

Research on the creative design of Tujia brocade pattern based on the principle of artistic conception drawing

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Abstract. Traditional Tujia brocade is inherited and taught through oral and mental-teaching mode. In order to achieve better inheritance and learning effect, modern artists got involved who began to use hand-painted artistic conception drawing to achieve a better inheritance effect. With the development of computer technology, modern artistic conception drawing can make the pattern more intuitively innovative, providing valuable inheritance materials for the inheritance of Tujia brocade. Taking the artistic and creative product design of Zhangjiajie College of Jishou University as an example, this paper analyses the innovative pattern design and application of Tujia brocade based on the principle of artistic conception drawing, which has a profound influence on the creative design of Tujia brocade and the research of related innovative products.

Keywords: Artistic conception drawing, Tujia brocade, Creative design.

1 Identification of Tujia brocade

Tujia brocade forms geometric patterns through the method of weft and warp interweaving, which is the most basic characteristic of tujia brocade to distinguish the Han nationality cross stitch, embroidery and printing and dyeing handicrafts. The special weaving technique of Tujia brocade makes the geometric elements in the pattern processing pattern prominent. Usually, an object image is composed of multiple regular or irregular geometric shapes. Li Xinyang. Research on the Lozenge pattern modeling of Tujia Brocade [J] Fine Arts Overview, 2020 (04). This traditional pattern formed by lozenge, spindle, octagon and folded straight pattern contains all things and is full of auspicious and festive connotations. Abstract summary form, very simple elegant and quiet aesthetic feeling; Composition is well-proportioned and balanced; Bright colors; Exquisite workmanship. The inheritance of Tujia brocade is mainly taught orally and by heart. [Long Xiangping. National Craft Culture of Western Hunan [M] Liaoning Fine Arts Publishing House, 2007] Brocade artists finish the picking and weaving by imitating the techniques of pattern color and organizational structure. Weaving before the need to do in the heart of the map, because of the participation of some art workers, the use of modern artisan map design form of expression design pattern, for the artist pick weave.

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Acquaint oneself with the tujia brocade design should begin from the introduction to the basic principle of tujia brocade weaving, tujia brocade adopts the principle of "menstruation broken weft", you will first need to understand the tujia brocade weaving skills, knowledge of knowledge chart, on the basis of general graph knowledge to understand the manufacturing principle of tujia brocade, thus achieve the goal of innovation design of tujia brocade jacquard graph.

1.1 The basic concept

1.1.1 Warp and weft

The longitudinal lines in Tujia brocade are called longitudes and the transverse lines are called wefts. There are three kinds of weft lines of Tujia brocade: on the back of the brocade, those that cannot be seen on the front are called "dark weft" or "bottom weft" (Figure 1); Those that can be seen directly from the front are called "bright weft". The weft of all kinds of brocade pattern is called "yarn", because the action of picking and sending yarn is very similar to the action of feeding things in the mouth, so it is also called "feeding line". (figure 2)

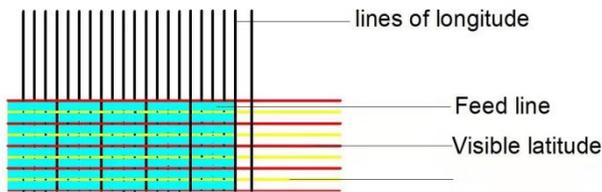


Fig. 1. Schematic diagram of warp and weft.



Fig. 2. Warp and weft.

1.1.2 Fluffy and group

The three adjacent and continuous warp threads in Tujia brocade are called a peng, and the four warp threads are called a group. (figure 3)



Fig. 3. Fluffy and group.

