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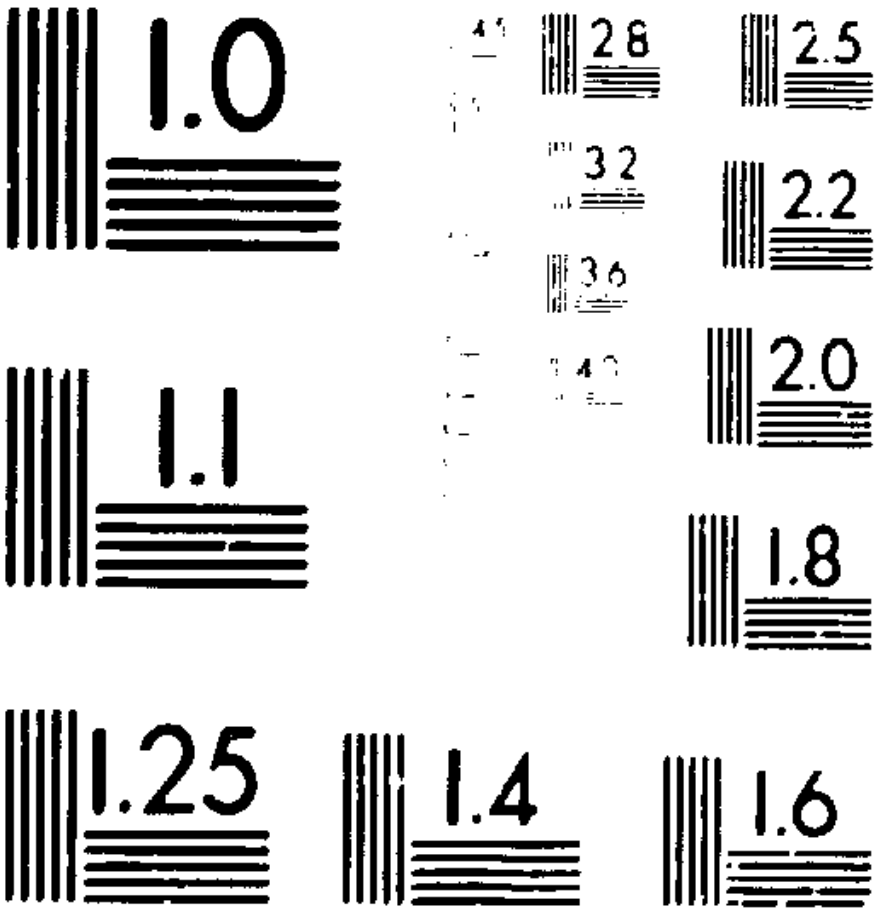

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DP/ID/SER.A/539
11 September 1984
English

LEATHER PRODUCTS DEVELOPMENT CENTRE

DP/PAK/79/022

THE ISLAMIC REPUBLIC OF PAKISTAN

Technical report: Design, Pattern Cutting, Grading, Packaging and Marketing of Leather Gloves of Differert Categories; Extension Services to Small-Scale Manufacturers in Karachi and Sialkot *

Prepared for the Government of the Islamic Republic of Pakistan
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of R. W. Beeby, ACFI, MIWM
Expert in Leather Gloves Design + Manufacture

2745

United Nations Industrial Development Organization
Vienna

* This report has been reproduced without formal editing.

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I. EXPLANATORY NOTES

A. Value of the Rupee

The national currency of Pakistan is the Rupee currently valued at 13.6 rupees for 1 American Dollar.

B. Unit of Measure

Although it is usual for glove designers and engineers to work in the metric scale to produce patterns and equipment, glove sizes are based on the Pied du Roi (the King's foot) which is approximately ¾ inch longer than the Imperial foot.

The size is measured around the knuckle joints of the hand with a glovers tape or more conveniently a glove retailer will try a glove against the knuckles of a clenched fist if the customer is unsure of his/her size before trying on.

I N T R O D U C T I O N

After briefing in Vienna on 2nd and 3rd April 1984 an overnight plane delivered the expert to Islamabad at 12:30 hours on Wednesday 4th April for immediate report to UNDP offices, and a conference was set up for 12:30 hours the following day with Mr. Mohammad Tajuddin Warsi, the Director General of the Leather Industry Development Organisation and his staff.

The counterpart was nominated and an agreed programme of instruction approved for the course in Karachi.

An addition to the programme was also requested, namely a visit to Sialkot with the counterpart to run a "crash course" for the glove manufacturers of roughly two weeks with a few days preparation time. This was also agreed.

It was not possible to get a confirmed seat on a flight to Karachi until Saturday 7th April, but upon arrival work commenced right away clearing a former store room and fitting it out with cutting tables to accommodate 25 candidates.

Two letters were sent out to each manufacturer by motorcycle courier, one annoucing the course and a second volunteering extension services, but it soon became obvious that the industrial support would be insufficient to provide the required numbers, so the expert draughted an advertisement which was translated into Urdu and after Government approval was inserted in the Urdu press.

The promised support with the installation of the Shima Seiki Knitting machine was not forthcoming as the Sun Glove Company maintained they were safeguarding a "trade secret"and did not wish to become involved with the programme in any way.

Nevertheless the machine was installed and linked up with 3-phase power in what was now the Glove Design and Develop ment Department.

All the manufacturers of gloves who agreed were given full and frank interviews and though most were not convinced that their present practise of scissor cutting industrial gloves using the contractor system could be improved upon, it was pointed out that they might have quite different views when the Government is no longer able to give them 17½% export rebate from the pockets of the taxpayer, because of more pressing demands on its resources.

A. Extension Services

Several requests for assistance came as the result of the letter offering help, some were simple requests for interpretation of client enquiries and the cutting of patterns by the expert so that samples could be despatched; it is hoped that in due course there will be feed back about firm business resulting.

A further enquiry was from a "cut and sew" textile glove manufacturer who was getting complaints from his clients about a recurring fault at the finger junctions, which turned out to be nothing more serious than overstretching during the final assembly when backs and fourchettes are joined to the palms. The same manufacturer also wished to know how to copy competitors samples without unpicking them, it was suggested he send a representative to do the course.

The most extensive enquiry came from a manufacturer who has a full range of the most advanced glove making equipment which has been unused for over 10 years while his contractor makes his industrials using scissor cutting techniques. New samples are being made for his approval in a higher price bracket with considerably more added value.

B. The Glove Design Pattern Cutting and Grading Course

The course commenced on Saturday 21st April, strictly in accordance with para 2 in the Job Description, and apart from its curtailment to seven weeks to accommodate the Governments request to go to Sialkot, the objectives were met in full as originally planned.

There is, however, a danger of rapid inputs of new material giving a superficial character to any course, so despite its unofficial title of the Geldi Geldi (quickly-quickly) course by the students, it will be suggested in the chapter on recommendations that the glove counterpart runs a recapitulation and reinforcement course at the Centre for two or three afternoons each week immediately upon the termination of the assignment, to produce a body of work in designs, patterns and finished products suitable for display.

C. The Master Stitcher

It was obvious that the stitching skills demanded by glove making would not be acquired in seven weeks, so after much pressure from the expert, an experienced glove stitcher was hired on a temporary contract to act as a technician in much the same way as they employ skilled stitchers in the fashion colleges in Europe.

He commenced work two weeks after the course started and the Centre would be ill advised if it does not extend his contract, for he proved a popular instructor, demonstrating and talking students through the difficult techniques in Urdu.

If the course is finally judged to be a success, a fair share of the credit must go to this man for his skill and his personality.

D. Course Duration

Commenced:- 21.4.1984 Terminated:- 6.6.84

RECOMMENDATIONS

1. Arrange a short course on lesson preparation and how to teach for the counterparts when the colleges of education 'go down' for the long vacation... GOVT.

2. Appoint a multi lingual leather products marketing man for Europe, preferably a European... Pakistan Export Board

3. Consider linking <u>added value per square foot of leather</u> used on all leather products with the percentage of export rebate which can be claimed

   e.g., Leather clothing say 50 feet FOB
   Leather goods " 5 " "
   Leather gloves " 2½ " "
   Leather shoe uppers 2¼ " "
   Leather shoes 2½ " + soles.

   Any imported item could be subtracted and Pakistan produced accessories could be added like direct labour, and a scale of say 5% to 30% which would encourage higher priced product design and manufacture.

4. Let the various R & D Institutes publish information concerning National sources of supply for items within their field.

   The purchase of Warp Knitted Pile Fabrics, imitation wool linings, wool and cotton knits for glove linings, specification cotton/nylon sewing threads with glace finish are not available in the bazaars.

5. Let the R & D programme for leather consider specific leathers for gloves, with sueded flesh, fluoro-chemical washables and fashion colours one year ahead, to Euromod or other forecast.

6. Consider what help the Government can offer to hand glove makers of high quality - this is the lowest capital investment area with the greatest added value potential. A good designer could instruct, establish standards, deliver cut blanks and collect finished work from "cottage industry" workers ready to package and market abroad with a big "mark up."

7. Dispense with flayingknives on small animal skins such as sheep, buffaloe calf and goat in favour of "blowing off" with compressed air. The grades of pelts would benefit as would the overall selection.

   Has anyone computed the lost added value.

8. Run a recapitulation and reinforcement course as soon as the counterpart returns from Sialkot to keep up the momentum of the glove programme in Karachi. Accuracy of finish and craft virtuosity only comes with constant high level practise.

9. Plan three-month assignment for Sialkot, from September 1984 onwards even though a great array of equipment will not be to hand — the quality of the teaching input is more important. Sialkot could acquire a modest selection of hand tools from its own resources while cutting pads and three Pfaff463 machines could be loaned and shipped for the duration of the course.

   Packaging and international marketing should be included and presented by a marketing expert from the Pakistan Export Board.

II. THE BODY OF THE REPORT

There were three main duties in the job description as follows:

1. To put into operation the glove lining knitting machine
2. To conduct a training course in leather glove designing and pattern cutting, specially emphasising size grading for different markets
3. To carry out extension services to small and medium scale leather glove manufacturers in the Karachi area.

Though the total assignment allocated in the project document is classed as a short term one, the original programme was further curtailed by a strong request by the Government to include a two week 'crash course' for the glove manufacturers in Sialkot, which had the effect of putting the whole programme under pressure; so while the design and pattern cutting programme was completed, the amount of glove making practise was seriously reduced and will need a further course run by the counterpart as soon as he returns from Sialkot, to keep up the momentum already established.

It is essential that the work is not allowed to fade as it did after the departure of the expert some fifteen months previously when all glove making inputs came to a virtual stand still, as most of the students either wish to compliment another skill, or are 'ab initio' trainees wishing to start their own business, join one already started, or establish themselves abroad importing gloves from Pakistan.

The enthusiasm is there, as was demonstrated during a power cut in the fifth week of the course, when it was stated that they did not mind being overworked, as they expected this in their own business, but one new design per week was enough to cope with, and some weeks they had to assimilate one every day, with no time to experiment on new developments until the basics had been fully comprehended.

1. The Sima Sheiki Glove Lining Knitting Machine:

Although this machine has been removed from its store and is wired up to three phase power with a standby air compressor ready to move in position it cannot become fully operational without 10 guage yarn which is still awaited.

Every effort has been made to become operational with visits to the Cotton Institute and interviews with skilled warp knitters to supervise the start up, so with only one week before travelling to Sialkot the original optimism is a little dimmed.

2. The training Course in Glove design, pattern cutting + grading:

It will be seen by reference to Annex. (I) just how much has been packed into this course, for most of it has had to spill over beyond the strict limits of the job description to cater for a range of students whose back grounds and future intentions cover a very wide spectrum. After a short introduction to leather glove making procedures, a designers hand tools were introduced, and each student commenced cutting training which involved sharpening instruction and analytical cutting exercises, which are produced to a formula to encourage marking out and measuring accuracy, followed by cutting "against the clock" (Annex. II). Simultaneously a simple light welder/oil field worker glove was introduced to dissipate the tensions created by exercise cutting with linking time and quality assessments, especially as most were beginners and could only be expected to take such pressure for half hour periods without a change in programme.

As skills developed and the newly introduced sharpening buff stick allowed all to keep their knives tolerably sharp, the simple glove pattern was produced as a graded set of thumbs, main tranks and fourchettes ready for a pattern trial in their size ready for machining up. Analytical machining of straight lines and curves now had to be introduced to continue the programme in sequence, while maintaining cutting training to continue the improvement in that area. Additional to the analytical stitching introduced during a previous visit, new

exercises of a more complex nature were evolved and marking out skills were brought out in their preparation (Annex II)

Analytical stitching training is done without thread to concentrate on accuracy of guiding and there was a marked difference between those with some experience of treadle control and those without, though with the aid of the professional stitcher the first batch of glove trials was produced at minimal cost using chrome splittings from the leather goods programme which were regarded as waste.

From this stage onwards the programme consisted of a regular input of new designs and methods of glove making to cover as much of the industry as was possible in the time available

III. Analysis of Activities

The range of industrial gloves made in Pakistan:Gloves to DIN. & BSI specifications (copies now in Centre Library). Cutting a glove pattern to the hand and making up procedures. Traditional glove cutting techniques for different qualities. Component parts of gloves, sizes and fashion glove usage. Animal skin structure, Areas of quality and stretch.

Skin layouts for glove cutting.

General purpose gloves with linked fourchettes.

Lined uni-sex type-introducing Boulton thumb.
High Quality Motor Cyclist glove - Boulton thumb and gusset.

Graded set of Motor Cycle Gloves.

Golf glove and visit of Julio Valdivia (Spanish Golf Glove Master).

Graded set of ski gloves.
Sailing, cycling and moped glove (Gunnthumb), Graded set.

Stitches used in glove making.

Types of thumbs available to a glove designer.
Crocheted back driving gloves.

Graded set English men's dress glove
" " " womens " "
" " South American Mens gloves (dress)
" " " " womens " (")

Integrated set mens and womens dress gloves - Albin Porket, Bayreuth

Grade analysis of above set with analysed increments per size.
Added value and its importance in industrial development.

Ancillary products for the glove makers range balance.
Relative merits of different fourchette designs.

Decorative treatments available

Range of womens fashion gloves using above treatments.
" " mens general purpose gloves with above treatments.

The course can hardly be considered complete without the suggested recapitulation and reinforcement course which should follow it immediately.

The strong emphases on design, pattern cutting and grading was essential in this phase, but use of the information in the making of many more prototypes would be a natural follow up until September 1984 at least, under the guidance of the counterpart member of staff.

It cannot be said that results have been utilised, but many students intend to make gloves by hand or machine and every effort has been made to put them in touch with the Pakistan Export Board concerning markets. Annex (I). One of the main factors to consider for the future would be the development of leather specifically tanned for golf and fashion gloves such as is being done by Zahur Sancho Limited, Karachi from kid and goat skins.

The factors which will effect the future glove development programme in addition to suitable leather and linings, would be a regular review at half yearly intervals concerning progress made and further developments envisaged.

The conclusions gained from the course and extension services interviews would indicate that the thriving and economically important industrial glove sector have a sound base for making and selling their goods, but there is no reason why dress gloves and some sports gloves cannot go "up, market" and add further to the glove sectors figures with a little help from the ancilliary range items introduced in the course.

IV. EXTENSION SERVICES TO INDUSTRY

There were six main extension services to the Glove Industry in Karachi summarised below as to subject matter:

A. Zia Rehman Garments, Karachi:

Analysis of production fault in fabricated cotton laboratory or electronic work gloves.
Diagnosis of fault and advise on elimination.
Advise on pattern cutting to copy submitted samples and price of swing beam cutting press.

B. Messrs. Blue Chrome Tanneries:

Cutting industrial glove pattern to Japanese client enquiry and cutting two pairs of samples in clients' leather for making up.

C. Motif Leathers:

Visit and tour of above works to advise about latent glove making machinery and cold bend knife plant.
Production of up market packaged sample to incorporate clients lower price base pattern was put in hand.

D. Abdul Hakim Textiles:

Discussion about the 'contractor system' and advise about breaking into the industrial glove market. Were unable to undertake production of 15 industrial glove patterns in leather and 10 in fabric, but offered to produce one specimen style with full costing.

E. Subhani Associates:

This project was in conjunction with the Sind Small Industries Craft work Programme.
Patterns and cut blanks supplied in high quality dyed nappa for subsequent embroidery and make up.

F. Pakistan Export Board:

Several visits to the Centre were made by Mr. Michael Joffé and his Sind Craft industries assistant concerning a leather gardening glove they were hoping to promote.

Technical advise was offered and supply sources for special gloving needles given.
(Mr. M. Joffé is I.T.C. International Design Consultant)

G. Zahur Sancho Limited:

The above tannery company is part of a large international group with links in Spain. This team of four who included a glove kid tanning expert and a highly experienced European glove master wanted assistance with producing 200 pairs of glove samples, and possibility of a joint venture in the future.

They were introduced to Razia Fasil a dress designer and large scale manufacturer who wishes to diversify and the glove experts at Mahmood Brothers who agreed to cooperate with the immediate samples.

THE SIALKOT PROGRAMME

Commenced 8.6.1984 concluded 21.6.1984

..

The extreme brevity of time allocated for this programme in Sialkot made it necessary to call a meeting of the Gloves Manufacturers Association on the day of arrival, to arrange a detailed item table for we were in the period of RAMADAN and each participant would be attempting something new to them during a daily 17 hours period of fasting.

It was decided that classes would commence at 07.00 hrs. each day until 10.00 hrs. and be followed by a factory visit and extension service programme by the expert and his counterpart Mr.S.A.R.Zaidi which would continue until 13.00 hrs. or later if this were necessary.

After a brief introductory talk about the need for the progressive introduction of new machinery and techniques and the movement away from "cottage industry" procedure in favour of batch and flowline assembly methods, the pattern cutting programme commenced with a display of tools each designer should acquire. Traditionally even master patterns had been produced with scissors so knife cutting, sharpening, cutting pad and other inputs were new even to established manufacturers. The equally important task of each student constructing his exercise to exact measurements before cutting was strongly stressed, as was the explanation of the marketing system and the use of "stop" clocks to record exercise performance time which would link with the quality rating to give a final mark.

Students were taught how to mark "tight" to an objective marking system which would enable them to make regular improvement in their straight line, shallow curve and deep curve cutting until the exercises were no longer necessary, i.e. they could cut free hand to the thickness of a human hair (if you can see it, you can cut it). (Annex I).

To break the monotony of exercise work, a further teaching input was a simple industrial round thumb glove of the light welder/oil field worker type for which the finger gussets or fourchettes would be constructed by them. It was presented as a graded set of sizes from 7-10 inclusive, with graded thumbs to match so that the programme was now a blend of

exercise and glove pattern cutting.

Later a Boulton thumb dress/driving glove was introduced which proved of interest, for by this time some of the very experienced glove makers were bringing in expensive handsewn gloves which had been submitted to their firms as samples. Due to difficult access on an upper floor it had not been possible initially to have sewing machines available, but a new class room in the Conference Room of the Surgical Instrument Makers Association removed this obstacle so that analytical sewing exercises were introduced also.

It was immediately apparent that the experienced gloves makers were glove masters of a very high order and needed only a simple exercise to show they were highly skilled stitchers with many years experience, some from the age of 12 or less. Talks were given on the structure of leather, lines of tightness and stretch, glove pattern lay out methods and the great success of the whole assignment, the use of the Schmidt Silver ball point pen which was enthusiastically received by the students the experts and the glove cutters in the factories equally - they all wanted to know the cost and source of supply.

The course had now developed into a two way seminar with the introduction of motor cycle and ski gloves for which the area is famous, so the expert was now priviledged to be shown the Sialkot system by one of their contractors - a simple clear-cut system by which a whole variety of gloves can be cut without fuss or excessive measurement and construction. There appears only one area where improvement might be made and that is some work elimination by cutting it double down a scribed fold line which would allow palm and back fingers to be cut at the same time with adjustment in the length of the latter's finger cuts on the opened out pattern - formerly scissor cut patterns had to be cut on the flat.

The technical part of the course finished on a high level with golf glove patterns and some very attractive submissions which will do well in Europe and the U.S.A. Curved finger fourchettes for motor cycle gloves and ski gloves was dealt with also.

Let there be no doubt, that while Sialkot will benefit it from a training centre to speed up the training in a progressive manner, there are advanced skills in abundance to be used to great advantage when they are able to progress to the employment of young women in segregated stitching rooms, supervised by skilled female supervisors.

In the time available it was not possible to do more than comment on quality control methods, work scheduling, material issue and cutting contol, departmental management skills and widened product ranges as linked with aggressive marketing of designs they have developed, rather than copies, but the proposed training centre could introduce courses in these and other subjects as the industry develops away from cottage industry concepts to full industrialisation on the western pattern.

VI. EXTENSION SERVICES TO THE SIALKOT GLOVE INDUSTRY

There were eight factory visits to firms in this area.

RAJAX INDUSTRIES: General advice on work place lay-out, material issues with some pattern grade checking and instruction on pattern cutting and grading to two of the senior personnel. Silver ball point marking trials. Advice on shoe upper patterns.

ARCO SPORTS: General appraisal of golf glove sample silver ball point pen demonstrated to cutters. Advise on piping guides.

HANSA ENTERPRISES: Visit to work shops and tannery with tour of new premises for assembly line production in due course. Discussion on work transportation and possible shoe upper involvement later.

PHEDRA INDUSTRIES. Visit to glove unit and football factory. Office discussion on hand-sewing needles for dress gloves and silver ball point making pens.

TAJSON CORPORATION: Visits to scattered work shops, discussion on feed guides for piping; check-up of motor cycle glove pattern grade and advise on elimation of tight wrists on motor cycle glove consignment by means of decorative side panel to edge cuff.

BILLOO TRADING: Visit to workshops, discussion on depressed industrial glove prices, help with DIN & BSI specifications and new pattern cut for a left hand/right hand work glove to meet a client enquiry.

HAJI AFTAB AHMAD BARLAS: Discussion on various sports gloves especially crochet backs for riding gloves. Cut pattern draft for client submitted Goatkeeper glove and amended sample pattern for snow mobile glove about which there was customer complaint.

GOOD LUCK TRADERS: No specific service given but along office discussion after tour of two production units; hopefully some advise will prove of value.

BARLAS CORPORATION - FITAL LTD: This was a courtesy invitation by Mirza Javed Iqbal. A vertically integrated company which was well organized with a thoroughly competent works director. Work was scheduled and docketed and though the product range was large and varied - he was in complete control. Cleanliness, good factory house keeping and clean quality controlled products had his stamp on them, a priviledged visit for a former works manager for the vibrations were right. They plan to go into cotton spinning in due course to keep the quality in their own control and to this end await the return of a young family member who is being educated in cotton technology in the USA. The management has recently imported 26 double chain stitching machines to increase the production to meet export enquiries. This machine which is equipped with trimming knife appears to perform at very high speed and will be a national asset.

VII B. SIALKOT'S DIALOGUE WITH GOVERNMENT

It was pointed out that while the expert visited Sialkot as a technologist with a specific job description to adhere to in the field of design and pattern training for glove making, the extension services programme opened the door to economic discussion and analysis of their difficulties in selling them products in a highly competitive world market. By acting as an honest broker and representing their views in Islamabad it was hoped that a direct dialogue could taken place between the appropriate government departments and themselves at the conclustion of the assignment, for it would be quite impossible for an assigned U.N. representative to be involved with matters of policy, no matter what his personal views happened to be.

In a meeting with the Pakistan Glove Manufacturers and Exporters Association on the penultimate day, the expert said that while the pressure of his programme made it impossible for him to assimilate the various laws and regulations which beset them, he would submit the following on their behalf:

1. Ask for a duty free equipping allowance for exporting companies.

based on the previous years export figures for each firm, to promote a steady and progressive development programme for any who wished to claim.

2. Ask for an examination of the social and other taxes which firms with more than 10 employees had to meet, as on the surface this seemed to be an inhibiting influence on future development and expansion programmes.

3. Ask that serious consideration be given to the problems which the employment of young female workers would pose even in stitching rooms which were segregated and supervised by women.

4. Recommend that to maximise the use of facilities, the proposed training centre should work a 12 hour day of three sessions, though not necessarily with the same staff.

5. Recommend classes in the following, to be introduced as development in the area progressed:

   a. Quality control methods.
   b. Departmental management.
   c. Documented work scheduling.
   d. Preparation of visual aids and diagrammatic specifications for skilled but illiterate workers.
   e. Study of piecework payment system.
   f. Product cost estimation linked with tight control on material utilisation by individual cutters.
   g. Original products design and development.
   h. The question of export rebate on crust and other leather would be mentioned though as this was government policy it was felt to be outside the bounds of the experts remit.

VIII ACKNOWLEDGEMENTS

Acknowledgement are due to the following for their assistance and cooperation during the assignment.

1.	Mr.Muhammad Tajuddin Warsi.	Director General, Leather Industry Development Organisation.
2.	Mr. Shujauddin Siddiqui.	Director, Leather Industry Development Organisation.
3.	Mr.Muhammad Arif Raza.	Leather Industry Development Organisation.
4.	Mr.M.M.Abou-el-Khair.	UNIDO Leather Goods Consultant LPDC,Karachi.
5.	Mr. Elie Chehwan.	UNIDO Leather Clothing Consultant LPDC, Karachi.
6.	Mr.S.A.R.Zaidi.	Leather Glove Counterpart LPDC,Karachi.
7.	Mirza Javed Iqbal	Chairman & Member of the Pakistan Glove Manufacturers and Exporters Association, Sialkot.

8. Sialkot Surgical Instrument Maker.Association.

9. Mr.Asif Mahmood Sheikh and his family for their overwhelming hospitality.

LPDC

LEARNING ELEMENT

TITLE

ANALYTICAL TRAINING IN KNIFE CUTTING & STITCHING

OCCUPATIONAL AREA

GLOVE DESIGN AND DEVELOPMENT

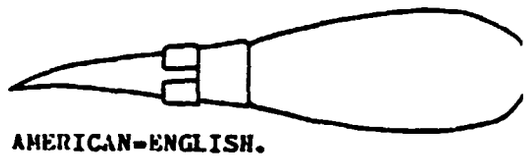
CODE

INTRODUCTION

The learning element concerns two of the early skills needed by a glove craftsman.

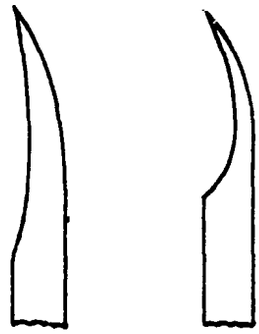
Cutting and Stitching both need superb control which takes a long time to acquire, but using these methods a student can evaluate his own performance and his instructor can mark objectively recording the improvement each time the exercises are attempted. Further exercises will be incorporated as classic glove cuts bring into use the need for accurate scribing - measurement - cutting and stitching.

TOOLS AND EQUIPMENT



AMERICAN-ENGLISH.

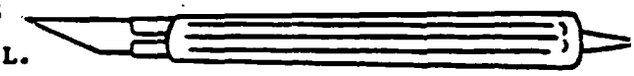
THIS TEACHING INPUT IS HIGHLIGHTED BECAUSE OF ITS GREAT IMPORTANCE, FOR ALTHOUGH THE FULL TOOL LIST HAS BEEN GIVEN AND THEIR USES EXPLAINED. MANY WILL NOT BE USED UNTIL THE PROGRAMME HAS BEEN OPERATING FOR A WHILE



PAPER BLADE

LEATHER BLADE

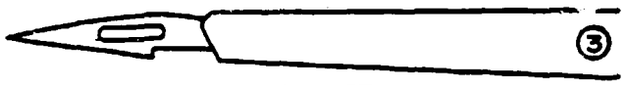
THE TYPES OF KNIVES SHOWN OPPOSITE ARE LARGELY A MATTER OF CHOICE AND WHERE THE INDIVIDUAL WAS TRAINED, BUT THEIR CARE AND SHARPENING IS VITAL.



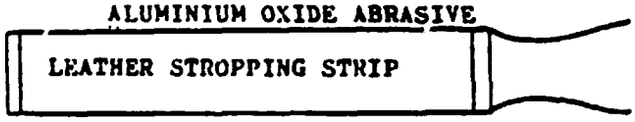
GERMAN

FRENCH

THERE IS A "FALL OFF" AND CASUAL DISREGARD FOR COMMUNAL PROPERTY DURING TRAINING, SO THE FIRST TOOL FOR STUDENTS TO ACQUIRE SHOULD BE A KNIFE WITH LEATHER AND PAPER BLADES TO CARE FOR AND CHERISH.



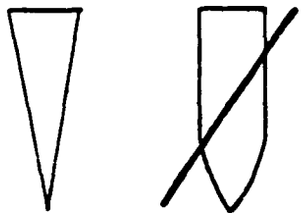
HOSPITAL SCALPEL



SHARPENIN STICK.

SHARPENING SHOULD BE DONE AS TAUGHT:

i.e.
- A. GET THE SHAPE RIGHT
- B. GRIND FROM BACK TO FRONT
- C. KEEP SHARPENED AND SHAPED ON BUFF STICK.
- D. KEEP THE CURVE AND POINT.



RIGHT

WRONG

ANALYTICAL CUTTING TRAINING

No.1

STRAIGHT LINE CUTTING EXERCISE.

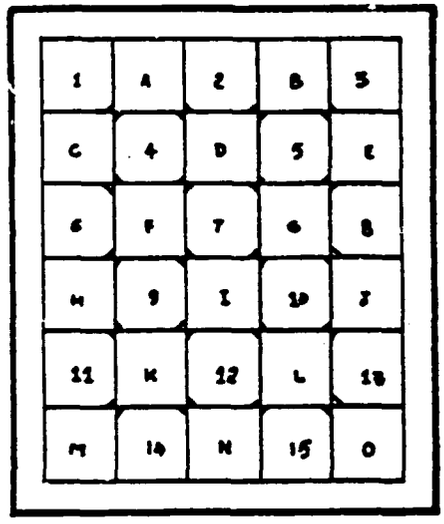
THE PHILOSOPHY BEHIND THIS EXERCISE IS THAT HAND CUT LINES, WHETHER HORIZONTAL, DIAGONAL OR VERTICAL ARE CUT WITH A LOCKED WRIST, USING THE MUSCLES OF THE UPPER ARM AND SHOULDER.

IT IS PERFORMED IN TWO WAYS

a. WITH STEEL RULE b. FREEHAND.

IT SHOULD ALWAYS BE TIMED WITH A STOP CLOCK AND TIME RECORDED.

THE QUALITY ASSESSMENT CAN BE OBJECTIVE FOR EACH STUDENT BY DEDUCTING FROM 100% A 1% MARK FOR DEVIATION FROM THE LINE AND DOUBLING UP IF MORE THAN 5MM. WITH ADDITIONAL DEDUCTIONS PRO RATA.



