

ENHANCED CIRCULARITY AND SUSTAINABILITY

Integrating a Removable Appliqué Work System for Enhanced Circularity and Sustainability

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Abstract

The Removable Appliqué Work system solves textile waste by making garment decorations (patches, beads, Velcro, embroidery, hooks) detachable instead of permanent. By using hooks or dissolvable threads.

Instant recycling: Separating pure fabric from plastic/metal implementation so the garment does not end up in a landfill.

Modular fashion: Users can change styles on the same base shirt, increasing the garment's life.

Component harvesting: Reuse of high-value designs on new clothes, creating a circular, closed-loop in fashion economy.

Keywords: removable appliqué; circular fashion; sustainability; upcycling; embroidery; textile waste

1 Introduction

Integrating removable applique work system for building up circularity and sustainability. This topic is related to embroidery patch works and beads work etc and its should be removable means detachable we can remove it and we can only attached that patch in where ever we want and we can attached to it easily according to our dress or colour, e.g. we are wearing frock we can attached some lace and it should be detachable or any top we have to attached motifs of flower or parrot or something we can attached it by changing motifs daily. Its related sustainability e.g. we can do embroidery on the fabric swatch small fabric piece motifs which goes on match we can do lace to attached lace we have to attach like that it should be plain not uneven it should be in proper serial to look properly on the garment.

I was excited to work on this topic to know the outcomes whatever problem I faced I have joined the internship in that I have to work the embroider patches or some bead work patches in that I have to do detailing work of embroidery work to do and some problems faced in that how to attached that patches patches are taken from sustainability fabric used in this swatches to do some handwork and put some hooks or something we can do embroidery and some hand painting fabric tube painting patches.

I was on an internship while I was enjoying it I faced problem of join a patch work I thought its interesting so I work on it I found solution I tried also. Practically and I have worked on that problem then got some ideas like we can used patches sustainable has hard base and can use press on button or Velcro and hook and eye to see I have tried it practically, and I got some ideas which I have done.

2 Background

The idea of embroidery patch work came from I was doing internship in that the given work was sustainability related to fabric swatches I was doing completing the embroidery patches then that time the I faced problem of detachable thing I get to know. I thought that is the problem to solve in that problem there it came, then I did research for that thing how to change the motif on so that we can use that patch on different tops so directly we can change so from that I get to know research and got idea some option on that.

I got some ideas on this.

3 Methodology

3.1 Study design and approach

The focus is on sustainability embroidery differ styles and shapes of embroidery that should not be waste. I have told before I have made embroidery motifs and I had to research on solution of how we can attached that patches to different clothes should be detachable so we can try it daily with differ tops or shirts. Done study on that thing of detachable and I got to know some of ideas of press buttons, Velcro, loop hole etc.

3.2 Materials and equipment

Fabrics: We need materials are needle fabric if it would be linen so it will be stiff and if it is cotton or rayon shirt material so stick fusing backside of fabric so it should be stiff and not get folds or we can say it may come gathers on that. So to see the it should be properly stiff or ironed so motifs can stay as it is buttons should be stick backside of motifs.

Threads: Fibre (cotton, rayon, metallic), thread weight brand, colours, fasteners, loop holes, Velcro etc.

Tools and machinery: Needles, loops, scissors, tracing tools, threads, printout of design, machines.

3.3 Pattern transfer and design preparation

Source of design: CAD, iPad, own design draw, illustration, animate, illustrate. (e.g. Ink/Stitch, fabric tube stitch, threads dyable).

Transfer method: Tracing method, candle chalk, heat transfer pen.

3.4 Stitching technique process

Hand embroidery: Detailing about stitch, (split stitch, chain stitch, satin stitch, French knot) layering techniques.

Machine embroidery: List digitizing setting, stitch density, running speed and underlay patterns.

3.5 Evaluation and analysis

Methods used to test fabric swatches for sustainability and embroidery stitch for trial and testing durability: is it dyeable or not the threads are throwing colour or not. Colour theory to match fabric how to attach the fabrics etc.

4 Objectives of the research

- To identify how the patchwork is attached to and embroidered.
- To develop a removable Yali motif appliqué system using waste fabric on khadi base with snap buttons, loops, Velcro hooks and how they work to attach.
- To check for enhanced circularity, easy removal allows base fabric to be recycled and patch to be reused and see how the patchwork attaches to be stiff.
- To see how sustainable, low-waste ideas of patchwork are to be done in different forms has done patch work of different motifs.

5 Case studies

5.1 Case study 1: Doodlage, Delhi (Indian sustainable brand)

Tula is a company which takes factory wastes from big brands to make small collections which are sold in the retail luxury market. She uses - Her Brand uses the last scraps to make Applique patches, removable fabric loops & brooches, jewellery etc.

She upcycles tons of fabric every month to make such applique patches. She has become a name in the design world for upcycling. These applique patches can be removed easily washing.

Sustainable brand that takes factory waste from big brands to make small collections which are sold in the retail luxury market. She uses waste fabric and out of scraps she makes beautiful applique patchwork with beautiful designs. She upcycles tons of fabric every month to make applique back patches, removable fabric loops, brooches, jewellery etc.

5.2 Case study 2: Anita Dongre, Grassroot

She has done some amazing work of patch work. She has done grass root collection, heavy chikankari work she has done on separated cotton patch she does some amazing hand applique work. So that the artisan can reuse and can re do some new work in that the next work of some biodegradable work on khadi fabric can separate it and done. This is done in yali work motifs to do some new effect. She also does handloom zari work patch attach on fabric.

6 Analysis and findings

The integrating removable applique work system for enhanced circularity and sustainability. The work which I have done or patchwork or hand embroidery work should be removable so we can wear it in various ways and should be by loop, hooks, buttons, beads, Velcro. So we can use it on various dresses we want easily to attach to any dress.

To use patchwork and use base should be strong means backside of patch using some fusing at the back or some strong fabric which we can remove should be stiff. The patchwork by tube also saves time or we can do hand embroidery if time limit is not there we can do. We can wear them with various dresses.

7 Conclusion

The conclusion that the patchwork should have done on how we are able to attach by using sustainability. How we can use that patchwork to attach so we can attach that patch to whatever dress we

wore by matching. The base of the patch on which patchwork is done should be stiff. So that we can do first embroidery on that fabric then stick fusing or PVA glue we can use to stuff fabric after that we can put Velcro button or loop hooks whatever we want we can attach.

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