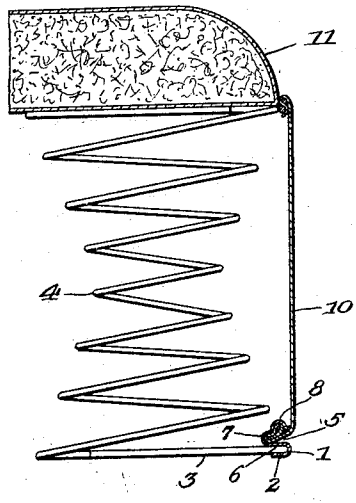
June 17, 1930. C. V. LOVELL 1,764,878

WELT LOCK FOR SPRING CONSTRUCTIONS

Filed Feb. 18, 1928

Fig. 1.



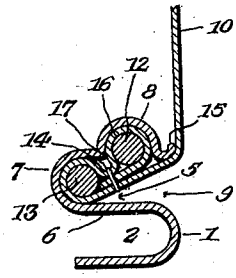


Fig. 2.

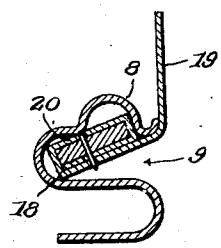


Fig. 3.

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Patented June 17, 1930

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UNITED STATES PATENT OFFICE

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WELT LOCK FOR SPRING CONSTRUCTIONS

Application filed February 18, 1928. Serial No. 255,415.

This invention relates to a welt lock for spring seats and analogous spring constructions.

The object of the present invention is to improve the construction of the means for attaching the curtain or apron of the upholstery of a spring seat or analogous spring construction to the base frame and to provide a simple, practical and efficient welt lock of strong, durable and comparatively inexpensive construction adapted to do away entirely with the closing operation of the base frame commonly employed in S-shaped base frames for securing the lower edge of the curtain or apron to the base frame.

A further object of the invention is to provide a welt lock of this character which will enable a welt at the lower edge of the curtain or apron to be readily introduced into one of the grooves or channels of the S-shaped base frame and which, when inserted in the groove or channel will be securely retained therein.

A further object of the invention is to provide an improved frame and welt lock which will permit the removal of the welt of the lower edge of the curtain or apron without injuring the frame or interfering with the continued use of the same. In spring seat constructions where the base frame is closed and clamped against the lower edge of the apron or curtain to retain the lower edge in a groove or channel of the base frame, the base frame is ruined and has to be replaced should it become necessary to remove the apron or curtain from the groove or channel and this is a serious objection in a production plant and such objection is entirely overcome by the present invention.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawing and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—

Figure 1 is a vertical sectional view of a portion of a spring seat construction provided with a welt lock constructed in accordance with this invention.

Fig. 2 is an enlarged detail sectional view of the welt lock.

Fig. 3 is a similar view, illustrating another form of locking welt.

In the accompanying drawing in which is illustrated the preferred embodiments of the invention, 1 designates an S-shaped base frame constructed of sheet metal and having a lower inwardly facing groove or channel 2 in which is clamped the lower convolution 3 of a spring 4. The S-shaped frame which in practice extends around the front, sides and back of the spring seat or other spring construction, has an upper outwardly facing groove or channel 5 formed by an approximately horizontal bottom wall 6, an inclined top wall 7, and a front wall 8 extending downwardly from the front of the top wall and spaced from the front of the bottom wall to form a constricted front entrance opening 9 through which the welt at the lower edge of the curtain or apron 10 is introduced while the welt is in substantially a horizontal position. The spring 4 supports the upholstery 11 and the curtain or apron depends from the upholstery as clearly illustrated in Fig. 1 of the drawing, and may be connected with the same in any suitable manner. The welt is introduced into the pocket formed by the groove or channel 5 of the base frame while the curtain or apron is in a loose or slackened condition resulting from the compression of the spring 4 and when the spring is released, the curtain or apron will be drawn taut and the welt will be held in the position illustrated in Fig. 2 of the drawing and effectually prevented from accidentally leaving the pocket. The welt in the form of the invention illustrated in Figs. 1 and 2 of the drawings is formed by a pair of cylindrical welt cords 12 and 13. The material at the lower marginal edge of the cur-