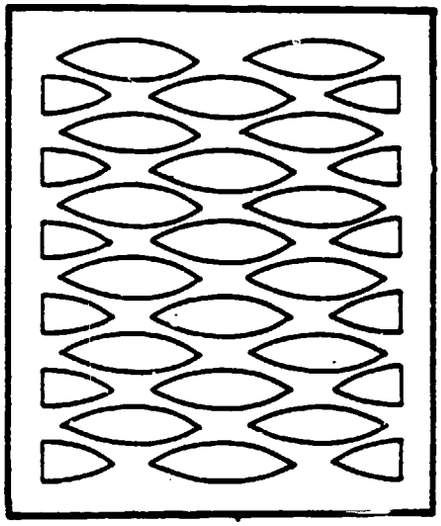
MINIMUM 2 CM MARGIN WITH 2 MM. TIE BAR IN THE CORNERS.

ANALYTICAL CUTTING TRAINING

No.2

SHALLOW CURVE CUTTING.

THIS EXERCISE TAKES STUDENTS INTO THE RELEASE OF THE "LOCKED WRIST" WITH SUFFICIENT CONCENTRATION TO CUT CONVEX AND CONCAVED CURVES SMOOTHLY. TIMING AND MARKING ARE DONE IN THE SAME MANNER AND SHOULD BE AS TIGHT AS POSSIBLE TO BE CERTAIN THAT CARE OF KNIVES IS BEING KEPT TO THE LEVEL INTRODUCED IN THE INPUT - "CARE OF TOOLS."



RETAIN CUT OUT PIECES.

ANALYTICAL CUTTING TRAINING.

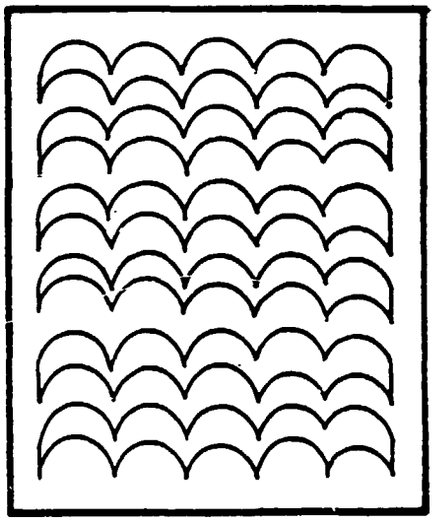
No. 3

DEEP CURVE CUTTING.

THIS EXERCISE THOUGH CUT AND MARKED AS THE OTHERS, IS DIFFERENT IN THAT A DEFFERENT BODY STANCE IS REQUIRED AT THE START OF THE CUT TO THAT ADOPTED AT THE FINISH.

THERE IS CONTROLLED RELEASE OF THE WRIST WHICH IS ONLY ACHIEVED BY GREAT EFFORT TO CONCENTRATE.

MARKING UP THE PATTERN CARD FROM TEMPLATE TO PRODUCE THE EXERCISE IS A GOOD MEANS OF ESTABLISHING GOOD MEASURING AND LINE DRAWING.



MINIMUM 2 CM MARGIN.

CUT AND REMOVE ALTERNATE SLOTS WHICH ARE MARKED AT THE MARGINS.

LEAVE IN POSITION UN MARKED ONES.

GUIDANCE NOTES FOR INSTRUCTORS ON MARKING ANALYTICAL CUTTING AND STITCHING EXERCISES

The basis for marking both cutting and stitching, is to commence with 100% marks anda recorded completion time.

For every stitch "off line" or cut which is untrue, whether due to marking out or cutting, 1% is deducted upto 0.5mm of linear error, though judgement must be used to double this if the error is very bad.

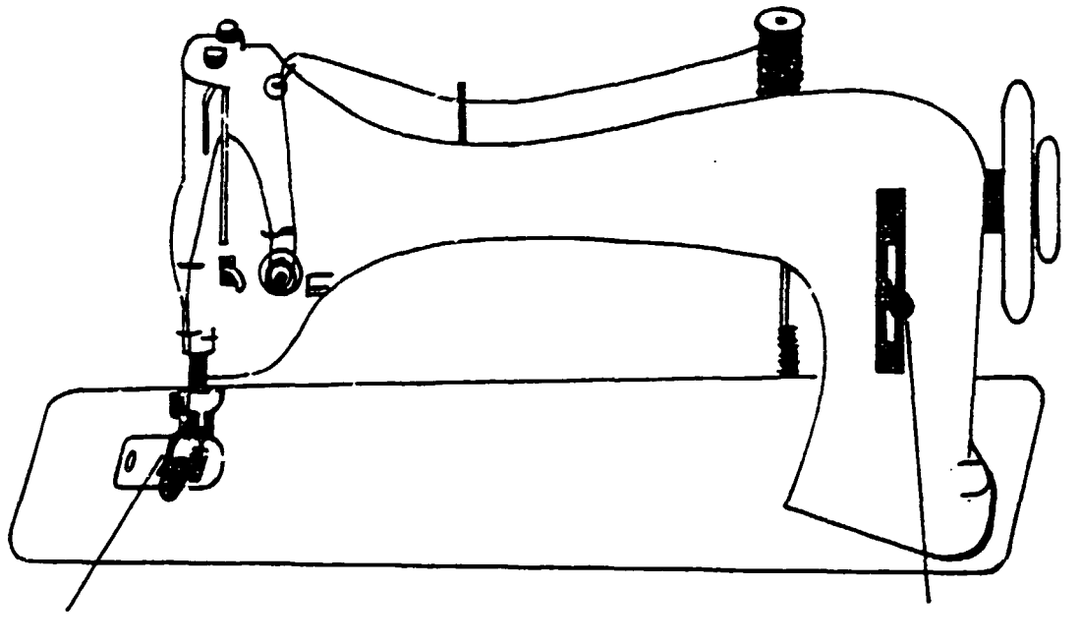
Conversely very slight errors can occur which are barely errors at all, such as stitching half on andhalf off the line, and there may be a tendency to "let it go", in this case it is better to deduct 1% or 2% over two centimetres or more, for the whole success and progressive improvement rests on "tight marking" from the start to show objectively what improvement has been made.

Marks should be adjusted in the light of the time taken - a long lingering exercise ought to be almost perfect and vice versa, but taking the average time as the norm, fast and slow workers can be comparatively assessed and a mark sheet produced to show improvements in progress.

ANALYTICAL STITCHING TRAINING

THE CENTRE HAS 1 34 CLASS PFAFF MACHINES

THE 34 CLASS MACHINE ILLUSTRATED HERE IS BEST FOR BEGINNERS BECAUSE OF ITS SLOW MOVEMENT DURING THE EARLY STITCHING EXERCISES AND A VERY SMOOTH ACTION DUE TO ITS CONTINUOUS WHEEL UNDERFEED. IT HAS BEEN SPECIALLY FITTED WITH A SMALL TAPERED PUNCH INSTEAD OF A NEEDLE TO GIVE A SMALL PERFORATION HOLE ON THE EXERCISE SHEETS, AND UNLESS URGENTLY NEEDED FOR PRODUCTION SHOULD BE KEPT FOR TRAINING EXERCISES. CONTROLS ARE AS ILLUSTRATED.



PRESSER WHEEL

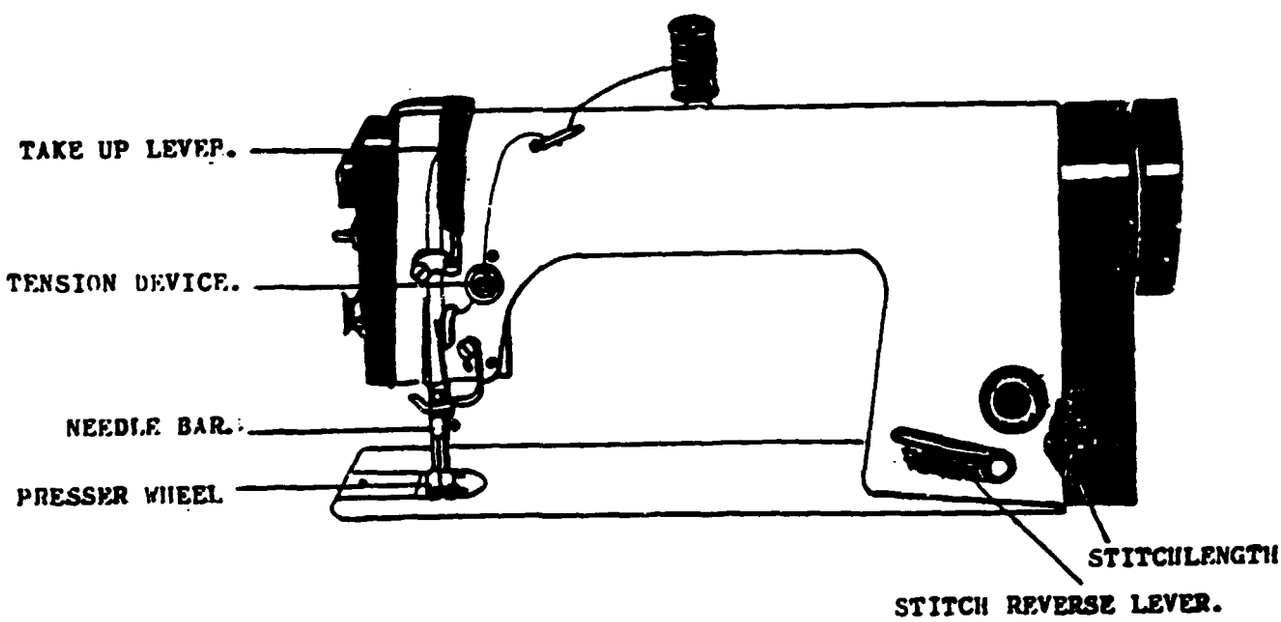
STITCH LENGTH

ANALYTICAL STITCHING TRAINING

THE CENTRE HAS 6 463 CLASS PFAFF MACHINES

THE 463 MACHINE IS A STRONGER MODEL USED IN MANY COMMERCIAL SITUATIONS WITH PRESSFOOT OR FEED WHEEL.
IT HAS A 4 MOTION UNDERFEED WHICH IS LESS SMOOTH THAM A CONTINUOUS WHEEL UNDERFEED BUT IS USED FOR GLOVE STITCHING COMMERCIALLY ON THE HEAVIER TYPES.

P.K. SEAMING - BROSSER SEAMING AND PRIX SEAMING ILLUSTRATED ON THE GLOVE SEAM HAND OUTS IS NOT CURRENTLY AVAILABLE AT THE L.P.D.C.



EXERCISE 1.

Construct in pattern card a rectangle 16 X 11 Cms. mark off in centimeters along all sides, and cut down your card to leave a 1cm. margin all round.

Starting on any corner, draw a line obliquely to the first centimeter mark on the opposite side. From this point draw a line to the 2cm. mark. Continue doing this until you have a row of narrow triangles with 1cm. bases.

Repeat from the opposite side so that the lines cross and then repeat the exercise length ways in both directions.

Apart from pattern practise in precise measurement and execution you now have a stitching template to perform straight lines, and use the knee lifter on the machine, leaving the needle in the material while you spin it round to its new direction at the end of each run.

EXERCISE 2.

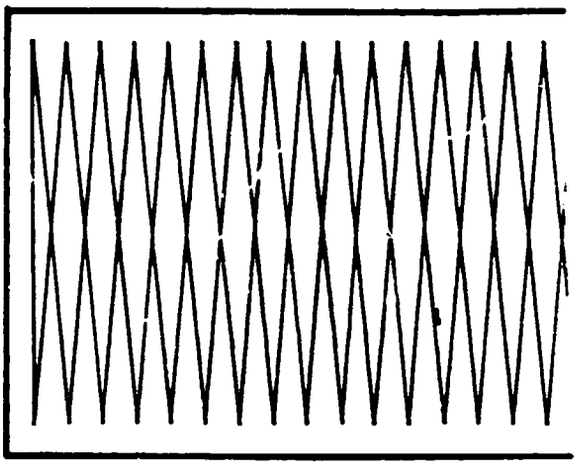
This is a simple exercise in a 16 X 11Cm frame to get you familiar with gentle curves which go to a peak, and then change direction.

EXERCISE 3.

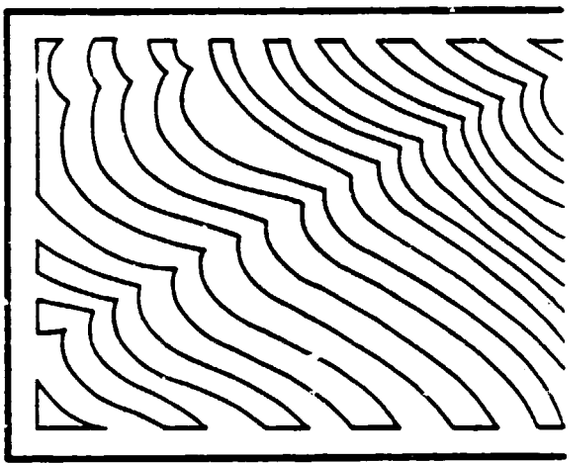
Simulates glove finger stitching which consists of straight rows and very tight curves. Again the 16 X 11Cm rectangle joined by straight lines and a 1cm radius semi circle at each end. This will be a time consuming difficult exercise but well worth the effort.

Since the number of machines at our disposal is only about a third of what we should need to allocate one to each student, the programme must now be operated so that you are each working on two or three jobs and my counter-part and I will organise new teaching inputs to take this into account.

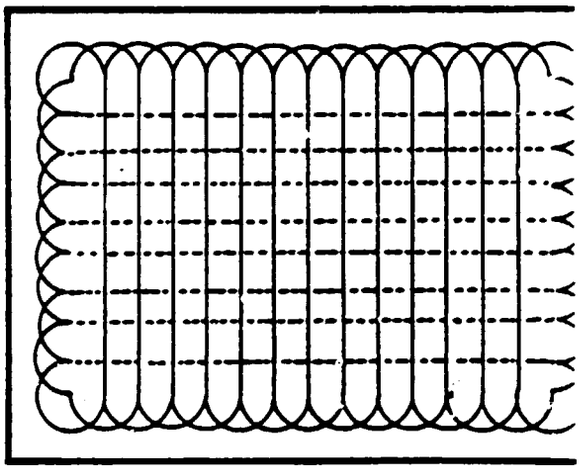
EXERCISE 1.



EXERCISE 2.



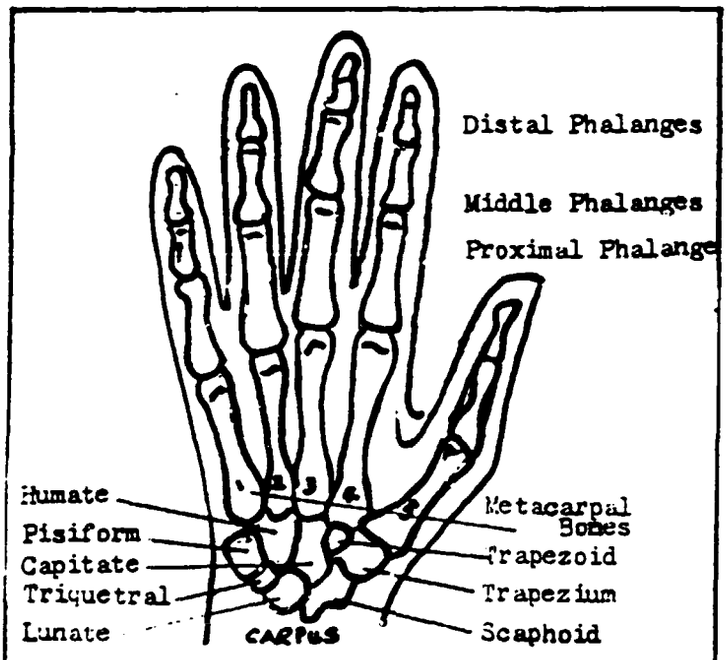
EXERCISE 3.



MAKING, SIZING AND SELLING GLOVES

A great deal has been written about the making and wearing of gloves, right back to the stone age when hunters protected their arms and hands from injury, and later when agriculture started to take over from hunting as a way of life and farmers protected their hands and arms from thorns and prickles as they cleared the thickets for agriculture.

Later still, certainly in the history of Europe, Kings Queens, Bishops and other persons of authority wore gloves as symbols of their office. Many of the gloves were ill-fitting and had to be altered many times up until the year 1834 in Grenoble, France when as inventor called Xavier Jouvin laid down a system of measurement to enable him to make forged cutting knives in a range of sizes which was based on the measurement around the widest part of the hand at the junction of the metacarpal and phalangeal bones. This new size scale was called the Pied du Roi (the Kings Foot). It is longer than the English inch by just over one sixteenth inch thus making the scale a little over 12¾ inches to the foot. Jouvin is alleged to have taken hundreds of measurements from different hands to produce his scale, but we do know that he was responsible for over 300 cutting knives, which is why high quality glove making is established around this region in France.



Bones of the Hand and Wrist.

Tapes and rules are still available for this scale, though many makers of equipment use metric dimensions these days. Womens size ranges increase in quarters from 6—7½, Mens sizes in halves from 7½—9½. Simulated leather and cotton gloves are often Small Med. Large. Stretch nylon — one size only 6—8.

The glove industry however, does not always stick strictly to these sizings even though they are marked on the gloves, for a careful look at the cutting dies would reveal that they are marked for example 6¼—6½ and can be used up or down on these markings to suit the stretch of the leather - the main reason is the very high cost of a full set of forged dies.

The diagram of the hand and its skeleton above only shows the outline and the shape and position of the bones, the serious student should study a good textbook and see the distribution of the muscles, ligaments, tendons and blood vessels in the hand to assist his progress in design and pattern cutting. The knowledge of tolerances which are required to give comfort in the different types of gloves is one which must be acquired gradually for it is only possible to give a formula for skin tight gloves which follow the outlines of the land intimately, and only then, when certain types of classic cuts are used. Other cuts of patterns which do not fit as well are quite justified in that many fulfil their purpose better, while others are more easily put together, and yet others take up proportionally less material. Regular practice in cutting and raking up prototypes in each category is essential, so an ongoing training programme on a regular or periodic basis with bi-annual refreshers to study the latest information concerning prices of materials and finished products on the world scene is better than the junketings of the International Trade Fairs where exhibition space, living accommodation and air travel is too costly to support; - better to send a team of two skilled observers who have ability to design on the spot and bring back a report which is more than a mass of words. Certain organisations provide "show reviews" at reasonable prices for their members which allows them to update their marketing programme and to keep abrest of the competition — while some individual designers send out quarterly reports of trends, patterns and prices backed by colour photographs of the windows in the capital cities of Europe taken at night — espionage, may be, but very effective and cheap.

The dissection and analysis of competitive products is common practise but is only one aspect of product development, where the aim is to recognise the most advanced or the developing trend where the profit margins are highest at the start and which diminish as the market becomes flooded and lowers in tone to low grade in inferior materials.

Looking at design and pattern cutting from a national point of view there is a greater chance of increasing the added value to a national resourse by going up-market than cobbling together copies of competitive products after they have gone off the boil; foreign agents will still ask for them to cash-in on an established trend because it is the easy route using multiple retail organisation to shift large volumes with one sale for which repeats are highly unlikely. It may be that the cost of a design and product development department is beyond the financial capability of individual companies, but a regional or national one should be supportable especially if experts in the different aspects of leather utilization can be brought in periodically to give an up-date on all information.

A further factor in the aim for sustained annual growth on a rising curve is buyer confidence: as a consultant retained by a buying department of a multiple fashion distributer it is possible to say that many are scared to death to change their suppliers, even if more exciting but unknown samples are submitted; if they make a mistake they are encouraged to leave with little chance of a good reference — it is easier to play safe, so new business must be wooed steadily and regularly with many rejections at the start. Former poor delivery or quality performance is passed by word of mouth.

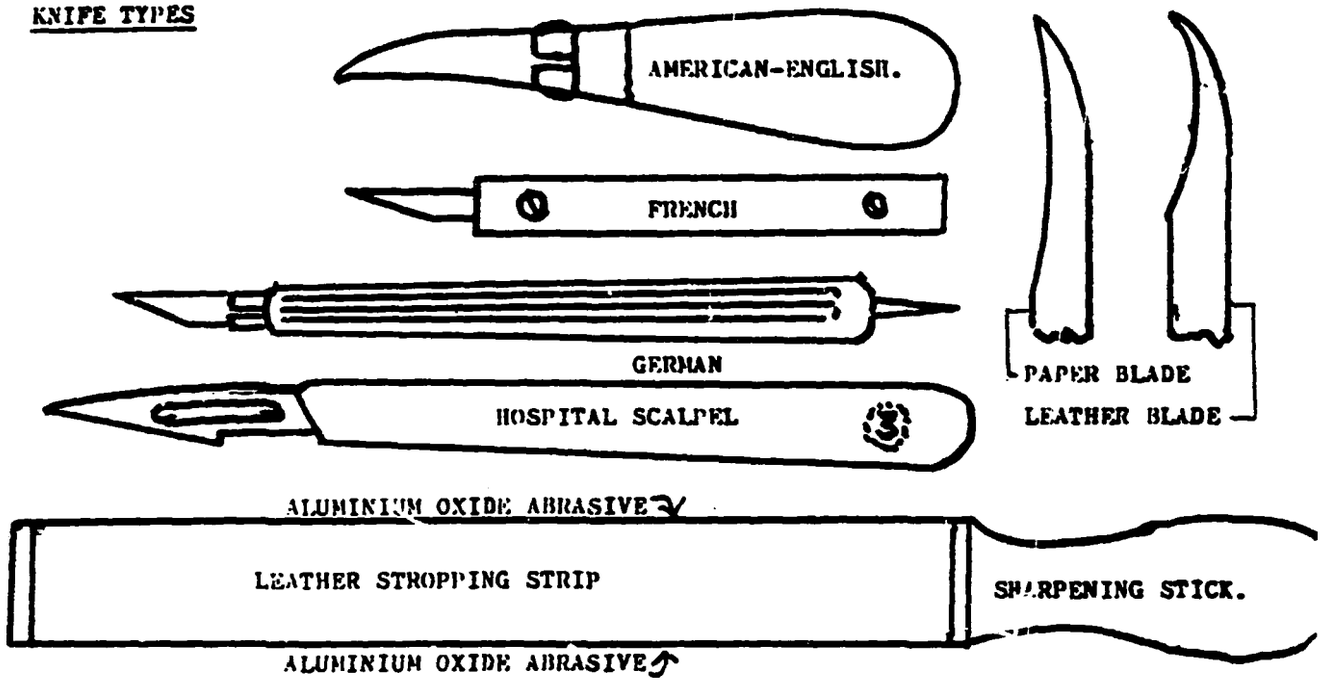
A stocking base in one European country with some local work content could help in market penetration of some products, while at the same time giving access to the rest of the E.E.C. without tariff, — the Japanese are doing this with many lines now. The U.S.A., Canada and may be the southern states would be an another area, but it should be remembered that Gloversville and district have strong links with Puerto-Rico where they have shipped cut blanks (for many years now) of leather gloves for hand sewing, because of the cheap labour compared with American rates.

THE WORKING TOOLS OF A GLOVE DESIGNER/PATTERN CUTTER.

1. HB. PENCIL.
1. H or 2H PENCIL.
1. SILVER INK PEN.
1. KNIFE HANDLE.
1. PAPER CUTTING BLADE.
1. LEATHER CUTTING BLADE.
1. STEEL RULE - MARKED IN INCHES AND MILLIMETRES.
1. FLEXIBLE P.U/FABRIC TAPE MARKED AS ABOVE.
1. PAIR 3" - 4" DIVIDERS.
1. PAIR PENCIL HOLDING COMPASSES.
1. STEEL POINTED SCRIBER OR AWL.
1. SET OF DESIGNER HAND PUNCHES.
1. PKT TRIANGULAR POINT GLOVING NEEDLE 3-7.
1. POLYPROPYLENE CUTTING PAD OR Similar.
1. BUFF STICK FOR SHARPENING KNIVES.

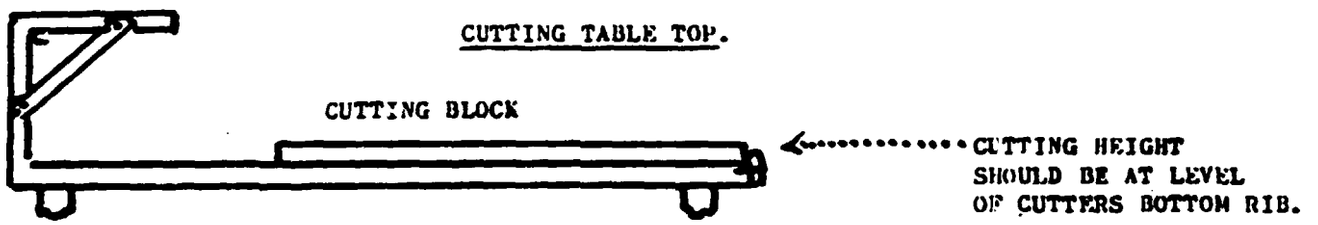
EQUIPMENT FOR CUTTING PATTERNS AND LEATHER

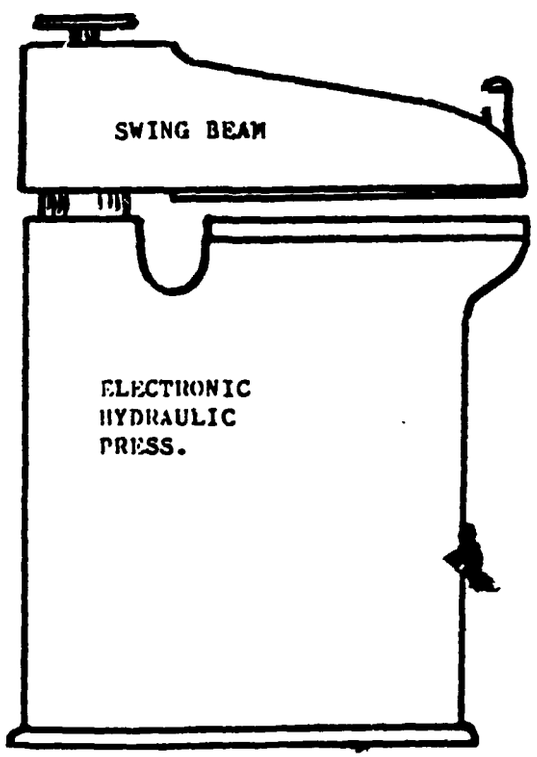
KNIFE TYPES



WORK STACKING SHELF

CUTTING TABLE TOP.





HAND CUTTING OF LEATHER COMPONENTS MAY BE DONE WITH PATTERNS STUCK ON SHEET IRON AND CUT TO SHAPE ON SHEARS.

PRESS CUTTING MAY BE DONE WITH FORGED OR COLD BEND KNIVES MADE TO STIFF CARD SHAPES.

DIE PERFORATING MAY BE DONE WITH HARDENED TUBE DIES SET IN STEEL BASES OF 6mm VULCANISED FIBRE SHEET WITH MICROCELLULAR RUBBER STRIPPER PAD.

GLOVE DESIGN, PATTERN CUTTING AND SIZE GRADING:

CUTTING LEATHER AND PATTERN CARD.

The philosophy behind the different cutting exercises is to introduce a steady but regular set of skills which are based on hand and eye co-ordination.

The first three exercises are very different in character and are meant to be in order to put extra emphasis on that difference.

The first exercise deals with straight lines which are cut with the wrist joint "locked" - a free elbow and most of the motive power in the upper arm.

The second exercise which deals with shallow curves allows for gradually released movement in the wrist which is different when cutting concavities to that used on convexities. Again the main motive power is above the elbow.

The third exercise with its tight curves requires a different stance and body position at the start of the cut to that adopted at its end. Controlled release of the wrist still occurs, with an added body twist and foot movement.

The classic strokes in most sports are learned slowly to eliminate bad practises - Goods cutters of paper and leather might gain some advantage by learning and polishing their skills in the same way.

There are also 12 preprinted exercises which will be introduced with time and quality assessments covering straight lines, gentle curves, changes of direction, tight curves and measured stops in the exercise range Gvv 1 to Gvv 16.

Your object in doing these rather boring exercises is to build up your speed of cutting, but improving your accuracy of knife control as your skills develop. To make high quality products in leather, perfect clean cutting is essential, and only constant practise will give you the skill to cut a strip as fine as a hair from your head.

Remember:- if you can see it, you can cut it - free hand!

7 WEEK COURSE.

DESIGN-PATTERN CUTTING, GLOVE GRADING

Week No.1
21-26 April.

Presentation of instruments, tools and equipment of a designer:

CUTTING EXERCISE 1.

STRAIGHT LINE CUTTING:

The theory and practise, using chequer board template and "locked wrist" cutting, using muscles mainly in upper arm.

(a) Precision and accuracy linked with speed using a scale or straight edge - STOP CLOCK TIMING.

(b) Ditto cutting free hand to develop concentration and muscle control. STOP CLOCK TIMING.

CUTTING EXERCISE 2.

SHALLOW CURVE CUTTING:

The theory and practise of muscle controlled wrist release for shallow concave and convex curves. Accuracy at stop points using free hand cutting. Elimination of wobble.

CUTTING EXERCISE 3.

DEEP CURVE CUTTING:

Introduction of body and foot position as well as arm muscle control to achieve this result.

INTRODUCTION TO SIMPLE INDUSTRIAL GLOVE WITH ROUND SET IN THUMB.

Due to tensions set up in the above exercises work to be done on copying and cutting out

given pattern a simple industrial glove of four fingers and round set in thumb.

From the master pattern marked out each student will produce his own master and will section palms and backs adding 2mm seams where indicated.

Pattern trials will be produced in leather substitute probably P.V.C. on knitted base fabric.

This exercise will be repeated when skill has been acquired in low grade leather.

Cutting practise on exercises 1, 2&3 now using STOP CLOCK turning on all exercises with the recording of TIME/QUALITY rating on each students CONTINUATION ASSESSMENT sheet.

LECTURETTES 20 to 30 minutes maximum before each practical work session.

1. Knives - types of knives and blades - and purpose.
2. Care of knives - sharpening - grading - buff straps.
3. Use of dividers.
4. Use of tapes - measuring positions on the hand.
5. Component parts of gloves and their names.
6. Size ranges mens and womens.
7. Animal skin structure - lines of tightness, lines of stretch, areas of comparative quality, offal.
8. Stitches used in gloving.
9. Methods of decoration.
10. The blend of leather and crochet cotton in gloves.

11. Hand sewing and its effect on added value.

12. Sewing threads and machine types.

Many of these subjects will coming over into subsequent weeks but are so listed that should questions arise the appropriate lecture may be given at the time.

