April 26, 1938. J. G. HUYE 2,115,633

HAT STAY OR SUPPORT AND COMBINATION THEREOF WITH A HAT BOX

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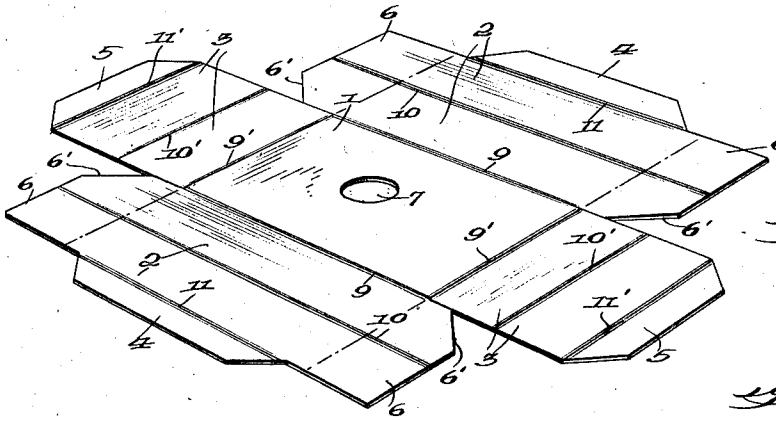


Fig. 1.

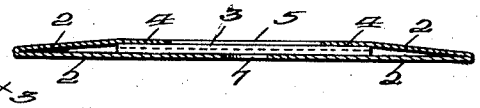


Fig. 3.

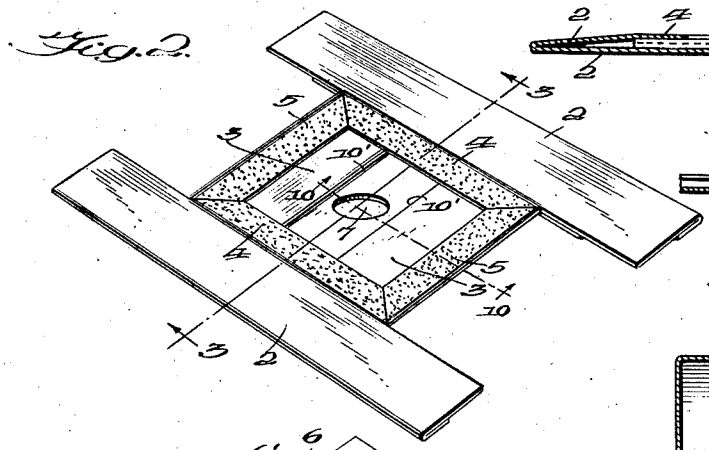


Fig. 2.

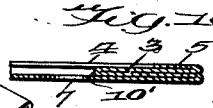


Fig. 10.

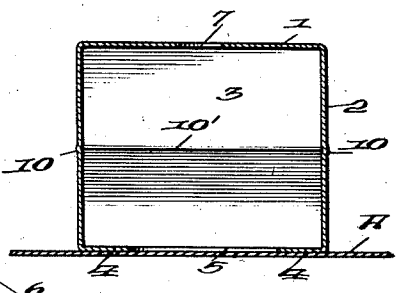


Fig. 5.

