Sept. 12, 1933. L. F. BUESCHER ET AL 1,926,430

COLLAPSIBLE HAT

Filed July 30, 1932

Fig. 5

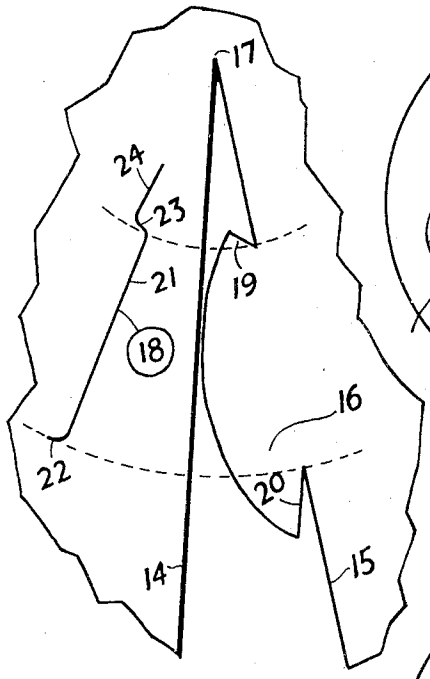


Fig. 1

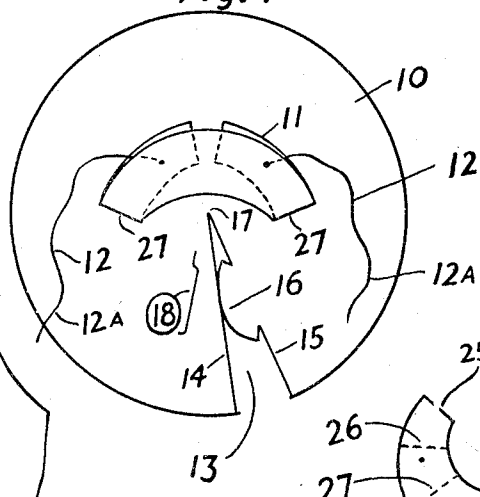


Fig. 4

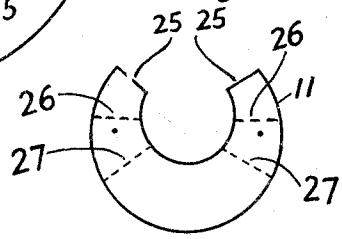


Fig. 2

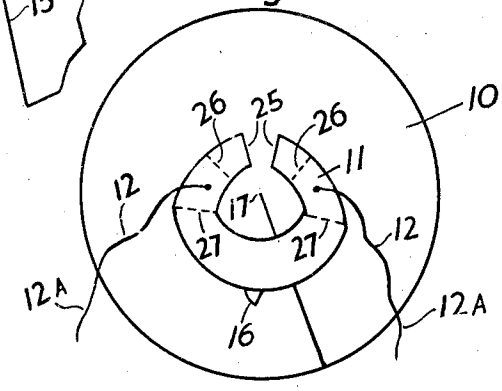


Fig. 6

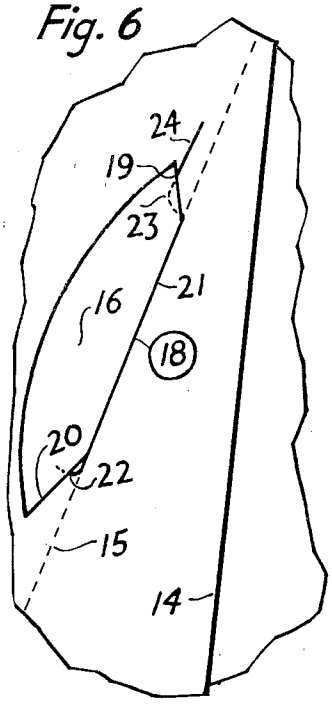
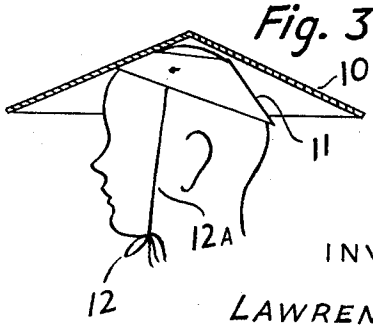


Fig. 3



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1,926,430

COLLAPSIBLE HAT

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Chicago, Ill.

Application July 30, 1932. Serial No. 626,609

17 Claims. (Cl. 2—200)

The present invention relates to collapsible hats.

More particularly the present invention relates to hats having a generally conical shape, popularly known as coolie hats.

An object of the present invention is to provide a construction which is cheap, which may be made up of a minimum of material, and which may be stored or shipped in substantially flat form.