Introduction of other industrial glove patterns with wing thumbs and Gunn thumbs will also be introduced as skills develop and each student will be instructed on how to make an indexed dossier for his work and instruction sheets.

CUTTING TRAINING

Exercise 1

4 cm Squares in 24x20 cm space

Emphasis on locked wrist vertically and horizontally.

Time :_____
Quality:_____

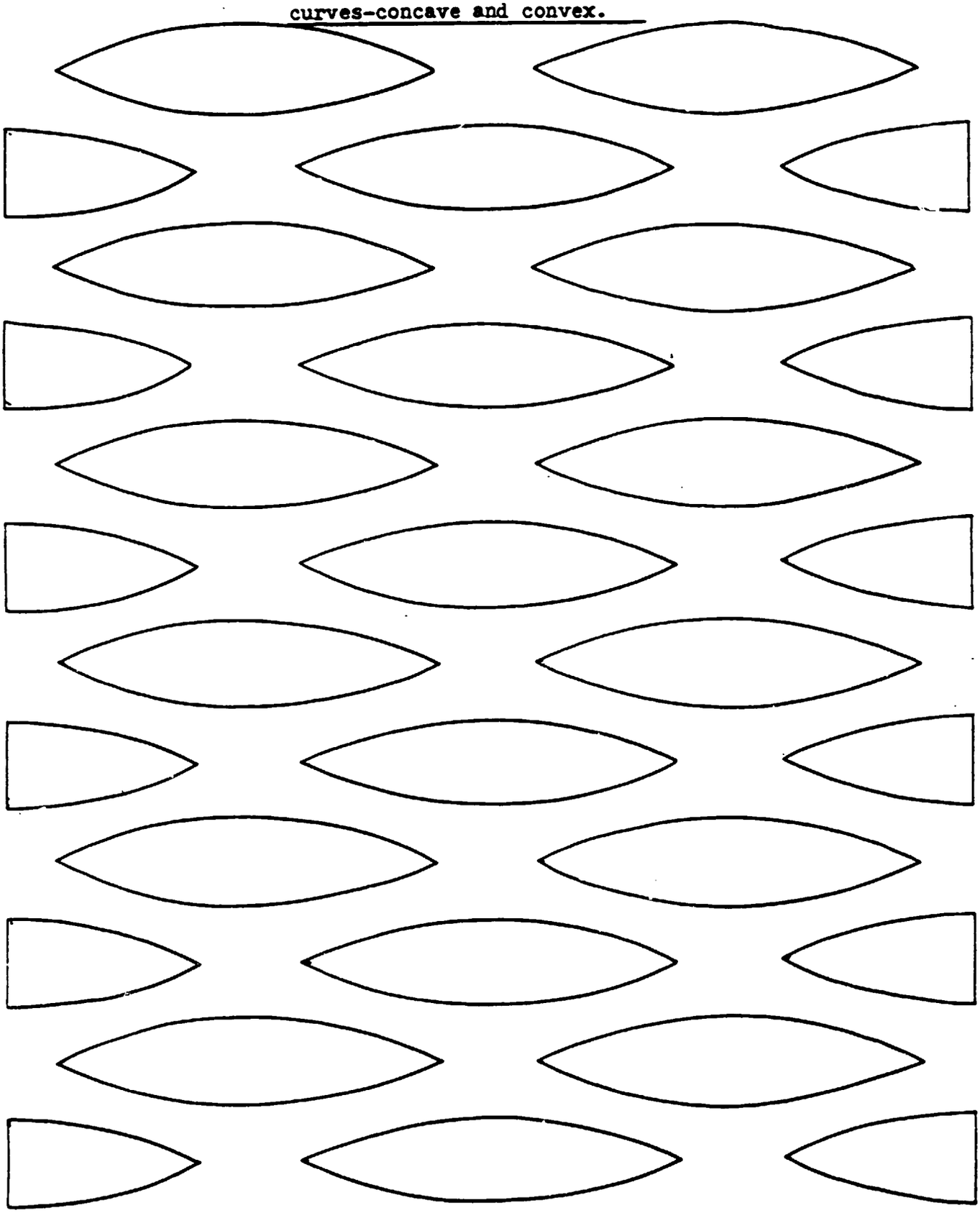
1	A	2	B	3
C	4	D	5	E
6	F	7	G	8
H	9	I	10	J
11	K	12	L	13
M	14	N	15	O

This exercise should be performed initially using a metal rule, then freehand on subsequent occasions if time and quality ratings are satisfactory.

CUTTING TRAINING
Exercise 2

Template produced 24x20 cm space. Emphasis on controlled wrist movement to cut shallow curves-concave and convex.

Time:_____
Quality:_____



Exercise always done free hand and severely marked for quality.

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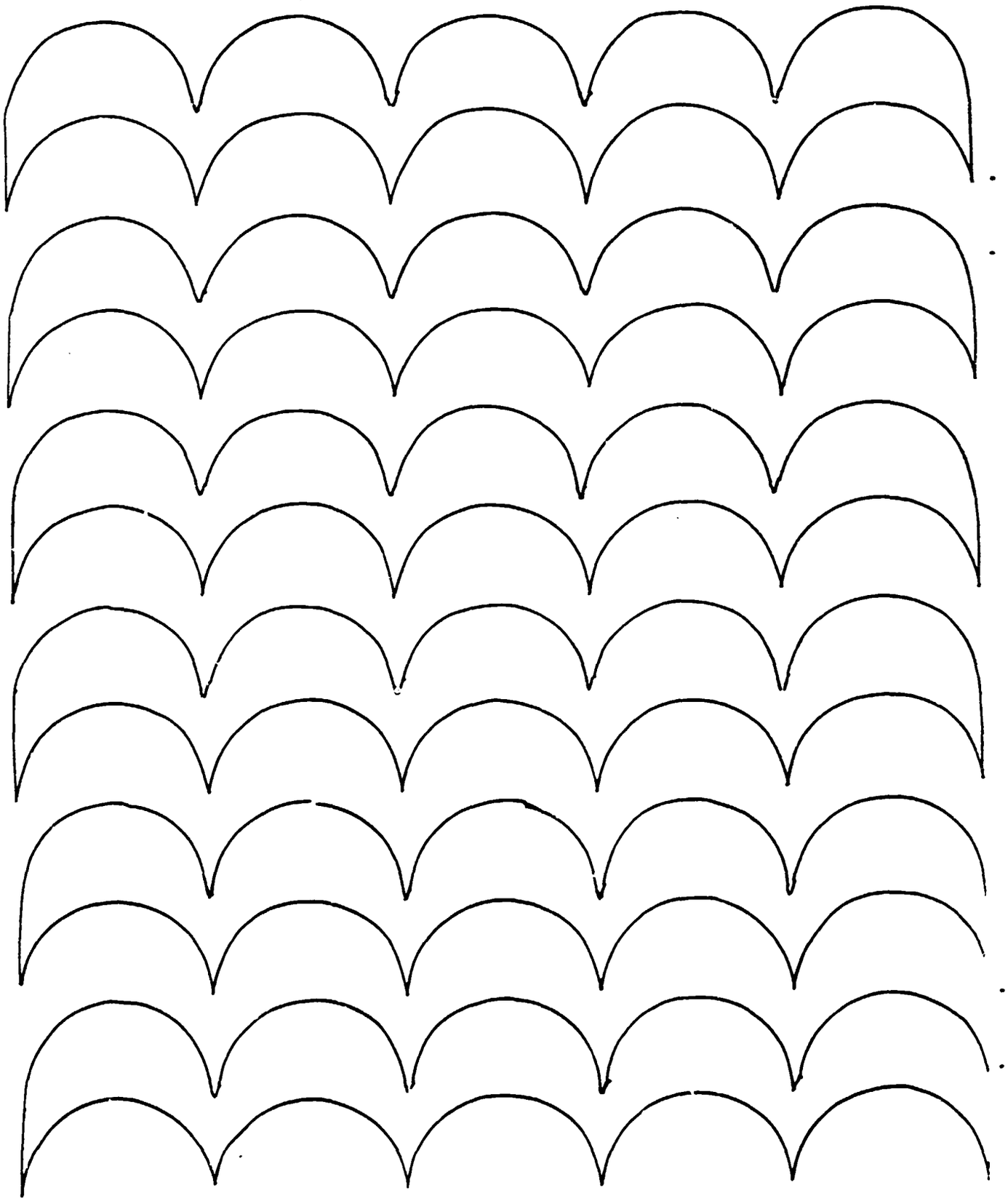
Cutting Training
Exercise 3

Emphasis on deep, tight curves which need great concentration and control

Time:_____
Quality:_____



Constructed by each student from a given single row template using a 2 cm. repeat, in a 24 x 20cm space

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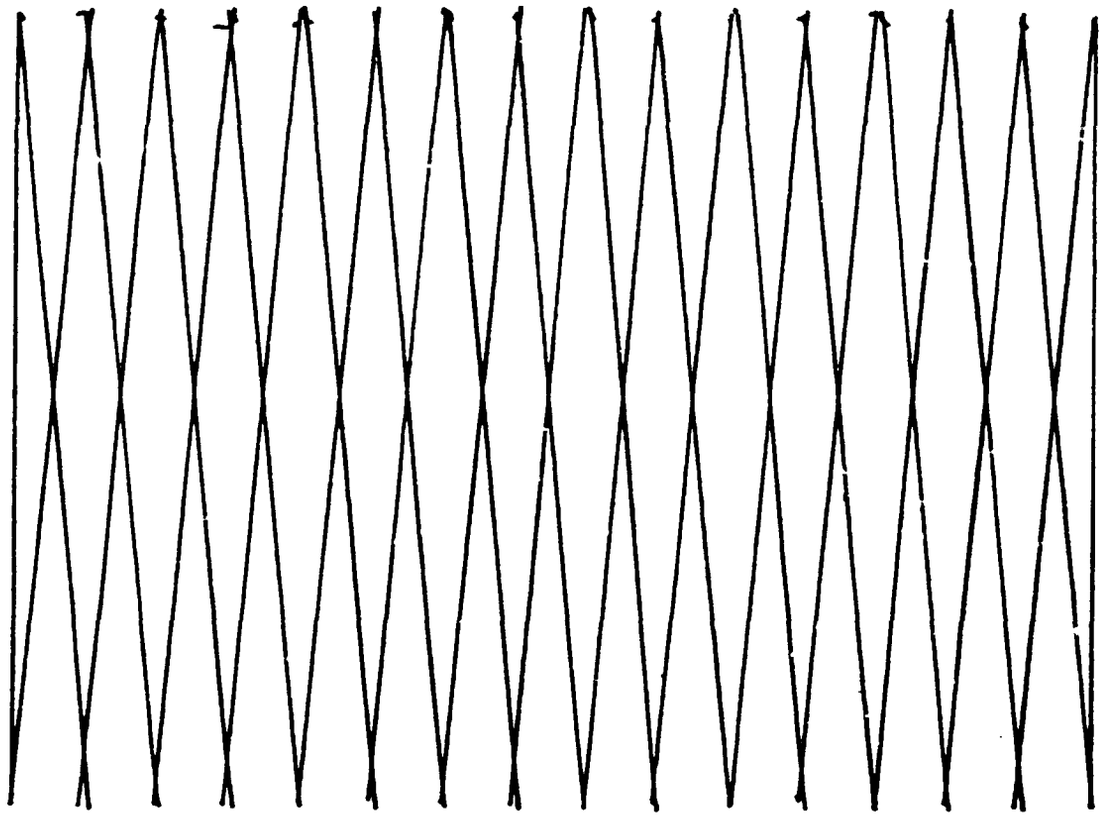
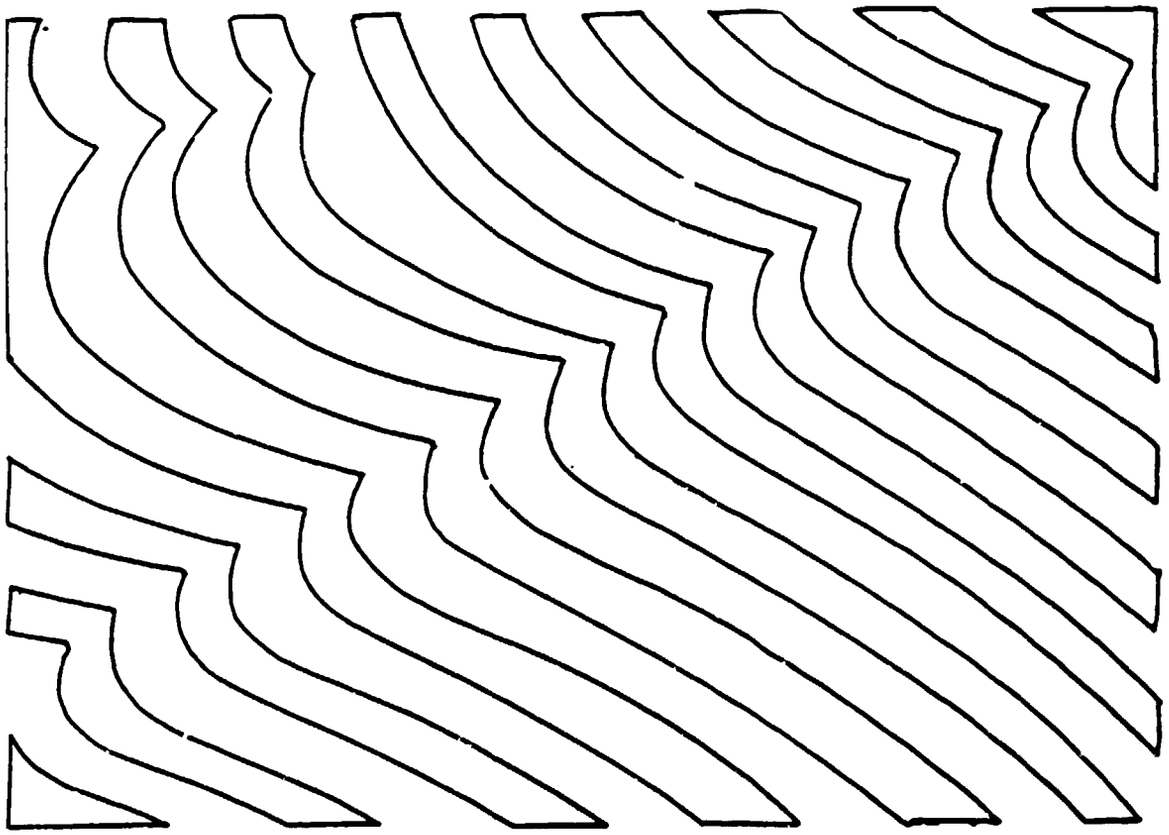
ANALYTICAL STITCHING TRAINING.

UNIDO Analytical Stitching Exercise 1. NAME _____



Turn at peak with Needle in Material. Time_____Quality_____%

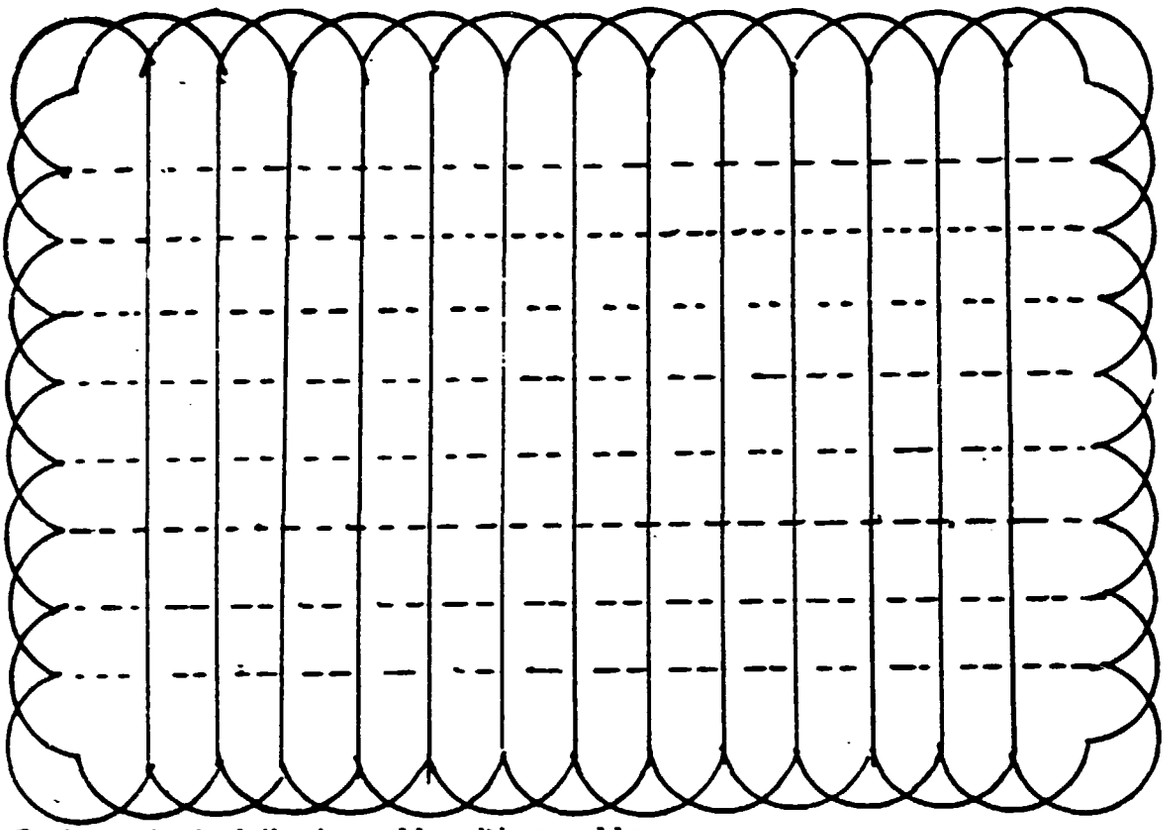
UNIDO Stitching Exercise 2. Analytical NAME _____



Stitch curves peaks and corners. Time_____Quality_____%

UNIDO ANALYTICAL STITCHING TRAINING.

ANALYTICAL EXERCISE 3. Name _____



To be stitched Horizonally, Diagonally or vertically as instructed. Time---------Quality----------

Please follow notes headed stitching exercises to produce templates 1,2 and 3 for stitching, and also the instructions for stitching, which should be done without thread on a Flat Bed Machine.

The machine involved for this programme is the wheel presser model PFAFF 463 for which a separate information programme is provided.

AIDE-MEMOIRE ON GLOVE MAKING FOR TEACHERS, INSTRUCTORS MANUFACTURERS AND DESIGNERS.

In order that this pamphlet is reduced to manageable size, much of the literature published on glove design and manufacture must be referred to in the bibliography, leaving the individual the work of selecting those areas which are of greatest interest to the development of the products they wish to produce.

It would appear that apart from a few craft papers, little modern writing has been done, though much older descriptions of the craft of "couture" gloving is available in English, French, Spanish and German.

To fully appreciate the array of skills involved it is necessary to go beyond the basics of glove assembly into leathers, their method of tanning and cutting for the individual "one-off" as well as the "all-in" procedures which have to be adopted for mass produced gloves; so to this end a list of leathers is included, which though not fully comprehensive covers most of what is now available in different parts of the world.

Much simplification has been possible by the use of "blown" P.V.C. on knitted base material which simulates kid and hair sheep glove leathers and this made production in the Far East so enormous that glove makers everywhere should study the materials and techniques used if they wish to compete.

The range of glovemaking also must be studied if a marketing policy is to be achieved by the individual or a producing company, production is never easy but in a world full of competing products, is more manageable than marketing which is an expensive and time consuming exercise and should only be attempted after prolonged market research on consumer needs linked with industrial intelligence concerning "the competition".

It is hoped that the following format will introduce subjects in a natural sequence.

LEATHERS

Calf-- young cattle calf and buffaloe calf skins

Kid -- young goat skins

Antelope -- often grain - sueded

Reindeer -- " " "

Doeskin -- female deer or simulated from sheep

Cape -- South African hair sheep

Chamois -- originally from Alpine antelope (now sheep with "frized grain"

Peccary -- wild pig from Mexico and S. America (hair holes in 3 grouping)

Carpincho -- water rodent from Brazil (hair holes 3 - 7 grouping)

Lambskins -- 'wool on' - often curly - unshorn

Shearlings -- 'wool on' - clipped before killing - even pile

Suede -- buffed flesh side of leather

Nubuck -- sueded grain - sometimes called Velour

Chrome split -- butt splits from cattle hides, sueded both sides and used in various substances for industrial gloves.

OTHER MATERIALS

Cotton -- fine long staple fibres essential for duplex weaving or simplex knitting - double fabric with interlocking layers hence little fraying. Usually preshrunk yarn. Extensively used for fashion gloves.

Nylon -- used alone or in a cotton mixture for "stretch gloves" (one size all clients) Can be made into lace, linen, shantung, sueded, and embossed fabrics for a wide range of markets.

OTHER MATERIALS(continued)

Crimpalene -- Precrimped or coiled nylon and similar yarns which allow satin

Melanca - cotton Lycra etc. which combined with Lurex yarn (melamine and vapourised aluminum) give glamourous effects.

Wool etc -- Natural wool and polyesters are used for hand and machine knitting of gloves and linings.

Astrakhan -- Genuine fur or knitted cloths for glove backs

Crochet backs -- Better qualities hand crocheted and lower qualities machine knitted.

Pile Fabrics -- Simulated fur for glove backs

Single raised -- soft cotton -- duck or plain weave brushed one side

Condenser Cloth -- used to line industrial gloves

Twill -- used for backs of industrial gloves

Elastic Web -- strip elastic for wrist fastenings

Velcro -- fastening strip -- Golf and Goalkeeper gloves etc.

In addition nylon and metallic zips - press studs -- loops and fasteners are incorporated to give adequate wrist fit, while interlinings of foam, hollowfil and other insulation fabrics are used for sub-zero temperatures.

CUTTING GLOVE PATTERNS FROM THE HAND AND MAKING UP A PAIR OF HAND SEWN GLOVES

Additional notes on glove pattern cutting will be issued as the course develops and more experience is gained, but the beginner should remember that the basic pattern taken from the hand will be closest to the unlined dress glove than any other which have "tolerance" allowances added to ensure good fitting properties. For example, a padded glove lining for a motor cycle or ski glove though smaller than its leather covering which wraps around it, must fit the hand very closely without wrinkles before being inserted into the outer casing.

The first step is to take a piece of pattern paper about 10-11 inches (25-30 cm) long and fold down the centre line in such a manner as to leave a generous margin when the hands placed along the fold with thumb extended.

The index finger should fit along the fold line and the wrist be positioned as illustrated.

With a vertical pencil, mark tightly against the fingers and outside of the hand, but keeping the paper firmly held down. Next with a sharp point between each finger and about a 3 mm allowance around fingers and side of the hand extending outward at the wrist. Roughly mark the bottom of the thumb position and remove the hand. Now mark the backside of the pattern with finger separation dots 10-15 mm lower than the front. Using a rule separate the fingers back and front between separation marks and finger tips.

Diag.2 illustrates the construction of the thumb hole which can be adjusted- the measurements shown are average size. The thumb position can be 3/8" 10 mm inside the fold line on the palm side of the pattern and its depth adjusted to the thumb mark made when the hand was in place. The hole should be cut out, the split C.A. cut and positions A,B,C and D marked on the pattern.

A folded piece of pattern card larger than the thumb should be cut and a side view of the thumb marked in position. The pattern should be opened out and additions added as in (Diag.4) not forgetting the peak at B and the slot CDA. which starts approximately half way up the thumb at C.

Before proceeding further it should be emphasized that the fitting of the thumb is a procedure which has to be done with greatest care and accuracy, so for this reason commercial patterns of appropriate size can be introduced to give a control check on the different areas of the pattern so far, and amendments made where errors are apparent. The quality of work only improves with practice so each candidate must resign himself to cutting many patterns, and assembling many gloves before a really high quality result is achieved every time; for this reason when the glove pattern has been checked and appears to be accurate, a copy pattern of thumb and thumb hole should be taken to produce a "practise piece" in leather before embarking on the complete pair of gloves.

The fourchettes of this individualized glove can be cut for each finger separation, this has the advantage of some material economy, but more

importantly, without excess material to trim away, the fit will be more accurate when assembling. Each finger separation should be measured with a paper strip or flexible measuring tape to ascertain the length of seam from finger tip to separation point on the palm and back of the trank, and single double fourchettes produced. Please note also that a little more than a seam allowance has been added around the hand shape at finger tips and outside hand so that the width of the fourchettes will be the width of each finger plus two seam allowances.

It will be recognized well before this stage that each person will becoming aware of certain skill deficiencies that need improvement, so for this reason as soon as each pattern is correctly cut with component patterns complete, it can be filed in an envelope and "held over" while a simpler glove is attempted through the stages of pattern cutting - skin layout - cutting - preparation stitching-up and finishing off (laying off).

PRODUCTION OF TRANK AND THUMB PATTERNS FROM THE HAND.

DIAGRAM 1.

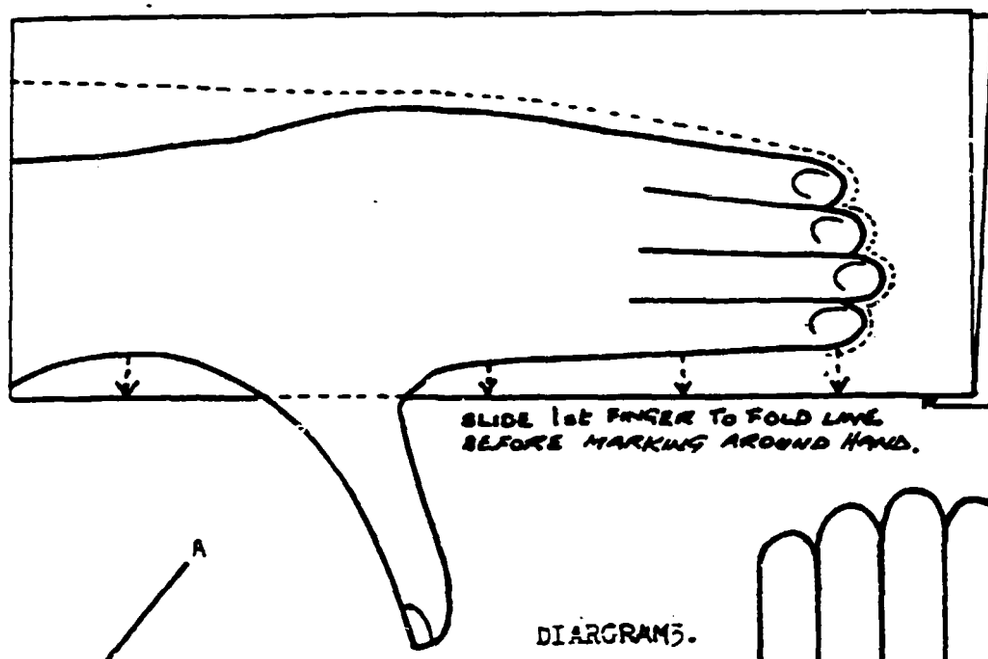
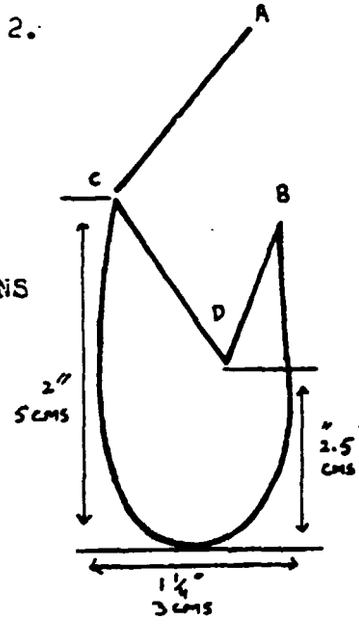
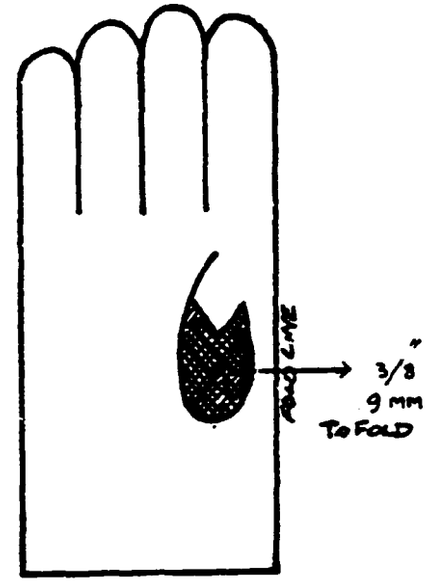


DIAGRAM 2.



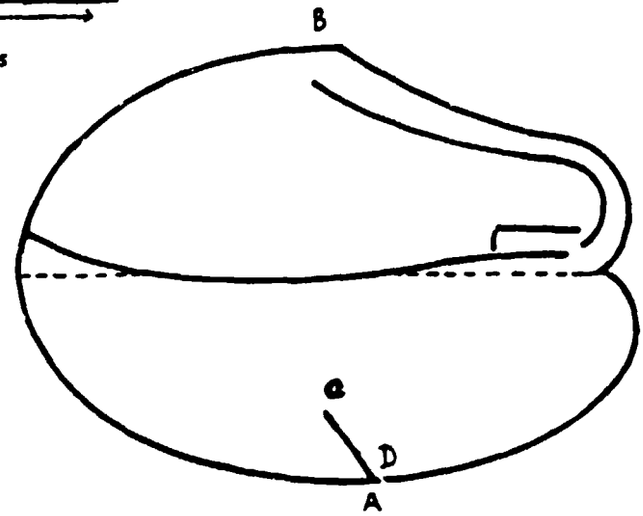
AVERAGE DIMENSIONS OF THUMB HOLE.

DIAGRAM 3.



POSITION OF THUMB-HOLE.

DIAGRAM 4.



FOLDED TRANK

THUMB PATTERN.

PAPER FOLD LINE.

Synopsis of traditional Gloving Techniques upon which it is probable that the Pakistan industry has been based, but varied to produce low priced products and eliminating many features which have contributed towards the production of high quality gloves in Europe and the USA.

TRANK CUTTING:

Cutters undergo a four year apprenticeship (approx.) and "block out" the main part of the glove in pairs together with thumbs, fourchettes and quirks. The main skill is avoidance of blemishes and assessing the degree of stretch in the right direction. Tranks are stretched to the maximum stretch and pulled back to avoid subsequent "bagging" in wear. All components for one glove set is "pair marked" and rolled up in damping cloths.

WEBBING:

The best gloves are "webbed" two pairs at a time by laying them grain to grain over a shaping die which cuts the thumb holes and cuts the fingers. A circular webbing block is placed over the leather to prevent movement and the press operated - first on the main trank, then thumbs, then fourchettes (finger gussets) and the diamond shaped quirks if used. Pairs are re-wrapped or bundled with every item pair marked.

