THE DEVELOPMENT AND EVALUATION OF A MANUAL ON TAILORING FOR THE CLOTHING DESIGN AND CLOTHING MANAGEMENT PROGRAMMES BASED ON THE CLOTHING INDUSTRY'S NEEDS

by

GEORGE VORSTER

Dissertation submitted in compliance with the requirements for the Master's Diploma in Technology in the Department of Fashion at Technikon Natal

I, GEORGE VORSTER, declare that this dissertation represents my own work, both in conception and execution

1995-10-20

APPROVED FOR FINAL SUBMISSION

1995-10-20.

DJ COERTZE DSc MBL
SUPERVISOR

DATE

Supervisor: Dr DJ Coertze DSc (PUCHO) MBL (UNISA
Co-Supervisor: Mr R Ellis, External Supervisor (industry)
Industrial Engineering Manager and Training Manager, Durban Clothing Manufacturers

Durban
May 1995

ACKNOWLEDGEMENTS

The author wishes to express his sincere gratitude to the undermentioned for their assistance in the preparation of this dissertation:

Dr DJ Coertze, supervisor, Head of the Centre for Enterprise Development, Technikon Natal, for his expert guidance and constructive criticism especially on the research methodology aspect.

Mr R Ellis and staff from Durban Clothing Manufactures for their advice and sharing of their expertise.

The Staff in the Department of Fashion at Technikon Natal for their assistance and support.

Mrs D Greef for her assistance and support during the typing of the manuscript

My wife and family for their support.

Finally, to those people who have assisted me with this project and whose names have not been mentioned above.

ABSTRACT

This study evaluated the programme content on tailoring of the National Diploma: Clothing Design and National Diploma: Clothing Management in terms of the needs of the clothing industry. The objective was to identify the critical factors needed for producing a manual on tailoring which could be used in a teaching environment.

The benefits of co-operation between training centres and industry in the formulation of training programmes have been discussed in the related literature. The importance of exposing students to situations which can be related to their future employment is only possible if the education centre, in this instance Technikon Natal, keeps up with developments in industry. The literature emphasises that student evaluation and assessment must indicate the extent to which a student can inter-relate and apply the knowledge and skills gained. When compiling the manual, cognisance was taken of the problems experienced by disadvantaged students on being exposed to tertiary education systems.

To compile and evaluate the applicability and appropriateness of the manual on tailoring, a four-phase strategy was adopted:

1. To establish industry's perception on the effectiveness and suitability of the training programme content, and to get guidance on which aspects of the training programme should be included in the manual. Designers, Production Managers, Quality Control Officers and Training Officers participated.

2. To establish the academics' perception regarding the effectiveness of the training programme and which factors would constitute a successful manual, staff lecturing Pattern Construction, Garment Construction and Clothing Factory Practice and Creative Clothing Design in the Department of Fashion at Technikon Natal, participated. In both these phases interviews and questionnaires were used to obtain the necessary data.

3. In phase three the data obtained in phases one and two, as well as observations of construction methods used by industry, were used as guidelines to compile the manual on tailoring.

4. Phase four evaluated the suitability and applicability of the manual on tailoring used for student training. The evaluation was done over a period of four years from 1989 to 1992. During 1989 and 1990 no manual was used during garment construction lectures. The evaluation was done by means of a questionnaire given to third-year Clothing Design and Clothing Management students before and after the construction of tailored garments. During 1991 and 1992 the manual completed in phase three was used during lectures with evaluations being done before and after the construction of the tailored garments.

The results have shown an increase, in most instances, of the students' knowledge of tailoring terms as well as construction methods. In a few instances decreases have also been reported. The implications of these findings were discussed.

It was concluded that the method of involving industry with the identification of critical elements for inclusion in the manual was not only feasible, but also practical. It is recommended that the relevancy of the manual content be continuously evaluated to ensure that changes in the manufacturing methods used in industry be included in the revised editions of the manual.

EKSERP

Hierdie studie evalueer die taileringsaspek van die program inhoud van die Nasionale Diploma: Kledingontwerp en Nasionale Diploma: Kledingbestuur, volgens die behoefte van die kledingindustrie. Die doel was om die kritieke faktore te identifiseer vir die samestelling van 'n handleiding oor taillering wat in 'n onderrigsituasie gebruik kan word.

In die tersaaklike literatuur word die voordele van samewerking tussen die bedryf en opleidingsentrums in die formulering van opleidingsprogramme bespreek. Dit is belangrik vir die studente om blootgestel te word aan soortgelyke situasies as hul toekomstige werk. Dit is net moontlik as opvoedkundige inrigtings, in hierdie geval Technikon Natal, op hoogte bly met industriële ontwikkeling. Die literatuur beklemtoon dat studente-evaluering en -beoordeling moet aandui in watter mate studente die aangeleerde kennis en vaardighede kan integreer en toepas. Met die samestelling van die handleiding is die probleme wat agtergeblewe studente ondervind met tersiêre onderrig in ag geneem.

Gedurende die samestelling en evaluering van die handleiding is 'n strategie met vier fases gebruik:

1. Om vas te stel wat die bedryf se houding ten opsigte van die effektiwiteit en toepaslikheid van die leerplaninhoud is en om leiding te kry oor watter aspekte van die leerplan in die handleiding ingesluit moet word, is Ontwerpers, Produksiebestuurders, Kwaliteitsbestuurders en Opleidingsbeamptes by die ondersoek betrek.

2. Om die akademici se opvatting oor die effektiwiteit van die leerplan vas te stel, asook watter faktore 'n suksesvolle handleiding uitmaak, het personeel wat Patroonkonstruksie, Kledingstukkonstruksie, Skeppende Mode-ontwerp en Kledingfabriekspraktyk in die Modedepartement by Technikon Natal doseer, aan die projek deelgeneem. Onderhoude en vraelyste is in albei gevalle gebruik om die nodige inligting in te samel.

3. In fase drie is die gegewens wat in fase een en twee ingesamel is, asook waarnemings van konstruksiemetodes in die klerebedryf gebruik om die handleiding oor taillering saam te stel.

4. Die geskiktheid en toepaslikheid van die handleiding oor tailering wat vir studente-opleiding gebruik is, is in fase vier geëvalueer. Die evaluering is oor 'n tydperk van vier jaar gedoen, 1989 tot 1992. Gedurende 1989 en 1990 is geen handleiding tydens lesings in Kledingstukkonstruksie gebruik nie. Die evaluering is gedoen met behulp van 'n vraelys wat deur die derdejaarstudente in Kledingontwerp en Produksiebestuur voltooi is, voor en nà die konstruksie van getailleerde kledingstukke. Gedurende 1991 en 1992 is die handleiding wat in fase drie voltooi is tydens die lesings gebruik; evaluering voor en na die konstruksie van getaileerde kledingstukke is gedoen.

Die resultate het in die meeste gevalle gedui op 'n toename van die studente se kennis oor taileringsterme en konstruksiemetodes. In 'n paar gevalle is 'n afname van kennis gerapporteer. Die implikasies van die bevindinge word bespreek.

Die gevolgtrekking was dat dit uitvoerbaar en prakties was om die bedryf te betrek om die kritieke faktore te identifiseer wat later in die handleiding saamgevat is. Dit word aanbeveel dat die inhoudstoepaslikheid van die handleiding gedurig hersien word om te verseker dat ontwikkeling in konstruksiemetodes in die bedryf ingesluit word in hersiene uitgawes van die handleiding.

CONTENTS

CHAPTER FOUR

RESULTS

CHAPTER FIVE

DISCUSSION

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

THE PROBLEM AND ITS SETTING

1.1 *BACKGROUND TO THE STUDY*

At Technikon Natal the student population comprises representatives of all the population groups in the Republic of South Africa. As a result of changing political pressure and the call for social accountability as far as education is concerned, constraints affecting student intake have been lifted during the past few years. As a consequence, more students from race groups other than white have been registered and the racial mix on campus has changed.

This trend has also been evident in the Department of Fashion at Technikon Natal. An analysis of the figures presented in Table 1.1 reveals that the intake of students who come from a disadvantaged education system has increased and, in the light of the new educational dispensation, it is accepted that this trend is most likely to continue in the future.

TABLE 1.1: Student intake of the Department of Fashion, Technikon Natal for the National Diploma Clothing Design and National Diploma Clothing Management for the years 1989 to 1993.

RACE	1989	1990	1991	1992	1993	EDUCATIONAL DEPARTMENT
Black	6	3	6	13	18	Department of Education and Training (DET)
Coloured	2	1	1	5	3	)
Indian	0	0	1	10	6	)Own affairs or)Tricameral Parliament)
White	103	91	84	90	63	)
TOTAL	111	95	92	118	90	

(Shackleford, MG: Personal Communication 26 April 1993)

At tertiary institutions generally, and at Technikon Natal in particular, the problems associated with disadvantaged students have been compounded by the trend to reduce the contact time between lecturers and students for practicals. Because more students require individual attention during practical sessions, the pressure on the lecturer for individual student contact is increased. Consequently the direct tuition opportunity is lost. It is therefore argued that, by taking in more students from an educationally disadvantaged background (NEPI 1993:1), both tuition and learning problems are exacerbated. These problems can only be solved through innovative and creative tuition strategies which are student-centred, and which would address the dilemmas lecturers have to face.

A technikon education is essentially vocationally orientated. Therefore, to prepare students for a place in industry, which has become highly competitive, the needs of both industry and of the students must be considered and, where necessary, existing programmes must be adjusted accordingly. If this is not done, students will not be adequately prepared to meet the demands of industry.

This study was therefore undertaken in the belief that the above problems could be addressed by the development of a suitable manual which would address the needs of industry and those of students across the board. Such a manual should facilitate the supervisory and supportive task of lecturers during practicals, as well as provide some source reference for consultation by both students and practitioners in the workplace.

1.2 *STATEMENT OF THE PROBLEM*

The purpose of this study was therefore to evaluate the programme content of the National Diplomas in Clothing Design and Clothing Management in terms of the needs of industry for the purpose of

a) identifying critical factors to be included in a manual on tailoring; and

b) providing criteria for the evaluation of a manual on tailoring.

1.3 *STATEMENT OF THE SUBPROBLEMS*

In order to provide the essential elements to solve the problem, the following questions were addressed:

1.3.1 First Subproblem

What are the perceptions of the clothing industry on the effectiveness and suitability of the existing programmes for Clothing Design and Clothing Management on tailoring, and of the effectiveness of the Technikon's training programme in these courses?

1.3.2 Second Subproblem

Which aspects in the Clothing Design and Clothing Management programmes should be incorporated in a manual on tailoring in order to render it successful for use in the lecturing environment, and how can these factors be identified?

1.3.3 Third Subproblem

Which components need to be considered when the usefulness of a manual on tailoring for the lecturing environment is evaluated, and how can these factors be measured and reported?

1.4 *THE HYPOTHESES*

1.4.1 Hypothesis One

It was hypothesised that the Clothing Industry's perception of the appropriateness of the programme content would be negative and that recommendations would be made regarding elements that should feature in a manual.

1.4.2 Hypothesis Two

It was hypothesised that the critical aspects to be included in a manual on tailoring could be identified.

1.4.3 Hypothesis Three

It was hypothesised that a manual on tailoring could be evaluated in terms of its usefulness for the lecturing environment, and that the effectiveness of the content for student training could be measured.

1.5 *DELIMITATIONS*

Because tailoring is a specialised craft and therefore highly competitive, one of the major tailoring manufacturers in South Africa selected for this study declined to participate in this investigation. The implications of this exclusion are discussed in Chapter 5.

1. This study was limited to *Durban Clothing Manufacturers*, a leading tailoring manufacturer. *Man About Town* and *Dugson Clothing*, subdivisions of *Durban Clothing Manufacturers*, are located in Durban. Because of the competitiveness of the tailoring industry, the other leading tailoring manufacturer, *Rex Truform* of Cape Town, does not, in terms of company policy, share or divulge technology information and therefore declined participation in this study (Mr Gillard, Managing Director and Mr Robinson, Factory Director. Personal communication 89.3.22).

2. This study did not include tailoring for leather garments because *Durban Clothing Manufacturers* do not manufacture leather garments. Costly specialised machinery is necessary for manufacturing such garments and consequently it is not included in the Technikon Natal programme for Clothing Design and Clothing Management.

3. The study was limited to the Department of Fashion, Technikon Natal, because the manual that was compiled to test hypothesis three was prescribed at this Technikon.

4. Only third year programmes were researched in this study because tailoring is a third-year subject. Testing was done over a period of four years.

5. This study only dealt with men's tailoring, viz. the jacket and trousers. Women's tailoring is based on men's tailoring; only the interlinings in women's garments are adapted to suit a softer look. The raincoat and ladies' lined skirt (included in the programme for the National Diploma: Clothing Design and Clothing Management) are done according to the soft tailoring method, and are dealt with in the second year.

1.6 *ASSUMPTIONS*

1.6.1 First Assumption

Although technological advancement will influence the manufacturing processes of industry and of training programmes in the future, it was assumed that the basic tailoring techniques would stay the same.

1.6.2 Second Assumption

It was assumed that the use of a manual would only serve to assist the lecturer; a manual cannot replace personal instruction during a practical lesson.

1.6.3 Third Assumption

During the first and second year of study, the programme for garment construction covers all the basic construction methods. It was therefore assumed that third-year students would be able to apply these basic construction methods to tailoring during the third year of study.

1.7 *OVERVIEW OF THE CHAPTERS*

Chapter Two - the Review of the Related Literature - gives an overview of the links between the clothing industry and educational centres in Britain and South Africa. Guidelines on manual compilation are also discussed.

Chapter Three deals with the method of obtaining the data to solve the problem. The data collection process pertaining to each of the three sub-problems is dealt with individually.

Chapter Four reports on the results of the interviews and questionnaires. The tabled results are analysed and discussed.

Chapter Five describes how the results were integrated and the reasons for accepting or rejecting the hypotheses are given. The factors associated with student performance after the use of the manual are also discussed.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

2.1 *INTRODUCTION*

It is widely recognised that education is of considerable importance to economic growth. As far as tertiary education is concerned, one would expect that there would be strong links with industry for the effective training of students for employment as well as self-employment. This chapter will attempt to throw light on the above issues by presenting information on links between industry and training centres both locally and abroad.

2.2 *LIAISON BETWEEN INDUSTRY AND EDUCATIONAL CENTRES IN BRITAIN*

The need for co-operation between training centres and industry in the formulation of qualification programmes in Britain has been stressed by many authors (Williams and Panton, 1977; Moor, Dean and Andrews, 1983; Moor, 1984; Coopers and Lybrand, 1985; McKeown, 1985; Davies and Rispin, 1987).

British authors postulated that student training should be a joint exercise involving industry and colleges (Williams and Panton, 1977). In recommendations to the Technician Education Council, Williams and Panton suggested that programme planning should be executed in three stages:

Stage One: Define the problem - specify the aims of the programme.

Stage Two: Invite colleges to collaborate with local industry to define job designations.

Stage Three: Colleges to approach local industry, the former armed with a list of job designations to identify the nature of the job activities.

Williams and Panton (1977) suggested that the result of such an approach would be a programme with a content of which a substantial part would be accepted nationally by industry and by teaching institutions. Local needs could still be met by making provision for local content, identified by the residing tertiary institution in conjunction with local industries.

The National Economic Development Office (1984) and Coopers and Lynbrand (1985) reported on the poor performance of British Industry as a result of ineffective training at educational centres. Institutions of higher education have subsequently been urged to become more market-orientated in their design and training programmes, and more effective in providing manpower for employers in the areas they serve.

As a result of the reports by the National Economic Development Office (1984), Coopers and Lybrand (1985) and Davies and Rispin (1987), a research team comprising representatives from institutions of Higher Education, colleges for further education and local employers was appointed by the Humberside Manpower Services Commission. The objective was to find a better means of identifying and meeting local training needs. Much of the time of the project team was devoted to a survey involving face-to-face discussions with a large number of employers. This produced a wide range of responses from which it was apparent that the most commonly held reservations stemmed from:

- a very real lack of communication between many employers and the educational system;
- a generally very happy view held by industrial employers of the programmes of study offered by the academic institutions.

Following research on the involvement of industry in the formulation of training programmes by Moore *et al* (1983), further research was done by Moore (1984) on the continued liaison with the employers initially involved in planning the programmes. Her results showed that employers in the engineering field were to a large extent satisfied with on-going involvement, but that the building industry was critical of what they perceived to be a lack of enthusiasm for liaison with industry on the part of the colleges. Employers in this industry requested more detailed information about the content of the programmes, and more opportunities to discuss programme content with college staff. Overall, informal liaison was preferred to formal representation on advisory boards.

Under the MSC Open Learning Techniques, McKeown (1985:83) reported that education and industry representatives jointly designed teaching programmes which were helpful in preparing young people for work.

An interesting fact revealed by Bishop and Gripaios (1988:57) following research on industry linkages in South West England, is that local establishments tend to be linked primarily to their local institutions of higher education.

2.3 *PARALLEL BETWEEN UNITED KINGDOM AND SOUTH AFRICA*

It is interesting to note the parallel between the evolvement of the South African technikon/industry liaison structure and function and that which developed in the United Kingdom (Table 1.2). Although the two systems are separated in time and distance, it is

apparent that their aims and function are very similar. South Africa has the advantage that much can be learnt from the experiences gained by the industry in the United Kingdom.

TABLE 1.2: Developments in United Kingdom and South Africa's clothing industries and training programmes.

DEVELOPMENT	UK	SA	REFERENCE
1. Inclusion of local content in Educational Programmes	1977	1987	Williams & Panton (88/01) NATED 02-150
2. Programmes to become more market orientated	1984/85	1986 1991	Nat.Dev.Office 1984 Lynbrand 1995 Dept.Nat.Education Form B 1986 Form B 1992
3. Liaison committee with industry	1987	1991	Davies & Rispin Departmental Records

2.4 *LIAISON BETWEEN INDUSTRY AND EDUCATIONAL CENTRES IN SOUTH AFRICA*

The importance of including local content in the design of instructional programmes is also recognised in South Africa. Legislation was passed in 1987 (National Education Act Act 40 of 1967, NATED 02-150 (88/01):3.8) for the inclusion of 30% local content in study programmes at technikons. This document also makes reference to the "intimate relationship between Technikons and industry" through the mechanism of "regular contact and interaction in the requirement of the occupation and its practice and in co-operation in the training of students".

The philosophy of liaison with industry during curriculum design is also practised in South Africa. For example, industry was initially involved in the formulation of study programmes for the Clothing Design and later the Clothing Production Management courses at Technikon Natal. According to Mrs A Defty (personal communication: November 1988), Head of the Department of Fashion at Technikon Natal from 1960 to 1987, the following people were involved in the formulation of study programmes:

W Scott, *Dugson Clothing*;

N Padoa, *South African Clothing*;

R Malcolm, *Bonwit*;

Representatives from:

The Clothing Industry Training Board;

The Clothing Institute.

According to departmental records, industry has continued its involvement in the revision of instructional programmes over many years. The programmes of the National Diploma in Clothing Management were revised in 1986 in co-operation with:

P Riches: Clothing Industry Training Board, Cape Town

B Scott : The Clothing Institute, Natal

R Malcolm: The Clothing Insitute, Cape

H Hobson: Clothing Industry Training Board, Durban

R Pritchard: Clothing Industry Training Board, Transvaal

Representatives from:

Cape Technikon

Technikon Natal

Witwatersrand Technikon

The Clothing Industry.

(Department National Education Form B, 1986).

The programme content of the National Diploma in Clothing Management was again revised in 1991. At this stage the name of the course was changed to the National Diploma: Clothing Production. The following people were involved:

N Padoa, Director, *SA Clothing Menswear* (Durban);

J Cooper, Production Director, *Donco (Pty) Ltd*, (Cape Town);

B Burns, Production Director, *Bibette (Pty) Ltd*, Cape Town;

P Riches, National Director, The Clothing Industry Training Board of South Africa.

The programme content of the National Diploma in Clothing Design was revised in 1991. The name of the course was changed to the National Diploma in Fashion Design and Technology. The following people were involved:

R Polexfin, Fashion Consultant, *Mosaic Designs* (Hong Kong);

N Padoa, Director, *SA Clothing Menswear*, (Durban);

K Lazarus, Merchandising Director, *Kingsgate Clothing* (Durban);

R Heron, Managing Director, *Alley Cat* (Durban);

P Riches, National Director, The Clothing Industry Training Board of South Africa (Cape Town);

(Department of National Education, Form B. 1991).

2.5 *THE CURRENT STATUS OF THE CLOTHING AND TEXTILE INDUSTRY IN SOUTH AFRICA*

The clothing and textile industries are seen as sensitive and primary industries all over the world. Internationally, these industries are regulated by the Multi-Fibre Arrangement which will operate outside the proposed GATT agreement (General Agreement Tariffs and Trade), and which will be phased out over a period of ten years (Daily News: 4 August 1994). Second only to the mining industry, these industries are the largest users of electricity and one of the largest payers of rates and taxes in several cities in South Africa.

According to Mervyn King, President of the Textile and Clothing Federation, the South African clothing industry has been isolated for many years and therefore needs time to adjust from an isolated protected past to a participatory global future. The first step in this direction was when Trade and Industry Minister Trevor Manual pulled the protection rug from under the clothing and textile industries, saying they should have used past protection to prepare for the lifting of trade barriers.

The clothing and textile industries are primary industries and it is estimated that every job in these industries creates 2,5 jobs in secondary industries such as packaging, chemicals, transport and distribution - a total of some 220 000 jobs. Cognisance must therefore be taken of the adverse impact on the South African economy if the restructuring of the industries as proposed by Mr Manual causes their collapse as a result of endeavouring to restructure too quickly. Thousands of people may subsequently lose their jobs, as the clothing industry employs 120 000 people and the textile industry 80 000 people.

Generally, however, the future of these industries is positive. According to Mervyn King, they have been through a difficult period, but indications are positive with a decrease in imports and an increase in demand. In 1993 an 8,9% increase in turnover was reported in comparison with 1992, and January 1994 sales have been 3,5% higher than in January 1993.

The clothing and textile industries both showed a significant increase in export during 1993; in the clothing industry exports were 37% higher than in 1993, totalling of R622 million (Daily News: 4 August 1994).

It was therefore disconcerting when, despite these achievements, Trevor Manual (Trade and Industry Minister) announced at the Textile Federation's conference in Durban in August 1994 that government planned to cut SA tariffs to 50% lower than the GATT binding levels. He argued that the industry should show evidence of drive towards self-sustained international competitiveness rather than revive itself on taxpayers' money (Conference Papers, The South Africa Textile Pipeline into the 21st century, Royal Hotel, Durban. 18 August 1994).

Mervyn King and Jaba Gwala (General Secretary, SA Clothing and Textile Workers' Union) expressed concern that this proposal by Minister Trevor Manual would be "suicidal" to the industry as it was still recovering from sanctions and it could therefore not afford to lower tariffs. National Clothing Federation chairman Sadek Vahed said that 37 000 new jobs could be created if government, through the Industrial Development Corporation, was prepared to back its export drive financially (Daily News: 19 August 1994).

From the discussion above it is clear that the time to react in order to adapt to changing circumstances is limited. The textile industry will have to rely on its inherent flexibility and versatility to adapt to changing market demands. Educated and well-trained staff are essential to effect the changes when needed. To this end tertiary institutions should provide the necessary training based on a realistic assessment of industry's needs.

2.6 *STUDENT EVALUATION*

Humphreys (1981:40) stated that the term "evaluation" has many definitions. These range from a broad view that evaluation is making judgements about the overall value of a programme of education, to the more limited view that evaluation means the assessment of student knowledge of a specific subject. The fact that the first definition states that judgements are necessary when making evaluations, implies that it is impossible to actually measure the worth of a programme, or for that matter, to measure the achievement of individual students. Judgements are more reliable if they are based on adequate data, using properly established criteria. Furthermore, assessment must indicate the extent to which a student can interrelate and apply the knowledge and skills gained (Business Education Council, 1976). For this study, Humphrey's narrower definition, viz. that evaluation means assessing a student's knowledge of a specific subject by means of established criteria, was used.

According to Dowell and Neal (1982:51-62) three elements of research design can be used to evaluate student knowledge. These are:

1. the use of section means as the appropriate unit of analysis;
2. the use of control for initial student ability;
3. the use of multidimensional criteria against which to validate student ratings.

Bolton (1986) summarises this when he comments that we can only fully understand that which we can measure, but that the converse is also true: we can only fully measure that which we understand.

2.7 *THE IMPORTANCE OF ILLUSTRATIONS IN TEXTBOOKS*

2.7.1 Do Students Remember Pictures in a Textbook?

The use of pictures in a textbook has been researched by many authors (Vernon, 1953; Williams, 1968; Dwyer, 1978; Levie and Lentz, 1982; Goldstein, Bailis and Chance, 1983).

Many researchers found that by using illustrations in a textbook there was an improvement in the results of the students. It was postulated that the illustrations and the text should complement each other, and that illustrations should not distract attention from the text (Williams, 1968; Dwyer, 1978; Levie and Richard, 1982).

In their study, Goldstein et al, (1983:26) reported that students looked at and remembered pictures in a textbook. They also demonstrated that students remembered pictures which they learned "incidentally". Additionally, they argued that students should be able to profit even more from illustrations which are both integrated into a set text and brought to the attention of the reader, instead of simply "being there".

In a study on the achievement of students based on illustrations depicting information in the written text, Levie and Lentz (1982:213) reported an average improvement of 36%. Based on the findings of these authors that illustrations in a textbook help the students to understand and remember text better, it may be argued that students should also benefit from illustrations to recall a practical process demonstrated to them.

2.7.2 Illustrations as an Aid to Learning

In one of the earliest text illustration studies, Vernon (1953:52) found that illustrations "facilitated learning points directly illustrated by pictures", but speculated that the pictures might have placed undue emphasis on certain points, and therefore distracted attention from the rest of the text. Williams (1968) predicted the opposite, postulating a generalised motivating or organising effect based on pictures that could improve learning of the non-illustrated as well as the illustrated aspects of a text.

When learning includes both illustrated and non-illustrated text information, a modest improvement may often result from the addition of pictures. Levie and Lentz (1982:213) reported an improvement of 25% in learners due to the use of pictures.

Dwyer (1978:129) summarised his own programmed instruction and textbook-like studies. He concluded that "the use of certain types of visual illustrations to complement self-paced instruction can significantly improve student achievement of specific educational objectives".

In a classroom situation with students who come from different educational backgrounds, some may need more individual attention than others. It therefore follows that an illustrated manual could be of assistance to students who are able, to a certain extent, to work on their own by following the illustrated text.

2.8 *TEXTBOOK CONTENT*

Redei (1984:103) provided some guidelines on textbook content which he had garnered from examining many textbook reviews published in professional literature:

1. The instructor must be prepared to teach the course content and be convinced that he can teach the material with enthusiasm.
2. The material must complement rather than overlap some of the courses taught by other instructors.
3. The requisites approved for the course must be sufficient for the level of the textbook.
4. The textbook must give a sufficiently comprehensive overview of the field and not be too selective.
5. Various areas must be integrated and the theory must come through with clarity.
6. It must be remembered that the purpose of teaching is to communicate useful information in as easy a way as possible.
7. The data must be in sufficient depth to make explanations logical without requiring further assumptions.
8. The language must be simple and straightforward.
9. The illustrations must be clear and self-explanatory.
10. All information must reflect the current status of the field.
11. The text must point out practical applications of the theory.

Redei (1984) concluded that a good textbook should not only meet the goals of the course and the needs of the student, but that it should provide clear, unambiguous information and should be reader friendly.

Students entering colleges of tertiary education are expected to read at a level where they are required to understand the content of the textbook material assigned by instructors. Levy and Dixon (1984:46) from the Patoma College did a readability survey on incoming students. The results of the survey indicated that the students following

vocational education programmes had the lowest reading levels. They recommended that specialised vocabulary development in content areas be done, and a bridging programme be offered to increase the first year students' reading abilities.

Under writing can also be a serious problem with textbook compilation, according to Roller (1986). She reported that the most serious difficulties would be encountered when a text failed to take into account the students' lack of background information. This would result when far too little information is provided to allow students to integrate the text information with their prior knowledge. Vocabulary difficulties could also be a problem. It was recommended that simple vocabulary and clear short sentences be used. She postulated that if students were expected to learn from their text, there should be a reasonable relationship between the students' prior knowledge and the information included in the text. She maintained that teachers and authors should come to grips with the fact that no text can present "all" the information necessary for students to thoroughly understand all the topics they cover.

In compiling a manual to be used in a teaching environment, all these facts have to be borne in mind. Because the proposed manual will be prescribed for third year students only, their prior knowledge of construction methods will play an important role, as this will ensure that they can draw on that knowledge for the successful construction of tailored garments.

CHAPTER THREE

GENERAL PROCEDURES

3.1 *INTRODUCTION*

The need for co-operation between industry and educational institutions has been stressed by many authors (Williams and Panton, 1977; Moore, 1984; Coopers and Lybrand, 1985; Davies and Rispin, 1987).

Therefore, in order to solve the problem of matching industry's needs with education programmes, the data selected for this study were obtained from interviews with and questionnaires administered to employees at a major clothing manufacturer in Natal, staff of the Department of Fashion, Technikon Natal, as well as third year students of National Diploma: Clothing Design and National Diploma: Clothing Management.

There are 1175 clothing factories in South Africa: 355 in the Transvaal, 384 in the Cape Province, 4 in the Free State and 432 in KwaZulu-Natal (The South African Clothing Industry Executive Handbook/Diary, 1993:6-7, 20-21). Only two major firms are involved in tailoring, viz. *Durban Clothing Manufacturers* of Durban and *Rex Trueform* of Cape Town. The tailoring market is therefore very competitive and aggressive. According to the Factory Director of *Rex Trueform*, Mr Robinson (personal communication 89-03-22) his company does not share technology information, and this firm therefore declined to participate in this project. However, the exchange of information on a regional basis between education institutions and industry does take place, because Technikon Natal and *Durban Clothing Manufacturers* have had firm links

for many years. It was therefore possible to collect data for this study from *Durban Clothing Manufacturers*, while data on training were collected from students and staff of the Department of Fashion at Technikon Natal.

3.2 *THE DATA*

The data for this research were collected by means of observations, interviews and questionnaires. Two kinds of data have been evaluated in this study: primary data and secondary data. The nature of each of these types is as follows:

3.2.1 Primary Data

Four types of primary data were required:

- the responses of industry to the questionnaires on the training needs of the tailoring industry;
- observations of the construction methods used by industry for tailored garments;
- the responses of staff to the questionnaire on the programme content;
- responses of students to the questionnaire on aspects of the educational programmes.

3.2.2 Secondary Data

Five types of secondary data were required:

- the current instructional programmes for the National Diploma: Clothing Design and National Diploma: Clothing Management for tailoring;

- research reports in journals and quarterly reviews;
- company policies on training;
- job descriptions of designers, production managers, training officers and quality control officers;
- responses of publishers on the factors that render manuals successful.

3.3 *RESEARCH METHODOLOGY*

3.3.1 The Instrument

Since the objective of this study was to identify the critical factors to be included in a manual on tailoring which would be based on both the needs of industry and on the programme content, the descriptive survey method (Leedy, 1985; Wimmer and Dominick, 1984) was employed to gather the data.

The descriptive survey method was used because it allows data to be collected by means of questionnaires. The same questions appeared in the questionnaires to students, academic staff and managers in industry. For compilation of the questionnaires the following two sources were tapped:

1. The content of the syllabi of the National Diploma Clothing Design and Clothing Management;
2. The job descriptions of the managers from *Durban Clothing Manufacturers.*

Because the objective of the data collection process was to obtain information regarding the steps involved in various tailoring processes and not to determine the perceptions of managers employed in the tailoring industry, many questions had to be double-barrelled. This holistic approach can be appreciated by people with a tailoring background but

might be confusing to the general reader. The questionnaires were used to collect data from different levels of operations in industry as well as from Technikon Natal staff in 1989. Since the research was carried out over the period 1989 to 1992, it was necessary to ensure that the same information was collected from the students during that period of time. Consequently, the same questionnaire was used to collect information from third year Clothing Design and Clothing Management students.

3.3.2 Sampling

Leedy (1985) suggested that if the population is large, the sample should be chosen carefully so that through it the researcher is able to see all the characteristics of the total population. The literature suggests that when a descriptive survey is planned, a pilot study should be done to standardise the questionnaires. This can be done when the sample is drawn from a large population. A problem arises when the population is so small, as is the case in this investigation, that no opportunity exists to do the pilot study. For this reason, the total population used for this study comprised the following:

- third year Clothing Design and Clothing Management students at Technikon Natal during 1989 to 1992;
- staff from the Department of Fashion lecturing third year students in Clothing Design, Pattern Construction, Garment Construction and Clothing Factory Practice in 1989;
- staff from *Durban Clothing Manufacturers* in the following designations: Designers, Production Managers, Training and Quality Control Officers in 1989.

How the participation of these respondents affected the results and conclusions is discussed in Chapter 5.

3.3.2.1 Industry

This study involved designers, production managers, training officers and quality control officers from *Durban Clothing Manufacturers*, a Durban-based tailoring manufacturer. The reason these designations were selected is that diplomates of the Department of Fashion at Technikon Natal are usually employed in or promoted to these positions. The questionnaires were completed during February 1989 and because the research was limited to *Durban Clothing Manufacturers*, the total population was chosen.

3.3.2.2 Staff from the Department of Fashion, Technikon Natal

Staff members of the Department of Fashion at Technikon Natal who lectured in Creative Clothing Design, Pattern Construction, Garment Construction and Clothing Factory Practice, were involved. The staff were chosen because Technikon Natal specialises in industrial methods and has close links with local industry. The questionnaires administered to the lecturing staff were completed during February 1989. This information, together with the information gathered from the questionnaires administered to staff from *Durban Clothing Manufacturers*, formed the basis of the information used to compile the manual on tailoring.

3.3.2.3 Third year Students

To establish the importance of the use of a manual during a practical lesson, third year students' insight in and knowledge of tailoring were evaluated over a period of four years, viz. 1989 to 1992.

Every year a new group of third year Clothing Design and Clothing Management students was used for the evaluation. Certain criteria had to be built into this study to ensure that the same standards were maintained during this period. These criteria were as follows:

- The total population was used every time and sampling was not necessary.
- The same questionnaire was used to evaluate the students' insight in and their knowledge of tailoring techniques.
- The questionnaires were completed during the second week of the first semester before the students constructed tailored garments. Control questionnaires were completed during the tenth week of the first semester, after the students had constructed tailored garments. This was done throughout the four years of the survey.

The following staff controlled the questionnaires:

Mrs EM Light, National Teacher's Diploma (Teachers' Training College, Wits); National Higher Diploma: Textiles (Technikon Natal)

Mrs EH McLeish, National Teacher's Diploma (Teachers' Training College, Pietermaritzburg); National Diploma: Clothing Design (Technikon Natal)

Mr GA Vorster, National Diploma: Clothing Design (Pretoria Technikon), National Higher Diploma: Clothing Design (Technikon Natal)

During this investigation the qualifications of the staff did not change. This implied that the knowledge base of the staff remained comparable throughout the period of study.

° The same staff lectured garment construction.

° The same assignments were given to each group of students.

° The same staff evaluated the assignments.

° The same venues and machines were used.

During 1989 and 1990 no manual was used during lectures; only demonstrations were done and the students took their own notes. If the students did not fully understand during the demonstration, the demonstration was repeated while the students were busy constructing the assigned garments.

During 1991 and 1992 the manual compiled from the information gathered from industry, staff and the programme content, was used additionally during lectures. With reference to the manual, each process was demonstrated and discussed until all the students indicated that they fully understood how to execute the task; after this the students had to make use of the manual to guide them in the method of construction in order to complete the section discussed.

Questionnaires should be designed to fulfil a specific research objective (Leedy, 1985). Since the objective of this study was to identify the critical factors in a manual on tailoring, based on the needs of industry and the programmes, the differential sliding scale or rating scale (Leedy, 1985; Bailey, 1982) was used to evaluate the responses.

Because of the practical nature of tailoring, the balance between the theoretical and practical aspects of the programmes needed to be addressed. Generally, although some aspects in the programmes seem less important than others, they are still important in constructing tailored garments. Therefore, less important aspects were also included in the manual on tailoring, but the more important aspects were given greater emphasis.

It must be stressed that in industry the quality of construction must be of a high level, or the garment is rejected. With this customer demand in mind, emphasis was placed on the fact that all construction processes had to be accurately executed, for example:

When a person buys a garment, he demands perfect construction. No one will be satisfied with a jacket with an inferior side seam or vent opening. Therefore, from a customer's point of view, all construction processes are equally important. The garment has to be of a high quality and standard.

In the light of this requirement, the implications of finding a balance between the theoretical and practical aspects of tailoring are discussed in Chapter 4.

3.4 *THE SPECIFIC TREATMENT OF EACH SUBPROBLEM*

3.4.1 Subproblem One

What are the perceptions of the clothing industry on the effectiveness and suitability of the tailoring programmes for training of students?

3.4.1.1 The Data Needed

The data collected, analysed and interpreted consisted of industry's evaluation of the relative importance of aspects of the programme on tailoring for the National Diploma in Clothing Design and Clothing Management.

The following data were collected from *Durban Clothing Manufacturers*:

- responses to the questionnaire administered to designers, production managers, training officers and quality control officers (Appendix 1);
- job descriptions of designers, production managers, training officers and quality control officers (Appendix 2);
- company policy on training (personal communications: Mr E Basson).

The following data were collected from the Department of Fashion at Technikon Natal:

- programme content for tailoring for the Clothing Design and Clothing Management courses (Technikon Natal, 1986; 1991).

3.4.1.2 The Location of the Data

Only responses from *Durban Clothing Manufacturers* (*Man About Town*, and *Dugson Clothing* division) and the Department of Fashion at Technikon Natal were accepted (Section 3.1). *Man About Town* and *Dugson Clothing* are part of the Durban Clothing Manufacturers' group. *Man About Town* manufacture under the *Man About Town* label, but *Dugson Clothing* manufactures under the *Pierre Cardin* label. Both manufacture tailored garments and both are using the same equipment and processes, the only differences being the styles, fabric and types of interlining. For the purposes of this study, *Man About Town* and *Dugson Clothing* were treated as one.

3.4.1.3 The Means of Obtaining the Data

The data needed were collected by means of interviews with staff at *Durban Clothing Manufacturers*, the Department of Fashion at Technikon Natal, the administering of questionnaires (Appendices 1 and 3), as well as the perusal of records of the Department of Fashion, Technikon Natal.

On the cover of each individual questionnaire administered to industry (Appendix 1), instructions and information regarding the questionnaire were given. All participants were asked to answer the questions as honestly as possible. They were informed that their names need not appear anywhere on the questionnaire and that their responses would be treated as confidential and would only be used for research purposes.

The following staff from *Durban Clothing Manufacturers* participated:

- Designers - 2
- Production Managers - 2
- Training Officers - 1
- Quality Control Officer - 1
- TOTAL - 6

The questionnaires were completed during February 1989.

3.4.1.4 Questionnaire Design

The questionnaire administered to industry was based on the programme content for tailoring for the National Diploma Clothing Design and National Diploma Clothing Management (Technikon Natal, 1986;1991) and the job descriptions (Appendix 2) of designers, production managers, training officers and quality control officers at *Durban Clothing Manufacturers*.

Table 3.1 was compiled from the information obtained on the job descriptions and includes factors considered as important by staff involved in different levels of operations in the clothing industry.

Cognisance was taken of these factors when the manual on tailoring was compiled.

The questionnaire was designed in three parts:

- Questions 1 to 6 focused on demographical aspects to evaluate the relationship between the respondent's educational background, the job description and the post in which he/she operated in industry.
- Questions 7 to 11 focused on programme data and covered the programmes for tailoring of the National Diploma Clothing Design and Clothing Management courses.
- Question 12 was an open-ended question to invite the respondent's comment with regard to the appropriateness of the programmes.

3.4.1.5 The Treatment of the Data

Screening of the completed questionnaires was done to determine whether all had been completed correctly and whether all respondents had met the selection criteria (Table 4.1).

The information presented in Table 4.1 was used to test the suitability of the current programme content from industry's point of view. The information was also used as a guideline to determine the aspects of the programmes that needed to be included in a manual on tailoring.

TABLE 3.1: Attributes required from job descriptions of designers, production managers, training officers and quality control officers in the clothing industry

	COMPONENTS OF JOB DESCRIPTION	DESIGNERS	PRODUCTION MANAGERS	TRAINING OFFICERS	QUALITY CONTROL OFFICERS
1.	Experimenting skills	x	x	x	x
2.	Engineering methodology	x	x	x	x
3.	Interpretation (practical)	x	x	x	x
4.	Understanding of technology	x	x	x	x
5.	Thinking skills	x	x	x	x
6.	Decision-making skills	x	x	x	x
7.	Problem-solving skills	x	x	x	x
8.	Design skills	x	x	x	x
9.	Innovative skills	x	x	x	x
10.	Communication skills	x	x	x	x
11.	Management skills	x	x	x	x
12.	Leadership skills	x	x	x	x
13.	Organising skills	x	x	x	x
14.	Interpersonal skills	x	x	x	x

3.4.2 The Second Subproblem

Which aspects in the Clothing Design and Clothing Management programmes would affect the successful application of a manual on tailoring in the lecturing environment, and how could these factors be identified?

3.4.2.1 The Data Needed

The data needed for testing the hypothesis of subproblem two were obtained from the responses to the questionnaire administered to the staff of the Department of Fashion, Technikon Natal. Information regarding the following aspects was obtained from staff members:

- the programme content for Clothing Design and Clothing Management (Technikon Natal, 1991; 1992);
- perceptions regarding the effectiveness of the programmes;
- perceptions of which factors would constitute a successful manual.

The questionnaires (Appendix 3) were administered to lecturers in Clothing Design, Pattern Construction, Garment Construction and Clothing Factory Practice for completion during the first week of the second semester in 1989.

The following staff participated:

- Creative Clothing Design - 2
- Pattern Construction - 2
- Garment Construction - 2
- Clothing Factory Practice - 1

TOTAL - 7

Everyone approached participated.

3.4.2.2 Questionnaire Design

The questionnaire administered to staff in the Department of Fashion, Technikon Natal, was based on the programme content for tailoring of the National Diploma in Clothing Design and Clothing Management, and was designed to evaluate the lecturers' perceptions of the programme content as they experienced it in their particular field of teaching.

The questionnaire was designed in three parts.

- Questions 1 to 3 focused on demographical aspects to determine which subjects were being lectured, and the educational background of the respondents.
- Questions 4 to 6 focused on data and covered the programmes for tailoring for the National Diploma in Clothing Design and Clothing Management to evaluate the respondents' perception of the programme.
- Question 7 required the respondents to list the projects that should be included in lectures on garment construction, to rate the importance of each project and to give guidance on which garments should be included in a manual on tailoring.

3.4.2.3 The Treatment of the Data

The information collected from question 7 was tabulated in Table 4.13, and indicates the different types of garments which respondents suggested should be included in a manual.

3.4.2.4 Compilation of the Manual

The data obtained from subproblems one and two were used as guidelines in compiling a manual on tailoring. Observations of the construction methods used by industry were used as valuable guidelines in the compilation of the manual. The manual was used in conjunction with samples of construction processes during lectures in 1991 and 1992.

3.4.3 The Third Subproblem

What factors need to be considered when the applicability of a manual on tailoring is evaluated in the lecturing environment, and how can these factors be measured and reported?

3.4.3.1 The Data Needed

The data needed for testing the hypothesis of the third subproblem were obtained from the responses to the questionnaire administered to the students of Clothing Design and Clothing Management courses during 1989 to 1992 (Section 3.3.2.3; Appendix 4). Information on the following aspects was obtained from the students.

- the manual on tailoring;
- their insight in and knowledge of tailoring before the use of the manual;
- their insight in and knowledge of tailoring after the use of the manual.

3.4.3.2 The Means of Obtaining the Data

The data needed were collected by means of questionnaires (Appendix 4). Information regarding the completion of the questionnaire appeared on the cover. All the respondents were requested to answer the questions as honestly as possible. They were informed that their names would not appear anywhere on the questionnaire and that all information would be treated as confidential and would only be used for research purposes.

After the students had completed the tailored garments and questionnaires, the garmets were marked by the lecturers. Marks were allocated according to the accurate execution of the tailoring processes. These marks were compared with the results of the questionnaires.

3.4.3.3 Questionnaire Design

The questionnaire was designed in three parts. Questions 1 and 2 established which course was being followed and the year of study. Questions 3 and 4 established whether the respondents had made any tailored garments and whether a manual had been used. Questions 5 to 8 dealt with programme data and covered the programme content for the National Diploma in Clothing Design and Clothing Management on tailoring. This information was used to evaluate the students' insight in and their knowledge of tailoring.

CHAPTER FOUR

RESULTS

4.1 *INTRODUCTION*

Sections 3.2.1 and 3.2.2 describe the types of data needed for this research. The data were collected by means of questionnaires and observations (Section 3.2). A differential rating code was used to evaluate all the responses to the questionnaires from staff of *Durban Clothing Manufacturers* (Section 3.4.1.4), staff from the Department of Fashion at Technikon Natal (Section 3.4.2.2), as well as third year Clothing Design and Clothing Management students of the Department of Fashion at Technikon Natal (Section 3.4.3.3).

The responses from industry generally came from a small population of managers working in the tailoring and clothing industry, but Mrs S Strous, Personnel Officer at *Durban Clothing Manufacturers* provided reasons for the small size of the population (Personal communication: May 1993).

During April 1993, 1 288 people were employed by *Durban Clothing Manufacturers*, with the following breakdown:

- One technical manager with two production managers working under him, one for the trouser division and one for the jacket division. Total Production Managers = 2.

- In the quality control division, two quality control officers, one for the trouser division and one for the jacket division. Total Quality Control Officers = 2.

- In the training division, one training manager and two training officers.

Based on this information, it was concluded that the situation as reported represented the actual staffing situation appropriate to this study, and it was therefore accepted.

4.2 *RESULTS FROM THE QUESTIONNAIRE TO STAFF AT DURBAN CLOTHING MANUFACTURERS*

The questionnaire was designed to evaluate industry's view on the importance of aspects contained in the programme content of tailoring for the National Diploma Clothing Design and Clothing Management (Section 3.4.1.1).

Questions 1 to 6 (Appendix 1) focused on demographical aspects to evaluate the relationship between each respondent's educational background as this pertained to his job descriptions and to the post occupied (Section 3.4.1.5).

Table 4.1 summarises the four management functions at *Durban Clothing Manufacturers* in which students educated by the Department of Fashion at Technikon Natal could be involved (Section 3.3.2.1).

The qualifications of staff at *Durban Clothing Manufacturers* can be divided into two categories:

1. Management qualifications

   The designers both have B.Com degrees. This is contrary to the usual qualifications required for designers, but is justified because of the external liaison functions of the designers at *Durban Clothing Manufacturers.*

   Because the South African fashion trends follow the European fashions, South Africa is always a season behind the European fashion scene. The 'designers' at *Durban Clothing Manufacturers* visit overseas fashion shows and adjust the South African trends accordingly, which justifies the management type qualifications of the designers.

2. Mix of management and technical qualifications

   The Production Manager, Training Officer and Quality Control Officer fall into this category. The focus of the functions of these managers is internal production and quality control. The qualifications as shown in Table 4.1 are production and technical orientated.

   To illustrate the importance of the production manager's functions, the production output per day of 3 200 pairs of trousers and 1 650 jackets requires ± 8710m of fabric (telephonic communication: Mr C Linshide, Production Manager: 5 February 1995). The operations involved in the manufacture of these garments are controlled by the Production Manager and Quality Control Officer which justifies the mix of management and technical qualifications of the Production Manager, Training Officer and Quality Control Officer. However, this qualification mix applies specifically to *Durban Clothing Manufacturers* and cannot be extrapolated to other clothing manufacturers.

TABLE 4.1:

Qualifications of staff from Durban Clothing Manufacturers and the posts occupied by them

Posts	Qualification	Qualification obtained from:	Years of experience
Designers			
i) Director of marketing	B.Com degree	University of Natal	4 - 6
ii) Merchandise manager	B.Com degree	University of Natal	4 - 6
Production Managers			
i)	Dip. Management	Damelin College	
ii)	Dip. Production Management	Technikon Natal	4 - 6
Training Officer	In-service Training Certificate	Durban Clothing Man C.I.T.B. *	4 - 6
Quality Control Officer	Dip. Production Management	Technikon Natal	4 - 6
* C.I.T.B. = Clothing Industry Training Board			

4.3 *THE RESPONSES OF THE CLOTHING INDUSTRY ON THE APPROPRIATENESS OF THE TAILORING PROGRAMMES FOR THE NATIONAL DIPLOMA CLOTHING DESIGN AND CLOTHING MANAGEMENT*

The responses to questions 7 to 11 (Appendix 1) pertained to programme data and covered the programme for tailoring for the National Diploma Clothing Design and Clothing Management. The responses are summarised in Tables 4.2 to 4.5.

Question 8 covered seven aspects on quality control and the information is summarised in Table 4.2.

TABLE 4.2: Responses of industry to aspects of quality control covered by the programme for National Diploma: Clothing Design and Clothing Management

	PROGRAMME CONTENT	DESIGNERS N = 2			PRODUCTION MANAGERS N = 2			TRAINING OFFICERS N = 2			QUALITY CONTROL OFFICERS N = 2		
	*	V	I	N	V	I	N	V	I	N	V	I	N
a.	Types of Sewing Machines		x x		x	x			x x		x x		
b.	Relevance of design to seams and machines		x x		x	x			x x		x x		
c.	Selection of appropriate threads			x x	x x				x x		x x		
d.	Quality and cost implications of different assembly methods	x x			x x				x x		x x		
e.	Sewing quality standards	x	x		x	x		x x			x x		
f.	Recognition and diagnosis of garment faults/incorrect machinery	x	x		x	x		x x			x x		
g.	Reorganise procedures to eliminate assembly defects	x x			x x			x x			x x		

* V = Very Important I = Important N = Not Important

The responses from the Staff at *Durban Clothing Manufacturers* demonstrate how each one 'sticks to his own knitting' by rating the aspects relating to their post as 'Very Important'.

The designers at *Durban Clothing Manufacturers* and *Dugson Clothing* who deal mainly with the silhouette and fabric choice were the only respondents who rated the selection of appropriate threads (a) as not important. This could be because the Production Manager is largely responsible for thread selection. Quality and cost implications of assembly methods (d) were rated as important only by the Training Officer because he is responsible for teaching machinists the different methods of construction, but does not decide which method to use for each sewing operation. All the other respondents rated thread selection as very important. The ability to reorganise procedures to eliminate assembly defects was rated as very important by everyone.

Responses to question 9 are summarised in Table 4.3 and cover four aspects on interlinings.

TABLE 4.3: Responses of industry to aspects of interlining covered by the programme for National Diploma: Clothing Design and Clothing Management

	PROGRAMME CONTENT	DESIGNERS N = 2			PRODUCTION MANAGERS N = 2			TRAINING OFFICERS N = 2			QUALITY CONTROL OFFICERS N = 2		
	*	V	I	N	V	I	N	V	I	N	V	I	N
a.	Knowledge of base fabrics for fusible interlinings	x x			x x			x x			x x		
b.	Inset of fusible forepart interfacings	x	x		x x			x x			x x		
c.	Inset of non-fusible fore-part inter-facings	x	x			x x			x x		x x		
d.	Understanding of bridle strip and stays		x x		x	x			x x		x x		

* V = Very Important I = Important N = Not Important

The aspects on interlinings were rated throughout as very important to important by all four levels of management. Again, the similarity of the answers given by the Quality Control Officer is noted, and is possibly due to the realisation that all the aspects contribute to the final appearance of the garment.

Five aspects of pressing of garments were covered in question 10 and the responses are summarised in Table 4.4.

TABLE 4.4: Responses of industry to aspects on pressing covered by the programmes for National Diploma: Clothing Design and Clothing Management

	PROGRAMME CONTENT	DESIGNERS N = 2			PRODUCTION MANAGERS N = 2			TRAINING OFFICERS N = 2			QUALITY CONTROL OFFICERS N = 2		
	*	V	I	N	V	I	N	V	I	N	V	I	N
a.	Underpressing	x	x		x	x		x			x		
b.	Effects of steeming		x x		x x			x x			x x		
c.	Pressing requirements		x x		x x			x x			x x		
d.	Pressing defects		x x		x	x		x x			x x		
e.	Final pressing	x x			x x			x x			x x		

* V = Very Important I = Important N = Not Important

In Table 4.4 the similar emphasis the Training Officers and the Quality Control Officers placed on all aspects of pressing garments was noted. The reasons for this is that both managers desire a good final product which can only result through effective pressing. The Production Managers also underscored the importance of pressing, although one

respondent rated underpressing and pressing defects only as important. The Designers rated pressing effects, requirements and defects as important, but indicated that underpressing and final pressing played an important role in the final product.
Construction methods were covered in question 11 and summarised in Table 4.5.

The results presented in Table 4.5 demonstrate the importance of construction methods. In the construction of garments not one method was rated as "not important". Table 4.5 can be divided into four sections.

- Section one, aspects (a) to (h) which dealt with pockets.
  In this section only the Training Officer did not rate most of the aspects as very important. Jigs in pocket manufacturing do not play an important role in the manufacturing of tailored garments.

- Section two, aspects (k), (l) and (m) involved the attaching of collars. The under collar shaping is usually done in the pattern department, while the final pressing is done on the construction floor. In industry, the person constructing the garment would not be responsible for the shaping of the collar. The attaching of the under and top collars was rated as very important by all the respondents.

- Section three included aspects (i), (j) and (n) to (r) and dealt with the rest of the construction methods for the tailored jacket. All these aspects were rated as very important by the majority of the respondents. One of the production managers rated the finishes of the hems as important only. The reason for this lower rating is not clear.

TABLE 4.5: Responses of industry to aspects of garment construction methods covered by the programmes for National Diploma: Clothing Design and Clothing Management

	PROGRAMME CONTENT	DESIGNERS N = 2			PRODUCTION MANAGERS N = 2			TRAINING OFFICERS N = 2			QUALITY CONTROL OFFICERS N = 2		
	*	V	I	N	V	I	N	V	I	N	V	I	N
a.	Patch Pockets	x x			x x			x			x		
b.	Welt Pockets	x x			x x			x			x		
c.	Jet Pockets	x x			x x			x			x		
d.	Jet Pocket with flap	x x			x x				x		x		
e.	Decorative Pockets	x x			x	x		x			x		
f.	Side Pockets	x x			x x				x		x		
g.	Jigs in pocket manufacturing	x	x		x x					x	x		
h.	Pockets into panel seams	x x			x	x			x		x		
i.	Attaching of facings	x x			x x			x			x x		
j.	Vents	x x			x x			x			x		
k.	Shaped under collars	x	x		x	x			x		x		
l.	Attaching of under collars	x x			x x			x			x		
m.	Attaching of top collars	x x			x x			x			x		
n.	Shoulder pads	x x			x x			x			x		
o.	Inset of pads	x x			x x			x			x		
p.	"Hang" of the sleeve	x x			x x			x			x		
q.	Two-piece sleeves with vents	x x			x x			x			x		
r.	Finishes of hems	x x			x	x			x		x		
s.	Waist finishes	x	x		x x			x			x		
t.	Fly zips and placket fasten-ers	x x			x	x			x		x		
u.	Faced waist-bands with belt loops	x x			x	x			x		x		

* V = Very Important I = Important N = Not Important

- Section four dealt with aspects (s), (t) and (u), which are all aspects used in the construction of trousers. The majority of respondents rated these aspects as very important.

4.3.1 Question 12 was an open-ended question to invite the respondents to comment with regard to the appropriateness of the programme content. No one responded to this question and the implications are discussed in Chapter 5.

4.4 *THE RESULTS FROM THE QUESTIONNAIRES TO STAFF OF THE DEPARTMENT OF FASHION AT TECHNIKON NATAL*

4.4.1 Questions 1 to 3 (Appendix 3), were demographical questions to establish the lecturers' educational background and the subject they lectured. The results are summarised in Table 4.6.

The information in Table 4.6 shows that all the lecturers had qualifications in the clothing field, with the exception of one lecturer who had a National Higher Diploma in Home Economics. Every staff member studied at Technikon Natal, the implications of which are discussed in Chapter 5. Table 4.6 also indicates that lecturers specialised in specific fields: each lecturer specialised in one subject and lectured in only one course, except one lecturer whose specialist subject was Garment Construction, but who lectured in both the Clothing Design and Clothing Management courses.

TABLE 4.6: Qualification of lecturers of the Department of Fashion at Technikon Natal, and the subjects lectured by them during 1989.

Subjects lectured	Qualification	Qualified at	Course lectured
Creative clothing design	i) Nat.Dip. Clothing Design	Technikon Natal	Nat.Dip.Clothing Design
	ii) Dip. Clothing Design	School of Arts London	Nat.Dip.Clothing Design
Pattern construction	i) Nat.Dip. Clothing Design	Technikon Natal	Nat.Dip.Clothing Design
	ii) Nat.Dip. Clothing Management	Technikon Natal	Nat.Dip.Clothing Management
Garment construction	i) Nat.H.Dip. Home Economics	Technikon Natal	Nat.Dip.Clothing Design and Nat.Dip.Clothing Management
	ii) Nat.Dip. Clothing Production	Technikon Natal	Nat.Dip.Clothing Management
Clothing Factory Practice	i) Nat.Dip. Clothing Production	Technikon Natal	Nat.Dip.Clothing Design and Nat.Dip.Clothing Management

4.4.2 An analysis of the questionnaire administered to lecturers revealed that lecturers who specialised in one subject and lectured in one course, were able to respond knowledgeably to questions pertaining to subjects and courses in which they did not lecture. The implications of this are discussed in Chapter 5.

4.4.3 Table 4.7 summarises the responses of lecturers in the Department of Fashion at Technikon Natal on aspects of tailoring covered by the programme content of the National Diploma in Clothing Design.

