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COMPARATIVE STUDY ON PRODUCTIVITY OF SEWING BETWEEN ROUND POCKET AND ANGLE POCKET

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ABSTRACT

Pocket states that it is a small baglike attachment. In the past the pocket was not originally sewn into garments as it is today. The first pockets were actually small pouches that hung from the belt where one could carry valuables and coins. Since the pocket was attached on the outside of one's clothing. The term sewing is the craft of fastening or attaching objects using stitches made with a needle and thread. Sewing is one of the oldest of the textile arts, arising in the Paleolithic era. Before the invention of spinning yarn or weaving fabric, archaeologists believe Stone Age people across Europe and Asia sewed fur and skin clothing using bone, antler or ivory needles and "thread" made of various animal body parts including sinew, veins, etc. There are various types of pockets used in apparel industry. Among that Round and angle pockets are mostly used. In our work, we have tried to show the different sewing productivity between Round Pocket and Angle Pocket from our experiment.

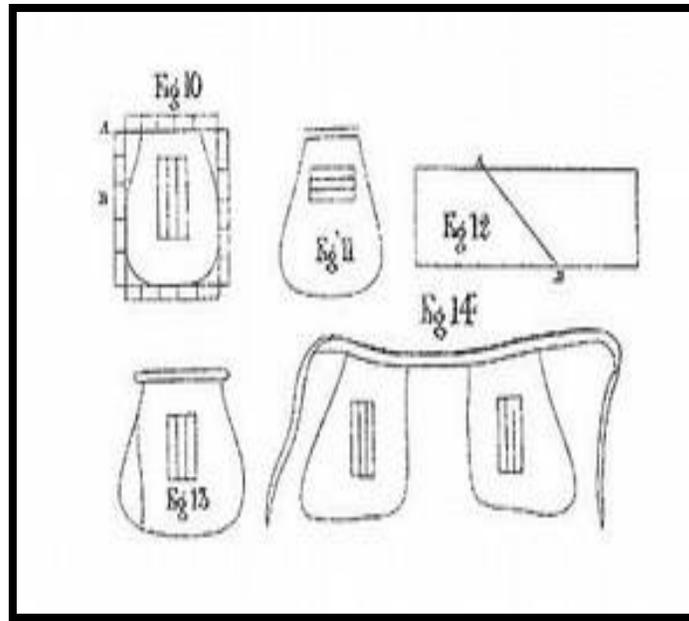
I. INTRODUCTION

The name of our project is "Comparative study on productivity of sewing between round pocket and angle pocket" here we find out the sewing productivity of round pocket and the angle pocket. By researching this project we discover a new thing that will help in Production Planning & Garments Merchandising. In this work we used a term Productivity, productivity may be defined as the ratio between output of wealth and input of resources of production. Output means the quantity produced and inputs are the various resources employed. The output in garment factories can be finished garments. The examples of input are: man, machine,& material(fabric), energy etc. Productivity can be calculated as,

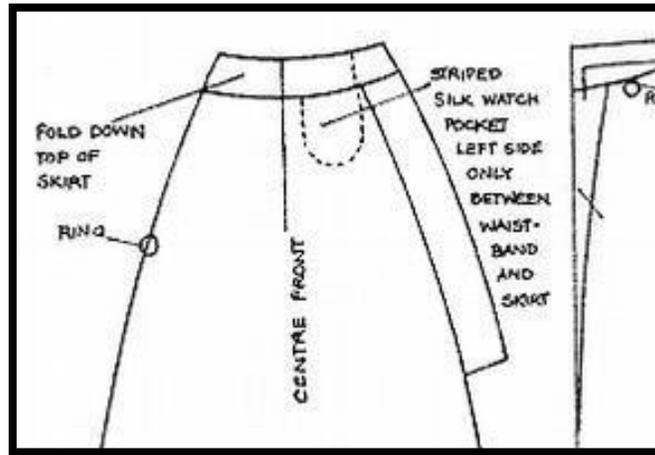
$$\text{Productivity} = \frac{\text{Output}}{\text{Input}}$$

II. POCKET HISTORY

In European clothing pockets began by being hung like purses from a belt, which could be concealed beneath a coat or jerkin and reached through a slit in the outer garment. The word appears in Middle English as pocket, and is taken from a Norman diminutive of Old French poke, pouque, modern poche, cf. pouch. The form "poke" is now only used dialectally, or in such proverbial sayings as "a pig in a poke". Historically, the term "pocket" referred to a pouch worn around the waist by women in the 17th to 19th centuries, mentioned in the rhyme Lucy Locket also called a hanging pocket.