A further object is to provide a hat of light weight and cheap material, which will maintain its shape when in formed condition.

A further object is to provide a hat or similar article which may be formed into conical shape or flattened out by very simple manipulations.

A further object is to provide a hat well adapted to manufacture on a quantity basis and which may be stored and shipped at a minimum of cost.

Further objects will appear as the description proceeds.

Referring to the drawing—

Figure 1 is a plan view of a hat or similar article in flattened out condition, said hat embodying the principles of the present invention, said view being taken from the bottom side of the hat;

Figure 2 is a view of the construction shown in Figure 1, but with the parts formed to provide a hat;

Figure 3 is a view, parts being in section, illustrating the hat in formed condition and located upon the head of a wearer;

Figure 4 is a view of a portion of the structure of Figure 1 or Figure 2 illustrating a detail of construction;

Figure 5 is a view on an enlarged scale showing certain locking features for holding the hat in formed condition, said view showing the parts in their flattened out condition; and

Figure 6 is a view on an enlarged scale illustrating the locking features, the hat being in its formed condition.

As illustrated in the drawing, the hat or similar article embodying the principles of the present invention may comprise three fundamental elements: first, the notched disk 10; second, the head-fitting member 11; and third, the hat holding means 12, which in the illustrated embodiment of the present invention includes two cords 12A—12A, but which may if preferred comprise a piece of elastic.

The disk 10 may be of cardboard or other relatively stiff resilient material. The member 10 in the illustrated embodiment of the present invention has a substantially circular contour, though it will be understood that the contour may be chosen as desired. The periphery of the member 10 is provided with a notch 13, which is generally V-shaped, one edge of said notch being defined by the line 14, the other edge being defined by the line 15, which line has projecting therefrom the locking member 16. Said lines 14 and 15 lead to a pivotal region or point 17, which point or region defines the axis of rotation of the parts of the member 10 as said member 10 is formed into conical shape. The locking member 16 is adapted to be inserted within the notch 18 spaced from but adjacent to the edge 14.

By reference to Figures 1 and 5, it will be noted that the illustrated embodiment of the locking member 16 comprises a structure elongated along the length of the edge 15. That end of the locking member 16 toward the pivotal point 17 is defined by a line 19 disposed at an acute angle to the line 15. The other end of the locking member 16 is defined by a line 20 which makes an acute angle with the line 15. Said lines 19 and 20 are flared relative to each other. The notch 18 includes the relatively straight line 21, the end slit 22 preferably cut on a curve, the end slit 23 and the extension slit 24. The intersection between the slit 21 and end slit 23 is spaced a distance from the pivotal point 17 approximately equal to the distance between the pivotal point 17 and the intersection between the line 19 and the line 15. The extremity of the rounded slit 22 is spaced from the pivotal point 17 a distance approximately equal to the distance between said pivotal point 17 and the intersection between the line 20 and the line 15. The line 19 is preferably disposed at a more acute angle relative to the line 15 than is the line 23 relative to the line 18, the object being to prevent the accidental pulling out of the locking member 16, as will be described more in detail hereinafter.

Disposed on the under side of the hat is the head-fitting member 11. This head-fitting member 11 may also be formed of cardboard or other relatively stiff material. Said member 11 will be cut from a flat sheet and comprises a portion of an annulus. Said annulus may be defined by portions of two circles, preferably not concentric. The ends of the partial annulus are defined by the lines 25—25. The ends of the annulus adjacent to the lines 25—25 may be secured to the under side of the disk 10 by means of adhesive, or, if preferred, by stitching or stapling, or other means. The lines 26—26 spaced from the lines 25—25 define approximately the limits to which

the adhesive need be applied. Creases 27—27 are preferably formed in the annular member 11, whereby the portion of said annular member 11 distant from the lines 25—25 may be folded over along the creases 27—27 into the form shown in Figure 1, whereby the hat is adapted to be stored or shipped in flat condition. The creases 27—27 are disposed less than 180 degrees relative to each other. The cords 12A—12A, or other fastening means, may be secured to the member 11 adjacent to the lines 26—26.

In manufacturing the hat, the member 11 will be folded upon itself along the creases 27—27. Inasmuch as said creases 27—27 are at less than 180 degrees from each other, the ends 25—25 of the member 11 will be closer to one another than they were when the annular member was in flat condition. The ends adjacent to the lines 25 will be secured to the under side of the disk 10, and when the disk 10 is in flat condition the folded member 11 will lie substantially flat. In this condition the hat may be stored or shipped, requiring a minimum of space.