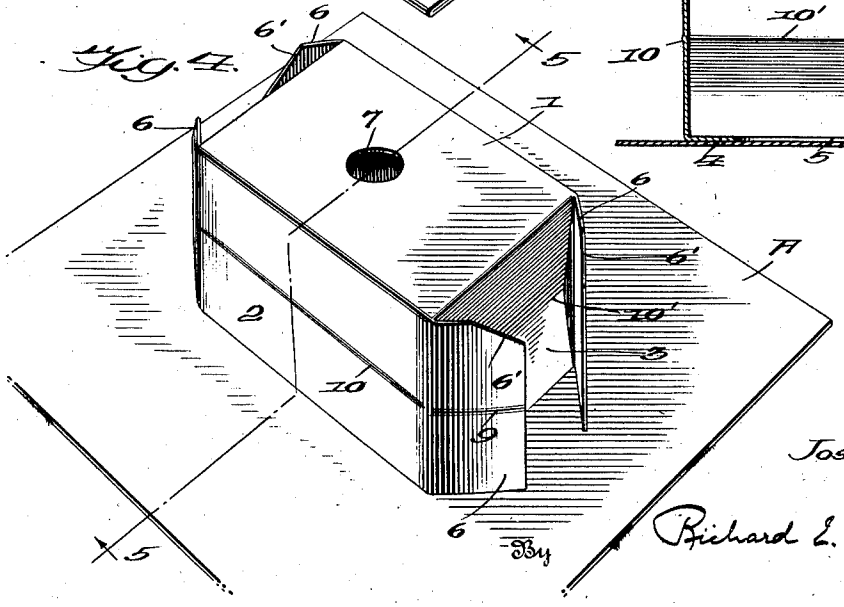


Fig. 4.

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Fig. 6.

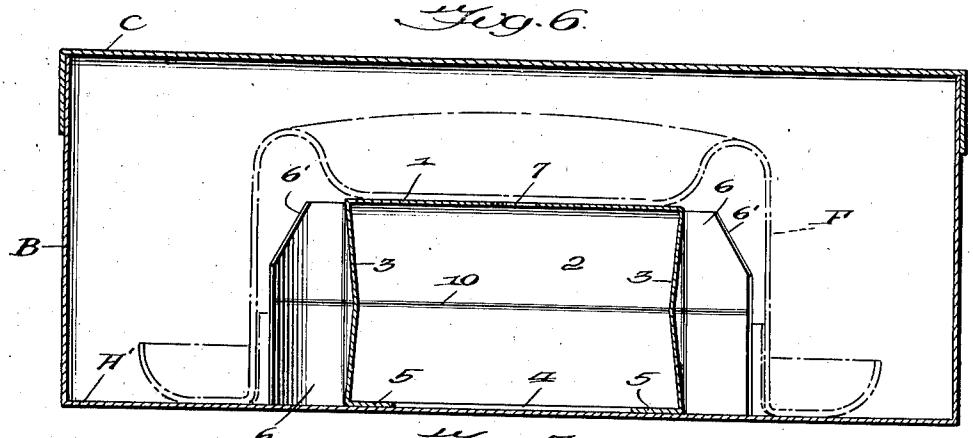


Fig. 7.

