

Expansion of Hat Product Design with Storage Idea

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Abstract. Popular design status of clothing products makes current clothing sales market lack excitement. Through analyzing the influence and feasibility of storage idea on clothing accessory design, this paper aims to propose remodeling design of hat products with storage idea, seek skillful design technique, method and route, solve plane design and three-dimensional application problems for hat products, repeatedly practice development and fabrication of material objects, verify implantation feasibility of storage idea and correctness of design method, prosper and activate consumer market with manure hat products and gain competitive resources with market advantage. Then, this paper points out that unique design consciousness is important in product design. Product design should pay attention to actively creating customers' personal experience, guiding design strategy and consumer market and innovating more design techniques and application methods, while catering to consumer market.

Introduction

The hat is a product matched with clothing and also one of main accessories in various outdoor activities or social occasions. In allusion to popular design market of brand clothing, existing innovative practices should be accepted and rejected. We should consider the new challenges to remodel existing product design. In terms of hat product development, this paper mainly discusses to lead product development market, gain competitive resources with market advantage, prosper and activate hat consumer market through differential design and customer orientation.

Understanding of storage design idea

Analysis of storage design idea

Storage design idea is often ignored in clothing product design. Storage design idea is initially interpreted as "reasonable concealing". Take clothing products for example. The best status of clothing products is flat placement, space conservation and carrying convenience when they are stored. Clothing products designed based on the purpose superficially try storage idea.

Storage idea as a significant thought for solving production function plays an increasingly important role in work and life. Meanwhile, solving plane storage design and three-dimensional multiple applications of products is reasonable and pragmatic improved design of storage idea in products. Except reflecting use value, non-storage products can also achieve role and function exchange with storage-type products, expand remodeling design of original products and adopt product property variability as the selling point to improve product sales performance.

Influence of storage idea on clothing product design

Storage idea can make clothing product design become strategic thought of core sales products. The generation, development and maturity of storage thought radiate each design field. Storage thought breaks through traditional design thought in a reasonable manner, and the design effect is distinct. For instance, in recent years, common daily necessity "shopping bag" can be folded into the size of a wallet when it is not used, and then nylon hasp or plastic hasp is used to fix it to save the space and carry it conveniently. This skillful design concisely shows the function of product design in life under storage idea.

Function and design analysis of hats in clothing products

Function of hats in clothing products

”Without hat, human has no civilization” - Christian Dior. At all times and in all over the world, the hat plays an indispensable culture role in social status, political power and clothing. In ancient Rome, both women and men would not wear hats, but only the emperor wore the royal crown. The sunhat provides us sun-blocking protection in scorching days and winter protection in cold days. At present, in 2014 fashion week, hats emphasized the necessity and fashion in overall dress collocation again.

Hat design emphasis based on storage idea

Design plays the role of meaning, expression and vision. Design lies in innovation and design must evolve. Subversive innovation of clothing products is unrealistic. It is necessary to start from storage idea, deeply design hat products and think how to seek design technique skillfully designed with storage design and acquire a differential product with multiple functions under the precondition of no change in basic wearing function of hats.

Based on the above consideration, the following design emphases are analyzed:

Firstly, plane design and three-dimensional application. All kinds of miscellaneous affairs such as tidying, handling and disposing three-dimensional articles induce plane design of three-dimensional articles. In Japan, there is a clothing product called “foot bag” (Fig.1^[1]). It uses plane materials and takes into account of the curved surface of wrapping foot. Besides, it can be tidied away in a plane way (Fig.2^[1]). Similarly, design of clothing products depends on people’s wisdom. Skillful utilization of natural force may easily make hats plane and three-dimensional. ^[1]



Fi.1. Foot bag

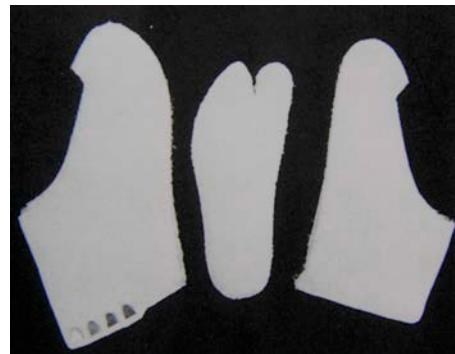


Fig.2. Plane of foot bag

Secondly, concise design of hat style and structure. Based on maintaining fundamental form of hats, if the style and structure of hats are more complex, it is more difficult to show product flexibility in form or function transformation. During evaluating clothing products, “conciseness” can be often connected with some hot network words such as “high end, generosity and high grade”. Conciseness is one of hat design features from aesthetic or practical perspective.

Thirdly, efficient design of function interchange. For hat products which integrate wearing function and storage function, customers will change product status according to their use needs. So, except concise style and structure design, the design idea and technique of function interchange must be introduced in design emphases. Design thought mainly focuses on quickness and portability of multiple function interchange of hat products (i.e. high efficiency).