1.1.3 Particles

The smallest square formed by the intersection of five warp threads and feeding threads is the smallest basic unit of Tujia brocade pattern, which is called "grain". The size of the grain is determined by the density of the reed and the thickness of the feeding wire. (Figure 4)

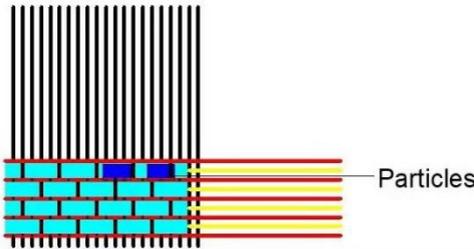


Fig. 4. Particles.

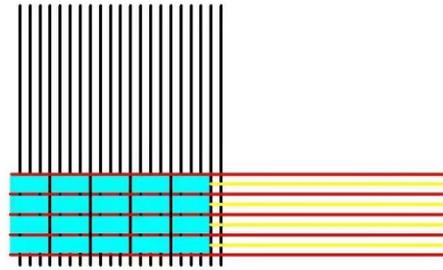


Fig. 5. Align the weave.

1.2 Organization chart of Tujia brocade

1.2.1 Align the weave

In the square grid composed of longitude and weft of Tujia brocade, the brocade pattern composed of longitudinal fully aligned patterns through color change is an oblique pattern, and the organizational structure of the oblique pattern is more obvious. (Figure 5)

1.2.2 Cross weaving

In the lattice composed of longitude and weft of Tujia brocade, the brocade pattern composed of one-half of the vertically staggered up and down and repeatedly arranged particles is called up and down oblique pattern through color change. The organizational structure diagram of up and down oblique pattern is relatively complex than that of opposite oblique pattern. (Figure 6)

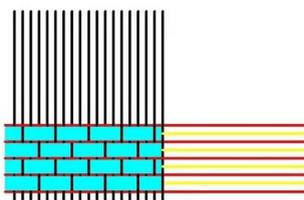


Fig. 6. Cross weaving.

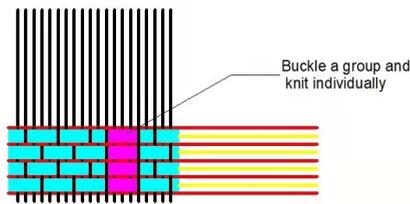


Fig. 7. Buckle a group and knit individually.

1.2.3 Buckle a group and knit individually

In some specific up-down oblique patterns, there must be a vertical alignment pattern. For example, the Yang bird in the Yang bird flower is arranged in a straight line vertically. A clever brocade craftsman cuts half of the two parallel ones respectively and reconstitutes one, so that some of the pieces are aligned vertically up and down, so as to meet the specific requirements of the up-down oblique pattern, The structure of Tujia brocade is called buckle a group and knit individually. (Figure 7)

1.3 Graphic design of Tujia brocade

The graphic design of Tujia brocade shows the front patterns, patterns and colors of Tujia brocade. Its smallest constituent unit is "particle". Due to the special weaving method of Tujia brocade, there are no dark weft and canopy threads in the plane design and final products. Therefore, in the process of graphic design, there are three process forms: opposite inclination, up-down inclination and buckle inclination.

1.4 Align the weave

The brocade pattern composed of vertically aligned stars is the diagonal pattern. The oblique pattern requires high pattern expression, and the pattern expression is more abstract. In terms of weaving technology, diagonal weaving technology is the most basic, simplest and easiest process expression method. (Figure 8) (Figure 9)

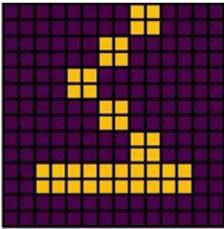


Fig. 8.Diagonal plane design drawing



Fig. 9.Dixie Tujia brocade

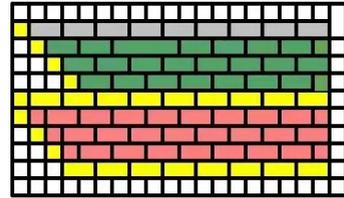


Fig. 10.Upper and lower inclined plane design drawing

1.4.1 Cross weaving

The up-down oblique pattern is composed of half of the grains staggered vertically up and down in the design, which can better express the design elements, and the design idea map is more concrete and perfect. In terms of weaving skills, up-down skew requires higher weaving skills than opposite skew, which not only requires Tujia brocade craftsmen to have higher weaving skills, but also have a deeper understanding of Tujia brocade craftsmen's drawings. (Figure 10) (Figure 11)