Seven lecturers responded (Section 4.4.1) to questions on the following four subjects:

- Creative Clothing Design
- Pattern Construction
- Garment Construction
- Clothing Factory Practice.

The information in Table 4.7 shows that all the respondents agreed that all aspects of garment construction covered by the programme are very important. However, 'bespoke' tailoring was rated as important by the pattern construction and garment construction lecturers only. This occurred mainly because at Technikon Natal specialised methods used by industry or 'ready-to-wear' methods are taught (Section 3.3.2.2). For the same reason, jacket foreparts in non-fusible interlinings, bridle strip and 'hang' of the sleeve, were not rated as important by the same respondents.

TABLE 4.7: Responses of lecturers in the Department of Fashion on aspects of tailoring covered by the programmes of National Diploma: Clothing Design

	SUBJECTS LECTURED BY LECTURERS N = 7												
	QUESTIONS FROM QUESTIONNAIRE	CREATIVE CLOTHING DESIGN N = 2			PATTERN CONSTRUC-TION N = 2			GARMENT CONSTRUC-TION N = 2			CLOTHING FACTORY PRACTICE N = 1		
	*	V	I	N	V	I	N	V	I	N	V	I	N
a.	'Bespoke' Tailoring	x x			x	x		x	x			x	
b.	'Ready-to-Wear'	x x			x x			x x			x		
c.	Jet Pockets	x x			x x			x x			x		
d.	Welt Pockets	x x			x x			x x			x		
e.	Pockets in Panel Seams	x x			x x			x x			x		
f.	Patch Pockets	x x			x x			x x			x x		
g.	Different types of collars	x x			x x			x x			x		
h.	Belt loops and waistbands	x x			x x			x x			x		
i.	Jacket Vents	x x			x x			x x			x		
j.	Jacket fore-parts non-fusing	x x			x	x		x	x		x		
k.	Jacket fore-parts fusible interlinings	x x			x x			x x			x		
l.	Bridle strips	x x			x	x		x x			x		
m.	Shoulder pads	x x			x x			x x			x		
n.	'Hang' of sleeve	x x			x	x		x x			x		
o.	Fly zips	x x			x x			x x			x		

* V = Very Important I = Important N = Not Important

TABLE 4.8: Responses of lecturers in the Department of Fashion on aspects of tailoring covered by the programmes of National Diploma: Clothing Management

		SUBJECTS LECTURED BY LECTURERS N = 5								
	QUESTIONS FROM QUESTIONNAIRE	PATTERN CONSTRUCTION N = 2			GARMENT CONSTRUCTION N = 2			CLOTHING FACTORY PRACTICE N = 1		
	*	V	I	N	V	I	N	V	I	N
a.	'Bespoke' Tailoring		x x				x x			x
b.	'Ready-to-Wear"	x x			x	x		x		
c.	Jet Pockets	x x			x x			x		
d.	Welt Pockets	x x			x x			x		
e.	Pockets in Panel Seams	x x			x x			x		
f.	Patch Pockets	x x			x x			x		
g.	Different types of collars	x x			x x			x		
h.	Belt loops and waistbands	x x			x x			x		
i.	Jacket Vents	x x			x x				x	
j.	Jacket fore-parts non-fusing		x x				x x			x
k.	Jacket fore-parts fusible interlinings	x x			x x			x		
l.	Bridle strips	x x			x x			x		
m.	Shoulder pads	x	x		x	x		x		
n.	'Hang' of sleeve	x	x		x	x		x		
o.	Fly zips	x x			x x			x		

* V = Very Important N = Not Important

4.4.4 Table 4.8 summarises the responses of lecturers in the Department of Fashion at Technikon Natal on aspects of tailoring covered by the programme content of the National Diploma: Clothing Management.

Five lecturers responded (Section 4.4.1) to questions on the following three aspects:

- Pattern Construction
- Garment Construction
- Clothing Factory Practice.

Creative Clothing Design was not lectured according to the programme for the National Diploma in Clothing Management, but was included in the questionnaire used for lecturers of both programmes.

The information in Table 4.8 shows that 'bespoke tailoring' and jacket forepart in non-woven interlinings and jacket vents were rated as important for pattern construction, but not as important for garment construction and clothing factory practice. This also corresponds with the findings reported in Table 4.7. Shoulder pads and 'hang' of the sleeve were rated as important by only one of the Pattern Construction lecturers and one of the Garment Construction lecturers. Usually, fully engineered patterns are used in industry and all the important information is given on the pattern, including the type of interlinings and notches on the sleeve head used to hang the sleeve. All these ratings were lower than 'very important' because the management course is even more industry-orientated than the design course (Section 3.3.2.2). All the other aspects were rated as very important by all respondents.

TABLE 4.9: Responses of lecturers in the Department of Fashion on aspects of pressing covered by the programme of National Diploma: Clothing Design

	SUBJECTS LECTURED BY LECTURERS N = 7												
	QUESTIONS FROM QUESTIONNAIRE	CREATIVE CLOTHING DESIGN N = 2			PATTERN CONSTRUC-TION N = 2			GARMENT CONSTRUC-TION N = 2			CLOTHING FACTORY PRACTICE N = 1		
	*	V	I	N	V	I	N	V	I	N	V	I	N
a.	Underpressing	x x			x x			x x			x		
b.	Effects of steam	x x			x x			x x			x		
c.	Pressing requirements	x x			x x			x x			x		
d.	Pressing Defects	x x			x x			x x			x		
e.	Final Pressing	x x			x x			x x			x		

* V = Very Important I = Important N = Not Important

TABLE 4.10: Responses of the lecturers in Department of Fashion on aspects of pressing covered by the programme of the National Diploma: Clothing Management

	SUBJECTS LECTURED BY LECTURERS N = 5										
	QUESTIONS FROM QUESTIONNAIRE	PATTERN CONSTRUC-TION N = 2			GARMENT CONSTRUC-TION N = 2			CLOTHING FACTORY PRACTICE N = 1		
	*	V	I	N	V	I	N	V	I	N
a.	Underpressing	x	x		x x			x		
b.	Effects of steam	x x			x x			x		
c.	Pressing requirements	x	x		x x			x		
d.	Pressing Defects	x x			x x			x		
e.	Final Pressing	x x			x x			x		

* V = Very Important N = Not Important

4.4.5 Table 4.9 summarises the responses of the lecturers of the Department of Fashion on aspects of pressing covered by the programme for the National Diploma in Clothing Design.

4.4.6 The information in Table 4.9 shows that all the aspects of pressing covered by the programme were rated as very important. This is because these aspects contribute to a high quality end-product.

4.4.7 Table 4.10 summarises the responses of the lecturers of the Department of Fashion on aspects of pressing covered by the programme for the National Diploma in Clothing Management.

4.4.8 According to the information in Table 4.10, lecturers responding to questions pertaining to garment construction and clothing factory practice rated all the aspects of pressing as very important, which corresponds with the findings reported in Table 4.9, which reflects the responses of Clothing Design students. One of the Pattern Construction respondents rated underpressing and pressing defects only as important. This is because, in industry, pressing defects form part of the order of construction, and therefore does not have to be stressed so much during training.

TABLE 4.11: Responses of lecturers in the Department of Fashion on aspects of quality control covered by the programme content of National Diploma: Clothing Design

	SUBJECTS LECTURED BY LECTURERS N = 7												
	QUESTIONS FROM QUESTIONNAIRE	CREATIVE CLOTHING DESIGN N = 2			PATTERN CONSTRUCTION N = 2			GARMENT CONSTRUCTION N = 2			CLOTHING FACTORY PRACTICE N = 1		
	*	V	I	N	V	I	N	V	I	N	V	I	N
a.	Types of Sewing Machines	x x			x x			x x			x		
b.	Relevance of Design and Fabric	x x			x x			x x			x		
c.	Garment faults - incorrect machines	x x			x x			x x			x		
d.	Quality Standards	x x			x x			x x			x		
e.	Appropriate threads	x x			x x			x x			x		
f.	Quality and Costs implications by assembly	x x			x x			x x			x		
g.	Assembly defects	x x			x	x		x x			x		
h.	Reorganise procedures to eliminate sewing defects	x x			x	x		x x			x		

* V = Very Important I = Important N = Not Important

TABLE 4.12: Responses of lecturers in the Department of Fashion on aspects of quality control covered by the programme content of National Diploma: Clothing Management

		SUBJECTS LECTURED BY LECTURERS N = 5								
	QUESTIONS FROM QUESTIONNAIRE	PATTERN CONSTRUCTION N = 2			GARMENT CONSTRUCTION N = 2			CLOTHING FACTORY PRACTICE N = 1		
	*	V	I	N	V	I	N	V	I	N
a.	Types of Sewing Machines	x x			x x					x
b.	Relevance of Design and Fabric	x x			x x					x
c.	Garment faults - incorrect machines	x x			x x					x
d.	Quality Standards	x x			x x					x
e.	Appropriate threads	x x			x x					x
f.	Quality and Costs implications by assembly	x x			x x					x
g.	Assembly defects	x x			x x					x

* V = Very Important N = Not Important

4.4.9 Table 4.11 summarises the responses of the lecturers of the Department of Fashion on aspects of quality control covered by the programme for the National Diploma in Clothing Design.

4.4.10 The information reported in Table 4.11 shows that all the quality control aspects were rated as very important. Only one of the Garment Construction respondents rated assembly defects and procedures to reorganise and eliminate sewing defects as important.

4.4.11 Table 4.12 summarises the responses of the lecturers of the Department of Fashion on aspects of quality control covered by the programme content for the National Diploma in Clothing Management.

4.4.12 Table 4.12 shows that all the aspects regarding quality control were rated as very important.

4.4.13 Table 4.13 summarises the rating of garments to be made up during garment construction time by the lecturers of the Department of Fashion at Technikon Natal.

Table 4.13: Ratings of garments to be constructed during construction lectures by lecturers of the Department of Fashion at Technikon Natal

TYPES OF GARMENTS	CLOTHING DESIGN	CLOTHING MANAGEMENT
1. Tailored Jacket	1	1
2. Tailored Raincoat	3	3
3. Men's Tailored Trousers	2	2
4. Tailored Skirt	4	4

1 = most important

4 = least important

4.4.14 The information in Table 4.13 shows that the tailored jacket was rated as the most important, as it is a very good basic garment for tailoring because it covers most of the basic methods used in tailoring. The tailored trousers were

rated as the second most important, as the construction of tailored pants covers some methods that are not used in the construction of the jacket. The raincoat was rated as the third most important and the skirt as the least important. The skirt is covered during the second year and for this reason not included in this study.

4.5 *QUESTIONNAIRE TO STUDENTS*

The questionnaire administered to third year students (Appendix 6) of the Department of Fashion at Technikon Natal evaluated the students' insight in the construction methods used for tailored garments.

4.5.1 The evaluations were done over the period 1989 to 1992, and were executed before and after the use of the manual (Section 3.3.3.3).

TABLE 4.14A: Breakdown of Clothing Design students who completed the questionnaire.

RACE	1989	1990	1991	1992
Black	1	0	1	1
Coloured	0	0	0	1
Indian	0	0	0	0
White	47	45	48	47

TABLE 4.14B: Breakdown of Clothing Management students who completed the questionnaire.

RACE	1989	1990	1991	1992
Black	0	1	1	3
Coloured	0	0	0	0
Indian	2	0	0	0
White	24	38	28	33

The information in Tables 4.14A and 4.14B reflects the student numbers for the National Diploma Clothing Design and National Diploma Clothing Management courses over the four-year period: 1989 to 1992. All these students were third year students. None of the students had made any tailored garments prior to the testing stage (Section 3.3.3.3). During 1989 and 1990 no manual was used, only oral communication and samples. During 1991 and 1992 the manual (Section 3.5.4) as well as oral communication and samples was used during practical lessons.

All the testing was done after the students had completed their tailored garments.

4.6 *RESPONSES OF CLOTHING DESIGN AND CLOTHING MANAGEMENT STUDENTS TO THE QUESTIONNAIRE*

Table 4.15 is a summary of the Clothing Design students' responses to questions pertaining to their knowledge of tailoring terms.

TABLE 4.15: Clothing Design students' responses to questions pertaining to their knowledge of tailoring terms.

	TAILORING TERMS	WITHOUT A MANUAL 1989 N=32			1990 N=47			WITH HELP OF MANUAL 1991 N=43			1992 N=43		
	*	B	A	Diff	B	A	Diff	B	A	Diff	B	A	Diff
a.	'Ready-to-wear'	24.75	25	.25	25.75	33.25	17.50	26	32.25	6.25	30	39	9
b.	'Bespoke'	20.75	22.50	1.75	17.25	23.25	6	21	33.75	12.75	28.50	35	6.50
c.	Jet pocket	24.25	25.50	1.25	22.75	26.50	3.75	20.25	40.75	20.50	28.25	32.75	4.50
d.	Welt pocket	21.75	26	4.25	21	33	12	20.75	36.75	16	25.25	32.75	7.50
e.	Pocket stays	14	25.50	11.50	17	34.25	17.25	18.75	34.75	16	16.50	33.50	17
f.	Diagonal tacking	23	30.50	7.50	21.75	34.75	13	25	38.75	13.75	11.50	38.25	26.25
g.	Jigs in pocket' manufacturing	10.25	20	9.75	17.50	29.25	11.75	20	28.25	8.25	18.25	36	17.75
h.	Quality points on pockets	9.50	21.50	12	14.75	29.25	13.50	13.75	29.50	15.75	18.50	31.50	13
i.	Forepart interfacings	13.25	22.50	9.25	15.50	30.75	15.25	16.50	40	23.50	11	38.25	27.25
j.	Floating body panel	8.50	21.50	13	15.50	31.75	16.25	14	36.75	22.75	11	38.50	27.50
k.	Bridle strip	8.75	23.50	14.75	12.50	35.50	23	12	34.50	22.50	21.75	39.75	18
l.	Edge stays	8	24.50	16.50	13.50	24.50	11	11.50	32.75	21.25	19.25	33	13.75
m.	Edge Bluffing	8	25.75	17.75	15.75	32.25	16.50	16	31.50	15.50	18.75	36.50	17.75
n.	Jigging of facing	8.25	21.50	13.25	12.75	33	20.25	11.25	32.50	21.25	11	38	27
o.	Vents	20.50	23.75	3.25	22	32.25	10.25	28	38.75	.50	42	36.50	-5.50
p.	Slits	16.75	21.75	5	27.75	34.75	7	25	35.50	10.50	26.50	34.25	7.75
q.	'Hang' of sleeves	8.75	24.50	15.75	12.50	30.75	18.25	11	34.75	23.75	13.50	40.25	26.75
r.	Sleeve roll	8	25.50	17.50	12.75	32.50	19.75	17.75	33.50	15.75	20.75	39	18.25

* B = Before tailored garments were made
A = After tailored garments were made

TABLE 4.16: Summary of Clothing Design students' responses to questions pertaining to their knowledge of tailoring terms.

	TAILORING TERMS	NO MANUAL			WITH MANUAL		
		1989	1990	Diff *P	1991	1992	Diff *A
a.	'Ready-to-wear'	.25	17.50	17.75	6.25	9	15.25
b.	'Bespoke'	1.75	6	7.75	12.75	6.50	19.25
c.	Jet pocket	1.25	3.75	5	20.50	4.50	25
d.	Welt pocket	4.25	12	16.25	16	7.50	23.50
e.	Pocket stays	11.50	17.25	28.75	16	17	33
f.	Diagonal tacking	7.50	13	20.50	13.75	26.25	40
g.	Jigs in pocket' manufacturing	9.75	11.75	21.50	8.25	17.75	26
h.	Quality points on pockets	12	13.50	25.50	15.75	13	28.75
i.	Forepart interfacings	9.25	15.25	24.50	23.50	27.25	50.75
j.	Floating body panel	13	16.25	29.25	22.75	27.50	50.25
k.	Bridle strip	14.75	23	37.75	22.50	18	40.50
l.	Edge stays	16.50	11	27.50	21.25	13.75	35
m.	Edge Bluffing	17.75	16.50	34.25	15.50	17.75	33.25
n.	Jigging of facing	13.25	20.25	33.50	21.25	27	48.25
o.	Vents	3.25	10.25	13.50	.50	-5.50	-5
p.	Slits	5	7	12	10.50	7.75	18.25
q.	'Hang' of sleeves	15.75	18.25	34	23.75	26.75	50.50
r.	Sleeve roll	17.50	19.75	37.25	15.75	18.25	34

* P = Total of pre-testing
A = Total of post-testing

Table 4.16 summarises the responses of Clothing Design students to questions pertaining to their knowledge of tailoring terms. The pre-testing was done during 1989 and 1990 before the introduction of the manual (Section 3.5.4), and the post-testing was done during 1991 and 1992 after the introduction of the manual.

The results reflected in Table 4.16 indicate that the Clothing Design students' knowledge of tailoring terms generally increased after the introduction of the manual (Section 3.5.4) which was used in conjunction with demonstrations during the period 1991 to 1992. However, a remarkable lack of knowledge was noticed in the following three cases:

- *Ready to wear* (a): This term is used more in design and was only mentioned in the introduction of the manual. In the rest of the manual reference was made to 'method used by industry'.

- *Vents* (o): Although the method of constructing the vent opening was illustrated in the manual, students demonstrated a lack of knowledge of this term. A possible reason for this could be under writing (Section 2.4).

- *Sleeve roll* (r): This is an out-dated method and was only demonstrated to the students. In the place of the sleeve roll, the 'boomerang' was discussed in the manual because this is the most popular method used by industry today.

Table 4.17 summarises the responses of the Clothing Management students to questions pertaining to their knowledge of tailoring terms.

Table 4.18 summarises the differences in pre- and post-testing results of Clothing Management students' responses to questions pertaining to their knowledge of tailoring terms. The pre-testing was done during 1989 and 1990 prior to the introduction of the manual, and the post-testing was done during 1991 and 1992 after the introduction of the manual.

The results reflected in Table 4.18 indicate that the Clothing Management students' knowledge of tailoring terms generally increased after the introduction of the manual which was used in conjunction with demonstrations. A lack of knowledge was noted in only two cases:

- *Vents* (o): A reason for this could be under writing (Section 2.4).

- *Slits* (p): Students demonstrated a lack of knowledge in the pre- and post-testing. Slits are usually used in skirts and the manual only deals with the tailored jacket and trousers.

TABLE 4.17: Clothing Management students' knowledge of tailoring terms.

	TAILORING TERMS	BEFORE USE OF MANUAL						AFTER USE OF MANUAL					
		1989 N=32			1990 N=47			1991 N=43			1992 N=43		
	*	B	A	Diff	B	A	Diff	B	A	Diff	B	A	Diff
a.	'Ready-to-wear'	19.75	20	.25	21	22.50	1.50	11.50	21.50	10	12.75	23	10.25
b.	'Bespoke'	14.50	15.75	1.25	15	21.50	6.25	10.25	14.75	4.50	10.50	18	7.50
c.	Jet pocket	18	25.50	7.50	14	21.50	7.25	9.50	23	13.50	19.50	24.50	5
d.	Welt pocket	20.25	26	5.75	13.75	18.50	4.75	13	21.50	8.50	16	25.50	9.50
e.	Pocket stays	11.75	20.50	8.75	9	19.25	10.25	10.25	23	12.75	8.25	27.50	18.25
f.	Diagonal tacking	18.75	25	6.25	12.25	18.50	6.25	7.50	20	12.50	13	19	6
g.	Jigs in pocket' manufacturing	17.25	17.25	0	12.50	19.75	7.25	19.50	22.75	3.25	17.50	21.50	4
h.	Quality points on pockets	15.50	20	4.50	14.50	19.50	5	11.50	20.75	9.25	13.25	22	8.75
i.	Forepart interfacings	11.50	21.25	9.75	17	21.75	4.75	7.50	26.25	18.75	10.50	22.75	12.25
j.	Floating body panel	7.50	20.25	12.75	14	19.50	5.50	7	20.25	13.25	10.50	23.25	12.75
k.	Bridle strip	7.25	25.25	17.75	8	21.75	13.75	7	32	25	10.50	26.50	16
l.	Edge stays	9.50	20.75	11.25	10.75	19.25	8.50	8.50	22	13.50	10.50	26.50	16
m.	Edge Bluffing	9.75	18.50	8.75	10.75	21	10.25	7.50	21.25	13.75	10.50	22.50	12
n.	Jigging of facing	9.50	13	3.50	10.75	17.75	7	7.75	20	12.25	8	18	10
o.	Vents	20.50	23	2.50	11.25	15.50	4.25	15	21.50	6.50	22	21.50	-5
p.	Slits	21.50	18.50	-3	16.50	18.50	2	17.50	15.25	-2.25	26.50	26.50	0
q.	'Hang' of sleeves	12.75	24.25	11.50	9.25	18.50	9.25	7	23.25	16.25	9	26.55	7.75
r.	Sleeve roll	11.25	20.75	9.50	9.25	17.25	8	7	22	15	9.75	22.50	12.75

* B = Before tailored garments were made
A = After tailored garments were made

TABLE 4.18: Summary of Clothing Management students' knowledge of tailoring terms before and after use of manual

	TAILORING TERMS	BEFORE USE OF MANUAL			AFTER USE OF MANUAL		
		1989	1990	*P	1991	1992	*A
a.	'Ready-to-wear'	.25	1.50	1.75	10	10.25	20.25
b.	'Bespoke'	1.25	6.25	7.50	4.50	7.50	12
c.	Jet pocket	7.50	7.25	14.75	13.50	5	18.50
d.	Welt pocket	5.75	4.75	10.50	8.50	9.50	18
e.	Pocket stays	8.75	10.25	19	12.75	18.25	31
f.	Diagonal tacking	6.25	6.25	12.50	12.50	6	18.50
g.	Jigs in pocket' manufacturing	0	7.25	7.25	3.25	4	7.25
h.	Quality points on pockets	4.50	5	9.50	9.25	8.75	18
i.	Forepart interfacings	9.75	4.75	14.50	18.75	12.25	31
j.	Floating body panel	12.75	5.50	18.25	13.25	12.75	26
k.	Bridle strip	17.75	13.75	31.50	25	16	41
l.	Edge stays	11.25	8.50	19.75	13.50	16	29.50
m.	Edge Bluffing	8.75	10.25	19	13.75	12	25.75
n.	Jigging of facing	3.50	7	10.50	12.25	10	22.25
o.	Vents	2.50	4.25	6.75	6.50	-5	1.50
p.	Slits	-3	2	-1	-2.25	0	-2.25
q.	'Hang' of sleeves	11.50	9.25	20.75	16.25	7.75	24
r.	Sleeve roll	9.50	8	17.50	15	12.75	27.75

* P = Total of pre-testing
A = Total of post-testing

Students' knowledge of *jigs* in pocket manufacturing (g) was the same during pre-and post-testing. Clothing Management students make use of jigs in clothing manufacturing from their first year and are therefore familiar with the term.

Tables 4.19 to 4.21 report on information regarding the Clothing Design and Clothing Management students' knowledge of construction methods for tailored garments. Table 4.19 shows the increase in or lack of knowledge of Clothing Design students regarding construction methods, and the results are summarised in Table 4.20.

TABLE 4.19: Clothing Design students' knowledge of tailoring methods

	TAILORING TERMS	BEFORE USE OF TEXTBOOK						AFTER USE OF TEXTBOOK					
		1989 N=32			1990 N=47			1991 N=43			1992 N=43		
	*	B	A	Diff	B	A	Diff	B	A	Diff	B	A	Diff
a.	Patch pocket	24.75	20.75	-4	26.50	35	8.50	30.25	34.75	4.50	30	35	5
b.	Welt pocket	22.75	20	-2.75	16.75	15.75	-1	26.50	33.25	6.75	27.50	40.50	13
c.	Breast pocket	17.50	22.50	5	14.75	28.25	13.50	13.50	28	14.50	12	38	26
d.	Straight side seam pocket	25.75	26.50	.75	21.25	29.25	8	27	32	5	22.25	35.50	13.25
e.	Slanted side seam pocket	23.50	25	1.50	18.25	34.25	16	17.50	32.25	14.75	17.50	35.25	17.75
f.	Hip pocket	13.50	14.50	1	11.25	35.75	24.50	18.50	34.50	16	23.25	38.72	15.47
g.	Vent	17.25	20.75	3.50	19.50	32.50	13	21.50	35	13.50	21.75	36.75	15
h.	Two-piece sleeve	16	23	7	17.25	36.25	19	25.50	37	11.50	37.75	40.25	2.50
i.	Fly zip	20	23.50	3.50	29.25	32	2.75	31.50	33.75	2.25	29	36.50	7.50
j.	Waistband	19	22.25	3.25	18.75	36.50	17.75	28.75	35	6.25	32.50	40.25	7.75
k.	Lining of ladies' skirt	10.75	13.75	3	21	30.50	9.50	28.50	36.75	8.25	27	33.25	6.25
l.	Lining tailored jacket or coat	10.50	13	2.50	14.50	36.25	21.75	12.50	36.25	23.75	14.75	42.25	27.50
m.	"Hang" of sleeve	13.50	24.50	11	12.75	26.25	13.50	12	34.75	22.75	20	38.75	18.75
n.	Inset forepart interfacing	15	22.25	7.25	12.50	28.25	15.75	21.50	36.50	15	18.75	38.50	19.75
o.	Assemble tailored collar	8.75	21	12.25	13	26.25	13.25	20.75	35.50	14.75	17.50	39	21.50
p.	Shape under collar	8.50	15.75	7.25	12.25	22.25	10	11.25	32.25	21	15.75	33.50	17.75
q.	Assemble tailored jacket	8.50	23	14.50	13.50	25.75	12.25	13.25	36.75	23.50	20.25	38.25	18

* B = Before tailored garments were made
A = After tailored garments were made

TABLE 4.20: Summary of Clothing Design students' knowledge of tailoring methods

	TAILORING TERMS	BEFORE USE OF MANUAL			AFTER USE OF MANUAL		
		1989	1990	*P	1991	1992	*A
a.	Patch pocket	-4	8.50	4.50	4.25	5	9.25
b.	Welt pocket	-2.75	-1	-3.75	6.75	13	19.75
c.	Breast pocket	5	13.50	18.50	14.50	26	40.50
d.	Straight side seam pocket	.75	8	8.75	5	13.25	18.25
e.	Slanted side seam pocket	1.50	16	17.50	14.75	17.75	32.50
f.	Hip pocket	1	24.50	25.50	16	15.47	31.47
g.	Vent	3.50	13	16.50	13.50	15	28.50
h.	Two-piece sleeve	7	19	26	11.50	2.50	14
i.	Fly zip	3.50	2.75	6.25	2.25	7.50	9.75
j.	Waistband	3.25	17.75	21	6.25	7.75	14
k.	Lining of ladies' skirt	3	9.50	12.50	8.25	6.25	14.50
l.	Lining tailored jacket or coat	2.50	21.75	24.25	23.75	27.50	51.25
m.	"Hang" of sleeve	11	13.50	24.50	22.75	18.75	41.50
n.	Inset forepart interfacing	7.25	15.75	23	15	19.75	34.75
o.	Assemble tailored collar	12.25	13.25	25.50	14.75	21.50	36.25
p.	Shape under collar	7.25	10	17.25	21	17.75	38.75
q.	Assemble tailored jacket	14.50	12.25	26.75	23.50	18	41.50

* P = Total of pre-testing
A = Total of post-testing

Tables 4.19 and 4.20 indicate a general increase in knowledge, except in two cases where a lack of knowledge was noted:

- *The two-piece sleeve* (h): The construction method used in industry was confusing to the Clothing Design students, mainly because they were not production orientated.

- *Waistband* (j): The more intricate production method was totally new to the Clothing Design students and they found this complicated.

Table 4.21 shows the increase or decrease in the Clothing Management students' knowledge of construction methods and this is summarised in Table 4.22.

TABLE 4.21: Clothing Management students' knowledge of tailoring methods.

TAILORING TERMS		BEFORE USE OF MANUAL						AFTER USE OF MANUAL					
		1989 N=32			1990 N=47			1991 N=43			1992 N=43		
	*	B	A	Diff	B	A	Diff	B	A	Diff	B	A	Diff
a.	Patch pocket	20.75	27	6.25	14.50	19.50	5	26.50	22.75	-3.75	23	22	-1
b.	Welt pocket	26.75	27	.25	21.75	18	-3.75	17	25	8	17	24.50	7.50
c.	Breast pocket	13.50	24.50	11	11.25	18.50	7.25	8.75	32	23.25	10	23	13
d.	Straight side seam pocket	20	25.75	5.75	15.25	18.50	3.25	22.25	32	9.75	19	18	-1
e.	Slanted side seam pocket	21.75	25.25	3.50	18.50	21	2.50	17	16.50	-.50	16.25	23.50	7.25
f.	Hip pocket	9.50	24.50	15	9.25	18.50	9.25	8.50	22.25	13.75	7.25	25	17.75
g.	Vent	19	24.25	5.25	11.50	9	-2.50	17	26	9	10.25	19	8.75
h.	Two-piece sleeve	20.75	26	5.25	9.75	17.25	7.50	14	20.75	6.75	11.50	25.75	14.25
i.	Fly zip	18.75	21.75	3	21.75	23.50	1.75	23	23.75	.75	15.50	24	8.50
j.	Waistband	19.50	22.25	2.75	13.75	22.50	8.75	17.25	21.75	4.50	12.50	20	7.50
k.	Lining of ladies' skirt	18.50	26.50	8	12.25	21.50	9.25	20.50	22	1.50	17.50	17.50	0
l.	Lining tailored jacket or coat	9.50	26.50	17	11	19	8	9.50	24.50	15	13	25.25	12.25
m.	"Hang" of sleeve	7.50	26	18.50	9.50	17.25	7.75	9.25	24.50	15.25	8.50	26	17.50
n.	Inset forepart interfacing	8	21	13	9.75	17.25	7.50	11.50	25	13.50	10.75	25.50	14.75
o.	Assemble tailored collar	8.25	24.50	16.25	10	16.50	6.50	9.75	21	11.25	9.50	24	14.50
p.	Shape under collar	6.75	26.25	19.50	7.75	17.50	9.75	8.75	18	9.25	8	17	9
q.	Assemble tailored jacket	12.50	23.75	11.25	5.25	18.25	13	14	25	11	12	20.50	8.50

* B = Before tailored garments were made
A = After tailored garments were made

TABLE 4.22: Summary of Clothing Management students' knowledge of tailoring methods.

	TAILORING TERMS	BEFORE USE OF MANUAL			AFTER USE OF MANUAL		
		1989	1990	*P	1991	1992	*A
a.	Patch pocket	6.25	1	7.25	-3.75	-1	-4.75
b.	Welt pocket	.25	-3.75	-3.50	8	7.50	15.50
c.	Breast pocket	11	7.25	18.25	23.25	13	36.25
d.	Straight side seam pocket	5.75	3.25	9	9.75	-1	8.75
e.	Slanted side seam pocket	2.50	2.50	5	-.50	6.25	5.75
f.	Hip pocket	15	9.25	24.25	13.75	17.75	31.50
g.	Vent	5.25	-2.50	2.75	9	8.75	17.75
h.	Two-piece sleeve	5.25	7.50	12.75	6.75	14.25	21
i.	Fly zip	7.75	1.75	9.50	.75	8.50	9.25
j.	Waistband	2.25	8.75	11	4.50	7.50	12
k.	Lining of ladies' skirt	3.75	9.25	13	1.50	15.50	17
l.	Lining tailored jacket or coat	17	8	25	15	12.25	27.25
m.	"Hang" of sleeve	19	7.75	26.75	14.25	17.50	31.75
n.	Inset forepart interfacing	18	7.50	25.50	13.50	14.75	28.25
o.	Assemble tailored collar	12.75	6.50	19.25	11.25	14.50	25.75
p.	Shape under collar	17.75	9.75	27.50	9.25	9	18.25
q.	Assemble tailored jacket	13.75	13	26.75	21	8.50	29.50

* P = Total of pre-testing
A = Total of post-testing

A general increase of the students' knowledge was noted, except in questions pertaining to their knowledge of patch pockets (a).

The patch pocket can be sewn on by two methods:

- by using top stitching, which is a very easy method usually used by students;
- by using the method used in formal tailoring, where the stitching is done on the inside of the pocket. This method is much more difficult and students do not manage well because it needs considerable practice.

Tables 4.23 and 4.24 deal with quality control factors for tailored garments for the Clothing Design students.

TABLE 4.23: Clothing Design students' responses to quality control factors for tailored garments

	TAILORING TERMS	BEFORE USE OF MANUAL						AFTER USE OF MANUAL					
		1989 N=32			1990 N=47			1991 N=43			1992 N=43		
	*	B	A	Diff	B	A	Diff	B	A	Diff	B	A	Diff
a.	Types of sewing machines	20.50	26.50	6	27.50	32.75	5.25	19	32	13	17.50	32.50	15
b.	Relevance of fabric to design	21	24	3	28	37	9	28.75	36.25	7.50	13.50	38	24.50
c.	Appropriate threads	19.50	20	.50	24.50	35	10.50	18.25	38.50	20.25	20.25	35	14.75
d.	Quality & cost of assemble methods	8	12.50	4.50	13	32.25	19.25	17.75	29.50	11.75	26.50	30.75	4.25
e.	Quality standards for tailored garments	8.50	34.25	25.75	12.50	32	19.50	16	33.50	17.50	27.50	32	4.50
f.	Faults by incorrect machinery	9	15	6	15	35.25	20.25	21.50	29	7.50	15	42.75	27.75
g.	Eliminate sewing defects	9	22.50	13.50	12.75	32.25	19.50	21.50	29	7.50	16	33.75	17.75
h.	Identification of assembly faults	8	17.50	9.50	12.50	34	21.50	11	28.50	17.50	17.75	29.25	11.50

* B = Before tailored garments were made
A = After tailored garments were made

TABLE 4.24: Summary of Clothing Design students' knowledge of quality control factors for tailored garments

	TAILORING TERMS	BEFORE USE OF MANUAL			AFTER USE OF MANUAL		
		1989	1990	*P	1991	1992	*A
a.	Types of sewing machines	6	5.25	11.25	13	15	28
b.	Relevance of fabric to design	3	9	12	7.50	24.50	32
c.	Appropriate threads	.50	10.50	11	20.75	14.75	35.50
d.	Quality & cost of assemble methods	4.50	10.25	14.75	11.75	4.25	16
e.	Quality standards for tailored garments	25.75	19.50	45.25	17.50	4.50	22
f.	Faults by incorrect machinery	6	20.25	26.25	7.50	27.75	35.25
g.	Eliminate sewing defects	13.50	19.50	33	7.50	17.75	25.25
h.	Identification of assembly faults	9.50	21.50	31	17.50	11.50	29

* P = Total of pre-testing
A = Total of post-testing

Table 4.23 displays the results of the Clothing Design students' increase in or lack of knowledge about quality control factors for tailored garments, and Table 4.24 summarises these results. A lack of knowledge was noticed in three cases.

Table 4.25 displays the results of the Clothing Management students' increase in or lack of knowledge about quality control factors for tailored garments, and Table 4.26 summarises these results. A lack of knowledge was noticed in five cases.

Quality control was not thoroughly covered in the manual, and it was decided that quality control should be discussed in more detail during crit sessions after the completion of the garment piece. Subsequently this was done only after the post-testing had been done.

TABLE 4.25: Clothing Management students' responses to quality control factors for tailored garments

	TAILORING TERMS	BEFORE USE OF MANUAL 1989 N=32			1990 N=47			AFTER USE OF MANUAL 1991 N=43			1992 N=43		
	*	B	A	Diff	B	A	Diff	B	A	Diff	B	A	Diff
a.	Types of sewing machines	21	25	4	15.25	16.25	1	15.50	21.50	6	22	23	1
b.	Relevance of fabric to design	13.75	25	11.25	16.75	17.75	1	9.50	15.25	5.75	18.75	19	.25
c.	Appropriate threads	19.25	24.75	5.50	17.50	18.50	1	16.25	13.50	-2.75	19.25	19.25	0
d.	Quality & cost of assemble methods	18.50	25.25	6.75	10.75	14.75	4	15.50	16.50	1	14.50	16	1.50
e.	Quality standards for tailored garments	11.50	25.25	13.75	10	19.75	9.75	13.50	20.25	6.75	11.50	18.75	7.25
f.	Faults by incorrect machinery	13.25	21.25	8	8.25	16.75	8.50	15	19	4	14.75	13.50	-1.25
g.	Eliminate sewing defects	12.50	24.75	12.25	9.50	16	6.50	17	17	0	14	19.50	5.50
h.	Identification of assembly faults	14.25	26.25	12	10.25	13	2.75	10	18.25	8.25	13.75	19.25	5.50

* B = Before tailored garments were made
A = After tailored garments were made

TABLE 4.26: Summary of Clothing Management students' responses to quality control factors for tailored garments.

	TAILORING TERMS	BEFORE USE OF MANUAL			AFTER USE OF MANUAL		
		1989	1990	*P	1991	1992	*A
a.	Types of sewing machines	2.75	1	3.75	5.75	1	6.75
b.	Relevance of fabric to design	11.25	1	12.25	5.75	.25	6
c.	Appropriate threads	5.75	1	6.75	-2.75	0	-2.75
d.	Quality & cost of assemble methods	6.25	4	10.25	1	1.50	2.50
e.	Quality standards for tailored garments	3.75	9.75	13.50	6.75	7.25	14
f.	Faults by incorrect machinery	12	8.50	20.50	4	-1.25	2.75
g.	Eliminate sewing defects	8.75	6.50	15.25	0	4.50	4.50
h.	Identification of assembly faults	10.50	2.75	13.25	8.25	5.50	13.75

* P = Total of pre-testing
A = Total of post-testing

Table 4.27 presents Clothing Design students' knowledge of pressing, and Table 4.28 summarises the results.

A general increase in knowledge was noticed, which stresses the respondents' perception of the importance of pressing during construction of the garments.

Table 4.29 presents the Clothing Management students' knowledge of pressing and Table 4.30 summarises the results.

TABLE 4.27: Clothing Design students' knowledge of pressing

TAILORING TERMS		BEFORE USE OF MANUAL						AFTER USE OF MANUAL					
		1989 N=32			1990 N=47			1991 N=43			1992 N=43		
	*	B	A	Diff	B	A	Diff	B	A	Diff	B	A	Diff
a.	Underpressing	32	32	0	24	31.25	7.25	34.50	40.25	5.75	24	38.50	14.50
b.	Effects of steam	29	31.50	2.50	17.50	39.50	22	32.25	36.75	4.50	27.50	47	19.50
c.	Pressing requirements - fabric	32	32	0	15.75	35.25	19.50	18.50	25.25	6.75	22.25	36	13.75
d.	Final pressing	32	32	0	12.75	38.25	25.50	32	40	8	24.25	40.50	16.25
e.	Order of construction	32	32	0	13	37.75	24.75	26.25	39.25	13	28.75	38.50	9.75

* B = Before tailored garments were made
A = After tailored garments were made

TABLE 4.28: Summary of Clothing Design students' responses to questions on pressing

	TAILORING TERMS	BEFORE USE OF MANUAL			AFTER USE OF MANUAL		
		1989	1990	*P	1991	1992	*A
a.	Underpressing	0	7.25	7.25	5.75	14.50	20.25
b.	Effects of steam	2.50	22	24.50	14.50	19.50	34
c.	Pressing requirements - fabric	0	19.50	19.50	6.75	13.75	20.50
d.	Final pressing	0	25.50	25.50	8	16.25	24.25
e.	Order of construction	0	24.75	24.75	13	9.75	22.75

* P = Total of pre-testing
A = Total of post-testing

In Table 4.30 reveals a general increase in the Clothing Management students' knowledge of pressing.

The results reported in Tables 4.14 to 4.18 show that the manual compiled in consultation with industry helped to promote and enhance Clothing Design and Clothing Management students' knowledge of tailoring terms. However, according to Levy and Dixon (1984) and Roller (1986), students following vocational education programmes have a low reading level, and vocabulary development in context areas is therefore recommended.

Although the same questionnaire was used to test the Clothing Design students' and the Clothing Management students' knowledge of certain aspects, the diversity of the two groups of students will be looked at when the results are discussed in Chapter 5. The Clothing Design students are more creatively minded and are trained to be more involved in the design side of clothing. The Clothing Management students are more production orientated and are trained to be involved in the management side of production. The latter group of students tends to be more practical and logical than the Design students.

TABLE 4.29: Clothing Management students' knowledge of pressing

	TAILORING TERMS	BEFORE USE OF MANUAL						AFTER USE OF MANUAL					
		1989 N=27			1990 N=29			1991 N=28			1992 N=30		
	*	B	A	Diff	B	A	Diff	B	A	Diff	B	A	Diff
a.	Underpressing	27	26.75	-.25	15	22.50	7.50	18.75	23.75	5	14.75	24	9.25
b.	Effects of steam	25.75	27	1.25	19	22.50	3.50	19	24.75	5.75	15.50	22.50	7
c.	Pressing requirements - fabric	27	27	0	21.50	25	3.50	13	23	10	13.25	15.25	2
d.	Final pressing	27	27	0	22.50	24.50	2	13.50	26.25	12.75	15.75	27	11.25
e.	Order of construction	25.50	27	1.50	15.25	19	3.75	13.25	22	8.75	13.75	25.75	12

* B = Before tailored garments were made
A = After tailored garments were made

TABLE 4.30: Summary of Clothing Management students' responses to questions on pressing

	TAILORING TERMS	BEFORE USE OF MANUAL			AFTER USE OF MANUAL		
a.	Underpressing	-.75	7.50	6.75	5	9.25	14.25
b.	Effects of steam	1	3.50	4.50	5.75	7	12.75
c.	Pressing requirements - fabric	0	3.50	3.50	10	2	12
d.	Final pressing	0	2	2	12.75	11.25	24
e.	Order of construction	1.50	3.75	5.25	9.75	12	21.75

* P = Total of pre-testing
A = Total of post-testing

4.7.2 The Data must be in Sufficient Depth to make Explanations Logical without Further Assumptions

To provide sufficient depth and to make the explanations logical without the possibility for further assumptions, the illustrations were supplied with inscriptions, explaining and giving insight into the construction processes. With each illustration only one step was added and each illustration was accompanied by its own text which explained the construction method. The order of construction used by industry was adapted to give a logical flow of work to ensure that the student understood the manufacturing process.

4.7.3 The language must be simple and straightforward

Throughout the manual the language is simple and straightforward, using terminology from industry. It is acknowledged that a manual cannot replace the lecturer and that it must be used in conjunction with demonstrations. Therefore, when any difficulties were experienced with terminology during demonstrations, the terms were explained by the lecturers.

4.7.4 The Illustrations must be Clear

For the purpose of clarity, the processes were illustrated in different steps. For example, the jet pocket was illustrated using nine illustrations (p.15-19). Each illustration added one step to the process. This method was used throughout the manual.

4.7 *COMPILATION OF MANUAL*

Reidei (1984) provides some guidelines on compiling manuals. Cognisance was taken of these guidelines and the requirements for managerial functions based on the job descriptions (Table 3.1) when compiling the manual. The following six aspects were suggested by Redei:

4.7.1 The Manual must give a Sufficiently Comprehensive Overview of the Field

To give a sufficiently comprehensive overview of the field in tailoring, the manual was compiled in three chapters covering the tailored jacket and tailored pants.

- Chapter One covered interlinings, starting with soft tailoring and then fully tailored garments, illustrating industrial methods;

- Chapter Two covered the construction of the tailored jacket and illustrated lining methods used by industry and adapted methods where specialised machinery was not available;

- Chapter Three covered the tailored trousers, illustrating industrial methods as well as adapted methods when specialised machinery was not available.

In all cases where the methods were adapted, the method used by industry was reported on the opposite page (Appendix 6).

The illustrations served a double purpose:

- During demonstrations they could be used as a reference;
- They served as a record for future reference.

The results in Tables 4.20 and 4.21 reflect a general increase in the students' knowledge, which demonstrates the success of the illustrations; but attention should be given to aspects where a lack of knowledge was reported when the manual is revised. Illustrations that are not clear in the manual should also be revised.

4.7.5 All the information must reflect the current status of the field

Because of the flexibility and versatility of tailoring in general to accommodate fashion (Tables 5.1 and 5.2), it was possible to reflect the current status of the information in the manual. The manual was compiled during 1990 using information from *Durban Clothing Manufacturers* and the programmes for the National Diplomas in Clothing Design and Clothing Management. Cognisance was taken of the subtle changes in fashion over the past three decades (Appendix 5). All changes were only an expression of the fashion at that particular period but, in principle, did not change or affect the basic construction methods.

Appendix 5 summarises these fashion changes of the tailored jacket and tailored trousers over the past three decades.

4.7.6 The Text must point out the Practical Application of the Theory

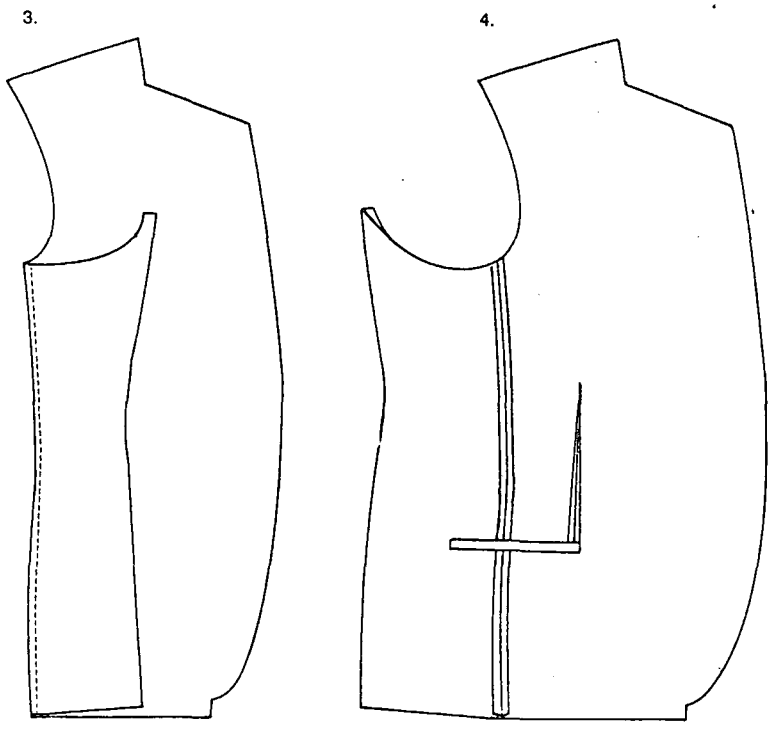
For the text to point out the practical application of the theory, the illustrations and text were carefully integrated to complement each other.

The construction of the side body seam and opening of the side seam are examples where this was achieved (Operations 3 and 4).

FIGURE 4.1: CLOSING OF SIDE SEAM AND OPENING OF THE JACKET SIDE SEAM

33. 3. Close jacket side body seams.

Close the side body seam, sew a 10mm seam and backtack.



34. 4. Open jacket side seams.

Press the seam open, fuse tapes over the seam onto side body for support to pocket area.

4.7.6 The Text must point out the Practical Application of the Theory

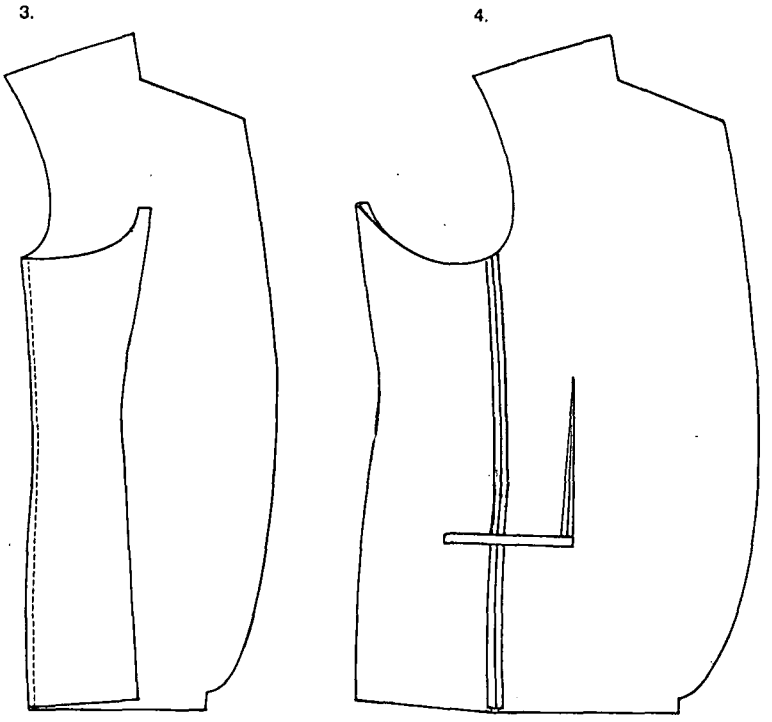
For the text to point out the practical application of the theory, the illustrations and text were carefully integrated to complement each other.

The construction of the side body seam and opening of the side seam are examples where this was achieved (Operations 3 and 4).

FIGURE 4.1: CLOSING OF SIDE SEAM AND OPENING OF THE JACKET SIDE SEAM

33. 3. Close jacket side body seams.

Close the side body seam, sew a 10mm seam and backtack.



34. 4. Open jacket side seams.

Press the seam open, fuse tapes over the seam onto side body for support to pocket area.

These operations referred to in Figure 4.1 rested on the third assumption that the students could apply their prior knowledge, acquired during the first and second years of study, to the construction of the tailored jacket, and for this reason detailed instructions were not given.

CHAPTER FIVE

DISCUSSION

5.1 *INTRODUCTION*

The purpose of this study was to evaluate the programme content on tailoring of the National Diploma: Clothing Design and the National Diploma: Clothing Management in terms of the needs of industry in order to compile a manual to be used in a teaching environment.

This was done by evaluating and integrating empirical results, and by taking cognisance of the following:

- Fashion trends;
- Industry's involvement in education;
- Job descriptions as a basis for the compilation of the manual;
- Compilation of the manual.

5.1.1 Fashion Trends

Tailoring has been an important aspect in fashion design through the ages and is still relevant today. To achieve a tailored look, certain design aspects have to be built into the garment. To achieve the desired end results in tailored garments, the use of correct interlinings and construction methods is vital.

An analysis of fashion reports over an extended period of time on men's tailoring (Tables 5.1 and 5.2) has revealed that fabrication and colour effect the most important changes in men's fashion for each season (Appendix 5). The silhouette changes during the past three decades have been subtle and consisted mainly of a variation on shoulder widths and waist suppression; a longer or shorter jacket length; variation of lapels and lapel widths; and button variations.

TABLE 5.1: Summary of Fashion Changes of the Tailored Jacket: 1960 - 1993

ELEMENTS	STATUS	COMMENT
Colour	Change	Seasonal change according to fashion forecast
Fabrication	Change	Seasonal change according to fashion forecast
Width at lapels	Change	Wider or narrower
Waist suppression	Change	More or less fitted in the waist
Back vent	Change	One or two
Pocket flaps	Change	Flaps or no flaps and width variations
Jet pockets	No change	
Welt pockets	No change	
Shoulder width	Change	Wider or narrower shoulders
Shoulder pads	Change	Variation in thickness of pads
Two-piece sleeves	No change	
Sleeve vents	No change	
Jacket length	Change	Longer or shorter
Collar	Change	Wider or narrower according to lapels
Buttons & buttonholes	Change	One, two or three buttons & buttonholes

TABLE 5.2: Summary of Fashion Changes of the Tailored Trousers: 1960 - 1993

ELEMENTS	STATUS	COMMENT
Colour	Change	Seasonal change according to fashion forecast
Fabrication	Change	Seasonal change according to fashion forecast
Width of legs	Change	Wider or narrower
Side seam pockets	Change	Straight pockets or slanted pockets
Front pleats	Change	One or two
Hip pockets	No change	
Fly opening	No change	
Waistband	No change	
Belt loops	No change	

Trousers having no pleats, one (or more) pleat(s), turn-ups or no turn-ups, slanting or straight side pockets, dictated the fashion of the season (The Bayer: June 1963; April 1968; May 1970; April 1971; June 1973; June 1976; April 1977; January 1981; July 1989; January 1992; July 1992; August 1992).

By taking cognisance of such subtle style changes, it was possible to compile a manual based on the tailoring needs of industry, and to relate it to the teaching environment.

The focus of this manual was on construction methods only. The departure point was the construction methods used in industry, and the content of the programmes National Diploma: Clothing Design and National Diploma: Clothing Management. By adapting these elements, a manual to be used by students was developed (Appendix 7). Cognisance was also taken of the fact that the programmes for the National Diploma: Clothing Design and National Diploma: Clothing Management were revised.

The Clothing Management programme was revised in 1986 and again in 1991, and the Clothing Design programme was revised in 1991. At no stage were any changes introduced to the tailoring section of the programmes. This section was therefore considered to be adequate to serve as a basis for the present investigation. Furthermore, the programme content for the National Diploma: Clothing Design and the National Diploma: Clothing Management was in no way adjusted or revised for the purpose of this study. It is concluded that with the integration of industry's work protocol with the instructional programme content as part of the Technikon's contribution towards training of future clothing manufacturers, the basis was set for testing the hypotheses of the subproblems.

5.2 *THE HYPOTHESES*

5.2.1 Hypothesis One: Industry's Involvement in Education

The first hypothesis was that the clothing industry's perception of the appropriateness of the programme content would be negative and that recommendations would be made regarding elements that should feature in a manual. This hypothesis was rejected in the light of industry's continuous involvement in the development of these programmes. Three reasons are given for its rejection:

5.2.1.1 Revision of Training Programmes

The reason for the initial negative postulation should be seen against the background of developments which took place at the time when the project was formulated. In 1989 the clothing and textile industry was experiencing a number of internal and external transformations caused by the impact of sanctions and trade union activity. A number of changes in the industry were suggested which impacted on the training of students. Consequently, the instructional programmes of the National Diploma: Clothing Design and National Diploma: Clothing Management were revised in 1991. During the revisions no changes to the tailoring aspects were suggested, which implied a positive attitude towards training in tailoring. Furthermore, all the persons approached in industry responded willingly to the questionnaire (Appendix 1).

5.2.1.2 Liaison Committee

A further indication of the positive attitude of industry towards technikon training was the extension of the 1991 revision programme which resulted in the establishment of a liaison committee comprising the Clothing Industry Training Board, representatives of the clothing industry and Technikons offering Clothing Design and Technology and Clothing Production programmes. At the conclusion of this study, this Committee still functioned. The technikons involved on this committee were Technikon Witwatersrand, Cape Technikon, Peninsula Technikon, Port Elizabeth Technikon and Technikon Natal. The liaison committee met twice a year. In addition, the technikons involved met twice a year with representatives from the local industry.

5.2.1.3 Appropriateness of Training Programmes

The second part of the hypothesis namely "...and that recommendations would be made regarding elements that should feature in a manual" was also rejected, and an alternative hypothesis i.e. that no recommendations for programme changes would be necessary, was accepted.

Question 13 of the questionnaire to industry was an open-ended question and nobody responded to it. In the light of industry's involvement in the design of the National Diploma: Clothing Design and National Diploma: Clothing Management programmes, this non-response could be interpreted as an indication of the respondents' acceptance of the appropriateness and the value of the liaison committee comprising, *inter alia*, Technikon Natal and industry, hence no recommendations were made.

5.2.2 Hypothesis Two: Factors to be included in a Manual on Tailoring

The second hypothesis was that the critical factors to be included in a manual on tailoring could be identified. This hypothesis was accepted for the following reasons.

5.2.2.1 Job Descriptions as Basis for Compilation of the Manual

In the second subproblem the question was asked which factors should be incorporated in a manual on tailoring to render it successful for use in a lecturing environment. An analysis of the job descriptions of various designations (Table 3.1) indicated that industry needs Clothing Designers and Clothing Managers who possess virtually the same qualities. Furthermore, it was shown that the Clothing Designer must not only be creatively minded, but must also have some management qualities. On the other hand, the Clothing Managers must be management oriented but must also have innovative skills. In reality the management style of creative managers often comes into conflict with the more rigid, production oriented type managers.

In this context Newman, Warren and Sace (1982:176) report that it is difficult to find people who possess both innovative and management skills. The significance of this observation has application in the training programmes of the students where the National Diploma: Clothing Design and National Diploma: Clothing Managements students have different lecture periods for the management components of the

programme. However, the overlap of the management orientation is manifested in the practical components which are identical for both groups. For this reason the impact of job descriptions, prior to the compilation of the manual, was critical.

Tables 4.2 to 4.5 show that staff from *Durban Clothing Manufactures* were, in general, satisfied with the content of the tailoring programmes for the Clothing Design and Clothing Management programmes. The hypothesis that the clothing industry's perception of the appropriateness of the programme content would be negative and that recommendations would be made regarding elements that should feature in a manual was therefore rejected and the alternative accepted.

People in different posts rated different aspects of the programmes as important or not important according to the work they did. Because the Clothing Design and Clothing Management programmes are not aimed at specific posts but at the clothing industry in general, all aspects of the programmes had to be considered as important for the purposes of this study.

5.2.3 Hypothesis Three: The use and Evaluation of a Manual on Tailoring in a Classroom

The third hypothesis was that a manual on tailoring could be evaluated in terms of its usefulness in the lecturing environment, and that the effectiveness of the content for student training could be measured.

As stated before, the third hypothesis rested on the assumption that a manual would only be of assistance to the lecturer, and could not replace him/her during a practical lesson. The hypothesis was accepted based on the results of the questionnaires administered to the Clothing Design and Clothing Management students (Appendix 4 and Tables 4.15 to 4.30).

Supported by the fact that a number of shortcomings were identified (section 5.5.3), the hypothesis that a manual on tailoring could be evaluated in a classroom environment and that the usefulness of the content for the training of the students could be measured, was accepted.