tain or apron is wrapped around the upper or front welt cord 12 being extended upwardly from a point slightly below the welt cord and around the front over the top and forwardly at the back of the welt cord. It is then extended rearwardly to the back of the lower welt cord 13 and then downwardly and forwardly around the front of the same, the three thicknesses of the material of the apron or curtain at the space between the welt cords being united by one or more rows or stitching 14. The curtain or apron extends upwardly and outwardly at an inclination from the bottom of the inner or rear welt cord 13 and is substantially straight between the bottom of the welt cord and the lower edge of the front wall 8 of the groove or channel 5 so that the pull is upon the lower portion of the locking welt which is drawn to a position substantially crosswise of the restricted entrance opening 9 so that it is impossible for the lock welt to pass through the said entrance opening 9 while it is in such crosswise position illustrated in detail in Fig. 2 of the drawing. The lower edge of the front wall 8 of the groove or channel is curved outwardly and upwardly forming a curved flange 15 which presents an outer convex bearing surface to the curtain or apron. This smooth convex bearing surface prevents any chaffing, wear or cutting of the curtain or apron. The locking welt formed by the welt cords 12 and 13 is of greater width than thickness and the thickness of the locking welt is approximately equal to the width of the restricted entrance opening so that the locking welt when in a horizontal position may be readily pressed into the pocket formed by the groove or channel 5. The top inclined wall of the pocket is bent or shaped to form two interior grooves 16 which conform to the configuration of the locking welt and form seats for the welt cords, the arcuately curved portions of the top wall uniting at approximately the center to form an inwardly projecting ridge 17 which extends between the welt cords as clearly illustrated in Fig. 2 of the drawing. The locking welt is firmly held in the pocket against the seats of the inclined top wall by the tension or strain on the curtain or apron.

Instead of providing a locking welt of two separate welt cords and coiling or wrapping the lower marginal portion of the curtain or apron around the same, a locking welt having a greater width than thickness may be formed by a single welt strip 18 as illustrated in Fig. 3 of the drawing. The welt strip 18 is substantially oblong in cross section and is adapted to be arranged crosswise of the entrance opening 9 of the upper groove or channel of the base frame. The marginal portion of the apron or curtain 19 is wrapped or coiled around the welt strip 18 and is secured to the same by one or more rows of stitching 20 which is preferably located slightly below the center of the welt strip so that the apron or curtain extends from the lower portion of the welt strip in substantially a straight line to the lower edge of the front wall 8 of the groove or channel 5. The pull or strain on the curtain or apron will maintain the locking welt in a cross-wise position with relation to the restricted entrance opening 9 and there will be no liability of the locking welt becoming accidentally disengaged from the pocket of the base frame. The locking welt is adapted to be readily introduced into the pocket of the base frame in a substantially horizontal position while the curtain or apron is loosened or slackened and the operation is the same as that described in connection with the locking welt illustrated in Fig. 2 of the drawing. In both forms of the invention the locking welt may be removed from the pocket by the use of a suitable tool without liability of ruining the base frame.

What is claimed is:—

1. A welt lock including a base frame having a groove or channel opening outwardly at the front of the frame to form a pocket and provided with a restricted front entrance opening, said base frame being provided in one of the walls of the groove or panel with a plurality of separate seats, and an apron or curtain provided at its lower marginal portion with a locking welt consisting of a plurality of welt cords fitting in the said separate seats and forming a welt of greater width than thickness adapted to be introduced edgewise into the pocket and to be arranged cross-wise with relation to the entrance opening to prevent accidental removal from the pocket.

2. A welt lock including a base frame having a groove or channel opening outwardly at the front of the frame to form a pocket and provided with a restricted front entrance opening, said base frame being provided in one of the walls of the groove or channel with separate seats, and a curtain or apron provided at its lower marginal portion with a welt composed of two cylindrical cords arranged in the said seats, the marginal portion of the curtain or apron being coiled around the cylindrical cords and the latter forming a locking welt of greater width than thickness to enable it to be passed edgewise into the restricted entrance opening.