Fig. 11.Upper and lower Tujia brocade



Fig. 12.Tuoxie Tujia brocade

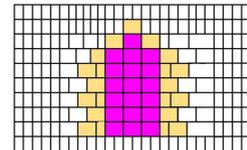


Fig. 13.Cutting plane design

1.4.2 Buckle a group and knit individually

When there are specific requirements in a specific up-down inclined pattern, half of the two parallel can be cut to form a new diagonal pattern in the up-down inclined pattern. This is an effective combination of diagonal and up-down inclined pattern, which can express richer Tujia brocade pattern elements. The requirements for Tujia brocade weaving

craftsmen are also increased accordingly. It requires many years of weaving practice experience, To master this weaving method. (Figure 12) (Figure 13)

2 Innovative design of Tujia brocade

Tujia brocade is one of the four generations of national brocade in China. It has inherited more than 100 kinds of classic patterns from ancient times to now. These classic patterns are not only the objective reflection of Tujia people on life, nature and ideology, but also the handicrafts formed by successive generations of Tujia brocade artists through continuous conception, practice and improvement for thousands of years.

2.1 Conception orientation

The traditional conception method of Tujia brocade pattern is a process in which craftsmen creatively combine the relevant materials around them and form the intention of the work in their mind by using the artistic creative expression method according to the needs of living goods and other needs. Its core is to express what elements and how to express them. For example, the traditional Tujia brocade craftsman needs to make a Tujia brocade strap. First, determine its size and material through the use function of the strap, so as to determine the size of Tujia brocade, and then reasonably conceive what pattern can be used for weaving on this basis; Secondly, the general scheme of Tujia brocade is determined according to the existing material positioning of silk and thread; Finally, select a suitable pattern according to the surrounding scenes, articles and customs, and weave a complete Tujia brocade handicraft by using the techniques of diagonal, up-down or buckle, so as to achieve the purpose of decorative beauty on the basis of practicality.

In modern design conception, it is necessary to fully tap the thick traditional culture of Tujia brocade and re create it in combination with modern culture. The design, color matching, wire texture and functional expression of Tujia brocade are all factors to be considered in the process of conception.

2.2 Conception process and method

First, preliminary brewing to determine the weaving style. The design style of Tujia brocade is determined according to the purpose, use object, use environment and other factors, such as gorgeous, simple and elegant; Then gradually clarify and complete the idea. According to the design style, repeatedly think and deliberate to determine the pattern modeling, color matching, process method (plain, twill, etc.), according to the specification, size, wire type, etc. The commonly used conception methods include association method, imitation method, synthesis method, analogy method, transformation method, etc.

2.2.1 Association method

Association method is to infer other things related to a thing through various inspiration. Association method has three categories: similarity, similarity and contrast. For example, in the Tujia brocade pattern, "dragon and Phoenix are auspicious" is that the creator starts from the theme of celebration and associates it with the images in myths and legends such as dragon and Phoenix, which are the most noble and sacred in people's traditional cognitive consciousness.

2.2.2. Imitation method

Imitation is a design method of re creation based on the prototype of various things and objects in nature and inspired by thinking such as brainstorming. A good Tujia brocade works can achieve "between the like and the not like" through repeated imitation and modification, which is better than the blue. Many traditional animal and plant patterns of Tujia brocade that have been inherited for thousands of years belong to typical cases of imitation, such as "Mabi flower".