In general, the use of the manual has resulted in an increase in the students' knowledge of tailoring terms and tailoring methods. The students had the opportunity to refer to the manual during demonstrations and after demonstrations while contructing the garments, and they were also able to use it as a source of reference outside contact hours.

5.3 *THE PERCEPTION OF THE CLOTHING INDUSTRY ON THE TRAINING PROGRAMMES*

The National Diploma: Clothing Design and National Diploma: Clothing Management programmes are structured to educate students to fill a wide spectrum of posts in the clothing industry. The quality and standard of the technikon's training will become visible only after a period of employment, and the adjudicators will be the people in the various management positions.

As these managers have a vested interest in the quality and expertise of any prospective new employees in the management field, their integrity and honesty in responding to the questionnaire were accepted. Each respondent used his own experience as well as

academic background to evaluate the questions on the training needs of technikon students. Table 4.1 shows the diverse range of qualifications of the respondents. The mix included qualifications from universities, technikons and private teaching institutions. The fact that no recommendations on programme content were made, implies the general level of acceptability of technikon training by the managers and implies a positive attitude.

The future requirements for and challenges of the clothing industry as described in section 2.5 must be regarded as being significant. The need for timeous action to ensure adequately trained people has been stressed. Unfortunately, this requirement creates a dichotomy. On the one side industry needs to grow to meet market demand, thus greater utilisation of spare capacity on equipment, increased productivity, and recruitment of appropriately trained staff need to take place. On the other side, appropriately trained people can only be provided if they have the opportunity to use the specialised equipment in industry during in-service training. This can only be done at the expense of production time and opportunity to use spare capacity for other purposes. This matter is further complicated by the fact that industry uses a whole range of different machines for tailoring, each with its own operational peculiarities. For example specialised machines are used to construct the jet pockets, sleeve back arm seam in fabric and lining, facing to front of jacket, sleeve head/lining and wadding all at the same time; and equipment for collar and lapel attachment and pressing consists of computerised and pneumatic machines. Initially, training on these machines is done by the supplier after installation, and thereafter on-floor training is done. According to company policy the older versions of the machines are kept in case of a breakdown to avoid the process having to be executed manually (Mr Ed Basson, Training officer: Personal communication, 17 November 1994). This is in stark contrast with the basic lockstitch machines used at Technikon Natal which only provide the most basic type of training. The need to train students with the necessary flexibility and versatility to adapt

to industrial requirements is only possible if the basic concepts have been reinforced during their training. Provision for such reinforcement strategies was provided in the manual and indications of where to place the necessary emphases were provided by industry.

5.4 *INDUSTRIAL AND EDUCATIONAL EXPERIENCE*

From the results of the questionnaires to staff at *Durban Clothing Manufacturers* and Department of Fashion at Technikon Natal, it became evident that experience in lecturing as well as in industry is critical before meaningful responses can be made with regard to aspects to be included in the manual.

It is reported in Table 4.6 that all the lecturers who responded to the questionnaire on the programme content (Technikon Natal, 1986; 1991a and 1991b) trained at Technikon Natal, except one who was trained in London. Table 4.6 also shows that all the lecturers had some industrial experience before they were employed at the Technikon. As a result of their training and experience, lecturers have contributed richly to the training programmes.

Specialisation in the lecturing field also takes place at Technikon Natal (reported in Table 4.6). This enables the lecturer to:

- have better insight into the subject matter;
- have better liaison with industry in specialised areas;
- introduce students to the latest developments in industry;
- become a specialist consultant in his subject.

It must be emphasised that although specialisation takes place, the lecturers keep track of the developments in adjacent subject areas, because the subjects of the Clothing Design and Clothing Management programmes are closely linked. For example, to be able to cut a master pattern it is also important to have a design background and to know how the garment will be constructed. Without a wide background knowledge of all aspects of garment manufacturing, it is impossible to be successful in the education or manufacturing field. Because the Clothing Design and Clothing Management programmes are directed towards two different groups of graduates, lecturers usually teach only one programme as shown in Table 4.6. This contributes to the appreciation of the ramifications of the clothing manufacture in industry.

Tables 4.7 to 4.12 summarise the responses of the lecturers regarding the importance of various aspects of garment construction and Tables 4.2 to 4.6 summarise the responses of *Durban Clothing Manufacturers* staff to the same questionnaire.

Although the Technikon staff responded from an educational viewpoint and the *Durban Clothing Manufacturers* staff from the working environment, the responses were very similar. This is the result of the close liaison between the Technikon and industry and also the industrial experience and exposure of staff, which have subsequently become evident in the normal fields of operation.

5.5 *COMPILATION OF THE MANUAL*

From the results of the questionnaire administered to staff at *Durban Clothing Manufacturers* (Appendix 1) and staff in the Department of Fashion at Technikon Natal (Appendix 3), all aspects on tailoring in the programme content for the National Diplomas in Clothing Design and Clothing Management were included in the manual (Appendix 6).

5.5.1 Format of Manual

The order of garment construction used by industry had to be re-arranged to be practical for lecturing purposes (Appendix 6: pages 1- 7). In industry a production line is scheduled to maximise output and minimise cost. In industry the machinists are trained to do one operation all the time without appreciating the mechanics involved in the whole process. For example:

- The first machinist will close the back arm seam of the two-piece sleeve;
- The second machinist will hem the sleeve and vent;
- The third machinist will sew the jet pocket in the interior;
- The fusing is done on the forepart gorge by a fourth person.

In contrast, in an educational environment the objective is to give the student an appreciation of the whole manufacturing process. It is therefore important that the student be aware of the flow of the operation and how each step in the manufacturing process contributes to the final product (Manual, example pp.21-24).

The methods used by industry had to be adapted for educational purposes when the specialised machinery used in industry was not available at the Technikon (pp.21-24). This apparent shortcoming was in fact an advantage when seen from a training point of view. In some cases a second method could be illustrated by simplifying the standard method to a method more familiar to the student, or by using a method that could be used on available machinery. In some cases the method used in industry was illustrated on the opposite page which enabled the student to decide which method to use. This was done with the following processes (Appendix 6):

- Breast and welt pockets - pages 15 to 26;
- Marking of neck circle, lapel and hem - page 31;
- Insertion of jets into interior - pages 39 - 42;
- Attaching lining to the hem - pages 43 - 44;
- Easing fullness to sleeve head - pages 49 and 52;
- Pressing svenline piece and sleeve crown - page 51;
- Basting armhole lining and preparing sleeve for armhole felling - page 56;
- Closing lining sleeve opening - page 55.

The consequence of providing options is the creation of an awareness that alternative solutions exist and that opportunities must be exploited when problems arise.

A criticism levelled at the content of the manual is the absence of a glossary of terms. Although the results of the study indicated an increase in the students' knowledge of tailoring terms, a glossary could be an added advantage when the manual is used as a reference. It is shown in Table 1.1 that the racial mix on campus is changing and it is common knowledge that many Black students for whom English is a second language, experience problems when English is the medium of instruction. The absence of a glossary will only exacerbate the problem for these students, especially where self study is encouraged. Additionally, the inclusion of a glossary can serve to support the learning processes of all students for, despite the assumption that the students could apply their knowledge of their first two years of study, it is a fact that people forget terms and

terminology, and the glossary will therefore only refresh the descriptions of terms when needed.

Example:

- P.23 - Bridle strip;
- P.36 - Pipe;
- P.51 - Svenline.

5.5.2 Applicability of Manual

Table 4.20 (section 4.6) reflects an increased understanding of the assembly of the tailored jacket from 26.75 before the use of the manual to 31.50 after the use of the manual.

It can be accepted that, in the cases where an increase was reported, students understood the text and could relate the text to the illustrations. However, the reverse was also true. In some cases a decrease in knowledge was reported and this could be an example of where the text and illustrations did not point out the practical applications of the theory, for example the construction of the two-piece sleeve (operations 75, 76 and 77 on pages 45 and 46 of manual).

THE BUYER. May 1962. Popularity of Italian-styled Suits for Men.

THE BUYER. June 1963. Style forecast.

THE BUYER. April 1968. New Menton styling is introduced.

THE BUYER. September 1968. Style Forecast for 1969.

THE BUYER. October 1968. World Styles for Men shown in Israel.

THE BUYER. May 1970. Man-About-Town Set Sights on Higher Targets.

THE BUYER. January 1971. Connoisseur Apparel (Pty) Ltd.

THE BUYER. April 1971. IMBEX '71 - the Now scene for men.

THE BUYER. June 1973. Sophisticated Styles Forecast in U.S.A.

THE BUYER. April 1976. Men's Fashion.

THE BUYER. June 1976. Men's Fashion.

THE BUYER. April 1977. Cologne Extends Sportive Styling.

THE BUYER. January 1981. Menswear Classics.

THE BUYER. January 1987. Menswear Classics.

THE BUYER. July 1989. Menswear Previewed.

THE BUYER. January 1992. Q'dos Show Spirit.

THE BUYER. April 1992. Paris Menswear Shows.

THE BUYER. July 1992. Summer-Bright Menswear.

THE BUYER. August 1992. Sartorial style sets the Q'dos mood.

THE SOUTH AFRICAN CLOTHING INDUSTRY EXECUTIVE HANDBOOK/DIARY. 1993: 6 - 7, 20-21.

VERNON, P.E. 1953. The Psychological Traits of Teachers. Yearbook of Education: 51 - 75.

WILLIAMS, C.M. 1968. Learning from pictures. Association for Educational Communications and Technology. Washington, D.C.

WILLIAMS, F.J. AND PANTON, P. 1977. The National Development of T E C programmes. A New Approach. Journal for Higher Education: 1 (2) Summer: 3 - 6.

WIMMER, R.D. AND DOMINICK, J.R. 1984. Experimental Methodology. Second Edition:100.

PERSONAL COMMUNICATIONS

BASSON, Mr E. Training Officer, Durban Clothing Manufacturers.

DEFTY, Mrs A. November 1988. Head of Department of Fashion at Technikon Natal 1952 - 1987.

GILLARD, Mr. 22 March 1988. Managing Director, Rex Trueform, Cape Town.

LINSHIDE, Mr C. 5 February 1995. Production Manager, Durban Clothing Manufacturers.

ROBINSON, Mr. 22 March 1988. Factory Director, Rex Trueform, Cape Town.

SHACKLEFORD, Mr G. 26 April 1993. Computer Service, Technikon Natal.

STROUS, Mr S. May 1993. Personnel Officer, Durban Clothing Manufacturers.

APPENDIX 1

QUESTIONNAIRE TO THE CLOTHING INDUSTRY

The perception of the clothing industry on the effectiveness and suitability of the syllabi for the Clothing Design and Clothing Management Courses.

Your answers to the questions in this questionnaire will be regarded as strictly confidential and will be used for research purposes only.

Please answer the questions as objectively as possible. Your name will not appear anywhere on the questionnaire and all the information you provide will be treated as confidential.

Thank you for your assistance.

QUESTIONNAIRE TO INDUSTRY

DEMOGRAPHICAL QUESTIONS.

1. Name of employer:

_____

2. Nature of industry:

_____

_____

_____

3. Please give your rank (a) and (b) a functional description of your post:

a. _____

_____

b. _____

_____

4. Educational Qualification:

MATRIC	MATRIC & DIPLOMA	MATRIC & DEGREE	OTHER

_____

5. At which institution/institutions did you study?

1. _____

2. _____

3. _____

6. Which year did you qualify?

1. _____

2. _____

3. _____

7. Please indicate your experience in the following fields:

DESIGNERS		PRODUCTION MANAGERS		TRAINING OFFICERS		QUALITY CONTROL OFFICERS	
YEARS OF EXPERIENCE		YEARS OF EXPERIENCE		YEARS OF EXPERIENCE		YEARS OF EXPERIENCE	
1 - 3	4 - 6	1 - 3	4 - 6	1 - 3	4 - 6	1 - 3	4 - 6

QUESTIONS ON THE SUITABILITY OF THE SYLLABI FOR THE TRAINING OF CLOTHING DESIGN AND CLOTHING MANAGEMENT STUDENTS

8. To what importance/unimportance would you rate the following issues?

Questions on Quality Control (Rating 1 - 8), eg. 1 = not important, 8 = very important

	VERY IMPORTANT	IMPORTANT	NOT IMPORTANT	RATING	
a. Different types of sewing machines used to construct tailored garments					
b. The relevance of the design and fabric to the seam and machine selection					
c. Selection of appropriate threads for different purposes					
d. The quality and cost implications of different assembly methods.					
e. The sewing quality standards required for tailored garments.					
f. To recognise and diagnose garment faults caused by in-correct machinery.					
g. Re-organise procedures to eliminate sewing and assembly defects.					
h. To identify the probable causes of assembly defects.					

9. Questions on Interlining (Rating 1 - 4) eg. 1 = not important, 4 = most important

	VERY IMPORTANT	IMPORTANT	NOT IMPORTANT	RATING	
a. A knowledge of the various base fabrics used for fusible interlinings and their adhesives.					
b. How to inset forepart interfacings by the non fusing method.					
c. How to inset forepart interfacing by the fusing method.					
d. Understanding of bridle strips and edge stays.					

10. Questions on Pressing (Rating 1 - 5) eg. 1 = not important, 5 = most important.

	VERY IMPORTANT	IMPORTANT	NOT IMPORTANT	RATING	
a. Reasons for under pressing					
b. Effects of steam, pressure, dwelling time and vacuum in pressing.					
c. Understanding of pressing requirements on different fabrics.					
d. Recognition of pressing defects.					
e. Understanding reasons for final pressing and equipment requirements for specific garments.					

11. Questions on Construction Methods

Methods of construction of the following garment components.

		VERY IMPORTANT	IMPORTANT	NOT IMPORTANT	RATING	
a.	Patch pockets.					
b.	Welt pockets.					
c.	Jet pockets.					
d.	Jet pocket with flap.					
e.	Decorative pockets.					
f.	Side pockets - straight and angled.					
g.	Use and importance of jigs in pocket manufacture.					
h.	Pockets into panel seams.					
i.	Attaching of facings.					
j.	Understanding of tailored garment vents.					
k.	How to make and shape under collars.					
l.	How to attach under collars.					
m.	Attaching of top collars.					
n.	Shoulderpads and the types for specific garments.					
o.	How to inset pads.					
p.	The "hang" of the sleeve.					
q.	Making up of two-piece sleeves with vents.					
r.	Hem finishes for tailored garments.					
s.	Waist finishes for tailored skirts and pants.					
t.	Principles of zip fly and placket fastenings.					
u.	Attach and face waist bands with belt loops and apply relevant fastenings.					

12. If you have any suggestions regarding the syllabi, feel free to comment accordingly.

_____

_____

_____

_____

DURBAN CLOTHING MANUFACTURERS MANAGEMENT JOB DESCRIPTION

NAME	**UNIT**	**DATE**
TITLE	Training Officer	
PURPOSE OF JOB	Application of N.I.P.R. "A" selection tests and other test criteria. Maximum utilization of allocated resources Maintenance of existing systems and standard procedures.	
DIRECTLY RESPONSIBLE TO	Training Manager	
DELEGATES TO SUBORDINATES	(i) Efficient and effective running of allocated registered and unregistered training courses. (ii) The preparation of training exercises. (iii) Consumables stock control.	
LIMITS OF AUTHORITY	Can start the selection process only after clearance from training manager. Can dismiss new trainees who cannot achieve the acceptable performance standards. Can hire or dismiss instructresses only in consultation with the training manager. Cannot change standard procedures but can recommend such action. All training school consumables requisitions to be endorsed by the training manager.	
FUNCTIONAL RELATIONSHIPS	Cutting division, manufacturing divisions, workshops and maintenance dept, medical and welfare dept, wages dept, work study department, printing dept, central quality control dept, security and employment dept, personnel.	
KEY RESULT AREAS	Motivation and morale, resource utilization Housekeeping and safety, communications Maintenance of standard procedures Training and development.	
CONTROL MECHANISMS	Registered course syllabi and time tables (D.O.M.) Unregistered course syllabi and time tables N.I.P.R. test criteria Standard operating procedures.	

DUTIES AND RESPONSIBILITIES

1. Responsible for formulation with the training manager action plans to fulfil training quotas, and the subsequent implementation of these plans.
2. Responsible for formulating with the training manager action plans for the development of training courses from training needs analysis, and the subsequent implementation of these plans.
3. Responsible for maintaining morale and effectiveness within her area, and dealing with anything adversely affecting these, seeking advice if necessary from the training manager.
4. Responsible for discipline, counselling, welfare, training and development of all subordinates, assistance when required from the training manager.
5. Responsible for maintaining documentation systems in operation and reporting any malfunctioning for training manager.
6. Ensures all consumables needed for the training school are requisitioned and endorsed by the training manager.
7. Ensures factory rules and regulations are followed.
8. Ensures correct time regarding procedures are carried out (clocking).
9. Ensures a high standard of housekeeping and safety is maintained.
10. Responsible for communicating company policy to subordinates.
11. Responsible for maintaining the effectiveness of training methods and recommending improvements where necessary.
12. Ensures all machinery and equipment under her control is maintained and in good condition.
13. Ensures she has a knowledge of legislation (law) as it affects her area of control.
14. Ensures when training courses are being developed, that methods and quality standards are clearly defined by work study dept. in conjunction with central quality control dept.
15. Ensures an acceptable level of absenteeism and labour turnover.
16. Ensures good channels of communications are developed and maintained in her area.
17. Ensures good lateral channels of communications with her colleagues are developed and maintained.
18. Ensures security of testing and training areas and no unauthorised entry.
19. Ensures no unauthorised garments enter the training school for make-up or alteration in any way.
20. Responsible for following and maintaining the standard grievance/discipline procedures.
21. Ensures that training personnel use the canteens provided for the purpose of storing and consuming food and drink.

DURBAN CLOTHING MANUFACTURERS MANAGEMENT JOB DESCRIPTION

NAME	UNIT	DATE
TITLE	Quality Manager	
PURPOSE OF JOB	The implementation and maintenance of the company policy on quality standards as laid down by the Factory Director. To maintain a system of controls which will aim at the prevention of defectives and seconds.	
DIRECTLY RESPONSIBLE TO	The Factory Director.	
DELEGATES TO SUBORDINATES	The maintenance of control systems aimed at the prevention of defectives and seconds. The maintenance of reporting systems, which indicate the level and frequency of defectives and seconds, and their points of origination.	
LIMITS OF AUTHORITY	Can hire and fire all subordinates in consultation with the Factory Director. Is expected to recommend improvements to methods, machinery, equipment, systems that are aimed at improving product durability and appearance. Implementation only after all implications including costs are considered and cleared by the Factory Director.	
FUNCTIONAL RELATIONSHIPS	Marketing, Manufacturing Divisions, Cutting Division, Workshops, Work Study, Training, Vendors, Receiving, Production Planning and Control.	
KEY RESULT AREAS	Prevention of defectives and seconds, Training and development of personnel. Research and development on means of improving product durability and appearance, communication.	
CONTROL MECHANISMS	M.A.T. Quality policy documents Woolworth quality documents and specifications Customer specifications S.A.B.S. Quality documents and specifications Government tender specifications.	

JOB INCUMBENT SIGNATURE FACTORY DIRECTOR SIGNATURE

DUTIES AND RESPONSIBILITIES

1. Responsible for implementing company policy as it affects his function.
2. Responsible for formulating detailed action plans, to fulfil quality control requirements.
3. Responsible for research and development into means of improving product appearance and durability, in conjunction with design department.
4. Responsible for making recommendations on improvements in methods, machinery, and systems which will improve, control or eliminate defectives and seconds.
5. Responsible for recommending changes in product design, which will contribute to improvements in durability, fit and appearance.
6. Ensures that quality standards and norms are quantified and published for new products.
7. Ensures that sample garments are capable of being produced on a large scale and able to meet quality and durability criteria.
8. Ensures agreed quality standards are installed and maintained.
9. Responsible for destructive and non-destructive testing of all new garment trim components, to ensure suitability and durability.
10. Responsible for testing new fabrics for weight, sewability, and stability under heat steam and pressure.
11. Responsible for the random audit of finished goods at periodic intervals.
12. Responsible for maintenance of a system of controls which aims at the prevention of defectives and seconds.
13. Responsible for the maintenance of reporting systems, which indicate the level and frequency of defectives and seconds, and their points of origination.
14. Responsible for maintaining morale and effectiveness throughout his area of control and dealing with anything adversely affecting those seeking advice when necessary from Factory Director.
15. Responsible after authorization for proper recruitment and selection of all subordinates.
16. Ensures advice and assistance on quality problems is available when necessary.
17. Responsible for discipline, counselling, welfare, training and development of all subordinates.
18. Ensures effective channels of communications are developed and maintained within his area of control.
19. Ensures good lateral channels of communications with his colleagues is developed and maintained.
20. Responsible for the effective motivation of all subordinates.
21. Ensures that he is aware of all statutory requirements and company rules as they affect his area of control.
22. Responsible for authorising overtime.
23. Ensures an acceptable level of absenteeism and labour turnover.
24. Responsible for maintaining documentation systems in operation and reporting any malfunctioning to the controlling department.
25. Ensures housekeeping in his area of control is to a high standard.
26. Responsible for the maintenance of the standard grievance/discipline procedure.
27. Ensures safety procedures are adhered to, advice when needed from the government certified engineer.
28. Ensures the maintenance of wage grades and policy related to wages and salaries.

DURBAN CLOTHING MANUFACTURERS MANAGEMENT JOB DESCRIPTION

NAME	UNIT Grimsby Road, Mobeni DATE
TITLE	Production Manager
PURPOSE OF JOB	The implementation of Company policy and the optimum utilization of the resources under his control, to achieve maximum efficiency at minimum cost.
DIRECTLY RESPONSIBLE TO	Factory Director
DELEGATES TO SUBORDINATES	The effective and efficient maintenance, and running of their areas of control.
LIMITS OF AUTHORITY	Can dismiss all subordinates in consultation with the Factory Director. Can change standard procedures in consultation with the originating department.
FUNCTIONAL RELATIONSHIPS	Production planning and control department, Design department, Maintenance and Workshops department, Work study department, General Quality Control, Personnel Department, Marketing Administration
KEY RESULT AREAS	Resource utilization, Training and development, Industrial relations, Budgetary Control, Maintenance of systems and standard procedures.
CONTROL MECHANISMS	Labour control, quality control, production control, NOSA Safety procedures and Mosact, Grievance procedure, Disciplinary procedure, Current labour agreement.

JOB INCUMBENT SIGNATURE

FACTORY DIRECTOR SIGNATURE

DURBAN CLOTHING MANUFACTURERS MANAGEMENT JOB DESCRIPTION

NAME	UNIT Design DATE
TITLE	Designer
PURPOSE OF JOB	Implementation and maintenance of company policy on size and fit of garments. The production of patterns for samples and production runs, with all necessary templates to enable manufacturing to take place. The production of sample garments for the purpose of establishing new models, new products, or changes of a technical nature. The compiling and circulation of garment specifications.
DIRECTLY RESPONSIBLE TO	Factory Director
DELEGATES TO SUBORDINATES	
(Michael)	The efficient and accurate production of patterns, specifications and samples.
(Maggie)	
(James)	
(Nelson)	
LIMITS OF AUTHORITY	Can hire and fire all subordinates in consultation with the factory director. Can change standard procedures in consultation with the factory director. Can draw fabric for the production of sample garments after consultation with factory director. Can introduce amended patterns into the production system only after consultation with the factory director.
FUNCTIONAL RELATIONSHIPS	M.A.T. marketing, export marketing, S.A.C.I. marketing Manufacturing divisions, cutting division, workshops, S.A.C.I. computer facility (hughes) central quality control Woolworths Workstudy
KEY RESULT AREAS	Resource utilization Training and development of subordinates Maintenance of standard procedures Morale and motivation Research and development
CONTROL MECHANISMS	M.A.T. size charts, Woolworth size charts and specifications S.A.B.S. size charts and specifications Grievance/Discipline procedures, sample standard procedure. Labour budget, expense budget Export size charts and specifications
JOB INCUMBENT SIGNATURE	HIERARCHY LEADER SIGNATURE

DUTIES AND RESPONSIBILITIES

1. Responsible for implementing company policy as it affects his area of control.
2. Responsible for formulating detailed action plans to fulfil processing requirements within his area.
3. Responsible for the proper recruitment and selection of all people under him.
4. Responsible for the effective motivation of all subordinates.
5. Ensures that he is aware of all statutory requirements and company rules as they affect his area of control.
6. Ensure that all machinery and equipment within his control is maintained and in good condition.
7. Responsible for maintaining morale and effectiveness throughout the division, and dealing with anything adversely affecting those seeking advice if necessary from the factory director.
8. Ensures the maintenance of wage grades, and policy related to wage, in conjunction with wages department.
9. Responsible for discipline, counselling, welfare, training and development of all subordinates.
10. Ensures an acceptable level of absenteeism and labour turnover.
11. Responsible for authorising overtime working.
12. Ensures housekeeping in his area is to a high standard.
13. Responsible for maintaining documentation systems in operation and reporting any malfunctioning to the controlling department.
14. Ensures effective channels of communications are developed and maintained within his area.
15. Ensures good lateral communications with his colleagues is developed and maintained.
16. Responsible for the maintenance of the standard grievance/discipline procedure.
17. Ensures safety procedures are adhered to, advice when needed from the government certified engineer.
18. Responsible for the efficient and accurate production of patterns, specifications and samples.
19. Is expected to recommend improvements to methods, machinery, equipment and systems that are aimed at improving product durability fit and appearance.
20. Responsible after new or amended patterns have been approved, for updating computer files to enable markers to be produced.
21. Responsible for working closely with the quality control function, on means of improving product durability and reliability.
22. Responsible for close liaison with the production manager and central quality control manager on new product development.
22. Is expected to be continually researching design techniques with a view to developing improvements.

QUESTIONNAIRE TO LECTURERS AT THE DEPARTMENT OF FASHION AT TECHNIKON NATAL

This questionnaire will deal with the following problem: What are the factors in the syllabi for Clothing Design and Clothing Management, which are lectured to students, that will effect the successful application of a textbook on tailoring in the lecturing environment and how can it be identified?

Your answers to the questions in this questionnaire will be regarded as strictly confidential and will be used for research purposes only. Please answer the questions as objectively as possible. Your name will not appear anywhere on the questionnaire and all the information you provide will be treated as confidential.

Thank you for your assistance.

QUESTIONNAIRE TO STAFF MEMBERS OF THE DEPARTMENT OF FASHION AT TECHNIKON NATAL

1. Which subjects do you teach at present?

(I) _____

(ii) _____

(iii) _____

2. For how many years have you taught these subjects?

(I) _____

(ii) _____

(iii) _____

3. Which of the following qualifications do you have?

National Diploma: Clothing Design .....
National Diploma: Clothing Production Management .....
National Diploma: Clothing Management .....
National Teachers Diploma: Home Economics .....
National Higher Diploma: Clothing Design .....
National Higher Teachers Diploma: Home Economics .....
Other (Specify) .....

4. How important will you evaluate the inclusion of the following aspects in the syllabi for the Clothing Design and Clothing Management Programmes?

D - Clothing Design
M - Clothing Management

	VERY IMPORTANT		LESS IMPORTANT		NOT AT ALL	
	D	M	D	M	D	M
a. Methods of "bespoke" tailoring.						
b. Methods of "ready-to-wear" tailoring.						
c. Construction methods of the following pockets: Jet pockets.						
d. Welt pockets.						
e. Pockets in pouch seams.						
f. Patch pockets.						
g. Construction of different types of collars.						
h. Construction of belt loops and waistband finishes on pants and trousers.						

4. How important will you evaluate the inclusion of the following aspects in the syllabi for the Clothing Design and Clothing Management Programmes? (continued)

	VERY IMPORTANT		LESS IMPORTANT		NOT AT ALL	
i. Construction of jacket vents.						
j. How to inset forepart interfacings by the non fusing methods.						
k. How to inset forepart interfacings by the fusing methods.						
l. Understanding of bridle strip and edge stays.						
m. Understanding of shoulderpads and their uses.						
n. How to "hang" a sleeve.						
o. Principles of zip fly and placket fastening.						

5. Questions on Pressing

D - Clothing Design
M - Clothing Management

	VERY IMPORTANT		LESS IMPORTANT		NOT AT ALL	
	D	M	D	M	D	M
a. Reasons for under pressing						
b. Effects of steam, pressure, dwelling time vacuum in pressing.						
c. Understanding of pressing requirement for different fabrics.						
d. Recognition of pressing defects.						
e. Understanding reasons for final pressing and equipment requirements for specific garments.						

6. Questions on Quality Control

D - Clothing Design
M - Clothing Management

	VERY IMPORTANT		LESS IMPORTANT		NOT AT ALL	
	D	M	D	M	D	M
a. Different types of sewing machines used in tailored garments.						
b. The relevance of the design and fabric to the seam and machine selected.						
c. Recognise and diagnose garment faults caused by incorrect machinery setting and use of unsuitable components.						
d. Sewing quality standards required for specific tailored garments.						
e. Selection of appropriate threads for different purposes.						
f. Quality and cost implications of different assembly methods.						
g. To identify the probable causes of assembly defects.						
h. Re-organise procedures to eliminate sewing and assembly defects.						

7. Garments to be constructed in Garment Construction classes: Please indicate to what degree do you think it is important for the students following the clothing Design and Clothing Management Programmes to make the following garments during their third year of study, and how would you rate them on a scale of one to four, four being the most important.

D - Clothing Design
M - Clothing Management

	VERY IMPORTANT		LESS IMPORTANT		NOT IMPORTANT	
	D	M	D	M	D	M
a. Tailored Jacket						
b. Tailored Raincoat.						
c. Men's tailored trousers.						
d. Tailored skirt						

QUESTIONNAIRE TO THIRD YEAR CLOTHING DESIGN AND CLOTHING MANAGEMENT STUDENTS AT TECHNIKON NATAL

This questionnaire will deal with the following problem:

What factors need to be considered when the applicability of a textbook on tailoring is evaluated in the classroom environment?

Your answers to the questions in this questionnaire will be regarded as strictly confidential and will be used for research purposes only. Please answer the questions as objectively as possible. Your name will not appear anywhere on the questionnaire and all the information you provide will be treated as confidential.

Thank you for your assistance.

QUESTIONNAIRE TO STUDENTS

1. Which course are you following?

CLOTHING DESIGN	
CLOTHING MANAGEMENT	

2. Are you a third year student?

YES	
NO	

3. Have you completed any tailored garments during this year?

YES	
NO	

4. Has a textbook in tailoring been used during your garment construction lectures?

YES	
NO	

5. How familiar are you with the following terms?

	GREAT DEAL	FAIR AMOUNT	LITTLE	NONE AT ALL
a. "Ready-to-wear" tailored garments.				
b. "Bespoke" tailored garments.				
c. Jet pocket.				
d. Welt pocket.				
e. Pocket stays.				
f. Diagonal tacking.				
g. Use of Jigs in pocket manufacturing.				
h. Quality points on pockets.				
i. Forepart interfacings.				
j. Floating body panel.				
k. Bridle strip.				
l. Edge stays.				
m. Edge bluffing.				
n. Jigging of facing.				
o. Vents in tailoring.				
p. Slits in tailoring.				
q. "Hang" of sleeve.				
r. Sleeve rolls.				

6. Are you able to execute the following:

	YES	NOT SURE	NO
a. Assemble a patch pocket.			
b. Assemble a welt pocket.			
c. Assemble a breast pocket.			
d. Assemble a straight side seam pocket on pants.			
e. Assemble a slanted side seam pocket on pants.			
f. Assemble a hip pocket on men's trousers.			
g. Assemble a vent in a tailored jacket.			
h. Assemble a two-piece sleeve with a vent.			
i. Insert a fly zip			
j. Finish a men's tailored pants waistband.			
k. Attach a lining in a ladies tailored skirt.			
l. Attach the lining in a tailored jacket and coat.			
m. "Hang" a sleeve.			
n. Inset forepart interfacings for a tailored jacket.			
o. Assemble a tailored jacket.			
p. Shape an undercollar.			
q. Assemble a tailored jacket.			

7. Are you aware of the following quality control factors of a tailored garment?

	YES	NOT SURE	NO
a. A knowledge of the different types of sewing machines used in tailoring.			
b. The relevance of the design and fabric to the seam and machine use.			
c. Selection of appropriate threads for different purposes.			
d. The quality and cost implications of different assembly methods.			
e. The sewing quality standards required for tailored garments.			
f. The recognition and diagnosis of garment faults caused by incorrect machinery.			
g. Re-organisation procedures to eliminate sewing and assembly defects.			
h. Identification of assembly faults.			

8. Are the following statements true or false?

	TRUE	FALSE
a. Underpressing is necessary.		
b. Effects of steam, pressuring, dwelling time and vacuum are important when you press a garment.		
c. Different fabrics have different pressing requirements.		
d. Final pressing is important.		
e. Garments should be constructed in the correct order.		

APPENDIX 5: JACKETS : FASHION TRENDS FROM 1962 TO 1992

SEASON	COLOUR	FABRICATION		SHOULDER WIDTH	WAIST SUPPRESSION	JACKET LENGTH	LAPELS	BUTTON VARIATIONS	POCKETS	VENTS	SINGLE AND DOUBLE	PUBLICATION
Autumn Winter '62				Squared-off		Shorter	Wider	Two buttons One button	Elimination of flaps			Buyer Jan 1962
Autumn & Winter '62	Muted dark shades	All wool Mohair & wool		Natural sloping appearance				Three buttons				Buyer May 1962
Winter '68		Pure new wool New lambswool	Stripes and checks	Natural slope	Nipped waist	Longer with flare at hip		Three buttons	Pocket flaps Ticket pock-et			Buyer April 1968
1969	Bluer shades or Blues Bright browns	Terylene blends Crimplene		Natural slope	Very marked waist		Wider	One button DB - no buttons showing				Buyer September 1968
Spring & Summer '69	Bolder use of colour		Fine stripes, pin chalk or coloured pastel stripes	Natural slope	Very marked waist	Longer	Wider	One or two buttons	Straight pocket with flaps			Buyer September 1968
1969	Clear ocean blue, rust brown, deep blue	Pure new wools	Broad trade stripes and tone-on-tone herring-bone		Strongly waisted	Longer	Short Wide				SB and DB	Buyer October 1968
1970	New greys/ blues, browns and greens	Pure new wools	Muted self-stripe Subtle contrast stripe, rich patterned Prince de Galle checks	Natural slope	Suppressed waist with back belt in waist		Bold lapels		Angled pockets	Deep centre vent		Buyer May 1970
1971				Soft and natural	Suppressed for waist high side vents	1/2 longer	Lapels 3-1/2 in wide, wider collar	Three buttons One button or two buttons	Slanted pockets with flaps	Waist high side vents or centre vent	SB	Buyer January 1971

APPENDIX 5: JACKETS : FASHION TRENDS FROM 1962 TO 1992 (continued)

1971	Shades of blackberry, cranberry, damson, dark browns rust, brick and blacks	Knits become the leading fabrication	Textured cloth	Wider, squarer, bolder shoulder	Waspy waistline		Wide lapels	Two or three buttons		Double vents at back	Wider cross over	Buyer April 1971 and June 1971
Spring Summer 1973-'74			Boldly patterned fabric for sports coats and en-sembles	Square padded shoulders	Marked waist. Flared hip (close to body)	Longer	Wide lapels	One or two buttons	pockets	Side or centre vents	SB	Buyer June 1973
Winter 1976	Petral blue lichen green, rust and Sahara		Subtly striped Gan-club check	Move away from square shoulders	Waistline longer	Long slim look						Buyer April 1976
Summer 1981-'82	Corsican or sand tones San Remo stone, Carmargue Tuscano Capri blue Burgundy and solemn shades	Trevira/wool mohair look-alikes	Tartans & plaids Black Watch tartan, Prince of Wales check	No change	No change		No change	Three or two buttons	Straight pockets	Centre back vent	DB and SB	Buyer January 1981
1989	Sombre shades	Fine wools New rayon and viscose blends	Richly patterned fabrics	Wide shoulders	Shaped waistlines					Centre back vent	SB	Buyer July 1989
1992 Q dos	Mint, sea greens, teal, grape Black & white, Dusty pastels, light blue, magenta & green	Cool wool, Trevira/wool/ viscose/linen blends Viscose/silk 100% wool cotton/ viscose	Luxurious country tweeds for rustic texture and surface interest	Relaxed shoulder line	Natural waist suppression	Slightly longer		Two button for SB and DB button-one show - six		Centre back vent	SB and DB	Buyer January 1992. April 1992 August 1992

APPENDIX 5: PANTS: FASHION TRENDS FROM 1962 TO 1992

	FRONTS	LEGS	TURN-UPS	WAISTBANDS	PUBLICATION
1962	Plain or one pleated	Tapered legs 17 inches	No turn-ups		Buyer January 1962 May 1962
Winter 1968	No pleats	From knee down slightly wider	Return to turn-ups	Deep waist-band	Buyer April 1968
1970-'71		Knee and bottom width the same	Deep turn-ups 2-1/4 in deep		Buyer January 1971 April 1971
Winter 1973-'74	Pleated	Legs are full with straight effect	Turn-ups		Buyer June 1973
1976 1977	No pleats	Elegantly flared or parallel line Straight legs no tapering	No turn-ups		Buyer April 1976 April 1977
1987-'89	No pleats	Straight leg	No turn-ups or turn-ups	Normal waist	Buyer January 1987 July 1989
1992	Double reverse pleats, inverted box pleat	Straight legs	Plain and turn-ups	Normal waist	Buyer January 1992

PREFACE

This manual covers the instructional programmes for tailoring as prescribed for third year students by the Department of National Education for the National Diploma: Clothing Design and National Diploma: Clothing Management.

The design and compilation of the manual were based on the assumption that third year students have a basic knowledge of garment construction methods and will therefore be able to apply this knowledge when using this book.

Two possible orders of construction are being dealt with throughout. The first covers the order of construction used in the clothing industry. This construction requires the use of specialised machinery which is too costly for most training centres. The second order of construction dealt with is that which has been adapted for use in student training.

The number appearing next to each operation refers to the corresponding industrial process. In some instances the method used in industry may appear on the opposite page.

It is hoped that this book will be of practical value to students not only during their studies at Technikon Natal, but also as a source of reference once they have completed their studies.

Many thanks are due to *Durban Clothing Manufacturers* for the information supplied by them.

CONTENTS

INTERLININGS

An interlining is a special type of fabric applied to the inside of a garment to give it shape, body and support. Interlinings are made from many different fibres in several weights and degrees of crispness; they may be woven or non-woven, fusible or non-fusible.

Two considerations are critical in selecting an interlining:

1. It should complement and reinforce the garment fabric without overpowering it.

2. Though the two fibres need not be the same in fibre content, the same care requirements should apply to the fabrics.

Wovens are usually cut on the straight grain, whereas non-wovens have no grain and therefore need not be cut in any particular direction. Both types are stable, but there are "all-bias" non-wovens which have some give in all directions. If a degree of give is desired with a woven interlining, it should be cut on the bias.

Fusible interlinings are made with heat sensitive adhesive on one side of the fabric. It may be woven or non-woven. A satisfactory bond depends on a combination of heat and pressure. Refer to instructions that accompany the product. Keep in mind that the adhesive tends to change the character of the garment fabric slightly by adding extra body.

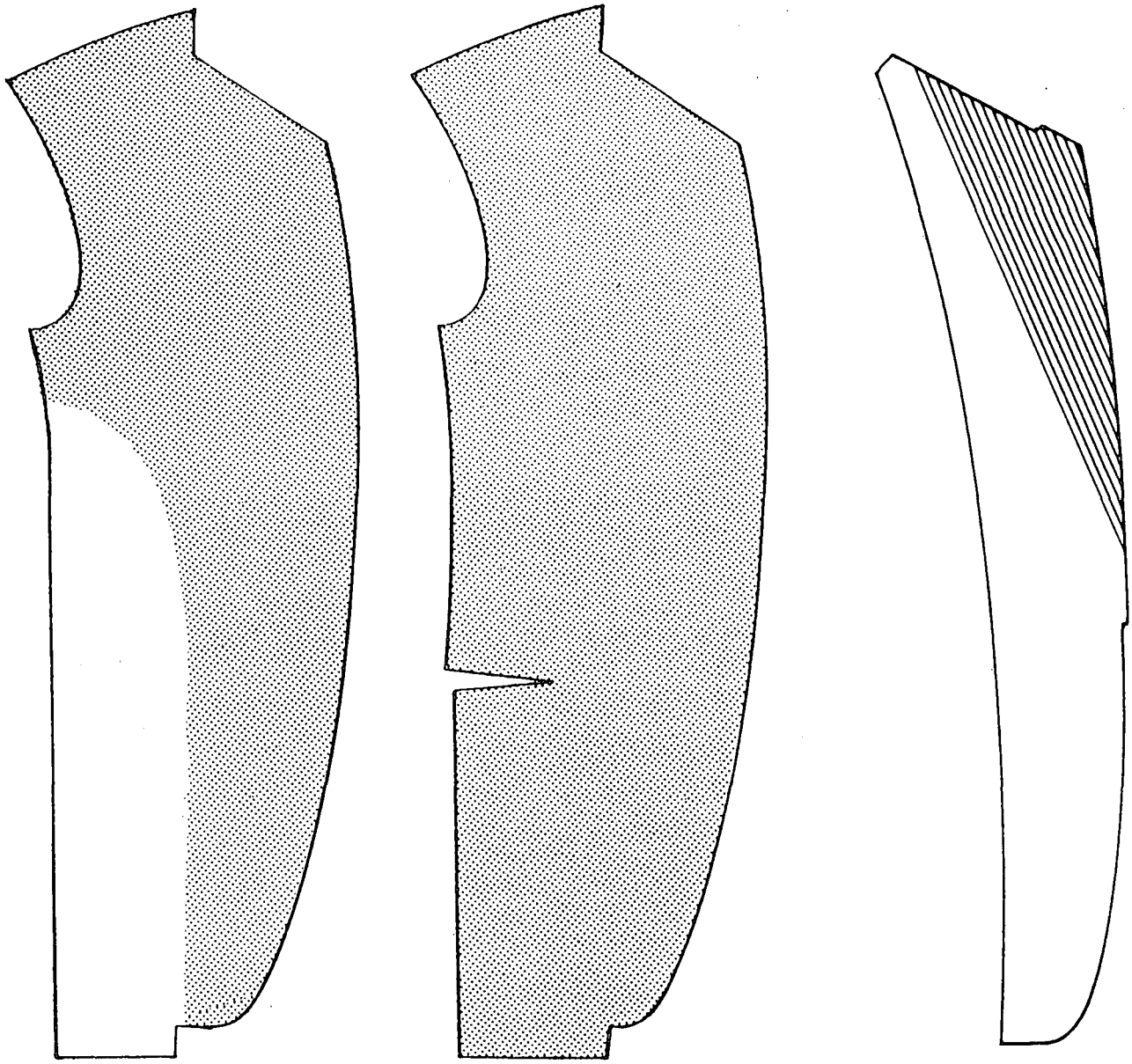
Heavy interlinings can be applied with the strip method. With this method, bulk is reduced by cutting off the seam allowances of the interlining and replacing them with strips of lightweight interlining.

The following examples of interlining uses are methods used by industry. Select the interlining and method most suitable to the design and fabric.

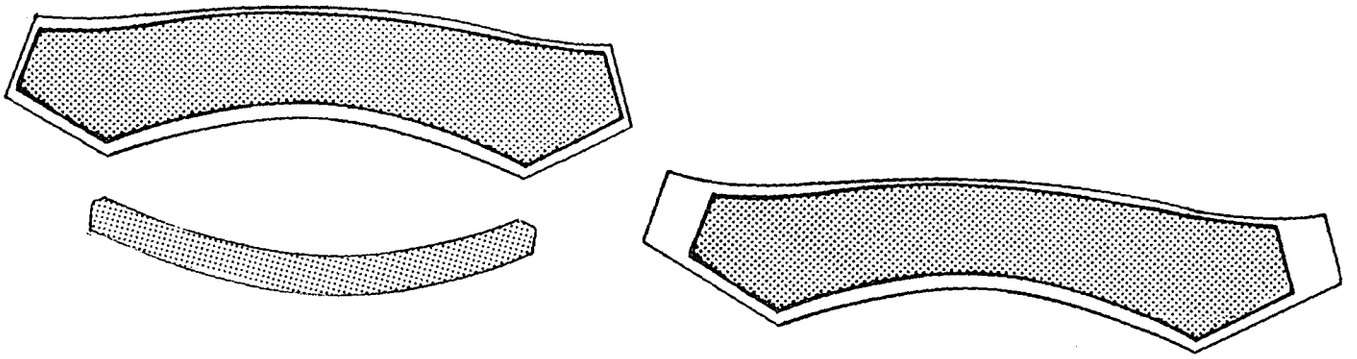
Method 1:

Suitable for soft tailoring - mainly cotton, linens, lightweight woollens and blends.

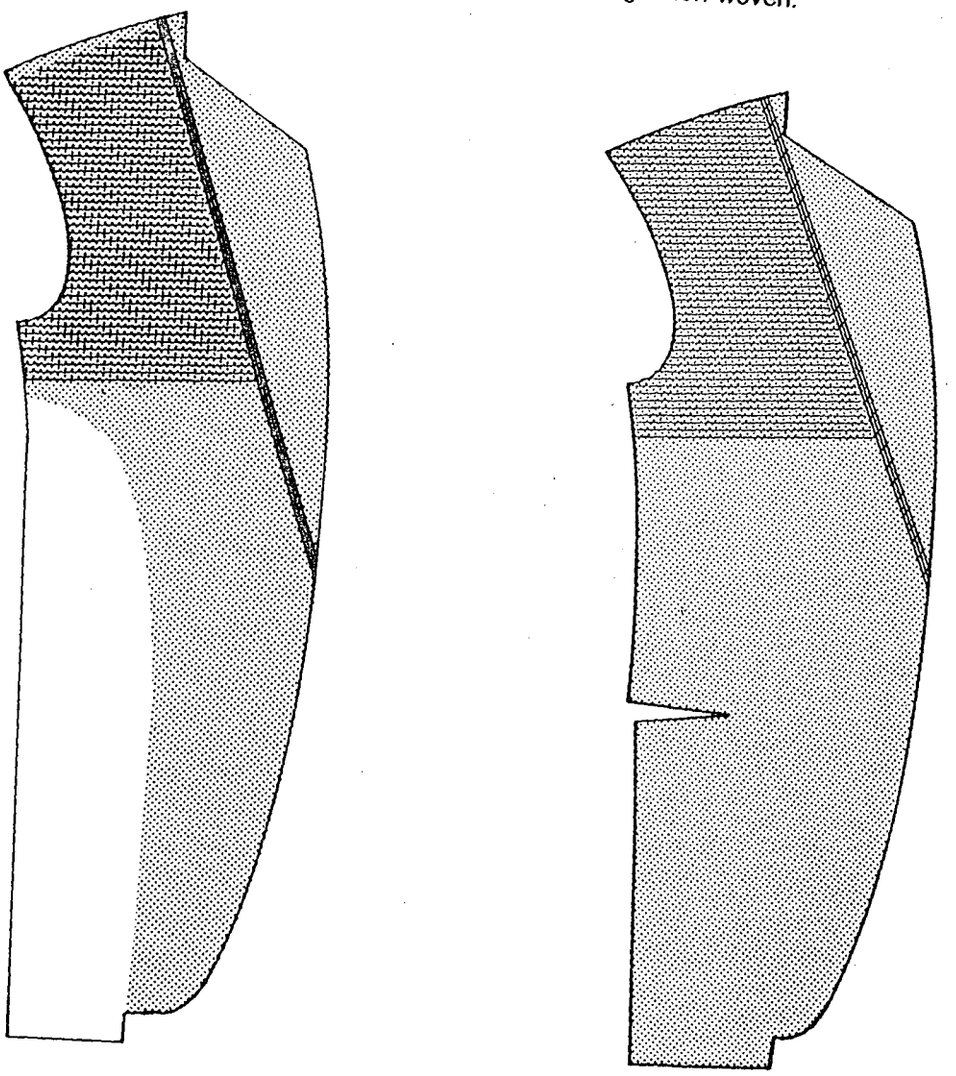
1. 2.



Jacket forepart - lightweight non-woven fusible.
Lapel - lightweight non-fusible or lightweight weft insertion non-woven.



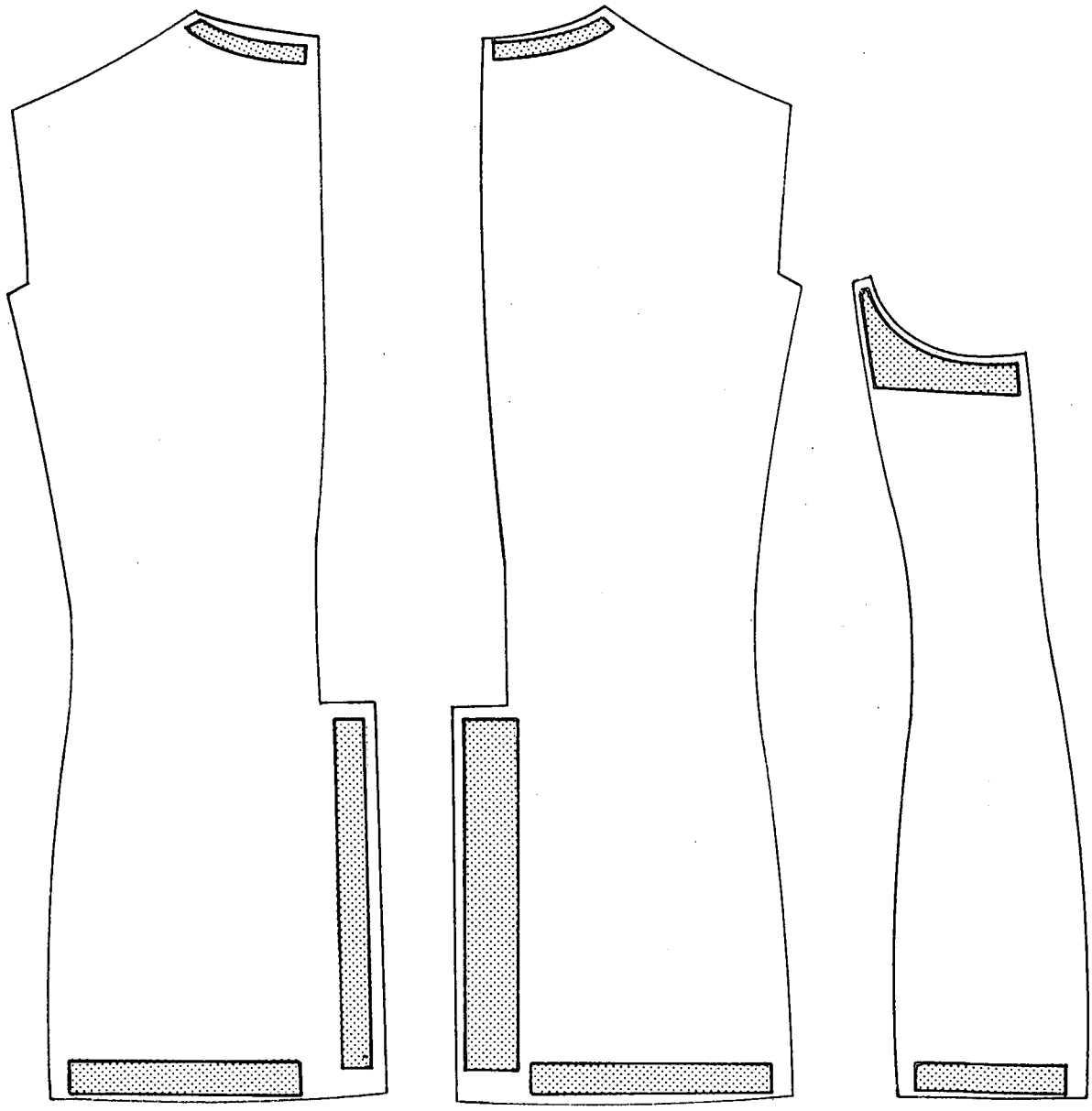
3. Two-piece under collar - lightweight non-woven.
4. Two-piece top collar (stand not included) lightweight non-woven.



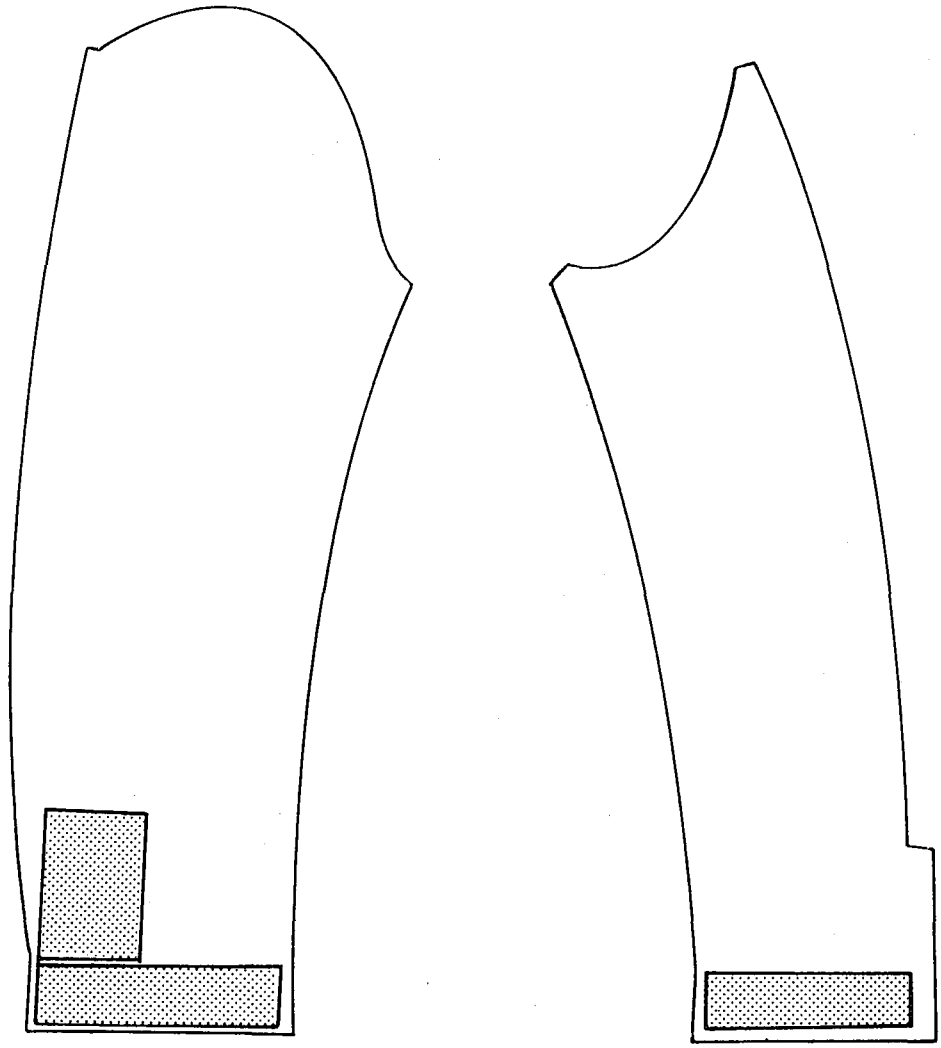
5. Floating body panel - woven non-fusible attached with woven non-fusible bridle strip.

Method 1 and Method 2

The back, side panels, top and under sleeve will be treated the same for both methods.



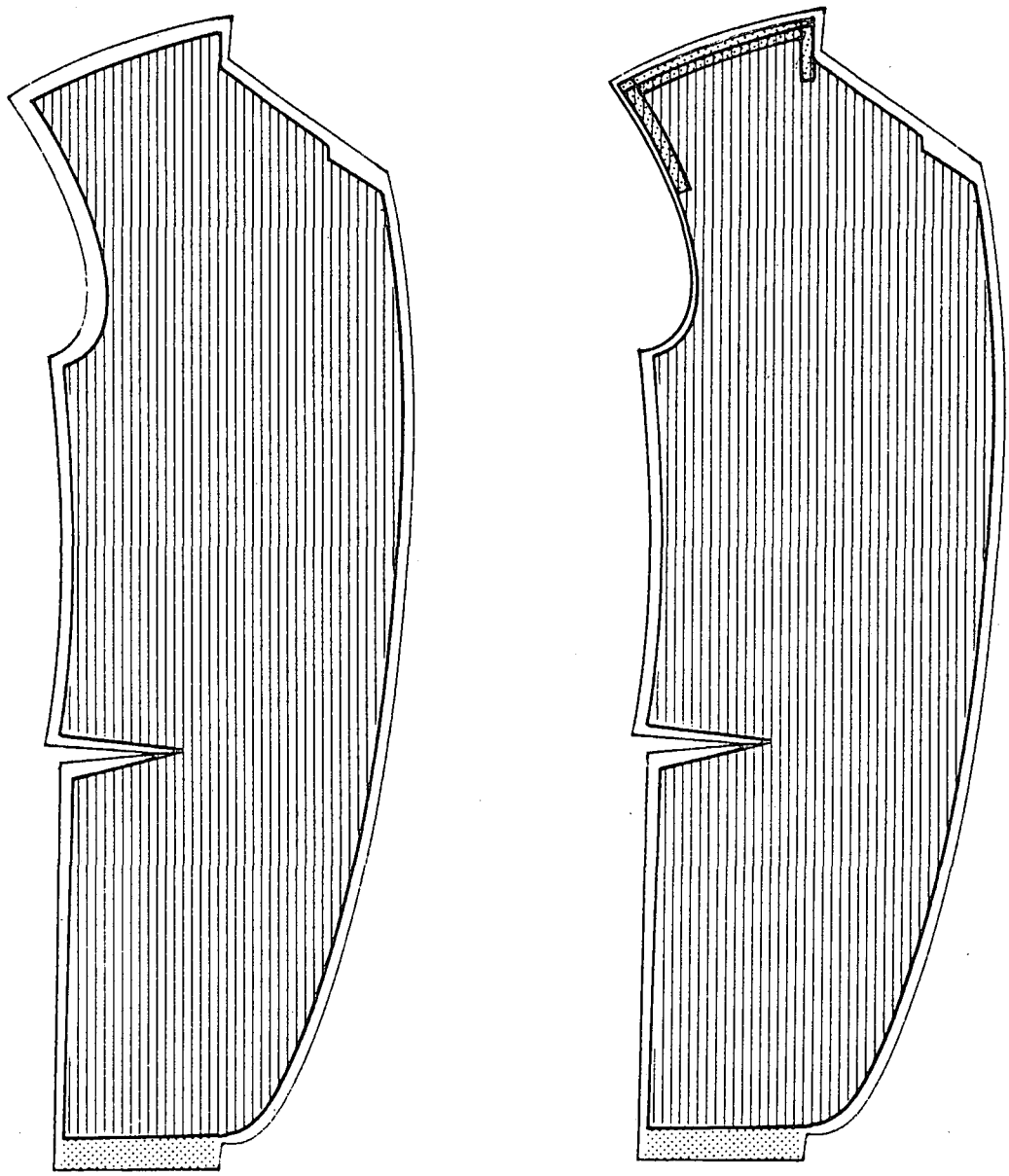
6. The back, side panels, top and under sleeve strips of lightweight non-woven fusible.