3. A welt lock including a base frame having a groove or channel opening outwardly at the front of the frame to form a pocket and provided with a restricted front entrance opening, and a curtain or apron provided at its lower marginal portion with a welt composed of two cylindrical cords, the marginal portion of the curtain or apron

being coiled around the cylindrical cords and the coiled portions being secured together between the welt cords whereby the apron is caused to exert an upward pull on the lower portion of the lock welt to maintain the latter in engagement with the top of the pocket at a point above the restricted entrance opening.

4. A welt lock including a base frame having a groove or channel opening outwardly at the front of the frame to form a pocket and provided with a restricted front entrance opening and an apron or curtain provided at its lower marginal portion with a lock welt of greater width than thickness and of a size to be introduced edgewise into the pocket through the restricted entrance opening, said lock welt consisting of a plurality of welt cords and the marginal portion of the curtain or apron being passed around the welt cords and securing the same to the apron or curtain, the latter being arranged to exert a pull upon the lower portion of the lock welt for maintaining the same in a cross-wise position with relation to the restricted entrance opening and in engagement with the walls of the groove or channel at a point above the restricted entrance opening.

5. A welt lock including a base frame having a groove or channel opening outwardly at the front of the frame to form a pocket and provided with a restricted front entrance opening, said pocket being provided with an approximately horizontal bottom wall and having an approximately inclined top wall and a front wall depending from the said top wall, and an apron or curtain having a welt lock of greater width than thickness and of a size to be passed edgewise through the restricted entrance opening and the pocket being of sufficient depth from front to rear to permit the welt lock to be inserted wholly within the pocket in such position and to be turned within the pocket cross-wise of the said entrance opening with its upper portion fitting against the said front wall, said curtain or apron being attached at the lower outer or front portion of the lock welt whereby the curtain or apron will exert a pull upon the lower portion of the lock welt for maintaining the same in the said cross-wise position with respect to the entrance opening and in engagement with the top and front walls at a point above the restricted entrance opening.

6. A welt lock including a base frame having a groove or channel opening outwardly at the front of the frame to form a pocket and provided with a restricted front entrance opening, said pocket being provided with an approximately horizontal bottom wall and having an inclined top wall composed of upper and lower curved portions forming interior concave seats, and a front wall depending from the top wall, and a curtain or apron having a lock welt arranged within the said pocket, and composed of a pair of welt cords fitting the seats of the said top wall, said curtain or apron being attached to the lock welt at the lower front portion thereof whereby the pull on the curtain will maintain the lock welt in engagement with the said seats.

7. A welt lock including an approximately S-shaped base frame having a lower inwardly opening groove or channel and an upper outwardly opening groove or channel, the upper groove or channel forming a pocket having an approximately horizontal bottom wall, an inclined top wall and a front wall depending from the top wall and spaced from the bottom wall to form a constricted entrance opening and having its lower edge curved outwardly and upwardly to present a smooth exterior surface, and a curtain or apron having a lock welt of greater width than thickness and of a size to be introduced edgewise into the pocket and the pocket being of sufficient depth from front to rear to permit the lock welt to be inserted wholly within the pocket in such position and to be turned within the pocket crosswise with respect to the entrance opening against the inclined top wall and depending front wall, said apron being attached to the lower front portion of the lock welt and exerting an upward pull on the lower portion of the said lock welt whereby the lock welt will be normally maintained in such position by the strain or pull on the apron or curtain.

8. A base frame for spring structures, composed of a strip of sheet metal folded longitudinally upon itself to provide an inwardly opening groove and an outwardly opening groove to form a pocket and provided with a constricted front entrance opening, said pocket being closed at the back and having an approximately horizontal bottom wall and a top wall directed upwardly and outwardly in an inclined direction with relation to said approximately horizontal bottom wall, with the outer portion thereof turned downwardly toward said approximately horizontal wall to form the said constricted front entrance opening and thence directed outwardly and upwardly and substantially vertically in a plane substantially in line with the back wall of said inwardly opening groove.

In testimony whereof I have hereunto set my hand.

CLARENCE V. LOVELL.