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Analysis of the Efficiency of Sewing with Round and Angled Pockets

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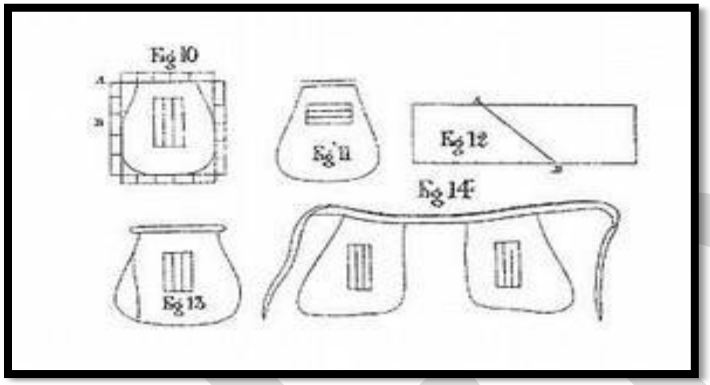
ABSTRACT

The word "pocket" implies a compact pouch or sack. Unlike now, when pockets are standard on most clothing, they weren't always included. Initially, people used little pouches that dangled from their belts to store their money and valuables. For the reason why the pocket was sewn onto the exterior of the garment. Using a needle and thread to create stitches, sewing is the process of affixing or securing an item. As a textile art form, sewing dates back to the Paleolithic period. Archaeologists think that Stone Age people throughout Europe and Asia stitched fur and skin clothes together using bone, antler, or ivory needles and "thread" formed of different animal body parts like sinew, veins, etc., before the development of spinning yarn or weaving fabric. In the garment business, pockets come in a wide variety of styles. Most common are round pockets and angle pockets. Our goal in this piece is to demonstrate, by experiment, how the Round Pocket and the Angle Pocket vary in terms of stitching efficiency.

I. INTRODUCTION

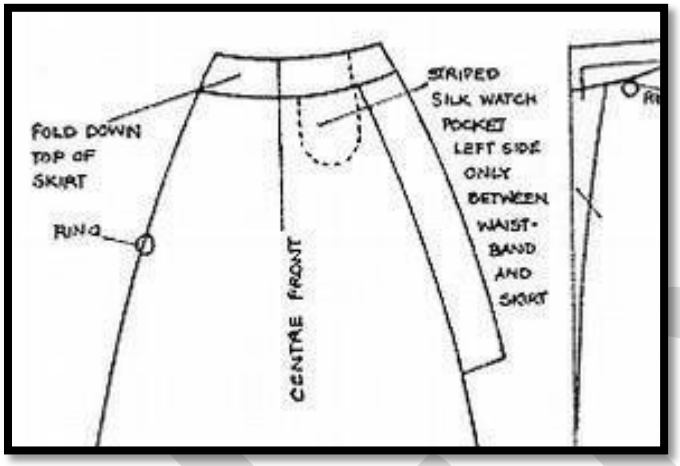
In our research, titled "Comparative study on productivity of sewing between round pocket and angle pocket," we examine the relative efficiency of these two types of pockets when it comes to stitching. We learn something new that will improve production planning and garment merchandising thanks to this investigation. We utilized the word "productivity" throughout this work; productivity is defined here as the value created relative to the amount of resources invested into its creation. The output is the amount of product produced whereas the inputs are the different ways of production. Finished garments are sometimes the product of clothing manufacturers. Man, machine, material (fabric), energy, etc. are all instances of inputs. The formula for determining productivity is

II. POCKET HISTORY



Historically, pockets in European clothing were attached to a belt and accessed via a split in the outer garment, much like a handbag. Originating as a Norman diminutive of Old French poke, pouque, modern poche, cf. pouch, the term first occurs in Middle English as pocket. Dialectically, or in idioms like "a pig in a poke," the "poke" form is no longer in common usage. The word "pocket" originally referred to a bag worn by ladies from the 17th to the 19th century, and was also referred to as a "hanging pocket" in the nursery rhyme Lucy Locket.

The Workwoman's Guide, 1838, has five pocket drawings. As a precursor to the modern handbag, most ladies from the 17th through the late 19th centuries carried at least one set of pockets. They were worn beneath petticoats most of the time. In the 18th century, there were no such things as cell phones, auto keys, or credit cards. Despite this, females were shown to carry a broad range of items in their pockets. When individuals used to share living quarters and domestic furnishings, a pocket was frequently the sole location to store valuables in secrecy.



Even though pockets were now joined to the skirt, they nevertheless maintained the conventional design of separate pockets, as seen by patterns of dresses from the 1850s through the 1890s. The fashion for ladies underwent a radical transformation in the 1790s. Petticoats and wide hoops have both fallen out of favor. Dresses, on the other hand, featured a high waist and skirts that hugged the wearer rather than flaring out. This meant that the dress's silhouette would be ruined by the addition of conventional pockets and their contents. Women's reticules, beautiful purses made to be slung over the arm like a modern handbag, were an answer to this problem. However, a reticule's modest size means that you can't even fit the customary contents of a pocket—a mirror, watch, keys, a needle case, and some oranges—in there.