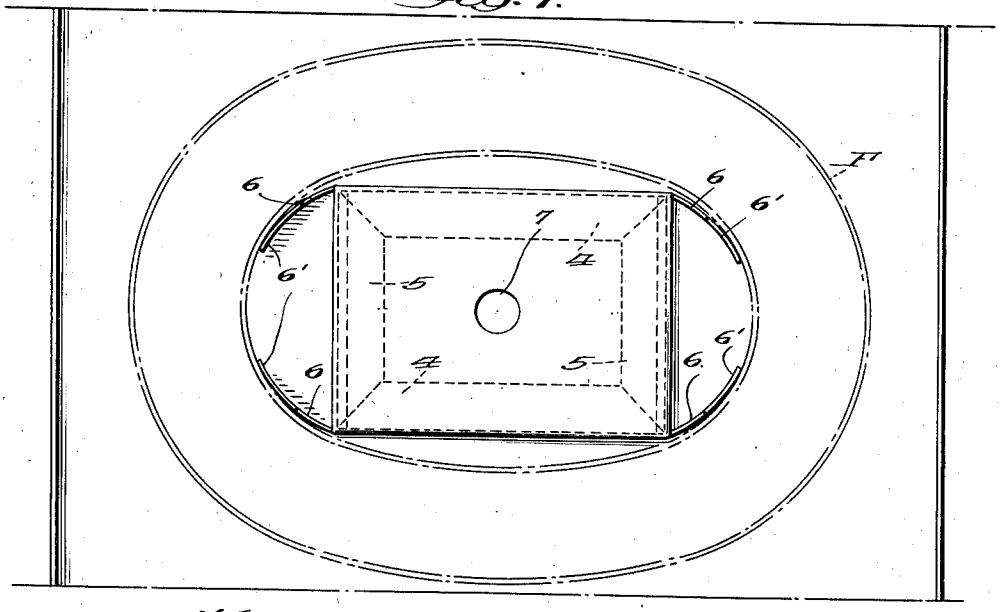


Fig. 8.

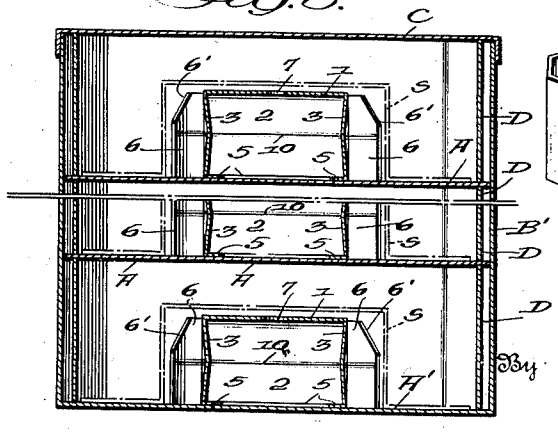
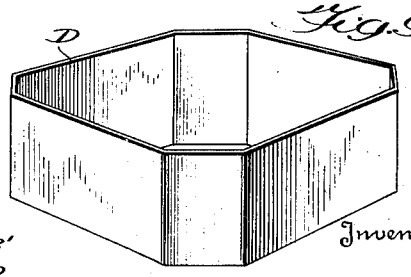


Fig. 9.



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2,115,633

HAT STAY OR SUPPORT AND COMBINATION THEREOF WITH A HAT BOX

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Application March 20, 1936, Serial No. 69,933

8 Claims. (Cl. 206—8)

This invention relates to the combination of a collapsible hat stay and a hat box whereby it is made practical to provide hat boxes with hat stays or supports which in erected condition will properly center or position, support and hold the hat and which in collapsed condition will not interfere with any one of the several modes of packing, shipping and/or storing hat boxes as presently practiced; and further, this invention relates to such hat stays or supports per se and to the several features thereof.

The primary purposes of this invention are to provide a combination of a hat box with a collapsible hat stay or support to the ends above stated; and to provide a hat stay or support of any suitable inherently resilient or mildly resilient paper board or other suitable material and which may be shipped and stored flat and which on being erected for use will automatically lock itself erected, and which in erected condition will firmly resiliently press upon and engage the opposite end portions of the hat to hold the same firmly in place. Further objects are to provide such a stay with portions to engage the opposed inner faces of the ends of the hat and which will conform to the shape of such opposed faces; and to provide a stay that will adjust itself to the size of an individual hat to be supported by such stay throughout the full commercial range of hat sizes.

This stay or support is not limited to use with any particular kind of hat box. It may be secured to the upper face of a knock-down set-up box such as, for instance, illustrated and described in my Patent No. 2,025,589, granted December 24, 1935, for Boxes, or to the upper face of the usual fixed form set-up box, such as illustrated in Figures 6 and 8 of the accompanying drawings, or to the upper face of the bottom of any of a number of well known conventional types of folding hat boxes, or to flat paper board separators for use in connection with the packing of a number of hats in a single shipping or storing box. Its feature of folding or lying flat until desired for use is equally desirable in connection with all of the above mentioned different constructions of boxes and with said separating boards, as by folding or lying flat it enables the bottom sections of the knock-down set up boxes to be shipped and filed flat in a small space in exactly the same manner as though the stay were not applied thereto, and the same applies as to the conventional folding boxes, also to said separating boards or separators, while in lying flat against the bottom of the fixed-form set-up boxes it does not in any way interfere with the usual practice of storing this type of box by nesting, that it by putting progressively smaller boxes in the next larger size box so that the largest size box will contain a large number of smaller boxes so conserving space in the box storing or shipping room.