STITCHING:

Pointing is multi needle - raised seam or other decoration on the back of the gloves and it is usually the work of these operative to do any elasticating.

The fourchettes are sewn in to the back of the glove and thumbs fitted, finally the back and front is closed up. There are a whole array of seams and thumb fitting techniques and naturally the slower and more difficult techniques are to be found on the more expensive gloves. Hand stitching can be done with a double or single needle seam, though the latter is most common today. Out workers have traditionally done the majority of these, as the process is much slower than machining. Some workers prefer to use a "dolly" which is wooden stand with a floor pedal that clamps the part being stitched - they have a toothed metal strip where the glove is inserted thus leaving spaces for the traditional stitch length of 12 stitches per inch when the needle goes between the teeth.

GLOVE SIZEING:

Originally the scale of sizing was developed by a Frenchman who produced a scale called the pied du roi (the king foot) it is about ¾ inch longer than the imperial foot but for practical purposes the measurement around the knuckles joint on the hand denotes the size in inches.

MEN SIZES:	6½ - 7 - 7½ - 8 - 8½ - 9 - 9½ - 10	in halves
WOMEN SIZES:	6 - 6¼ - 6½ - 6¾ - 7 - 7¼	in quarters.

For practical purposes the back of a glove laid against the back of the land across the knuckles is a reasonable guide, and good shops teach their assistants this technique. Additional tolerances are needed for sporting gloves, lined gloves and industrial gloves.

WELDERS GLOVE

This simple model has been chosen because it is relatively easy to carry out all the operations required even by beginners. The patterns prepared are size 8 (mid-size) though 7+9 models are also available if anyone wishes to work with them.

The thumb which can be whole or half-pieced is a simple inserted cut, and the cut and shape of the trank would allow further piecing to give practise in pattern cutting, cutting from leather pieces and machining together.

While every effort should be made to keep the standard of work up to that of a dress glove - if it should fall the resulting products are of value as long they are soundly constructed.

The technique of producing components with added seam and other allowances from a base standard pattern gives experience in straight line cutting using a steel rule, plus the added skill of free hand cutting of curves and the use of piercehole location points.

It is hoped to use less than 2/3 the leather area on this exercise welder-glove and lay down future teaching standards for works trainees who might have module day-release programmes at a later date.

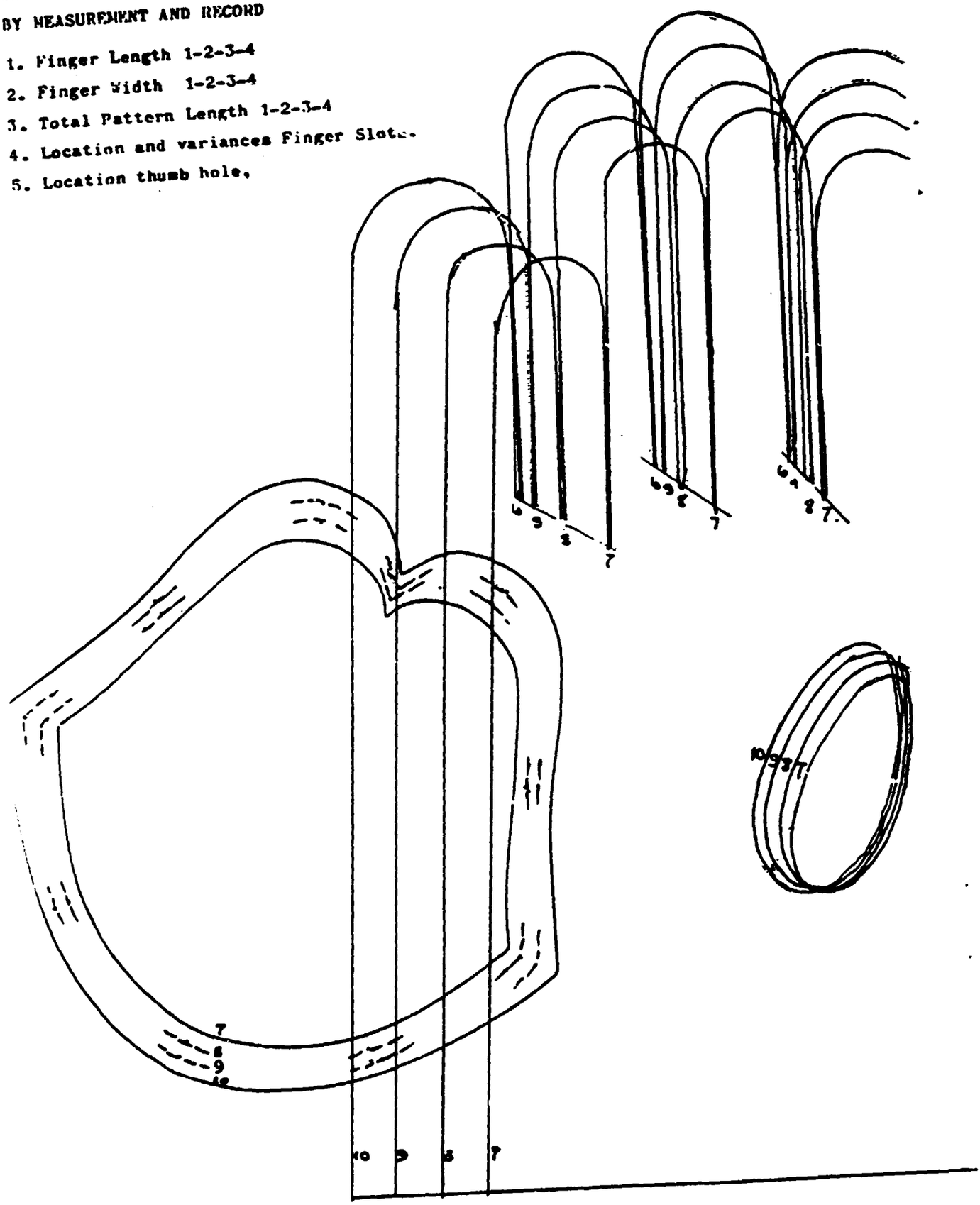
The availability of waste of sufficient size need not affect this programme, but will doubtless be important in the Centres future budgeting.

INDUSTRIAL GLOVE SIZE GRADE

WORK OUT THE FORMULA FOR THESE GLOVES

BY MEASUREMENT AND RECORD

1. Finger Length 1-2-3-4
2. Finger Width 1-2-3-4
3. Total Pattern Length 1-2-3-4
4. Location and variances Finger Slots.
5. Location thumb hole.



There are three main methods of cutting glove components in leather:

1. Table cutting - Fully tranked
2. Pattern cutting - Semi blocked
3. Block cutting - Direct cut

TABLE CUTTING is a method of "parting" or "slitting" the skins into 'tranks' using shears and a French rule after assessing the degree of lateral stretch. Thumbs and fourchettes are blanked out from the same skin with a short hand knife (quirks are usually incorporated into the webbing knife above the little fingers.

When all parts for one pair have been cut they are tied up or rubber banded together after getting the pair number stamped on all parts. This is the most effective way to produce high quality gloves, but a four year apprenticeship is essential for cutters to give them the ability to assess the quality and stretch. Naturally the other skills in the rest of the workroom must be equally high.

PATTERN CUTTING is a less expensive method used by volume manufacturers for the good quality market. Skins are stretched to their fullest extent across the middle, marked out to the trank shapes and then blanked out complete with thumbs and other parts. The tranks and where necessary the thumbs are "pulled down" to fit the pattern and "webbed" (die cut) two pairs at a time by laying over the cutting die and covered with a thick webbing block to hold them in position while top pressure is applied.

BLOCK CUTTING. is the term applied to direct cutting on a hydraulic press, using forged or cold-bend knives, straight from the skin,. Many glove experts feel that this is an inferior method only suitable for the heavier types of gloves, particularly industrials, but the writer is of the opinion that well staked skins which have been plate dried could be finished with the apprpriate top-season and then dry drummed to return some of their elasticity, while at the same time giving a flat even cutting surface needed for direct cutting.

LEATHER ECONOMY CONTROL. All cutting methods must have a sound method of estimation of the amount of leather needed for a particular order, otherwise there is a tendency fc for cutters to use the best leather issued to do the work and return to stock the less perfect skins. Issue batches should be just enough to complete the order with very little extra, and the exact amount used entered on a cutting record which can be compared with the estimated amount for each cutter. A monthly 'league chart' can then be compiled showing which cutters are on target and which are not, for it is quite uneconomic to continue to give employment to anyone who has not got a sufficiently tuned sense of spatial relationships after a reasonable period of training; the cost of material is now so high that it is not difficult for a cutter to put more value on the cutting room floor than his/her 'take home pay'.

RUNNERS. This is a term given to secodary items in some factories which are smaller and lower in quality than the main items being cut; they are cut by a cutter at the same time that the main items are being produced and are used to allow more manoeuvrability in pattern placement which is always a challenge due to the skin periphery being variable and finite and the restrictive constraints due to blemishes natural areas of quality and sub-quality in all animal skins.

COMPONENT PARTS OF THE GLOVE AND THEIR ASSEMBLY

The method of presentation will attempt deal with a simple 7 mm-8 mm dress glove with a Bolton thumb, first the shape-size-quantity, quality and characteristics of its components, followed by an assembly sequence suited to this kind of glove.

The "stab stitched" needle sewing technique will be used to allow students to do their own layout, cutting and assembly under supervised conditions to produce a quality result.

Patterns and equipment will be provided the material will hopefully be chrome tanned hair sheep in the "crust state" to allow dyeing and colouring to be introduced if the materials are to hand and timetable allows.

Although most gloves are now commercially cut by press and die even though the selected skins may have been 'parted' by knife or shears, the basic components are the same and the same criteria are applied to achieve a satisfactory product (much of the final result depends upon the "cut" of the pattern and the distribution of tightness and stretch in each component linked with appropriate grain quality.

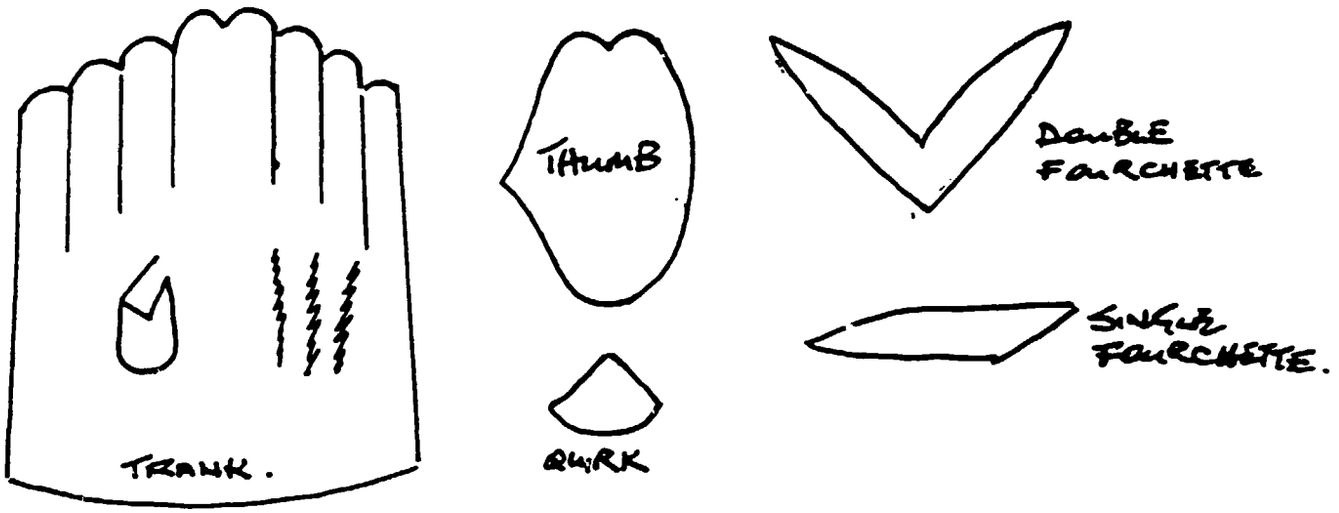
/TRANK/(2) main part of glove incorporating front, back and fingers.

/THUMB/(2) cut in one piece and shaped to fit the thumb while fitting accurately into the hole in the trank.

/FOURCHETTE/ a gusset between the fingers. May be double or single, though the latter is not recommended for high quality gloves.

/QUIRK/ also a gusset between the fingers allowing extra stretch in this area. Almost exclusively used in conjunction with the double fourchette.

/POINTS/ Decorative lines of stitching, perforation or other embellishment on the back of the glove.



/SIZES/ are determined by measuring around the knuckles of the hand and recording in inches.

The ranges are as follows:

LEATHER - LADIES: 6, 6¼, 6½, 6-3/4, 7, 7¼, 7½

LEATHER - MENS: 7½, 8, 8½, 9, 9½

COTTON & NYLON: 6, 6½, 7, 7½

KNITTED: L - M - S

STRETCH NYLON: one size covering 6-8.

GLOVE FITTING:

Size may be estimated by folding down the fingers and gussets and taking the doubled glove between the Ist finger and thumb of each hand and laying against the customers hand with fingers pointing down ward at right angles.

GLOVE LENGTH:

The following length movements refer to gloves worn by Western ladies and may be considered as "classics" in a fashion environment.

Normally, referred to as "button" lengths they extend from the wrist to shoulder using the formula: 1 button length = 1 inch.

The first measurement is taken 1 inch below the base of the thumb and may be open at the wrist up to about 7 button lengths; after which they are often made with a Mousquetaire finish (an opening cut to fit the wrist which is fastened with buttons) while the sleeve of the glove is closed.

Main Groupings:

1- Wrist length
2- Above wrist
3- Mid-forearm (6-8 button)
4- Elbow length (12 buttons)
5- Above elbow (16 button)
6- Shoulder length (20 button).

WHAT TO WEAR WITH WHICH:

Formal backless bare shoulder fashion - 16-18 B.L.
Sleeveless dress & camisole top - Wrist L.-Mid forearm L or above 16 BL.
Short sleeve dress - Wrist L or Mid forearm L.
Elbow length dress - Mid forearm 8 B.L.
¾ length sleeve dress - 6-8 BL or wrist length
Long sleeve dress - Wrist or above wrist.

FOR WHICH OCCASION:

Town and shopping: Classic wrist length - 6 or 8 BL in fine suede or grain according to sleeve length.

COUNTRY WEAR - RACING AND SPECTATOR SPORTS (WHEN COLD):

Handsewn hair sheep - hogskin - carpincho, doeskin or crochet backs. Fur - lambskin - knitted linings or hollow fill padded.

TRAVEL GLOVES:

Simple, casual, easy to slip on and to mountain - soft leather or nylon simplex sueded cotton and nylon for light colours (easy to wash and quick drying)

COCKTAIL WEAR:

Nylon - satin and stretch - laced with Lurex according to sleeve length. Daintyness and delicacy of design essential.

EVENING WEAR:

Use the full elegance of the formal glove to suit the gown 12-20 BL gracious simplicity - mousquetaire fastening.

WEDDINGS:
(The Bride)

Often long sleeve dress, so gloves will be short - grain - suede or plain nylon satin.

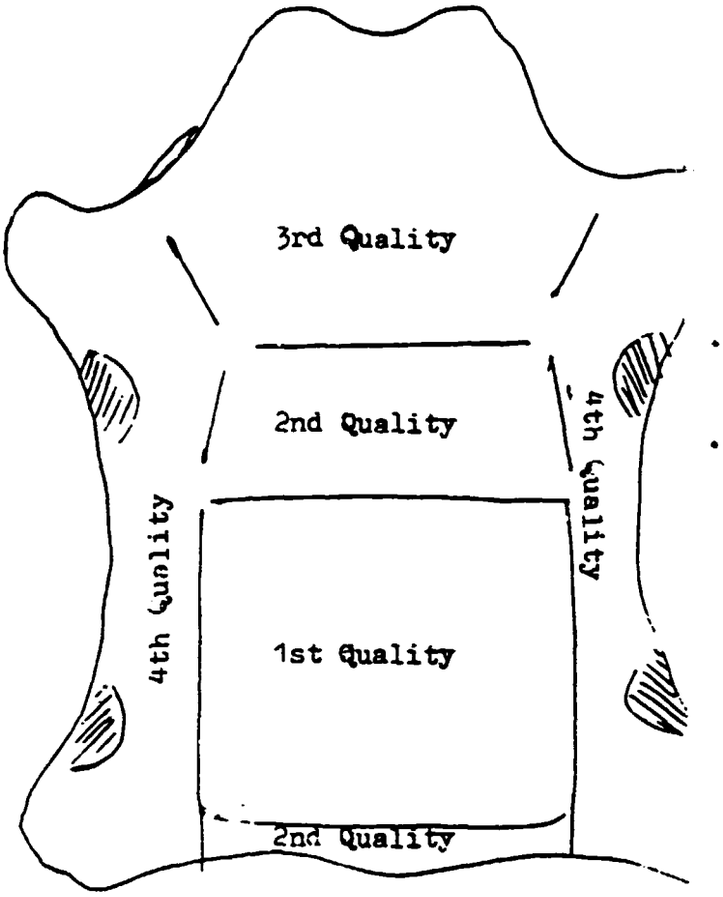
Bridesmaids: Wrist or mid forearm according to dress style in matching nylon or fine grain.

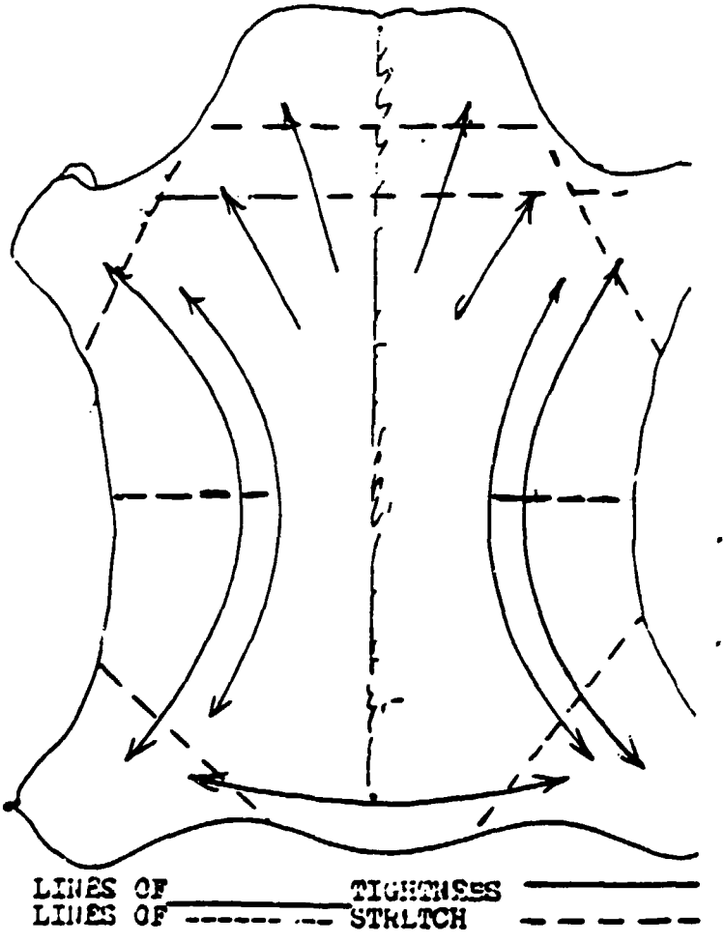
The above is written with the full knowledge that store buyers may have quite different views on what they want to sell, it is included as an "atmosphere piece" and will be of value hopefully to many who rarely see gloves worn.

ANIMAL SKIN STRUCTURE.

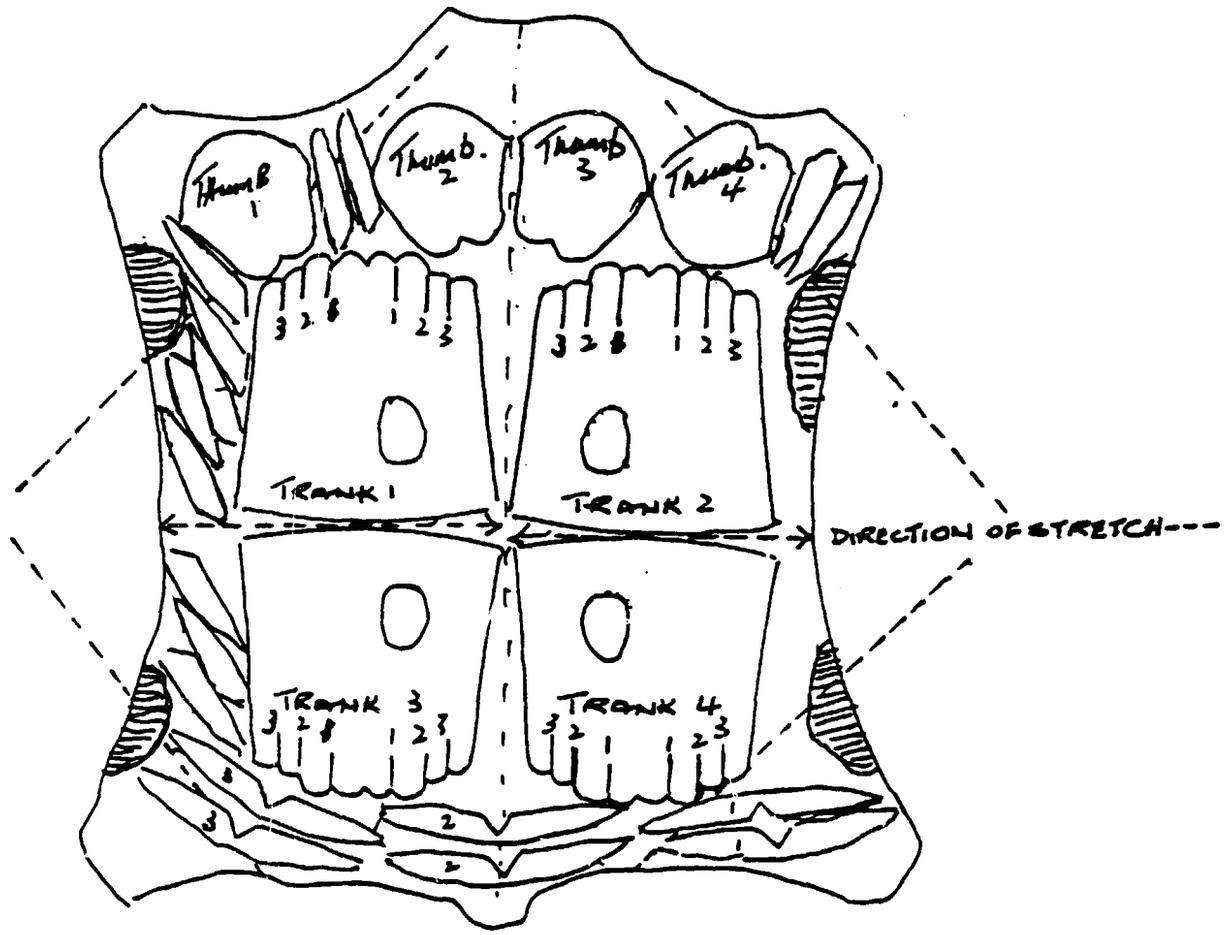
The adjoining diagrams of animal skins are for guidance only. Most four legged animals have a skin structure as indicated but the differences between beefcattle, buffaloe, goat, hair-sheep, wool sheep and pigs will only be fully seen when many have been handled. The lines of tightness and stretch are roughly as indicated. Areas of quality are highest on top of the back where the sun and rain wash them clean and dry them out, and though there are no clear cut lines of demarcation they are as indicated because of interlacing fibres in the structure which makes resistance to much stretch in any direction difficult to detect on the thicker varieties.

See other notes and diagrams for glove cutting instructions.





SKIN DIAGRAM WITH EXAMPLE OF A METHOD OF LAYOUT FOR TWO PAIRS OF GLOVES COMPLETE.



Although the above lay-out may be considered an idealised one, the cutter should have a model presented to him during training against which his future efforts can be pitted to optimise the use of material issued, which could be recorded as follows:

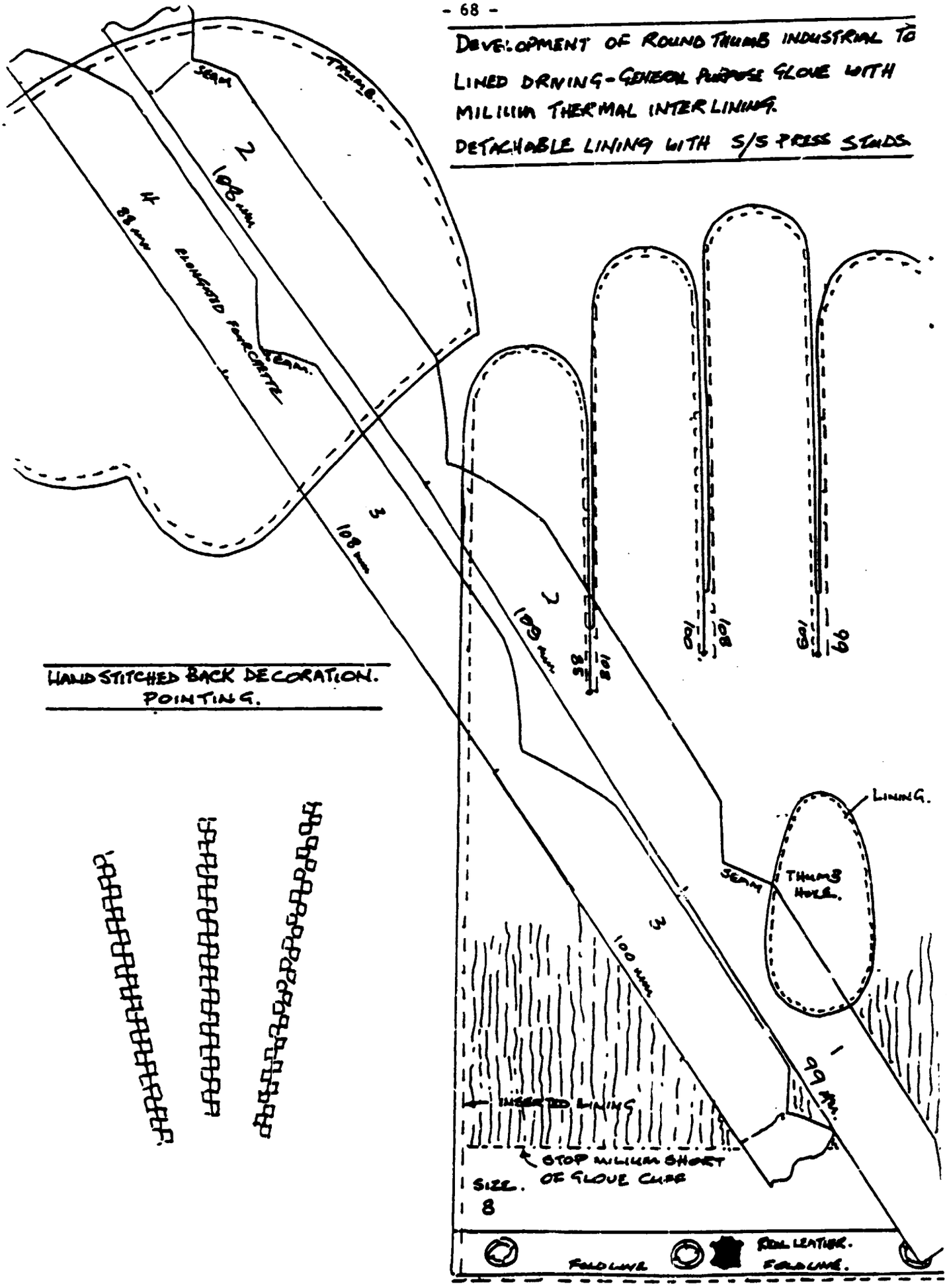
1. Maximum pairs per leather batch (recorded by weight or areas)

2. Maximum pairs of first quality per leather batch, plus quantity of second quality components, which should be as few as possible to utilize the entire batch of leather issued. Prime quality is the target.

3. Acceptable quantity of supreme quality components in pairs, shaded to match plus 'run-in' items of a lower grade or value in a smaller pattern size to assist the pattern interlock; this method pushes up quality without the prodigal waste of material. Example: White dress gloves . baby bootees. both of which could be hand sewn by the same female out-workers.

It should also be recognised that all recording systems are non- productive so should be as simple and effective as possible to keep a tight rein on cutters who can put scrap on the floor each day which exceeds their pay, if not monitored.

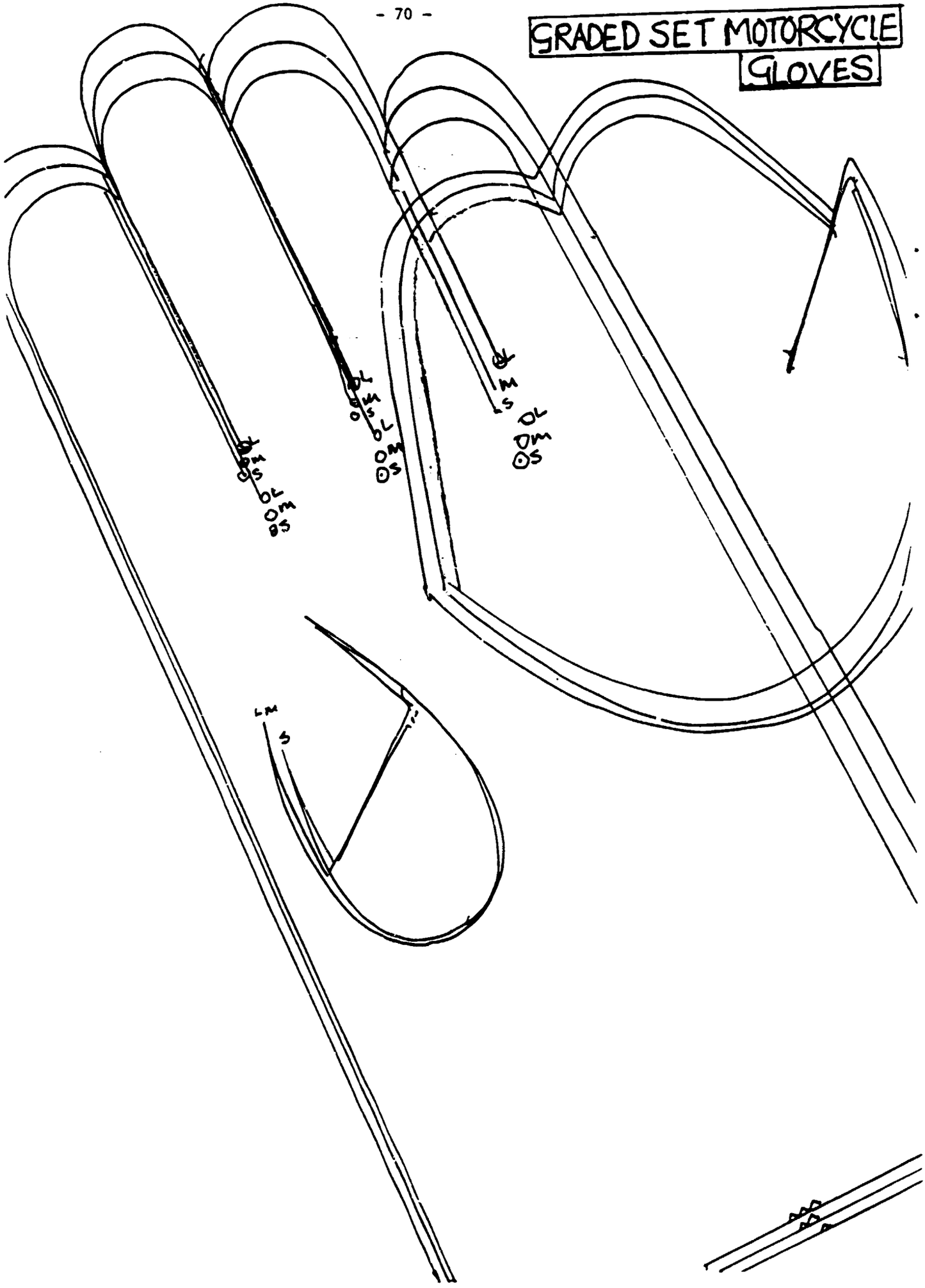
DEVELOPMENT OF ROUND THUMB INDUSTRIAL TO LINED DRIVING-GENERAL PURPOSE GLOVE WITH MILLIUM THERMAL INTER LINING.
DETACHABLE LINING WITH S/S PRESS STUDS.



