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Chapter - 1

Introduction

1.1 Definition of Leather goods:

The term "Leather goods is a misnomer. Literally the term leather goods is applied and confined generally to articles or goods made mainly of leather and intended for containing and carrying personal belongings, such as smaller items one finds it necessary to carry in the pocket or in the hand. Now a days, goods made of synthetics or man made fabrics are also termed as leather goods, but these goods are definitely much lower in price compared to "Genuine Leather". But the methods of construction or fabrication are the same for both. The product which are made out of leather and lend themselves to an enormous variety of both useful and essential and which are a need and asset in modern living are called leather goods.

1.2 History of Leather Goods:

Man from very beginning, has been using animal skins for covering his feet and legs form climate conditions, keeping his provisions of water in goat skins and making belts for various purposes.

Leather goods such were created much later. 700 years B.C. the shepherd "GYPES", who became the kind of LYDIA, created the gold currency standard. A money holder was required and that's how purse came into existence.

Later on the purse become part of the standard equipment of the Roman legionary, made especially for the currency of the country where he went on campaign. 88

In the middle ages, leather goods manufacturing was divided into various guilds. Like 'Purse maker, Saddler, Cobbler, Glover'. At the 12th century "Chaplain's Purse" is introduced, which was close by a lace and tied to the waist.

In 13th century moneybag has arrived, it was containing all the saving kept in a coffer. It has a metallic clasp.
Rabelais used the word "Marioquin" meaning a goatskin tanned in Morocco at 16th century.

Today we can distinguish between,

1.2.1 Small Leather Goods:

Wallet, Purse, Cardholder, Key holder, Cheque holder, Spectacle case, Pen case etc.

1.2.2 Medium Leather Goods:

Hand bags (ladies and gents)

Luggage:

Traveling bags, suitcase, vanity case, attaches case etc.

Saddlery:

School bag, satchel, document holder etc.

Leather Covering:

Box, case jewelers box, office equipments, upholstery etc.

1.3 General Classification of Leather Goods:

A wide variety of leather goods is produced world wide. The main groups are,

1. Small leather goods/fancy leather goods.
2. Medium leather goods
3. Heavy leather goods.

1.3.1 Small Leather Goods:

Small leather goods are some times called personal leather goods which are usually carried in pocket or hand bags, includes purses, wallets, key case, passport case, note case, card case, cigarette case, cigar case, mach box case and so others. Most of those products are made without any internal stiffening of reinforcement. These leather goods require leather having thickness of about 0.5mm to 1.00mm. Different type of hides and skins, which are usually used in making small leather goods are cow softy, goat glaze, sheep napa, calf skin etc.

1.3.2 Medium Leather Goods:

It includes handbags, shopping bags, shoulder bags, documents cases, attach cases and so on. This bags are made from calf, goat, sheep and exotic skins and hides finished with range of colors which generates a good appearance and look sophistication and modernity. Leather that has a thickness of 0.8mm to 1.2mm is used in making of medium leather goods. Cow softy, dry milled, Cow Napa, sheep napa, goat and buff softy leather are widely used in making of medium leather goods.

1.3.3 Heavy Leather Goods:

These are made generally from cow and buff hides, which are strong and durable. The hides have distinct surface grain patterns and size ranges from 20 to 30 sq. ft. is full hide. Cow and buff hides of thickness 1 to 1.5mm are used for making heavy leather goods. The type to leather goods for making heavy leather goods are box sides, kitty leather, cow upper, upholstery, biff softy etc.

1.4 Terms Used in Leather goods Manufacture:

1.4.1 Outer Top:

The component, which forms the exterior of an article and has been on the outside is called Outer Top. In wallets key cases and other personal and jacket pocket article it is generally leather. In bags it may be either leather or a combination of leather and fabric.

1.4.2 Asther:

The portion of jacket pocket articles like wallets and card holders which shows when the articles is called opened is called Asther. It may have pockets to hold cars a window, a gusseted coin pocket etc.

1.4.3 Step Pocket:

It is a pocket to keep credit card.

1.4.4 Stamp Pocket:

It is pocket where stamp are kept.

1 .4.5 Coin Pocket:

It is a pocket for keeping coins. Generally it is a gusseted construction.

1.4.6 Flap:

It is the piece of material that folds or tamps to cover the opening of a pocket or bag. It serves to keep the contents of the pocket/bag securely.

1.4.7 Divider:

The component which is used to divide inner portion of an article e.g. wallet, bag etc. to create an additional component is called divider.

1.4.8 Beeding:

To improve the appearance some times of the outer top assemblies are raw edges using these straps of bound together leather or fabrics with a U bind stiching. This is called Beeding.

1.4.9 Handle:

It helps to carry the articles easily. Handles are provided to articles using ropes, wooden/metallic fittings etc. Some times the fittings are covered with leather to provide a better look to the product.

1.5 Definition of Passport Case:

Passport case is a kind of small leather goods used for carrying passport and some small articles like credit card, identity card, stamp, coin etc.

1.6 Present and Future Prospect of Passport Case:

A passport being a long time useable article needs to be protected from rubbing, exposure to dust, dirt, water, blazing sun etc. At present only a few people have got used to using it but in future its use will get and upward trend.

1.7 Usage of Passport Case:

1. To carry passport and to save it from rubbing and erosion.
2. To carry different type of credit cards as well as address card.
3. To carry light papers.
4. To carry coins or money.
5. To carry traveling tickets.
6. To carry photographs etc.

Chapter – 2

2.1 Role of Raw Materials for the Manufacture of Leather Goods: (Specially for Passport Case)

Man has gone a long way from the days of primitiveness and so has gone leather. Today the role of leather is varied and vast. The products made from leather lend themselves to an enormous variety of both useful and fashionable items, which bear a need and asset in modern life. A extensive range of colors and designs widen the selection range which encourage the prospective consumers to put this products multiuse, be it fashionable or functional. Hence the study of materials is very important in the manufacture of leather goods.

2.1.1 Finished Leather:

These are the main materials required in the manufacture of leather goods. Finished leather may be of different types in the fabrication of wide variety of leather goods. Goat, sheep or calfskin are used in the manufacture of light leather goods. Cow and buff hides are used in heavy and luggage type goods. Softy uppers, sheep, goat napa and suede leather are used in making handbags. Softy leather is exclusively use in "Turn Type of Articles". The thickness of these kinds of leather varies from 0.8mm to 1.0mm.

2.1.2 Calf Skin:

Calf is a term generally used to describe and animal in the sucking stage. The average size of these kinds of skin is from 6 to 10 sq. ft. Natural

finish of these kinds of skin is used for tooling work. It is used for making wallets, coin purse, passport case, key case etc.

2.1.3 Goat Skin:

Its average size is 4 to 6 sq. ft. When dyed it is very rice an appearance. In natural finished it can be used for tooling. It is used for making wallets, billfolds, passport case etc.

2.1.4 Glace kid:

It is made from goat skin and tanned with a smooth, bright glossy finish. It is used for making wallets, billfolds, passport case etc.

2.1.5 Morocco:

It is goatskin tanned with a characteristic grain, which is developed naturally. It is mainly used for making wallets, coin purses, under arm cases etc.

2.1.6 Accessories:

Accessories play a vital role in designing and production of leather goods. Accessories provide not only richness to the design but also durability to the product. Now let us study the accessories in the manufacture of leather goods.

Accessories are grouped into

- **Fittings**
- **Fasteners**
- **Lining**
- **Miscellaneous**

2.1.6.1 Fittings:

Fitting components are

(a) Locks

(b) Frames

(c) Strap fittings

(d) Handle fittings

(e) Hooks

(f) Hinges

(g) Clips

(h) Miscellaneous fittings

2.1.6.2 Fasteners:

Attaching parts with different types of fittings are called fasteners.

(a) Rivets

(b) Buttons

(c) Eye lets

(d) Studs

(e) Press buttons

(f) Zippers

2.1.6.3 Linings:

Different types of linings are used in leather goods. They are used to

(a) **Mask the rough surface of the flesh side of leather.**

(b) **Provide sufficient strength to the product.**

(c) **Give elegance to the product by using matching color to the components.**

Various linings that are used in the manufacture of leather goods are as follows:

Leather lining : Suede, Splits, and Skivers etc.

Fabric lining : Cotton and Silk.

Synthetic lining : Nylon, Coated fabric etc.

The cotton lining and split leather linings are used in the case of heavier leather goods, silk and skiver lining are used in light leather goods suede and silk linings are used in hand bags while nylon and coated fabric are used in leather products which need water proof ness.

2.1.6.4 Miscellaneous:

Threads:

To provide good sewing performance, a thread must have consistent size, strength, stretch and needle heat resistance. The strength and suppleness have to be sufficient to withstand the rigorous of stitch, formation while stitching in the sewing machine. The thread selected for sewing has to provide satisfactory appearance in the seam in both stitch formation and color match. Compatibility between the material and thread is equally important for strength, stretch, abrasion resistance and durability.

Sewing threads are made from two types of fibers.

1. **Natural fibers (cotton, silk and line) and**
2. **Synthetic fiber (nylon, polyester, rayon etc.) natural fibers provide the best sewability while the synthetic fiber provide the best seam performance. Cotton thread is vulnerable to abrasion during the use while synthetic threads provide excellent seam strength and have very good abrasion and resistance.**

Polyester – cotton and nylon – cotton are also used on a large scale in the manufacture of leather goods. Special futures of using them are:
Improve sew ability because it is less harsh than a pure synthetic thread:

I. **The cotton wrap acts as an insulation needle heat resistance during sewing.**
II. **Extra seam grip avoid running back of seams at the start of finish.**
III. **Fill the needle hole completely as cotton cover has a higher moisture regain which allows it to swell.**
IV. **Prevents finer materials such as light leather from having cut by the hard synthetic core.**

2.1.7 Adhesives:

2.1.7.1 Solvent based:

Rubber solution is a solvent based and composed of crepe rubber and petrol (Gasoline). It provides sufficient grip while stitching. It has only a temporary bonding effect and hence and leather goods bonded with rubber solution must be stitched.

2.1.7.2 Water Based:

Synthetic resin adhesive is also used in attaching lining and components for making leather products. This provide good strength and does not stain the lining.

2.1.7.3 Synthetic Rubber Based Adhesive:

This adhesive is extensively used for making stitch less articles and also attaching components where stitching is not possible. It has permanent bounding effect and hence stitching not necessary. It has added advantage over other adhesive like glue, starch, paste etc. because curing takes place immediately. Care is absolutely necessary is applying to the components because excess application of adhesive causes permanent stain the lining.

2.1.8 Needles:

Sewing leather is less difficult than fabric as it – does not slip under the presser food. A leather pointed needle is used which is particularly designed for stitching leather. The wedge point makes a clear cut in the leather resulting in an uniform stitch.