7. The back, side panels, top and under sleeve strips of lightweight non-woven fusible.

Method 2

Tailoring - for medium to heavy weight woollens, linens and blends.



1. 2.

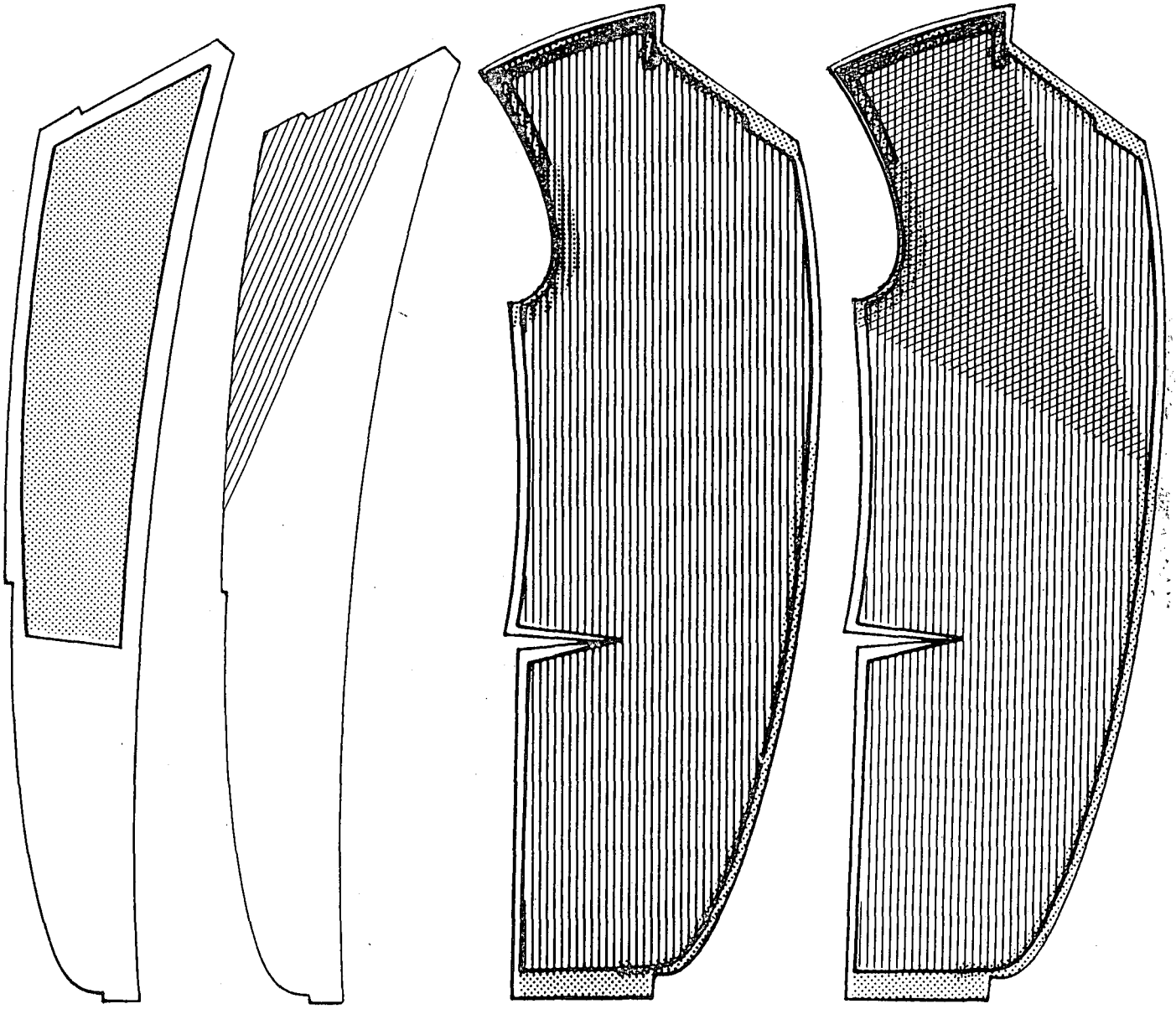
1. Jacket forepart - woven fusible and hem lightweight non-woven.
2. Lightweight non-woven at shoulder seam, top of armhole and neckline.

3. Lapel - lightweight non-woven fusible or lightweight weft insertion non-woven.

4. Fuse forepart front edge, gorge and front armholes.

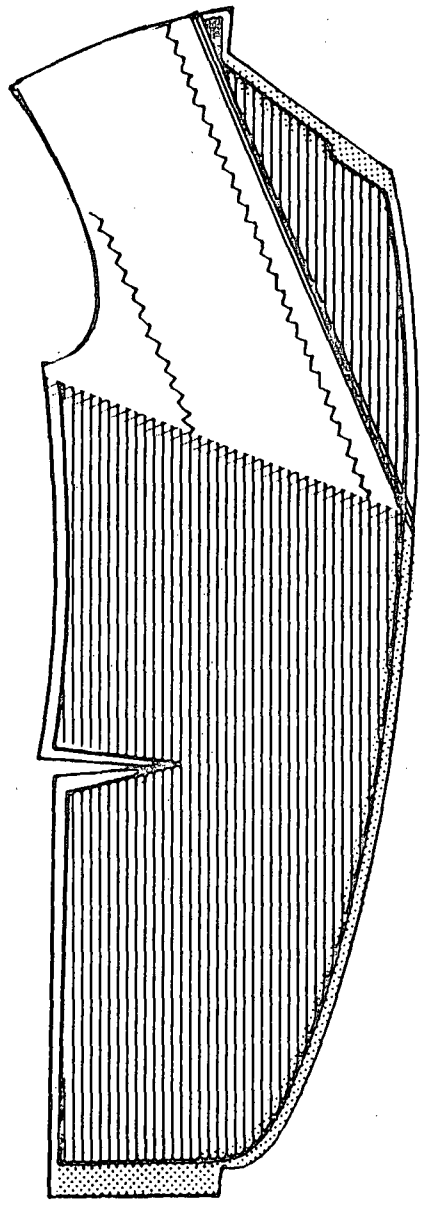
Fuse a lightweight non-woven tape from the hem corner to ± 2cm above the buttonhole notch.
Fuse tape along the gorge edge.
Fuse the front armhole, shrink the forepart armhole between the notches ± 1cm and fuse tape from just above the top nick to the edge of the body fusible.

3. 4. 5.

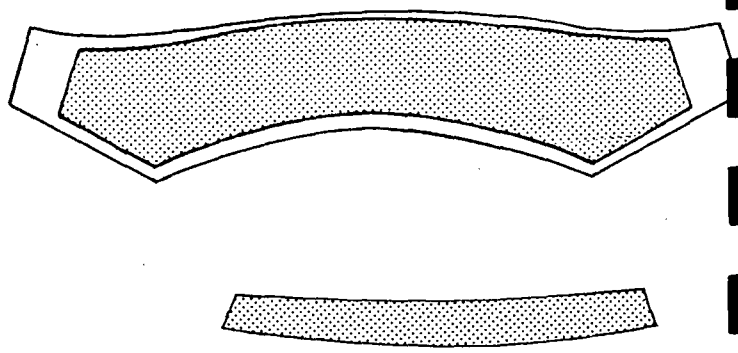


5. Floating body panel - non-fusible woven.

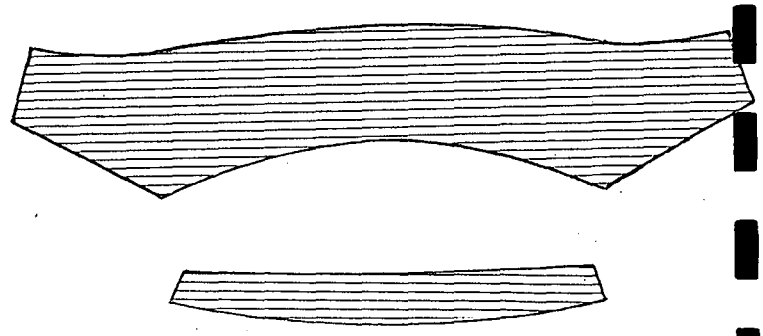
5.



6.



7.



5. Felt and floating body panel attached with woven non-fusible bridle strip.

6. Two-piece top collar non-woven.

7. Under collar - if two piece in fabric, a woven fusible.
if one piece melton cloth, lightweight fusible woven.

ORDER OF CONSTRUCTION USED IN INDUSTRY

MEN'S JACKETS

ORDER OF CONSTRUCTION USED IN STUDENT TRAINING

Lining

Sleeves

Finish the jacket off

CONSTRUCTION OF A TAILORED JACKET

For constructing the jacket a lockstitch machine is used except when another machine is mentioned.

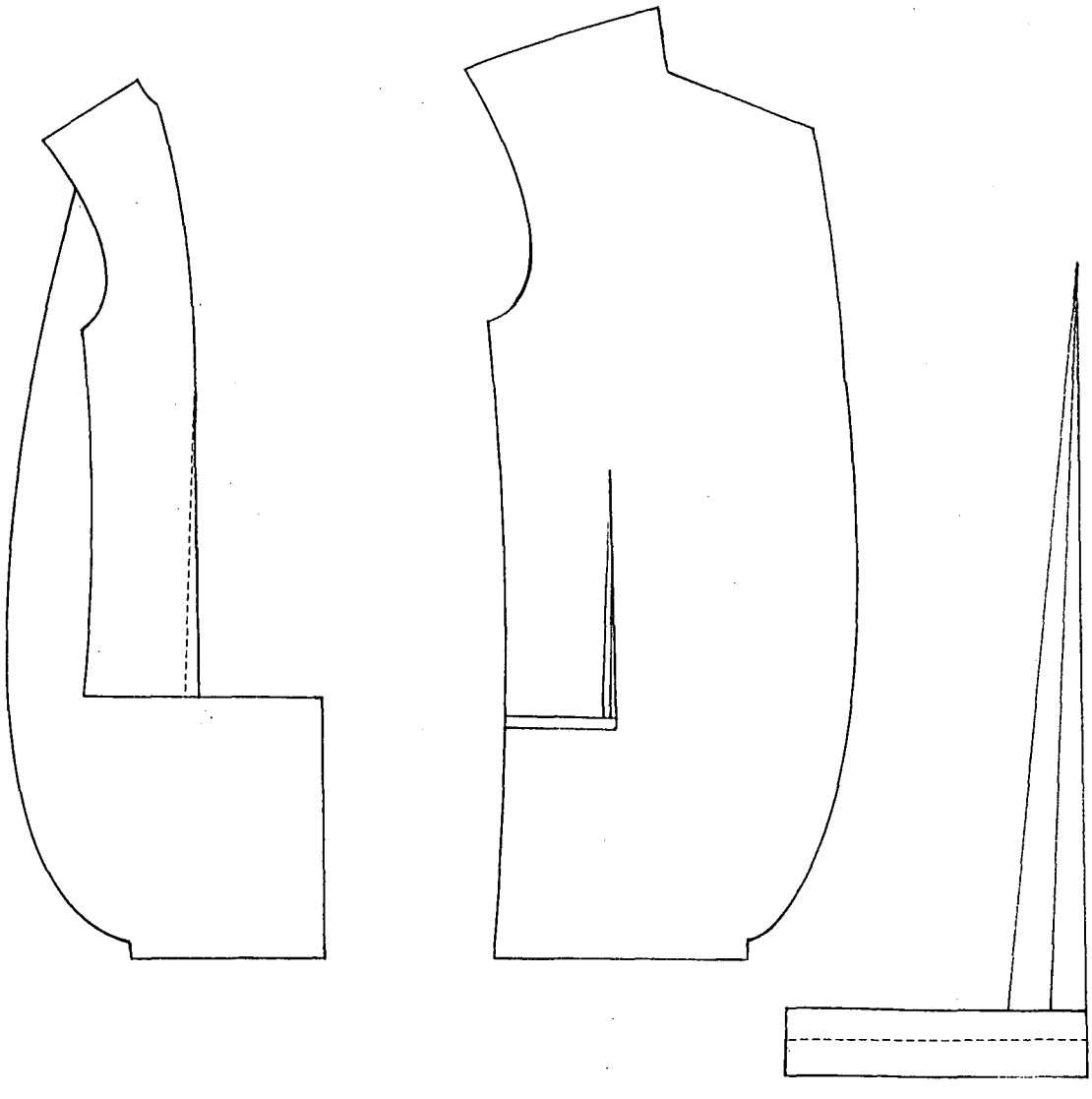
Fusing of interlinings

Execute all fusing as described in the previous chapter.

31. 1. Mark and sew front dart.

Place the marker on forepart and mark the dart end position.
Nick the belly dart 6mm.
Sew the dart - at its widest point 6mm tapering off to dart point.

1. 2.



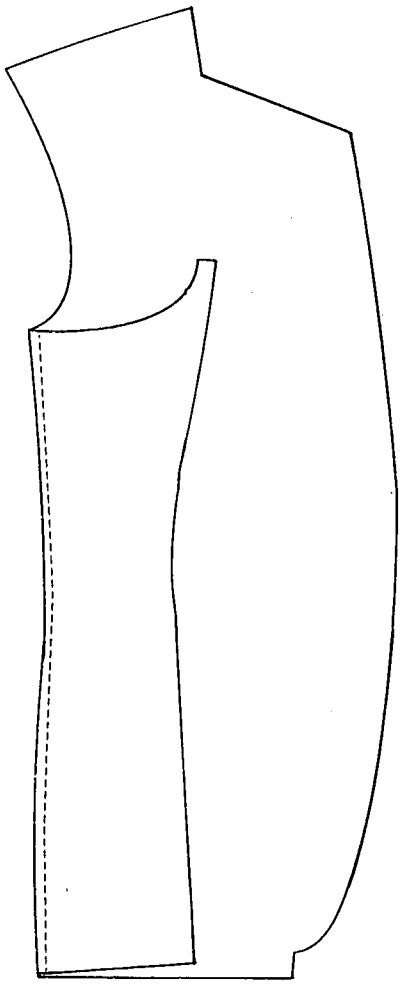
32. 2. Press front dart.

Cut the dart open and press. Open it to the stitching by using a pin.
Close the belly cut with fuse tape.

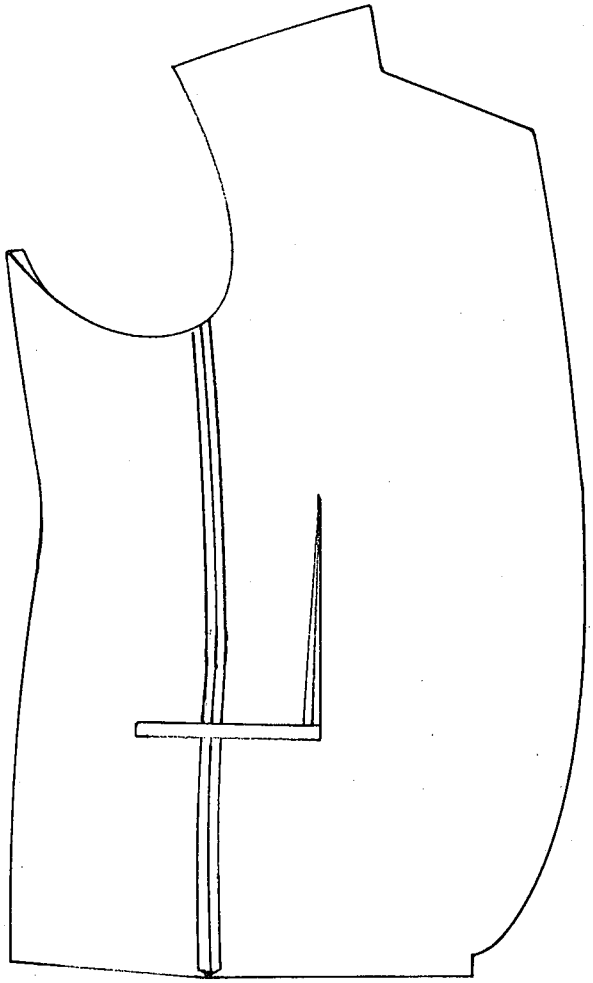
33. 3. Close jacket side body seams.

Close the side body seam, sew a 10mm seam and backtack.

3.



4.



34. 4. Open jacket side seams.

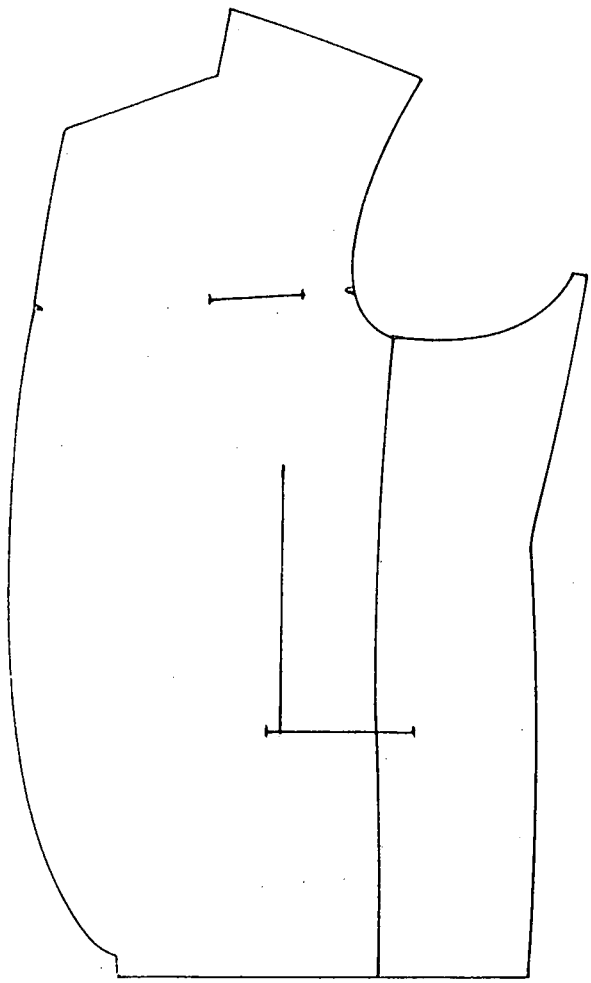
Press the seam open, fuse tapes over the seam onto side body for support to pocket area.

Method used by industry

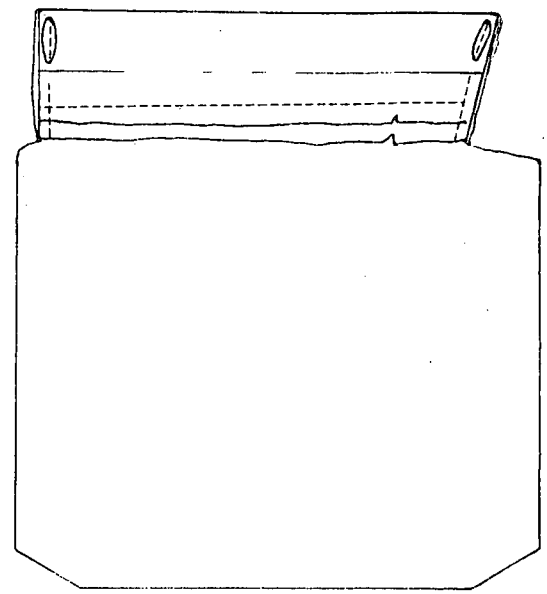
35. Mark welt and flap sew on line.

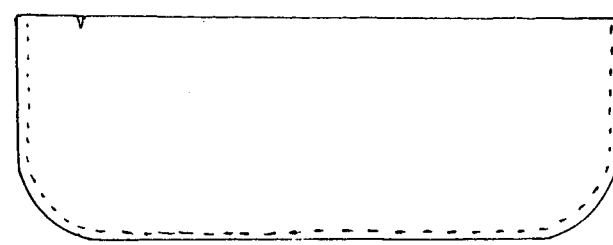
Mark a chalk line along the belly cut. Place fusible interlining on the line, place the flap on the fusible. Make sure the notches and stripes match. Fuse and press flap onto fusible. Mark the welt by using the marker. Place fusible on the mark followed by the welt. Match the stripes and fuse into position.

35.



36.





37.

36. Mark welt and fit pocket bag.

Make sure the notches correspond and sew a 6mm seam. Stitch double side fusible tape in the centre of the welt. Fold flat on breakline and stitch sides. Trim excess cloth and turn welt.

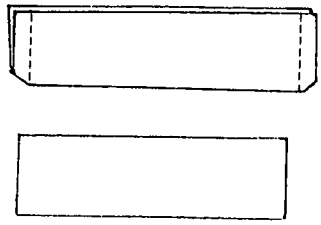
37. Profile stitch flaps.

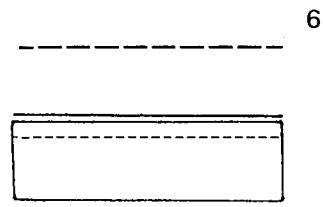
Place lining in jig, place fabric in lid of profile according to the nick and stitch a 6mm seam and trim.

5. Sew welt

Fold the welt in half lengthwise, with the wrong side outside, and stitch a 5mm seam at each end. Cut off the corners. Turn the welt inside out and press it.

6. Mark the position and the exact length of the pocket opening on the right side of the garment with a line of tacking stitches.





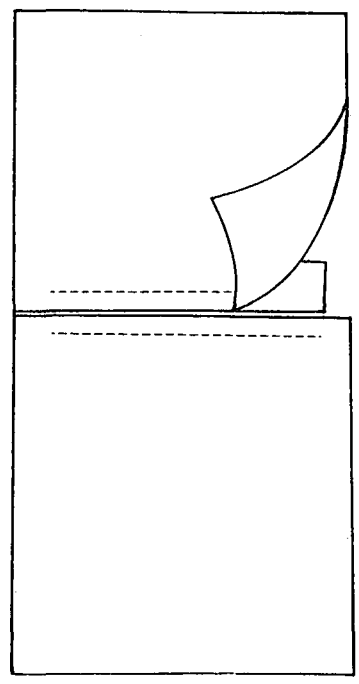
7. Place the welt below the marking line, with the raw edges of the open side against the tacking stitches, and tack it to the right side of the garment.

8. Place the lower pocket piece over the welt, below the marking line, with the raw edges together, and the right side of the pocket piece to the right side of the garment. Pin and tack it in position.

9. Place the upper pocket piece above the marking line, with its raw edge against the tacking stitches and its right side on the right side of the garment. Pin and tack it in position.

10. Stitch the pocket pieces to the garment, making the stitching exactly as long as the opening. Stitch 5mm from the edge of each piece. Remove the tacking threads.

10.

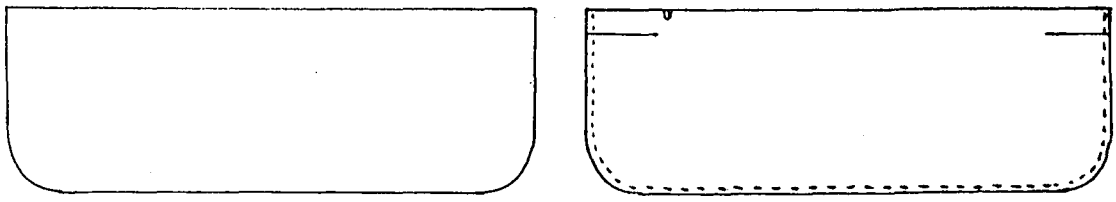


Method used by industry

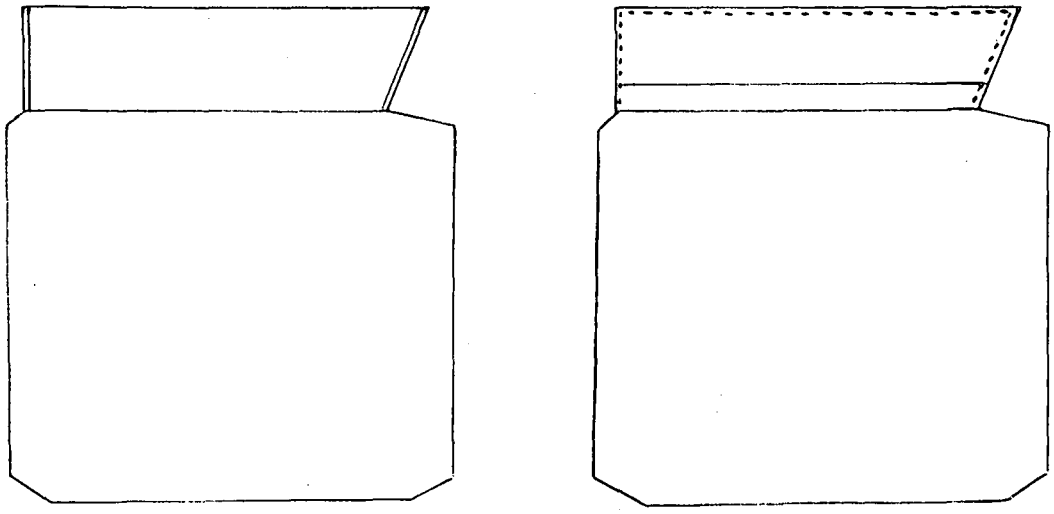
38. Press welt and flap.

Press the welt on the wrong side, turn the flaps and press.

38.

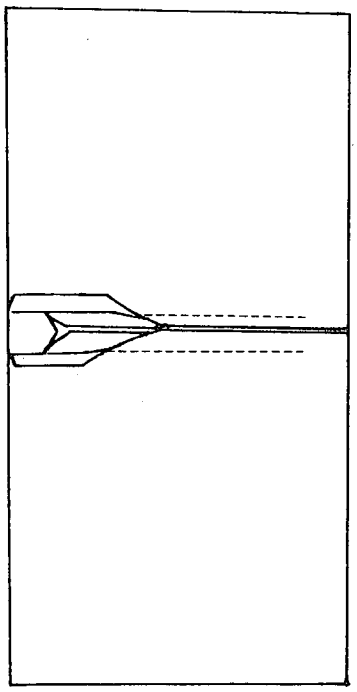


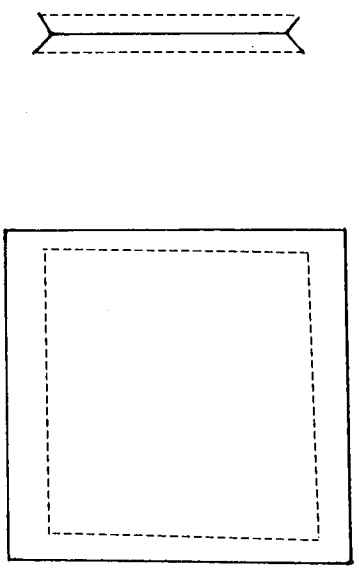
40.



40. Mark welt and flap width.

Place the markers on the welt and flaps and mark the correct widths. Trim excess off and place welt in the forepart. Match the stripes. Place the flap on the forepart and match the stripes.





11. Lift the edges of the pocket pieces away from the marking line. Slash the opening for the pocket along the tacking stitches to within 5mm of each end and snip diagonally to the end of the machine stitching on each side to form a little "tongue" or triangle at each end. Take care not to cut the stitching.

12. Fold the little triangles through the opening to the wrong side and press them flat. Draw the pocket pieces through the opening to the wrong side and turn the welt up on the right side to cover the opening.

13. Press the pocket flat along the seam line on each side of the opening on the wrong side of the garment, and flatten the upper pocket piece over the lower one, with the right sides facing.

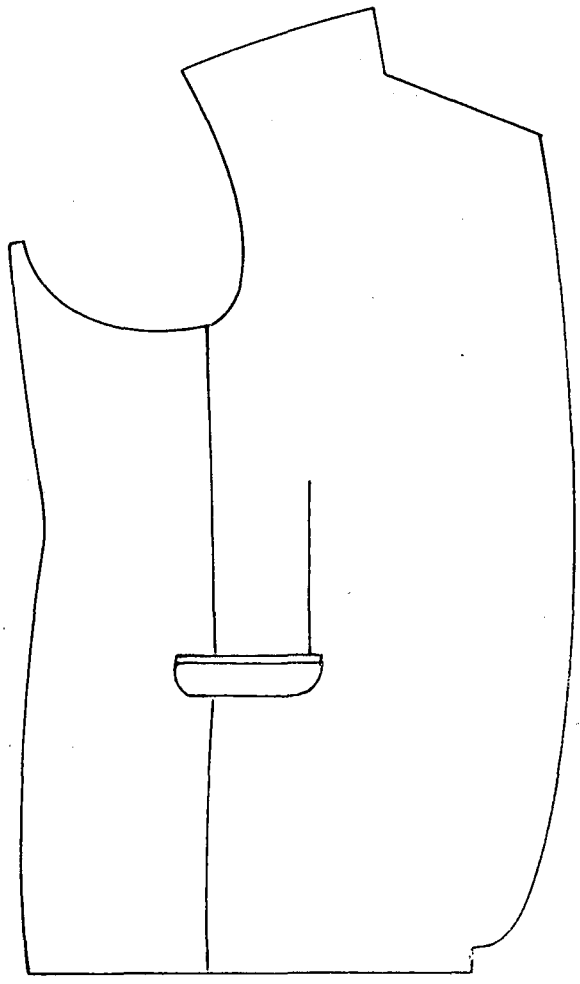
14. Tack and stitch the pocket pieces together 10mm from the edge, catching the little triangles on each side in the stitching to close the ends of the pocket opening.

Method used by industry

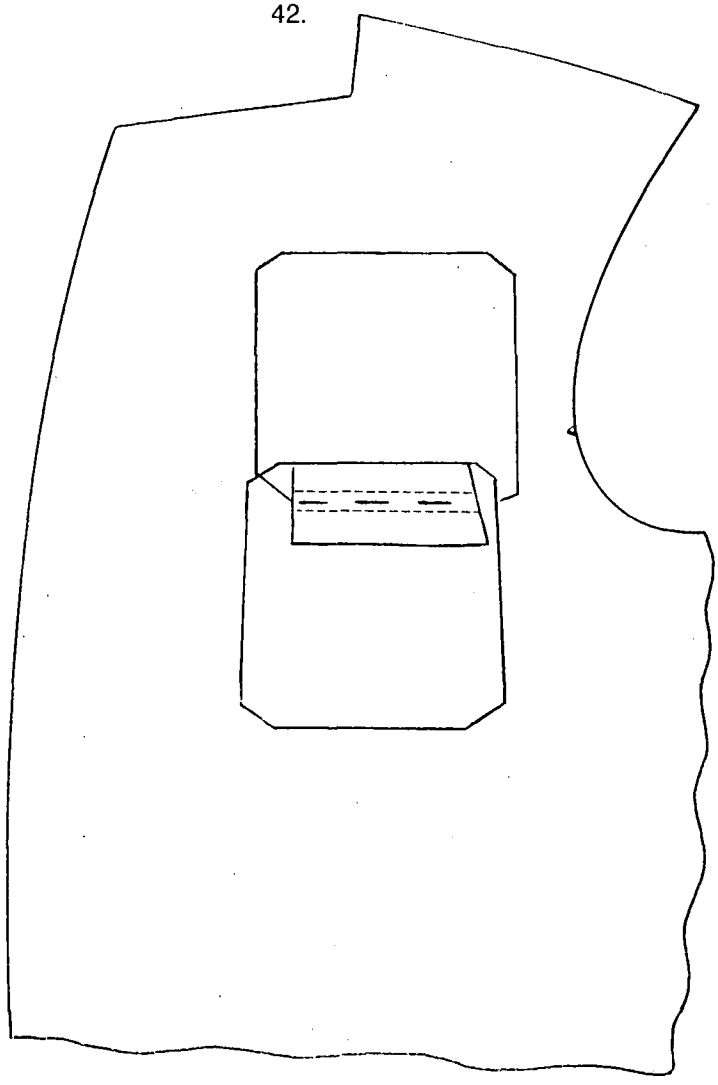
41. Insert jet pocket with flap.

Place jet in machine, align forepart under the lights, place flat in machine. The jet and flap will be stitched and mitred automatically.

41.



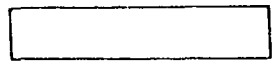
42.



42. Fit welt and second half of welt pocket bag.

Place welt on the marked line, match the stripes, stitch and backtack. Place the lining on the upper side of the welt and stitch a 6mm seam. Backtack.

15. Turn the garment to the right side. Pin the ends of the welt to the garment to cover the pocket opening and slip-stitch by hand or machine-stitch them in position.



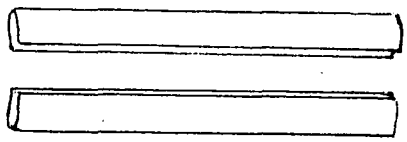
16. Press the pocket on the wrong side, then lift it up and slip the iron between the pocket and the garment to iron away any impression left on the garment by the first pressing.

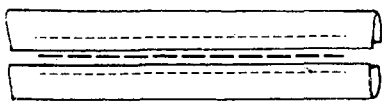
Sew jet pocket

Method 1: A pocket with a two-piece binding.

17. Mark the position and the exact length of the pocket opening with a line of tacking stitches (called the marking line) on the right side of the garment.

18. Place the two binding pieces on the right side of the garment, with the raw edges of each piece meeting on the marking line and the ends protruding 10mm beyond each end of the marking line. Tack them in position on each side of the marking line and stitch along the centre of each piece and exactly the length of the pocket opening.



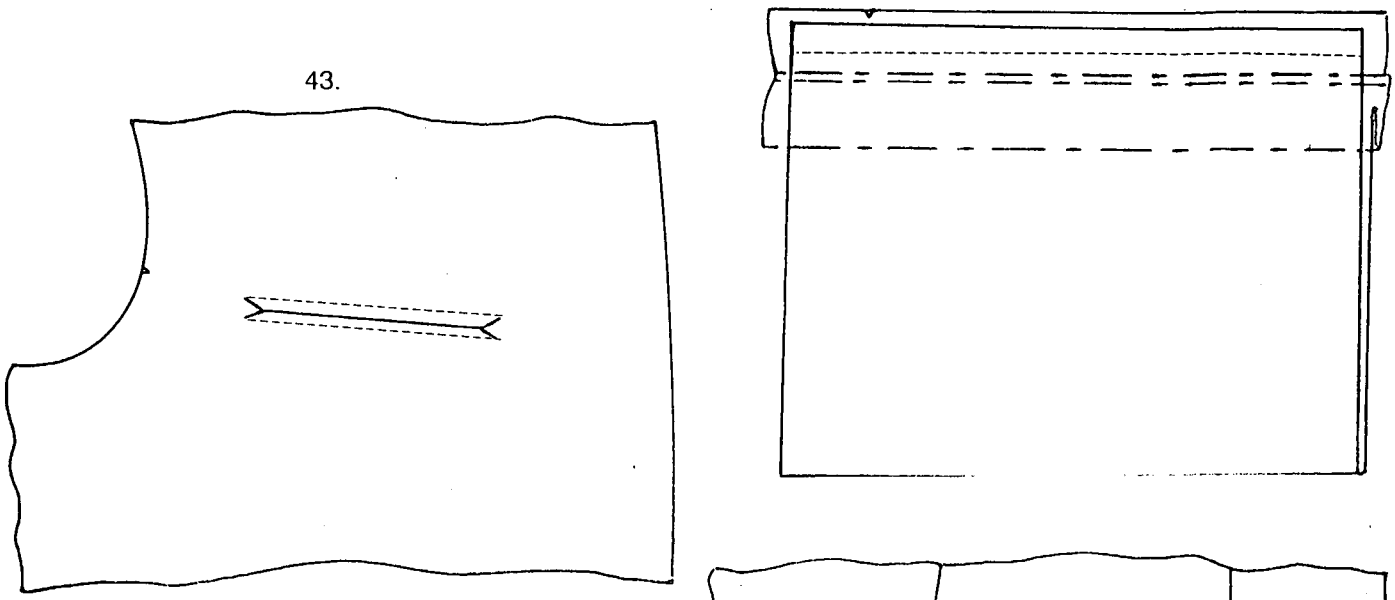


Method used by industry

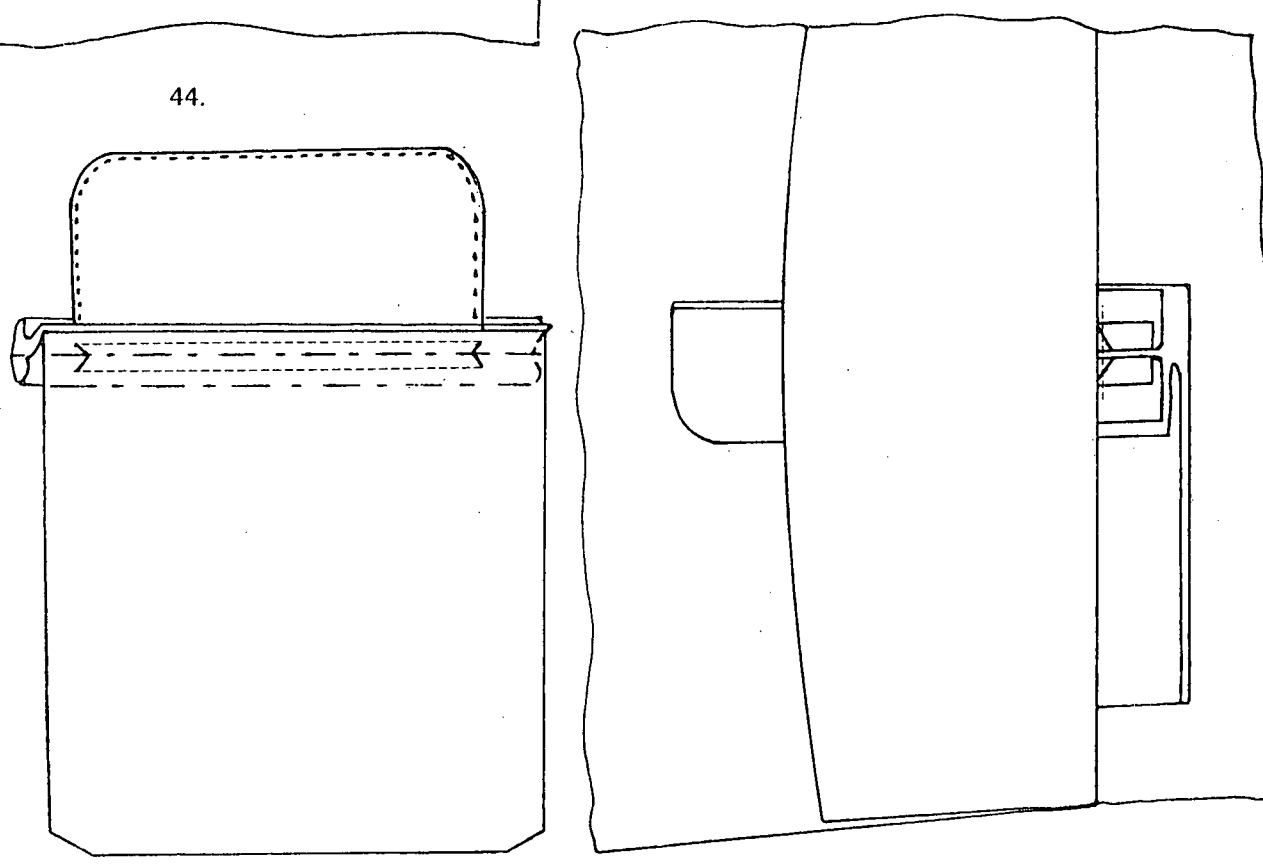
43. Cut mitre jet pockets and welt, wipe chalk marks.

Mitre into the stitched jet pocket corners and push lining through.
Mitre into the attached welt corners and push the lining through.

43.



44.



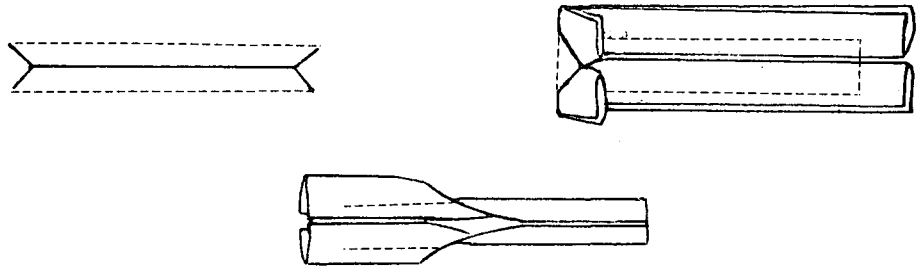
44. Fit pocket bags.

Attach the pocket bag with a 10mm seam to the bottom of the jet. Pull the lining through the pocket mouth and form jet, align the lining with the top jet and sew a 10mm seam.

45. Tack side pocket mitres.

Sew mitre down onto the jet and backtrack.

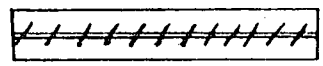
19. Cut the pocket opening by slashing through the garment fabric and the interfacing along the marking line between the raw edges of the binding pieces to within 5mm of each end. Lift up the pieces at each end and snip diagonally to the end of the machine stitching on each side to form a little "tongue" or triangle at each end of the opening. Take care not to cut the stitching. Remove the tacking threads.



20. Fold the little triangles and the binding pieces through the opening to the wrong side so that the folded edges of the binding pieces meet at the centre of the opening. Press them flat on the wrong side over the interfacing.

21. Turn the garment to the wrong side. Fold back the ends of the binding pieces and stitch across the ends, catching the little triangles in the stitching to close the ends of the opening.

22. Tack the edges of the binding pieces together with diagonal tacking.



23. Face the top end of the upper pocket piece (or both pieces) on the right side with the garment fabric.

24. Fold back a 5mm turning to the wrong side along the top edge of the lower pocket piece and place it on the lower binding piece, with the folded edge immediately below the seam line or the stitching on the binding piece, and the right side up. Tack and stitch the pocket piece to the edge of the binding piece only.

25. Place the upper pocket piece over the lower one, with the right sides facing and the top edge level with the raw edge of the upper binding piece. Tack and stitch it only to the edge of the upper binding piece, immediately above the seam line or stitching on the binding piece.

Method used by industry

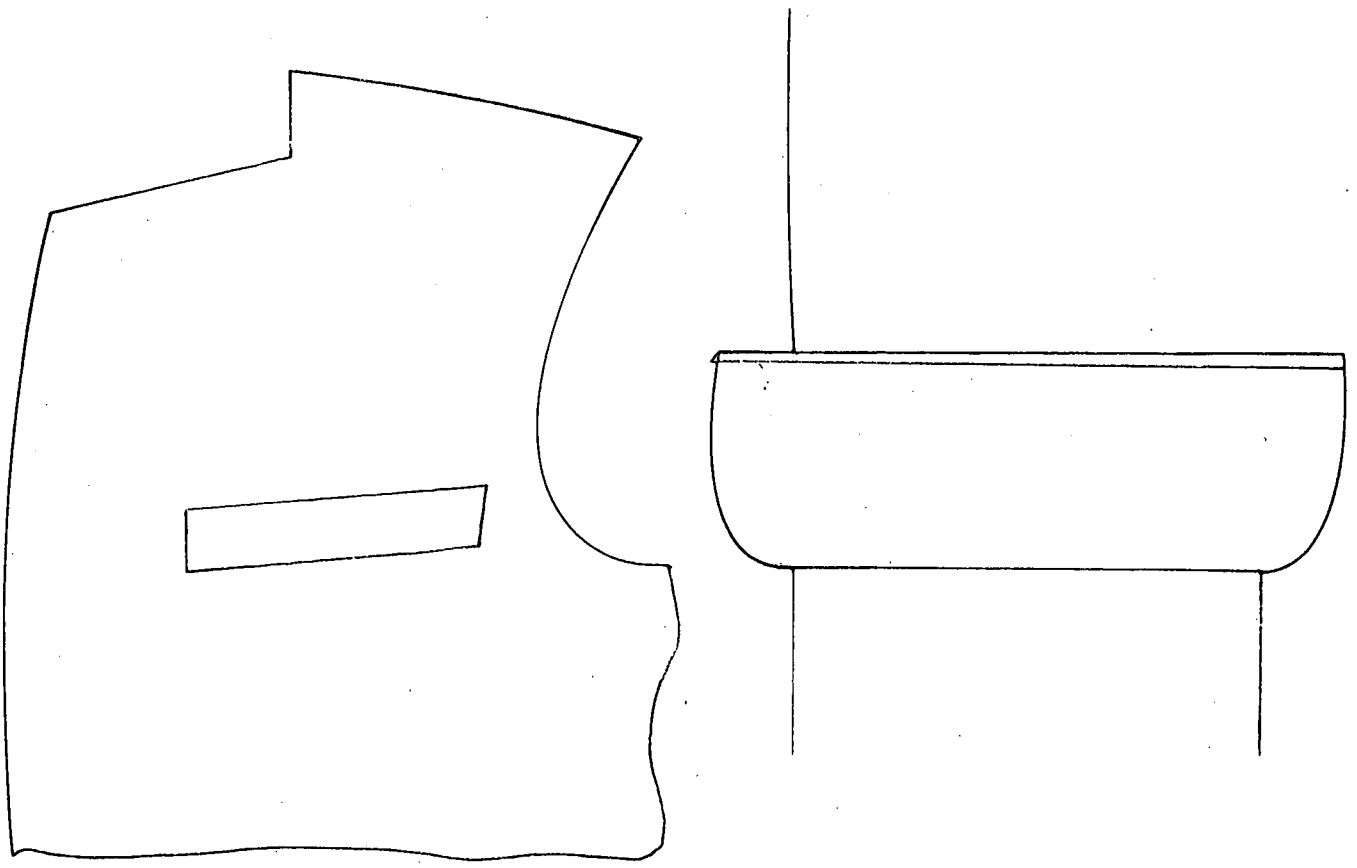
46. Tack welt ends.

Make sure the welt lies flat on the forepart, roll seam over and stitch in the seam. Backtack.

47. Press welt and side pockets.

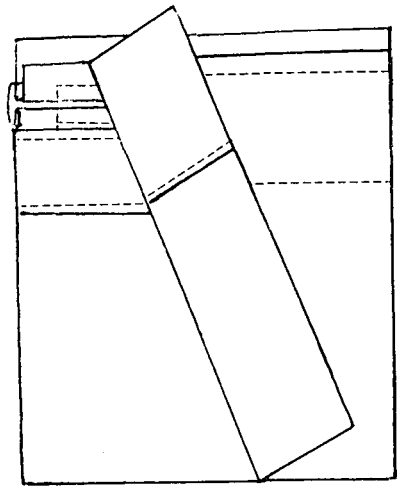
Straighten welt out and press.
Tuck flap into jet pocket. Make sure there are no folds in the pocket bag and press. Remove flap from jet and repress.

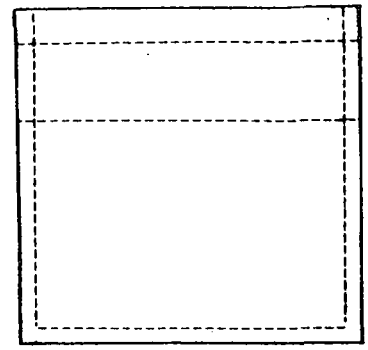
47.



48. Tack side pocket mouth.

Lifting the flap, make sure the pocket bag lies flat and tack jet closed, to keep it neat during rest of the operations.





26. Pin and stitch the pocket pieces together 10mm from the edge, catching the little triangles and the edge of the interfacing on each side in the stitching.

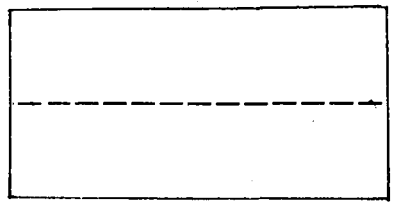
27. Trim the raw edges of the pocket. Edge-stitch and neaten the raw edges of the pocket.

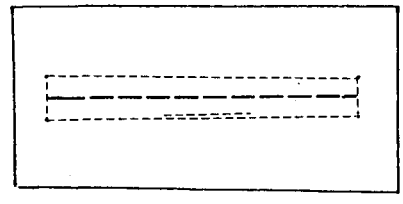
28. Press the pocket on the wrong side, lift it up and slip the iron between the pocket and the garment to iron away any impression left on the garment by the first pressing.

Method 2: A pocket with a one-piece binding.

29. Working on the right side of the garment, place the binding piece right side down on the right side of the garment, with the crease on the marking line and the ends protruding 10mm beyond each end of the marking line. Tack the binding piece to the garment on the crease, making the tacked line exactly as long as the pocket opening.

30. Stitch the binding piece to the garment and the interfacing, stitching 5mm on each side of the centre marking line and straight across each end of it. Begin the machine stitching in the middle of one long side, stitch round the marking line, keep the corners at each end perfectly sharp and overlap the stitching at the end for about 10mm. The line of stitching along the sides should be of the exact length of the pocket opening and should be perfectly straight and exactly 5mm away from the centre marking line.

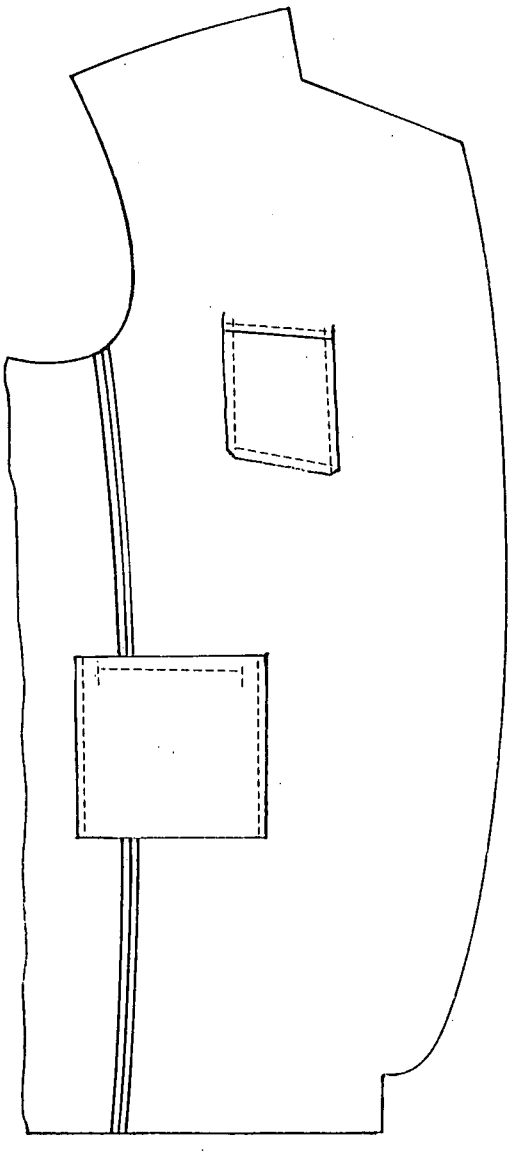




Method used by industry

49. Close side and welt pocket bags.

Align sides of pocket bags and sew a pocket seam. Backtack.

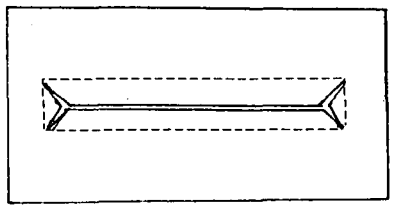


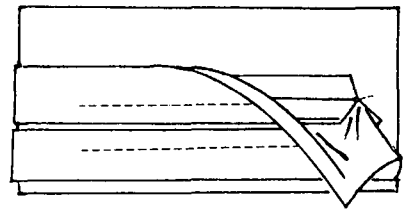
50. Examine.

At this stage an in-line examination will take place on the following operations:

1. Jet pockets.
2. Side seams.
3. Soabars and size.

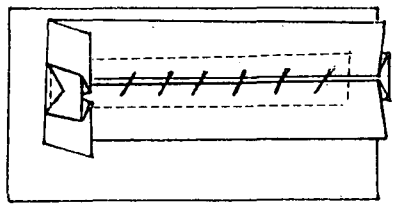
31. Slash the pocket opening through both layers of the fabric and the interfacing along the centre marking line to within 5mm of the stitching at each end. Snip diagonally into the corners to form a little "tongue" or triangle at each end of the pocket opening. Take care not to cut the stitching at the corners.



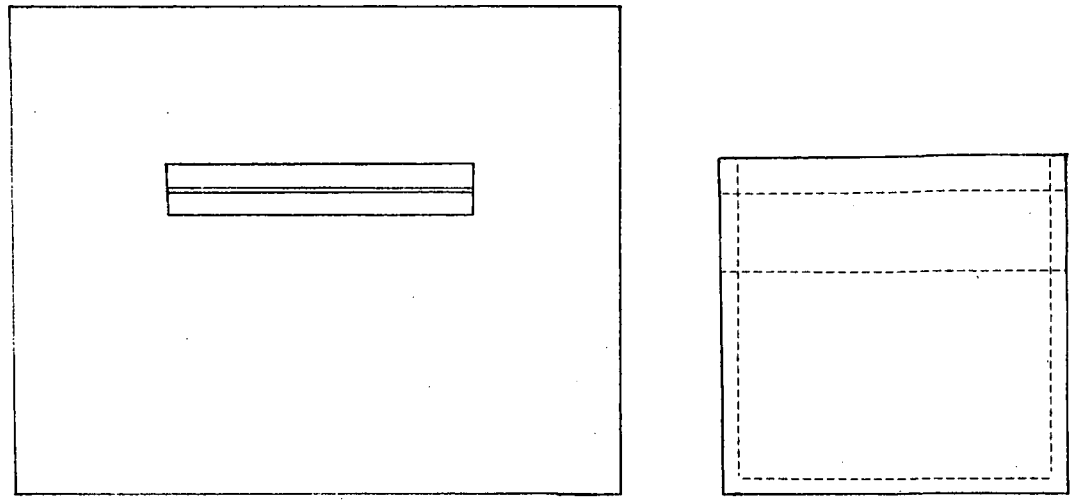


32. Fold the triangle at each end through the opening to the wrong side. Fold the binding piece through the slit to the wrong side. Fold an inverted pleat in the binding piece so that the folded edges of the pleat meet at the centre of the pocket opening. Tack it in position on the wrong wide.

33. Tack the folded edges of the pleat together over the opening with diagonal tacking. Fold back the ends of the binding piece on the wrong side and stitch across the ends and through the little triangles to close the ends of the opening.

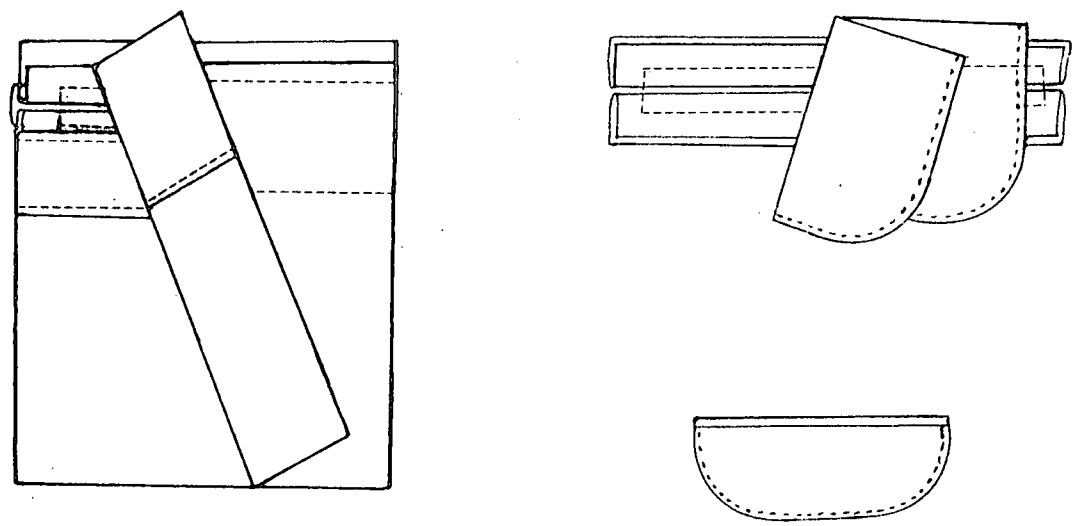


34. Fold back a 5mm turning along the top edge of the lower pocket piece and place it with the folded edge immediately below the stitching (or seam line) on the lower half of the binding piece and the right side up. Tack and stitch it to the edge of the binding piece.



35. Place the upper pocket piece over the lower one, with the right sides facing and the top edge level with the raw edge of the upper half of the binding piece. Tack and stitch it only to the edge of the binding piece and the interfacing immediately above the stitching (or seam line) on the binding piece.

36. Pin and stitch the pocket pieces together 10mm from the edge, catching the little triangles and the edge of the interfacing on each side in the stitching.



37. Jet pocket with flap.

Follow instructions for jet pocket but do not close pocket bag. Sew a 6mm seam around the curved edge of the flap. Turn the flap and top stitch. Insert flap into jet pocket and attach along the top binding. Close pocket bag.