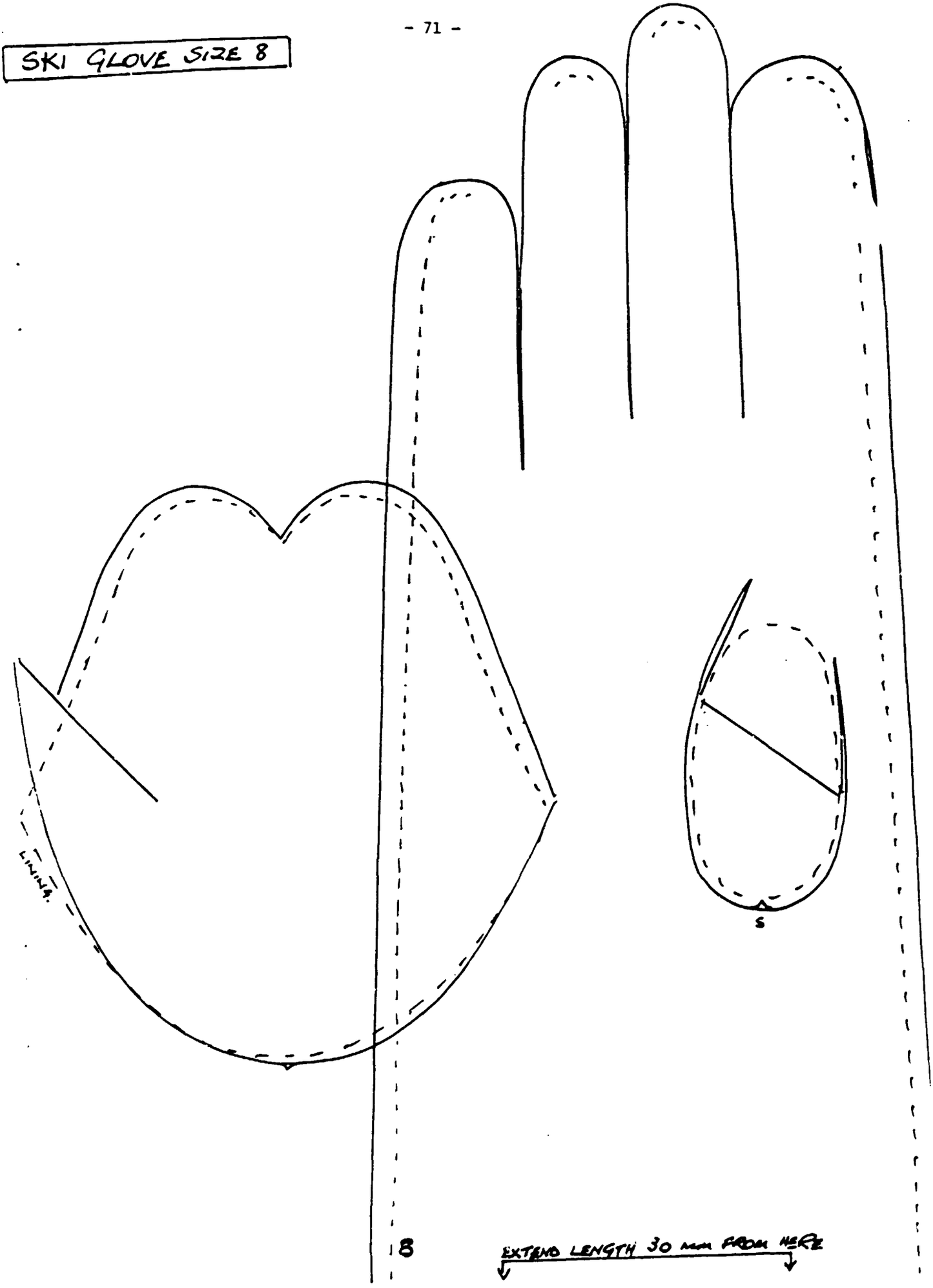
HAND STITCHED BACK DECORATION.
POINTING.

MOTOR CYCLE GLOVE - KNITTED LAMBSWOOL LINING WITH AMIANT THERMAL WAFER.

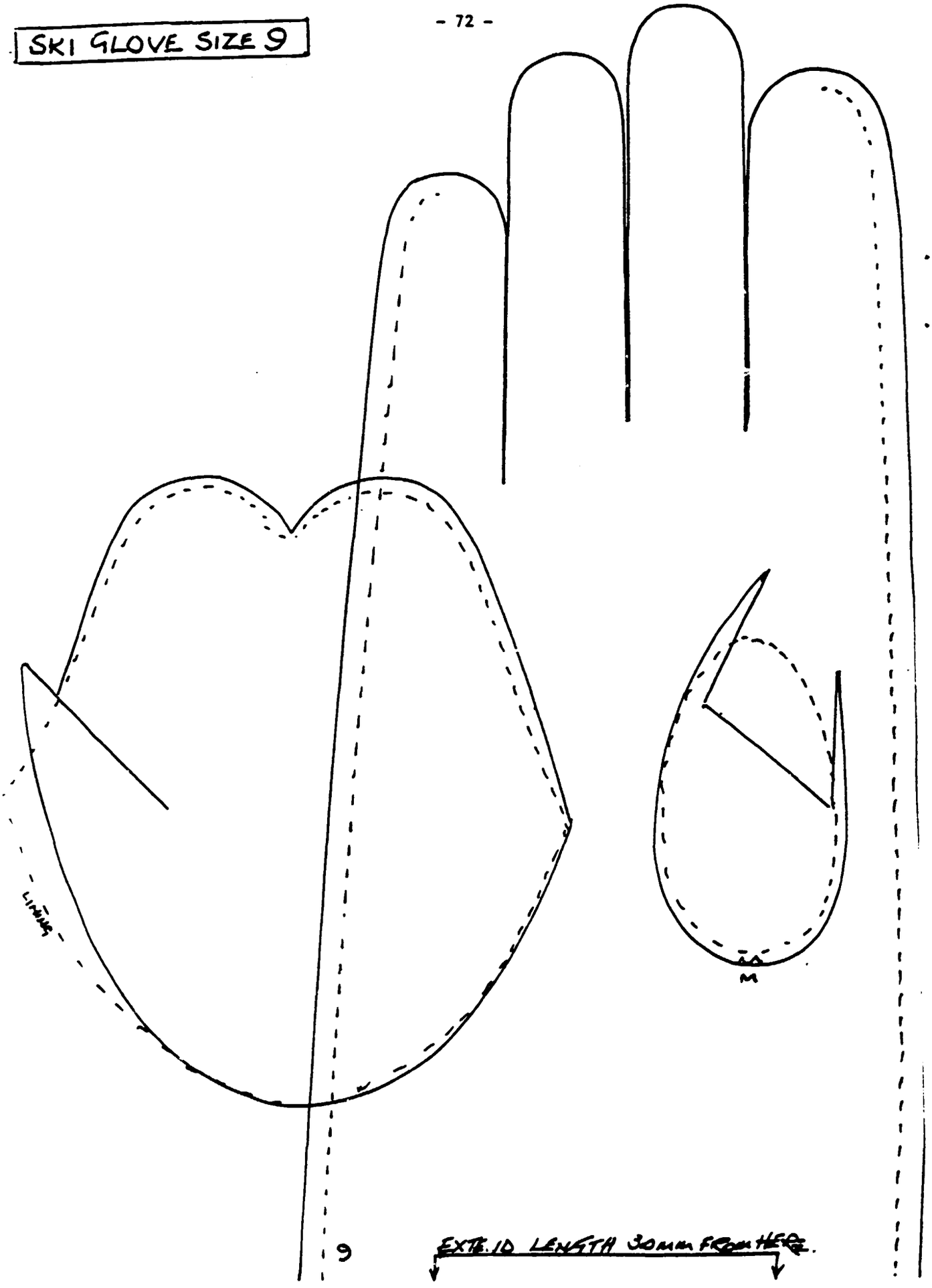
GRADED SET MOTORCYCLE GLOVES



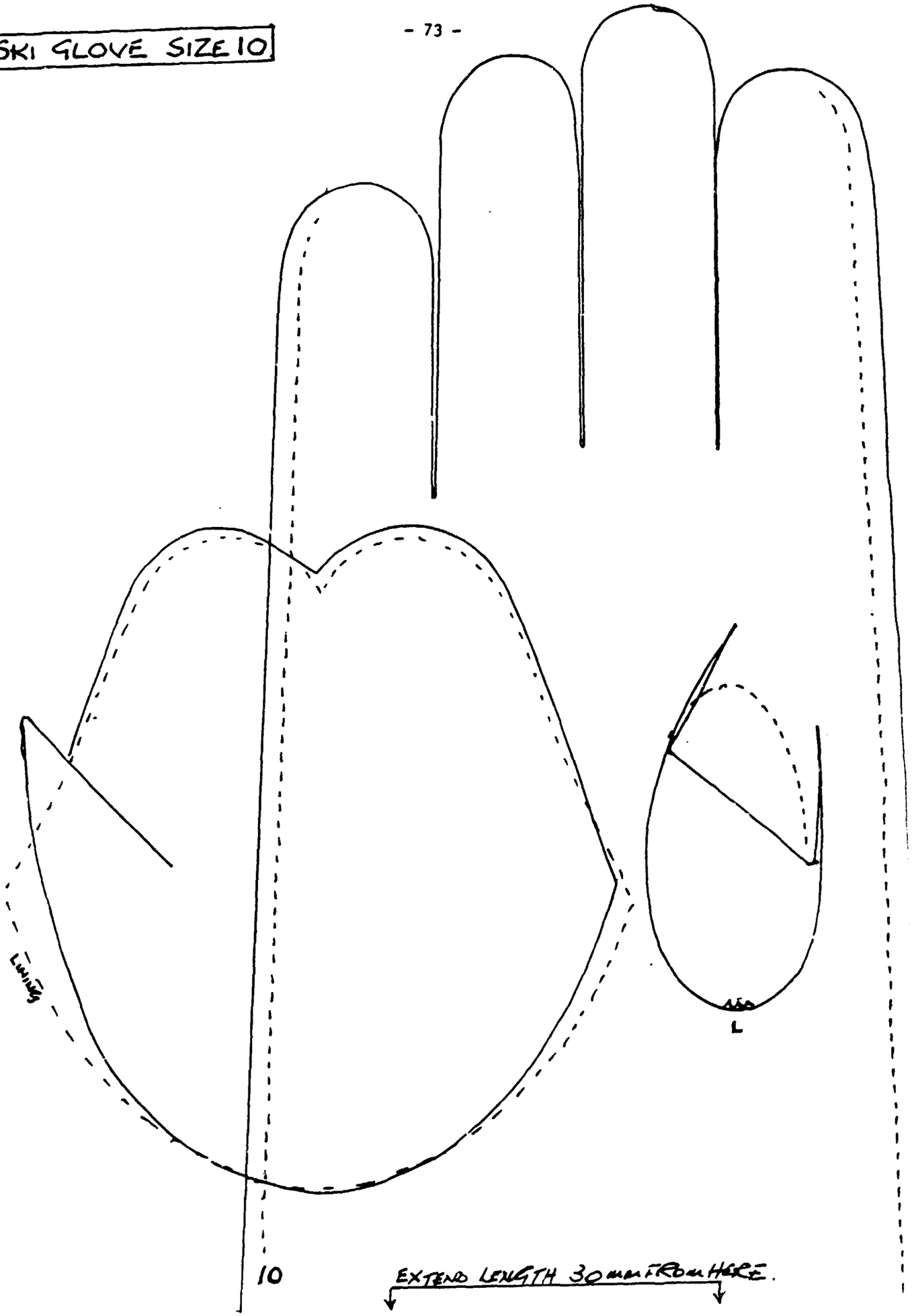
SKI GLOVE SIZE 8



SKI GLOVE SIZE 9

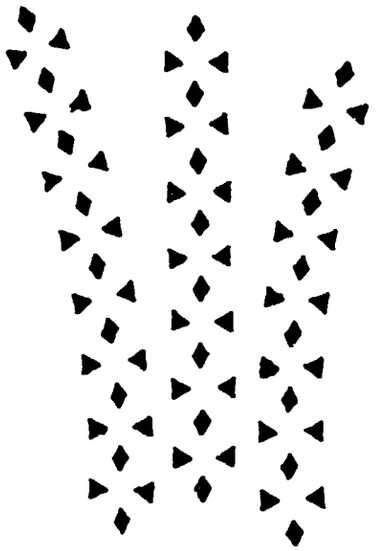


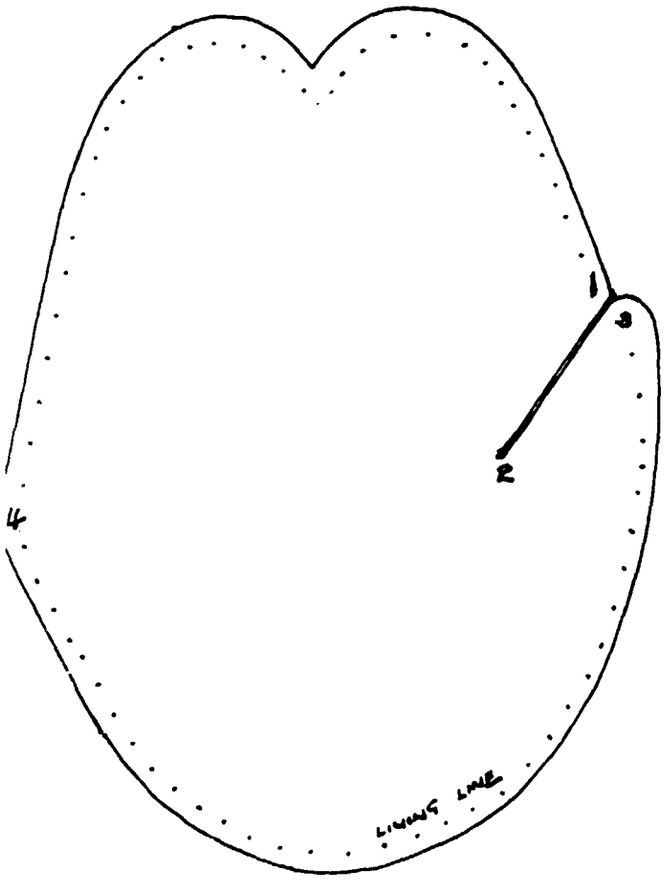
SKI GLOVE SIZE 10

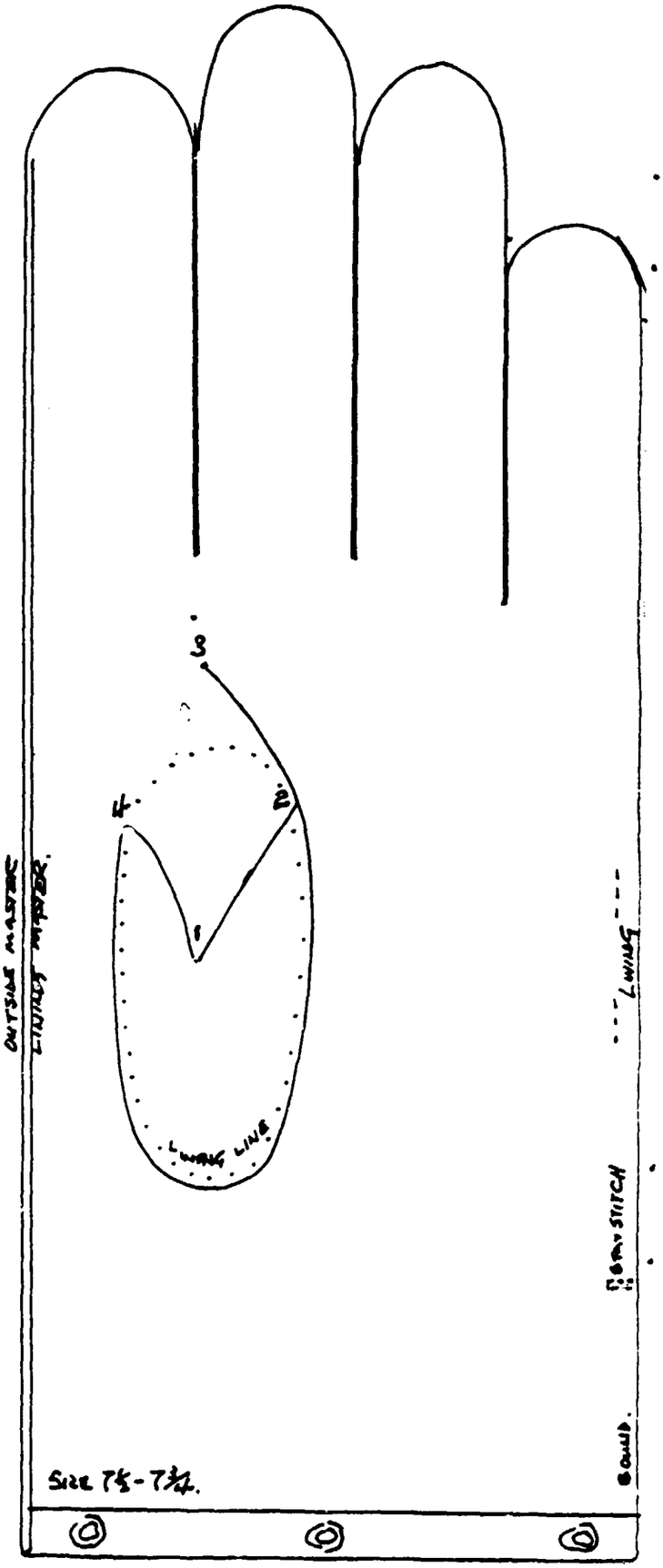


LINED UNISEX GLOVES - BOULTON THUMB - 18 MM FOURCHETTES.

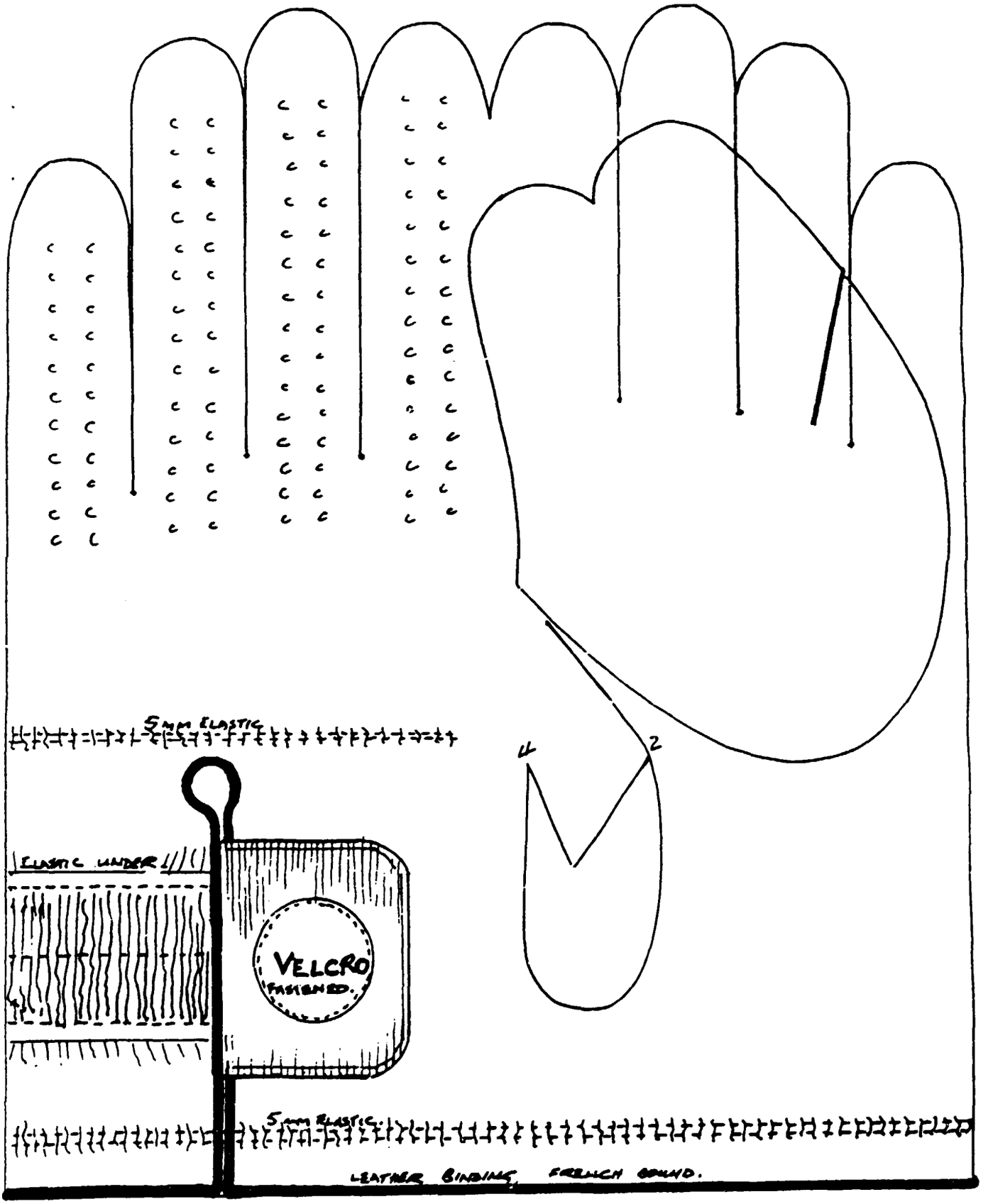
PAINTING DECORATION ON BACKS







GOLF GLOVE .5MM KID.



FOURCHETTES

The design and construction of fourchette patterns varies considerably with the type of glove you wish to make, the price at which it will be sold and what tolerance you require in the finished glove, whether they are a loose "slip on" or fit very tight to the hand, leaving the natural stretch in the leather to stretch on to the hand:

Fourchettes should be cut as far as possible "stretch across" and "tight" in their length to stop the glove going out of shape in wear.

The following types of fourchette are those in common use, but will be starred to indicate the more expensive types and to separate them from the less expensive and more easily fitted varieties.

* 1. The wrist to wrist casual glove fourchette.

** 2. As above but oblique stitched at the finger junctions and narrowed at the tips.

* 3. The straight curved "one size" finger gusset.

*** 4. The double panel type fourchette.

** 5. The half-centre seamed fashion fourchette.

**** 6. The double unseamed fashion fourchette, V cut.

***** 7. The double panel fourchette with curved tips (this type often requires a quirk).

***** 8. The double panel men's fourchette with finger end shaping (used with quirks).

9. As type 6 but lap seamed on the straight.

Remember fourchettes are separators between the front and the back of the glove and should follow the fingers in shape and measurement from the tip to the knuckle joint.

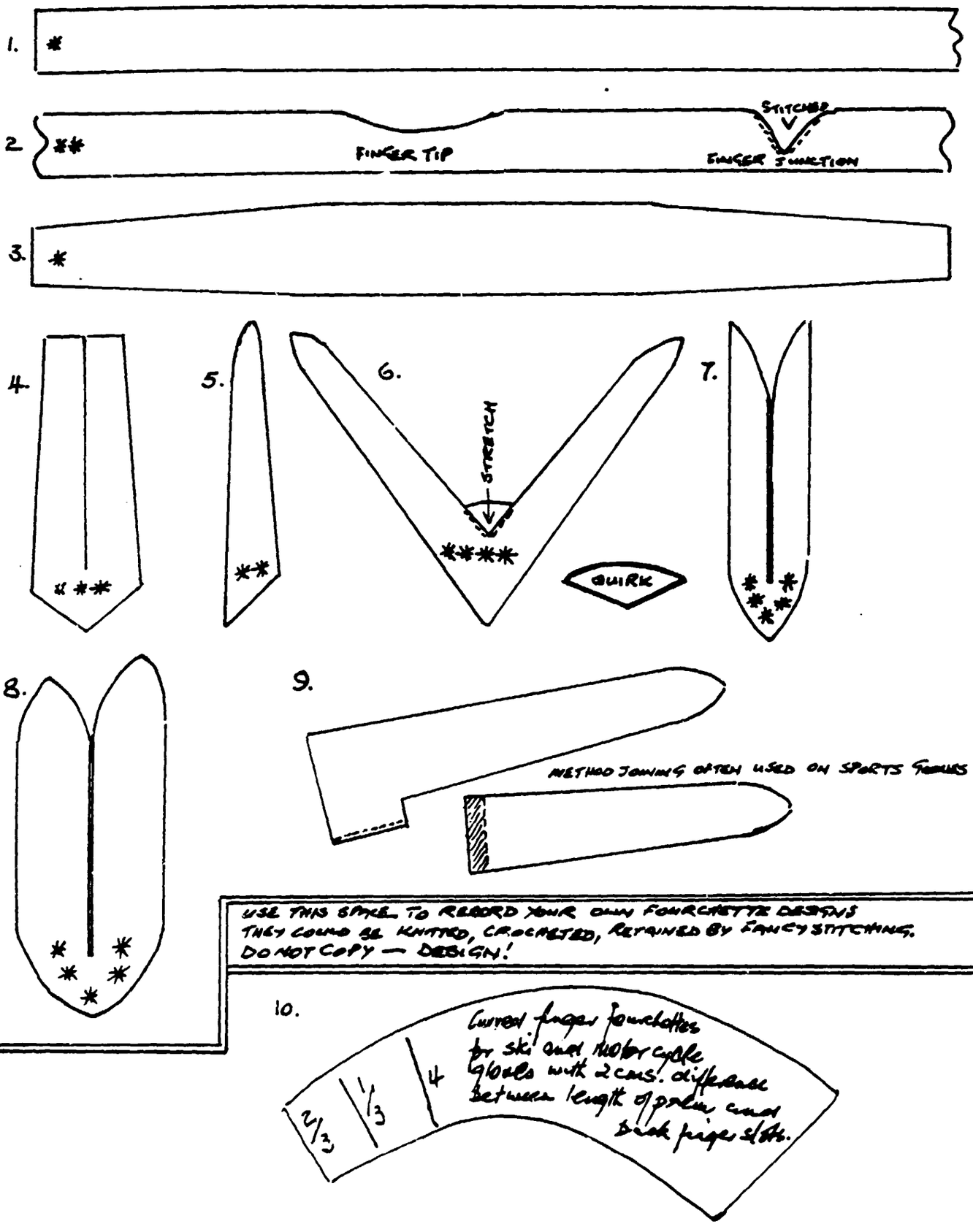
They should be taken to the junction between the fingers and have two measurements but it is easier to start with back slots first and adjust to produce the front slot measurement to the centre finger tip at each side.

The difference in depth (12 - 14 mms. Women and 15 mms men) of the finger slots back and front needs careful calculation of thickness through the fingers to produce a good fit, and since it differs greatly between men and women, and also between the races, it should be studied with care, making due allowance also for the thickness of lining and padding which increases the fourchette width to a marked degree.

A useful exercise would be to take the first and second fingers of one of the glove patterns you have been given - get the finger measurements for 1 and 2, and cut test piece fourchettes by each method given to show yourself the difference in result the different cuts produce.

Hand stitching would be best but if machined 1 - 2mm seams <u>with no scissor trimming</u> so that a fair comparison can be made.

FOURCHETTES



SIZE GRADING

The fundamental control measurement in glove sizing has been repeatedly used during the course, it is the measurement taken around the hand at the knuckles and is the one which most glove users know equally as well as their shoe size and hat size.

Unfortunately the complex nature of fashion gloves with little or no "tolerance" apart from animal skin elasticity, which also has to be part of the whole exercise of grading, requires many other measurements and it is part of the mystique of glove making that they keep their secrets. In fact the patterns you will be analysing were produced by Albin Porkert of Germany and as we have bought some equipment from them for the Centre, which relies on knowledge of grade, I asked for a simple explanation of their system - they replied they were makers of equipment and we would need to go else where for the information, they would not supply it.

We have gone else where, and have a double graded set of classic mens and womens dress gloves which are fully integrated, that is they can grade through from one to the other.

The knives were made by Porkert and the Spanish Glove Master Julio Valdivia who you saw yesterday is in full agreement they are the best in the world.

The vital information needed to get true enlargement or diminution of patterns is a follows:

THUMB
1. Length and size measurement Av. 5mm
2. Width and size measurement Av. 2mm.
3. The thumb slot grades out from a common starting point in line with the grade but average enlargement is 1mm per size.

Contd...P/2.