Needle No.	Application
No. 14 & 15	Light leather goods like coin purse, Wallets, Key case etc.
No. 18 & 19	Medium leather goods like wrist bags, hand bags etc.
No. 21 & 23	Heavy leather goods like Document case, Travel bags etc.
No. 26 & 28	Multiply layer construction and handle.

2.1.9 Paper and Boards:

2.1.9.1 Blotting Paper / Cartridge Paper:

These are used for cutting patterns and for lining purpose.

2.1.9.2 Mill Grey Board:

This board has smooth surface on once side and coarse surface on the other side. The board is used for making moulded articles, viz. jewel box, pen holder tumblers etc. In articles where the foundation is given sticking millboards covers the coarse surface of the foundation. This helps to get uniform smooth surface while covering with leather.

2.1.9.3 Straw Boards:

Yellow straw boards are used in making moulded type of articles like jewel box, penholder tumble, pincushion etc. These are sold by weights.

2.1.9.4 Elastic Bands:

Elastic is used in leather goods, where elastic pockets are necessary. Elastic is also used in head bands, travel, suitcase etc. It comes in various color and size.

2.1.9.5 Foam Rubber Sheets:

Polythene – foam rubber sheets are used in a variety of leather products for providing cushion effect. These come in various colors and sizes.

Generally foam rubber sheets of size 2m x 1m and 3mm thickness are used.

2.1.9.6 Piping Wire:

These are synthetic wires, which are used for providing piping to the articles. Piping wire is mostly used in soft type of articles. Piping wires of thickness 1/32inche, 1/16inche and 1/18inche are used in making leather goods.

2.1.9.7 Crepe Rubber Sheet:

This is thin sheet and used to remove excess adhesive in finishing. These are also used to prepare rubber adhesive.

2.1.9.8 Caster Wheels:

Caster wheels are used in luggage goods. These are fixed to heavy travel goods / luggage goods, which cannot be easily lifted physically. Castor wheels facilitate the goods to be pulled from place to another easily.

2.2 Machinery and Tools used in Leather Goods Manufacture:

For many years, machines and rest of the unit operation like clicking, skiving and strap cutting did only sewing, where done manually for the fabrication of leather goods. Today, like any other industry, leather goods units also use semi automatic and automatic machines for the production of leather goods. These machines help not only to increase the volume production, but also ensure quality of products.

The leather and other materials undergo various unit operations before being shaped into a product. The following are the various unit operations in the manufacture of leather goods.

2.2.1 Clicking Machine:

The sequence of operations to fabricate an article begging with the clicking machine. Different panels of component of a leather product are cut in this machine. Cutting dies are used to cut the components to take the component the shape of the die used. So a set of dies is required for each article. On an average, about 400 components can be cut in an hour. This machine could be either of mechanical or hydraulic operation.

2.2.2 Splitting Machine:

Leather available from the tannery are generally found to be thicker than requirement. The components thus cut will have a thickness varying from 1 to 2mm and if the components are assembled as such the article will be vary thick and non-functional. (It should be noted that for certain articles, the leather components need not be split). Hence, we have to reduce the substance of the components to the required thickness. The thickness of the leather required depends on the design of the articles. We can achieve this with the help of the splitting machine. The working width of the splitting machine may be either 300 or 400mm.

2.2.3 Skiving Machine:

This machine reduces the thickness of leather along the edge to the desired width for easy folding. This machine could be use for single groove of double groove skiving for belt making. Only skilled persons can operate this machine as this quality of skiving depends on various adjustments and operating techniques. Different presser foots are used for different type of skiving.

2.2.4 Strap Cutting Machine:

In this type of machine, leather are cut into strips of different width, the minimum being 3mm and cut straps may be used for making belts or shoulder straps. This machine uses a set of disc knives and the spaces used determine width of the strap. By using etched spacers, embossing can be done on the straps while cutting.

2.2.5 Sewing Machine:

This is very important machine as the assembled components are permanently joined together by stitching. Quality of stitch is an important factor and it adds aesthetic value to the end product. Wide range of sewing machines with different attachment is available. The main classes of sewing machines are flat bed, cylinder bed and post bed and under each class, different types are available to suit the requirement of the users.

2.2.6 Other Simple Machine:

Apart from the above important and essential machines, the following machines are used depending upon the design. The edge coating, cementing, creasing, folding, frame opening and closing, designing,

stamping, eyeleting, reverting, buttoning etc. Some of them are simple pedal operated machines.

2.2.7 Tools:

Hand tools play an important role in the fabrication of leather goods. These tools are used while assembling the components. These tools are illustrated in the following pages and it has to be noted that each tool is having a specific function to perform. Thus with the increase in demand for leather good day by day and with the state of art technology, computerized machines are slowly replacing the conventional machines in the leather goods manufacture.

2.3 Unit Operations:

Manufacturing of the leather goods consists of a multitude of different operations. Some of them essential for all type of goods and some may be skipped, depending on the design and method of constructions.

2.3.1 The Essential Operations are:

a. **Sorting.**
b. **Cutting or Clicking.**
c. **Splitting.**
d. **Skiving & Sewing.**

2.3.2 Other Supplementary Operations are:

a. **Creasing**
b. **Staining**
c. **Cementing**
d. **Folding**

e. **Embossing**
f. **Stamping**
g. **Punching**
h. **Eyeleting**
i. **Buttoning**
j. **Reverting etc.**

2.4 Evaluation of Design and Fashion Trend in Leather Goods:

Before depending with the concept of design in detail, a broad outline of what have organized before the advent of design in detail with, it started first with the purpose of utility. During the pre-historic times, man was exposed to a lot of natural hostile forces from the environment such as cold, heat and rain. Initially, he started using large leaves to cover himself and palm leaves to protect his feet but when demand for these increased, he looked for alternatives with a longer durability.

Then start the emergency of using the skin of animals. As he hunted for his food, he discovered a number of applications of the skin including protecting him the elements.

Hence, from the crude utility stage, it moved the later stages to a higher level of designing. Design took different from another to differentiate life styles, occupation and so on. As civilization progressed, simultaneously population grew and demand also increased. Market paved its way to competition. Competitions vied with one other and it was them that DESIGN took stronger roots. Design plays a major role in a number of

fields. It is not limited and has application in diverse fields like architecture, scientific equipment etc.

A study of design in the leather industry would show that of late there has been a dramatic change. A number of design schools have been started to meet the growing demands of the trade. The designer's words are exhibited in fairs organized by the leather industry. It goes into the various attributes and a jury is formed to evaluate the display designs. The displayed designs are then awarded a ranking. It is then selected for a period of two years to be the fashion. Designs are selected two years in advanced before coming into market.

In the western countries fashion changes twice a year, due to their climate conditions. Hence, we find that winter wear has its own fashion vary different from that of summer. Here we also find that purpose power is vary high and hence we find the designers like Pioerie Cardin. J. C. Penny and so on who bring out a total range of wear consisting of clothes to footwear, together with leather accessories.

Clothes and footwear change are attributed to formal occasions, such as an informal party dress to a formal dinner wear. Colors also play a very vital role in fashion trend. When a particular design is selected by the jury, rights are granted to the manufacture for production which finally comes to the market, it is at this stage, it is seen whether the level of acceptance by the public is high, which in turn determined by the sales and successful it become a trend of that time.

The foregoing included market that pertains to the western countries. There is a complete absence of these trends in a developing country like India. Only now there exists a very marginal awareness of design in the minds of the younger generation. With the advent of multinationals among the major business houses, there seems to be a positive outlook even through it might not be as successful as their western counterpart.

2.5 Design and Pattern Development:

In the processing and marketing of leather goods, design and development (Pattern development is the off- shoot of design and development) is of utmost importance. Without proper conception or grasp of functional value no design could convert into a fabricated product and such as the work relating to the design and pattern development aspect of leather goods manufacture cannot be over emphasized.

In the first instance, a design should be as simple as possible and easily workable and saleable. The function of the design should be crystal clear before joined or assembled should be avoided to the extended possible, as it cuts into other important aspects of the design namely size, shape and aesthetic value. A compromise or judicious or imaginative blend of elegance and performance, quite in harmony with the function use is suggested for the best creative design.

As the sole intention of design is to meet the requirements of its basic functions, its performance could be better built around its generic character rather than its additive character. A good leather goods

designer has to foresee the fashion trend / change and style in the coming seasons usually a year ahead and form an idea of what things are in the coming seasons usually a year ahead and form an idea of what things are in store for the market. In fact, designer stands between the market and the manufacture. He is the creator of fashions and fashioner of creations. Some of the important factors are color matching, texture, feel embellishments and soon on but the most important parameter being the functional value.

Another important aspect of design and pattern development is that the design should be easily translated or transformed into production schedule. Further productions and productivity are the key factors for a successful commercial venture. That is why it has been advocated that too many components have to be avoided. For instance, from the author's experience, a wallet could be made out of one single components of leather in less that three minutes, here the design and pattern making of the wallet plays a stellar role, but the consumptions of leather in pattern cutting is high but the compensated with the case of operation and the productivity is very high in this case. On the other hand, the same wallet could be made with 5 or 6 components assembled together. Here we case saving leather, but production schedule is long and productivity slows down within its ambits. So in design and development of leather goods (the above is only in illustration to drive home the point) a judicious blend of production technique and productivity, cost saving, value addition and quality control aspects should be taken into consideration.

The pattern maker, next to the designer should have knowledge about the design chosen, the various materials of construction that are to be used and the different. In each pattern, allowances for seam and turnover are to be provided. The pattern size caries for leather, lining, foam and reinforcements. It is always the practice to have distinct marking in patterns itself for buttonholes and other fasteners. Normally the patterns are made of thick strong paperboard with metallic piping around the edges or made of metal like aluminum and zinc. These are known as templates in technical parlance. The individual patterns of an article are numbered and kept together and stored properly for easy identification and reproduction at a stage.

Undoubtedly, pattern cutting is an art, but it is scientific in the sense that it required elementary mathematics and geometry as symmetrical shapes of pattern are to be fitted in the area of leather judiciously to get the maximum advantage of cutting. The art of pattern cutting requires anticipation, sound judgment, cultivated style of approach with the sense of quality control.

After going through the scientific system of designing pattern development, one feels inclined that the principles of designing are based purely on mathematical calculations and geometrical drawings.

In the beginning, it is so; angle, degrees, dividers, set square is necessary. But by identifying one self within such limits, one cannot become a perfect pattern maker. Experience, practical knowledge and

keen observation are the ingredients to become efficient to give perfect, vital shape to the patterns and requires training.

Chapter – 3

Studies on the Manufacture of Standard Passport Case

Article No. 1

3.1 Objectives:

1. To make a passport case.
2. To develop skill in perspective drawing.
3. To develop skill in manufacturing the developed pattern.
4. To develop skill in quality control during manufacturing.
5. To increase practical knowledge.

3.2 Raw Materials:

1. Leather, aniline finished goat leather: thickness 1.5mm.
2. Lining materials : Satin, color as per leather.
3. Pattern paper.