Herein I show and describe the present preferred embodiment of my invention simply by way of illustration of the practice of my invention, as by law required. However, my invention is capable of other embodiments and the several details may be substituted or modified in various different ways, all without departing from my said invention. Therefore, the description and drawings hereof are to be considered as merely illustrative and not as exclusive.

In the accompanying drawings:

Figure 1 represents a near plan perspective bottom view of a stay embodying my invention, spread out as cut from the paper board stock, after scoring and the application of adhesive, but prior to folding and securing to the upper face of the bottom of a box or to a separator;

Figure 2, a similar view thereof, in folded condition;

Figure 3, a sectional view on the line 3—3 of Figures 2, looking in the direction of the arrows;

Figure 4, a perspective view thereof as applied to an anchoring or supporting member which may be either a separator A or the bottom A' of a box of any known construction;

Figure 5, a sectional view on the line 5—5 of Figure 4, looking in the direction of the arrows; the folded position of the stay being indicated by dotted lines;

Figure 6, a sectional view at right angles to Figure 5 showing the stay as used in a set-up box, the stay being shown in erected condition and a hat applied thereto being indicated in dot and dash lines;

Figure 7, a top plan view, broken away, of Fig. 6;

Figure 8, a view similar to Fig. 6 showing a plurality of hats as packed with the use of the stays in a big shipping box, broken away, and employing separators and supporting bands or rings; and

Figure 9, a perspective view of a supporting band D such as contemplated for use in shipping a number of hats in a single shipping box.

Referring now in detail to the drawings, A designates a separator or separating board to which the stay may be secured; A' designates a paste-board or paper board or other box bottom of a set-up, or a knock-down set-up, or conventional folding box to which the stay may also alter-

natively be secured; B, the body of the box; C, the top of the box; D, supporting or spacing rings for use in packing a number of hats in a single shipping box; F, a felt hat held in arranged position by the stay; and S, straw hats held in position by the respective stays on separators A and the box bottom A' when a number of hats S are packed in a single shipping box having a high body B'.

The stay comprises a top panel 1 formed with a finger pull opening 7, two side panels 2 with pasting or attaching tabs 4 and two end panels 3 with pasting or attaching tabs 5, preferably all formed from a single piece of paper board or cardboard by a single stamping or cutting operation. The blank is scored along the sides of the panel 1 as at 9 and across the ends of the panel 1 as at 9', the sides 2 being scored midway between the score lines 9 and the tabs 4 as at 10 and the ends 3 being similarly scored midway between the score lines 9' and the tabs 5 as at 10' and the joint between the tabs 4 and sides 2 are scored as at 11, the joint between the tabs 5 and the ends 3 being similarly scored as at 11'. The scoring along the lines above mentioned may be done as a distinct operation separate from the stamping or cutting of the blank, or may be performed coincident with the stamping or cutting as a single operation.

The tabs 4 will be folded inward toward each other and the same applies as to the end tabs 5 and their upper faces in the spread blank condition preferably will be coated with an adhesive so that when said blank is folded into folded stay form, as illustrated in Figure 2, said faces will be presented downward toward the upper face of the box bottom A' or separator A and will be secured thereto by said adhesive which may be of any usual characteristics suitable to the purpose.

The sides 2 will extend laterally from the panel 1 to the score lines 10, at which they will fold on themselves, the score lines 11 being substantially in registry with the score lines 9.

The ends 3 will be folded inward toward each other on the score lines 9' to lie flat against the lower face of the panel 1 and will then be folded outward away from each other on the score lines 10' to dispose the score lines 11' substantially in registry with the score lines 9', and thereafter the tabs 5 will be folded inward on the score lines 11' toward each other with their mitered ends substantially in engagement with the mitered ends of the tabs 4 of the sides 2, said tabs 4 and 5 being then pasted or otherwise secured by usual known means to or against the face of the separator A or the box bottom A'.