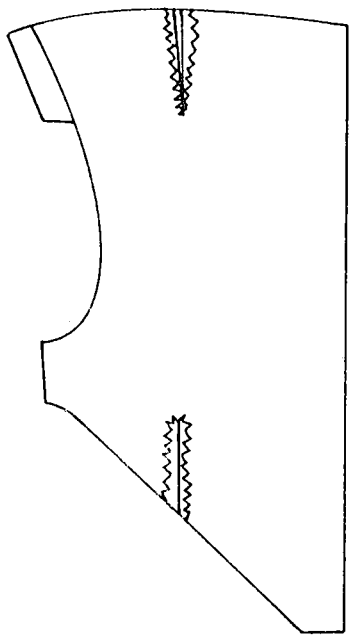
38. Press welt and jet pocket.

39. 39. Make chest piece.

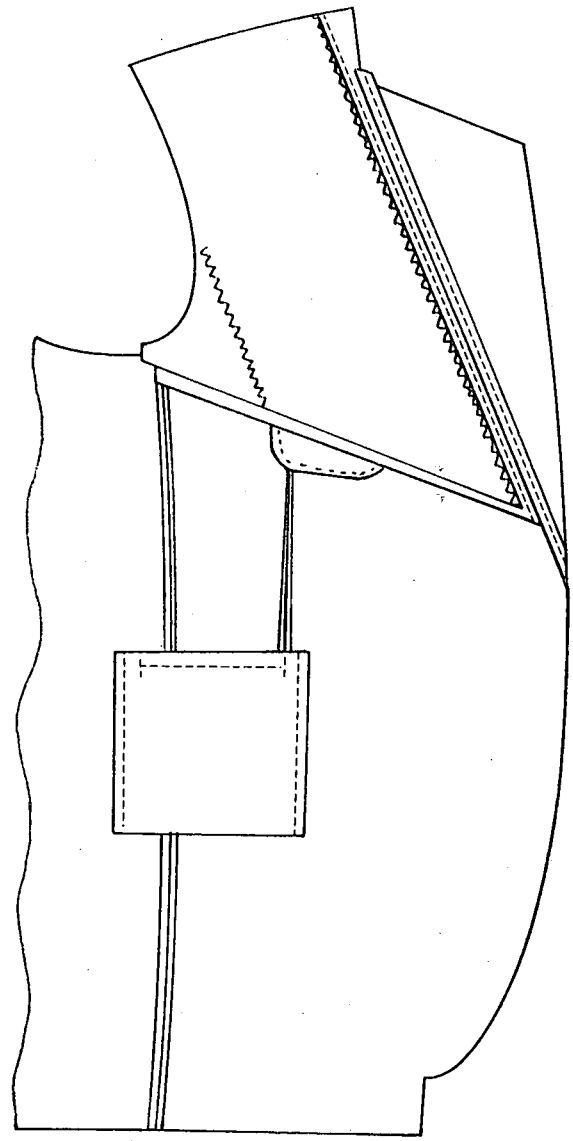
* Zig-zag machine.

Close the top dart with wedge piece - bottom dart opens by 1,2cm.
Place felt on canvas, stitch on long side and another row on the short side up to the centre.

39.



40.



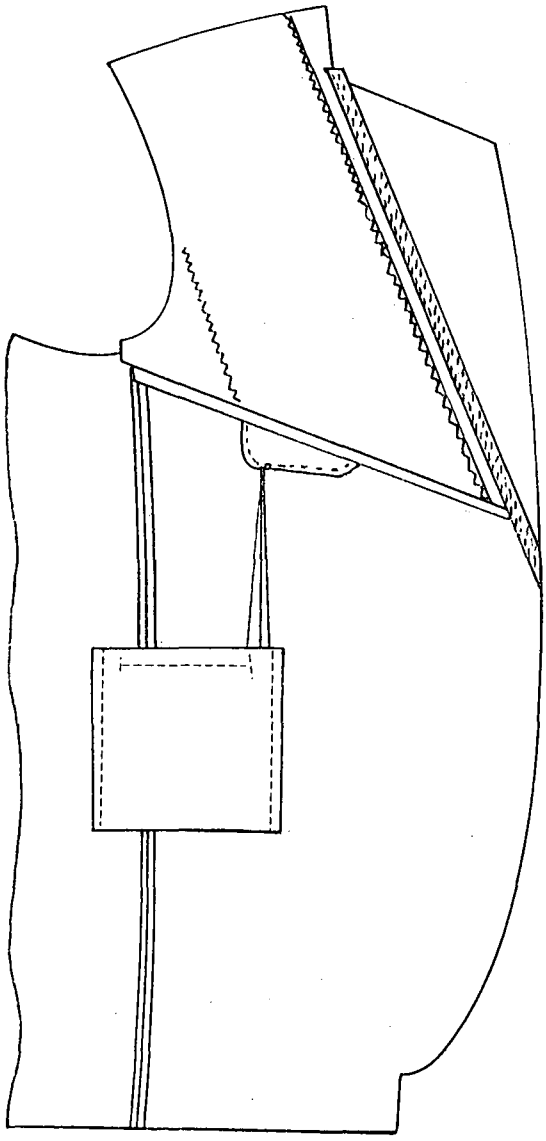
51. 40. Fit chest piece and bridle strip.

Align chest piece on the forepart according to the bridle strip marking, baste the long side of the chest piece to the forepart.
Place the bridle strip over the long side of the chest piece. Allow for slight tension ± 1cm and baste the strip down.

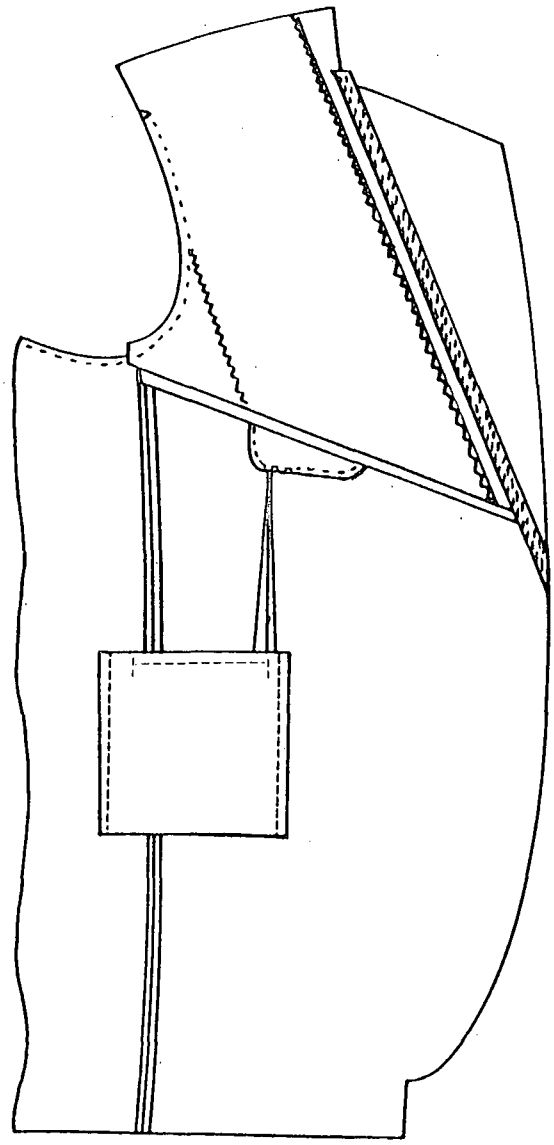
54. 41. Blindstitch bridle tape, remove basting.

* Blindstitch machine.
Blindstitch both sides of the bridle tape and remove centre basting.

41.



42.



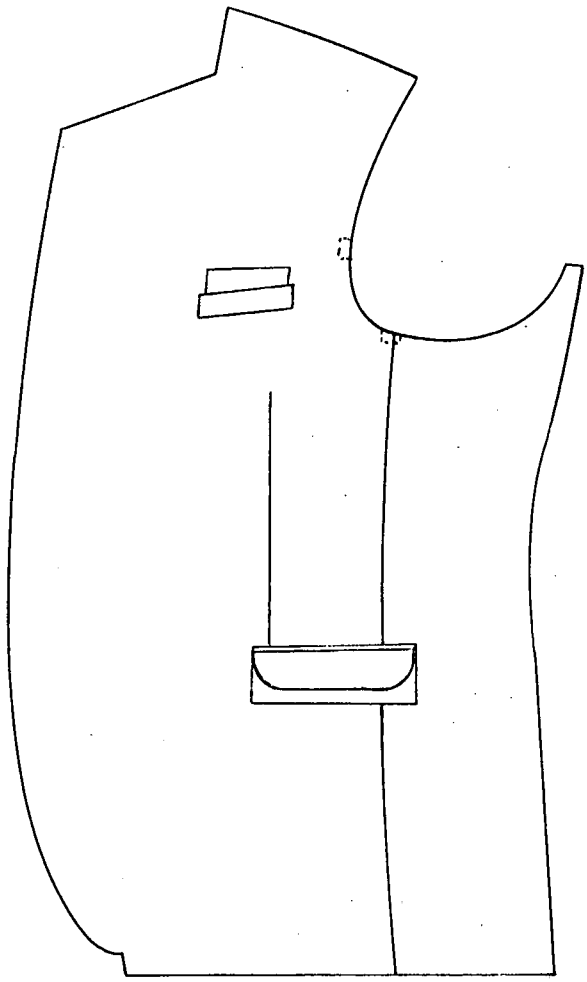
56. 42. Stitch and trim forepart armhold, trim canvas shoulder edge.

Stitch the chest piece to the forepart from the top nick in the armhole to the side body seam, allowing a 5mm seam. Trim excess canvas at armhole, neckline (gorge) and shoulder.

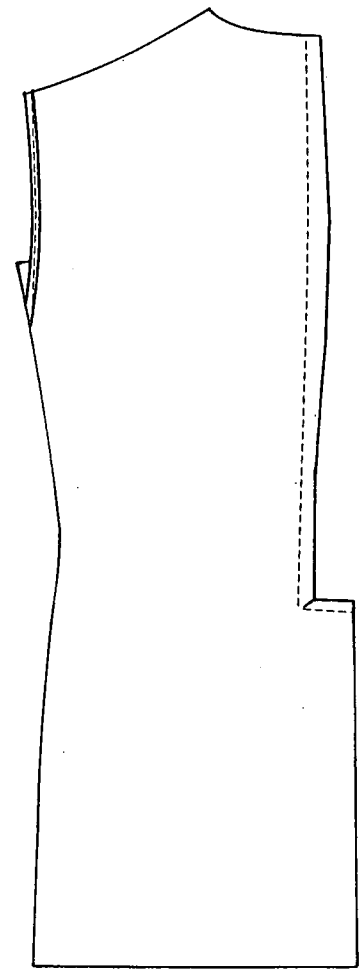
55. 43. Block press foreparts.

Place forepart on the block press, smooth out all creases and apply vacuum.
Place template under flaps and in welt.
Place double-sided fusible tape at nick in the armhole and side body seams.
The forepart will be pressed, steamed and vacuumed by computer.

43.

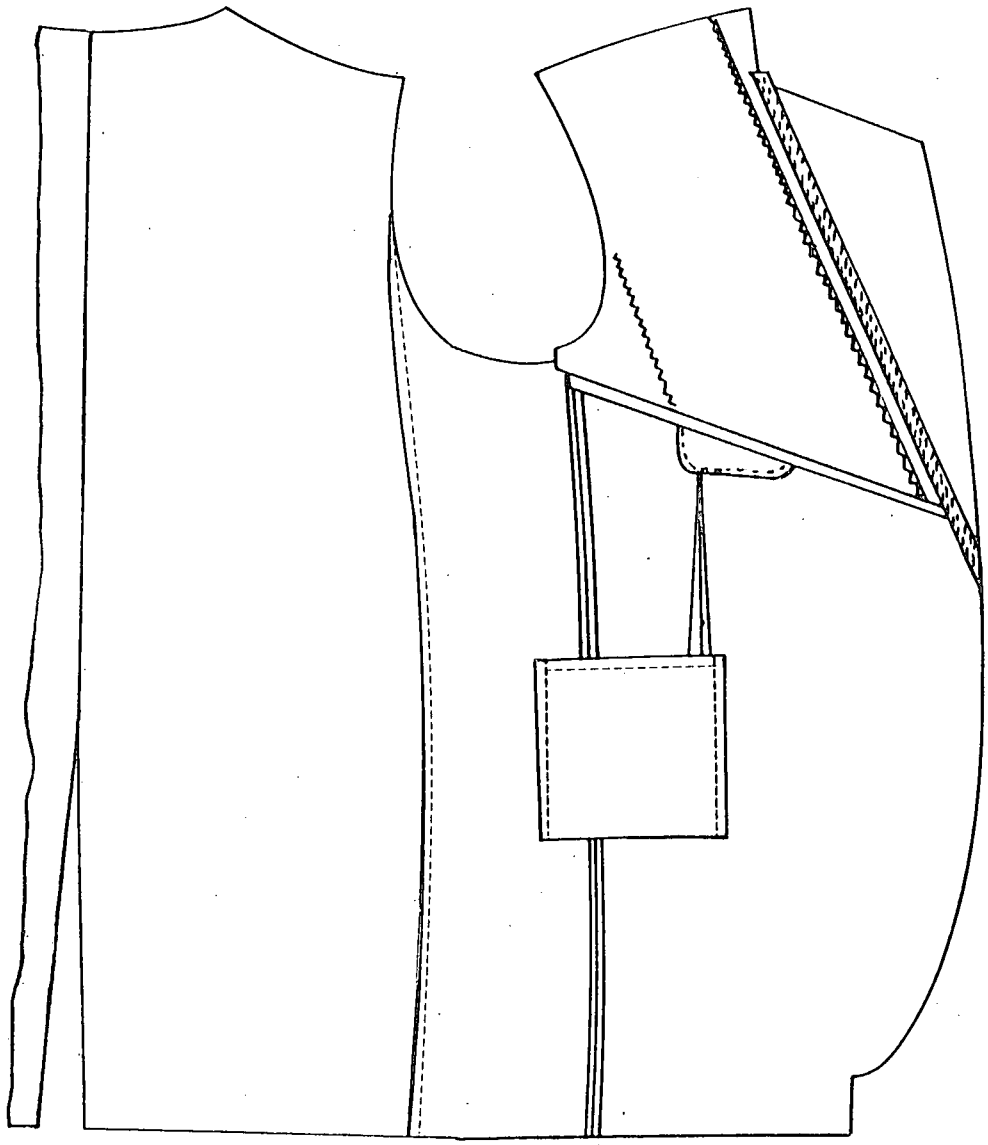


44.



52. 44. Close jacket back seam and fit armhole tapes.

Align centre back seams and stitch a 12mm seam to top of the vent; turn and sew a 12mm seam to the seam allowance (12mm).
Nick the corner to the stitch line.
Stitch the armhole tape on the back armhole.



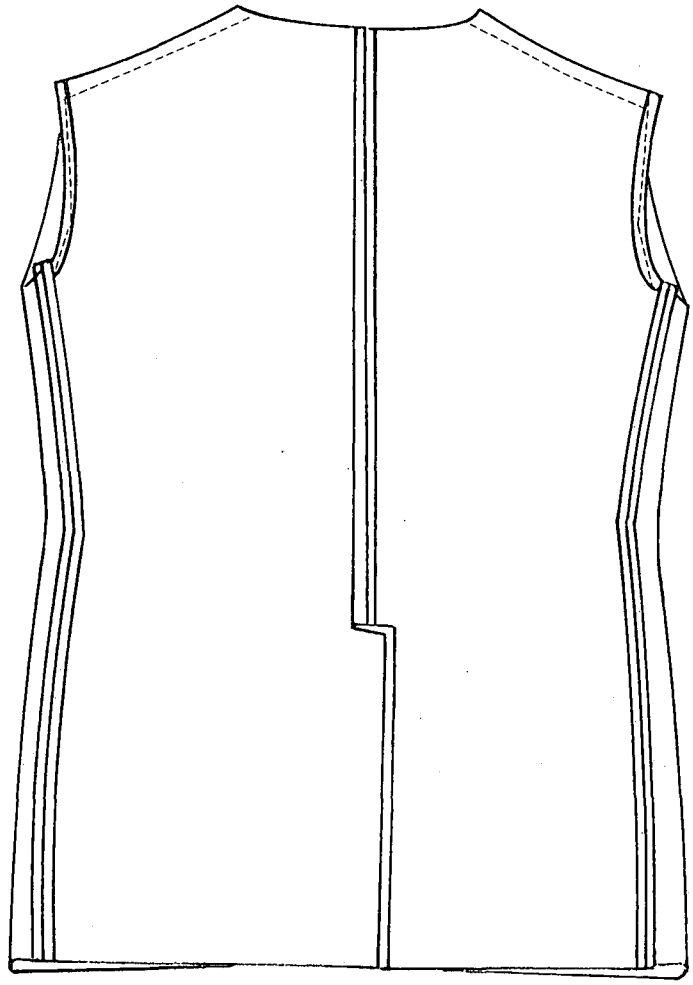
57. 45. Close side seam.

Align side underarm piece and back side seam and sew a 12mm seam.

26. 46. Press side and back seams open.

* Hoffman press
Press side and back seams open. Fold vent at notch and press.

47.

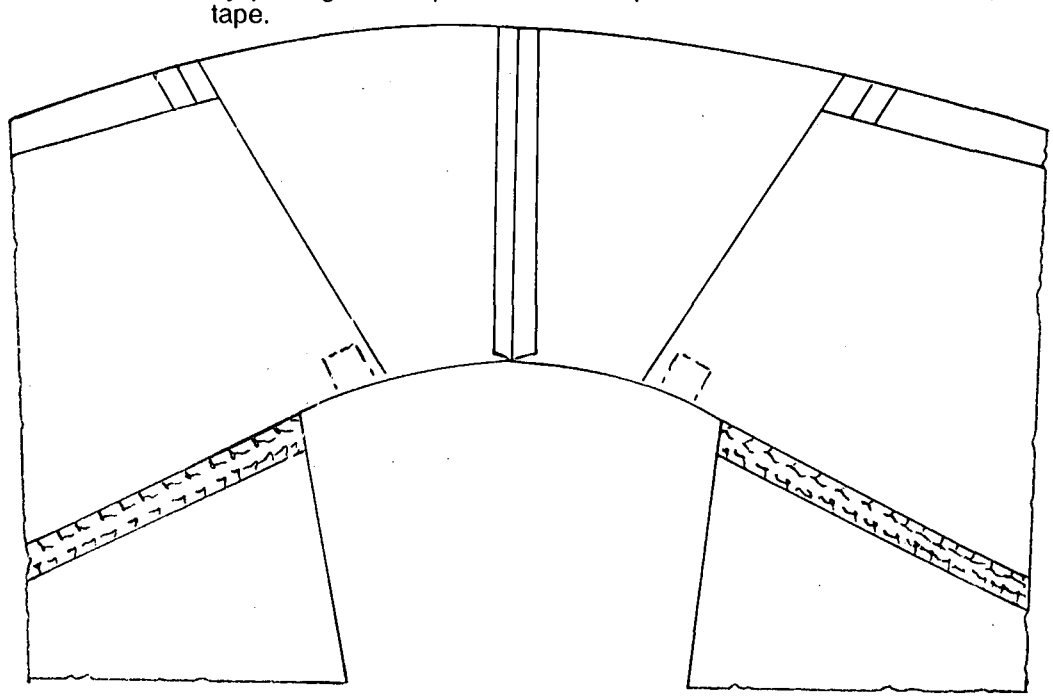


59. 47. Join shoulder seams, trim armhole canvas.

Join the shoulder seams at the back and front, ease in back fullness between notches. Do not attach the canvas to the shoulder seam.

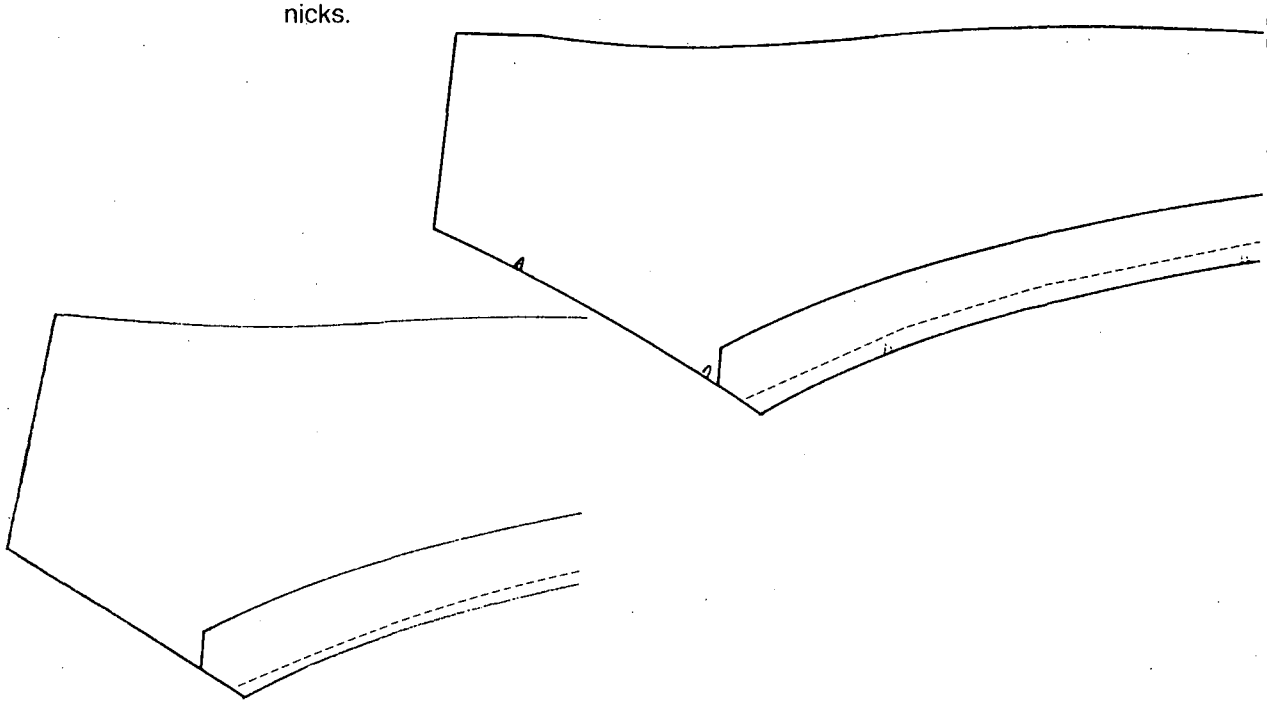
60. 48. Open shoulder seam, fit and fuse canvas to shoulder.

* Hoffman press
Press shoulder seam open, fit and fuse canvas to the shoulder seam by placing fuse tape at neck on open seam and canvas on top of tape.



14. 49. Join upper collar stand to upper collar.

Align the seams, matching the notches and sew a 6mm seam.
Take care to ease the fullness in the collar evenly between the outer nicks.

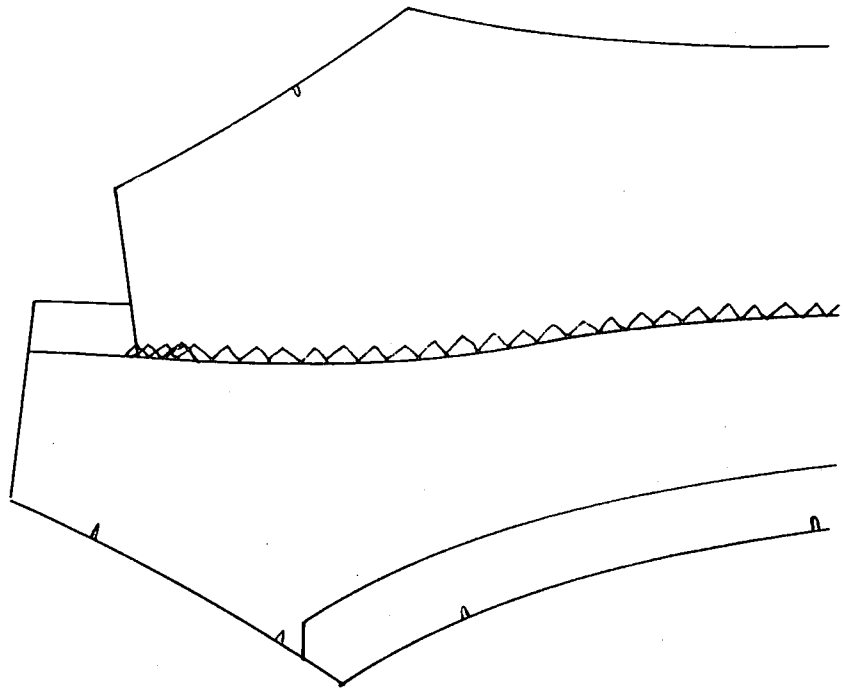


50. Join under collar stand to under collar.

If melton cloth is used for the under collar, it must be cut all in one. If fabric is used, cut the collar and stand separate, align the seams, matching the notches and sew a 6mm seam.

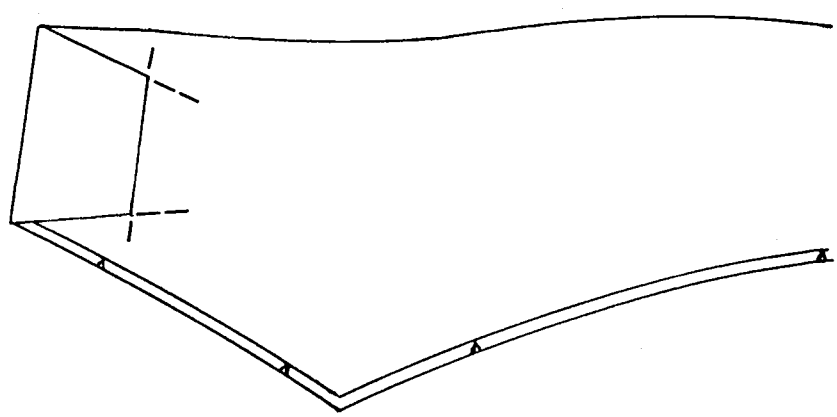
16. 51. Mark and fit top collar to under collar.

* Zig-zag machine.
Place marker on top collar and mark. Align top and under collar by overlapping under collar ± 10mm, matching the notches and stretch the under collar ± 5mm. Zig-zag the top and under collar together.



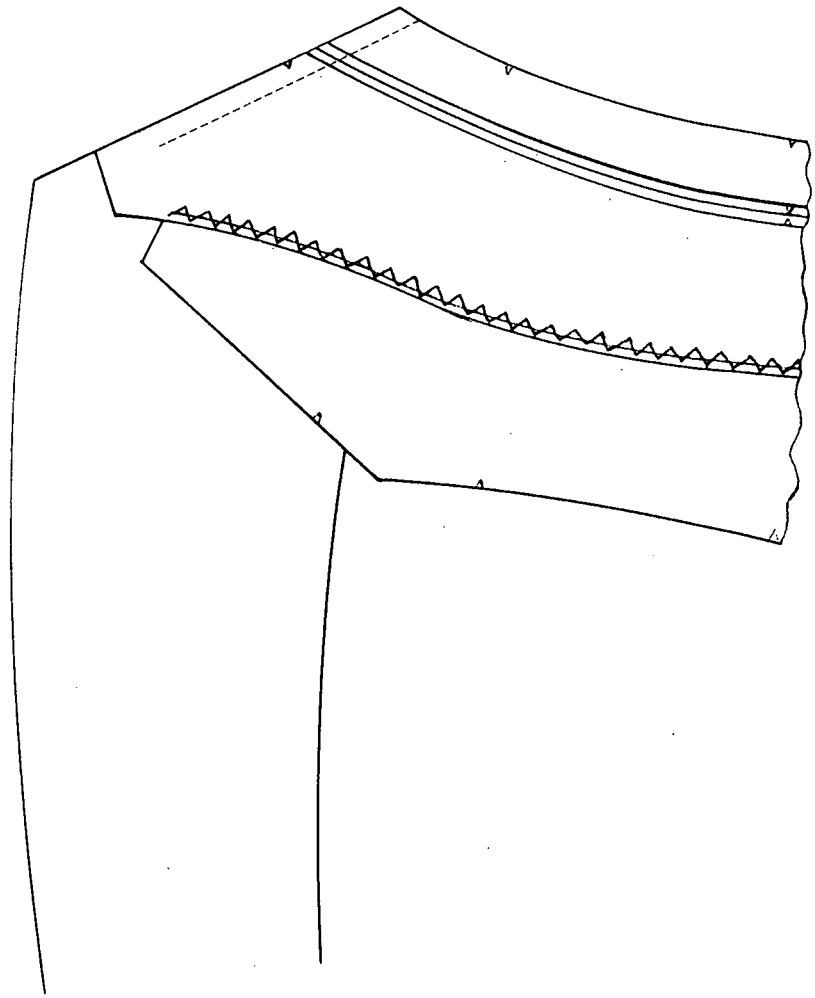
17. 52. Press collar.

Press the collar stand seam open and give some stretch. Fold under collar on top collar and press. Fold top collar ends onto under collar and mark with chalk and press.



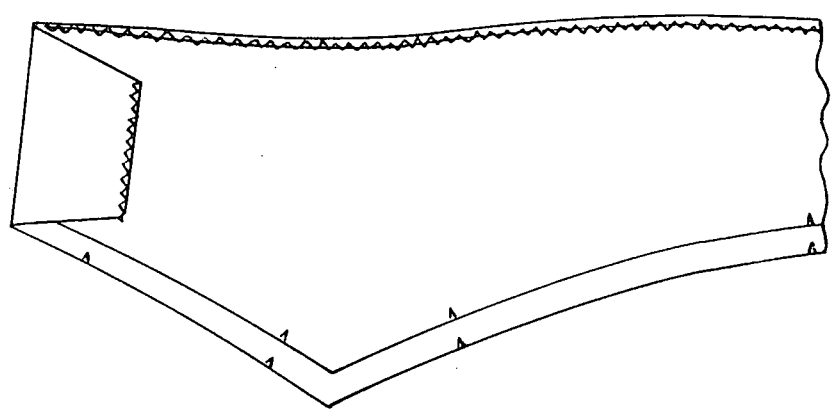
21. 53. Join collar to facing.

Use a marker and mark the sew off point. Align seams and stitch from collar step to neckline and neckline to collar step. Make sure the notches correspond, use a 10mm seam.



24. 54. Fasten collar ends.

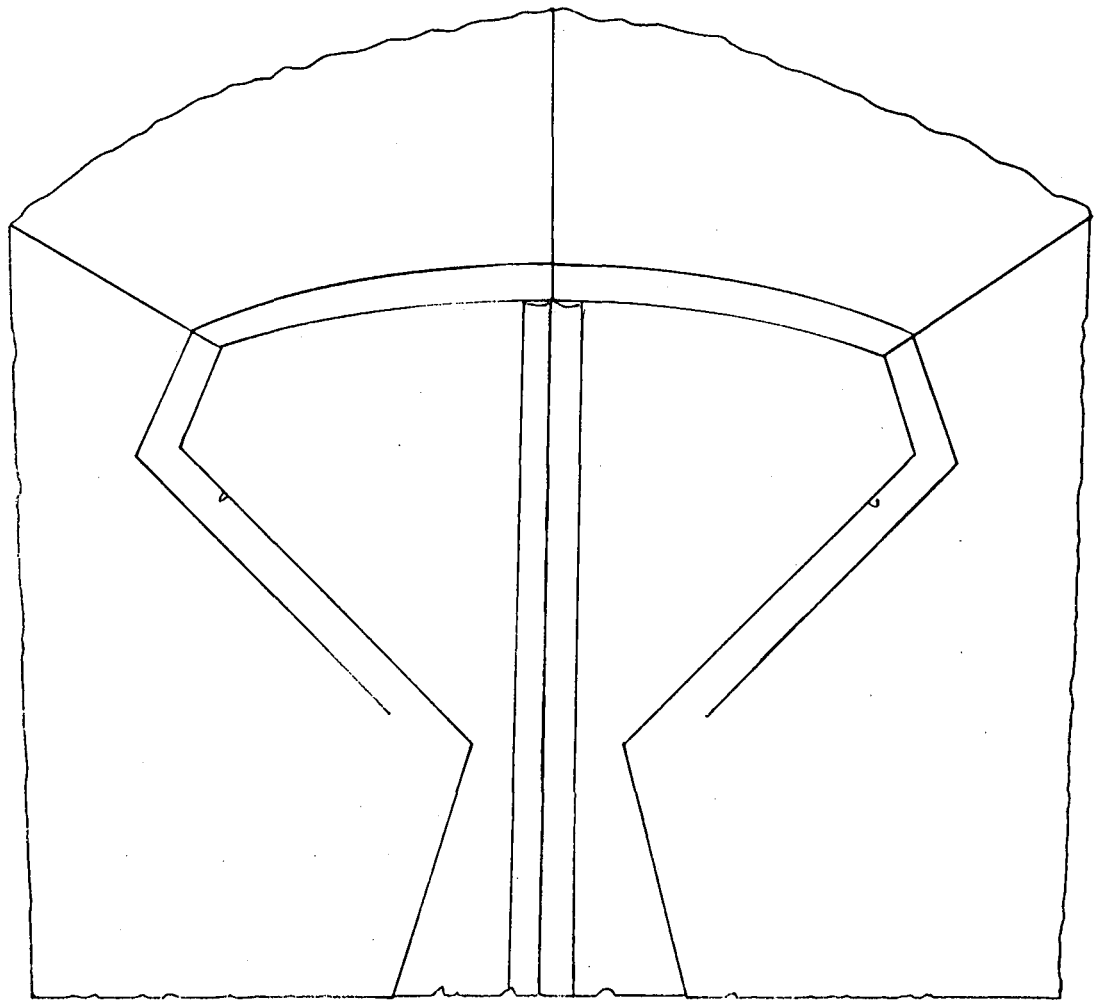
* Zig-zag machine.
Fold top collar onto mutton cloth (under collar). Fold top collar ends down onto mutton and zig-zag collar ends to under collar.



Method used by industry

62. Mark neck circle.

* Table and chalk
Place the garment flat on the table and check the neckline size.
Place the marker on the garment and mark the neckline circle with chalk. Mark the notches.

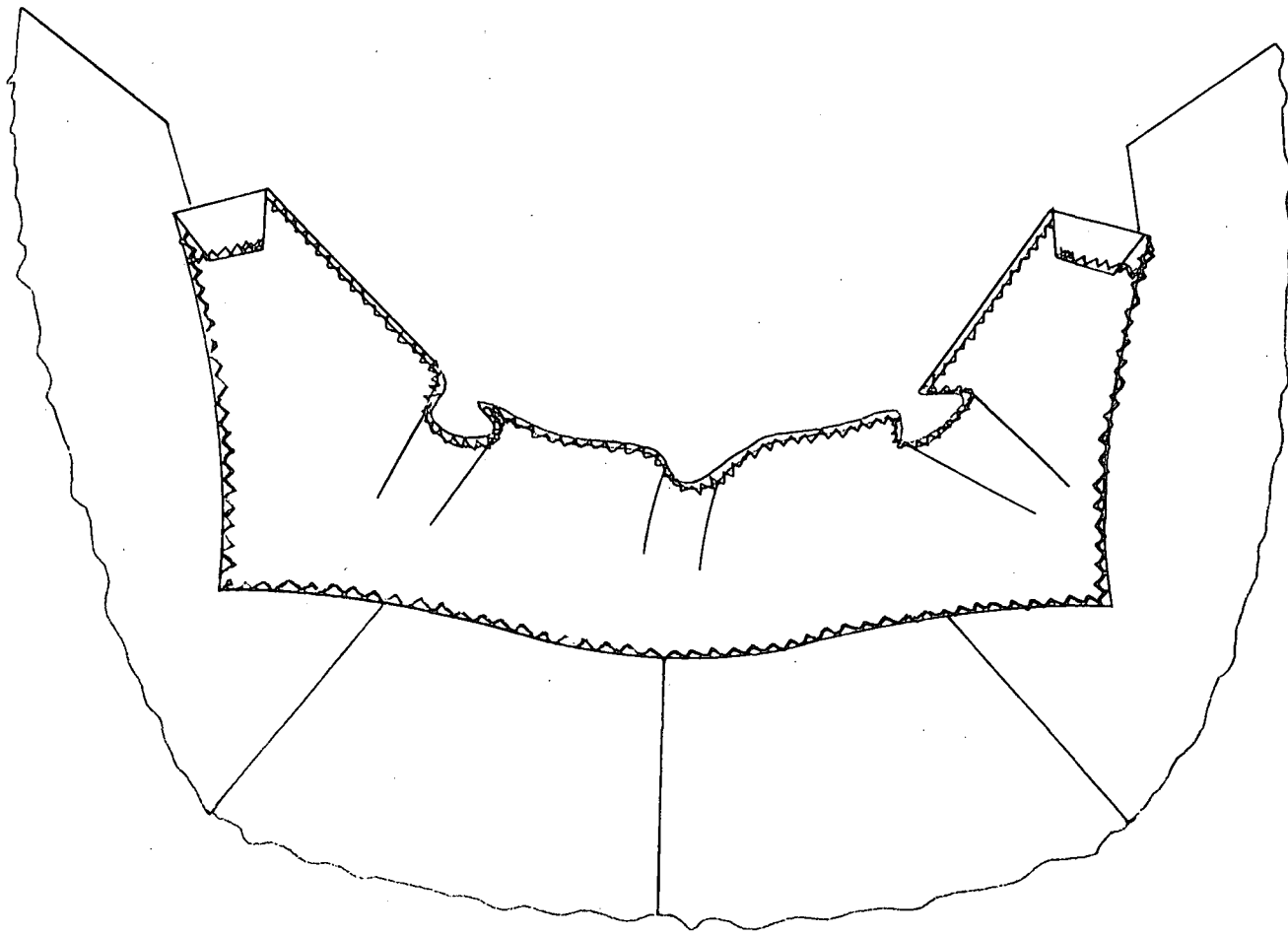


30. Mark lapel and hem.

Place marker on the forepart and mark bridle tape position, also mark the lapel sew line.
Place marker on hem and mark hem sew line.

63. 55. Fit under collar to neck circle.

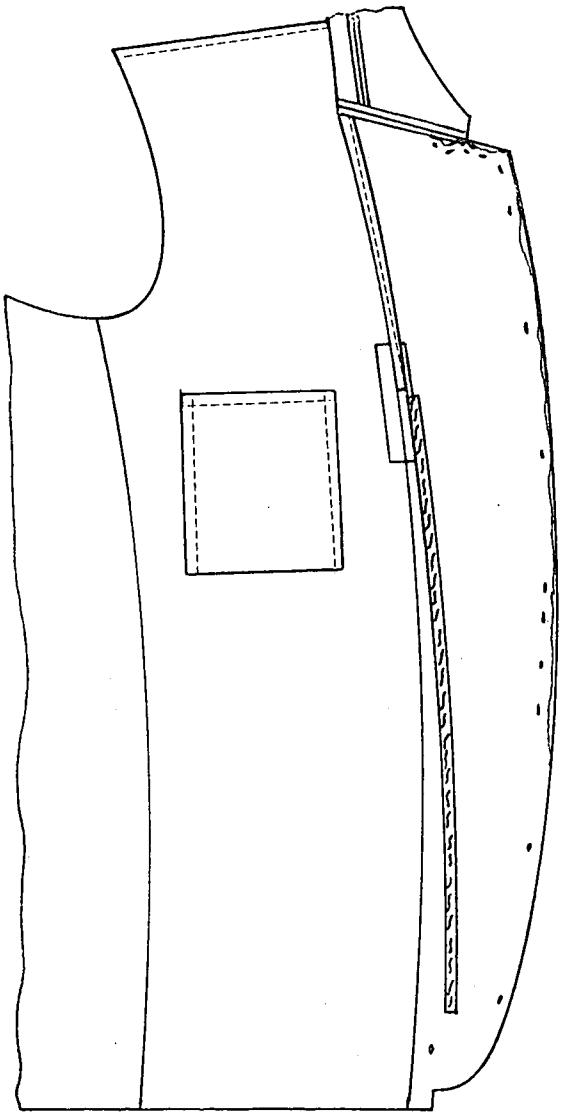
* Zig-zag machine
Use a 10mm seam, place the collar on the jacket, match the notches, ease fullness in and zig-zag under collar to garment. Backtack.



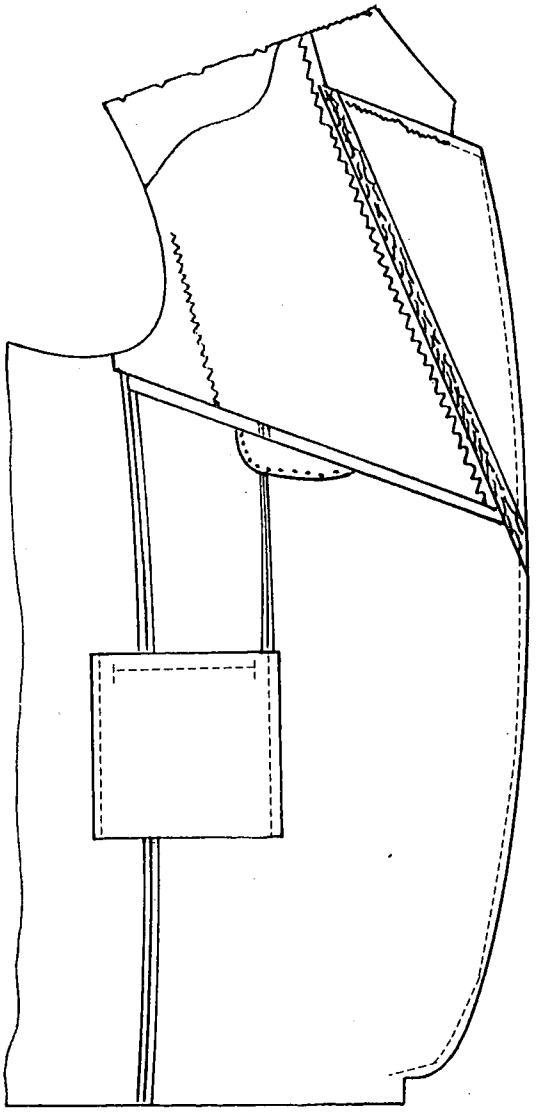
64. 56. Staple facing to forepart.

* Table, stapler or pins
Staple or pin the facing to the forepart, easing the fullness between the lapel point and the end of the breakline.

56.



57.



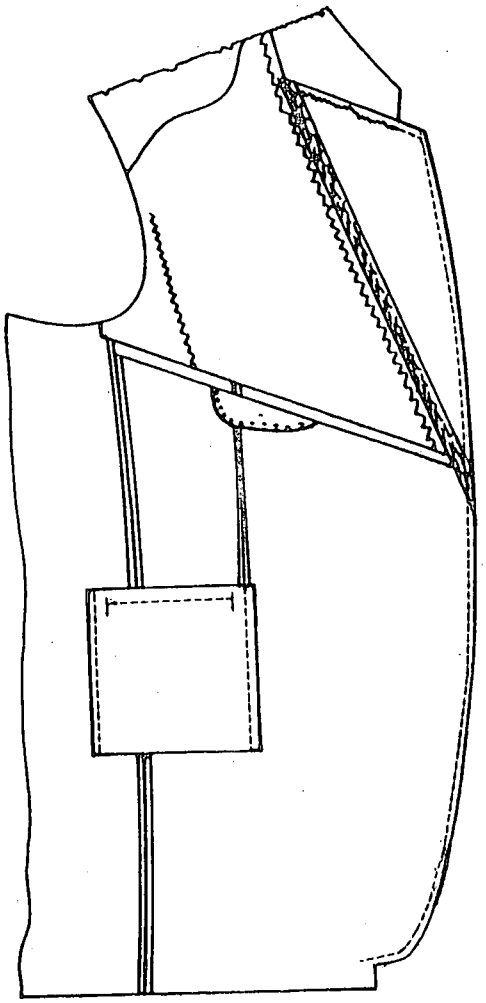
66. 57. Sew around the facing.

With the garment facing up, sew a 6 mm seam around the lapel to the hem, trimming away the excess fabric. Backtack.

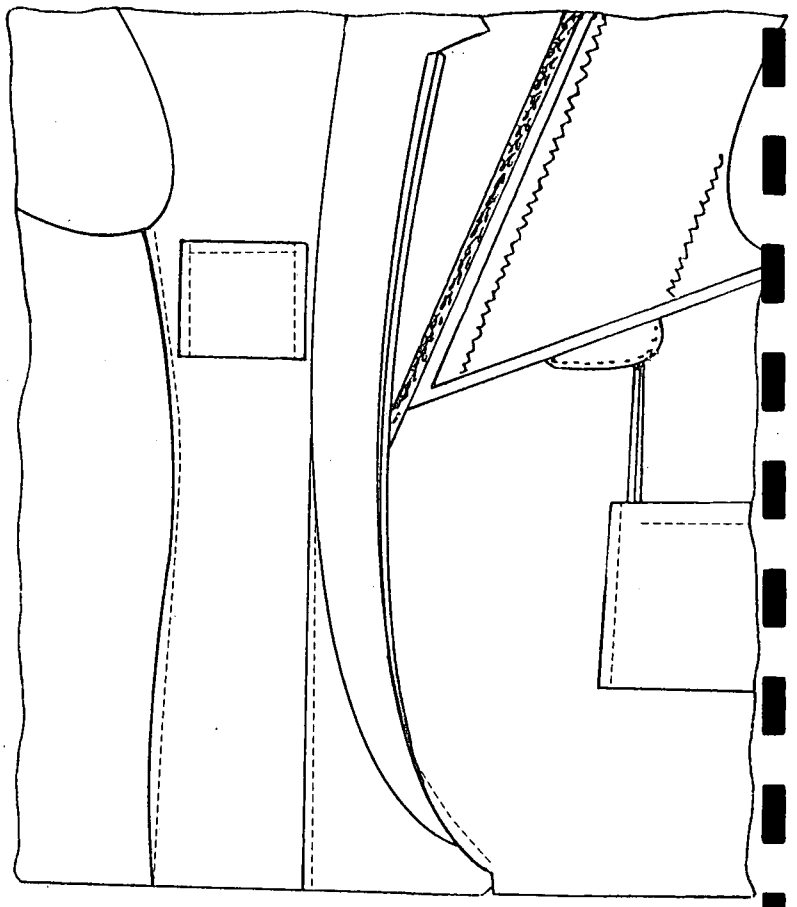
69. 58. Trim corners, lapel and bottoms.

* Table and scissors
Nick the collar point on the forepart, and cut the excess fabric off at the corners and the lapel leaving a 6mm seam.

58.



59.

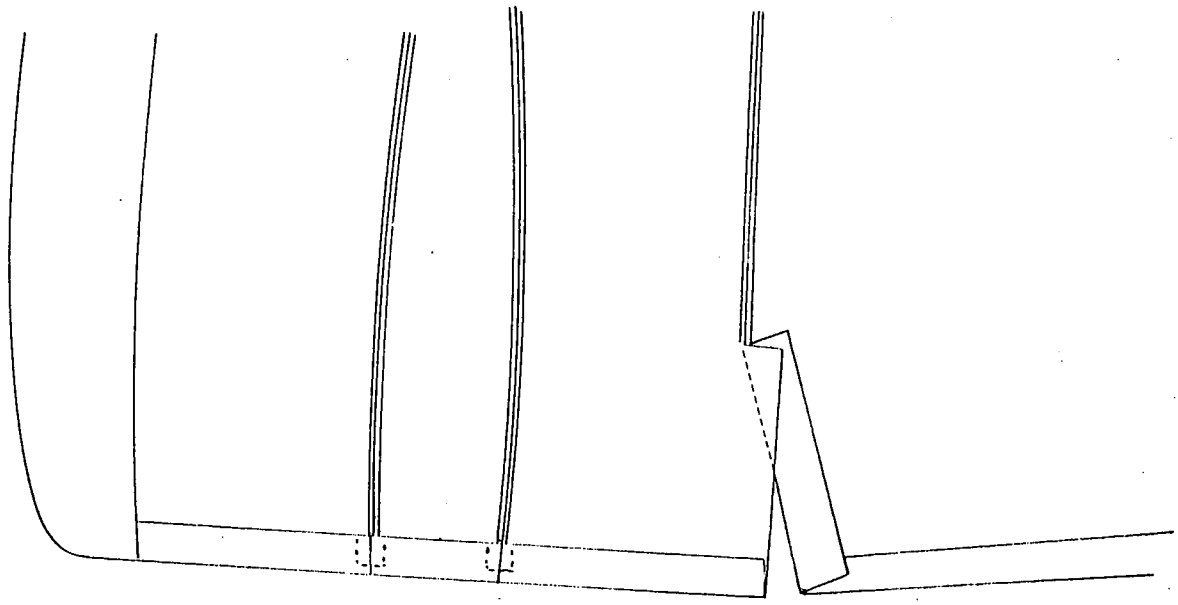


70. 59. Break open front edge seam.

* Steam iron with buck
Place the facing forepart seam on the press, iron the front edge open.
Take care not to stretch the seam.

60. Turn jacket hem up.

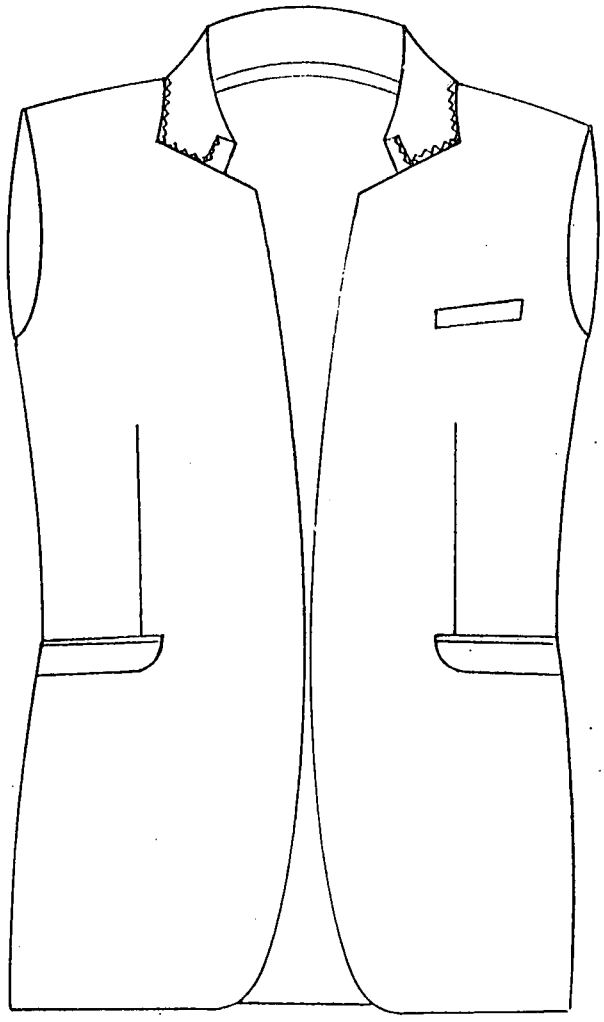
Using the fusing at the hem as a guide, tuck the hem up and insert double-sided fusible tape at seams.



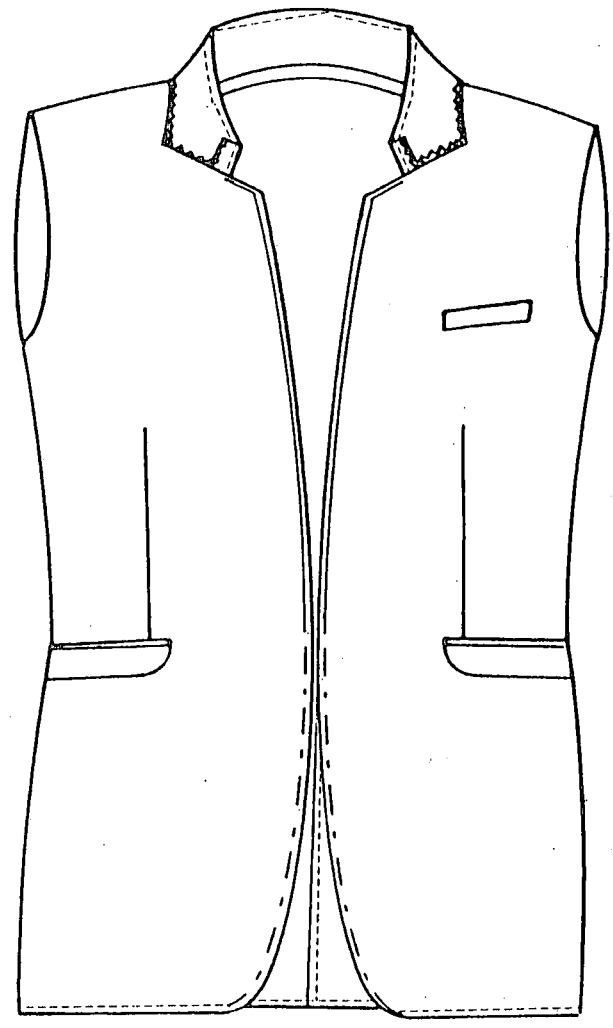
73. 61. Turn jacket.

* Spike and scissors
Turn the jacket, push all corners out but take care not to stretch.

61.



62.



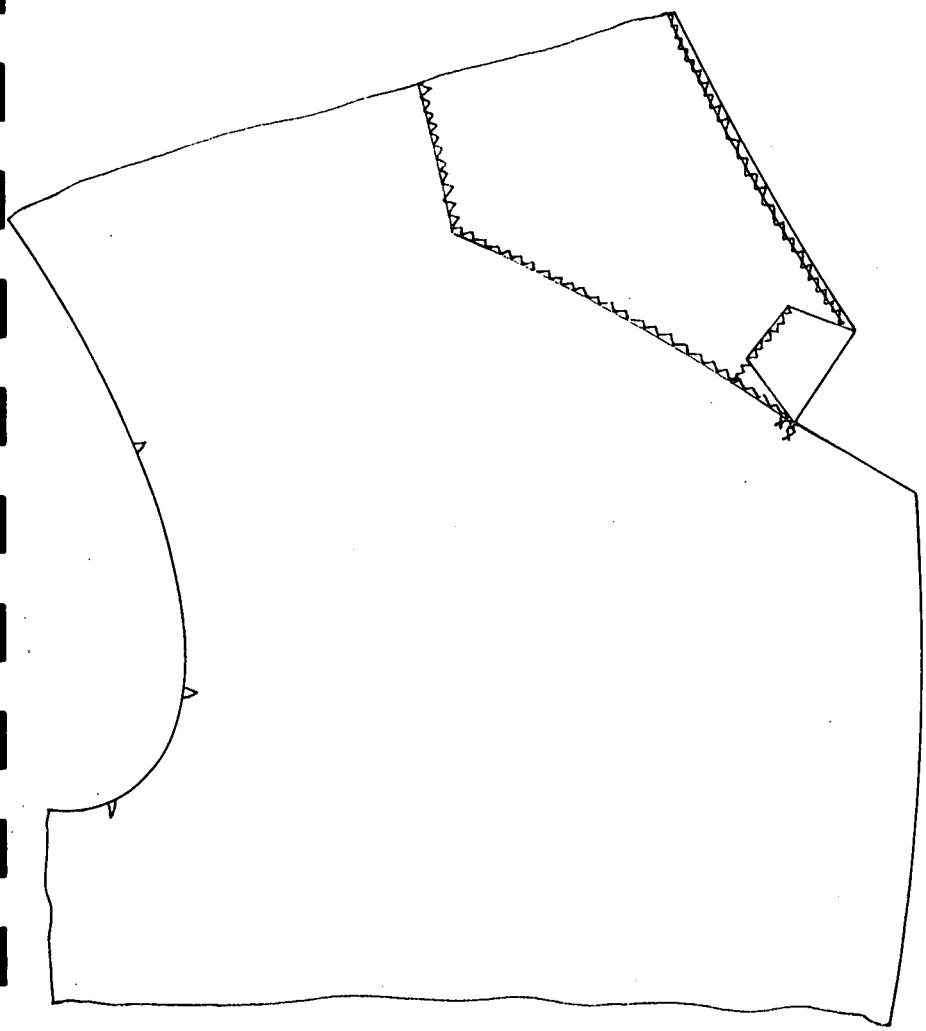
74. 62. Edge baste jacket.

* Basting machine
Pipe on outside of jacket for the top half from the roll in the lapel, around the collar to the other side. Pipe on the inside for the lower half of the jacket, from the roll of the lapel to the hem.

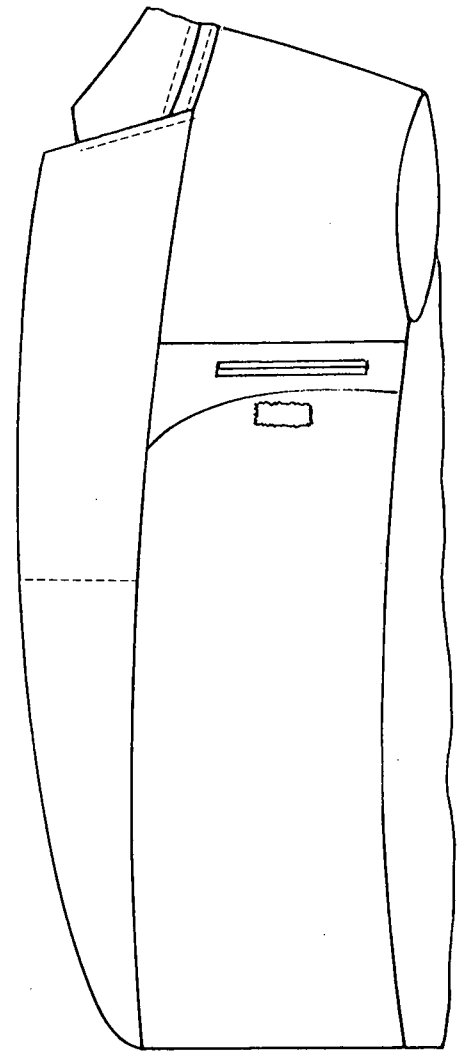
75. 63. Hand tack lapel point.