3.3 Tools:

1. Designing knife.
2. Scale.
3. Measuring tape.
4. Awl.
5. Cutting knife.
6. Thickness gauge.
7. Scissors.
8. Creasing tools.
9. Hammer.

3.4 Machines and Equipments:

1. Splitting machine.
2. Skiving machine.
3. Flat bed sewing machine.
4. Adhesive (Latex, rubber solution).
5. Needle (90, 100, LR, 134).

3.5 Measurement Instructions:

3.5.1 Leather:

Serial No.	Component	Exact size in cm	Folding allowance	Extra cutting allowance	No. Of pieces
1	Outer top	22x17	10mm at all sides	-	01
2	Center piece	17x4.5	-	-	01
3	Credit card & passport pocket	17x9.5	-	10mm at right side	01
4	Stamp pocket	17x9	7mm at top side	10mm at left side	01
5	Top Patti	17x3	7mm at top side	10mm at left side	01

Consumption (With 15 % wastage): 938.4 sq. cm

1.01 sq. ft.

3.5.2 Lining Materials:

Serial No.	*Component*	Exact Size in cm	Extra cutting allowance	No. of pieces
1	***Outer top***	22x17	3mm at all sides	02
2	Passport pocket	17x9.5	3mm at all sides	01
3	Credit card pocket	9x14	3mm at all sides	06
4	Top Patti pocket	17x9	3mm at all sides	01
5	***Stamp pocket***	9x10	-	06

Consumption (With 15 % wastage): 2358.5 sq. cm

2.54 sq. ft.

3.5.3 Other Component:

Serial No.	Component	Exact size in cm	No. of pieces
1	Foam	17x9.5	02
2	Pattern paper	17x9	02

Consumption (With 15 % wastage): Foam: 323 sq. cm

0.35 sq. ft.

Consumption (With 15 % wastage): Pattern paper: 306 sq. cm

0.33 sq. ft.

3.6 Operation Schedule:

3.6.1 Cutting:

a. Leather cutting using cutting pattern
b. Lining cutting
c. Pattern paper cutting
d. Foam cutting

3.7 Splitting Instructions:

Serial No.	Component	Thickness
1	Outer top	1.2mm
2	Center Piece	1.2mm
3	Credit card & Passport Pocket	1.2mm
4	Top Patti	1.2mm
5	Stamp pocket	1.2mm

3.8 Skiving Instructions:

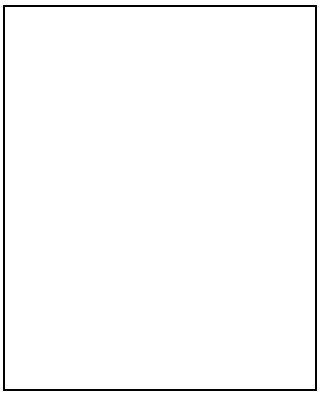
Serial No.	**Component**	**Side to be skived**	**Width**	**Thickness**	**Type of skiving**
1	Outer top	All sides	11mm	0.7mm	Bevel
2	Center piece	All sides	8mm	0.5mm	Bevel
3	Credit card & passport pocket	All sides	7mm	0.5mm	Bevel
4	Stamp pocket	Top side	8mm	0.5mm	Parallel
		All side except top	0.5mm		Bevel
5	Top Patti	Top side	8mm	0.8mm	Parallel
		All side except top	0.5mm		Bevel

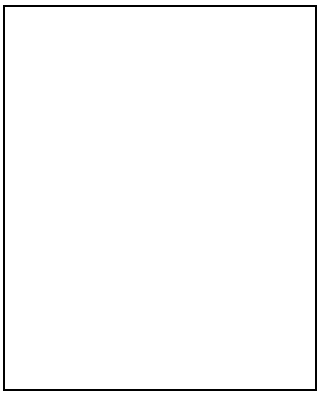
3.9 Assembling Stitching:

1. Pattern paper with foam preparation.
2. Outer top preparation.
3. Credit card and Passport pocket preparation.
4. Stamp pocket preparation.
5. Top patti Preparation.
6. Center Piece preparation.
7. Asther preparation.
8. Final assembling.

3.9.1 Pattern paper with foam preparation:

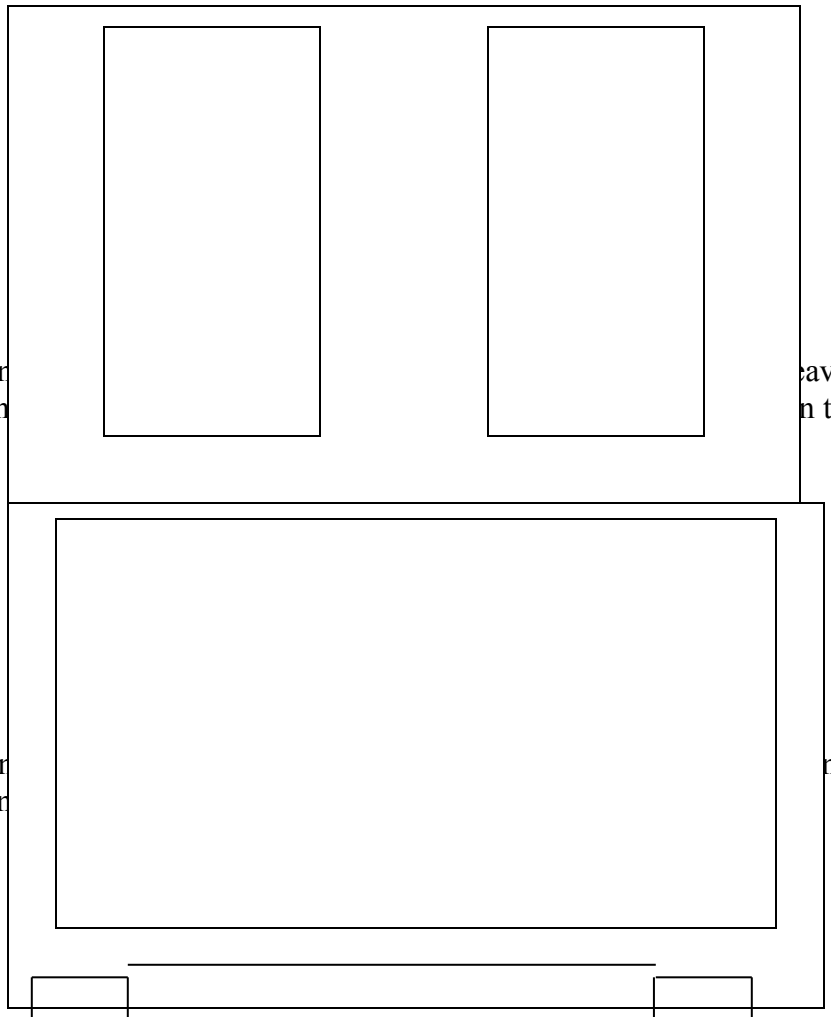
Apply cement on all sides of the pattern paper within the mark and fix the form on it.





3.9.2 Outer Top preparation:

Apply cement on the outer top within the mark as shown in the figure and fix the pattern paper with foam.



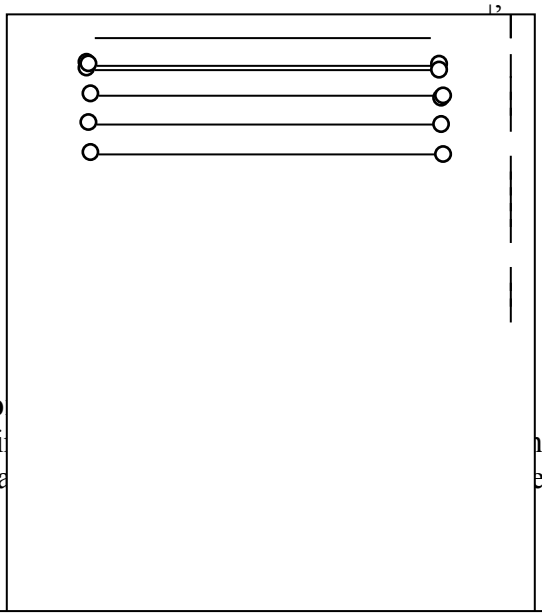
Apply cemer aving a 10mm allowance on n the mark.

Apply cemer n leather and 6mm on linir

3.9.3 Credit Card and Passport Pocket Preparation:

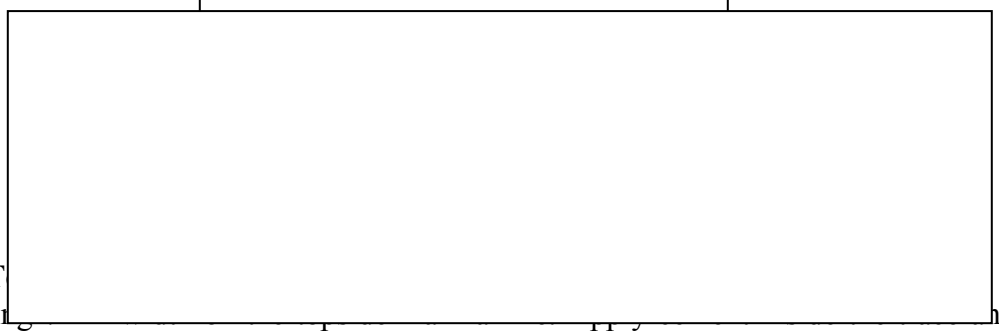
By keeping the working pattern on the component punch the holes following the holes provided in the pattern and then cut in horizontal direction from one point to other. This is done to provide credit card pocket. Assemble the credit card pocket lining as shown in the figure.

Apply cement on all four sides to a width of 10mm and fix the base lining. Trim the excess material on all four sides. Apply cement on the right side on the component to a width of 13mm. Fold the right side and stiching is done along the folded edge. This will act as passport pocket.