III. OBJECTIVES OF THE RESEARCH

To find out the sewing productivity difference between round pocket and angle pocket.

IV. METHODOLOGY

Here, we sew 22 pockets to compare the efficiency of the round pocket with that of the angle pocket. We sew 22 pockets, 11 of which are round and 11 of which are at an angle, and then we calculate the difference in time it takes to stitch each kind.

APPARATUS

The following apparatus are used for completing the pocket sewing:

1. Semi automatic sewing Machine.
2. Sewing Thread.
3. Fabric.
4. Scissor.
5. Measuring Tape.
6. Iron

V. EXPERIMENT

We have completed all the process for making Round pocket & Angle pocket and counted the time required for making the Round pocket & Angle pocket those are shown by bellow Figure 1 to Figure 10.

Figure 1: We were doing Iron a Round pocket.

Figure 2: We were doing Iron a Angle pocket.

Figure 3: We were doing iron a Round Pocket

Figure 4: We were noteing sewing time of Round Pocket.

Figure 5: We were taking sewing time of Angle Pocket.

Figure 6: We were calculating total time of making the pocket

Figure 7: We were observing the sewing operation.

Figure 8: We were observing the sewing operation of round pocket.

Figure 9: We were counting sewing time by stop watch.

Figure 10: We were observing the sewing operation of angle pocket.

Table 1: Accurate times were taken from the experiment

Serial # of experiments	Round Pocket		
	Folding & Ironing time (sec)	**Sewing time (sec)**	**Total Pocket making time (sec)**
1	86	56	142
2	78	50	128
3	82	53	135
4	70	50	120
5	80	45	125
6	48	52	100
7	55	54	109
8	54	50	104
9	52	51	103
10	49	50	99
11	49	40	89
	Average =64sec	Average=51 sec	Average =114sec

Table 2: Accurate times were taken from the experiment

Serial # of experiments	Angle Pocket		
	Folding & Ironing time (sec)	**Sewing time (sec)**	**Total Pocket making time (sec)**
1	57	47	104
2	46	42	88
3	51	45	96
4	58	54	112
5	62	31	83
6	60	42	102
7	51	38	89
8	54	54	108
9	51	41	92
10	51	32	83
11	55	50	105
	Average =56sec	Average= 44sec	Average =97sec

VI. RESULT

We have taken precautions to ensure reliable data collecting in our experiment. Due to the statistical nature of the experiment, careful attention must be paid to details such pocket size and sticking to a precise time schedule using a stopwatch.

We had made every effort to be precise in our calculations and analyses. We saw that the iron needed to be moved carefully in the case of a round pocket, and that the pocket itself needed to be sewn gently and smoothly in order to achieve a perfect roundness.

form that required more effort to create. The end result of the whole stitching procedure may change depending on how it is carried out. As a result, we need to be vigilant about ensuring that all procedures are carried out in a consistent manner and in an analogous setting. Time to create a round pocket minus time to create an angle pocket = 114 - 97 = 17 seconds

Based on our results, it seems that each Round Pocket requires an additional 17 seconds to create.

VII. ANALYSIS

Because it takes a more competent operator to sew a round pocket than an angle pocket, round pockets take more time to produce. Stitching a Round Pocket correctly might be difficult if your sewing machine is in poor shape. If you don't know what you're doing, ironing the edge of a Round Pocket may take a long time. The Round Pocket requires more skilled workers because to its complex folding, ironing, and stitching process. The Round Pocket is best stitched on a fully automated sewing machine.

VIII. RECOMMENDATION

IX. Before starting to sew, it is crucial to inspect the machine and perform any necessary maintenance. If you want to save some time, it's recommended that you utilize a completely automated sewing machine. Ironing requires the right temperature be maintained at all times. The pocket-making process may be sped up with the use of an automatic thread-cutting technology. Use only high-quality sewing thread to avoid frequent thread breaks and increased downtime. The experiment's findings will aid the Garments Industry's Production, Planning, and Merchandising divisions. Students who want to do similar study will find this thesis to be an invaluable resource.

X. CONCLUSION

We have measured and computed the output time for two distinct sorts of pockets. We have concluded that the production time for a round pocket is higher than that of an angle pocket. This is because it takes more effort to fold, press, and sew a circular pocket than it does a rectangular one. Our newfound understanding of how to maximize Round Pocket manufacturing will serve us well in the future, should we find ourselves working in the garment industry's production division. If we take a job as a merchandiser, we'll be better able to determine how much things like shirts, jeans, and other items with pockets should sell for. We have never completed a thesis or assignment before. We've become better at working together thanks to this endeavor. Our understanding has been broadened and our analytical skills sharpened, both of which will be useful in our future careers.

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