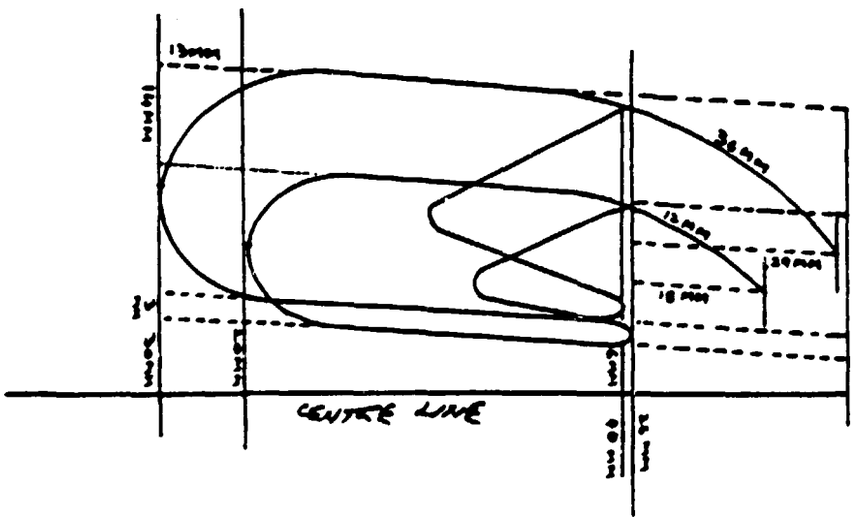
MAIN TRANK WIDTHS

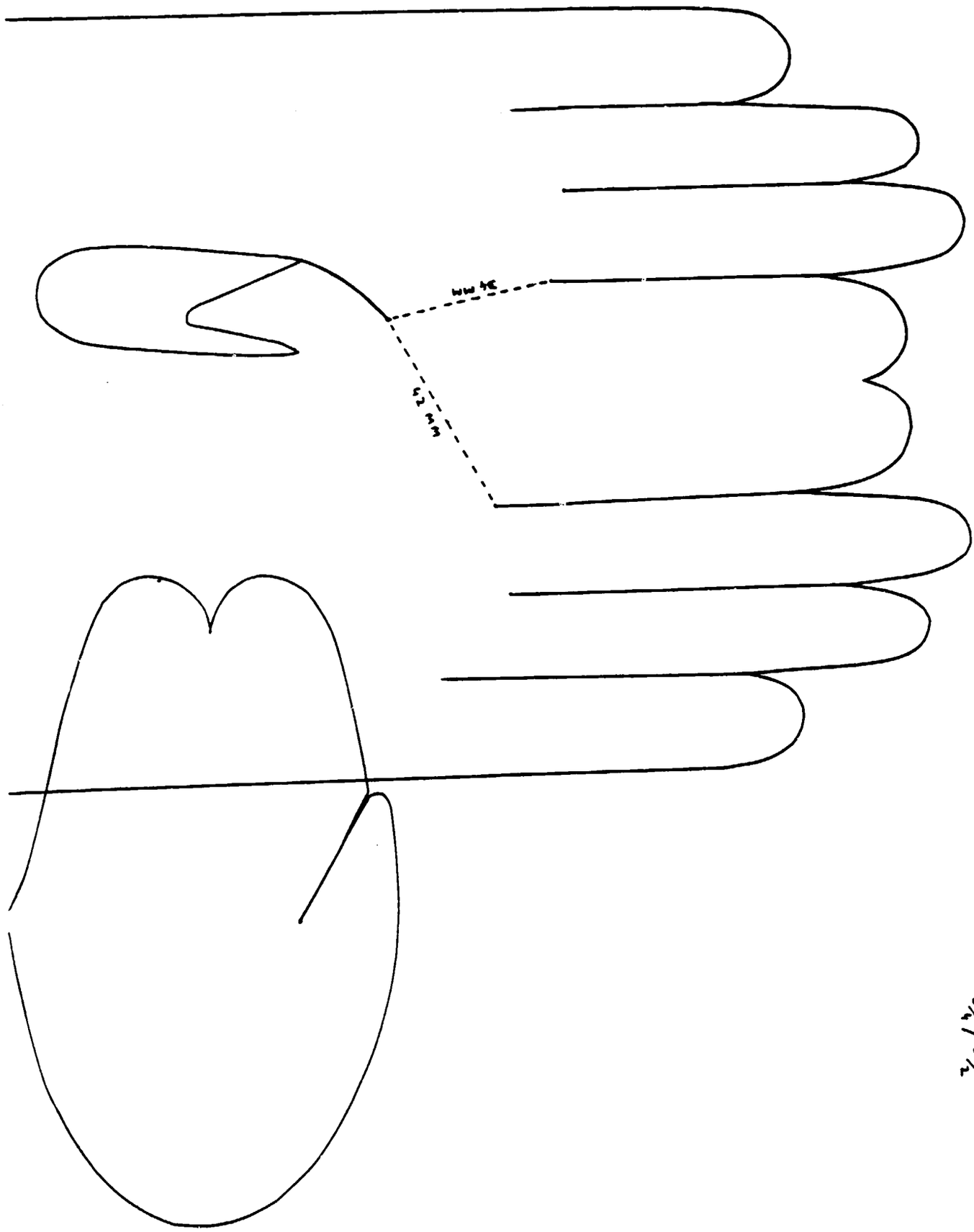
Size 6¼/6½	6¾ - 7	7¼ 7½	7¾ 8	Increment
Cms. 15.0	15.9	16.8	17.7	Av. 9mms.
Size 8¼/8½	8¾/9	9¼/9½		
Cms. 20.0	21.1	22.2		Av. 11mms.

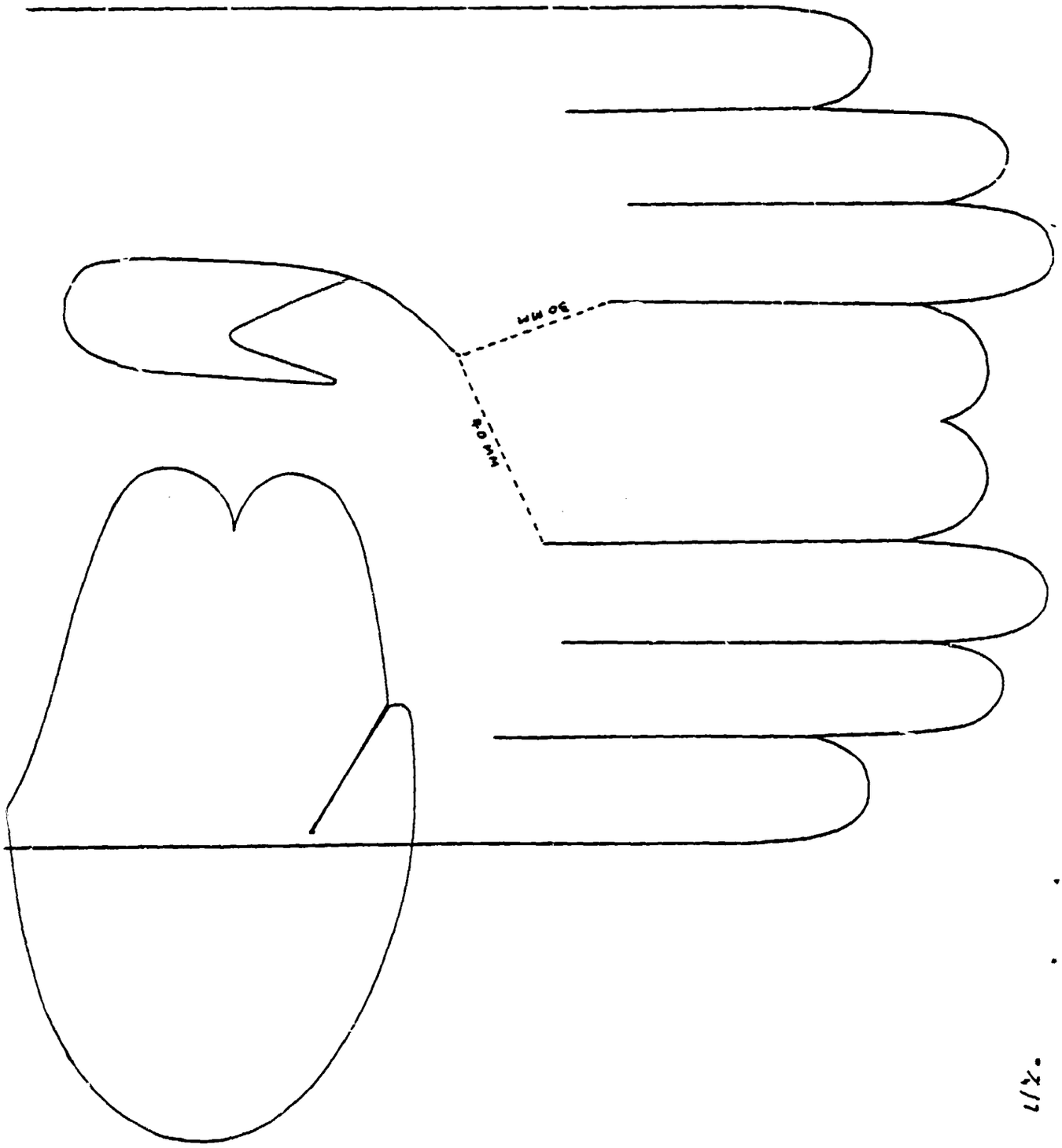
FINGER LENGTHAS AND WIDTHS.

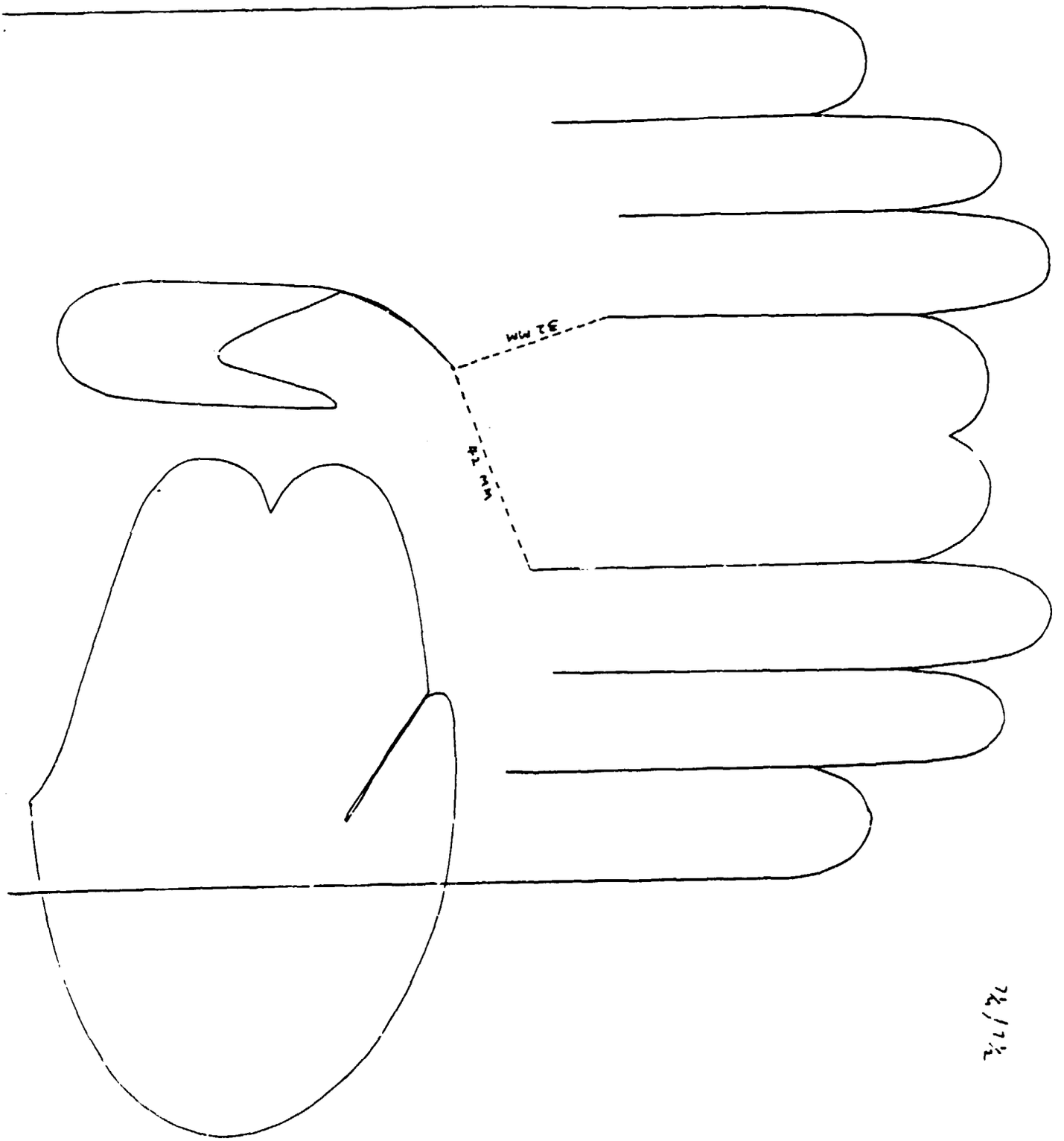
SIZE	1 L. W.	2 L. W.	3 L. W.	4 L. W.	Difference 1 2 3
	MM	MM	MM	MM	MMS
6¼/6½	72 20/40	83 17	72 17	59 18	12 12 11
6¾/7	74 22/44	86 18	74 18	60 19	12 11 10
7¼/7½	75 23.5/47	88 19	76 18	61 20	12 12 11
7¾/8	78 25/50	91 21	78 19	63 22	12 12 12
8¼/8½	81 28.5/57	94 23	82 22	65 25	12 13 12
8¾ 9	83 29.5/59	96 24	83 23	67 26	12 14 14
9¼ 9½	85 31.5/63	99 26	85 25	69 28	14 15 15
Av.	2 2-	3- 1+	2+ 1+	2- 2-	12+13+12

ANALYSIS OF THUMB HOLE LOCATION (WHERE IT SHCULD BE)




WW 45
1
2
3

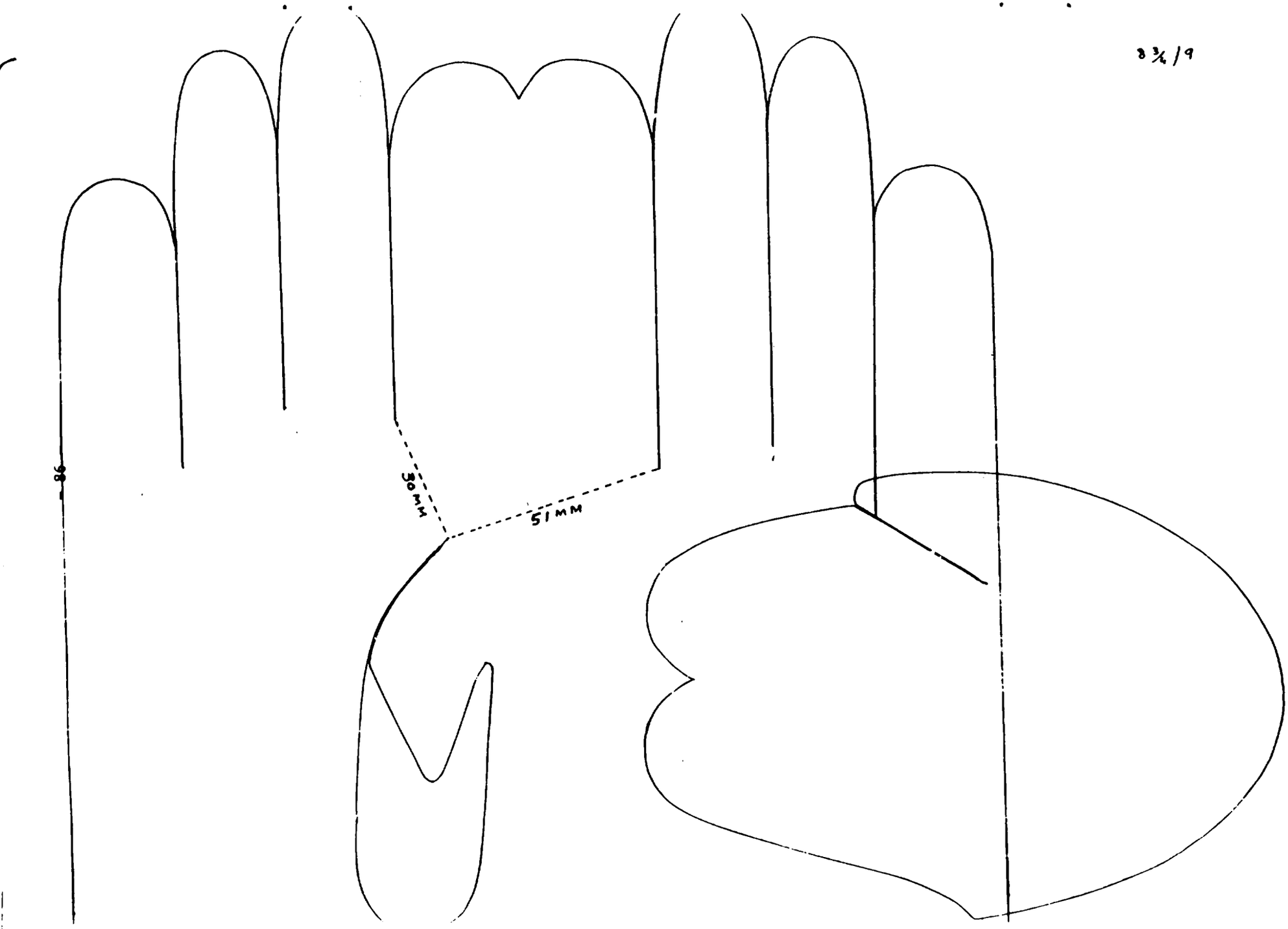

MM 05
MM 08

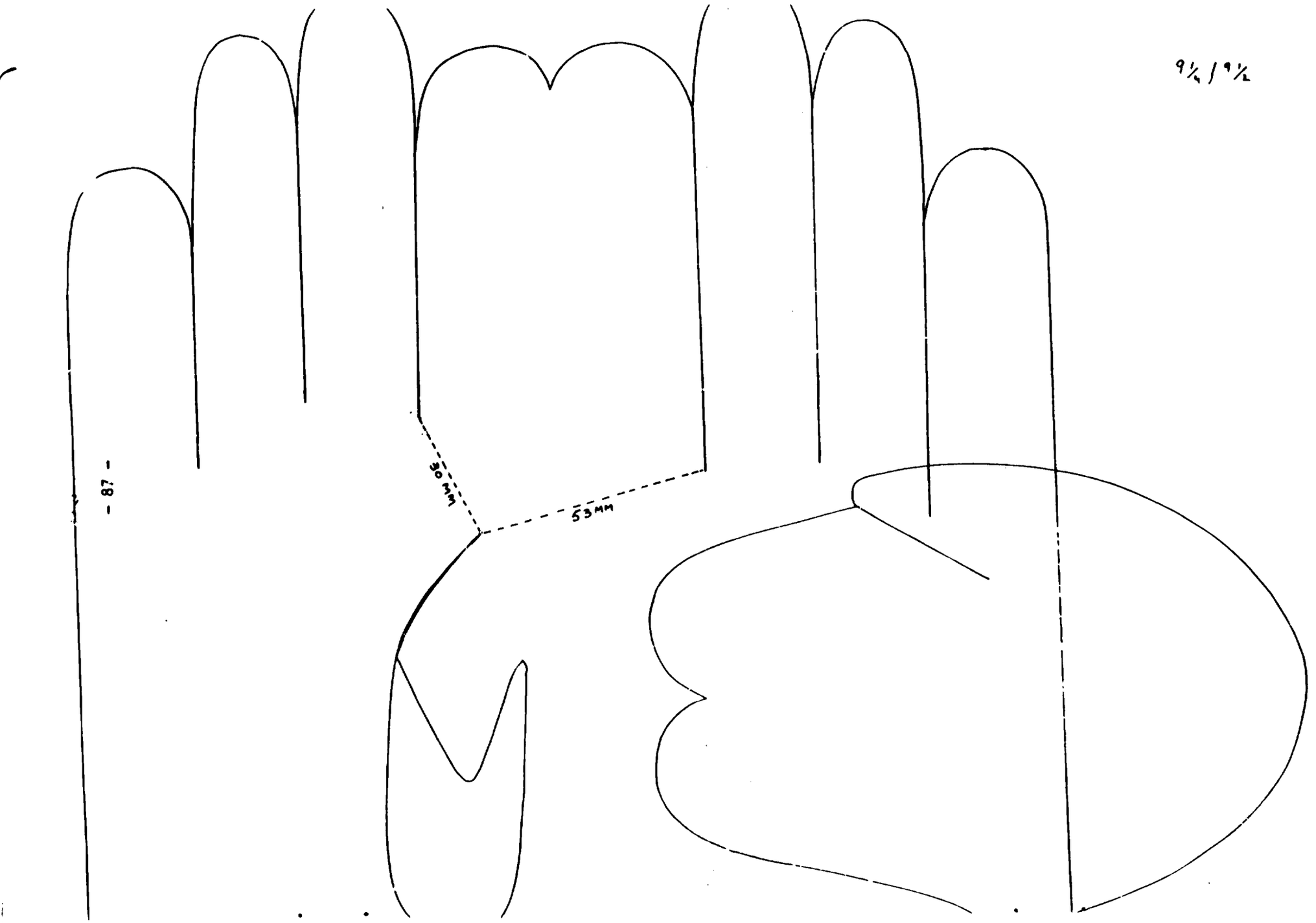


24/24

74/8

7/8/7/8

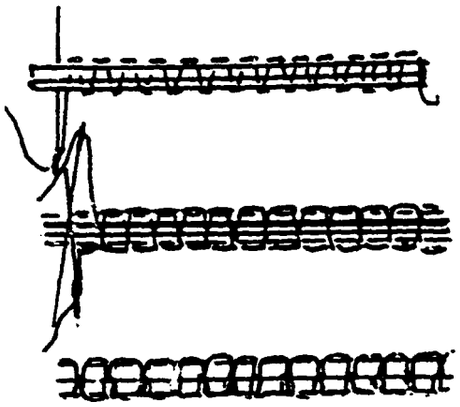

8 3/4 / 9
96
30 MM
51 MM


9½ / 9½
- 87 -
53MM

HAND AND MACHINE GLOVING SEAMS.

THE HANDSEWN STAB STITCH.

Sewn with triangular pointed gloving needle .7mm from edge 12-14 stitches per inch.



THE SADDLE STITCH.

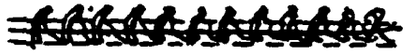
As above with two needles working from eitherside. Used on areas of great wear.

THE PRICK SEAM PXM.

A lock-stitch seam tensioned in the centre usually on a machine with a presser wheel.

BROSSER SEAM OR ROUND SEAM RDSM.

Can be chain or swing needle lock-stitch in which the seam goes through the material and round the edge.



CHAIN IN SEAM.

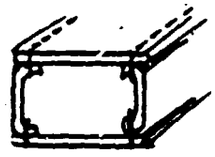
Usually a two thread chain seam which is strong and flexible for turned fabric gloves.

KIP SEAM.

First done as an in-seam on the glove back then turned and a further row through the fold-resembles pique seaming P.K.

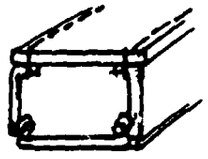
PIQUE SEAM P.K.

The most difficult seam of all - a lapped seam done on a pencil slim post machine, great skill needed and long training period.

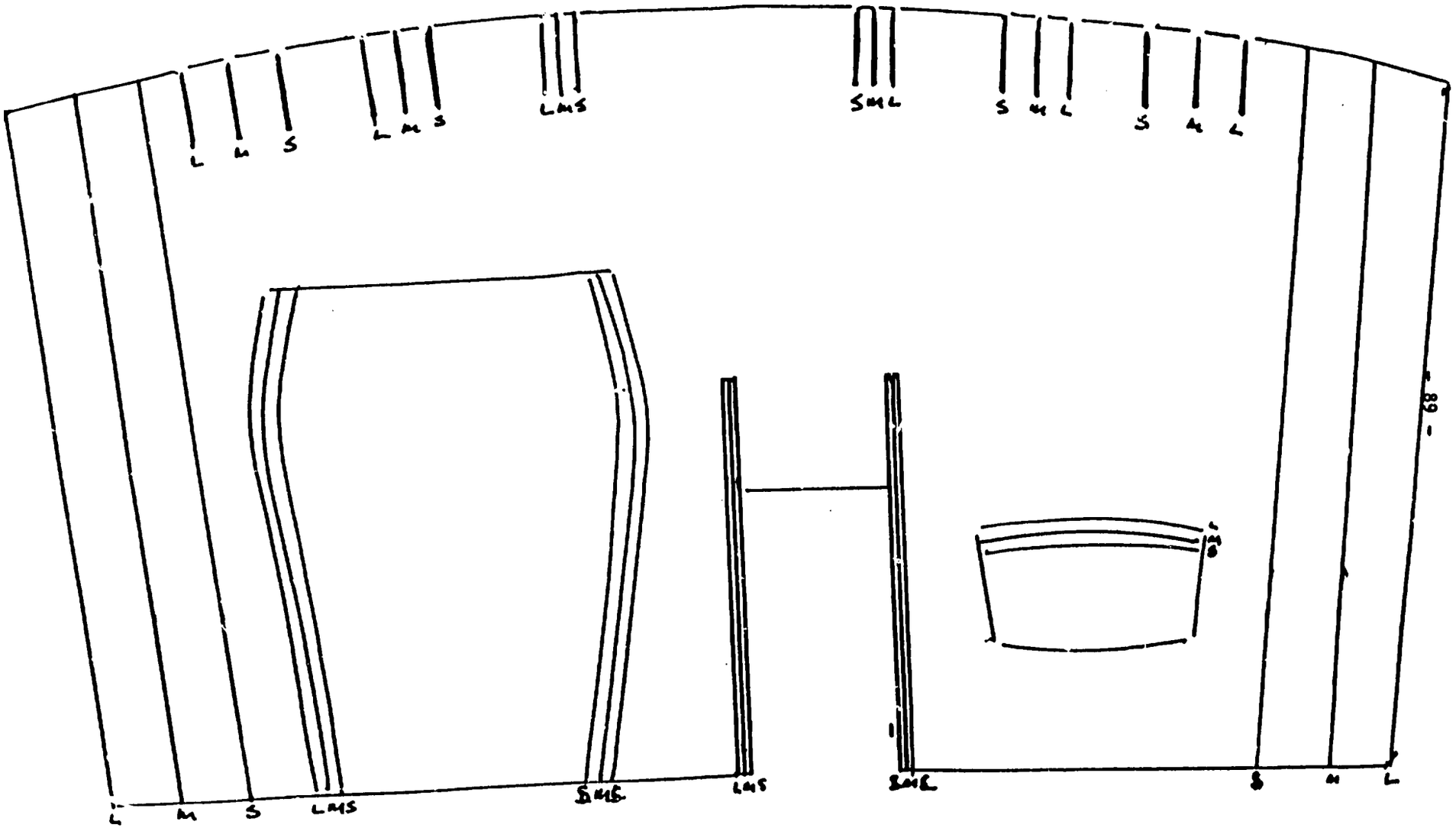


HALF PIQUE SEAMS.

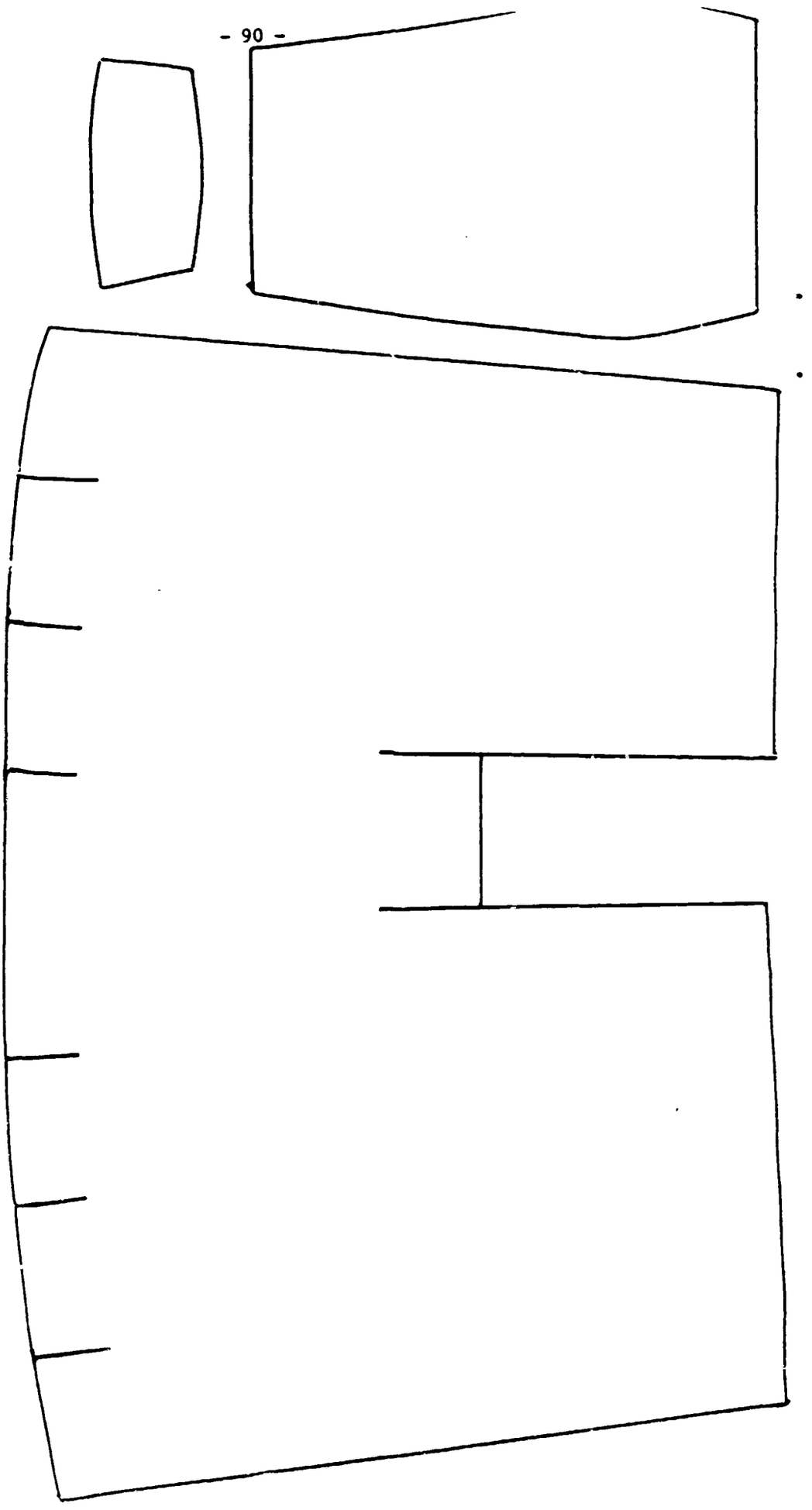
Done on the back of the gloves only, while the fronts are in-seamed.