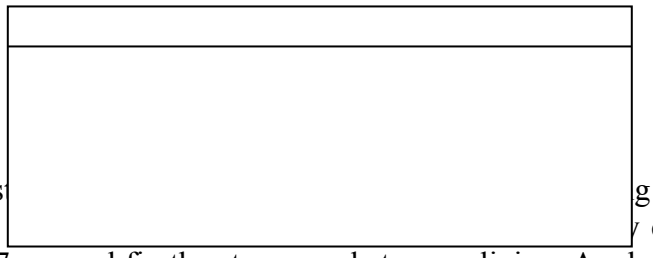
3.9.4 Stamp pocket p

By keeping the worki nt to a width of 13mm on flesh side (Top side) a e excess material on other three sides

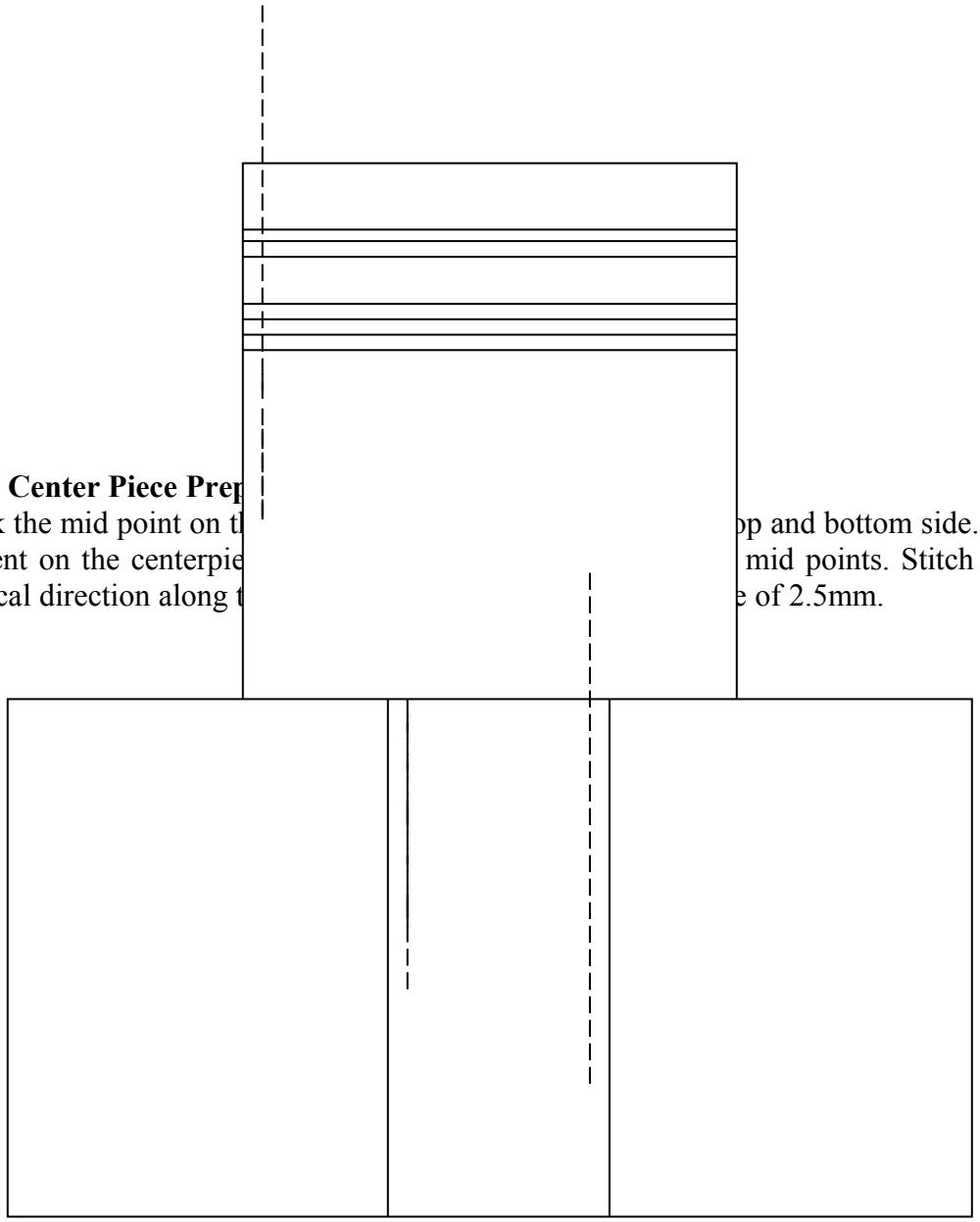


3.9.5 T

Allowi nd fix the lining following the mark. Apply cement to a width of 13mm (7mm on leather and 6mm on lining) on the topside and fold it.



Now assemble the s g 15mm width from topside edge of the y cement on all four sides to a width of 7mm and fix the stamp pocket cover lining. Apply cement on the left side of the component and fold the portion. Then stiching is done.

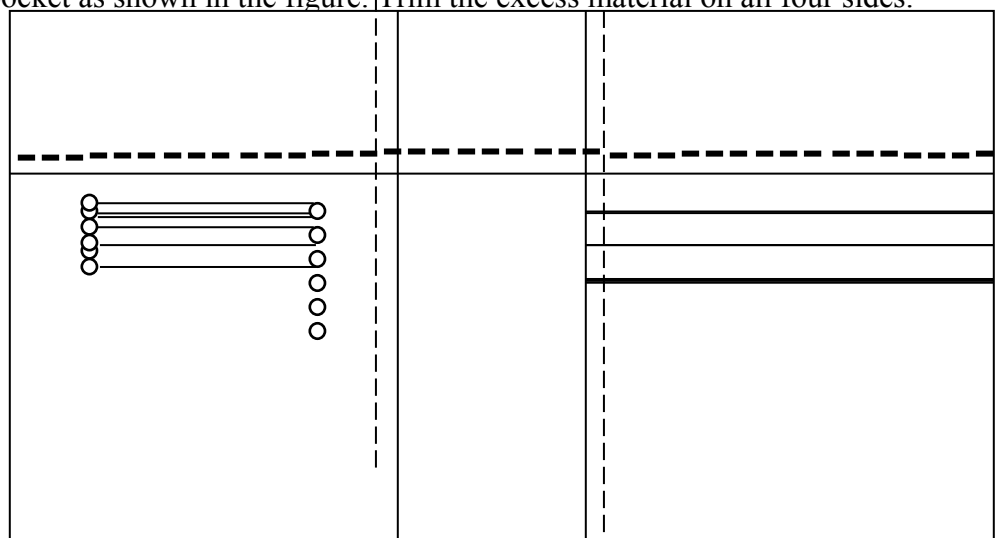


3.9.6 Center Piece Prep

Mark the mid point on t op and bottom side. Apply cement on the centerpie mid points. Stitch on the vertical direction along t e of 2.5mm.

3.9.7 Asther Preparation:

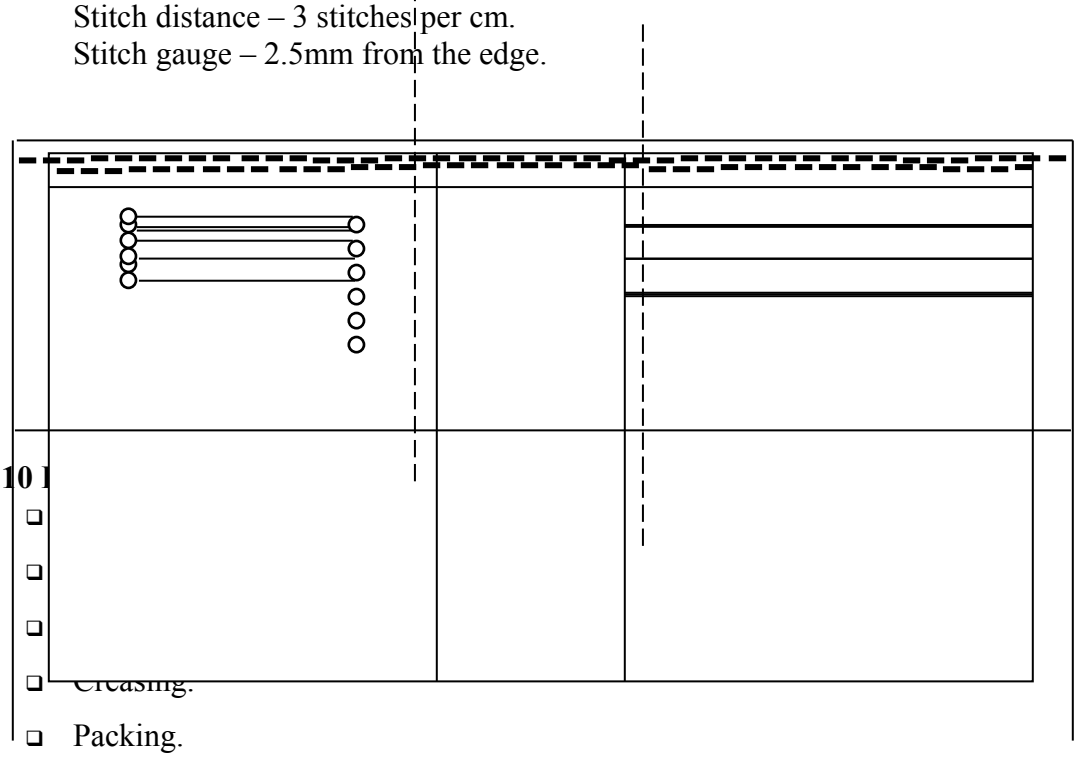
By keeping the center gauge on the centerpiece allowing equal distance on both sides fix the pocket as shown in the figure. Trim the excess material on all four sides.



3.9.8 Final assemble:

Apply cement to a width of 10mm on three sides of the outer top except the topside inside the trace and fix the asther in cradle construction manner. Apply cement to a width of 13mm (7mm on outer top and 6mm on asther) and fold it. Stitch the three sides following the instruction below.

Needle – 134 – 35kk, 90
Thread – Mixed (Polyester, cotton)
Stitch distance – 3 stitches per cm.
Stitch gauge – 2.5mm from the edge.



3.10 I

-
-
-
- Creasing.
- Packing.

3.11 Safety Precautions:

- To switch off the machine when not required.
- To be careful during cutting and stitching.
- To hold cutting knife correctly during cutting.

- To keep away hands from movable band and bell knife.
- To check thickness carefully.
- To avoid long and loose sleeves.
- To keep body away from moving parts of the machine.
- To check proper alignment between needle and needle plate hole.
- To switch off the machine during changing any part.

3.12 Assessment criteria:

- Cutting regularity.
- Checking thickness of splitted leather.
- Skiving width and depth must be accurate as per instruction.
- Extra thread must be pulled down and attached or burnt properly.
- Thread tension must be accurate.
- Slipstitch is not acceptable.

Chapter – 4

Studies on the Manufacture of Standard Passport Case

Article No. 2

1. **Objectives:**

1.1 To make a passport case.

1.2 To develop skill in perspective drawing.

1.3 To develop skill in manufacturing the developed pattern.

1.4 To develop skill in quality control during manufacturing.

1.5 To increase practical knowledge.

2. Raw Materials:

2.1 Leather, aniline finished goat leather: thickness 1.5mm.

2.2 Lining materials: Satin, color as per leather.

2.3 Pattern paper.

3. Tools:

3.1 Designing knife.

3.2 Scale.

3.3 Measuring tape.

3.4 Awl.

3.5 Cutting knife.

3.6 Thickness gauge.

3.7Scissors.

3.8 Creasing tools.

3.9 Hammer.

4. Machines and Equipments:

4.1 Splitting machine.

4.2 Skiving machine.

4.3 Flat bed sewing machine.

4.4 Adhesive (Latex, rubber solution).

4.5 Needle (90, 100, LR, 134).

5. Measurement Instructions:

5.1 Leather:

Serial No.	Component	Exact size in cm	Folding allowance	Extra cutting allowance	No. Of pieces
1	Outer top	22x15	10mm at all sides	-	01
2	Center piece	15x4	-	2mm at top & bottom sides	01
3	Credit card & window pocket	15x10	-	2mm at all sides	01
4	Stamp pocket	15x6	7mm at top side	2mm at left & right sides	01
5	Passport pocket	15x4	7mm at top side	2mm at left and right sides	01
6	Top Patti	15x3	7mm at top side	2mm at left & right sides	01
7	Beeding	15x1.5	-	2mm at top & bottom sides	01

Consumption (with 15% wastage): **1003.95 sq. cm**
1.08 sq. ft.