2.2.3. Synthetic method

Synthesis is a method of combining two or more traditional elements into a new pattern. In the traditional Tujia brocade pattern, there is the synthesis of geometric figures. For example, the mouse wedding is the combination of straight lines and curves; There are also the synthesis of animal and plant patterns. For example, butterfly and peony is the synthesis of two traditional elements: butterfly and peony.

2.2.4. Analogy method

Analogy is mainly from concrete to abstract, aligning the characteristics of concrete things for abstract analysis and analogy. Analogy is a creative thinking method in Tujia brocade pattern design. Through the creative process of heterogeneous assimilation and homogeneous alienation of analogy, we can obtain the creative method with intention.

2.2.5. Transformation method

Transformation method is a unique pattern expression method formed in the process of changing one thing into another. Various methods are not immutable, and can be used alone or comprehensively. In the design process, elements shall be increased or decreased at any time according to product needs and throughout.

2.3. Hand drawn or computer designed

2.3.1. Freehand design

Tujia brocade hand-painted design is to draw the conception pattern into a freehand drawing. Freehand freehand drawing consists of two parts: freehand drawing and moving drawing.

A Freemason drawing is a pattern drawn on a special Freemason paper or hand-painted Freemason paper with a fixed height width ratio, so that weaving can be completed according to the drawing. Now commonly used prints. The horizontal line represents the weft line, the vertical line represents the warp line, and each flat square represents one in the fabric.

2.3.2. Freehand Tool

Pigment: General watercolor and gouache pigment. In order to achieve the accurate expression of hue, special pigments for traditional Chinese painting can also be used. At present, the marker which is more convenient to carry and use is also a good choice.

Oil painting pen: choose 1-5 flat head hard wool oil painting pen, because the small flat head oil painting pen is more convenient and practical when filling the square of Yijiang paper.

Needle pen: This is a special pen for Tujia brocade hand-painted freehand craftsman's drawing grid. The line is evenly displayed, which is not easy to be covered by later filling, and the needle pen with different thickness of 0.03mm-2mm can be selected. When using the steel ruler, it is not easy to be scratched, and it is very convenient to use.

Pencil: used in the early stage of drawing outline. The advantage is that it is easy to modify and has no impact on the later filling.

Stainless steel ruler: it is used to draw the lattice of the craftsman's map. The lines drawn by it are more neat and fine than those drawn by the general ruler or triangle.

2.3.3. Freehand sketch

On plain paper, according to the design needs, conceive, draw a sketch and color it. The decorative block surface technique is used to draw the intention of the main frame, image and color block. For example, in "Yang que Nao Chun", Yang que usually calls in spring, so the word "Yang Que" is combined with the word "spring", the figure of "day" is visualized, and the word "spring" is inverted to represent the arrival of spring. The overall synthesis method is used to draw the pattern.

2.3.4. Shift graph

Due to the special modeling characteristics of Tujia brocade, the patterns drawn on ordinary paper can not be used by Tujia brocade artists. Only after the patterns are transferred to Yijiang paper with Tujia brocade patterns and expressed as Yijiang drawings with pieces, can Tujia brocade artists pick and weave several pieces. First move the sketch outline onto the paper. The size of the pattern is moderate. The drawing should be large rather than small. There should be room around. Choose according to the "rounding" method and fill it in the appropriate grid to determine the outer contour of the pattern.

2.3.5. Coloring

Fill in colors in turn. In most cases, fill in the background color for simple color matching, so as to ensure that the tone of Tujia brocade crafts is consistent with the shape contour. The color filling of the drawing center depends on the overall effect and product application effect. This is a process of modification and improvement for many times, generally from shallow to deep.

2.3.6. Adjustment complete

In the overall image of the artist, a layer of grid line is covered on the outline of the color block with a needle pen to clearly identify the color block and outline, which is convenient for Tujia brocade weaving. The cotton thread with the color number used in the design drawing can be glued on the design drawing to make a color card, which is convenient to select the cotton thread color with the same hue during weaving.