Five illustrations for pockets in *The Workwoman's Guide*, 1838. From the 17th century to the late 19th century, most women had at least one pair of pockets, which served a similar purpose as a handbag does today. They were usually worn underneath their petticoats. There were no mobile phones, car keys or credit cards in the 18th century. Nevertheless, women kept a wide variety of objects in their pockets. In the days when people often shared bedrooms and household furniture, a pocket was sometimes the only private, safe place for small personal possessions.



Patterns of dresses from the 1850s to the 1890s show that although pockets were now attached to the skirt, they still followed the traditional shape of separate pockets. In the 1790s women's fashions changed very dramatically. Wide hoops and full petticoats went out of style. Instead, dresses had a high waistline and skirts that fell close to the body and legs. This meant that traditional pockets and their contents would ruin the line of the dress. As a solution, women began to use reticules, decorative bags designed to be carried over the arm in the manner of our contemporary handbag. However, reticules are very small with barely enough room for a hankie and a coin, never mind the mirror, watch, keys, needle case and oranges that a pocket usually contained.

III. OBJECTIVES OF THE RESEARCH

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

IV. METHODOLOGY

To find out the productivity of the round pocket and the angle pocket, here we sewing 22 pocket. 11 pocket are round pocket & 11 pocket are angle pocket and we compare the time variation of round and angle pocket sewing.



V. 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

VI. 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 noting 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

VII. RESULT

In our experiment we have tried to maintain the accuracy of data collection. For doing this experiment we have to aware for maintaining the proper size of pocket, perfect time schedule maintain by stop watch which is consumed by statistically.

We had tried to maintain the calculation carefully and analyzed perfectly. During making we have seen that the iron had to move slowly in case of round pocket and also in sewing operation, the pocket had to move slowly and smoothly to make that perfect round



shape which consumed more time in making. Result could vary for doing whole sewing process in different ways and different conditions. So we have to be conscious about maintaining every operation in the same procedure with similar working environment. Round Pocket making time - Angle Pocket making time = $114 - 97 = 17$ seconds

From our experiment we have seen that extra 17seconds were needed for making one Round Pocket.

VIII. ANALYSIS

Due to the following reason Round Pocket is taking more time than that of Angle Pocket-It needs skilled operator to stitch the Round Pocket than that of Angle Pocket. If the machine condition is not good enough then it is problem to stitch Round Pocket properly. Improper pressure & heat of iron takes more time for ironing the edge of Round Pocket. More skill worker is needed for folding, ironing & sewing the Round Pocket. Fully automatic sewing machine is better for stitching the Round Pocket.

IX. RECOMMENDATION

It is highly recommended to check the sewing machine & done the required maintenance before sewing. Better to use fully automatic sewing machine then time will be saved. Proper temperature have to be maintained at the time of ironing. Automatic thread cutting system will be helped to save the pocket making time. Have to be used good quality of sewing thread otherwise thread breakage will be higher & productivity will be less. The result of the experiment will be helpful to the Production, Planning & Merchandizing department of the Garments Industry. The thesis will be helpful to the student; those are interested to do research on the same topic.

X. CONCLUSION

We have calculated the productivity of two types of pocket & measure the production time. Finally we have found that round pocket needs more time to be produced than that of Angle Pocket. That because round pocket consumes more time in folding, ironing as well as sewing. We have got knowledge about productivity of Round Pocket making which will help us when we will work in production department in garments industry. If we work as merchandiser, it will help us in costing of garments like shirt, pants & other garments those have pocket. This is the first time we have performed a thesis or project. This project has helped us to learn how to work together. It has enlarged our knowledge & improved our analytical ability, which will help us in future when we will do service in any organization.

XI. REFERENCE



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