5.2 Lining Materials:

Serial No.	*Component*	Exact Size in cm	Extra cutting allowance	No. of pieces
1	***Asther***	22x15	3mm at all sides	01
2	***Credit card & window pocket***	15x10	3mm at all sides	01
3	Passport pocket	15x8.5	3mm at all sides except top	01
4	Credit card pocket	10x8.5	-	05
5	Top Patti pocket	15x10	3mm at all sides	01
6	***Base for window pocket***	10x9	**-**	01

Consumption (with 15% wastage): **1642.2 sq. cm**
1.77 sq. ft.

5.3 Other Component:

Serial No.	Component	Exact size in cm	No. of pieces
1	Celluloid	9.5x6.5	01

Consumption (with 15% wastage): **92.86 sq. cm**
0.099 sq. ft.

6. Operation Schedule:

6.1 Cutting:

e. Leather cutting using cutting pattern
f. Lining cutting
g. Pattern paper cutting
h. Celluloid cutting

6.2 Splitting Instructions:

Serial No.	Component	Thickness
1	***Outer top***	1.2mm
2	Center Piece	1.2mm
3	Credit card & Window Pocket	1.2mm
4	Passport Pocket	1.2mm
5	Top Patti	1.2mm
6	Stamp pocket	1.2mm
7	Beeding	0.8mm

6.3 Skiving Instructions:

Serial No.	Component	Side to be skived	Width	Thickness	Type of skiving
1	Outer top	All sides	11mm	0.7mm	Bevel
2	Center piece	All sides	8mm	0.5mm	Bevel
3	Credit card & Window pocket	All sides	7mm	0.5mm	Bevel
4	Calculator & Stamp pocket	Top side	8mm	0.5mm	Parallel
		All side except top	0.5mm		Bevel

5	Top patti	Top side	8mm	0.8mm	Parallel
		All side except top	0.5mm		Bevel
6	Passport pocket	Top side	8mm	0.8mm	Parallel
		All side except top	0.5mm		Bevel

7. Assembling and Stitching:

7.1 Outer top preparation.

7.2 Stamp pocket preparation.

7.3 Passport pocket preparation.

7.4 Top patti Preparation.

7.5 Credit card and Window pocket preparation.

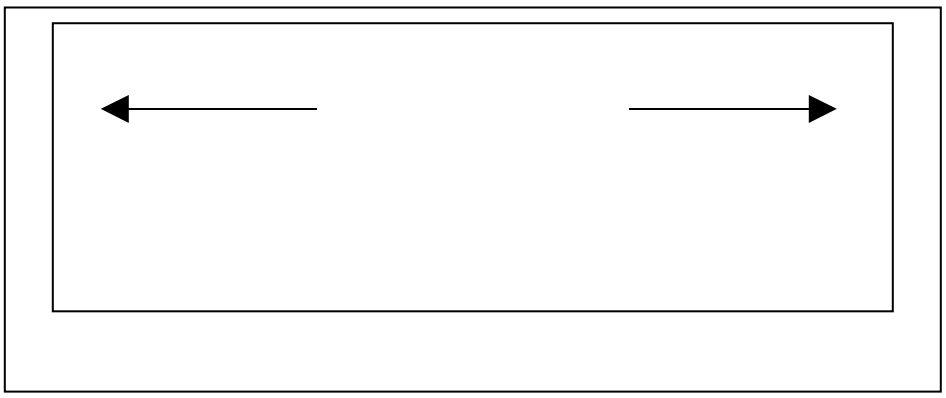
7.6 Center Piece preparation.

7.7 Asther preparation.

7.8 Final assembling.

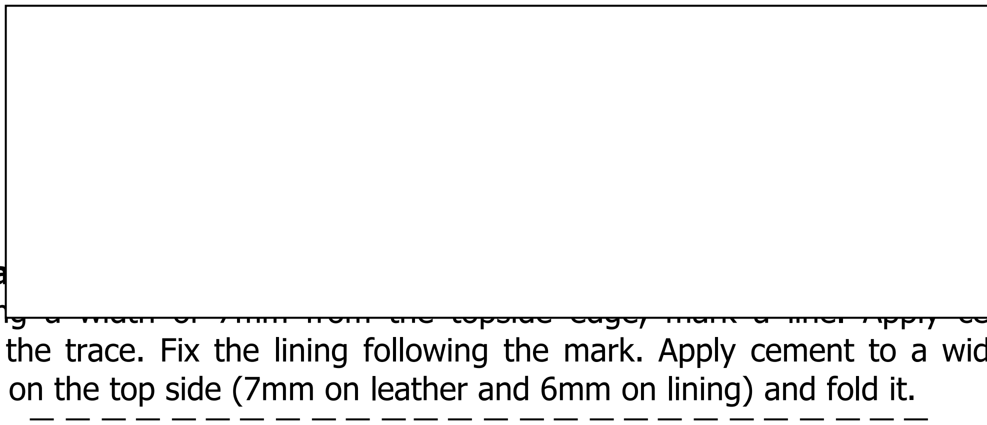
7.1 Outer Top preparation:

Keeping the tracing pattern on the flesh side of the outer top, trace the out line.



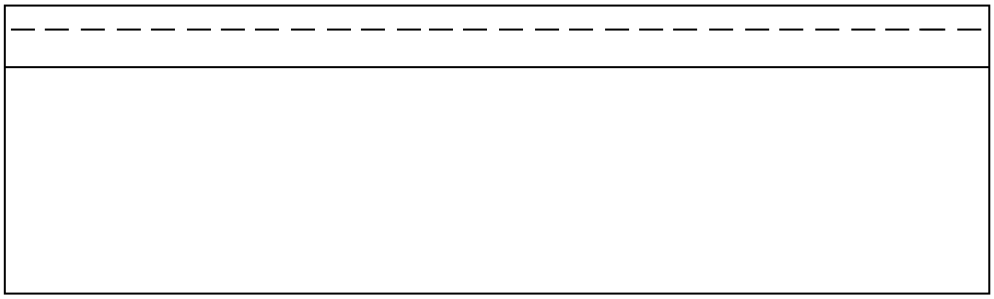
7.2 Stamp pocket preparation:

By keeping the working pattern on the grain side apply cement to a width of 13mm on flesh side (Top side) and fold it following the pattern. Trim the excess material on other three sides



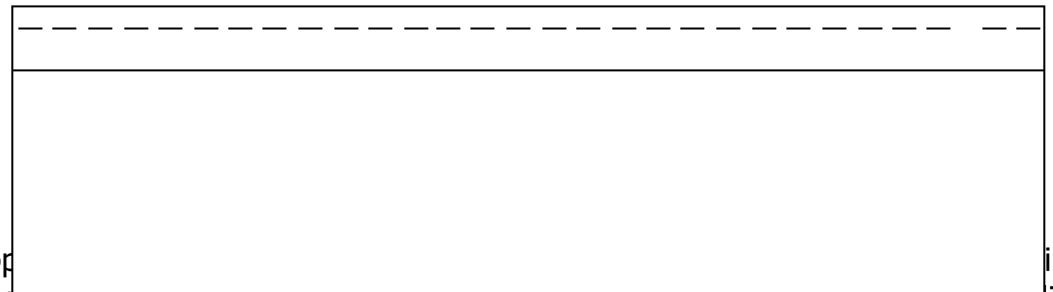
7.3 Pa

Allowing a width of 7mm from the topside edge, mark a line. Apply cement inside the trace. Fix the lining following the mark. Apply cement to a width of 13mm on the top side (7mm on leather and 6mm on lining) and fold it.

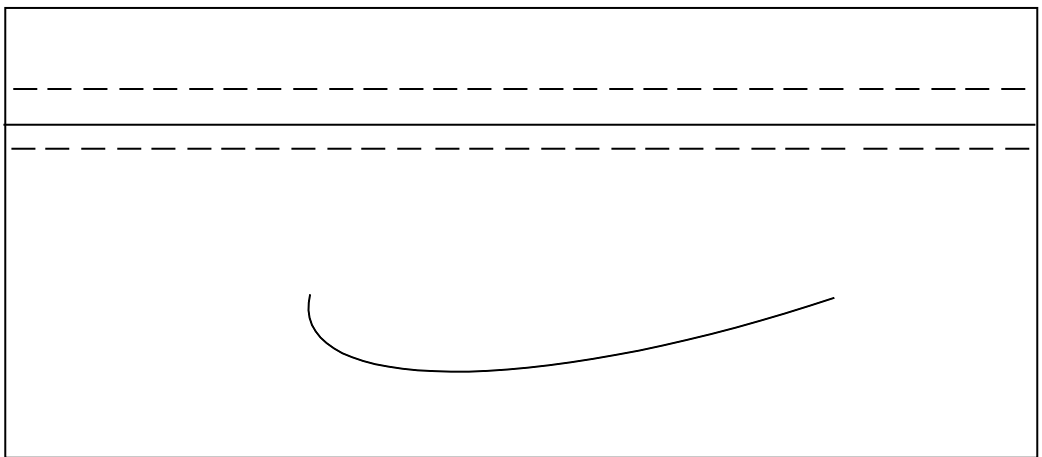


7.4Top Patti Preparation:

Allowing 7mm width on the topside mark a line. Apply cement inside the trace and fix the lining following the mark. Apply cement to a width of 13mm (7mm on leather and 6mm on lining) on the topside and fold it.



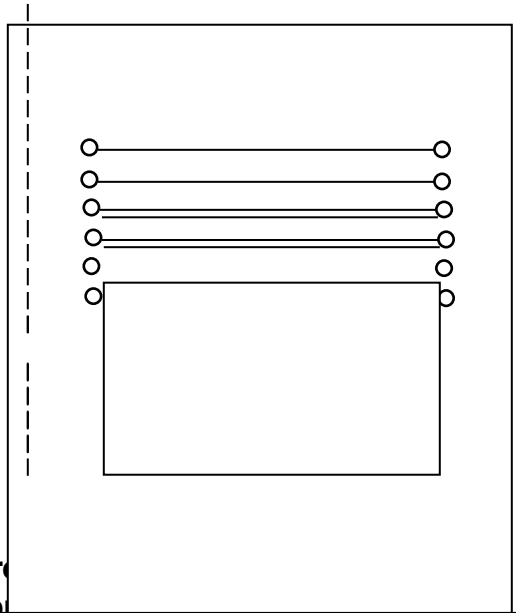
App [illegible] ing a 10mm allowance on all four sides as shown in the figure. Now fix the lining within the mark.