When it is desired to form the hat into usable condition, the member 10 will be grasped by the two hands of the operator adjacent to the lines defining the notch 13. The locking member 16 will be slid along the upper side of the hat until said locking member engages the notch 18. Said locking member will be piloted into the notch 18, and the operator will press toward the pivotal point 17 with the hand which is engaging that portion of the disk 10 adjacent to the line 15, whereby that portion of the locking member 16 adjacent to the line 20 will clear the slit 22. After the locking member 16 has been inserted into the slit 18, the disk 10 will have a natural tendency to flatten itself out, which will urge that portion of the locking member 16 adjacent to the line 20 into locking engagement with the portion of the disk 10 adjacent to the end slit 22. Inasmuch as the line 19 is at a more acute angle to the line 15 than is the slit 23 relative to the line 21, the portion of the locking member 16 adjacent to the line 19 will underlie that portion of the disk 10 bounded by the end slits 23 and 24. The natural tendency of the disk 10 to flatten itself out will cause a thrust between the lines 19 and 20 on the one hand and the end slits 22 and 23 on the other hand, whereby an effective lock is secured. In order to unlock the locking member 16 from the slit 18, it will be necessary to exert opposite radial thrusts upon the portions of the disk 10 adjacent to the lines 14 and 15, whereby that portion of the locking member 16 adjacent to the line 20 will clear the end slit 22. Therefore there is no danger that the parts will become unlocked accidentally.

The act of forming the disk 10 into the conical shape illustrated in Figure 3 will generally cause the opening of the head-fitting member 11 from the shape shown in Figure 1 to the shape shown in Figures 2 and 3, said head-fitting member 11 swinging about the creases 27—27 to provide a conformation which will fit the head of the wearer. In any event, it is a simple matter to give the head-fitting member 11 a small impetus to move from the position shown in Figure 1 to the position shown in Figures 2 and 3 as the disk 10 is formed into conical shape.

The fastening means 12 may be tied under the chin of the wearer, whereby the hat will be held securely in place. Though the illustrated embodiment of the present invention discloses means which may be unlocked for holding the member 10 in its conical shape, it will be understood that said member 10 may be permanently secured in such shape if preferred, said member 10 having sufficient flexibility so that the head-fitting member 11 may be folded along the creases 27—27 to dispose the swinging part of said member 11 either in its operative skull-fitting position or in folded position adjacent to the ends of said member 11. It will be understood, further, that the invention is of sufficiently broad scope to cover constructions in which means other than the locking member 16 is relied upon to hold the member 10 in its conical shape. It will be understood further that the term "conical" is not to be limited to a geometrical definition of this term, but that said term shall be construed with sufficient breadth to include a hollow contour.

What is claimed is—

1. An article of the class described comprising a sheet member having a notch therein at its periphery and a slit adjacent to said notch, said sheet member being provided with a locking member adapted to fit within said slit, and a member comprising a portion of an annulus secured to said sheet member, said last mentioned member having creases disposed less than 180 degrees from each other, said last mentioned member being folded upon itself along said creases and having its extremities secured to said sheet member.

2. An article of the class described comprising a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member having a locking member adapted to be located within said slit and a member secured to said sheet member, said member comprising a portion of an annulus, said portion of an annulus having its extremities secured flatwise to said sheet member and being folded upon itself along lines disposed less than 180 degrees from each other, whereby when said sheet member is formed into conical shape said portion of an annulus may assume a head-fitting contour.

3. In an article of the class described, a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member also having a locking member adapted to be located within said slit, said locking member having a portion extending from the apex of said notch a distance greater than the distance from said apex to the distant extremity of said slit.

4. In an article of the class described, a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member also having a locking member adapted to be located within said slit, said locking member having a portion extending from the apex of said notch a distance greater than the distance from said apex to the distant extremity of said slit, said slit being curved to provide a portion overlapping another portion of said locking member.

5. In an article of the class described, a sheet member provided with a notch in its periphery, said sheet member also having a slit adjacent to said notch and a locking member projecting from the side of said notch distant from said slit, said locking member having projecting portions adapted to extend through said slit and overlie portions of said sheet member adjacent to said slit.

6. In an article of the class described, a sheet member provided with a notch in its periphery, said sheet member also having a slit adjacent to said notch and a locking member projecting from the side of said notch distant from said slit, said locking member having oppositely projecting por-

tions adapted to extend through said slit and overlie portions of said sheet member adjacent to said slit.

7. In an article of the class described, a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member being also provided with a locking member disposed in said notch and projecting from the wall of said notch distant from said slit, said locking member being shorter in a direction extending toward the apex of said notch than is said slit, said locking member having a portion extending a greater distance from the apex of said notch than does said slit.

