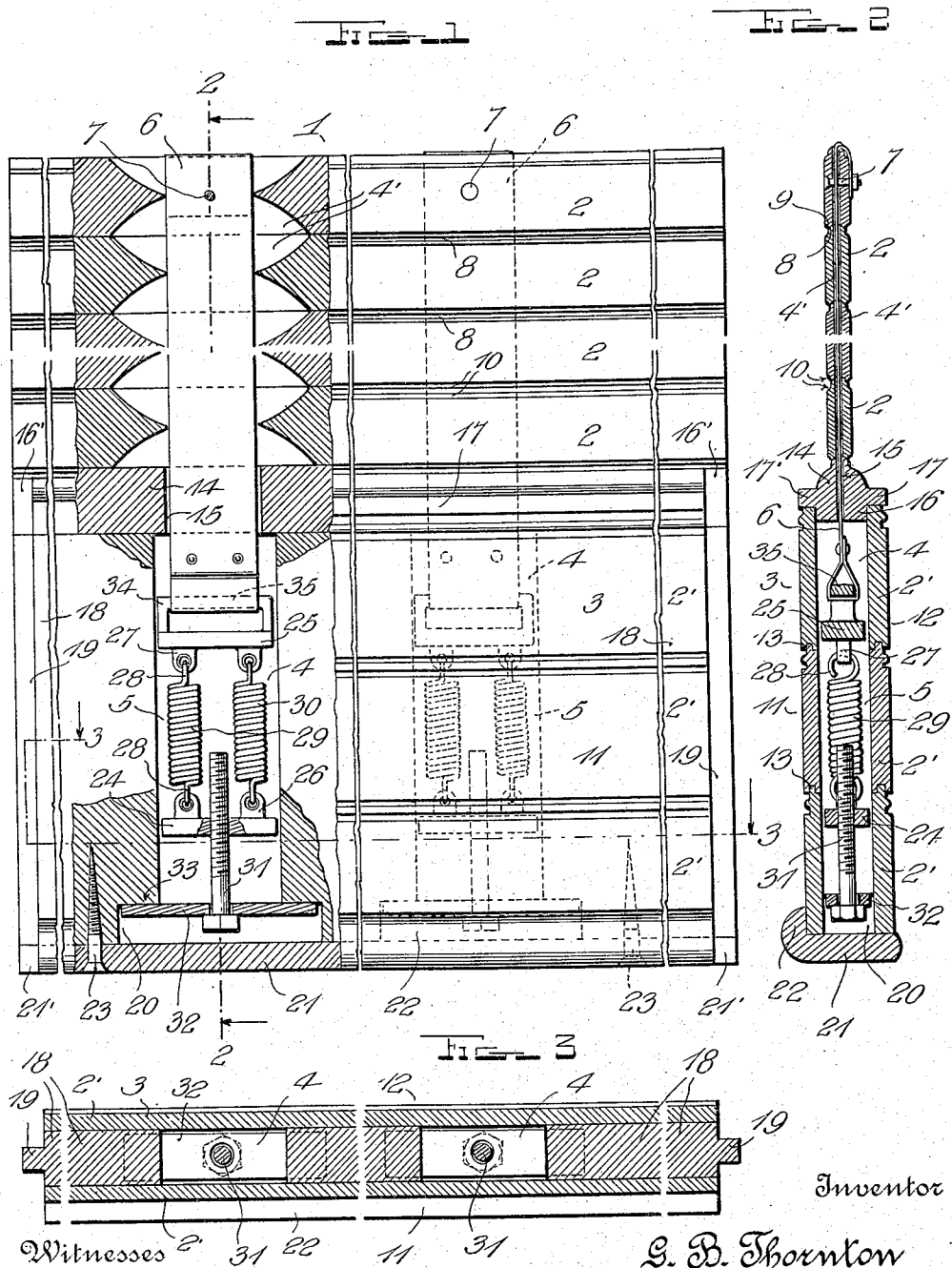


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 ROLLING FLEXIBLE PARTITION OR CURTAIN.
 APPLICATION FILED JULY 6, 1915.

1,170,856.

Patented Feb. 8, 1916.



Witnesses
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UNITED STATES PATENT OFFICE.

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ROLLING FLEXIBLE PARTITION OR CURTAIN.

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Specification of Letters Patent.

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Application filed July 6, 1915. Serial No. 38,383.

To all whom it may concern:

Be it known that I, GEORGE B. THORNTON, a citizen of the United States, residing at Belleville, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Rolling Flexible Partitions or Curtains; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in flexible wooden structures, such as shutters, blinds, partitions, mats and the like.

The primary object of the invention is to provide an improved construction of rolling partition or curtain composed of wooden sections or slats secured together by means of bands, and the special object of the invention is to so construct such a curtain or partition as to reduce or entirely eliminate the tendency of the curtain to lengthen when rolled or flexed.

Another object of the invention is to so connect the slats of such a curtain as to permit shrinkage thereof without causing separation or opening of the joints and yet to permit the bending, coiling or rolling up of the article so constructed when desired.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings: Figure 1 represents a front elevation partly in section of a curtain constructed in accordance with this invention, parts being broken out. Fig. 2 represents a vertical section thereof, taken on the line 2—2 of Fig. 1. Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 1.

In the embodiment illustrated, a curtain or partition 1 is shown composed of a plurality of flexibly connected slats 2 and a hollow bottom rail 3, with chambers 4 formed in said rail and in which is designed to be mounted tension devices 5 for the bands 6 which connect the slats 2 and which are preferably constructed of strips or ribbons of bronze, one end of which is securely fastened to the top slat of the partition or curtain 1 as shown at 7 and the lower end of which is connected to the tension device 5 mounted in the hollow bottom rail 3.