* Needle and thread
Close the gap in the corner point, securing it in position with ± 6 hand stitches.

63.



64.



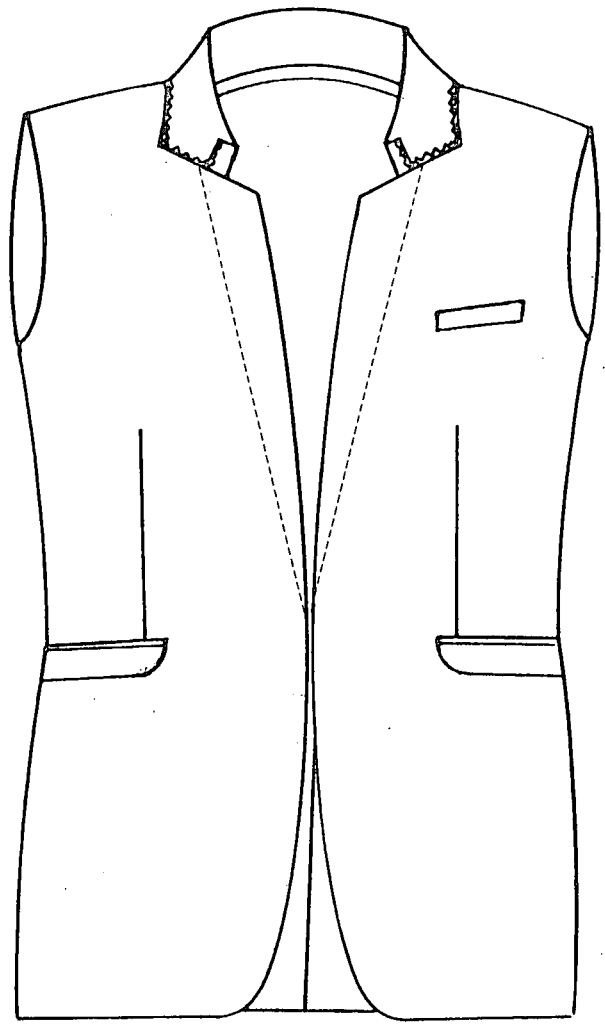
76. 64. Out-baste breakline in facing and collar.

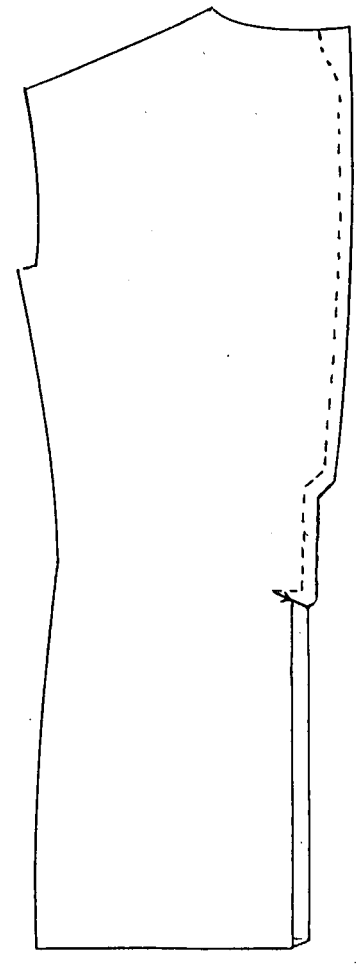
* Basting machine
Baste facing at breakline point across the facing.
Allow for fullness.
Baste along collar ± 2cm away from collar stand seam.
Baste along collar stand ± 2cm away from lining.

77. 65. Edge press lapels.

* Hoffman Press
Place correct break and roll of lapel ± 2cm above buttonole position.
Smooth out pressing surface and apply steam and vacuum.

65. 66.





22. 66. Close lining back seam.

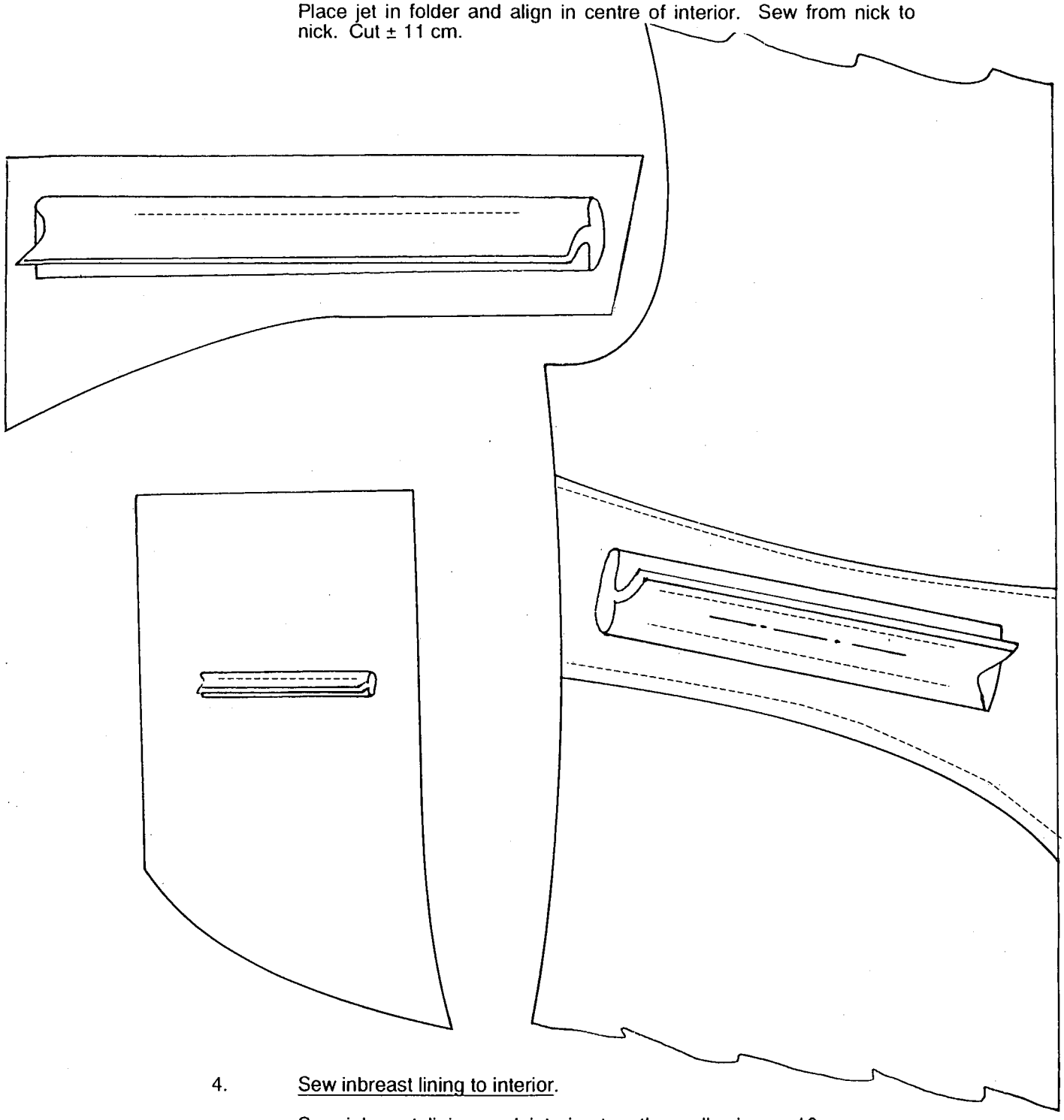
Align seams. Start at centre back neckline nick, sew at a curve to a 12mm seam to the top of the vent, turn and sew the width of the vent. Backtack and nick to the stitching.

Method used by industry

3. Insert jets into interior.

Lockstitch with folder.

Place jet in folder and align in centre of interior. Sew from nick to nick. Cut ± 11 cm.



4. Sew inbreast lining to interior.

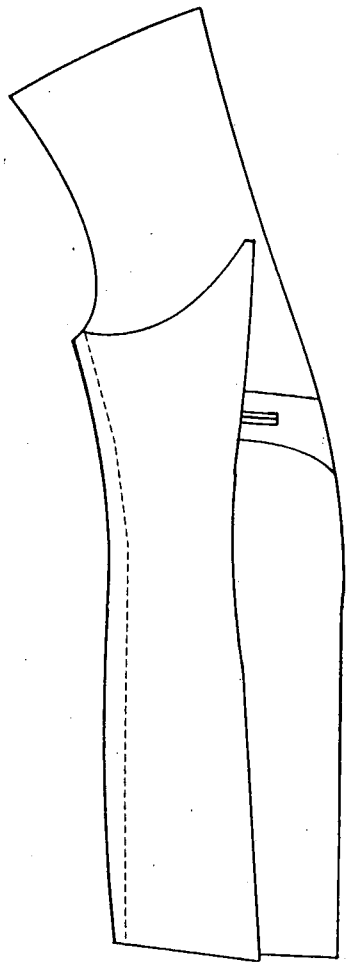
Sew inbreast lining and interior together, allowing a 10mm seam. Make sure that the notches correspond and backtack at beginning and end.

Insert jets into interior.

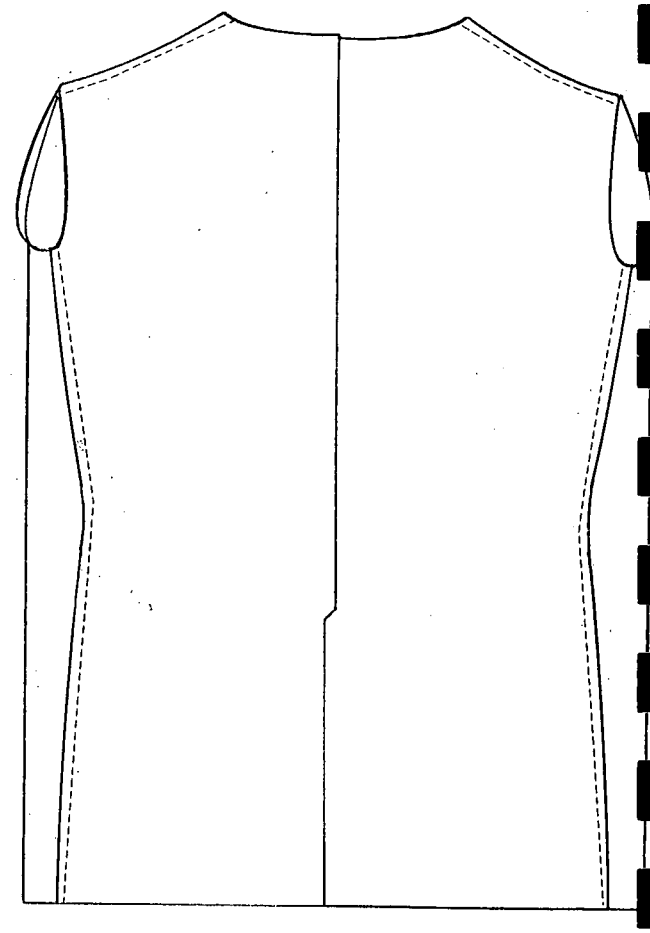
25. 67. Close lining side body seams.

Align seams, matching notches and stitch a 10mm seam. Backtack.

67.



68.



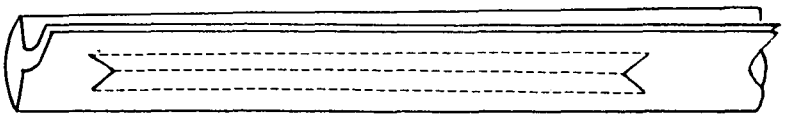
26. 68. Close lining side seams and shoulders.

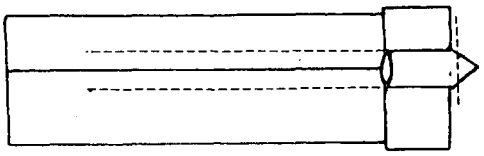
Align side seams and sew a 12mm seam.
Align shoulder seams and sew a 10mm seam.

Method used by industry.

12. Cut interior jet pocket.

Cut to the corners of the sewn jet in a V-shape.



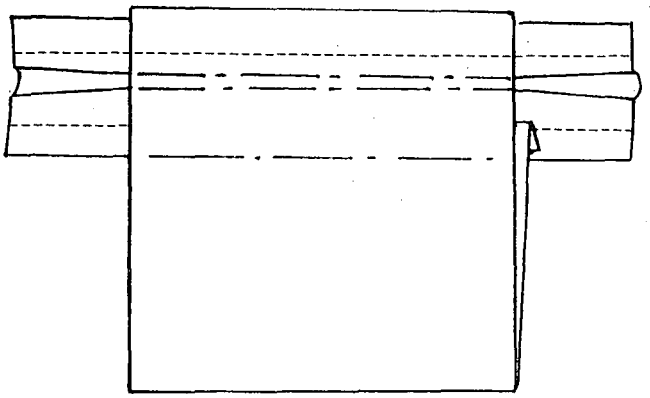


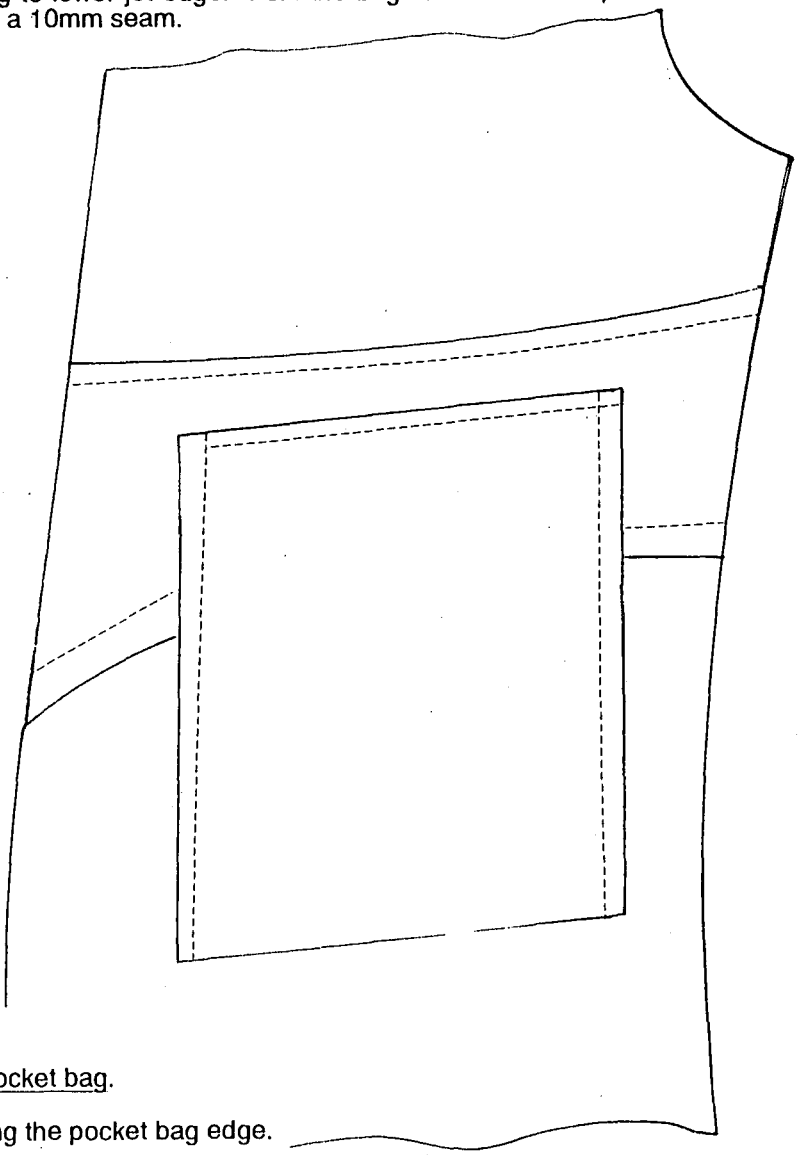
18. Sew mitres on inbreast pocket.

Turn the jet pocket. Sew the mitre down onto the jet at the point of the mitre.

19. Fit inbreast pocket bag.

Attach pocket bag to lower jet edge. Fold the bag and attach to top jet edge, allowing a 10mm seam.





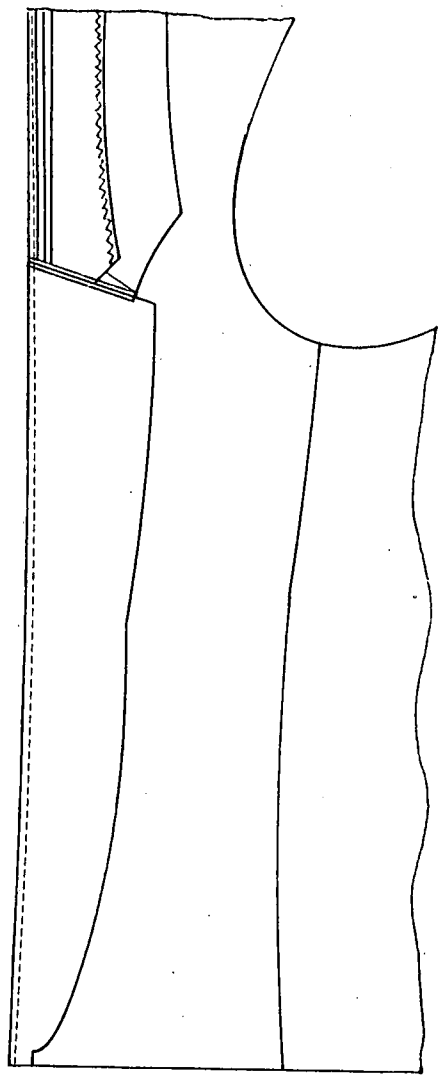
20. Close inbreast pocket bag.

Run a seam along the pocket bag edge.

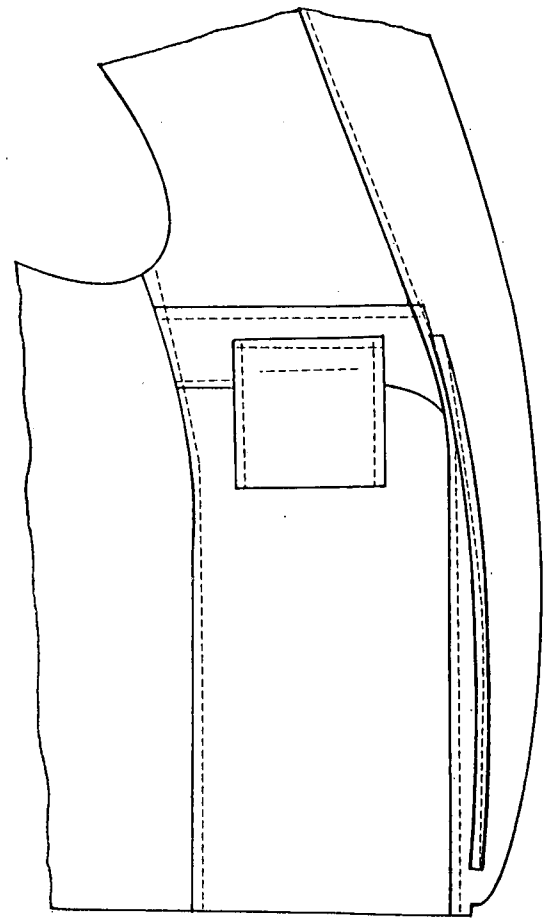
27. 69. Join lining to facing.

Join the facing and lining together starting at the hem, and sew around to the collar onto the back lining and down to the hem. Sew a 10mm seam.

69.



71.



28. 70. Press seams open.

Steam iron.
Open collar seam and press flat.
Press the lining seams to face centre back and press pockets.

Blindstitch fuse tape to facing.

* Blindstitch Machine.
Blindstitch a double-sided fusible tape to the facing ± 5cm from the bottom to halfway up the facing, catching the inbreast pocket seam.

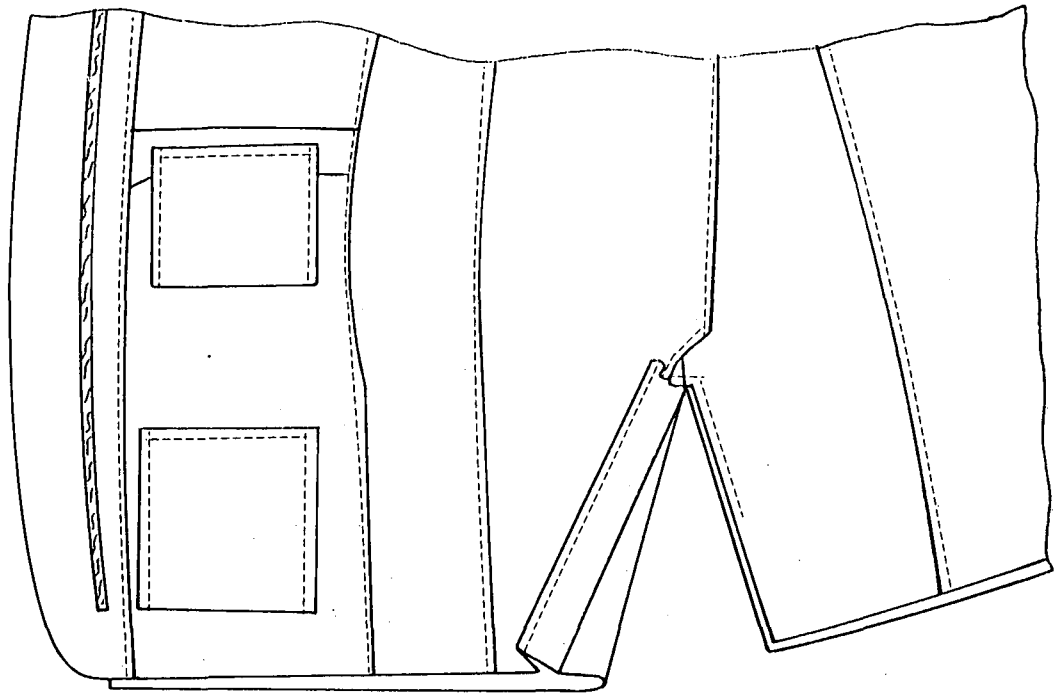
29. 71. Fuse webb tape to lining.

Attach webb fuse tape onto the lining from the one inbreast pocket to the collar and down to the other inbreast pocket.

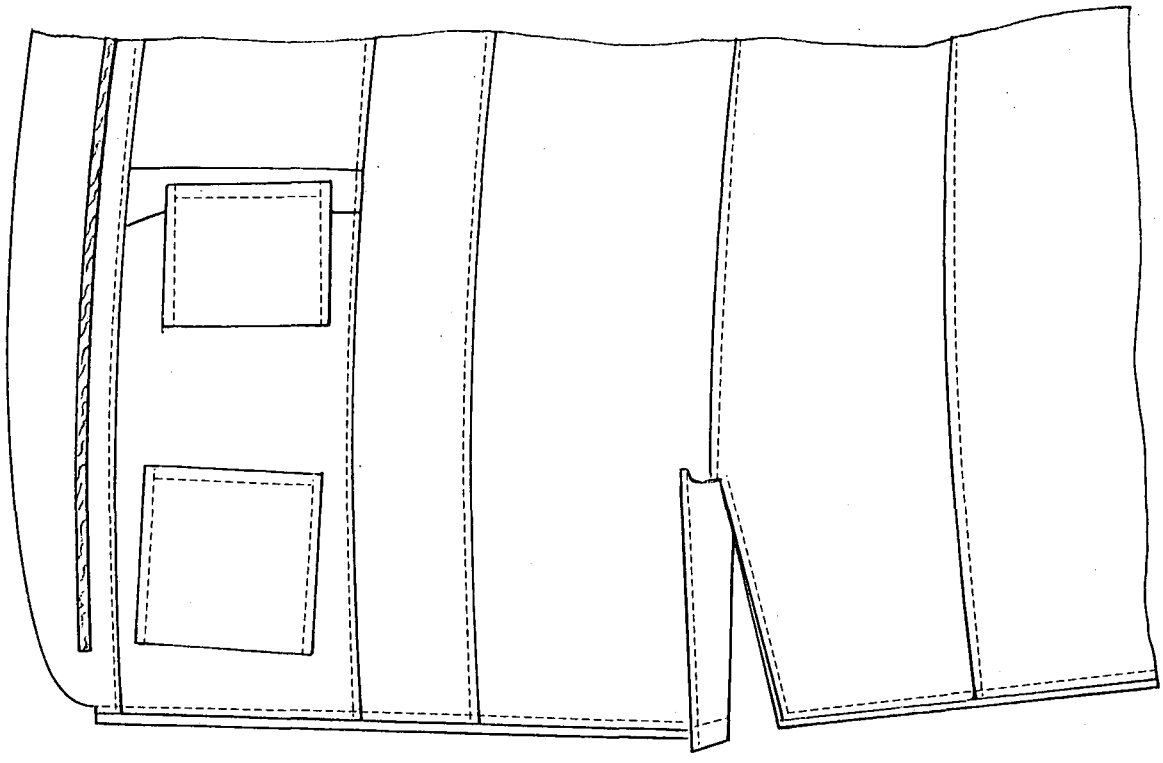
Method used by industry.

71. Close vent.

Align the seams. Make sure that the notches correspond and sew a 10mm seam.



72.

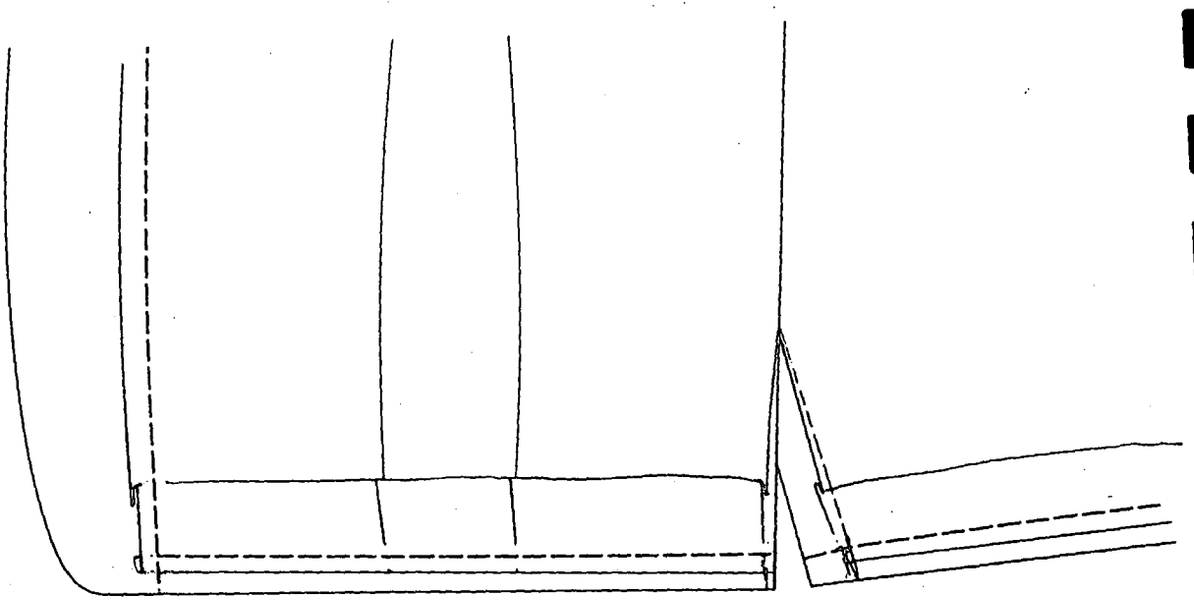


72. Sew lining to jacket bottoms.

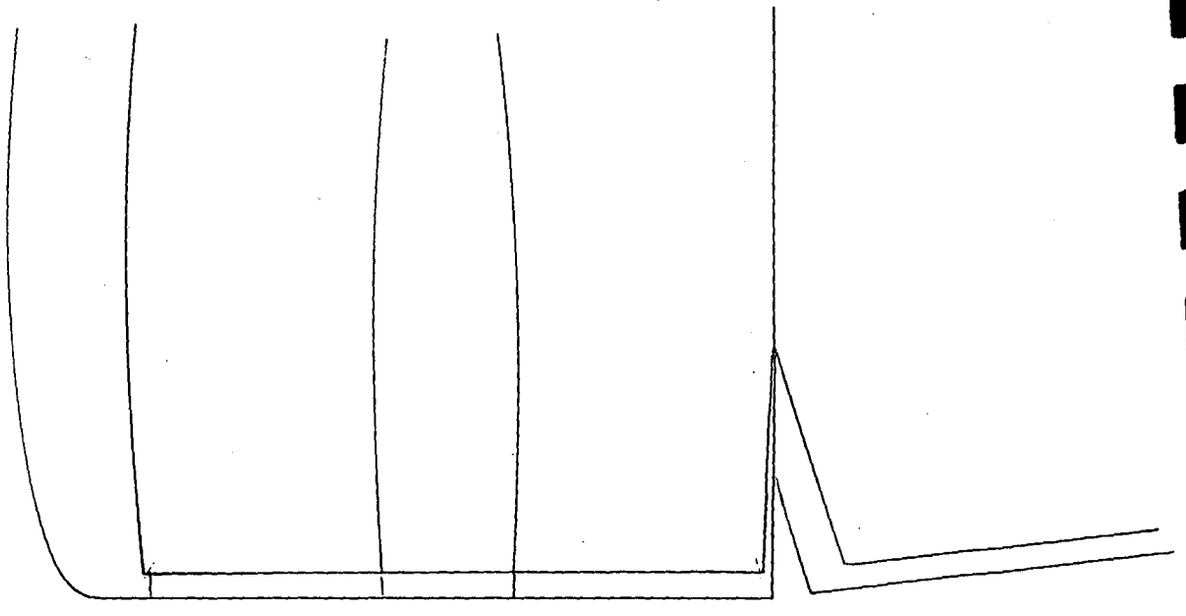
Sew the lining to the jacket allowing a 10mm seam. All seams must face the centre back. Place fuse tape under side body seams at the hem line.

72. Sew lining to jacket hem

Fold the lining into a 1cm hem and make sure the jacket and the lining are the same length. Pin the fold line up to 1cm from the jacket hem's raw edge. Fell the lining from the lapel to the vent.



73.

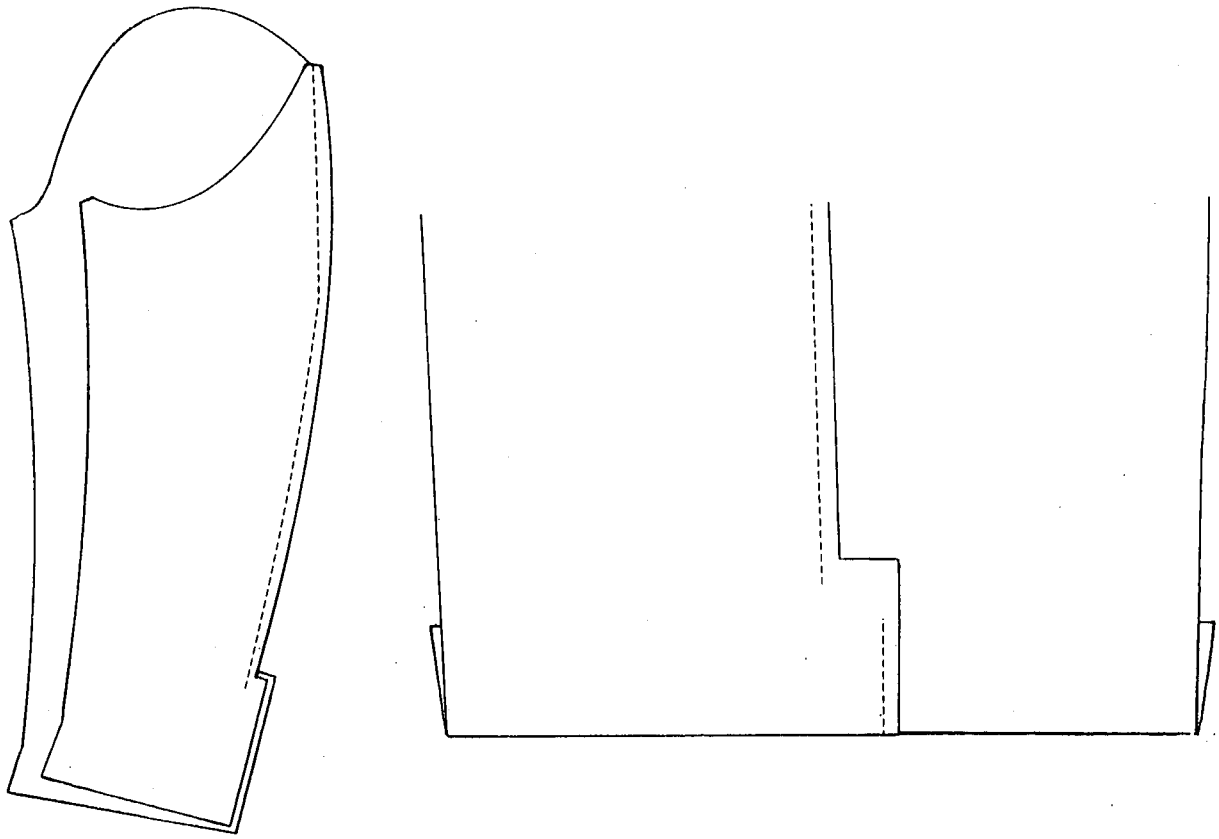


73. Sew lining around the vent.

Pin the lining around the vent and fell. A pleat will form at the hem line that will allow for movement. Also fell the pleat that forms at the front facing. If a fully engineered pattern is used, apply the industry method.

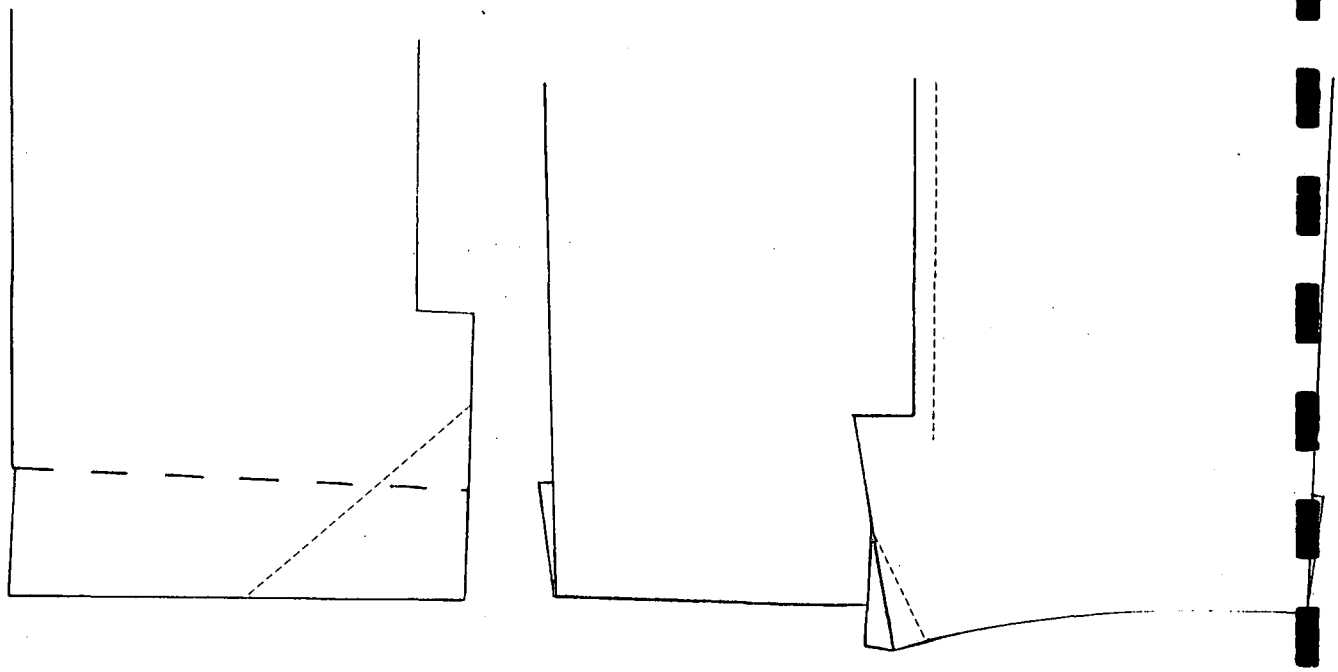
1. 74. Closing of two-piece sleeve back arm seam.

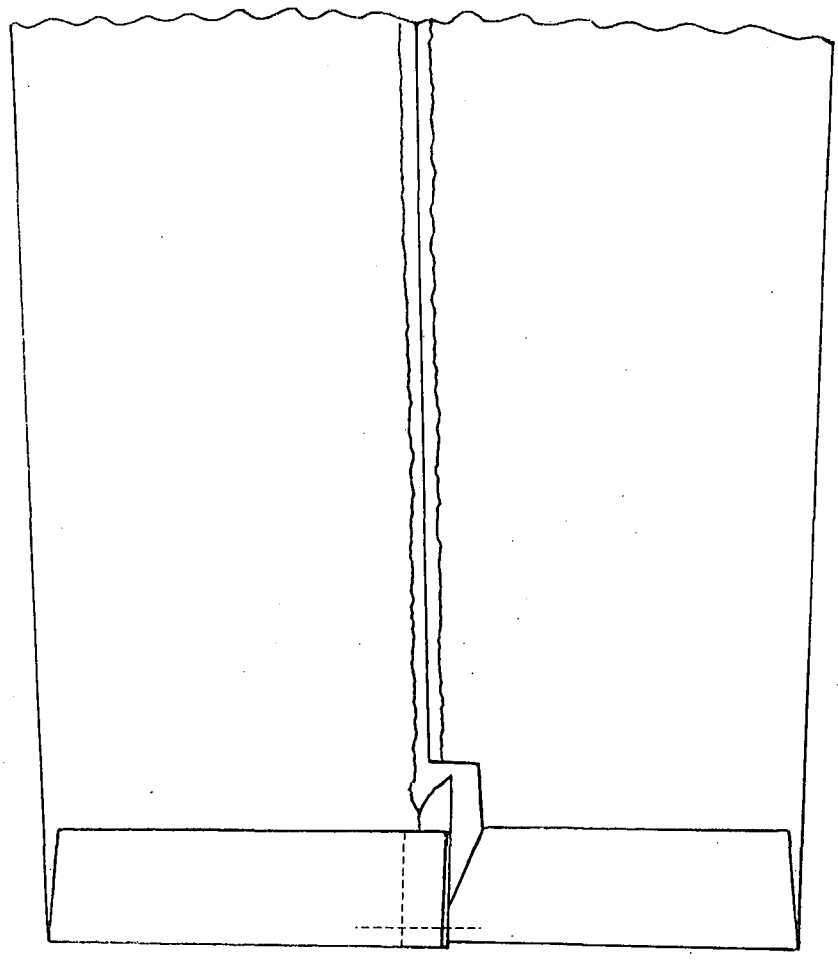
Align the top and under sleeves and sew a 10mm seam matching the corresponding notches; stop at vent nick and backtack.



2. 75. Sleeve hem and vent.

Fold the hem up and at vent opening sew a 6mm seam. Fold the hem of the top sleeve up and mitre the vent opening. Turn to right side and tack together.





76. <u>Sleeve hem and vent</u>.

Mitre the top sleeve hem, sew at a 45° angle and box the hem out.

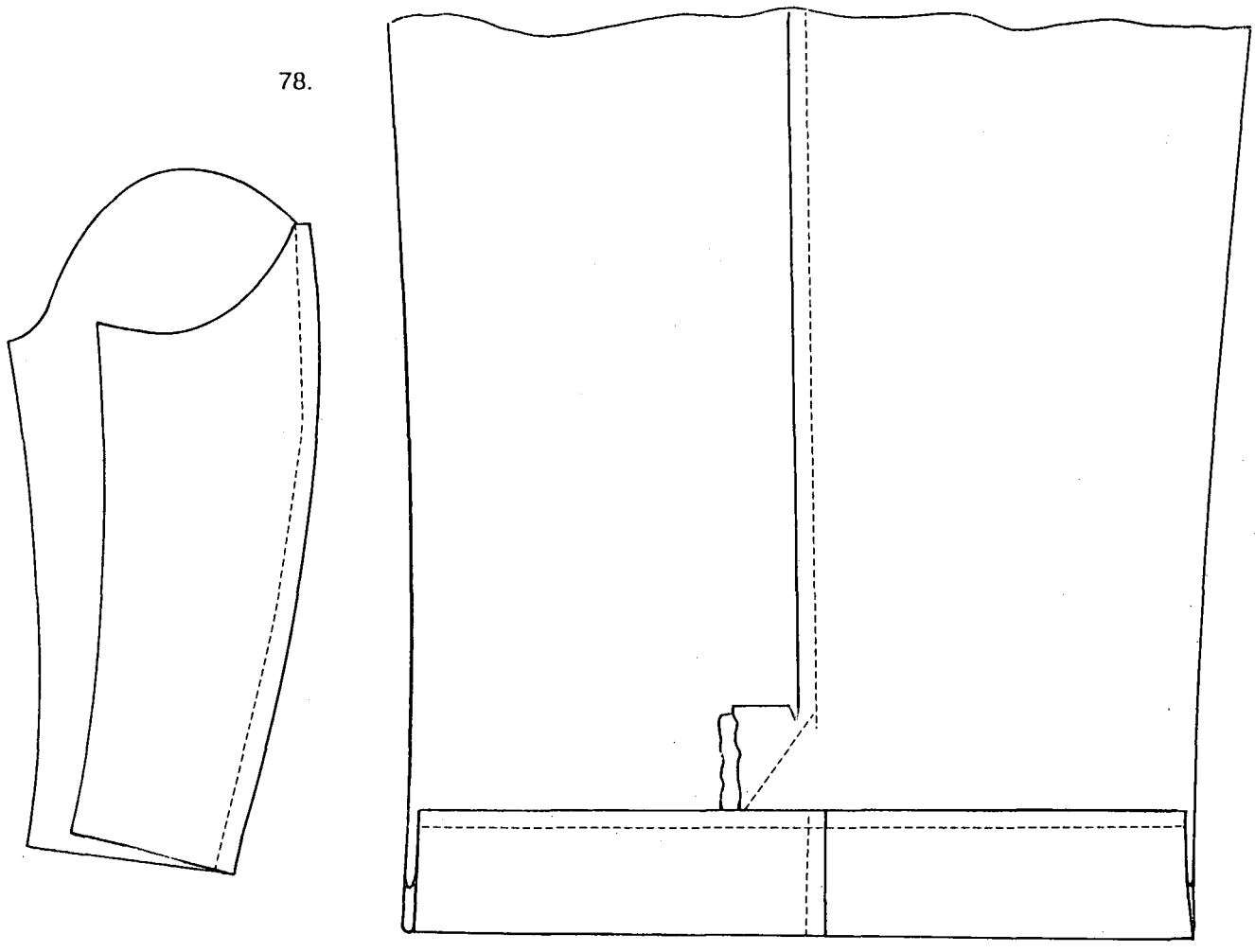
2. 77. Fold the hem up and tack together.

7. 78. Close back arm seam of sleeve lining.

Align the top and under sleeve back arm seam and sew a 10mm seam, matching corresponding notches and backtack. Do not leave an opening for the sleeve vent because it is only a mock vent.

79.

78.



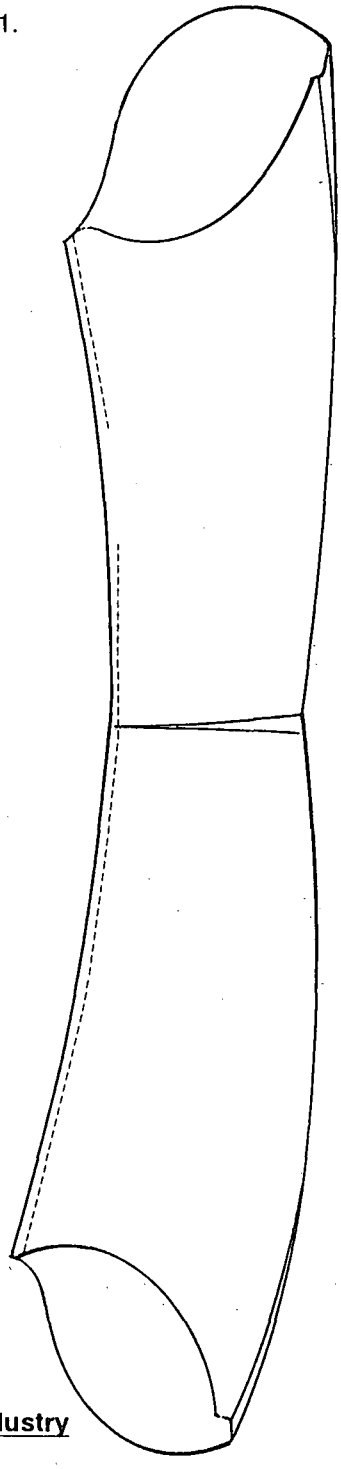
8. 79. Sew the sleeve lining to the hem.

Align the lining and fabric hems and sew a 10mm seam. Use the fusing line as a guide and fold up the hem.

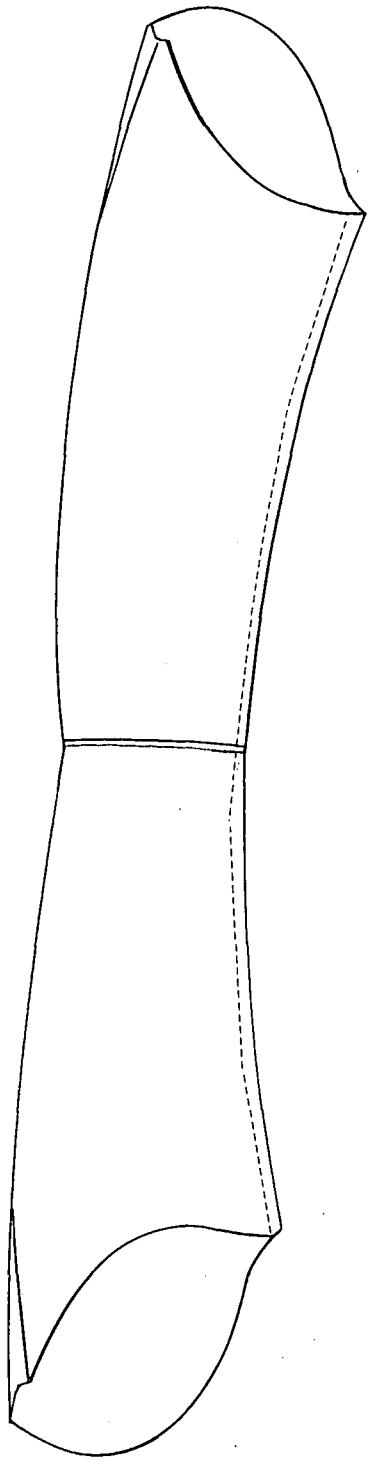
9. 80. Press back arm seam of sleeve lining.

Press the seam open. Fold the hem at the nick and press. Press the vent.

81.



81.



Method used by industry

10. Close sleeve and lining forearm seam.

Align the seams and sew a 10mm seam, matching notches and stretching the top sleeve to fit. Leave an 8cm opening in the lining for the armhole felling.

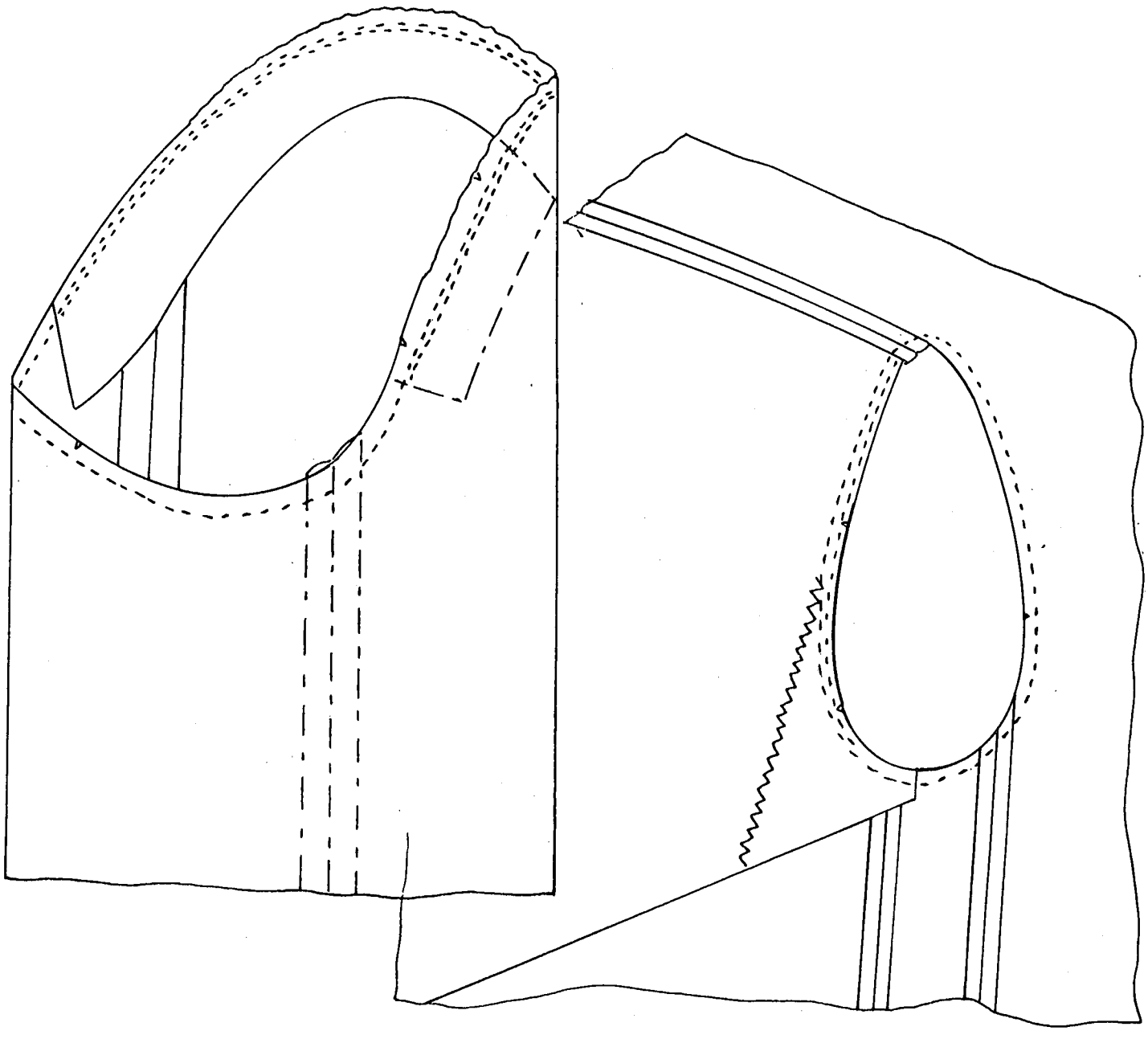
81. Close the sleeve and lining forearm seam.

Align the seams and sew a 10mm seam, matching the notches and stretching the top sleeve to fit. The sleeve head will be felled from the outside because specialised machinery is not available.

Method used by industry

80. Ease fullness to sleeve head.

* Chainstitch
Use a computerised machine to ease fullness to the sleeve head. Punch in the right information, start to sew at forearm seam and end at forearm seam. Sew a 6mm seam. Fullness is automatically gathered.



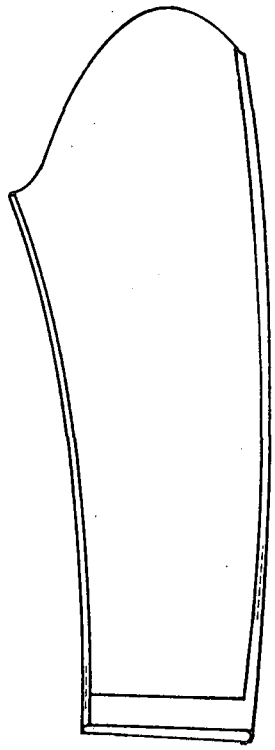
81. Sleeve setting.

* Chainstitch
Align seams and match the notches. Start at the front pitch notch, insert svenline piece at crown and sew a 10mm seam.

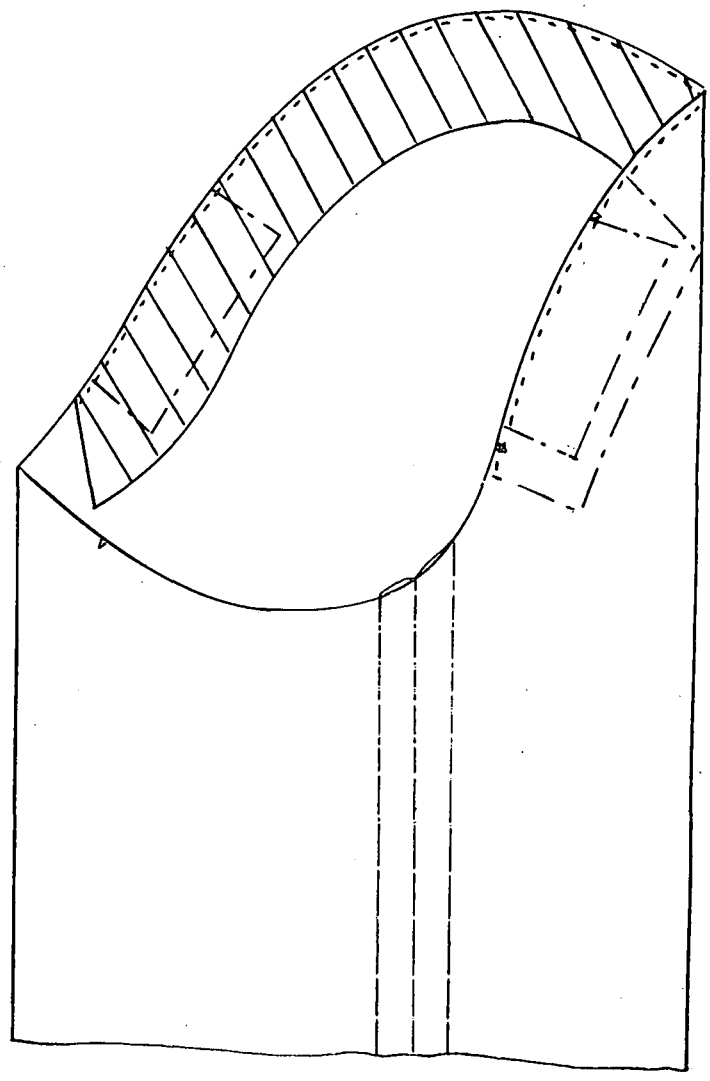
13. 82. Sew lining and sleeve seams.

Turn the sleeve inside out and fold the lining into a tuck at the hem. Sew the forearm seams together and also the back arm seam at the hem.

82.



83.



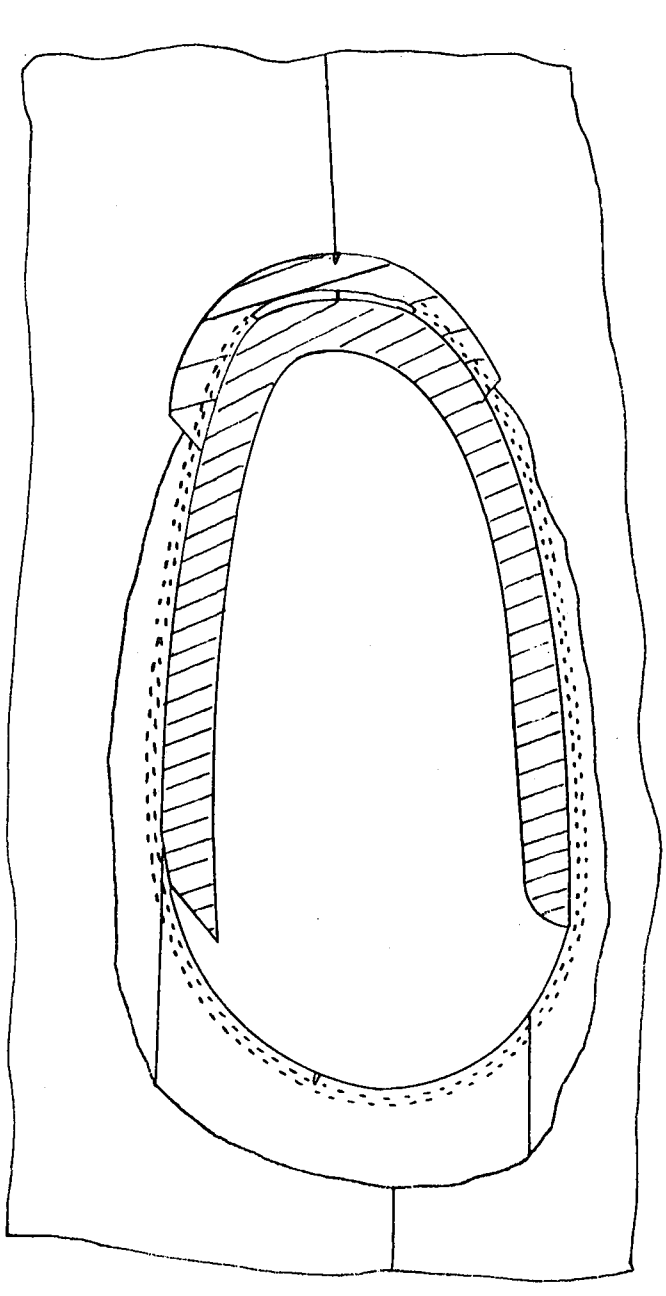
79. 83. Fit wadding to sleeve head.