7.5 Credit Card and Identity Pocket Preparation:

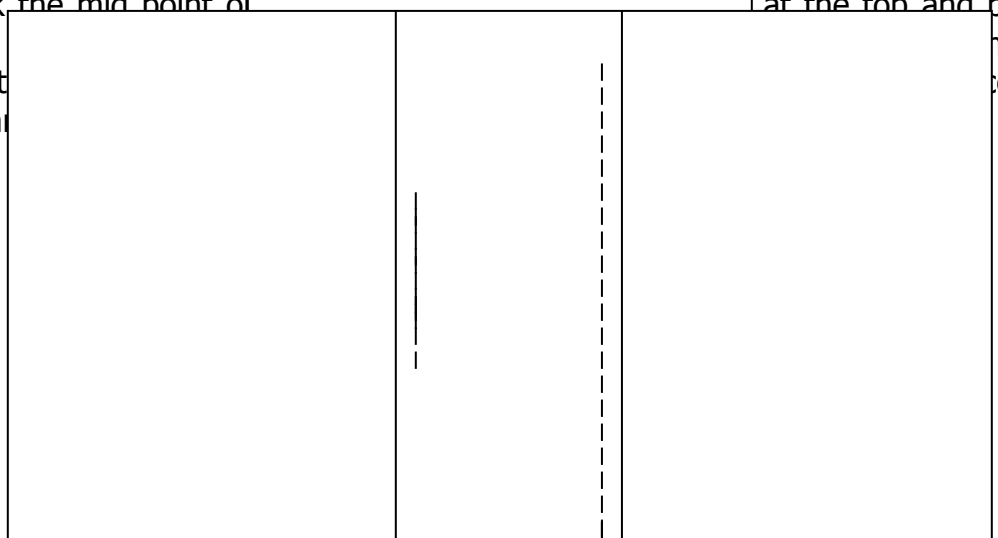
By keeping the working pattern on the component punch the holes following the holes provided in the pattern and then cut in horizontal direction from one point to other. This is done to provide credit card pocket. Now cut the window slot and the window opening following the working pattern. Apply cement around the window slot and fix mica. Then fix the mica cover lining. Assemble the credit card pocket lining as shown in the figure.

Apply cement on all four sides to a width of 10mm and fix the base lining. Trim the excess material on all four sides. Trace line in vertical direction to a width of 5mm on the line side of the assembly. Apply cement on all four sides to a width of 10mm and fix the base lining. Trim the excess material on all four sides. Apply cement on the left side and fold following the mark. Trim the other three sides as per the pattern.



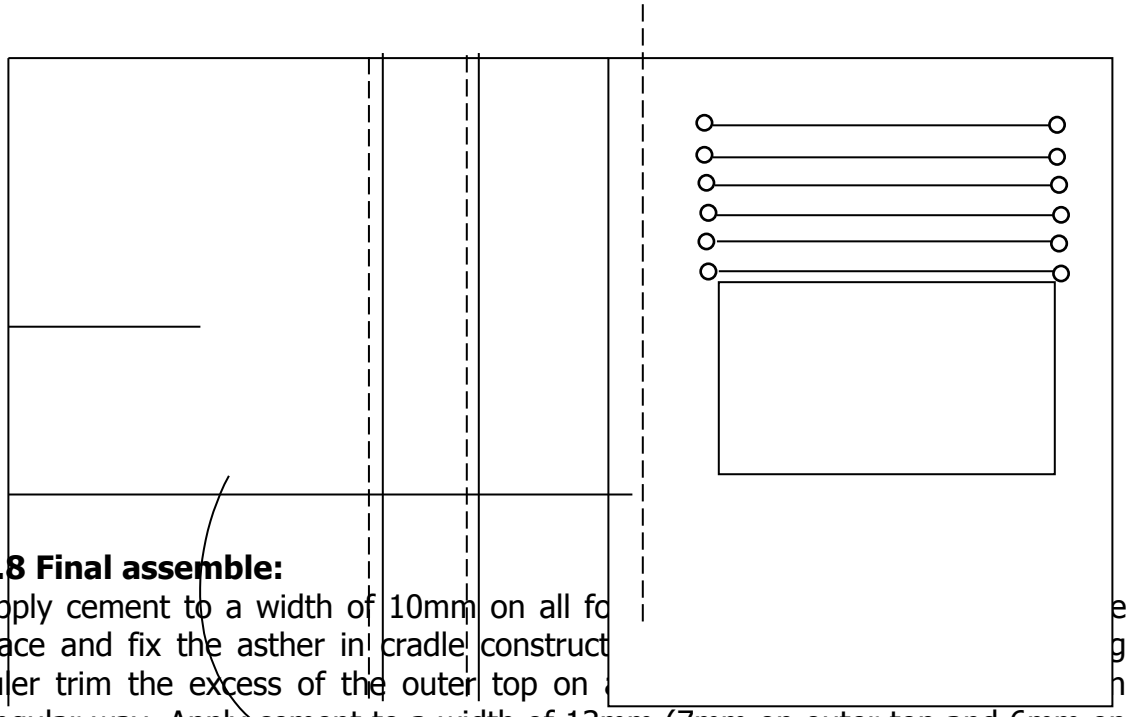
7.6 Center Piece Pr

Mark the mid point o at the top and bottom side. he mid point ce at a distar



4.9.7 Asther Preparation:

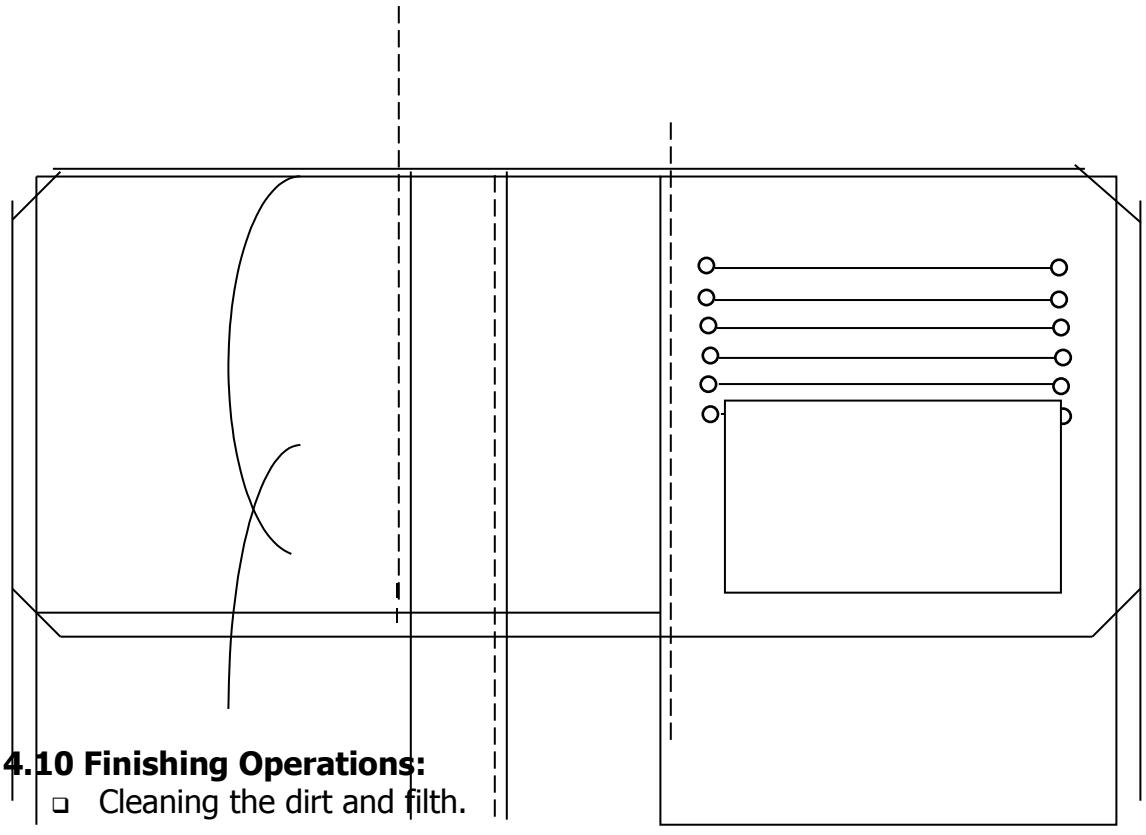
By keeping the center gauge on the centerpiece allowing equal distance on both sides fix the pocket as shown in the figure. Trim the excess material on all four sides.



7.8 Final assemble:

Apply cement to a width of 10mm on all fo e trace and fix the asther in cradle construct g ruler trim the excess of the outer top on n angular way. Apply cement to a width of 13mm (7mm on outer top and 6mm on asther) and fold it. Stitch the four sides following the instruction below.

Needle – 134 – 35kk, 90
Thread – Mixed (Polyester cotton)
Stitch distance – 3 stitches per cm.
Stitch gauge – 2.5mm from the edge.



4.10 Finishing Operations:

- Cleaning the dirt and filth.
- Cutting the thread.
- Burning the thread.
- Creasing.
- Packing.

4.11 Safety Precautions:

- To switch off the machine when not required.
- To be careful during cutting and stitching.
- To hold cutting knife correctly during cutting.
- To keep away hands from movable band and bell knife.
- To check thickness carefully.
- To avoid long and loose sleeves.

- To keep body away from moving parts of the machine.
- To check proper alignment between needle and needle plate hole.
- To switch off the machine during changing any part.

4.12 Assessment criteria:

- Cutting regularity.
- Checking thickness of splitted leather.
- Skiving width and depth must be accurate as per instruction.
- Extra thread must be pulled down and attached or burnt properly.
- Thread tension must be accurate.
- Slipstitch is not acceptable.

Chapter – 5

Studies on the Manufacture of Standard Passport Case

Article No. 3

5.1 Objectives:

6. To make a passport case.
7. To develop skill in perspective drawing.
8. To develop skill in manufacturing the developed pattern.
9. To develop skill in quality control during manufacturing.
10. To increase practical knowledge.

5.2 Raw Materials:

4. Leather, aniline finished goat leather: thickness 1.5mm.
5. Lining materials : Satin, color as per leather.
6. Pattern paper.

5.3 Tools:

10. Designing knife.
11. Scale.
12. Measuring tape.
13. Awl.
14. Cutting knife.
15. Thickness gauge.
16. Scissors.
17. Creasing tools.
18. Hammer.

5.4 Machines and Equipments:

6. Splitting machine.
7. Skiving machine.
8. Flat bed sewing machine.
9. Adhesive (Latex, rubber solution).
10. Needle (90, 100, LR, 134).

