by the tongue including serration.

6. In an ensemble unit of the class described, a hollow bar with a groove, a filler engaged in the hollow and having a groove aligning with said groove, vertical strips with tongues engaged in said grooves, spacers within the grooves for holding the strips in spaced condition, and means for joining sections of said bar, comprising pegs projecting from one of the sections and engaging in apertures in the other of the sections, and a lock tongue projecting from one of the sections and engaged in an opening in the other of the sections.

7. In an ensemble unit of the class described, a hollow bar with a groove, a filler engaged in the hollow and having a groove aligning with said groove, vertical strips with tongues engaged in said grooves, spacers within the grooves for holding the strips in spaced condition, and means for joining sections of said bar, comprising pegs projecting from one of the sections and engaging in apertures in the other of the sections, and a lock tongue projecting from one of the sections and engaged in an opening in the other of the sections, said lock tongue including serrations.

In testimony whereof I have affixed my signature.

SAMUEL S. MITTLEBURG.

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