2.3.7. Drawing method of twill lattice

The painting method also relies on the plain Weaver's picture grid filling, but the grid filling method requires more rigorous and neat. The oblique lines along the twill steps, such as the half grid zigzag color filling of the stair top, cannot have any error, otherwise the oblique lines will not be aligned, which will affect the final effect of Tujia brocade.

3 Tujia brocade pattern innovation case -- Taking the cultural and creative products of Zhangjiajie University as an example

3.1. Conception orientation

Zhangjiajie College of Jishou University is an independent college approved by Hunan Provincial People's government and confirmed by the Ministry of education. The college is located in Zhangjiajie, an internationally famous tourist city, covering an area of 738 mu. It is adjacent to the world natural heritage Zhangjiajie Forest Park, Tianmen Mountain and other scenic spots. [introduction to Zhangjiajie college. Zhangjiajie College of Jishou University [citation date: May 14, 2018]] the design positioning takes the rich cultural atmosphere as the tone and sends the traditional auspicious meaning, which can show the rich connotation of Zhangjiajie College of Jishou University.

3.2. Conception process

Combined with the needs of later product design and product size, the five characters of Zhangjiajie university are used for deformation design, and slightly adjusted on the basis of small seal characters, so that the whole design is concise and generous, which can not only clearly express the key information of Zhangjiajie University, but also reflect the cultural connotation of Zhangjiajie University. (Figure 14)



Fig. 14. Zhangjiajie University font design.

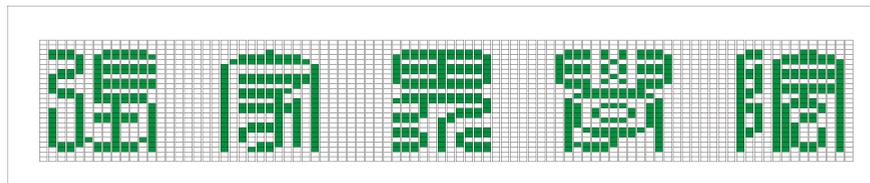


Fig. 15. Graphic design of Zhangjiajie University.

3.3. Finalization of computer design

The final design is superimposed with the Tujia brocade grid map in the software Photoshop, the final design is meshed, the images falling into the grid are sampled and analyzed to obtain the particle matrix, and then the small rectangular particle matrix is filled

with color, and the displayed map has the grid effect, which is the first draft of the idea map. The final design can be woven according to the filling position in the grid diagram.

3.4. Design case display

The combination method is used to combine the content of the design - Zhangjiajie college with the traditional auspicious patterns of Tujia brocade, such as lock catch, so as to make the pattern more rich and natural as a whole. (Figure 16)Tujia brocade has complex process, cumbersome weaving process and high labor cost, which is also one of the reasons for the difficulty in selling Tujia brocade. Therefore, the author combines Tujia brocade with modern materials, adopts the method of seamless splicing, and creatively combines Tujia brocade with modern briefcase, so as to achieve the purpose of practicality, beauty and cost reduction (Figure 17).



Fig. 16. Tujia brocade performance.



Fig. 17. Handbag design.

4 Epilogue

The traditional Tujia brocade is passed on through the inheritance mode of oral and heart-to-heart instruction. Through the understanding of the basic picture of Tujia brocade, the Tujia brocade is designed with three weaving techniques of oblique, up-down and buckle oblique. It is more intuitive and convenient to inherit the teaching by using the pattern of Tujia brocade craftsman's picture. With the development of computer technology, the use of modern graphic design can create more intuitive patterns and provide valuable inheritance materials for the inheritance of Tujia brocade. Taking the cultural and creative product design of Zhangjiajie College of Jishou University as an example, the Tujia brocade innovates the pattern design and application at the level of the principle of Yijiang map. It has a profound impact on the innovative design of Tujia brocade craftsman drawings and the R & D of a series of innovative products.

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