5.5 Measurement Instructions:

5.5.1 Leather:

Serial No.	Component	Exact size in cm	Folding allowance	Extra cutting allowance	No. Of pieces
1	Outer top	21x14	10mm at all sides	-	01
2	Center piece	14x4	-	2mm at top & bottom sides	01
3	Window pocket	14x8	-	-	01
4	Stamp pocket	14x8	7mm at top side	2mm at left & right sides	01
5	Passport pocket	14x2	7mm at top side	2mm at left and right sides	01
6	Top Patti	14x2	7mm at top side	2mm at left & right sides	01
7	Coin pocket	6x7	7mm at top & left sides	2mm at bottom & right sides	01
8	Extra part of coin pocket	6cm at right, 4.5 cm at left & 7cm width	7mm at top & left sides	10mm at bottom & 2mm at right sides	01

5.5.2 Lining Materials:

Serial No.	*Component*	Exact Size in cm	Extra cutting allowance	No. of pieces
1	***Asther***	21x14	3mm at all sides	01
2	Passport pocket	9.5x14	3mm at all sides	01
3	Stamp pocket	8x14	3mm at all sides	01
4	Top Patti pocket	9.5x14	3mm at all sides	01
5	Coin pocket	6x7	3mm at all sides	01
6	Extra part with coin pocket	12 cm at right, 10.5 cm at left & 7cm width	3mm at all sides	01

Consumption (with 15% wastage): **820 sq. cm**
0.88 sq. ft.

5.5.3 Other Component:

Serial No.	Component	Exact size in cm	No. of pieces
1	Celluloid	14x8.5	01

Consumption (with 15% wastage): **136.85 sq. cm**
0.15 sq. ft.

5.6 Operation Schedule:

5.6.1 Cutting:

a. Leather cutting using cutting pattern
b. Lining cutting
c. Pattern paper cutting

d. Celluloid cutting

5.7 Splitting Instructions:

Serial No.	Component	Thickness
1	***Outer top***	1.2mm
2	Center Piece	1.2mm
3	Coin pocket & extra part	1..2mm
4	Passport Pocket	1.2mm
5	Top Patti	1.2mm
6	Stamp pocket	1.2mm

5.8 Skiving Instructions:

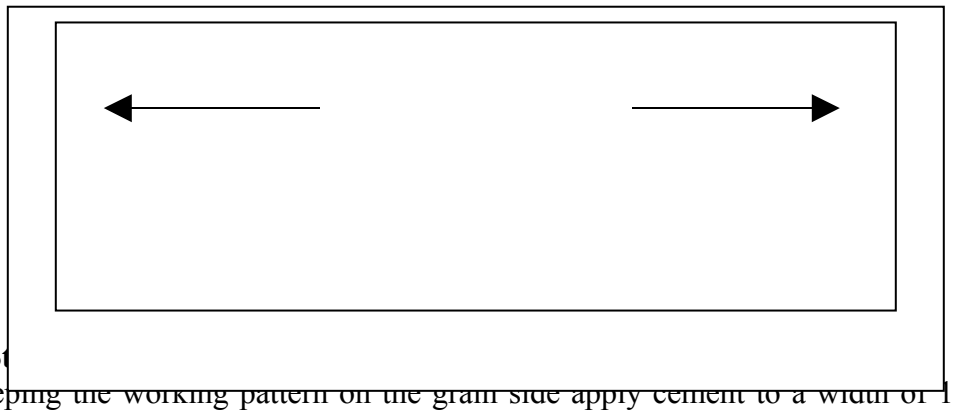
Serial No.	Component	Side to be skived	Width	Thickness	Type of skiving
1	Outer top	All sides	11mm	0.7mm	Bevel
2	Center piece	All sides	8mm	0.5mm	Bevel
3	Coin pocket	Top & left side	11mm	0.5mm	Bevel
4	Extra part of coin pocket	Top, left & bottom sides	11mm	0.5mm	Bevel
5	Stamp pocket	Top side	8mm	0.5mm	Parallel
		All side except top	0.5mm		Bevel
6	Top patti	Top side	8mm	0.8mm	Parallel
		All side except top	0.5mm		Bevel
7	Passport pocket	Top side	8mm	0.8mm	Parallel
		All side except top	0.5mm		Bevel

5.9Assembling and Stitching:

9. Outer top preparation.
10. Stamp pocket preparation.
11. Passport pocket preparation.
12. Window pocket preparation.
13. Top Patti Preparation
14. Coin pocket preparation.
15. Center Piece preparation.
16. Asther preparation.
17. Final assembling.

5.9.1 Outer Top preparation:

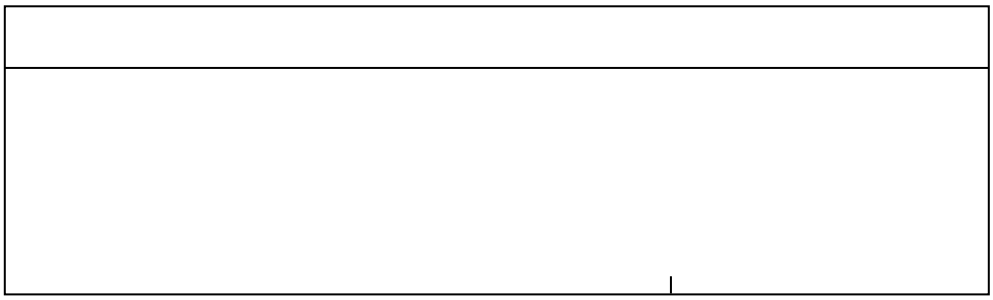
Keeping the tracing pattern on the flesh side of the outer top, trace the out line.



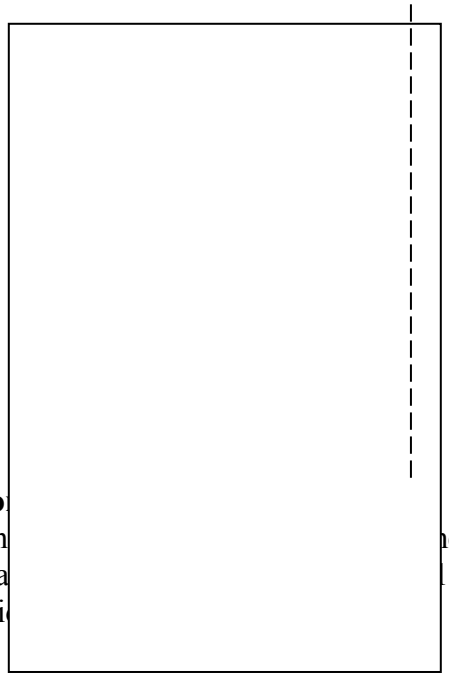
5.9.2 St

By keeping the working pattern on the grain side apply cement to a width of 13mm on flesh side (Top side) and fold it following the pattern. Trim the excess material on other three sides

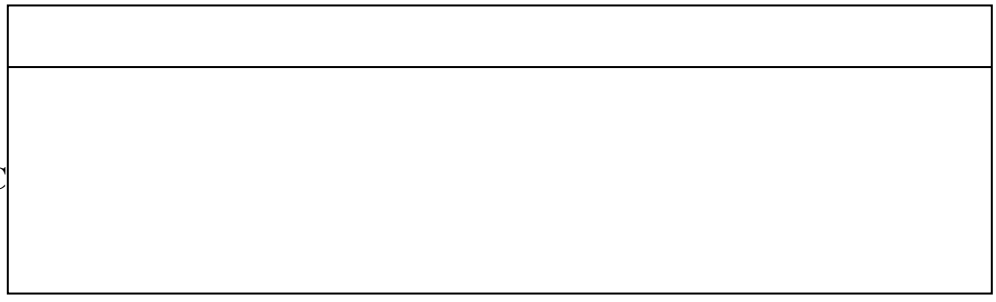
5.9.3 Passport Pocket Preparation:
Allowing a width of 7mm from the topside edge, mark a line. Apply cement inside the trace. Fix the lining following the mark. Apply cement to a width of 13mm on the top side (7mm on leather and 6mm on lining) and fold it.



5.9.4 Window Pocket Preparation:
By keeping the pattern trace the line and cut mica and fix the bedding by stitching at the right side of the mica piece.

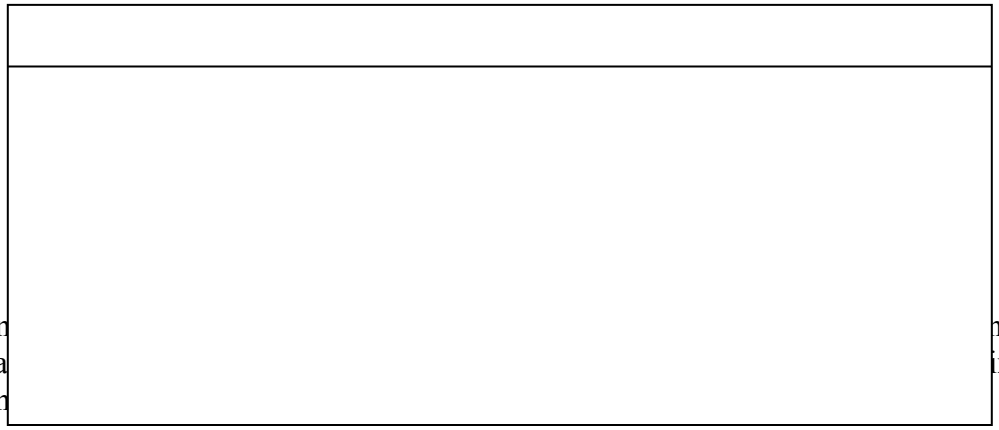


5.9.5 Top Patti Preparatio
Allowing 7mm width on th ent inside the trace and fix the lining following the ma 13mm (7mm on leather and 6mm on lining) on the topsi



5.9.6 C

By using the working pattern trace the lines on the flesh side of leather. Apply cement on all four sides and fix the lining. Apply cement to a width of 13mm 7mm on leather and 6mm on lining on the top side and fold it.