The connection between the slats 2 of the

partition is here shown in the form of tongues 8 which fit in grooves 9 in the edges of adjacent slats, each slat being provided on one edge with a tongue and on its other edge with a groove. The tongues 8 here shown, are semi-cylindrical in cross section and the grooves 9 rounded to snugly receive said tongues. The meeting edges of these slats on the opposite faces thereof are beveled as shown at 10, and which thus provide for the rolling of the curtain. This tongued and grooved connection of the slats provides a continuous substantially one-piece structure when the curtain is in lowered operative position, so that no air or moisture may pass between the slats and outsiders cannot peep through the cracks between them, such as is usually the case with curtains of this character.

The hollow rail 3 for housing the tension device 5 is shown in the form of a box-like structure, the side walls 11 and 12 of which are composed of slats 2' connected by tongued and grooved joints 13 so that the partition 1 together with this bottom rail will present a uniform pleasing appearance. The upper ends of these side walls 11 and 12 are connected by a cross bar 14 having slots 15 extending therethrough for the passage of the slat connecting bands 6. This cross bar 14 has a central rib 16 of a width equal to the distance between the side walls 11 and 12 and between which it is inserted and secured by any suitable means. Arranged on opposite sides of said bar at the base of said rib are laterally extending longitudinal flanges 17 which are designed to extend over the upper edges of the side walls 11 and 12 of the bottom rail, (see Fig. 2). This bar 16 has transversely extending ribs 16' at its ends alining with the ends of slats 2 and of the same thickness. Upright longitudinally spaced filler or spacing bars 18 are arranged in the rail 3 for reinforcing and strengthening said rail and forming between them the chambers 4 in which are mounted the tension devices 5, the end walls of said chambers formed by the side edges of said bars forming guides for said tension devices. The end bars 18 are provided with upright ribs 19 on their outer edges which are of the same thickness as the slats 2 and are arrayed in alinement with the ends of said slats to adapt them together with the slat ends to be slidably engaged with guides, (not shown). These bars 18 are provided at their lower

ends in the edges thereof with recesses 20 for a purpose to be described.

The lower end of the hollow rail 3 is closed by a removable member 21 here shown in the form of a plate provided at one side edge with an upright flange 22 which is designed to engage the outer face of one wall of said rail 3. This plate is secured to the rail by wood screws 23 which may be removed when access to the interior of the rail is desired and is provided at its ends with transverse ribs 21' alining with the ribs 19 of the end spacing members 18. The tension devices 5, a plurality of which are mounted within this rail, are each here shown in the form of two metal heads 24 and 25 provided on their opposed faces with laterally extending apertured ears 26 and 27 respectively and which are designed to receive hooks 28 formed on the opposite ends of coiled springs 29 and 30. These springs are preferably made of heavy wire and closely coiled in helical form, which will yield sufficiently to permit the slats of the curtain or partition to which they are connected to roll properly, but exert sufficient tension to hold said slats in engagement and prevent separation of the joints thereof. An adjusting bolt 31 is shown secured in a bar 32 mounted in the lower end of the hollow rail 3 below each chamber 4 thereof and which is held in operative position in said rail by shoulders 33 formed by the inner or upper walls of the recesses 20. This bolt 31 extends transversely through the lower head 24 between the apertured lugs 26 thereof and is adapted to be adjusted for controlling the position of the tension device relatively to the slats with which it is connected. The upper head 25 of this tension device is here shown provided with an upwardly projecting bail-shaped member 34 here shown substantially U-shaped with the cross bar 35 thereof extending parallel with the head 25 and with which is designed to be engaged one of the bronze bands 6 which connect the tension devices with the slats. In the construction of this improved curtain or partition, when the slats have been assembled and the tension devices 5 secured within the hollow rail 3, the metallic bands or tapes 6, which are connected with said tension devices, are passed upward through openings 4' formed edgewise through the slats and are engaged at their upper ends with the outermost slat of the series and thus it will be obvious that both the tapes and tension devices connected therewith are completely housed within the curtain, and hence all injury thereto either from weather influences or otherwise, is prevented.

From the above description it will be obvious that by means of the adjusting screws 31 the tension of the bands 6 can be regulated at will, and being under tension serve to hold all of the slats in close contact edge to edge and thus prevent them from separating to such an extent as to cause the disengagement of the interlocking tongues and grooves thereof. When the slats shrink, which would cause the separation or opening of the joint or joints, the tensional bands 6 are decreased in length by the contraction of the springs 29 and 30 to an extent corresponding to the total amount of shrinkage, thereby drawing the slats together.

When the partition is rolled or coiled up, as in the case of rolling partitions, shutters, or blinds, the alternation of length caused by the turning of the slats about their edges of contact is allowed for by the drawing apart of the coils of the springs which increases the length of the bands 6.

I claim as my invention:

In a flexible partition, the combination of a plurality of slats, flexible elements connecting said slats, a hollow rail disposed at the lower end of said partition and having a detachable closure at its lower end and openings in its upper end for the passage of the flexible slat connecting elements, longitudinally spaced fillers arranged in said rail to provide chambers between them in which said flexible elements extend, the opposed ends of said fillers being recessed at their lower edges to form seats, an apertured bar spanning each chamber and engaged at its ends with said seats, spaced heads mounted in each chamber and each having longitudinally spaced ears on its inner face, coiled springs having loops at their opposite ends engaged with said ears for yieldingly connecting said heads, the upper head having an upwardly projecting substantially U-shaped loop with which the inner end of one of said flexible slat connecting elements is engaged, the other head having a threaded aperture extending transversely therethrough between its ears, and a bolt inserted upwardly through the aperture in said chamber spanning bar and having threaded engagement with the apertured head whereby said head may be adjusted to vary the tension of said springs.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE B. THORNTON.

Witnesses:

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