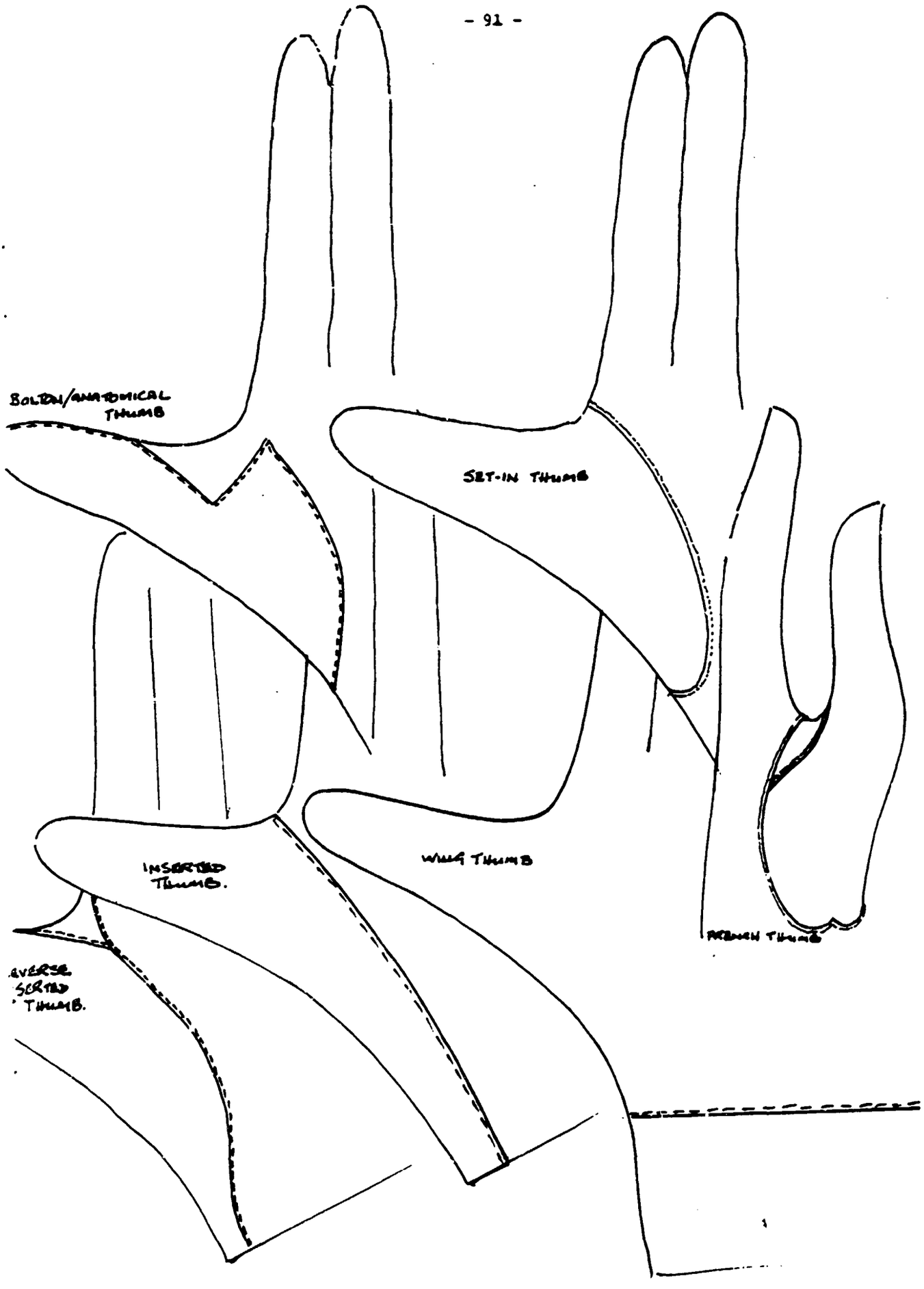


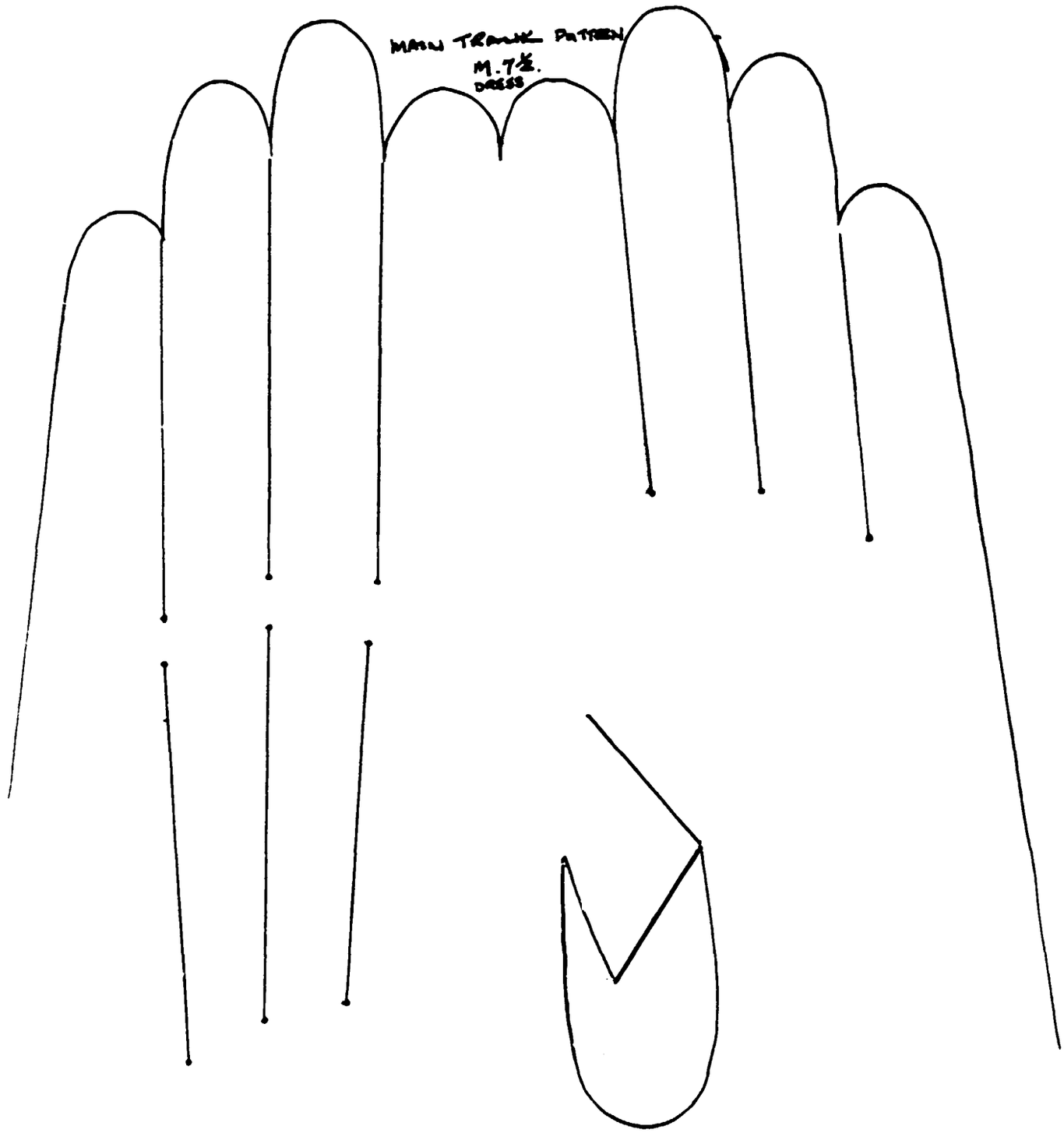
GRADED SET CYCLE SAILING AND MOPED GLOVE PATTERNS



CYCLING GLOVE




BOLTON/ANATOMICAL THUMB
SET-IN THUMB
INSERTED THUMB.
WING THUMB
REVERSE SET THUMB.


MAIN TRUNK PATTERN
M. 7½.
DRESS

GLOVE BACKS IN CROCHET AND KNIT.

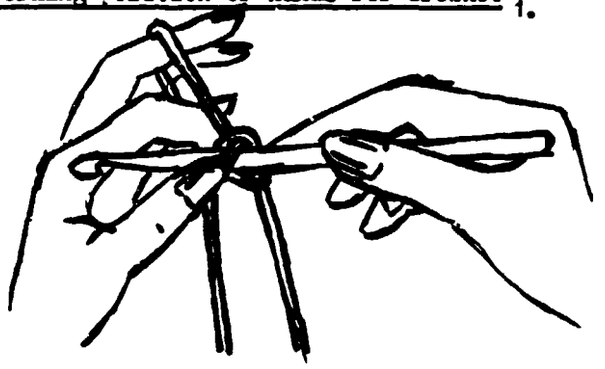
In addition to the large numbers of gloves which are produced on automatic glove knitting machines, or which are cut to size from warp knitted fabrics and put together on the different sewing machines, there are increasing quantities which have backs which are made to specific sizes and patterns and incorporated into sports casual and driving gloves with leather fronts and thumbs.

Many of these gloves assume the characteristics of the formal hunting glove in patterned knitted cotton string and when hand crocheted easily fall into the mid and uptown markets even though the cost of the leather content is little over half that of the traditional leather glove.

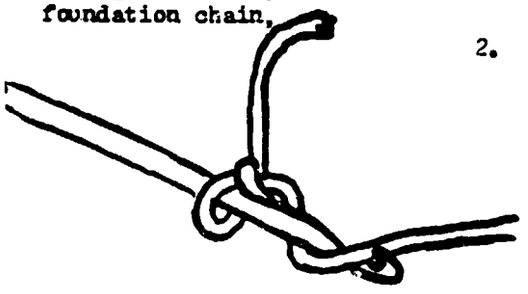
Leather glove makers wishing to produce such gloves should establish the following:

1. A set of board back and half thumb patterns in all sizes
2. Outworker training, quality control and delivery service
3. Assembly unit prepare fronts complete with fourchettes and ? quirks
4. Final assembly and laying off
5. Packaging to ordered size roll and casing.

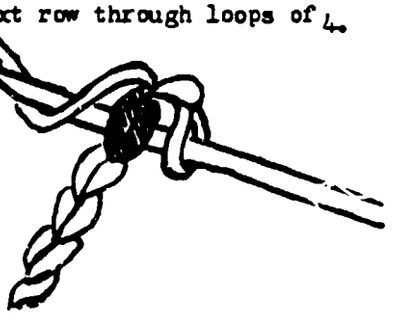
Working position of hands for crochet 1.



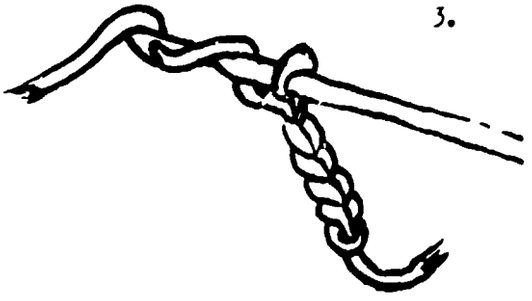
Making first loop to start the foundation chain. 2.



Making foundation chain from initial loop. and starting next row through loops of 4. second stitch.

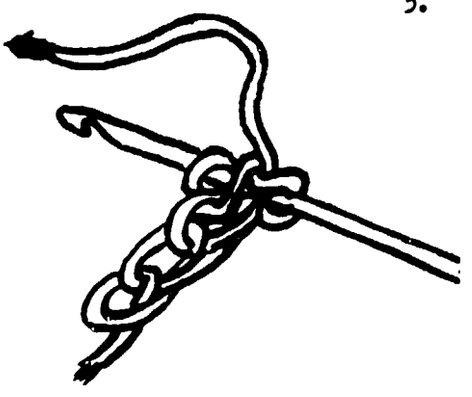


Foundation chain. 3.



Appe diag

Stitch formed by following 5.



DECORATIVE TECHNIQUES

As the course has progressed various methods of decoration have been introduced which have been essential to individual stylesof gloves. It is necessary now, however, as we are at the creative design stage to outline decorative treatments in their own groups so that future designers recognise them, and also have a working knowledge of the relative costs involved with each category.

CATEGORIES

Single and multi needle stitching.

Swing needle, including cam controlled stitching, Binding and piping.

Linear, block and mass perforation.

Under-lays in self and contrast colours.

Thonging and inter lacing.

Pinking and crimping.

Screen and block printing.

Embossing, raised seaming and air cording - plain and cut.

Eyelets, studs and other metallics.

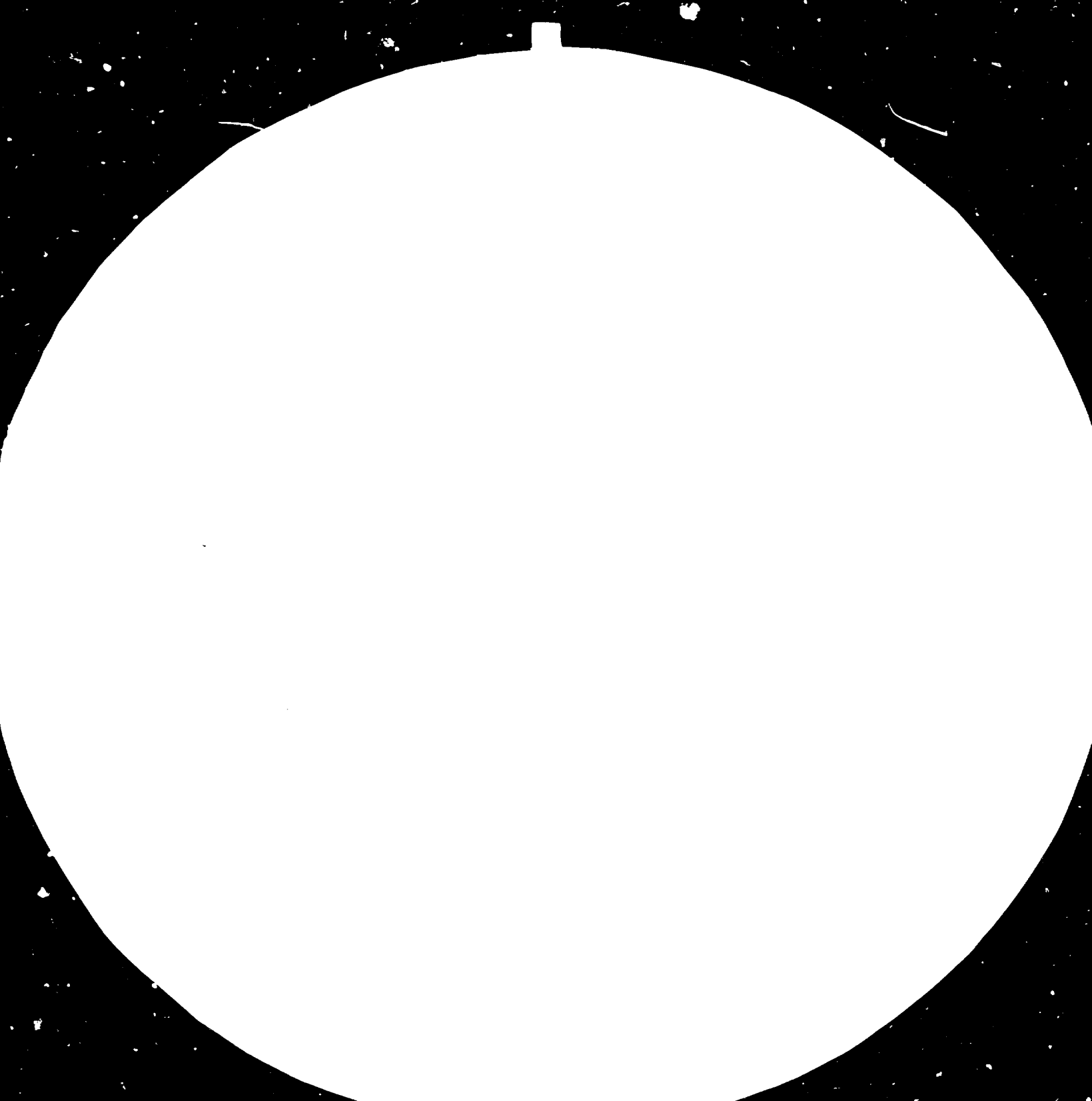
Hand sewing and decorative embroidery.

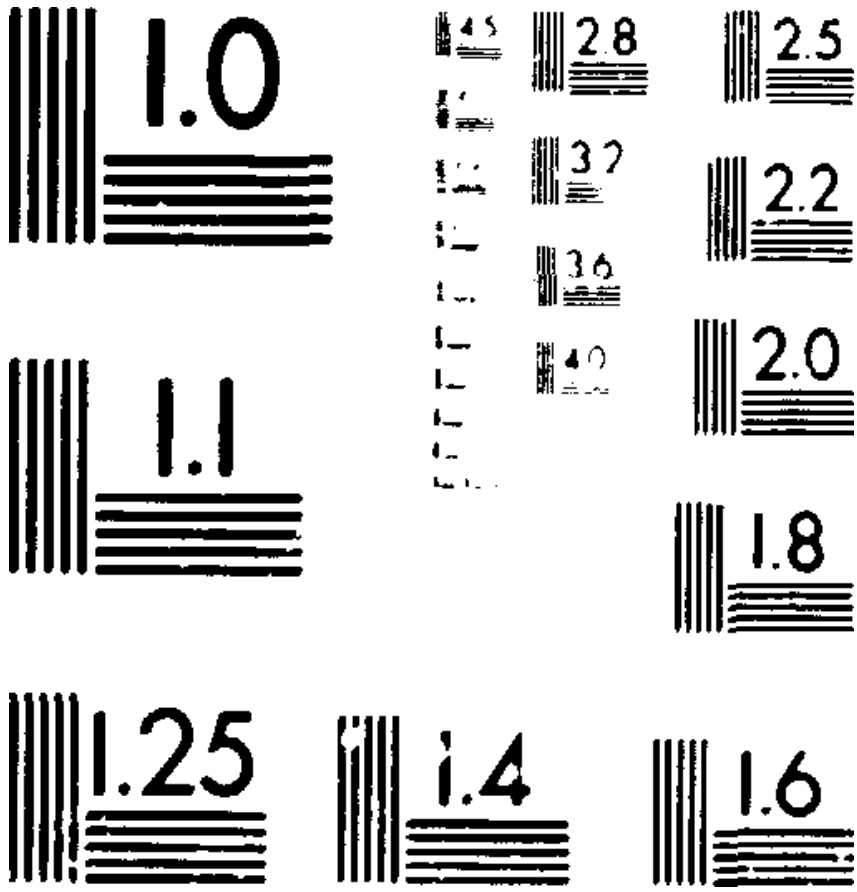
Crunch punching and texture changes.

Applique work including machine embroidered labels.

Each student will be expected to prepare a creative swatch of specimens after examples have been given and hand them to the counter part instructor for marking and entry on their course mark sheet.

There is no set time for this work as students should do this when they have gaps in their programme.





ADDED VALUE

This handout has been asked for specifically due to the number of times the expression has been used during the course.

In most countries undergoing an industrial development programme the question of added value assumes a very important role, for each Government has to decide which of their national resources they can afford to export to attract hard currencies from the rest of the world to purchase essential imports beneficial to their economy. Anything grown, mined or raised within a country can be looked upon as a national resource, and if we take an example from the raw material source of our own industry we might say that a regular kill of part of the animal population will yield:

a) A main resource of carcases for consumable meat

b) A secondary resource in the hides and skins which can be preserved and made into leather.

It might be felt that the relatively low price of meat in Pakistan would encourage freezing and meat exports, but if this happened on too large a scale, alternative protein foods would need to be raised to feed the population. If hides and skins were exported immediately after flaying the amount of profit would be relatively small, much better to turn the skins into leather, thus providing the first step in providing added value.

The export of leather does take place on quite a large scale, and is encouraged by an export rebate for the tanners who sell abroad (with one exception, for it has been announced this week that "wet blue", that is leather which has been dehaired and chrome tanned is being removed from the rebate list).

Added value to the leather products designer and maker is of great importance for no government would consider removing rebates from a national resource which gives employment in large numbers to another resource, the national labour force; but governments have many calls upon their funds and are forced to take unpalatable decisions from time to time, but the last to be touched will be the products which produce the greatest added value per square foot of leather used to make them.

These high added-value products are nearly all the same in that they are:

1. Well designed and made from the best selection of materials.
2. Far from simple to put together.
3. Usually in the higher price bracket.
4. Are marketed in smaller quantities to specialist outlets.
5. Mostly made entirely by hand.

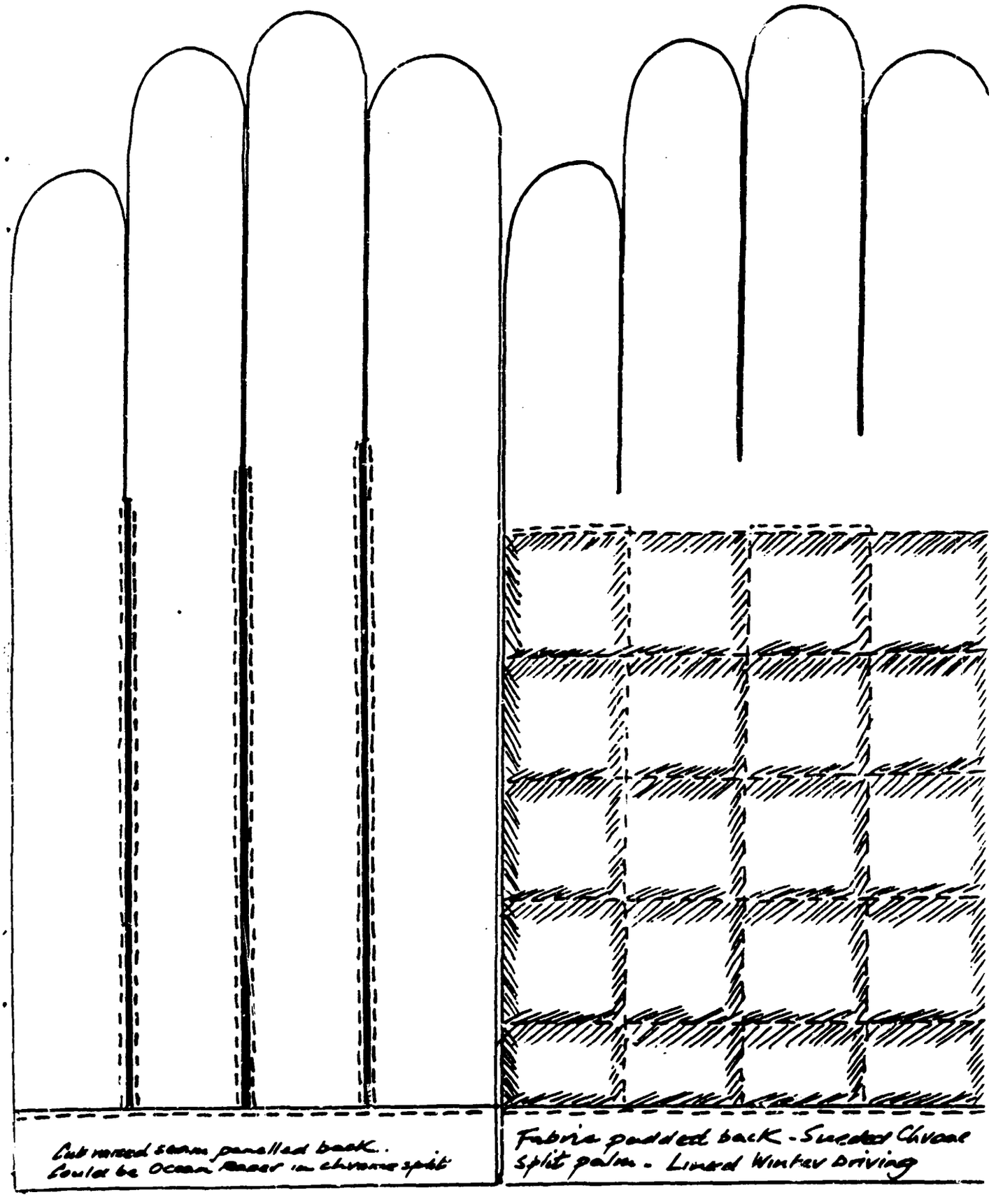
Added value per square foot of leather used in a product is a simple way of determining the national value of that product, for example an exported product with an almost non existent profit margin and a high export rebate provided by the tax payer is not of the same value nationally as a leather product exported at three times the price of the original leather cost of

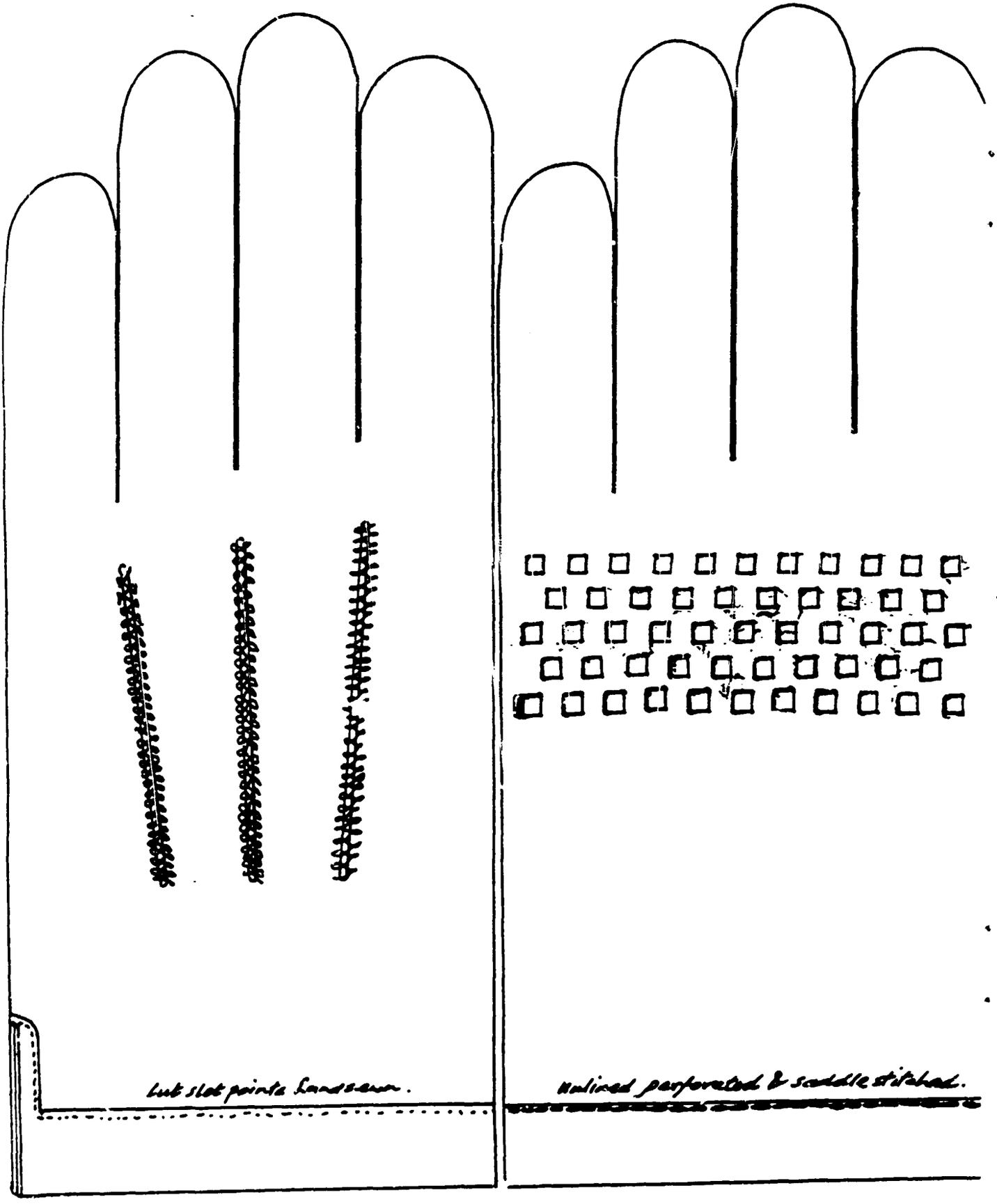
that product - the extra added value has been put there by high quality which is in great demand the world over, the quality factor in the leather is there because of better selection and care in processing, and in the product because of good design and model cutting linked with advanced making skills. More people have been employed for more time on the animal skin or skins from which the product is made than for products of basic essentials, so the added value may not be all profit, even through the gain to the country may be classed as a net national profit.

It may be the time to consider a new leather product export rebate system in Pakistan, now that "wet blue" has been dealt with; in fact discussions may be currently in progress.

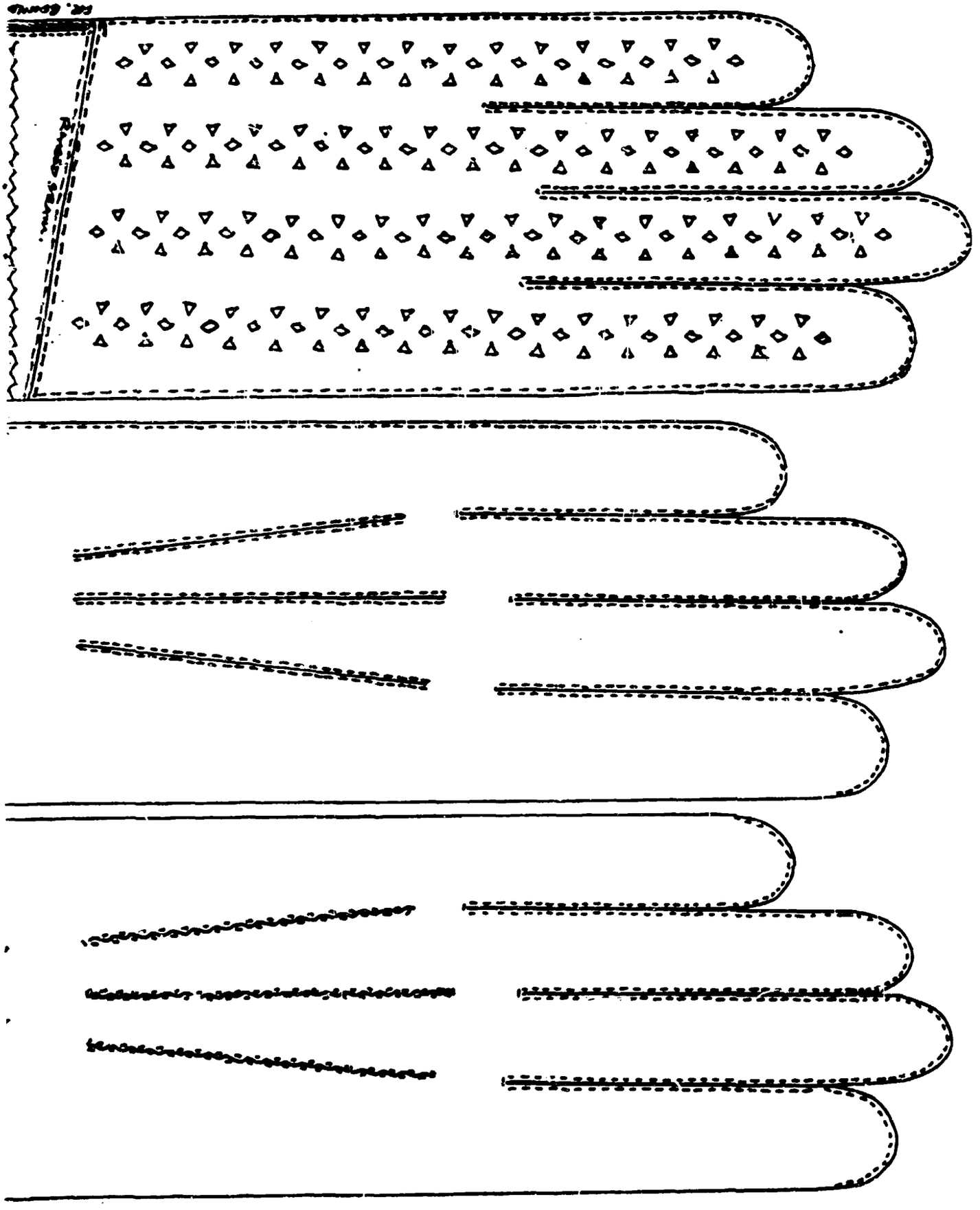
A system in which added value per square foot could be the basis for rebate and not too difficult to calculate and check back upon, with a comparison of total turn-over and total leather purchases over whatever calculating period deemed necessary.