The sides 2 are appreciably longer than the panel 1 and project by portions 6 beyond the ends of said panel 1, as indicated by the dotted lines in Fig. 1 and as shown in Fig. 7 for a distance nearly equal to half of the width of the panel 1, the upper corners of said portions 6 being cut away on a slanting line 6' to avoid interference in the application of a hat to the erected stay.

Said end portions 6 are bent toward each other at the respective ends of the stay and have a certain amount of springiness and resiliency inherent in the paper board stock used, so that as the stay is pulled to erect condition by means of a finger inserted in hole 7, said end portions 6 snap inward toward each other to at least a limited degree, this movement serving to move their lower edges in contact with the upper face of the separator or box bottom A' out of alignment with the fold line joint or score line 11 of the respective sides 2 and such engagement of the portions 6 out of alignment with said score lines serves to lock the parts in erected position, preventing the collapsing of the sides 2 and ends 3 by folding along the score lines 10 and 10' respectively until said portions 6 are spread outwardly into alignment with the rest of their respective sides 2.

The outward folding of the sides 2 opposed to the inward folding of the ends 3 serves to equalize the strains and stresses on all parts, the sides 2 prevent endwise twisting or folding, and the ends 3 preventing sidewise twisting or folding, the side edges of the ends 3 engaging the adjacent inner face portions of the sides 2 and serving to brace the respective end portions of both sides 2.

Also, by having the ends 3 fold inward and the sides 2 fold outward all interference between the movement of the ends 3 and the end portions 6 of the sides 2 is eliminated.

In practice, with the stay pulled to erect position the side portions 6 at one end of the stay are slightly pressed toward the corresponding end 3 and a hat such as felt hat F or a straw hat S is then slantingly applied to receive that end of the stay in one end portion of its crown, after which the other portions 6 at the other end of the stay are slightly pressed in and the hat dropped down over that end of the stay, after or during which the latter end portions 6 are released except as confined by the hat and will by their resiliency spring out and engage and largely conform to the curved contour of the ends of the hat crown, the two pairs of portions 6 acting in opposition to each other and serving to center the hat and firmly center and support it in respect to the stay in proper and firmly anchored position in the box. The confining action of the hat crown, plus the engagement of the hat brim with the upper face of the separating board A or of the box bottom A' will of course act to hold the parts of the stay against relative movement and will serve to increase its rigidity.

While the provision of the ends 3 with their attaching tabs 5 is preferred, the ends 3 are not essential and may be eliminated, the construction and operation otherwise being as above stated, with very efficient results.

Where a number of hats, such as straw hats S, are to be shipped in a single shipping box as illustrated in Figure 8, the lowest stay will preferably be secured to the bottom A' of the box, the remaining stays being secured to the separating boards A, and supporting or spacing bands or rings D of a height equal to or in excess of the respective hats are respectively arranged about the respective hats between the brims of the hats and the upper separating boards, which are arranged in superposed relation, or between the bottom of the box and the lower separating board, and between the latter and the next higher separating board and so on, the function of these supporting or spacing bands being to carry the load and prevent the lower hats from being damaged by the weight of the upper hats.

Also, by the use of these separators and supporting bands D it is found that a much lighter weight shipping container or box may be employed than has heretofore been the case with equal safety in shipment due to the fact that the separators are of a form and size corresponding to the internal cross-sectional shape and size of the box body B' and so brace and strengthen the same at relatively closely adjacent points throughout its height, being held separated and

at definite relative intervals by the supporting or spacing bands or rings D.