Besides, at the mention of storage function, the bag is the most valuable clothing product. The hat and bag belong to social dress accessories. In other words, hats and bags are essential articles when people go out and especially go out for travelling. Hence, quick storage, carrying easiness and multi-function seem to be very important. Therefore, expanded design of role transformation of hats and bags may serve as a main conception direction.

Expansion of hat design with storage idea and life experience of wearing interest

Expansion of hat design with storage idea is purposeful design. It is required to overall set product design objective, deeply consider all details and solve popular design problem of hats with rational and practical storage idea. Repeated implementation of plane and three-dimensional hat products explains storage ideas most directly. When the hat is stored, it shows a two-dimensional plane. When it is used, it presents three-dimensional shape, as shown in Fig.3^[1]. Spiral cutting design of plane materials can achieve three-dimensional shape after the hat is worn. The combination and separation must be completed in a simple and quick way.



Fig.3. Spiral cutting design

Technical extraction of expansion of hat design with storage idea

From multiple perspectives, we find different design techniques for fast implementation of three-dimensional and plane transformation go deep into hat design application. It is required to innovate product features, functions and income under the guidance of storage idea and deliver good hat design results so that users can experience the interest of wearing process.

Application of cutting style design technique

The thought on cutting style design technique comes from housing decoration garland, as shown in Fig.4. The garland owns distinct characteristics of plane design and three-dimensional application. Based on basic modeling structure of hats, style design of hat crown and hat brim should be valued. According to garland design method, the rules of cutting modeling technique can be found out through repeated cutting to design the cutting line of concentric circle (Fig.5, left). After cutting, spring-like hat crown can form (Fig.5, middle) so as to reach good effect of accurate design of plane cutting and three-dimensional folding. After the hat is worn, hollow appears to the cutting line of hat crown. This is effective heat dissipation design. Thus, cutting design technique is suitable for summer sub-blocking hats. When the hat is inverted, the hat crown with spring structure immediately changes to storing space of the bag (Fig.5, right). The space may be used to put personal articles which are not less than the cutting gap. In view of this, it is required to design the length of cutting line b in advance. If the cutting length is long, the stretching distance is large and elasticity is large. On the contrary, the stretching distance is small and elasticity is small. During hat design and making, the cloth which will not disperse after cutting should be selected. Expanded design of cutting technique in hat products makes people become more relaxed and convenient in social life and enjoy multiple functions and cost-efficient purchase experience.



Fig.4. Decorative garland



Fig.5. Application of cutting design technique

Application of pulling and drawing design technique

The final objective of expanded design of hat products with storage idea: design products own three functions: plane storage, hat wearing and material storage in bags. Many conceptions are extended from the final objective. The design thought on rope belt is deepest. The linear role belt contains historical and cultural value. More importantly, in terms of modeling change design treatment, shrinking and stretching through the rope belt can change the length or circumference of the cloth. Here, we mainly design the position and feature of rope belt pulling and drawing and expand development and design of hat products.

Fig.6 shows flat round cloth after pulling and drawing design (Fig.6, left). The radius dimension of the whole round is 25cm. Radius size of exposed line on the outer ring of stringing part is 19cm. After it is completed, the first visual perception is anterior plane design, but three-dimensional application thought after pulling and drawing has been mature. When the rope belt is pulled to the proper size, round cloth immediately becomes a lovely and nifty plicated hat (Fig.6, middle). It can shade the sun. When external environment changes, it may be taken off and inverted. Then, a small storage space will form in the hat. The hat becomes a bag (Fig.6, middle). The bag can be used to put some articles, such as mobile phone, facial tissue and key. After the rope belt is tightened, the bag mouth can be closed to ensure safety of article storage, and the rope belt serves as the role of rope for carrying or backing.



Fig.6. Application of pulling and drawing design technique

Expansion of life experience of wearing interest with storage idea

Unusual and innovative product change design can always bring people with new and unexpected surprise. Storage design idea and technique expand application of hats. Different state change during storage and wearing is convenient, fast and full of interest and can satisfy people's psychological and use demands. Elastic or pulling structure and inverted function transformation inject fresh seasoning for people's simple and boring life.

Summary

The core value of storage idea is that it meets plane design and three-dimensional application of hats. Under the guidance of such idea, hat remodeling design techniques such as cutting style design

technique and pulling and drawing design technique are continuously thought. Inserted structure design which is not involved in this paper is also a sustainable product design technique. It is necessary to practice repeatedly and carry out functional innovation and cultural innovation with certain purpose.

Unique design consciousness has infinite potential to motivate expanded development of products. Storage idea is just one potential. When catering to design of consumer market, corporate planning layer should pay attention to actively creating customers' individual experience, guide design strategy and consumer market, push storage idea to a wider product design platform and innovate more design techniques and application methods.

In addition, enterprise management level should realize "design is not equal to brand". The decisions on brand connotation and brand operation should also be considered prudently by enterprise management level.

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