8. In an article of the class described, a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member being also provided with a locking member disposed in said notch and projecting from the wall of said notch distant from said slit, said locking member being shorter in a direction extending toward the apex of said notch than is said slit, said locking member having a portion extending a greater distance from the apex of said notch than does said slit, said slit being curved to overlap the portion of said locking member when said locking member is disposed within said slit.

9. In an article of the class described, a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member also having a locking member adapted to be located within said slit, said locking member having a portion extending from the apex of said notch a distance greater than the distance from said apex to the distant extremity of said slit, and a head-engaging member of sheet material secured to one side of said sheet member, said head-engaging member comprising a portion of an annulus creased along lines disposed less than 180 degrees apart whereby said head-engaging member may be folded flatwise against said sheet member.

10. In an article of the class described, a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member also having a locking member adapted to be located within said slit, said locking member having a portion extending from the apex of said notch a distance greater than the distance from said apex to the distant extremity of said slit, said slit being curved to provide a portion overlapping another portion of said locking member, and a head-engaging member of sheet material secured to one side of said sheet member, said head-engaging member comprising a portion of an annulus creased along lines disposed less than 180 degrees apart whereby said head-engaging member may be folded flatwise against said sheet member.

11. In an article of the class described, a sheet member provided with a notch in its periphery, said sheet member also having a slit adjacent to said notch and a locking member projecting from the side of said notch distant from said slit, said locking member having projecting portions adapted to extend through said slit and overlie portions of said sheet member adjacent to said slit, and a head-engaging member of sheet material secured to one side of said sheet member, said head-engaging member comprising a portion of an annulus creased along lines disposed less than 180 degrees apart whereby said head-engaging member may be folded flatwise against said sheet member.

12. In an article of the class described, a sheet member provided with a notch in its periphery, said sheet member also having a slit adjacent to said notch and a locking member projecting from the side of said notch distant from said slit, said locking member having oppositely projecting portions adapted to extend through said slit and overlie portions of said sheet member adjacent to said slit, and a head-engaging member of sheet material secured to one side of said sheet member, said head-engaging member comprising a portion of an annulus creased along lines disposed less than 180 degrees apart whereby said head-engaging member may be folded flatwise against said sheet member.

13. In an article of the class described, a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member being also provided with a locking member disposed in said notch and projecting from the wall of said notch distant from said slit, said locking member being shorter in a direction extending toward the apex of said notch than is said slit, said locking member having a portion extending a greater distance from the apex of said notch than does said slit, and a head-engaging member of sheet material secured to one side of said sheet member, said head-engaging member comprising a portion of an annulus creased along lines disposed less than 180 degrees apart whereby said head-engaging member may be folded flatwise against said sheet member.

14. In an article of the class described, a sheet member having a notch in its periphery and a slit adjacent to said notch, said sheet member being also provided with a locking member disposed in said notch and projecting from the wall of said notch distant from said slit, said locking member being shorter in a direction extending toward the apex of said notch than is said slit, said locking member having a portion extending a greater distance from the apex of said notch than does said slit, said slit being curved to overlap the portion of said locking member when said locking member is disposed within said slit, and a head-engaging member of sheet material secured to one side of said sheet member, said head-engaging member comprising a portion of an annulus creased along lines disposed less than 180 degrees apart whereby said head-engaging member may be folded flatwise against said sheet member.

15. In an article of the class described, a sheet member of substantially conical contour and a member secured to the inner side of said sheet member, said member comprising a portion of an annulus, said portion of an annulus having its extremity secured to said sheet member and being folded upon itself along lines disposed less than 180 degrees from each other whereby upon flexing of said sheet member said annular member may assume a head-fitting contour.

16. In an article of the class described, a sheet member having a slit extending from an intermediate portion to its periphery, and means for holding said sheet member in conical contour, said sheet member having on the inside of said conical contour a head-fitting member comprising a portion of an annulus, said head-fitting member having creases disposed less than 180 degrees from each other, the extremities of said head-fitting member being secured to said sheet member whereby upon flexing of said sheet member said head-fitting member may be selectably folded upon itself along said creases or disposed in a head-fitting contour.

17. In an article of the class described, a sheet member having a generally V-shaped notch therein, means for holding said sheet member in a conical position with said notch closed, said sheet member being provided on one side with a head-fitting member, said head-fitting member comprising a portion of an annulus, the extremities of said annulus being secured to said sheet member, said head-fitting member having creases disposed less than 180 degrees from each other whereby said head-fitting member may be disposed selectably in folded condition or in head-fitting condition.

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