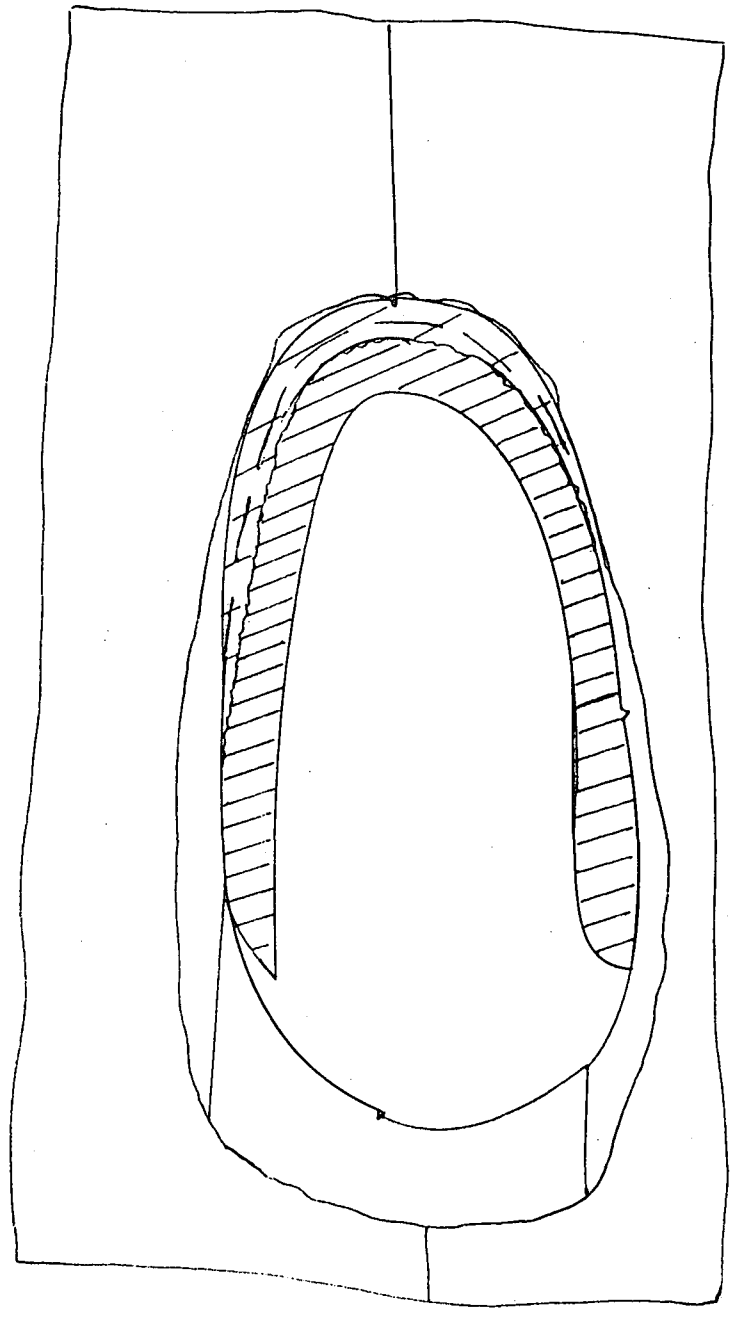
Align seams, matching the notches, and fit the canvas to the front and back of the sleeve head. Sew a 6mm seam. Take care not to stretch.

Method used by industry

83. Press svenline piece and sleeve crown.

* Buck with vacuum.
Place sleeve on block, press steam and vacuum the sleeve crown and svenline piece.
Fold svenline at seam and press again.





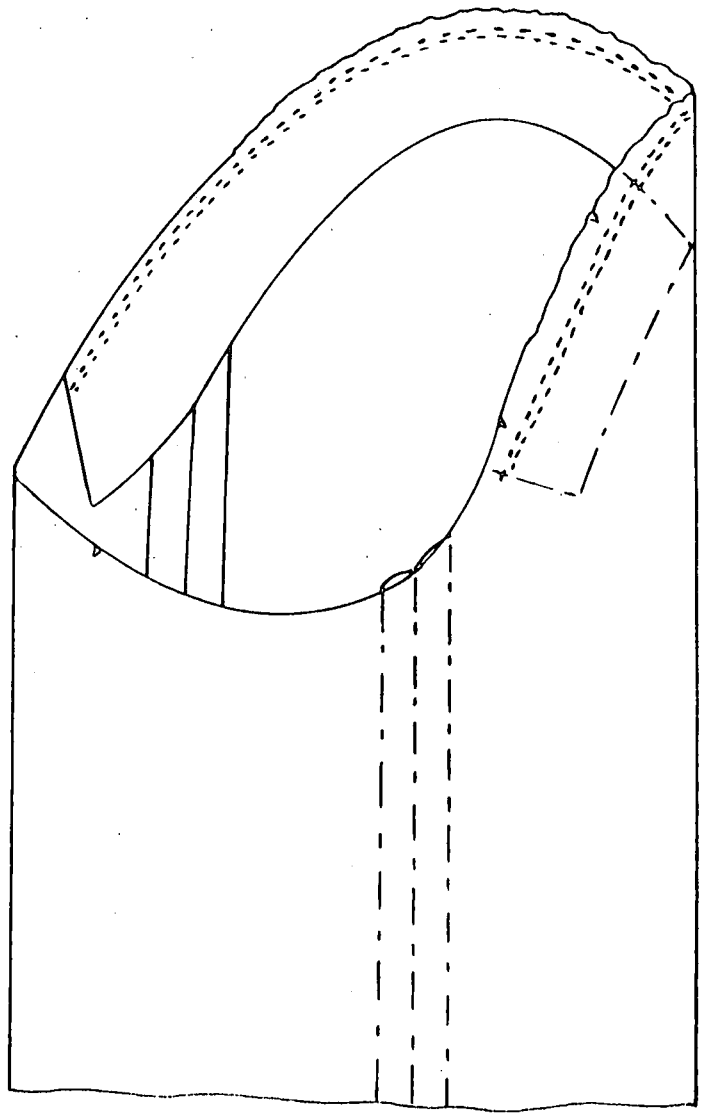
84. Tack shoulder pad.

* Basting machine
Establish left or right pad making sure that the shoulder seam and pad match.
Make sure the pad lies flush with the armhole and baste pad.

84. Ease fullness to sleeve head.

Run two rows of gathering stitches around the sleeve head and ease in slightly.

Place a piece of canvas, 4cm x 10cm shaped according to the sleeve head, at the end of the wadding.



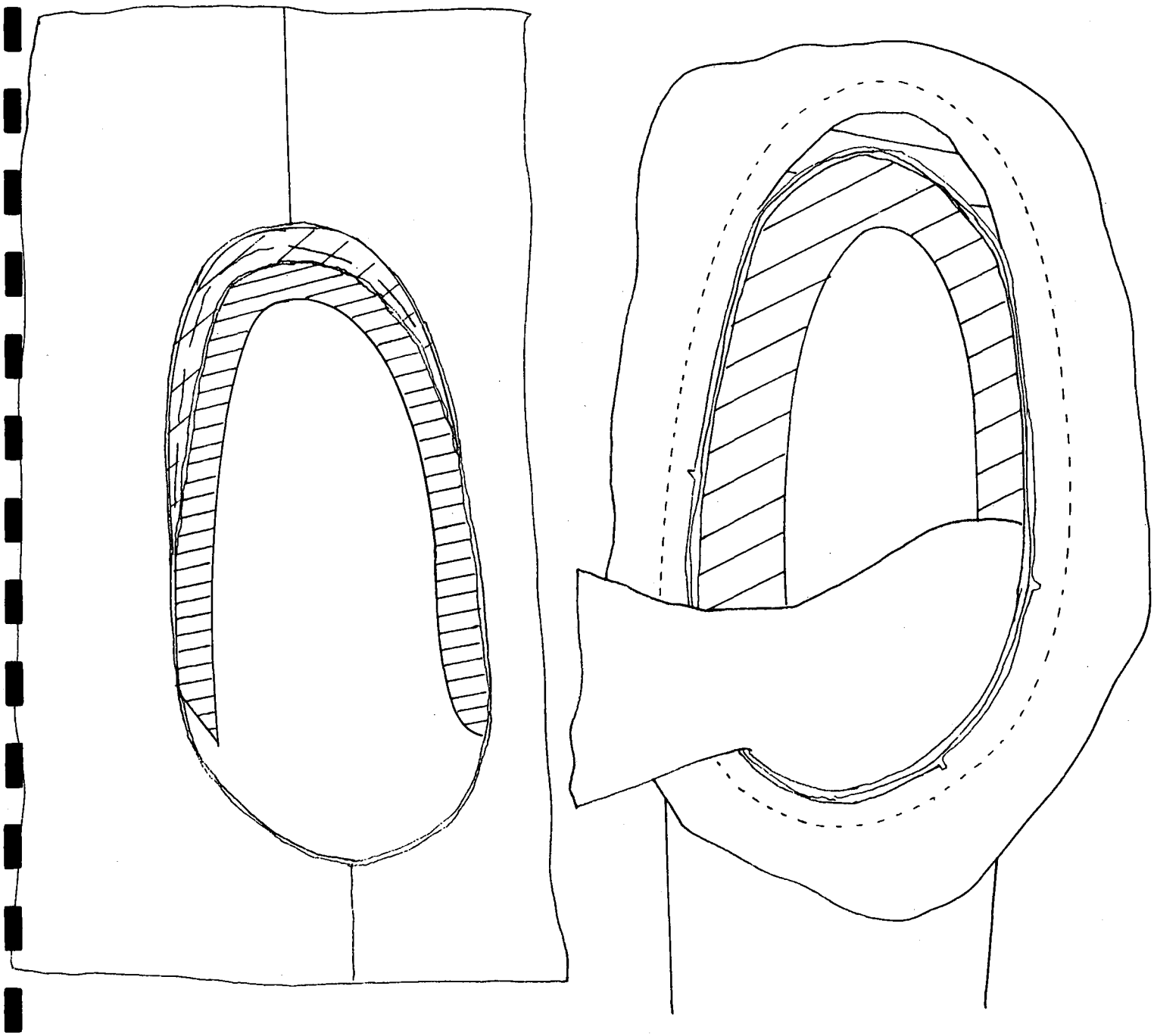
85. Fit shoulder pads for fitting.

Fit the jacket on a person and fit the shoulder pads to the shoulders, between the lining and the jacket.

Method used by industry

85. Baste armhole lining and prepare sleeve for armhole felling.

* Basting machine
The shoulder seam of the lining and the notch on the pad must match. Baste lining, starting and finishing at the same place.

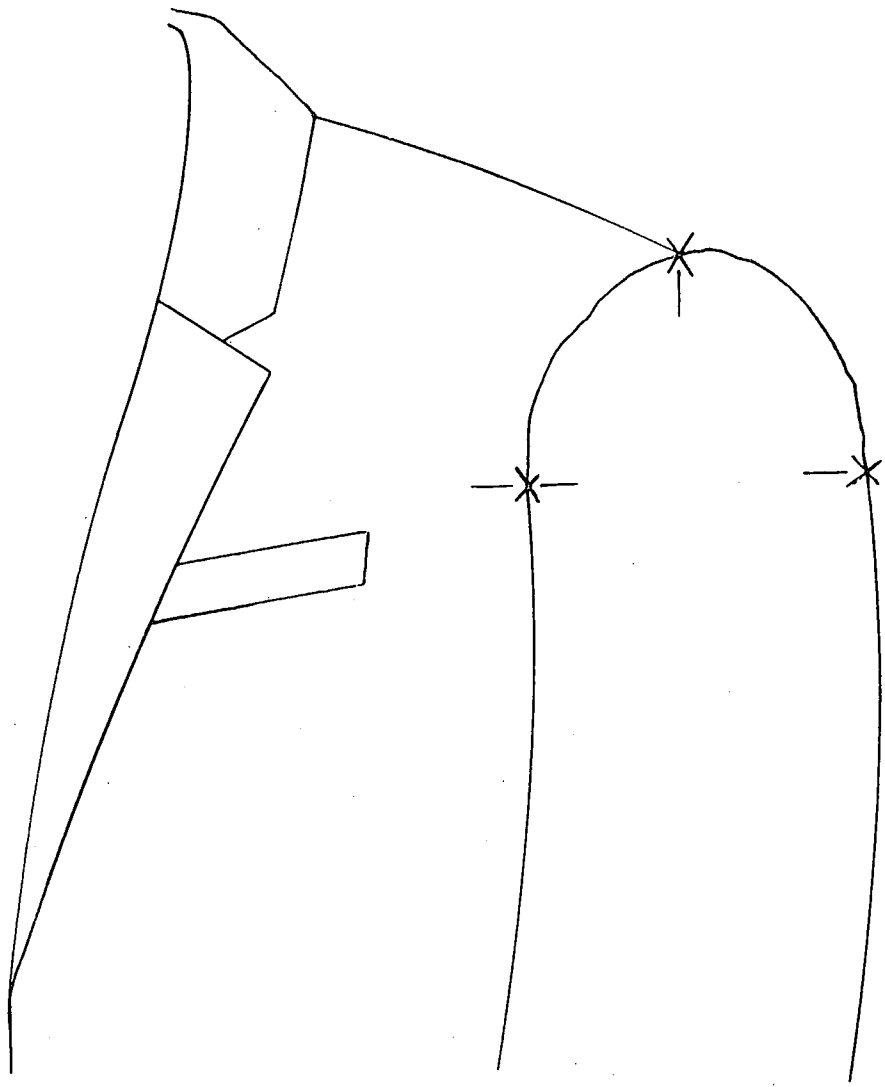


86. Armhole felling.

Start with the under seam, make sure notches match and fell a 9mm seam.

86. Hang the sleeve.

Hang the sleeve by pinning the centre of the sleeve head to the shoulder seam. Make sure the sleeve hangs in a natural curve to the arm. Pin the front and back of the sleeve head, making sure there are no creases in the sleeve.



87. Match marks and tuck sleeve.

Take the jacket off the person, transfer the markings to the other sleeve and jacket head, and tuck the sleeve in. Sew the sleeve making sure there are no pleats. Stitch down.

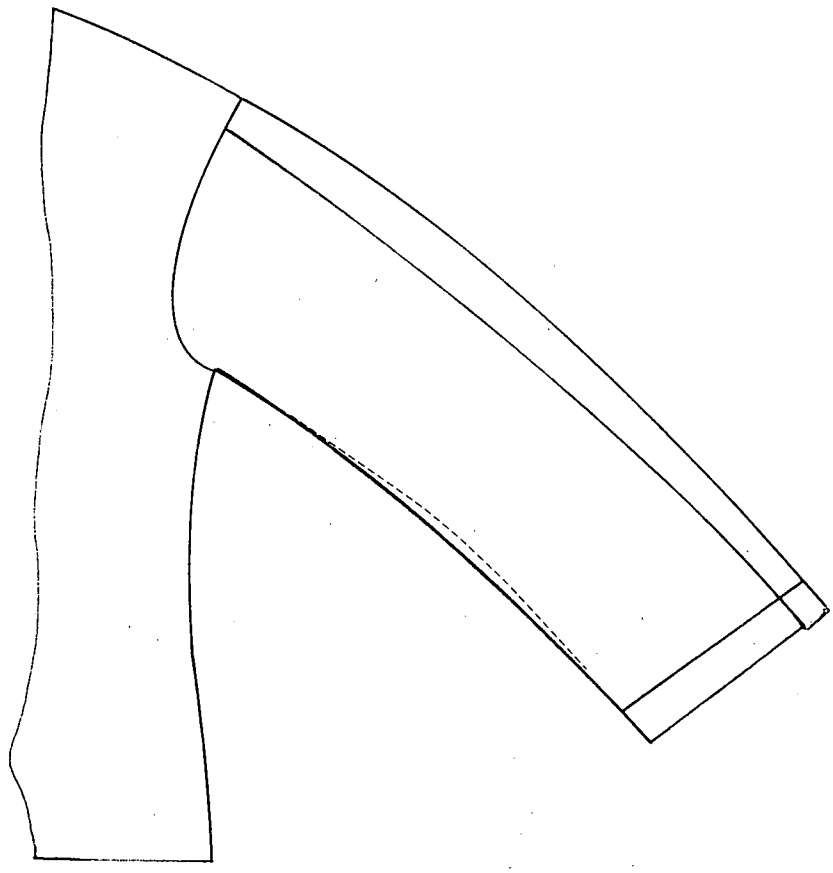
88. Press sleeve head.

Place jacket on the pressing table. Using the tip of the iron press from the inside of the sleeve. Apply steam and vacuum. The seams must be pressed together and not open.

Method used by Industry

87. Close lining sleeve opening.

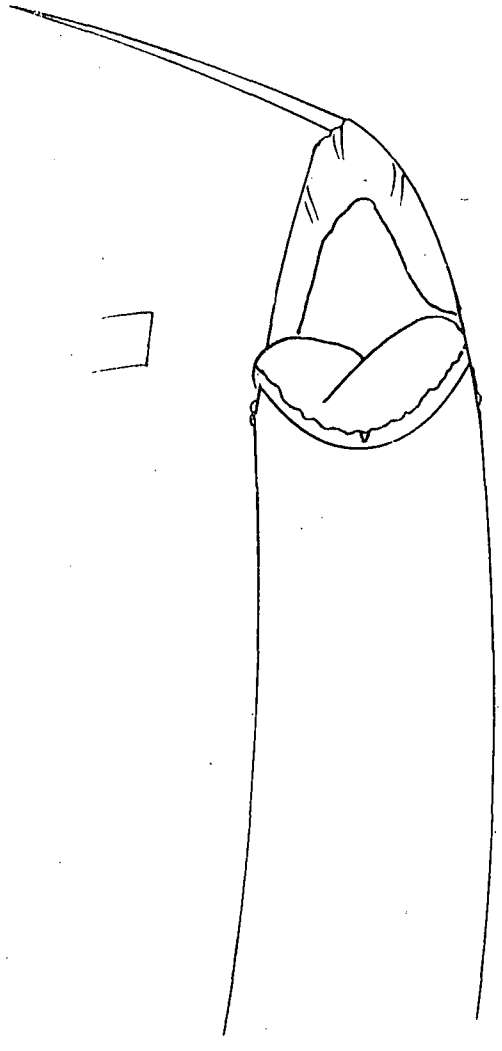
Align the seams and sew a 2mm seam easing in any fullness. Remove basting.



15. Fit production label to inbreast pocket.
67. Remove staples and soabars.
68. Mark bottoms.
69. Trim corners, lapel and bottoms.
82. Examine.
90. Buttonhole lapel and front.
91. Bartack buttonholes
98. Press shoulders.
99. Nip and drape sleeve.

89. Fit and sew shoulder pads.

Establish left or right pad. Match the notch with the shoulder seam. Extend the pad into the sleeve and align the sleeve edge with the pad edge. Make sure the pad lies flush with the jacket and sew through all layers with 1cm running stitches. Secure the pad to the shoulder seam at the neckline, with herringbone stitches.



90. Pin sleeve lining to armhole.

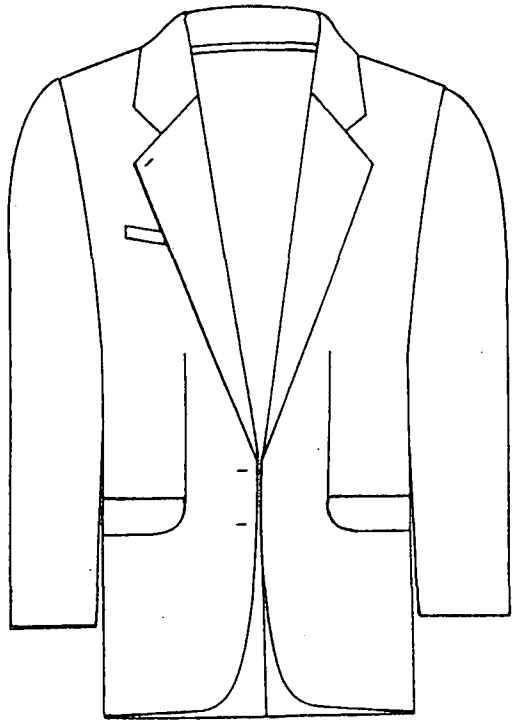
Matching the under arm seams, fold a 1cm seam around the sleeve head along the top half of the sleeve.

91. Fell sleeve lining.

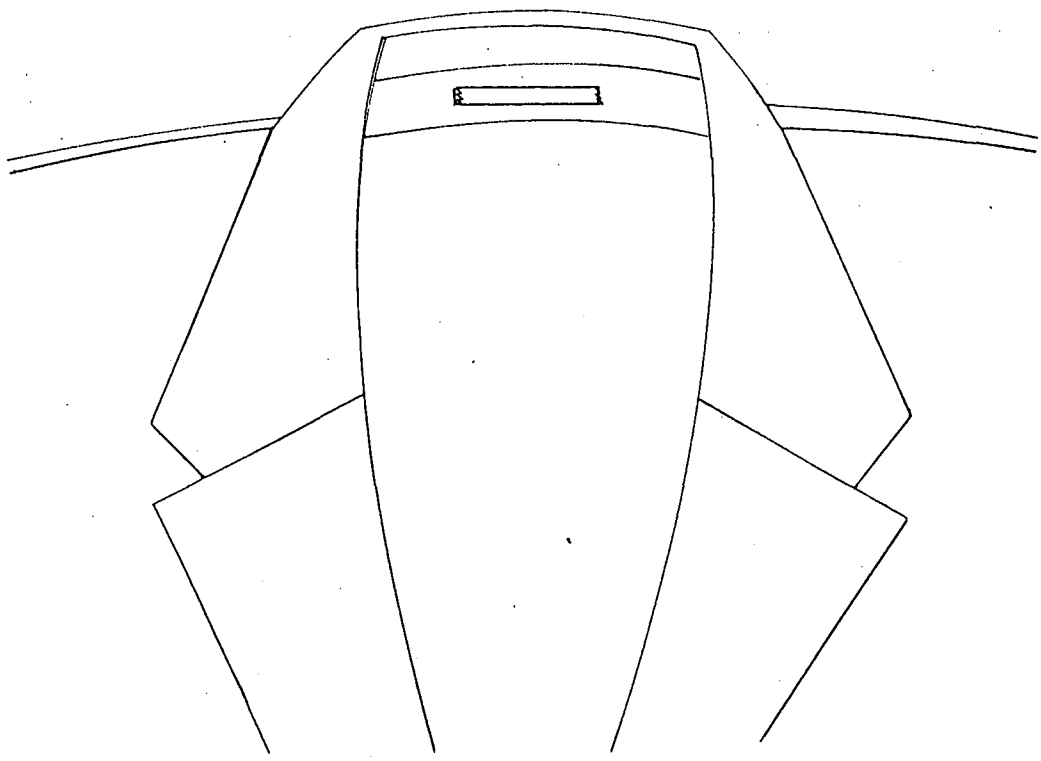
Fell the sleeve lining to the armhole with 2mm felling stitches.

88. 92. Mark lapel and front buttonholes.

* Chalk
Place the marker and mark in the buttonhole on the front of the jacket. For the lapel position place marker on the gorge and mark the buttonhole.



93.



89. 93. Bartack hanger tape.

* Bartack Machine - lockstitch
The bartack must be positioned at the centre back on the collar stand. Bartack down leaving no raw edges.

88. 94. Mark button position on sleeves.
Use marker and mark button positions on sleeves.
Sew buttons on with buttonsew machine.

102. 95. Mark button positions.

Place both fronts together and mark button positions. Use marker and mark in sham.

103. 96. Sew buttons.

Sew 2 buttons on front of jacket - shank the buttons by hand. Align sleeve under button sew machine and sew buttons on eash sleeve vent (sham).
Cut loose threads.

92. 97. Clean threads.

* Clippers
Remove all threads and basting from the jacket.

93. 98. Off press sleeve.

* Hoffman Press
Press left and right front.
Press left and right back.
Press vent.

94. 99. Off press sleeves between seams.

* Steam iron and vacuum table
Position sleeves flat on the table and press the sleeves between the seams.

96. 100. Press front and backs.

* Hoffman Press
Press left and right front.
Press left and right back.
Press vent.

97. 101. Press collar.

* Hoffman Press
Place jacket on press according to mirror, fold the collar over at nicks on under collar.

98. 102. Press shoulders.

* Hoffman Press
Place shoulders on press, smooth out, press area.

101. 103. Smooth lining.

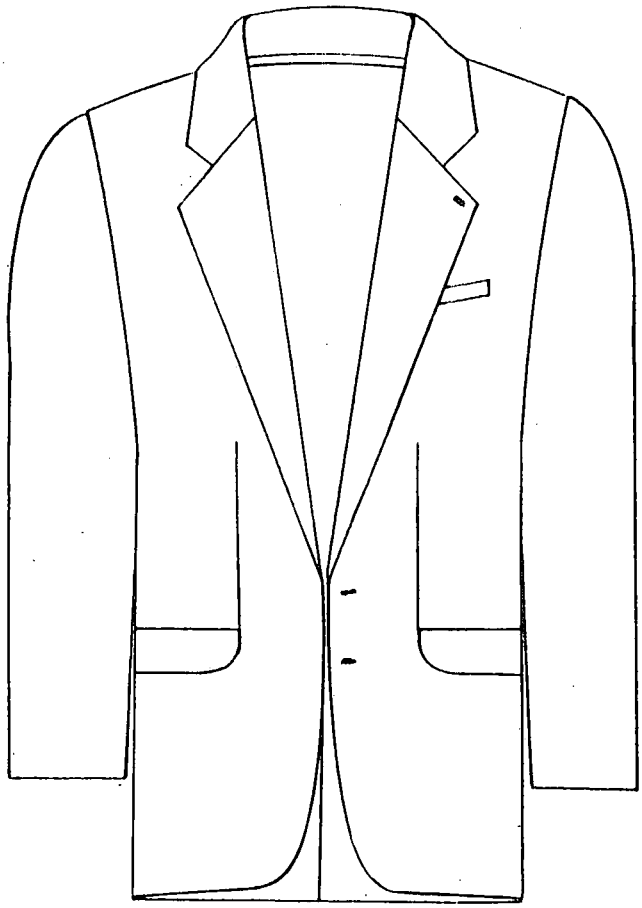
* Steam iron and vacuum table
Complete lining is smoothed out with iron.
Place vent correctly and press.

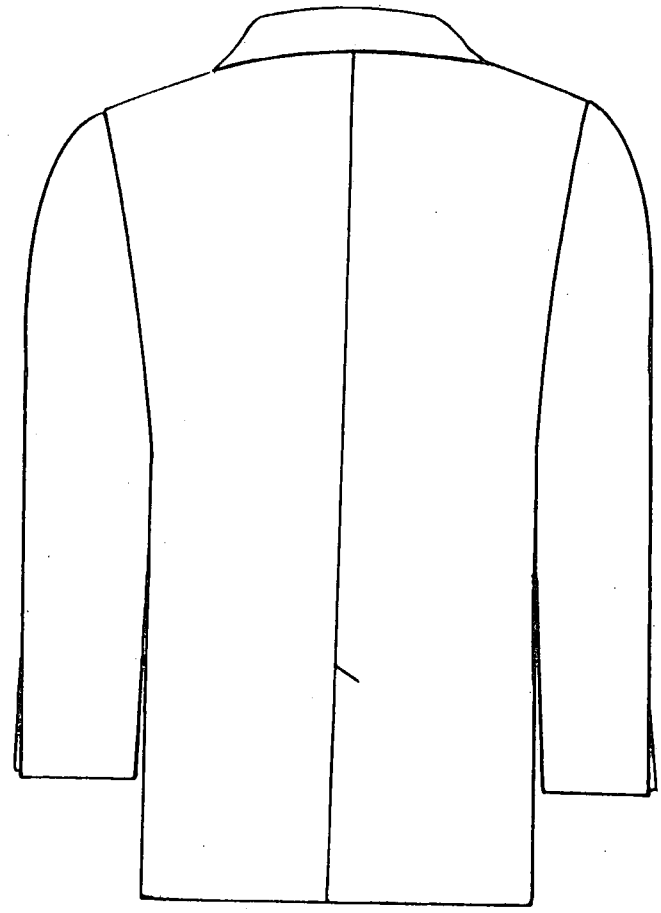
104. Final Press.

* Steam iron and vacuum table
Smooth out any impressions on the jacket and execute final press.

105. Press roll of lapel.

106. Final examination.





106. Examine.

1. Collar
2. Lapels
3. Sew round
4. Edge baste
5. Shoulder seams facing
6. Sleeve setting
7. Sleeve seams
8. Lining sleeves
9. Welt
10. Side pockets
11. Forepart darts
12. Side seams
13. Side body seams
14. Back seam
15. Vent
16. Jacket hem
17. Lining hem
18. Lining to
19. Pocket linings
20. Labels
21. Lining
22. Buttonholes
23. Bartacks
24. Hanger tape
25. Cleaning
26. Chest canvas

CHAPTER THREE

MEN'S TROUSERS

ORDER OF CONSTRUCTION USED IN INDUSTRY

MEN'S TROUSERS

ORDER OF CONSTRUCTION USED IN STUDENT TRAINING

Method used by industry

1. Staple Half Lined Fronts

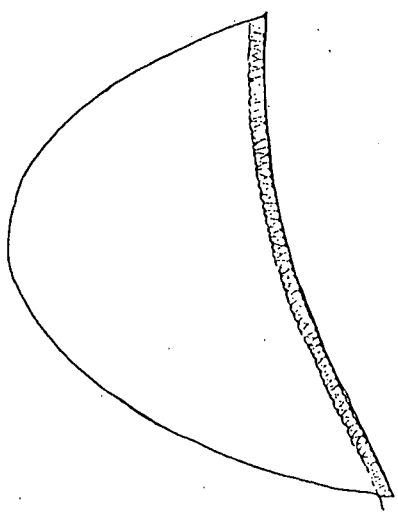
   Align lining at fork and front with excess lining at the side and top. Staple a soabar at the fork, leaving an 8mm pleat at each side.

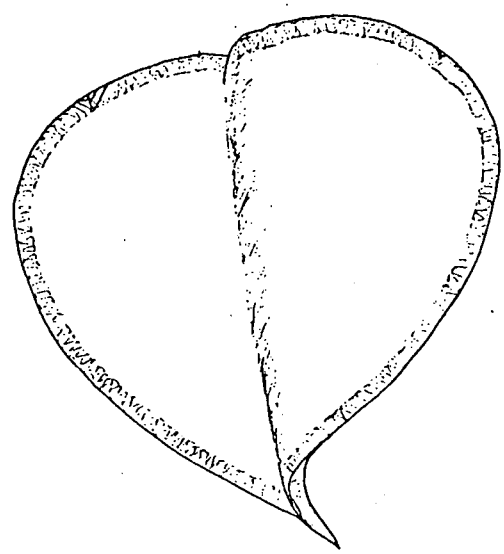
2. Overlock Half Lined Pants

   Trim the excess lining. Trim frayed edges. Stitch flush with the cloth edge.

3. Overlock Crotch Piece

   Align the short sides and stitch flush to the edge. Trim only the frayed edges. Stitch around the edge, trimming the frayed edges.



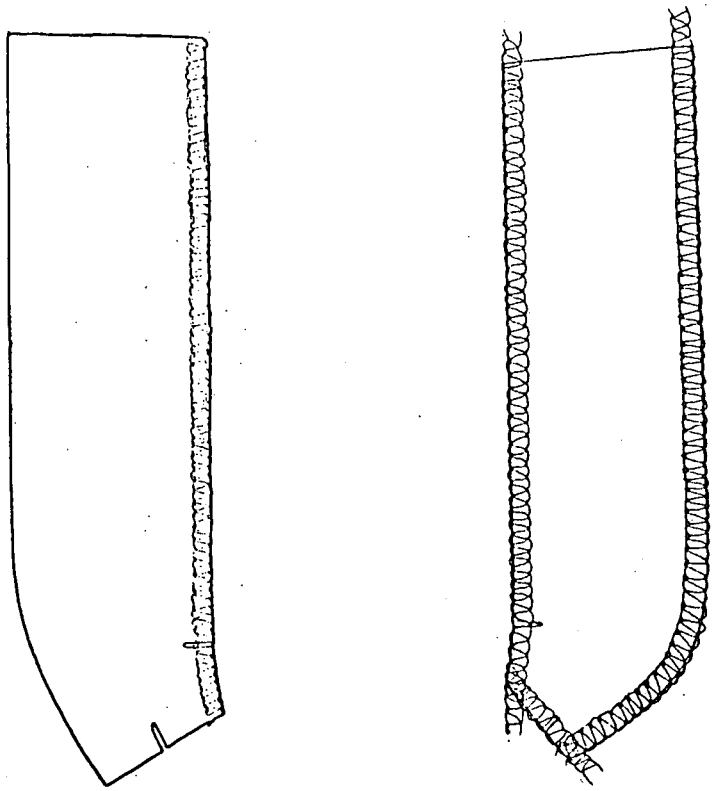


4. 1. Overlock Back and Front

Stitch flush with the edge, trimming the frayed edges. Overlock side seams and inside legs. Overlock only the buttonstand front seam on the wrong side of the fabric.

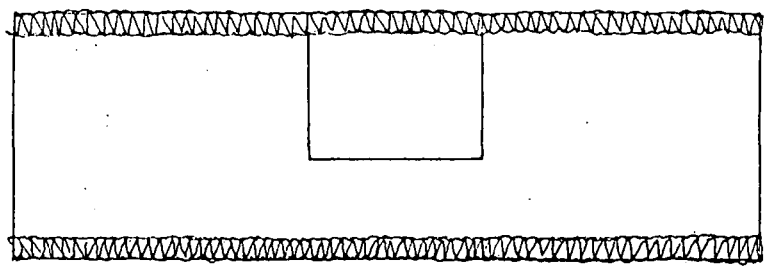
5. 2. Overlock Buttonstand Fly

Overlock flush with the edge, and trim frayed ends only. Overlock only the notch side.



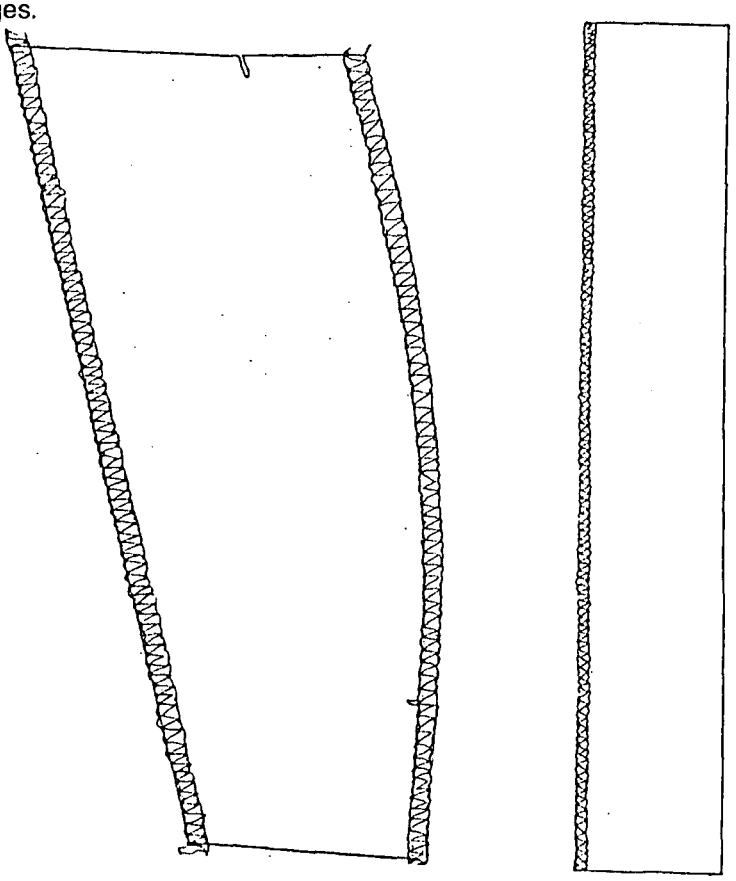
6. 3. Overlock Hip Pocket Facing and Tag

Overlock flush with the edge, and trim frayed ends only. Overlock the long edges only and catch production tag.



7. 4. Overlock Side Pocket Bearer

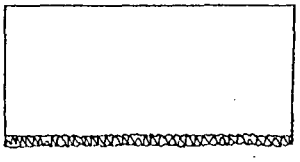
Overlock flush with the edge, and trim frayed ends only. Overlock only the long edges.



5. Overlock the Waistband

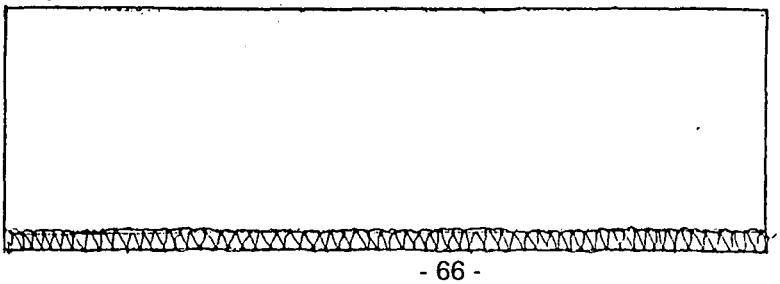
Overlock flush with the edge, and trim frayed ends only. Overlock only the top edge.

6. Overlock cash pocket facing.



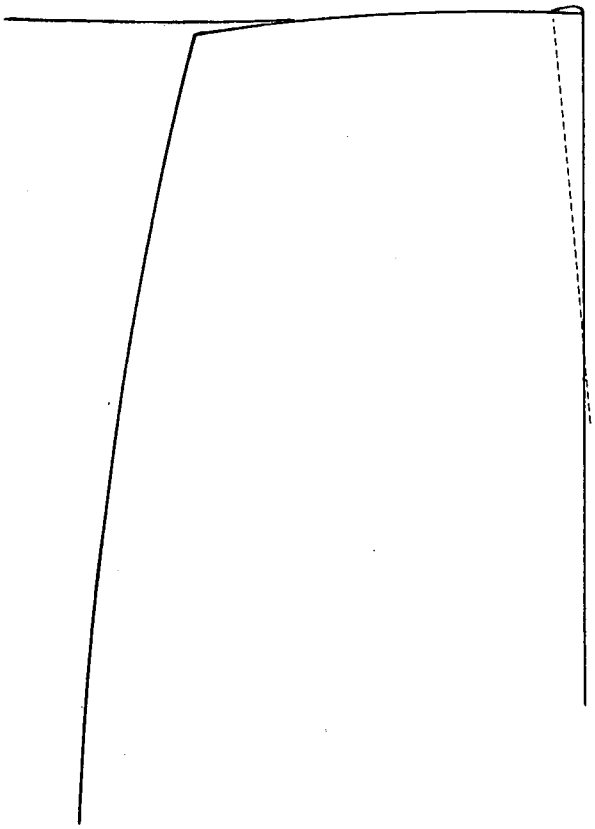
9. 7. Overlock Jets

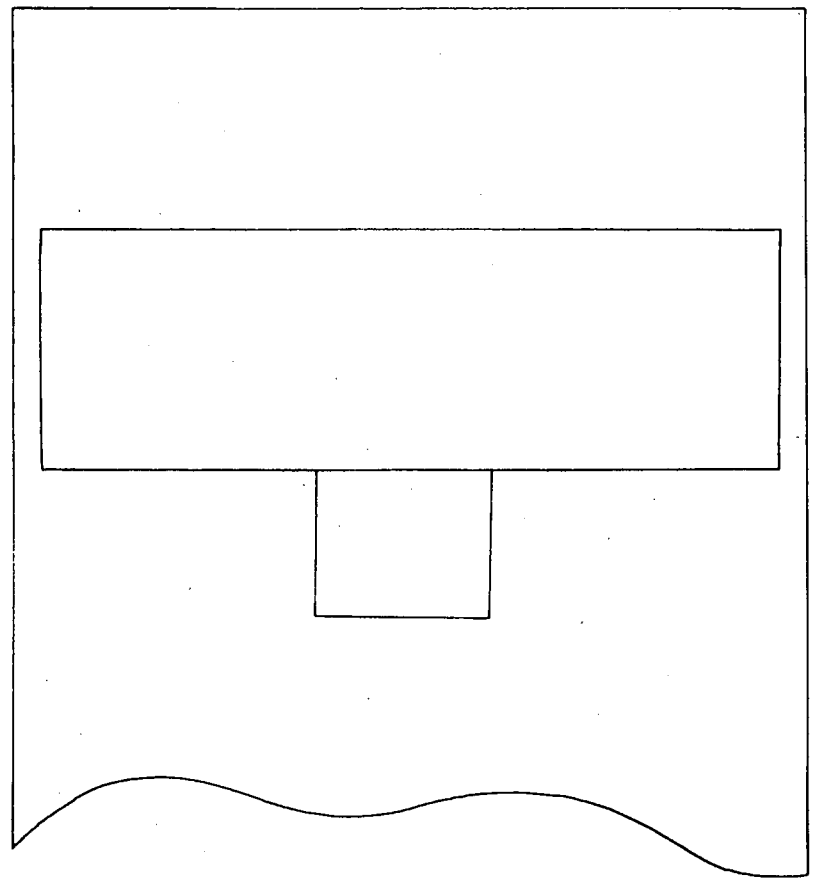
Align the stay and the jet, stitch flush with the edge and trim frayed edges. Overlock only one long side.



20. 8. Sew Dart

Sew the darts on the back of the trousers: 10mm wide and 70mm long.





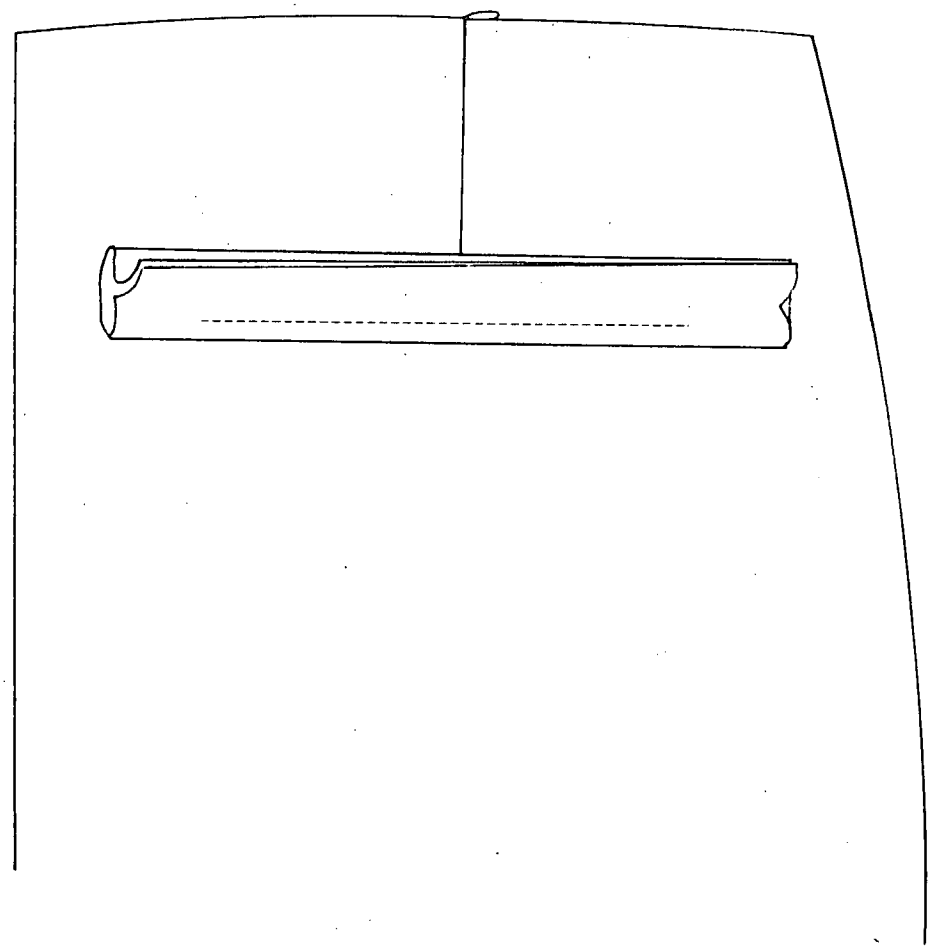
16. 9. Hip Pocket Facing to Lining

Position the facing on the lining by matching the notches. Position the production tab at the lower edge. Sew a 4mm seam along the lower edge.

Method used by industry

27. Attach Hip Pocket

* Jet pocket machine.
Double 5mm jet folder. Lining under and panel on top. Centralise to dart, Jet piece to clamp.

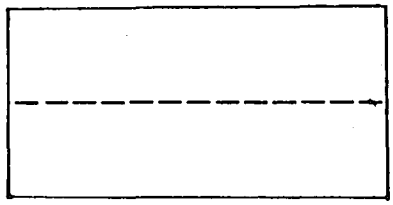


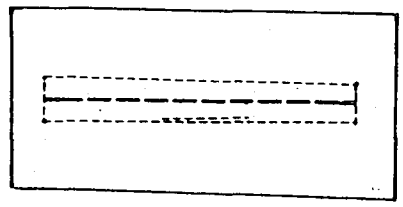
10. Sew jet for hip pocket

A pocket with a one-piece binding

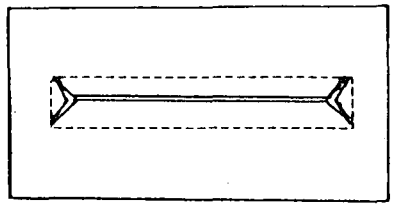
Working on the right side of the garment, place the binding piece right side down on the right side of the garment, with the crease on the marking line and the ends protruding 10mm beyond each end of the marking line. Tack the piece to the garment on the crease, making the tacked line exactly as long as the pocket opening.

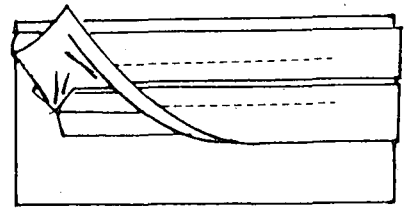
Stitch the binding piece to the garment and the interfacing, stitching 5mm on each side of the centre marking line and straight across each end of it. Begin the machine stitching in the middle of one long side, stich round the marking line, keep the corners at each end perfectly sharp and overlap the stitching at the end for about 10mm. The line of stitching along the sides should be of the exact length of the pocket opening and should be perfectly straight and exactly 5mm away from the centre marking line.





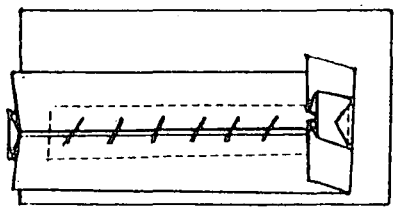
Slash the pocket opening through both layers of the fabric and the interfacing along the centre marking line to within 5mm of the stitching at each end. Snip diagonally into the corners to form a little "tongue" or triangle at each end of the pocket opening. Take care not to cut the stitching at the corners.





Fold the triangle at each end through the opening to the wrong side. Fold the binding piece through the slit to the wrong side. Fold an inverted pleat in the binding piece so that the folded edges of the pleat meet at the centre of the pocket opening. Tack it in position on the wrong side.

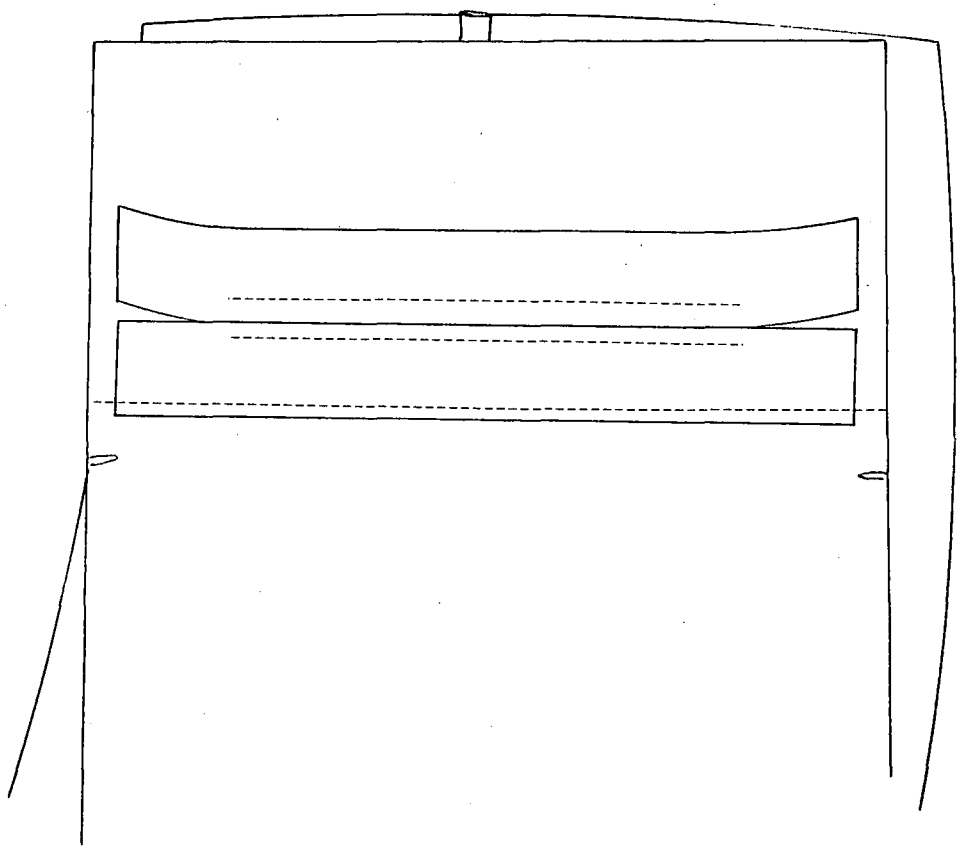
Tack the folded edges of the pleat together over the opening with diagonal tacking. Fold back the ends of the binding piece on the wrong side and stitch across the ends and through the little triangles to close the ends of the opening.



Fold back a 5mm turning along the top edge of the lower pocket piece and place it with the folded edge immediately below the stitching (or seam line) on the lower half of the binding piece and the right side up. Tack and stitch it to the edge of the binding piece.

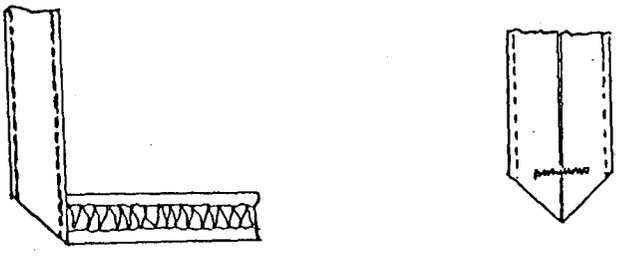
30. 11. Fasten Jet Facing

Sew bottom jet facing 40mm from the edge.



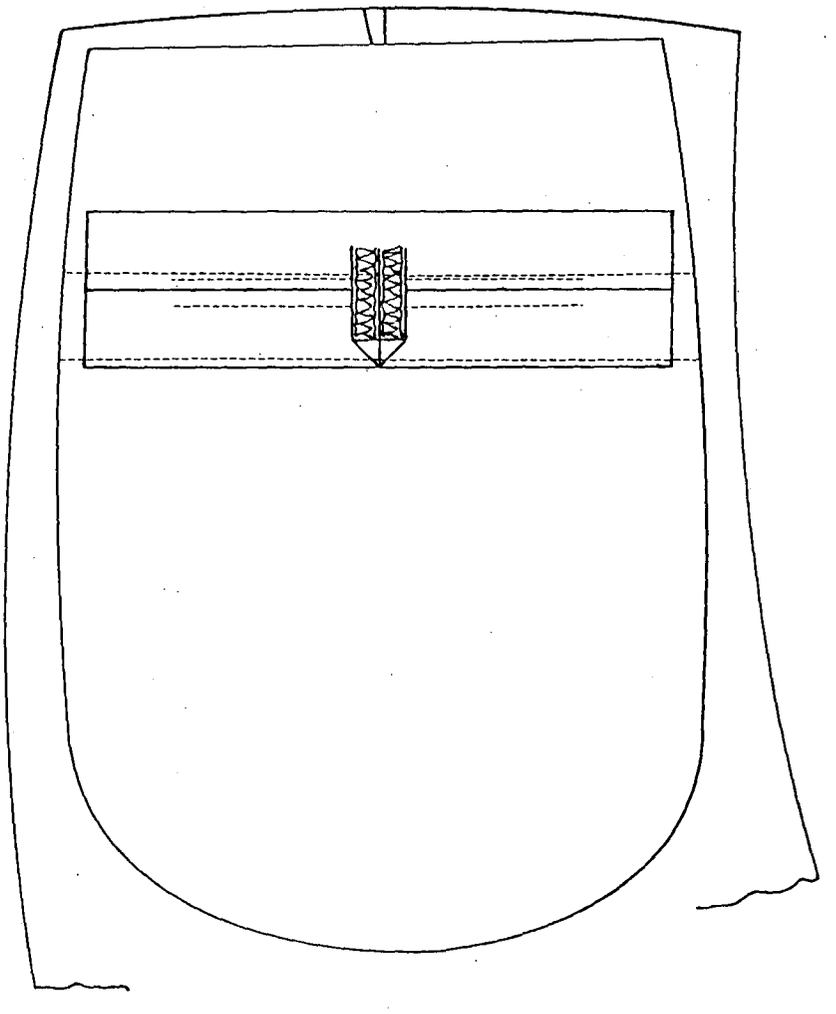
12. 12. Make hip Tabs

Fold the tabs in half and make a bartack 8mm from the point. Mark and cut 30mm from the point.



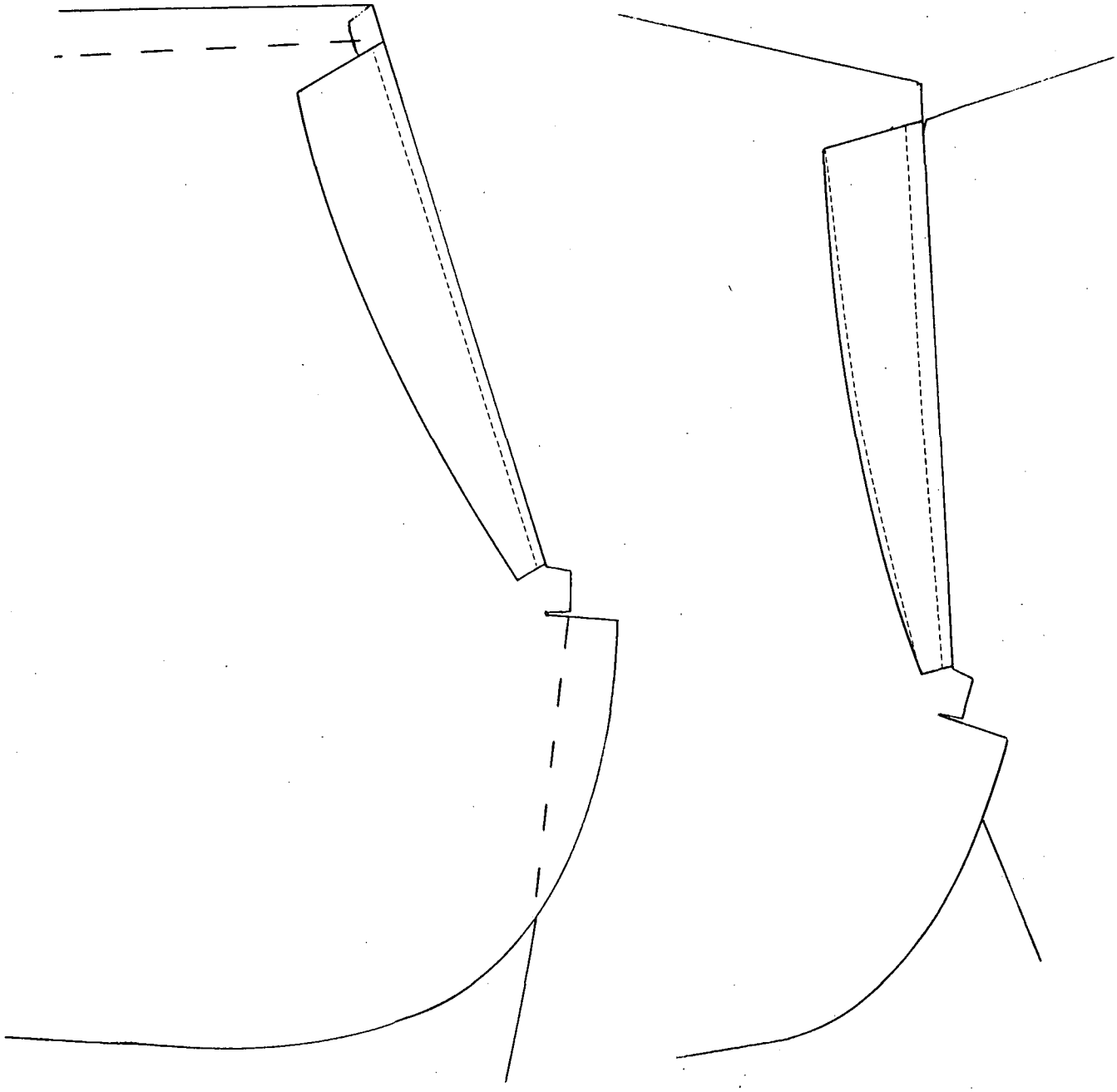
31. 13. Close Pocket Top and Insert Tab

Position the top at the centre of the pocket (dart). Fold the top facing to the top of the jet and sew through the jet seam catching the facing and the pocket bag.



23. 14. Fit side pockets

Align pocket bag nick to nick, fold at nicks and topstitch 4mm.