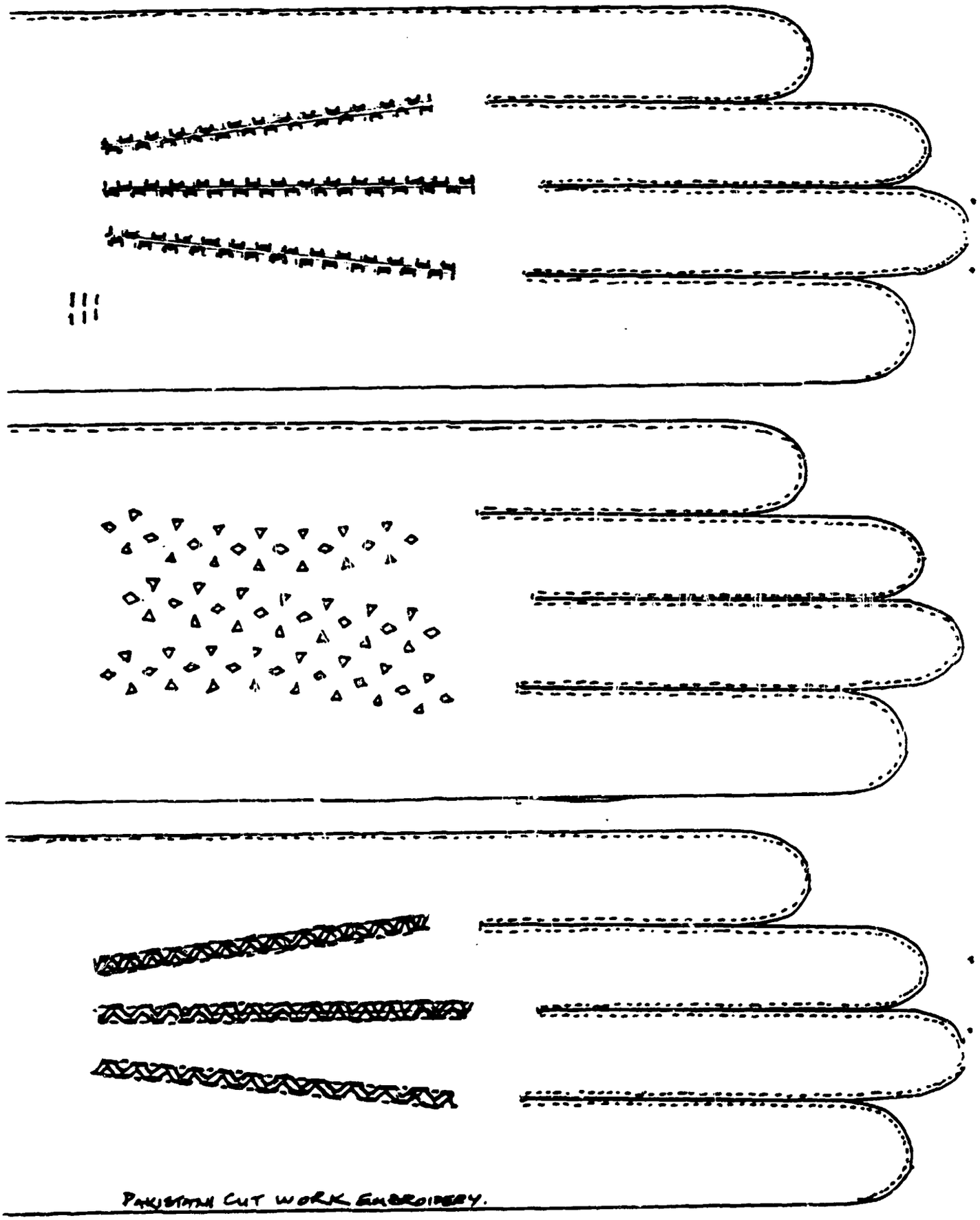
Added value, honestly arrived at, is the most progressive and sound advice a consultant can give, devoid of dubious deals and tax avoidance practices, the national speed of forward progress cannot fail to accelerate if it is the aim of sufficient individuals.


Cut waved seam panelled back.
Could be Ocean Racer in chrome split
Fabric padded back - Suedette Chrome
split palm - Linard Winter Driving


Cut slot points Sandseam.
Unlined perforated & saddle stitched.

HAND STITCHED AND PUNCHED FASHION GLOVES





PAKISTANI CUT WORK EMBROIDERY.

ANCILLIARY PRODUCTS FOR RANGE BUILDING

As the majority of glove orders are seasonal or at least buying patterns fluctuate in volume at different times of the year, it is wise to have a few non-glove items in the range which can be produced with the same labour and equipment to keep the cutting and machining work shops at full stretch for as long as possible.

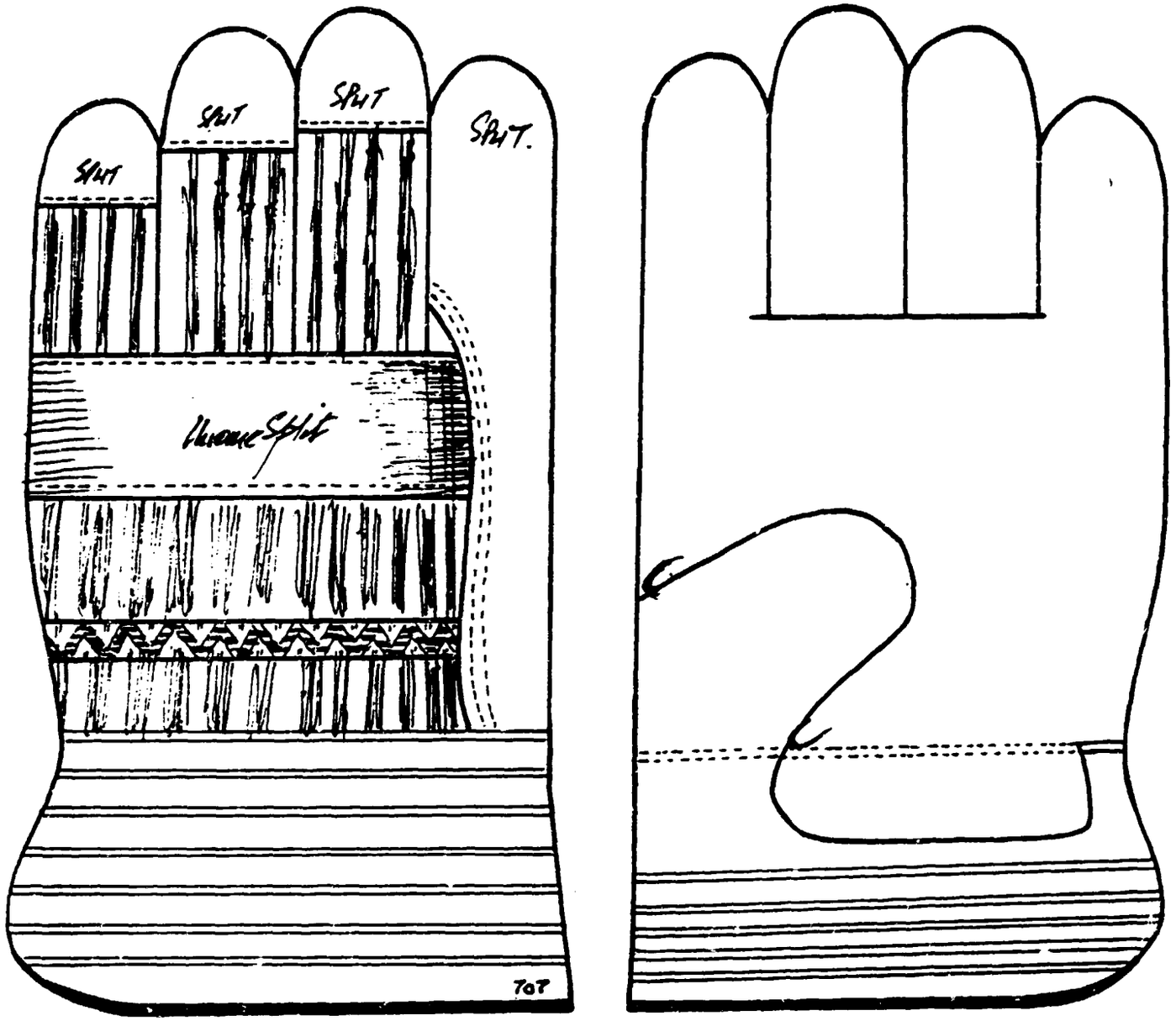
SUGGESTED PRODUCTS

1. Children's turn shoe - house shoes.
2. Elasticated leather strip leg warmers.
3. Soft leather ladies tie belts.
4. Motor cyclist's One and Two finger vizor wipers.
5. Nylon mesh and foam windscreen wipers.
6. Light leather mocassin type shoe uppers.
7. Soft leather fashion bags - sling and clutch.
8. Childrens knee and elbow protectors.
9. Elasticated Gymnast pumps.

This list can be increased by innovative thinking and students submitting prototypes will be rewarded by bonus marks for the course, especially items which turn leather scraps into money.

THE FASTEST SELLING WORK GLOVE IN EUROPE

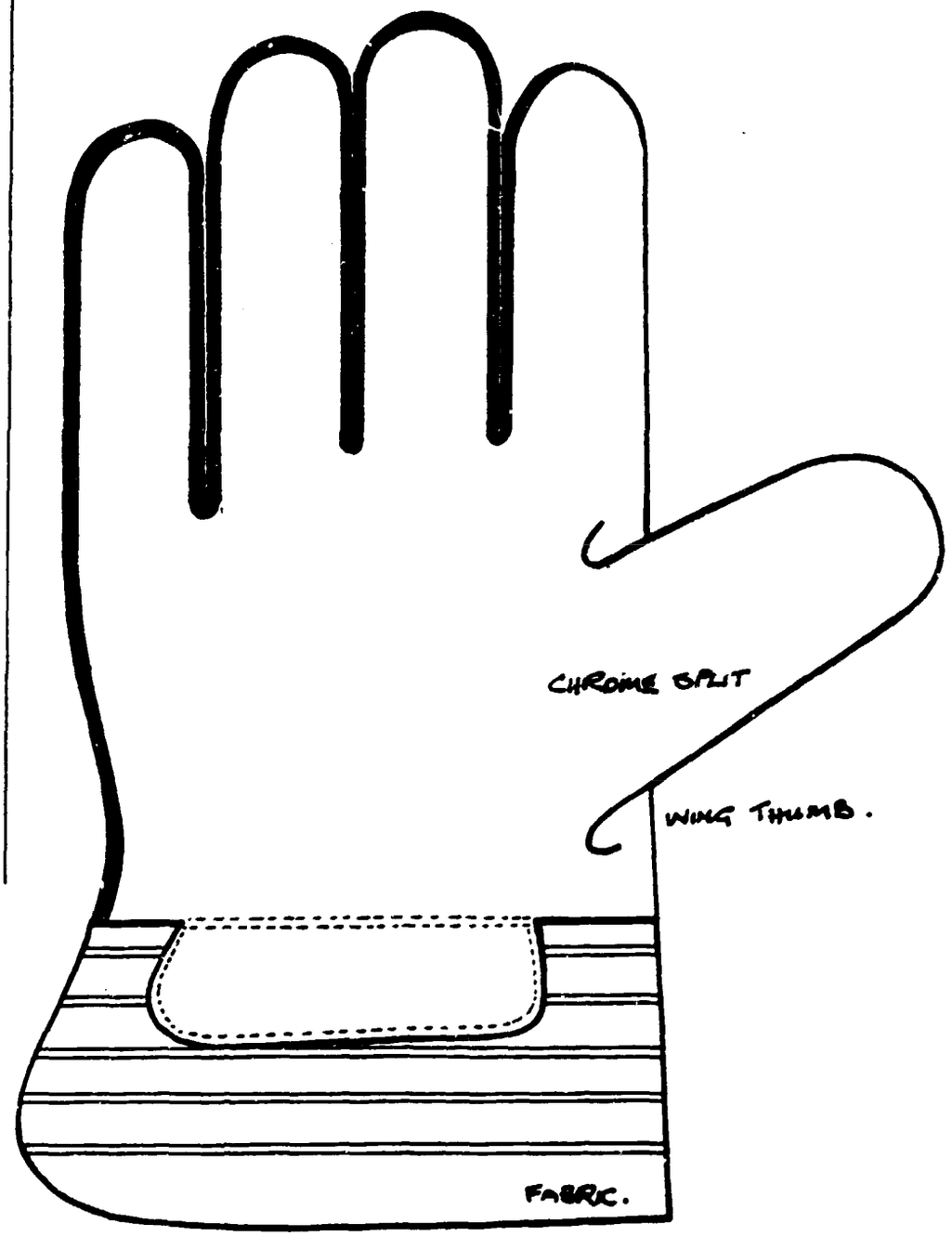
An analysis of the illustrated glove has been done because of its success in the hope that a similar success can be developed in the larger chain store fashion market using low quality leathers.

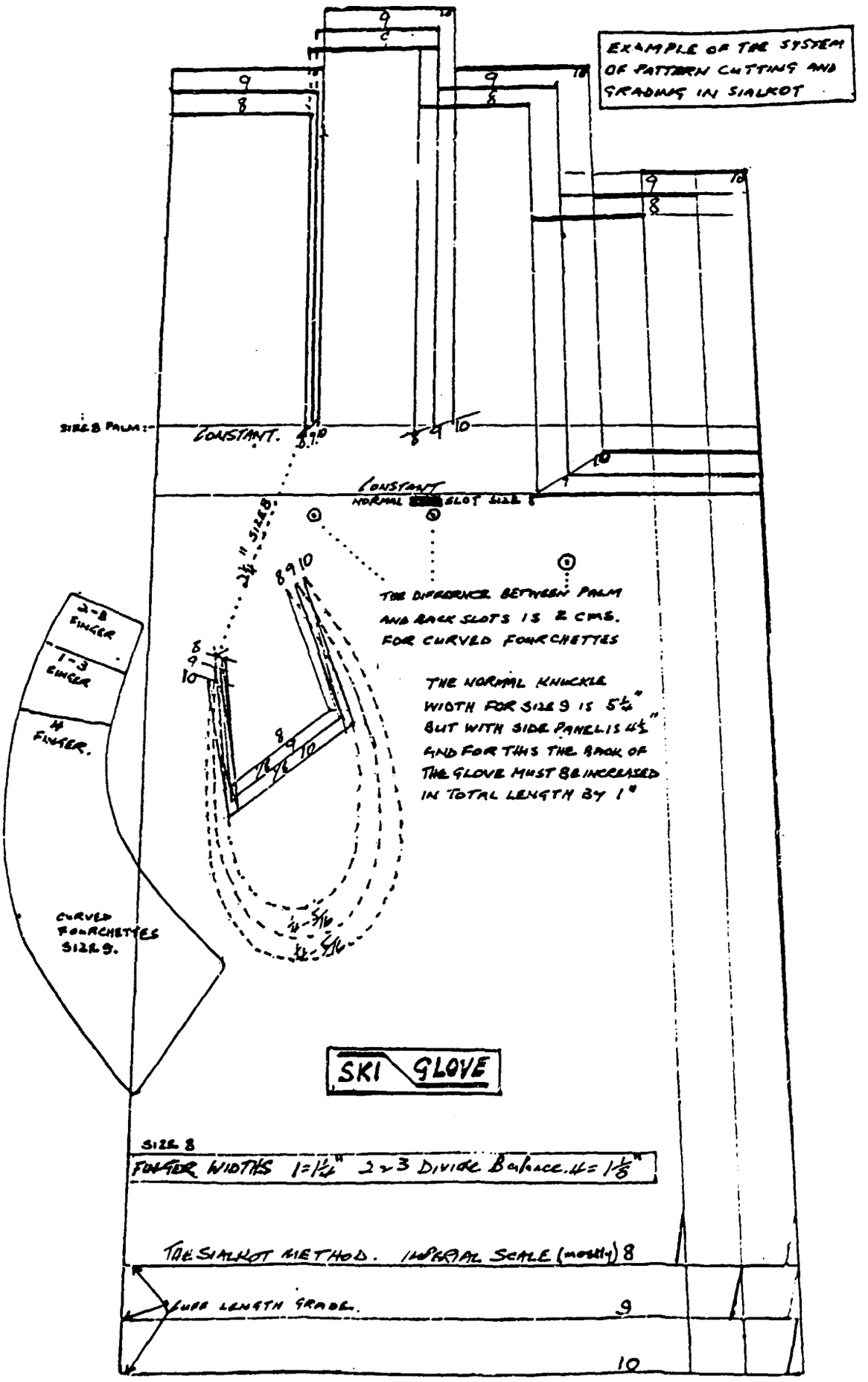


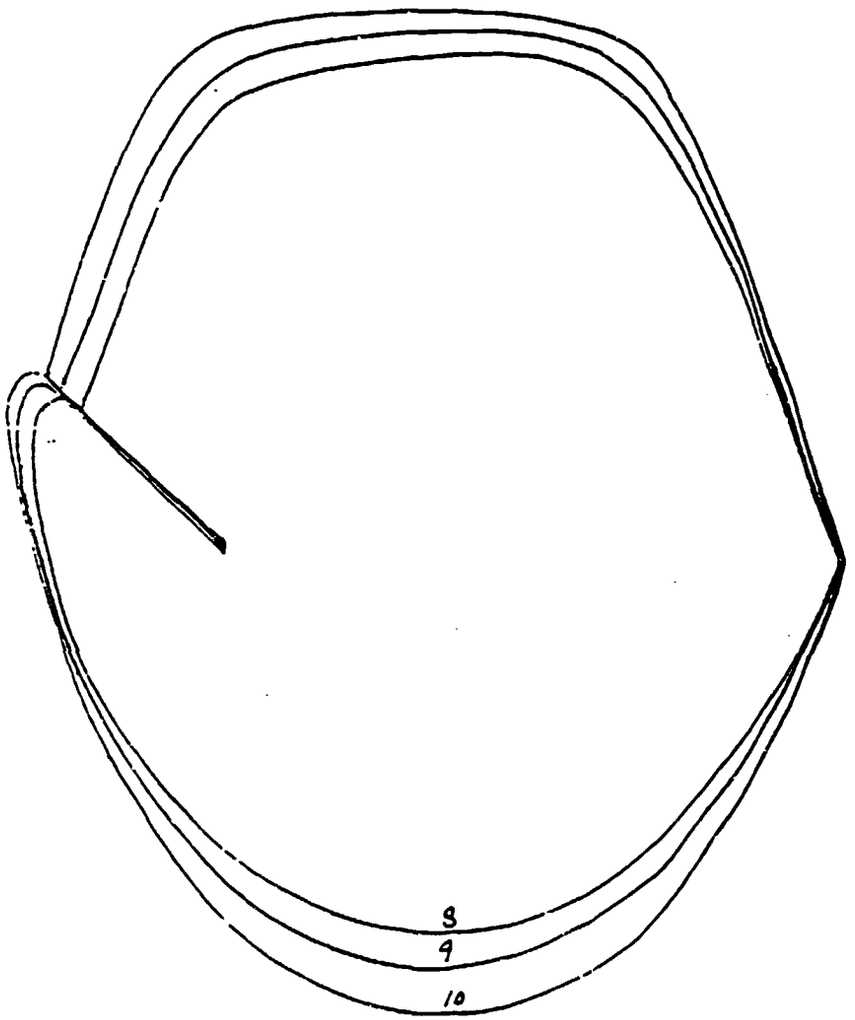
Work Study Schedule.

Operations	minutes 10 pairs
Stamping	2
Sew 2 finger parts on flat of the hand with tape	10
Sew thumb parts on flat of the hand with tape	12
Insert cuffs	6
Glue on lining	4
Sew on knuckie belt	9
Sew finger tips on back of the hand	8
Sew back of the hand on flat of the hand gather with elastic	8
Sew in cuffs with lining	10
Fasten pulse protection over cuffs	8
Gather with lining	28
Turn glove	3
Iron glove	4
Bundle glove	3

Casual fashion glove for the young person.




EXAMPLE OF THE SYSTEM OF PATTERN CUTTING AND GRADING IN SIALKOT
SIZE 8 PALM :-
CONSTANT.
CONSTANT
NORMAL SLOT SIZE 8
THE DIFFERENCE BETWEEN PALM AND BACK SLOTS IS 2 CMS. FOR CURVED FOURCHETTES
THE NORMAL KNUCKLE WIDTH FOR SIZE 9 IS 5½" BUT WITH SIDE PANEL IS 4½" AND FOR THIS THE BACK OF THE GLOVE MUST BE INCREASED IN TOTAL LENGTH BY 1"
2-3 FINGER
1-3 FINGER
4 FINGER.
CURVED FOURCHETTES SIZE 9.
SKI GLOVE
SIZE 8
FINGER WIDTHS 1=1½" 2=3 DIVIDE BALANCE. 4=1⅛"
THE SIALKOT METHOD. 1/8TH REAL SCALE (mostly) 8
HAND LENGTH GRADE.
9
10


8
9
10

One of the greatest success stories in the last two or three decades is the way the Japanese manufacturers have conducted their market research, designed and developed new products and then proceeded to penetrate markets all over the world with a wide range of different products made from imported raw materials.

In a world overloaded with low quality products it becomes more apparent that the low labour cost areas of the Far East will always be able to offer goods at a lower price and their volume will be such as to enable them buy the latest push-button equipment to automate their production in some areas and instal linked automatics in others.

To optimise the use of this expensive equipment many have found it necessary to move away from natural materials and substitute man made ones which are free of all variants thus allowing for the elimination of craft skills which the natural materials demand due to their very variability; for example gloves made from simulated leather or simplex fabrics can be direct cut at least eight thick and sometimes sixteen thick on computor controlled beam presses which traverse the cutting block and move the multi layers forward at the end each traverse.

On the other hand a careful look at the developed counties in the West still shows companies which have refused to lower their sights and devalue their products who are as busy as ever and can switch from the home market to greater exports when the home buyers try to squeeze them down, - they are not selling on price but on design and "know how" - it needs courage when the market is sliding, but in the U.K due to high government borrowing a year or two ago, and high pay awards the rate of inflation which is now about 5% was about 20% and so there were many bankrupcies in the leather and leather using industries - I think the same thing will happen in the U.S.A from now on for the same reasons, particularly with hide and skin prices moving up so rapidly and the failure of the leather users to warn their clients that there must be some large increases by autumn 1984 and spring 1985.

The following chart lists the hourly wages and social costs as a percentage with a total wage cost per hour for 17 countries with whom you may be competing.

Country	Hourly Wages incl Piecework Incentive		Social Cost in %	Wage Costs Total per hour	
	£	DM		£	DM
West Germany	2.75	11.0	70	4.68	1870
Egypt	0.48	1.92	52	0.73	2.92
England	1.90	7.60	27	2.41	9.25
Greece	1.21	4.85	85	2.24	8.97
Hong Kong	0.83	3.30	29	1.07	4.26
Haiti	0.30	1.19	32	0.39	1.57
Ireland	1.49	5,95	27	1.89	7.56
Italy	2.18	8.70	105	4.46	17.84
Ivory Coast	0.48	1.90	80	0.86	3.42
Malta	1.50	6.00	25	1.88	7.50
Morocco	0.30	1.20	10	0.33	1.32
Portugal	0.68	2.70	25	0.84	3.37
Spain	1.50	6.02	42	2.14	8.55
Sri Lanka	0.19	0.76	25.8	0.24	0.96
Switzerland	3.38	13.53	40	4.74	18.94
Tunisia	0.40	1.58	19.5	0.47	1.89
U.S.A.	2.82	11.26	33	3.75	14.98

Good marketing must take into account the material and labour costs of the product, but equally the design, colour and attention to detail in line with the consumer image of themselves brings the repeat business on which businesses thrive.

At a recent meeting of the Clothing and Footwear Institute, marketing was defined as the sale and distribution of well turned out products which do not come back from customers who do.

GLOVE MARKET CATEGORIES AND OUTLETS SUBDIVIDED FOR TYPES.

Categories of Glove.		Outlets.
Dress Gloves, Womens	Daywear	Wholesalers of Womens and Menswear Fashion Accessory distributors Importing stockists and agents. Multiple men's wear and women's wear stores buying departments.
"	Evening	
"	Casual	
Mens	Business	
	Casual	
Driving Gloves	Casual	as above but also motor spares and accessory wholesalers and distributors.
	Regular	
	Sports	
Motor cycle Gloves	Cat.1	Long distance, enthusiast riders. High quality usually plain black with contrast logo - must have waterproof backs and gauntlets to cover sleeves. ? Vizor wiper incorporated or attached. Military and Police contracts Distributors of High power bikes Accessory distributors - Magazine mail order.
	Cat.2	Brighter, wrist elasticated and zipped, still foam padded but bought by the younger "nifty-fifty" moped owner. as above but not contract work.
	Cat.3	Small wrist length motor sports gloves, often wing thumb with padded palms. Crochet backs or patterned perforations and cut outs.
Golf gloves		Large expanding market. now selling for £7.00 per single glove - average player buys twice each year. Sports goods distributors and "pro" shops on golf courses
Ski gloves		Wide range from cheap to expensive which tend to be quieter and longer wristed with room to tuck in elasticated sleeves. Sports goods distributors and direct arrangements with equipment makers to brand with their label and promote in the equipment range.
Sailing gloves		Leather must be full chrome and treated with Fluo chemicals . Marketdd with or without fingers through yacht suppliers and ships chandlers.
Goal keeper		Sports goods distributors and wholesalers.
Pagin Gloves		These are a current fashion item made in knitted man made yarns to match dress trends of the young. Very large quantities are involved with-out fingers at 20.8 per pair - could be palm faced in fluoro- chemical finished washable leather on make and trim basis or supply only to knitwear trade.
Industrial Gloves		Very large market with vicious competition in the low cost zone. European and American safety equipment distributors still make or have made to their quality standards in the home market. Consider DIN and BSI specifications.
Misc. Items to use all leather		Vizor wipers. Nylon meshed sponges. Baby Boots. Glove palms. Elasticated gymnast slippers.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)

CABLES: PROLEATHER
TELEPHONE: 617237, 626659, 627611

LEATHER PRODUCTS DEVELOPMENT CENTRE
IV-D/14-7 RAZIA APARTMENTS
P O BOX No: 2375 NAZIMABAD
KARACHI-18 PAKISTAN

REFERENCE: DP/PAK/79/022

10 April 1984

Dear Sirs,

Further to verbal communication with your company and in some cases a subsequent visit, I would like to introduce myself as the UNDP Glove Consultant working on behalf of the Government of Pakistan to further promote the design, pattern cutting and size grading aspects of the industry.

Further work we hope to accomplish will include the installation of an automatic lining knitting machine and provision of extension services within your own organization about ranges, packaging, marketing and other items about which you might wish to have on free consultation.

The course is scheduled to commence on 21st April 1984 and continue for six weeks, after which my counterpart and I will move to Sialkot.

We would ask you to make your reservation by the 14th April for a course place, and give us details about your candidates experience with hand knife cutting under the following headings:

NO EXPERIENCE	A LITTLE EXPERIENCE	MUCH EXPERIENCE

Yours faithfully,

R.W. Beeby
ACFI, MIWM
Leather Product Consultant
to UNDIO Vienna.

Annex IV

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)

CABLES: PROLEATHER
TELEPHONE: 617237, 626659, 627611

LEATHER PRODUCTS DEVELOPMENT CENTRE
IV-D/14-7 RAZIA APARTMENTS
P O BOX No: 2378 NAZIMABAD
KARACHI-18 PAKISTAN

REFERENCE: DP/PAK/79/022

31 May 1984

Mr. Michael Joffé,
Product Design Adviser,
Handicrafts Export Promotion Project,
Sind Small Industries Corporation,
8/11-F, Block 14, Nazimabad,
Karachi, Pakistan.

Dear Mr. Joffé,

I wish to thank you for your visit to the Leather Products Development Centre this afternoon and earlier this week and hope we were able to make some small contribution to the gardening glove you were developing for export.

Part of the philosophy behind some of the things we have been doing on this glove design course may have sufficient handicraft and handstitched content to develop thriving cottage industry bases, though they will be aimed at the normal outlets of the U.S. and European fashion markets when they come on stream in volume.

The two main items I shall ask to be submitted to your organisation for consideration will be:

1. Completely handsewn, hand crochet back, unisex general purpose driving gloves

2. Hand stitched and hand decorated classic dress gloves for the fashion market.

The capital investment will be deviscrily small and the glove trainees should be producing very attractive ranges and be ready to train cottage workers in a very short time to the highest standards acceptable to the West.

My counterpart Mr. Zaidi will no doubt be continuing the programme upon my departure and I am sure many of the trainees will welcome your expertise on marketing procedures at the appropriate time for their own ventures.

Yours sincerely,

R.W. Beeby,
UNIDO-Gloves Consultant.

cc: Mr. Zaidi.
Glove Notice Board.