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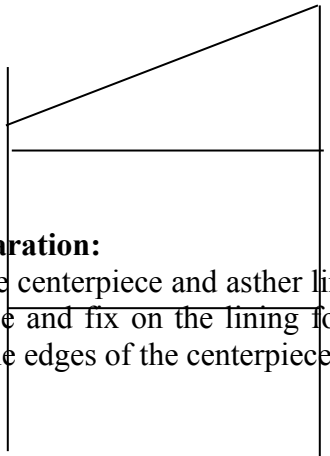
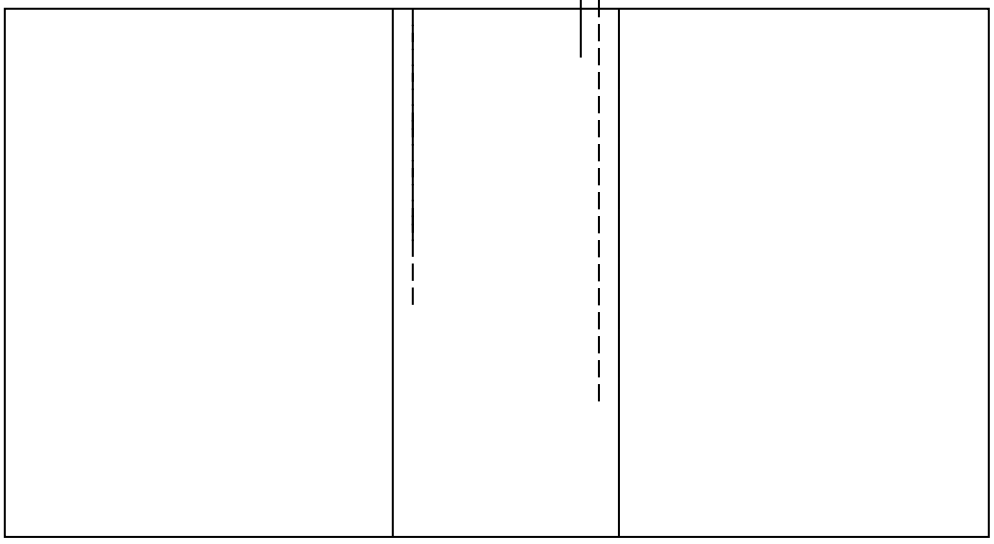


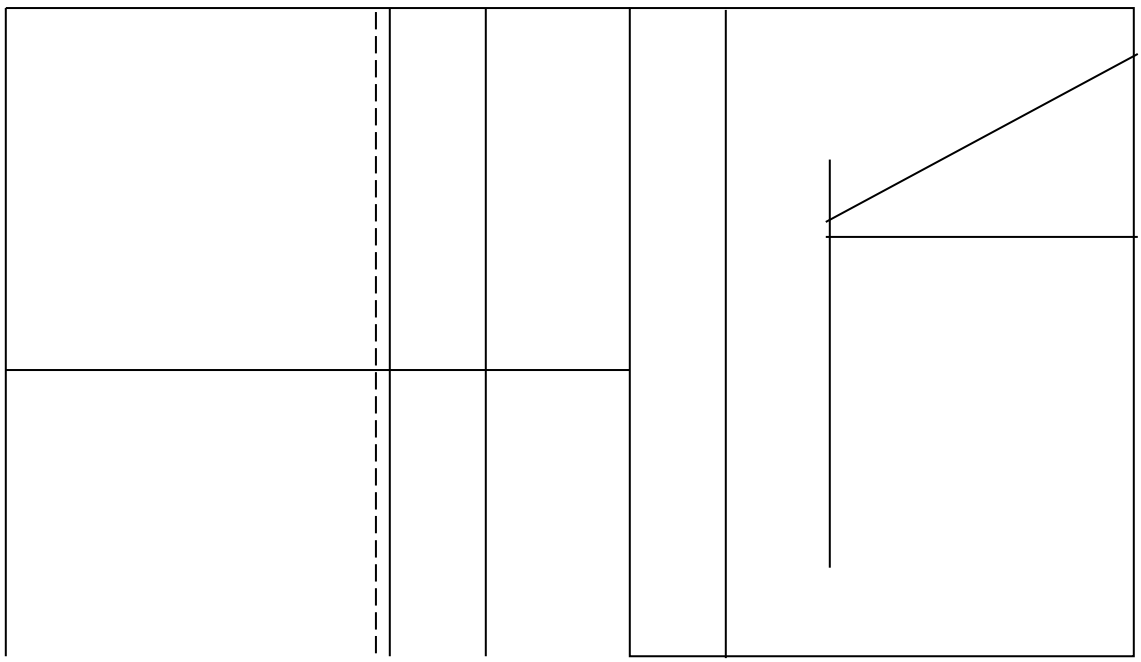
5.9.7 Center Piece Preparation:

Mark the mid point on the centerpiece and asther lining at the top and bottom side. Apply cement on the centerpiece and fix on the lining following the mid points. Stitch on the vertical direction along the edges of the centerpiece at a distance of 2.5mm.



5.9.8 Asther Preparation:

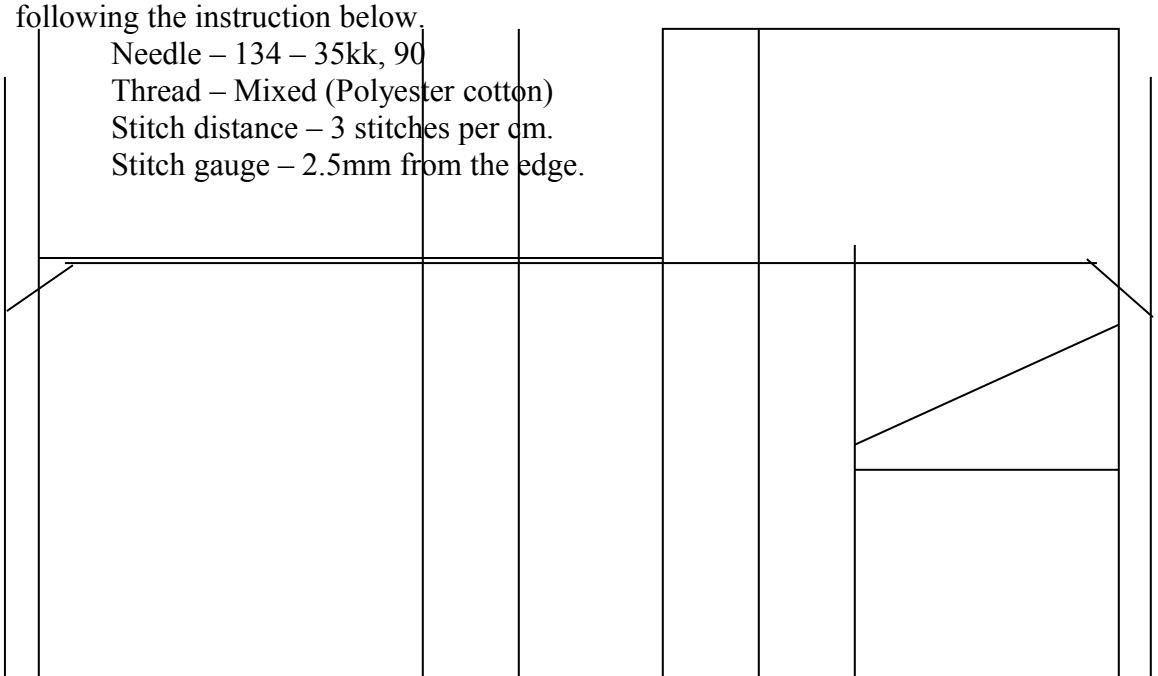
By keeping the center gauge on the centerpiece allowing equal distance on both sides fix the pocket as shown in the figure. Trim the excess material on all four sides.

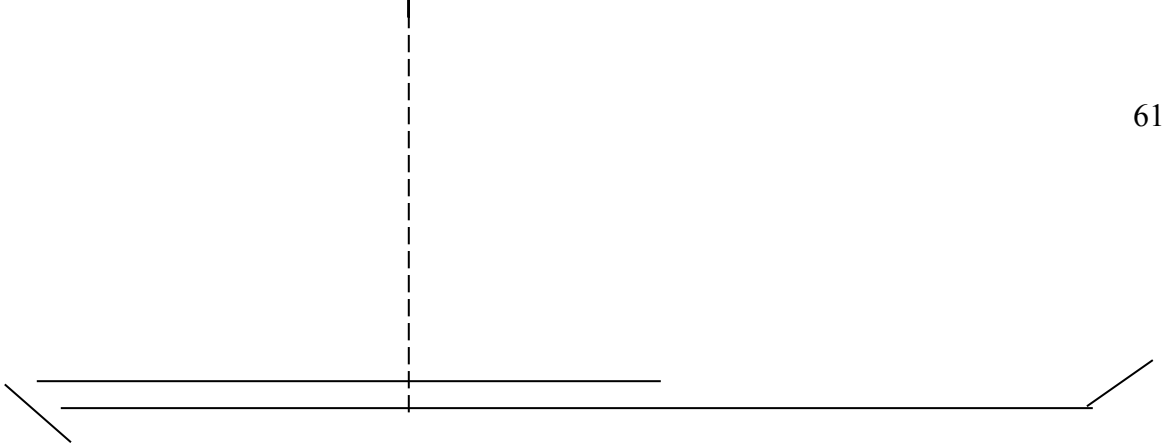


5.9.9 Final assemble:

Apply cement to a width of 10mm on all four sides of the outer top inside the trace and fix the asther in cradle construction manner. By using the trimming ruler trim the excess of the outer top on all four sides. Cut the corner in an angular way. Apply cement to a width of 13mm (7mm on outer top and 6mm on asther) and fold it. Stitch the four sides following the instruction below.

Needle – 134 – 35kk, 90
Thread – Mixed (Polyester cotton)
Stitch distance – 3 stitches per cm.
Stitch gauge – 2.5mm from the edge.





5.10 Finishing Operations:

- Cleaning the dirt and filth.
- Cutting the thread.
- Burning the thread.
- Creasing.
- Packing.

5.11 Safety Precautions:

- To switch off the machine when not required.
- To be careful during cutting and stitching.
- To hold cutting knife correctly during cutting.
- To keep away hands from movable band and bell knife.
- To check thickness carefully.
- To avoid long and loose sleeves.
- To keep body away from moving parts of the machine.
- To check proper alignment between needle and needle plate hole.
- To switch off the machine during changing any part.

5.12 Assessment criteria:

- Cutting regularity.
- Checking thickness of splitted leather.
- Skiving width and depth must be accurate as per instruction.
- Extra thread must be pulled down and attached or burnt properly.
- Thread tension must be accurate.
- Slipstitch is not acceptable.

Discussion

A passport being a long time usable article needs to be protected form rubbing, exposure to dust, dirt, water, blazing sun and rough weather. It is clear that the three passport cases discussed above along with their manufacturing procedures, costing sheets etc. are really of good quality, cheap, durable, moderated, easily usable and having good color combination according to the demand of age.

The business prospect of these types of passport case is very bright. With a small capital one can have the initiative of manufacturing, marketing these types of passport case and can earn a lot. In addition, the manufacturing procedures are very easy and the raw materials are easily available.

These types of passport case are the result of my long time observation, hard effort and my project work.

Conclusion

I am very pleased for being able to carry out the project work. Consequently after completion of my project work, it is crystal clear that small leather goods posses a great prospect not only in our country but also in overseas market. Besides comprehensive work such as entrepreneurship, market research and above all quality control will help to increase the demand of small leather crafts all over the world.

It is a fact that we are accustomed to use small leather goods in our life to a large extent. For instance we use wallet, passport cases and coin boxes to maintain the daily money handling personally. Further more using leather goods are also a matter of status and prestige in many countries. As observed, it is easy to make small leather goods but difficult to maintain the quality. Here after the sector needs careful handling to fulfill the market demands.

On the other hand new internship will make a base for exporting the small leather goods after consuming local demands. Foreign currency can be gained in a significant way which may develop the country economy as raw materials and labor are two most important factors but available in our country.

Finally there may be a revolution in our economy, if the authority takes the necessary steps to gain the desired achievements by comprehensive efforts.