I claim:

1. An integral inherently resilient paper board hat stay or support comprising a top panel formed with a finger-grip hole, in combination with side panels extending from said top panel and in collapsed condition folded outwardly upon themselves respectively and extending substantially vertically in erected condition, end panels extending from said top panel and in collapsed condition folded inwardly upon themselves respectively beneath said top panel and extending substantially vertically in erected condition, and means for anchoring said side and end panels to a support, the end portions of said side panels extending substantially beyond the end panels and, on the erection of the stay swinging within themselves laterally inward and serving to lock the stay in erected condition, and said end panels in the erected condition having their side edge faces substantially in engagement with the opposed inner faces of the side panels and serving to brace the stay as a whole against lateral deformation.

2. An inherently resilient paper board hat stay or support comprising a top panel, in combination with side panels extending from the sides of said top panel and in collapsed condition folded upon themselves respectively and extending in a vertical direction in erected condition, end panels extending from the respective ends of said top panel and in collapsed condition folded upon themselves respectively and in erected condition extending in a vertical direction, and means for anchoring said side and end panels to a supporting surface, the end portions of said side panels extending substantially beyond the end panels and, on the erection of the stay, swinging automatically laterally inward and serving to lock the stay in erected condition.

3. A paper board collapsible hat stay or support comprising a top panel, in combination with side and end panels extending respectively from the respective sides and ends of said top panel, said side and end panels in collapsed condition being folded upon themselves respectively and in erected condition extending in a vertical direction, and means for anchoring said side and end panels to a supporting surface, the end portions of said side panels extending substantially beyond the end panels and automatically swinging laterally inward on the erection of the stay to lock said stay in erected condition.

4. A paper board collapsible hat stay or support comprising a top panel, in combination with side panels extending from the respective sides of said top panel, said side panels in collapsed condition being folded upon themselves respectively and in erected condition extending respectively in vertical directions, and means for anchoring said side panels to a supporting surface, the said side panels having free end portions so formed that on the erection of the stay said free end portions automatically swing laterally inward and engage said supporting surface with their lower edge faces and automatically lock said stay in erected condition.

5. A paper board collapsible hat stay or support comprising a top panel, in combination with two opposed panels connected to opposed edge portions of said top panel and in collapsed condition being folded upon themselves respectively and in erected condition extending respectively in vertical directions, and means for anchoring said opposed panels to a supporting medium, the said opposed panels having free end portions so formed and of such characteristics that incident to the erection of the stay said free end portions will move out of alignment with the remainder of the respective opposed panels and with their lower edges engage the upper face of said supporting medium to lock the stay in erected condition.

6. A hat box having a closed bottom, in combination with a hat stay fastened against relative bodily movement to the upper face of said bottom, said stay being of stiff inherently resilient paper board material and comprising side and end panels, all of said panels when erected extending substantially in a vertical direction with respect to said bottom, and the end portions of said side panels extending substantially beyond and outwardly of said end panels to yieldingly conform to and with their vertical edge portions press against one of the inner end faces of a hat crown to hold the same on the stay in the erected condition of the latter.

7. A hat box having a closed bottom, in combination with a hat stay fastened against relative bodily movement to said bottom to be disposed within said box, said stay being of stiff, inherently resilient material and comprising a top panel in combination with side panels extending respectively in vertical directions when erected from the respective sides of said top panel, the side panels having free end portions extending substantially beyond and outwardly of the edges of said top panel to yieldingly conform to and press with their vertical edge portions against the inner end faces of a hat crown to center such hat with relation to said stay and to hold it thereon by a firm frictional contact.

8. A hat box having a closed bottom, in combination with a hat stay fastened against relative bodily movement to the upper face of said bottom, said stay being of stiff inherently resilient material and comprising a central stay body, at least one pair of vertical free end portions attached to the sides of said central stay body on a vertical axis at their respective inner ends and having their respective oppositely disposed free ends extending outwardly to yieldingly conform to and press against the inner end faces of a hat crown to center such hat with relation to said stay and to hold it thereon by a firm frictional contact.

JOSEPH G. HUYE.