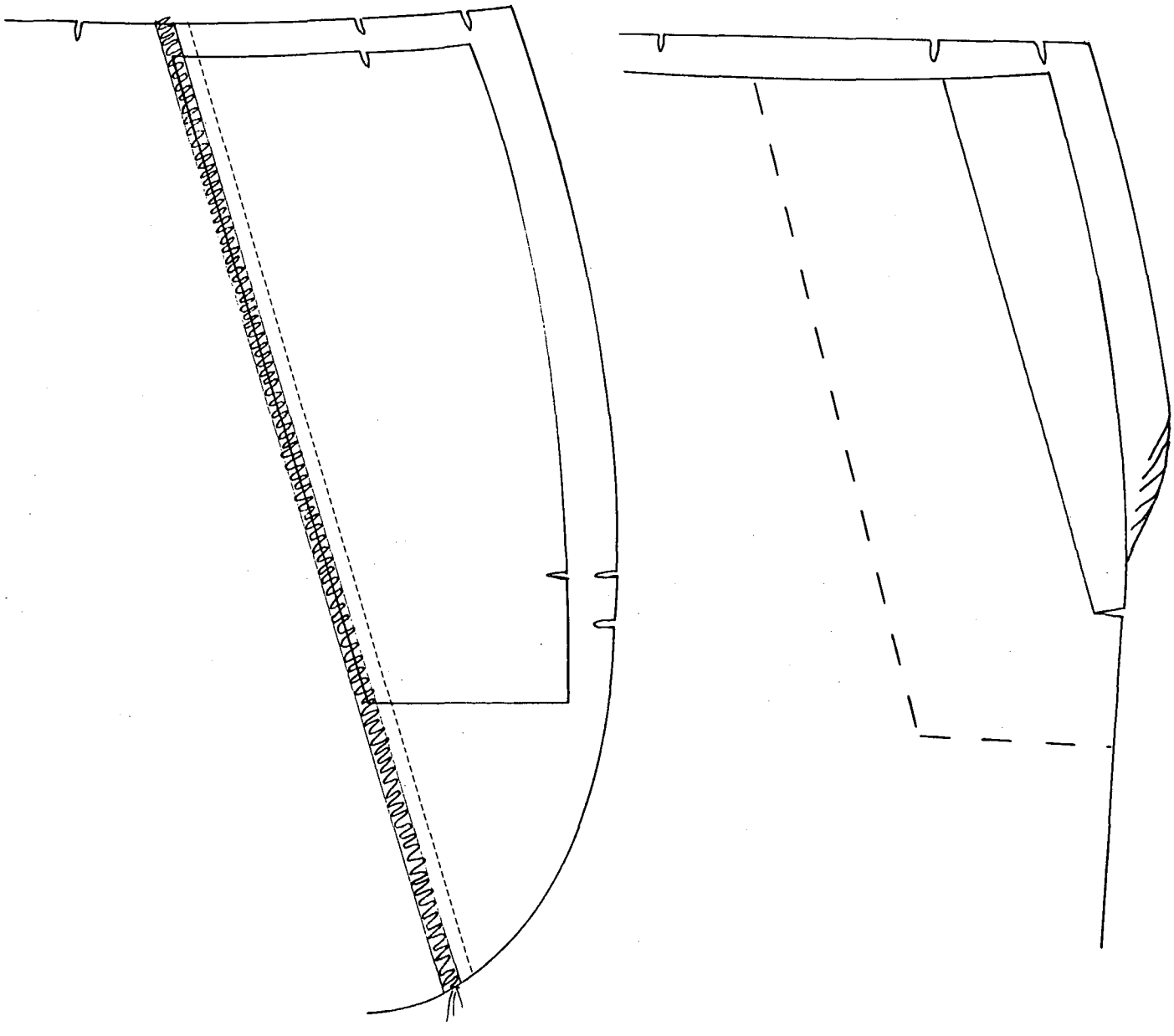


24. 15. Fasten Pocket Facing

Sew the pocket facing onto the lining and sew 4mm from the overlocked edge.

25. 16. Fit Bearer

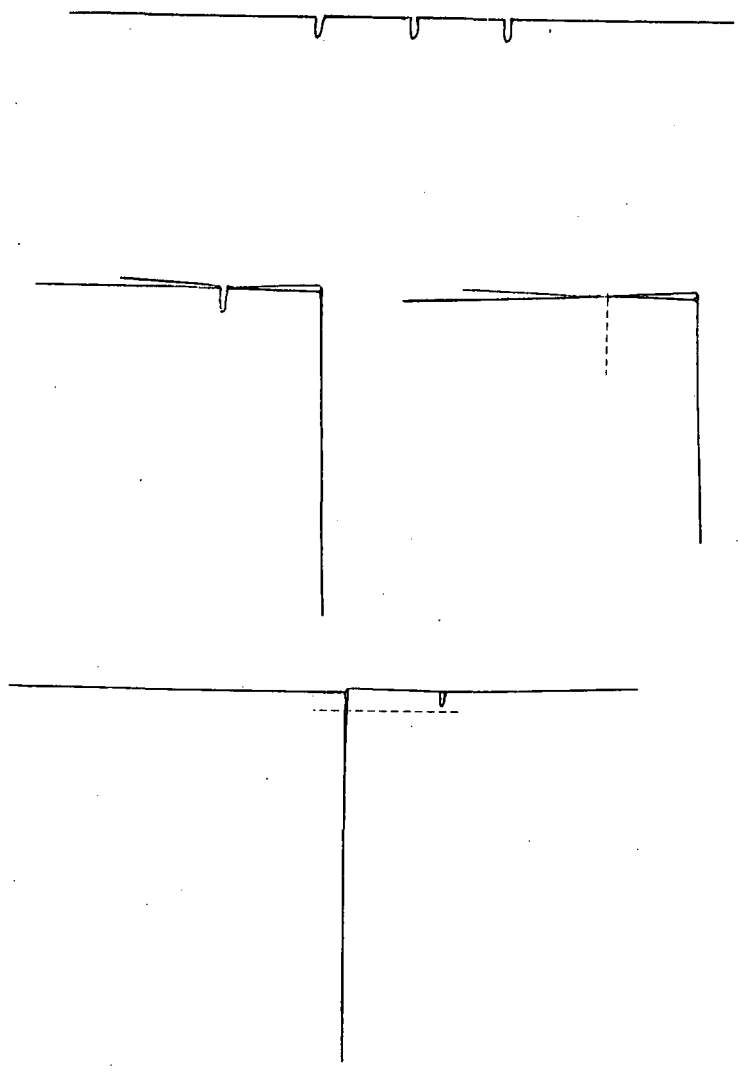
* Seven thread flowing - coverstitch machine.
Fit the bearer 15mm in from the side seam running parallel to the side seam. Notch to notch at the side seams.



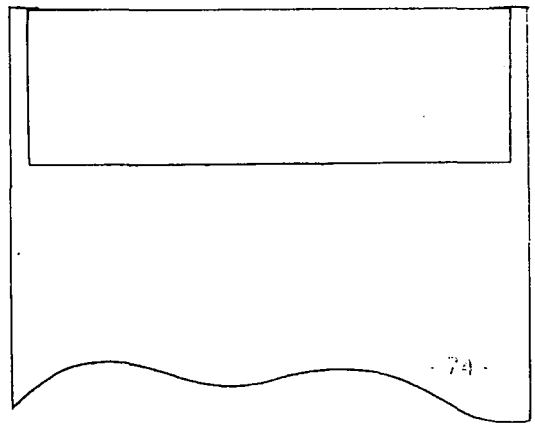
26. 17. Tuck Pocket Mouth

Place pants front on pocket bag, matching the notches at the side seams. Tuck at bottom nick 10mm. The top must be 30mm from the side seam and tuck 6mm from the top edge.

18. Sew or tack front pleats. Make front pleats. Align nick to nick. 20mm seam square to top. Backtacking seam start and finish

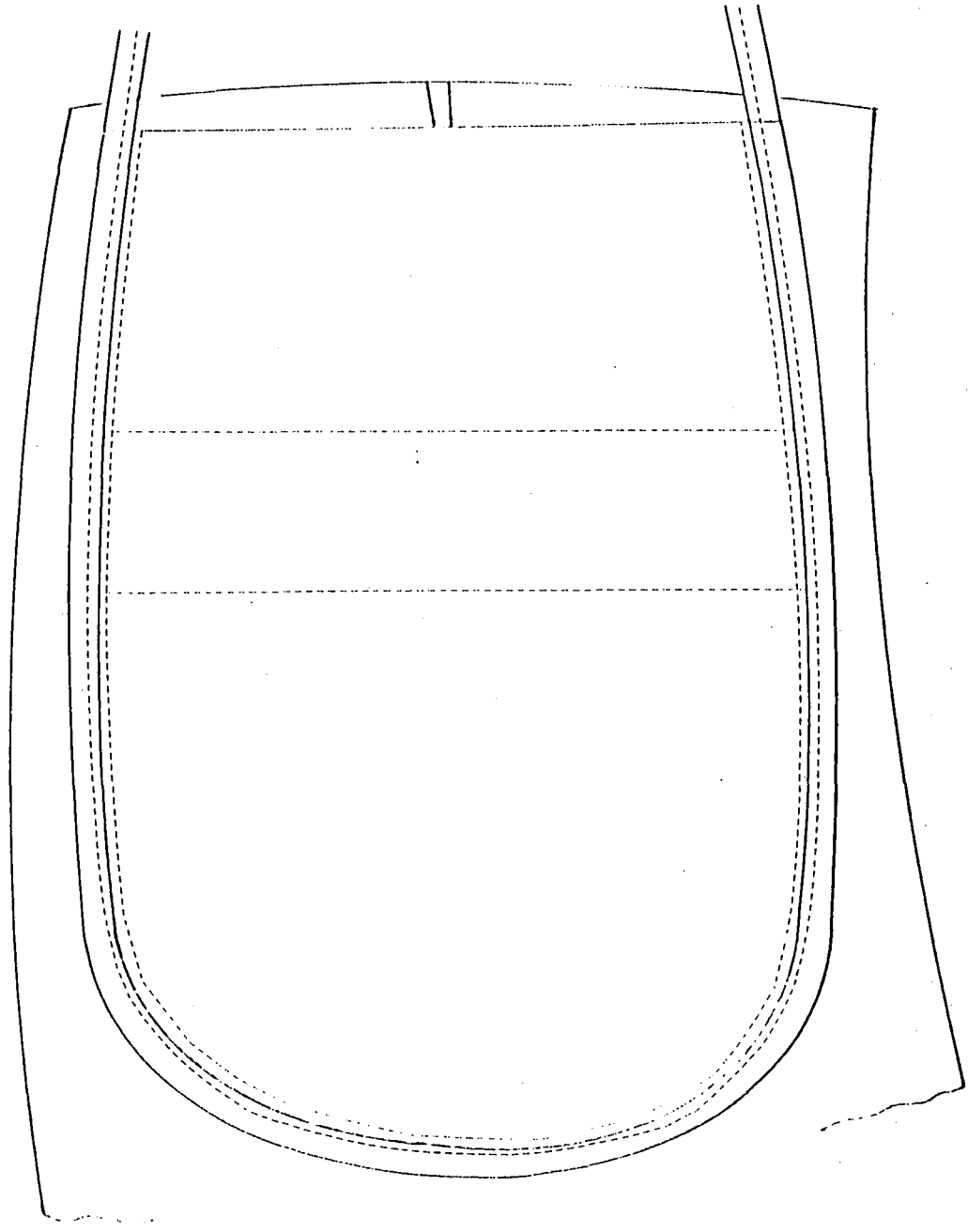


19. Attach cash pocket facing.



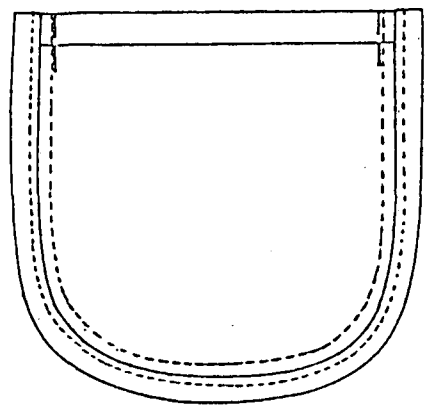
32. 21. Bind Hip Pocket Bags

Chainstitch with binding folder (40mm to 10mm). Stitch binding along sides and bottom of pocket bag.



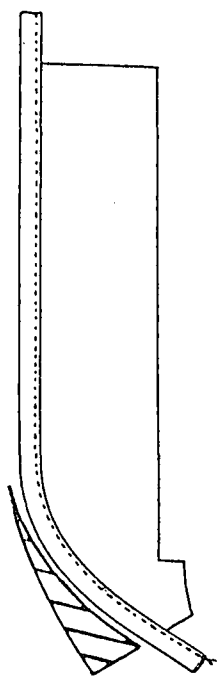
33. 22. Bind Cash Pocket

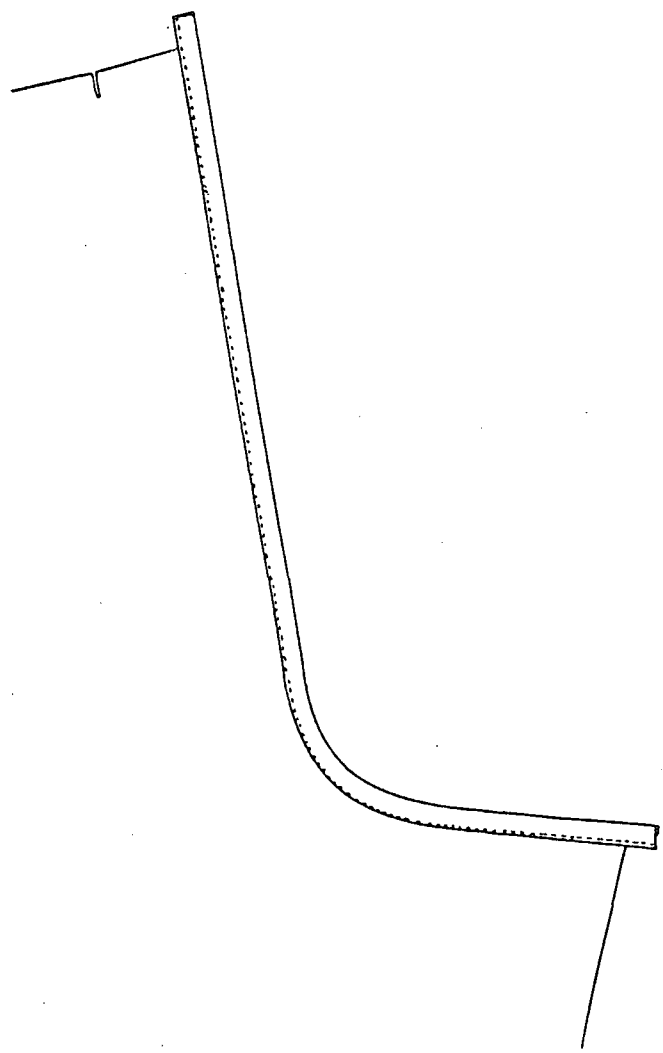
Chainstitch with binding folder (40mm to 10mm). Align pocket bags, lining 9mm below cloth and bind around pocket bag.



34. 23. Bind Fly and Seat Seam

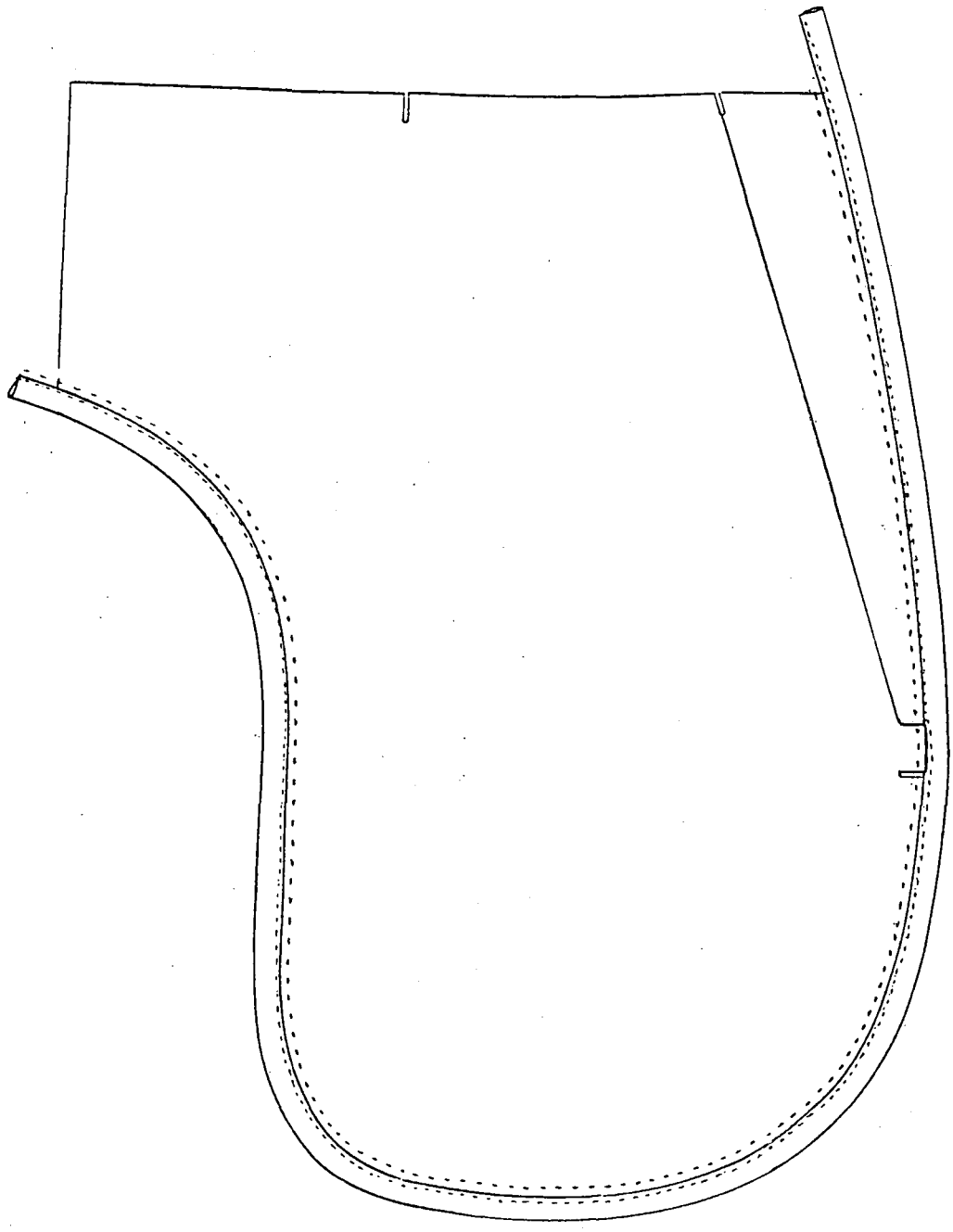
* Chainstitch with two threads.
Trim the fly from the notch and bind outside. Bind seat seams on the backs.





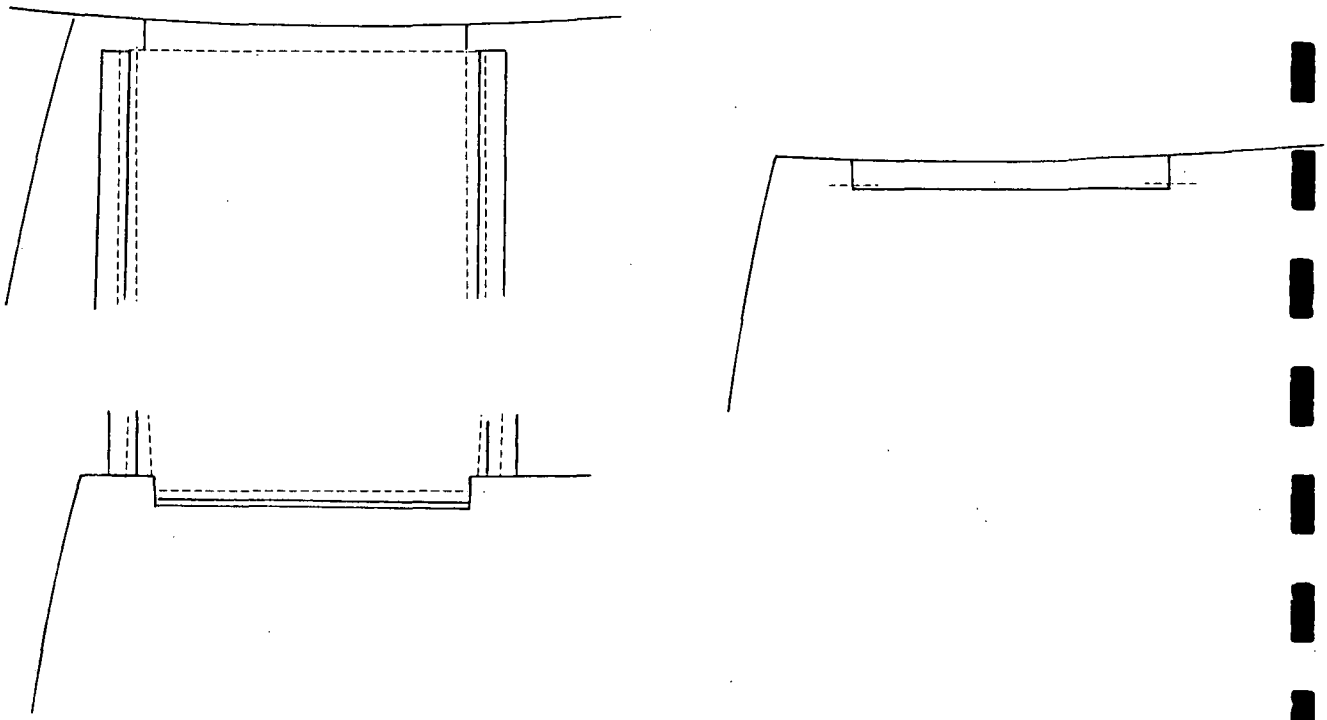
40. 24. Bind Side Pocket Bags

Trim to nick at side. Run binding along side to front following the pocket shape.



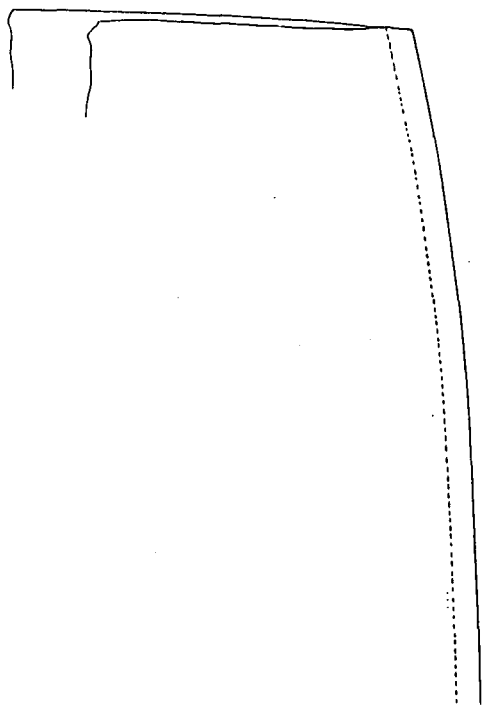
35. 25. Fit Cash Pocket

Position 20mm from the edge of the right pocket. Sew a 7mm seam. Alow 2mm of 9mm seam for counterseam. Sew and backtack at beginning and end.



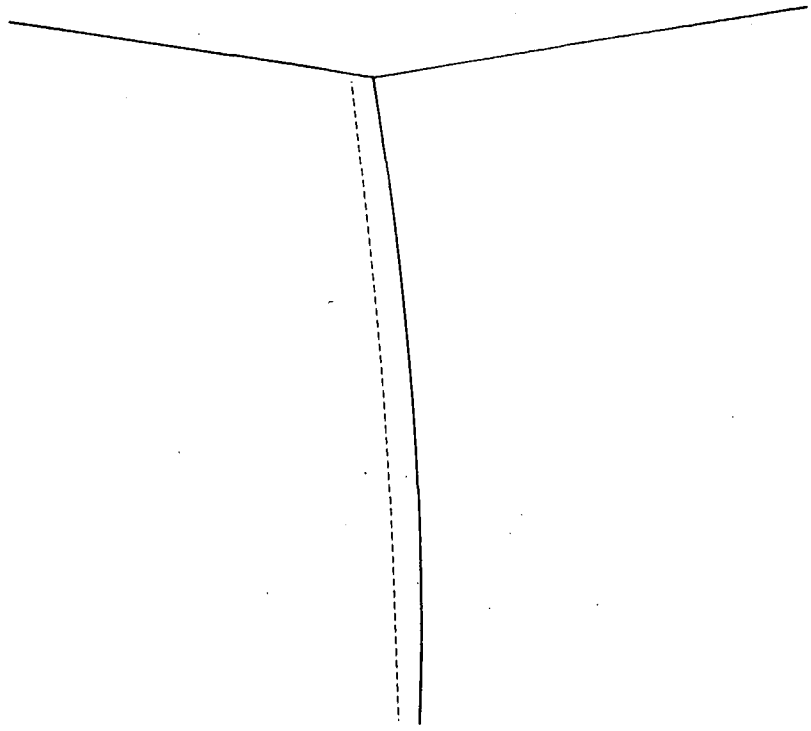
37. 26. Close Side Seam

Nick the side pockets, 10mm deep below button pocket mouth, 12mm deep for raised side seams and 22mm deep for open side seams. Close side seams with a 10mm seam.



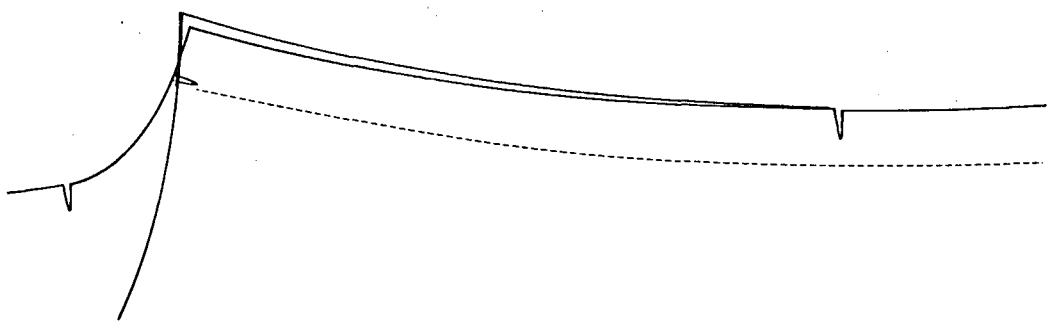
39. 27. Raised Side Seams

Raise side seam towards the back 6mm or 2mm.



50. 28. Close Inside Leg

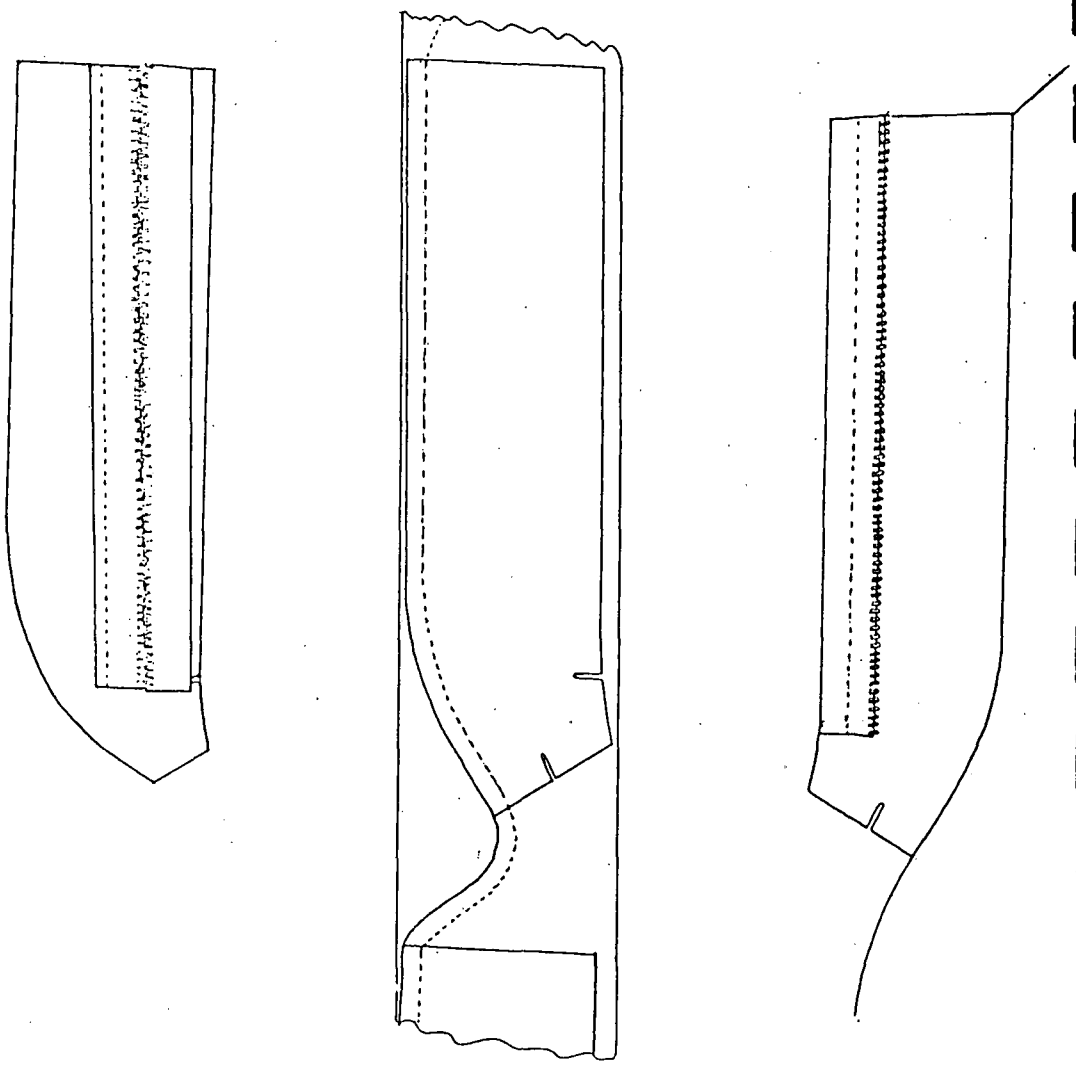
Sew a 20mm seam by matching the notches and stitch the back onto the front for the top 160 mm. (10mm fullness to 160mm).



Method used by industry

13. Attach zip to fly

Position zip onto fly, 2mm below nick at the bottom, 2mm from bottom edge and 6mm from top edge.

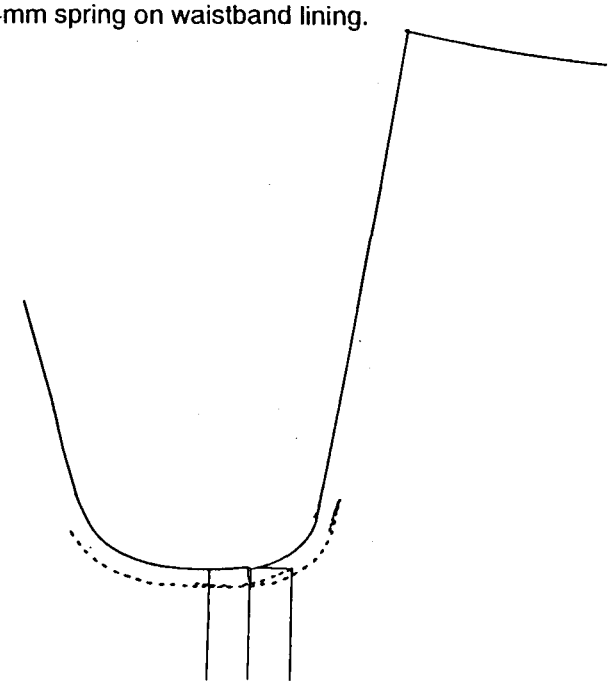


14. Make Buttonstand

Sew the buttonstand to the lining. Sew a 4mm seam.

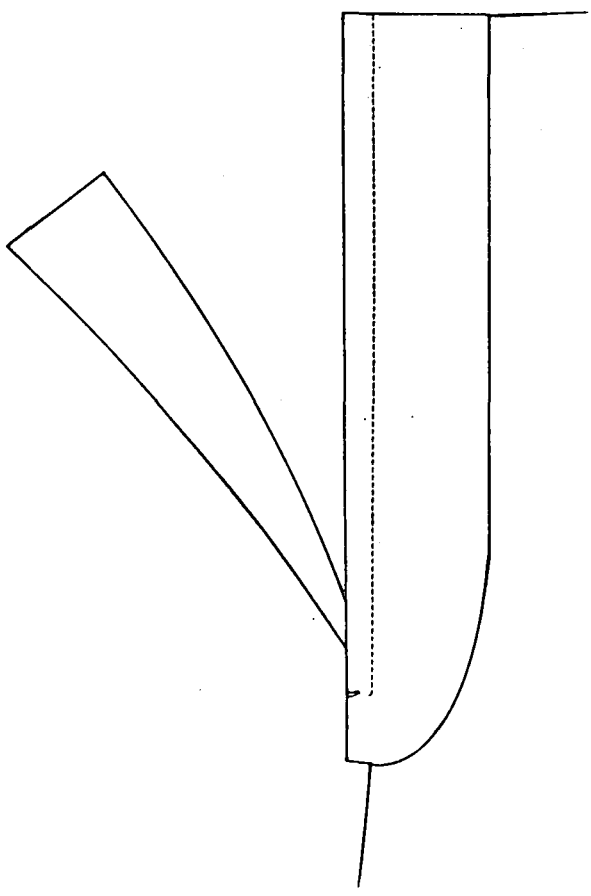
29. Close Seat Seam

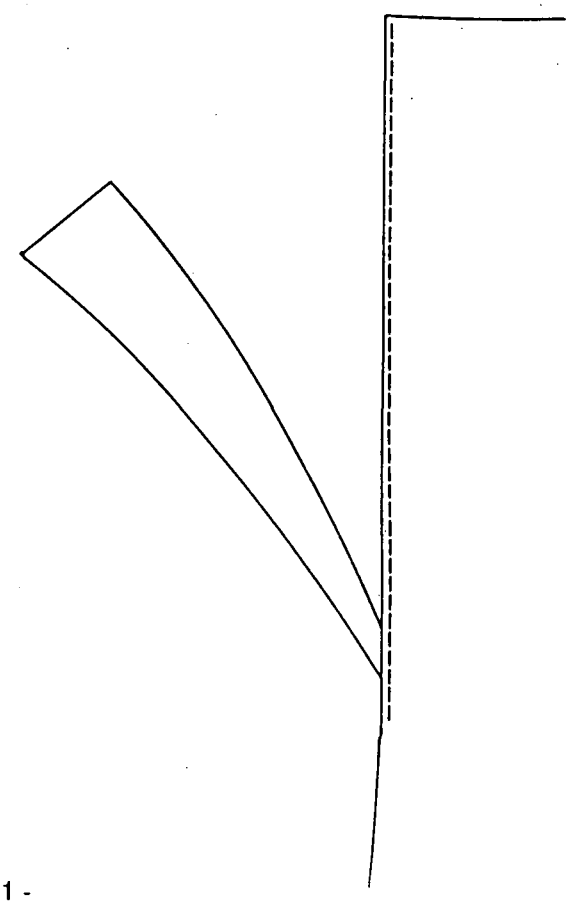
Trim ban roll. Measure the waist, half waist. Join fly tack stitching, sew a 10mm seam for curve of seat, fun from 10mm to waist size, waist size across waistband incorporate 4mm spring on waistband lining.



30. Fit Fly and Raise

Fit the fly by sewing an 8mm seam to notch, backtack and nick.

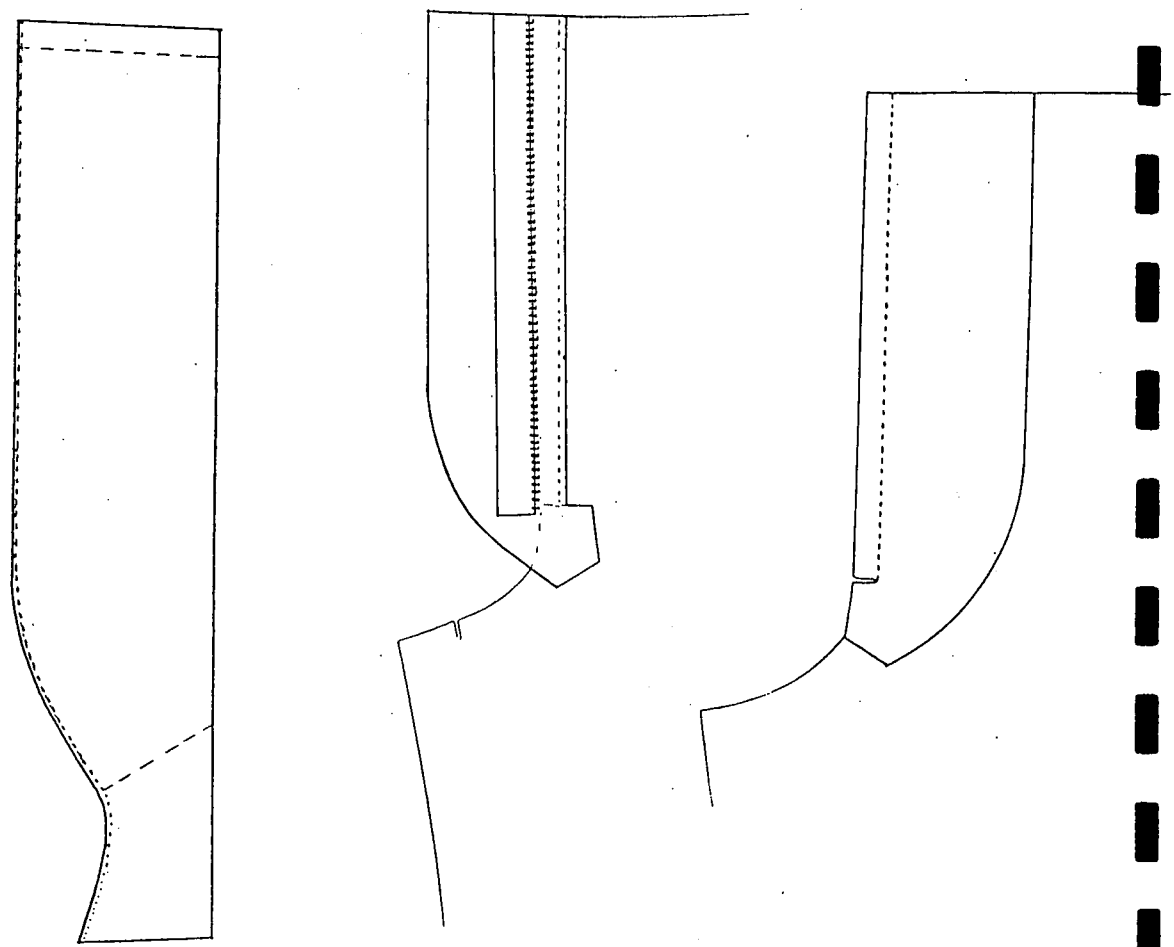




Method used by industry

15. Zip to Buttonstand and Raise Buttonstand

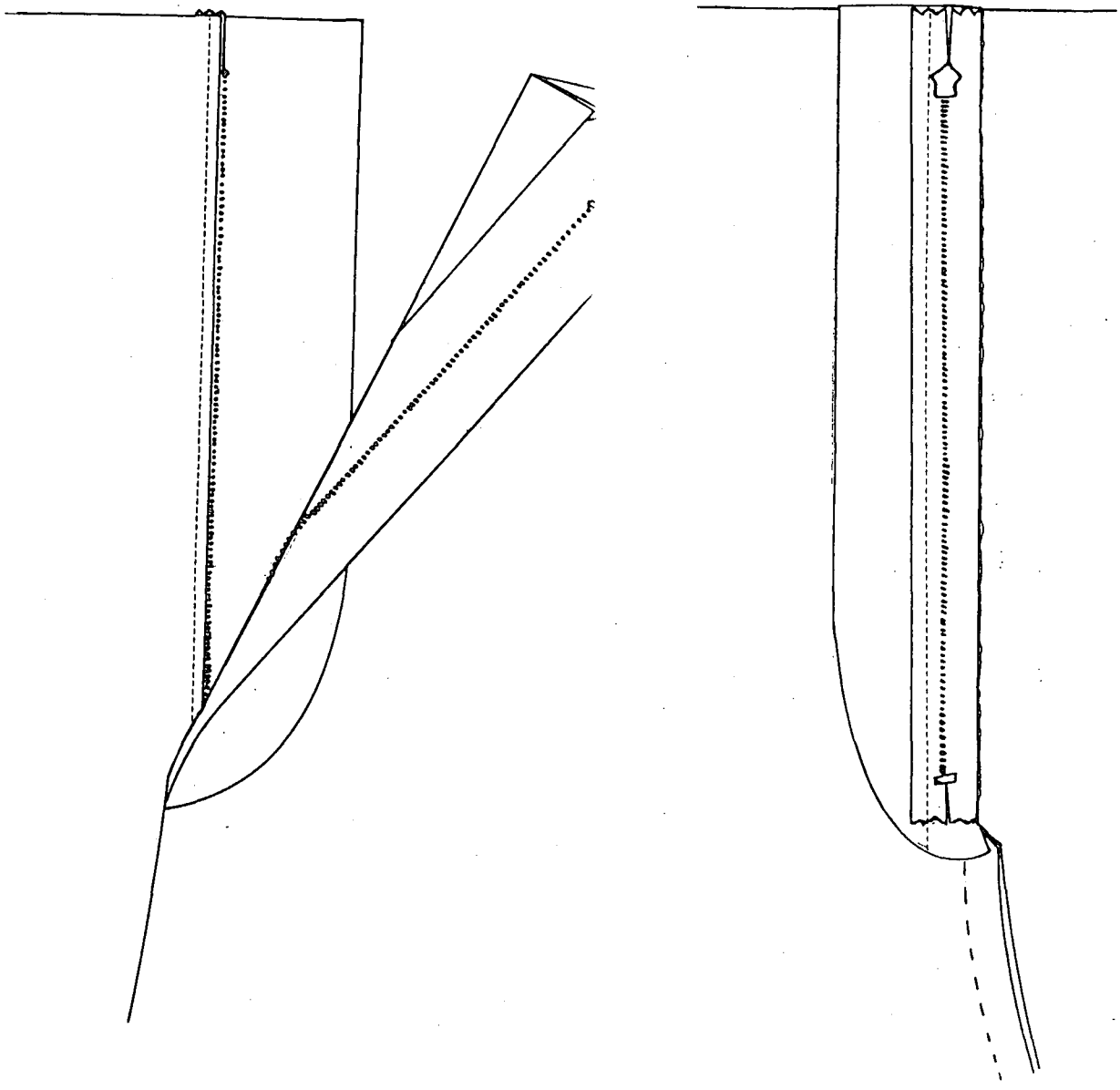
Sew zip flush with edge of buttonstand to 2mm below the bottom nick. Topstitch the buttonstand 2mm from edge.



8. Overlock Waistband

31. Zip to Buttonstand and Raise Buttonstand

Sew zip flush with edge of buttonstand to 2mm below the bottom nick. Topstitch the buttonstand 2mm from edge.



32. Attach zip to fly

Zip position onto fly. 2mm below nick at the bottom, 2mm from bottom edge and 6mm from top edge.

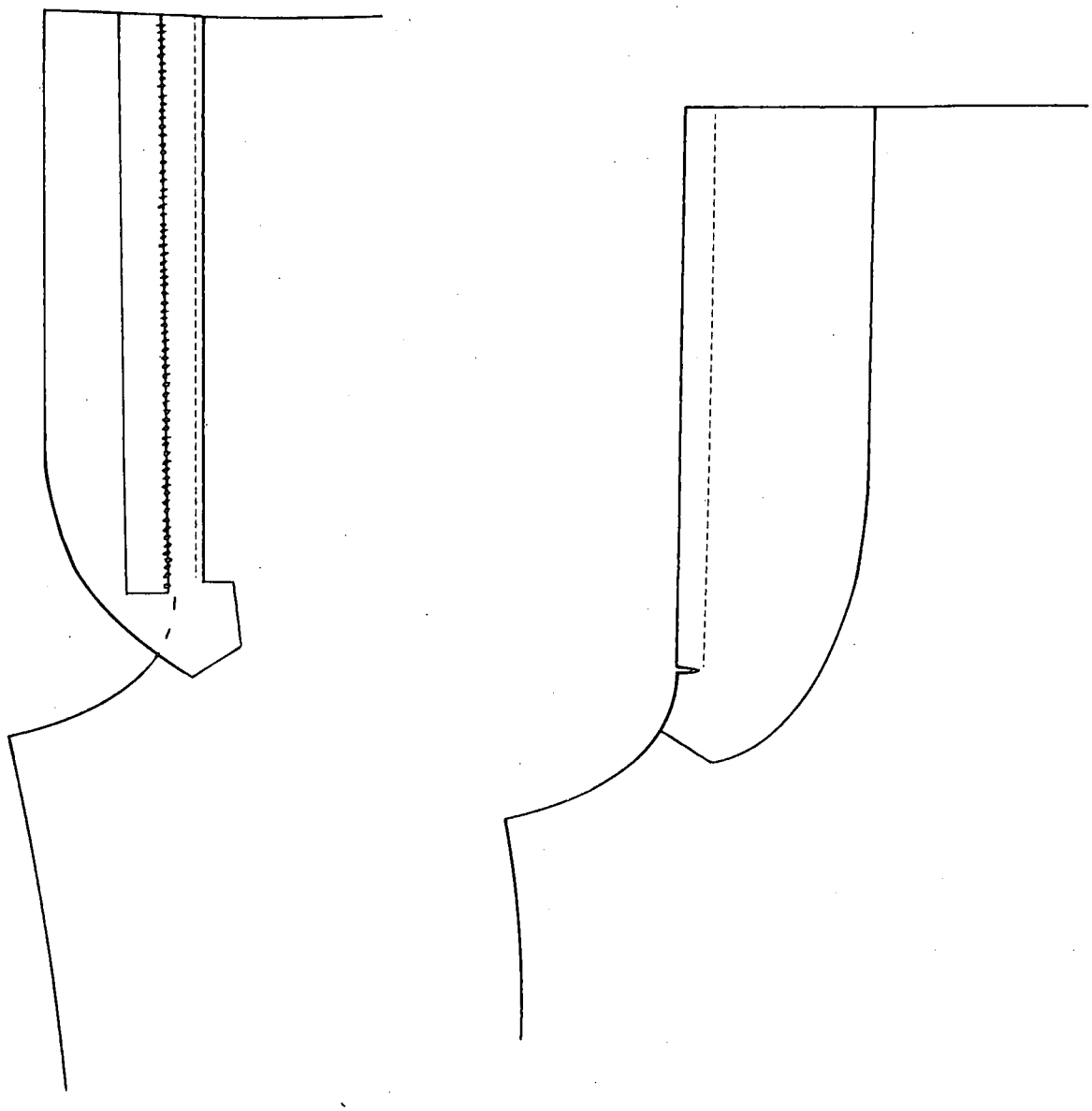
41. 33. Stitch Pockets to Fronts

Stitch and trim pockets to front seams.

Method used by industry

21. Fit Fly and Raise

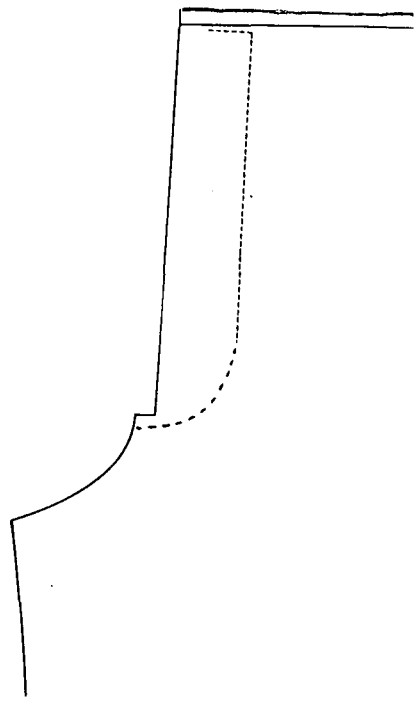
Fit the fly by sewing an 8mm seam to notch, backtack and nick.



36. Second row of stitching on fly zip and tuck cash pocket.

51. 34. Profile stitching on Fly

Stitch square at top 30mm wide down the zip to 5mm below the nick.



10. 35. Make the loops

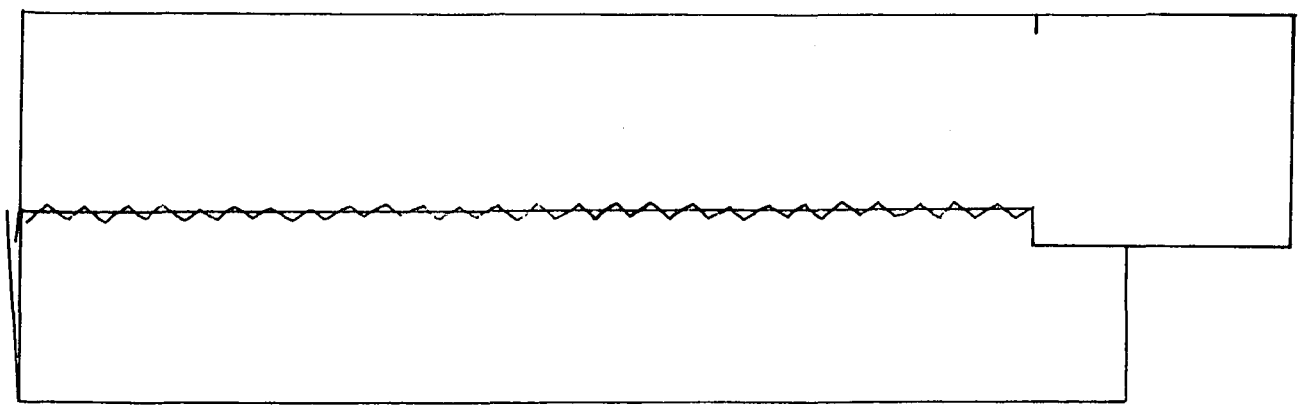
Use a strip of fabric 72mm x 22mm. Use a 10mm folder and three thread coverstitch machine. Stitch the loops.

10. 36. Cut the loops

Scissors.

17. 37. Make the Waistband

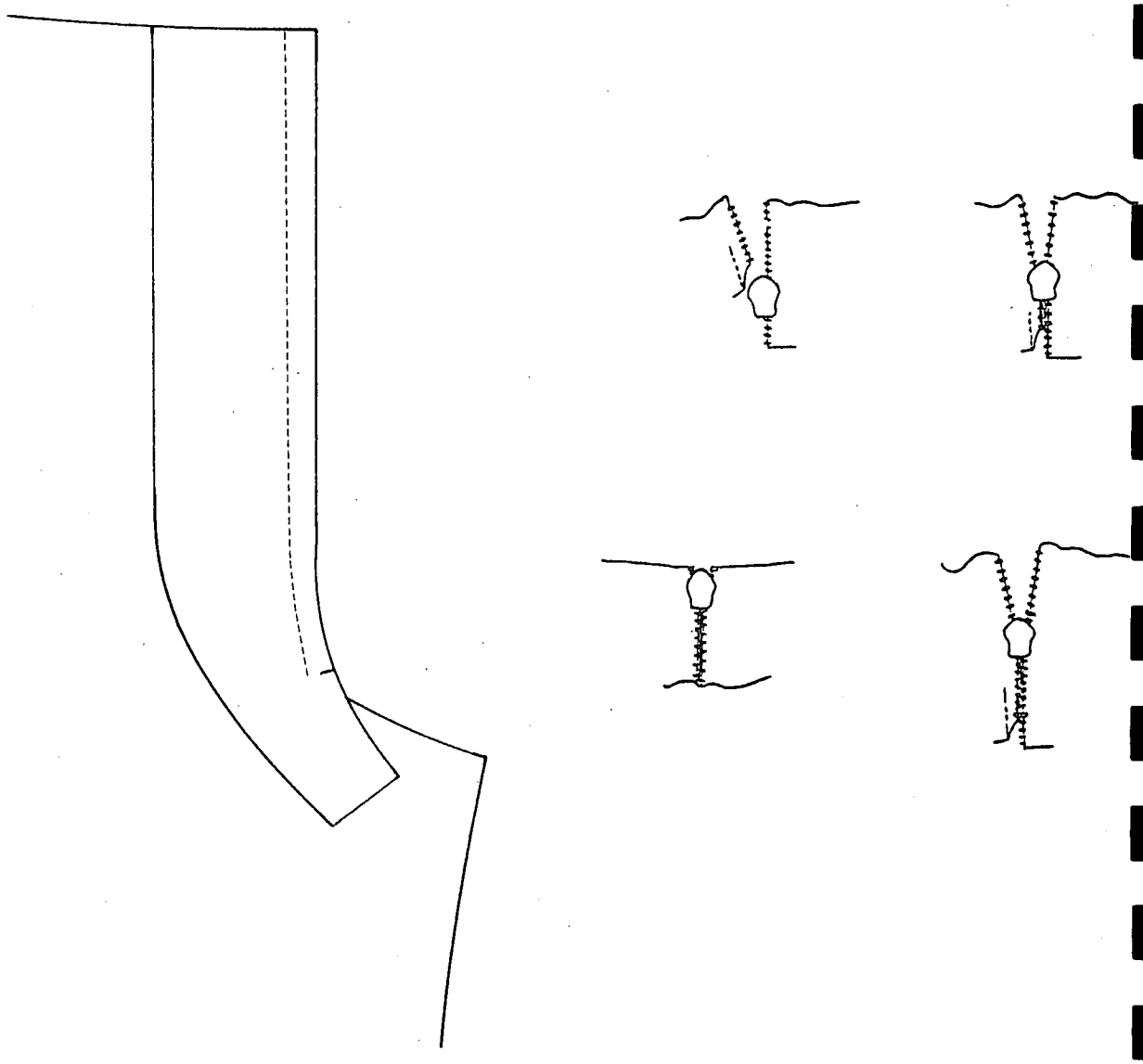
Use a 3mm bon-roll overlay. At the fly side the waistband must extend 70mm flush with the buttonstand side. Allow for a 35mm back seam inlay. Match stripes and checks.



Method used by Industry

22. Fit Buttonstand

With the machine foot flush against the zip, sew an 8mm seam to the nick. Backtack.

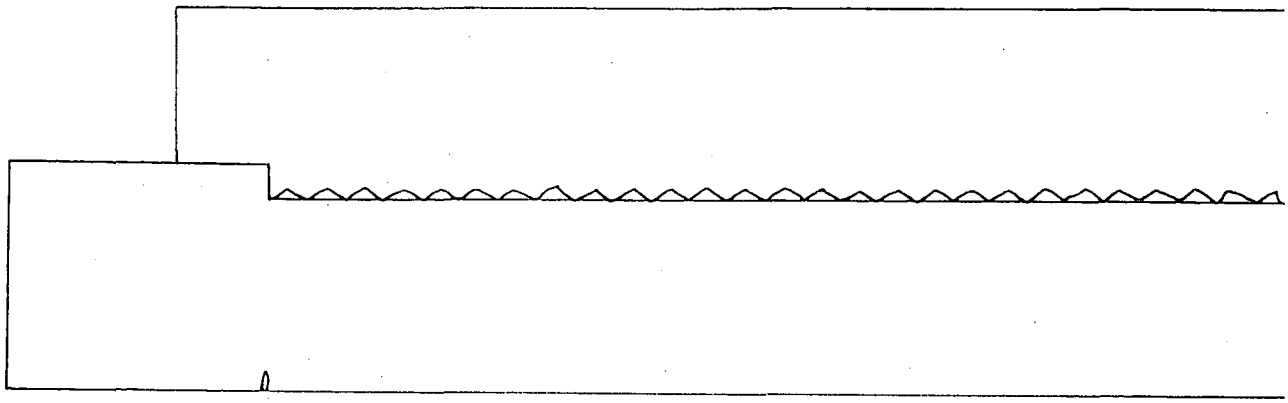


56. Zip Stop

Attach slider, slider with latch outside, fly side, zip on tooth, above waistband seam. Zip stop beteen first and second tooth on fly side, cut thread and binding on crotch.

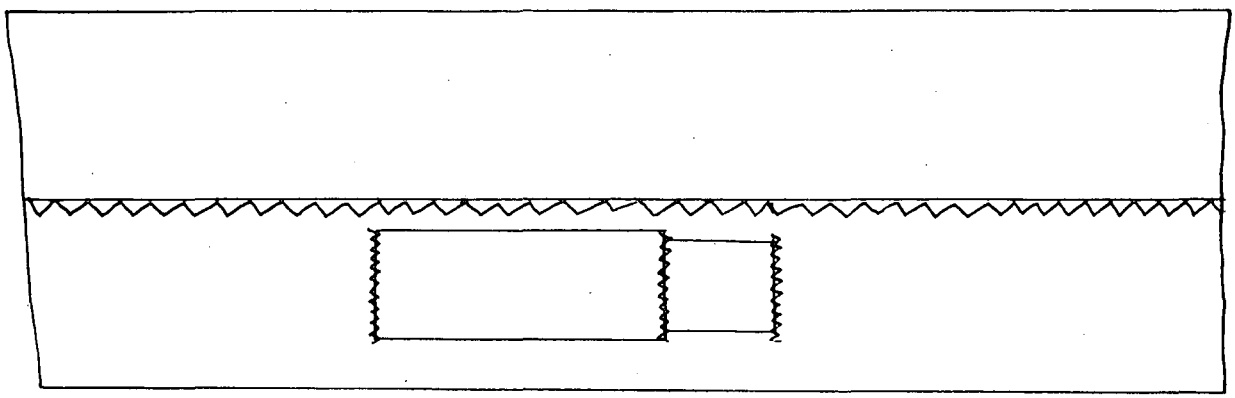
18. 38. Mark and Trim Waistband

Width depends on the style. Trim waistband to half waist + 15mm.



19. 39. Attach Label to Waistband

Attach the label on the buttonstand side, halfway between the front and back, at the centre of the waistband lining. Adjust the machine stitches to the correct length. (30 stitches per 25mm).



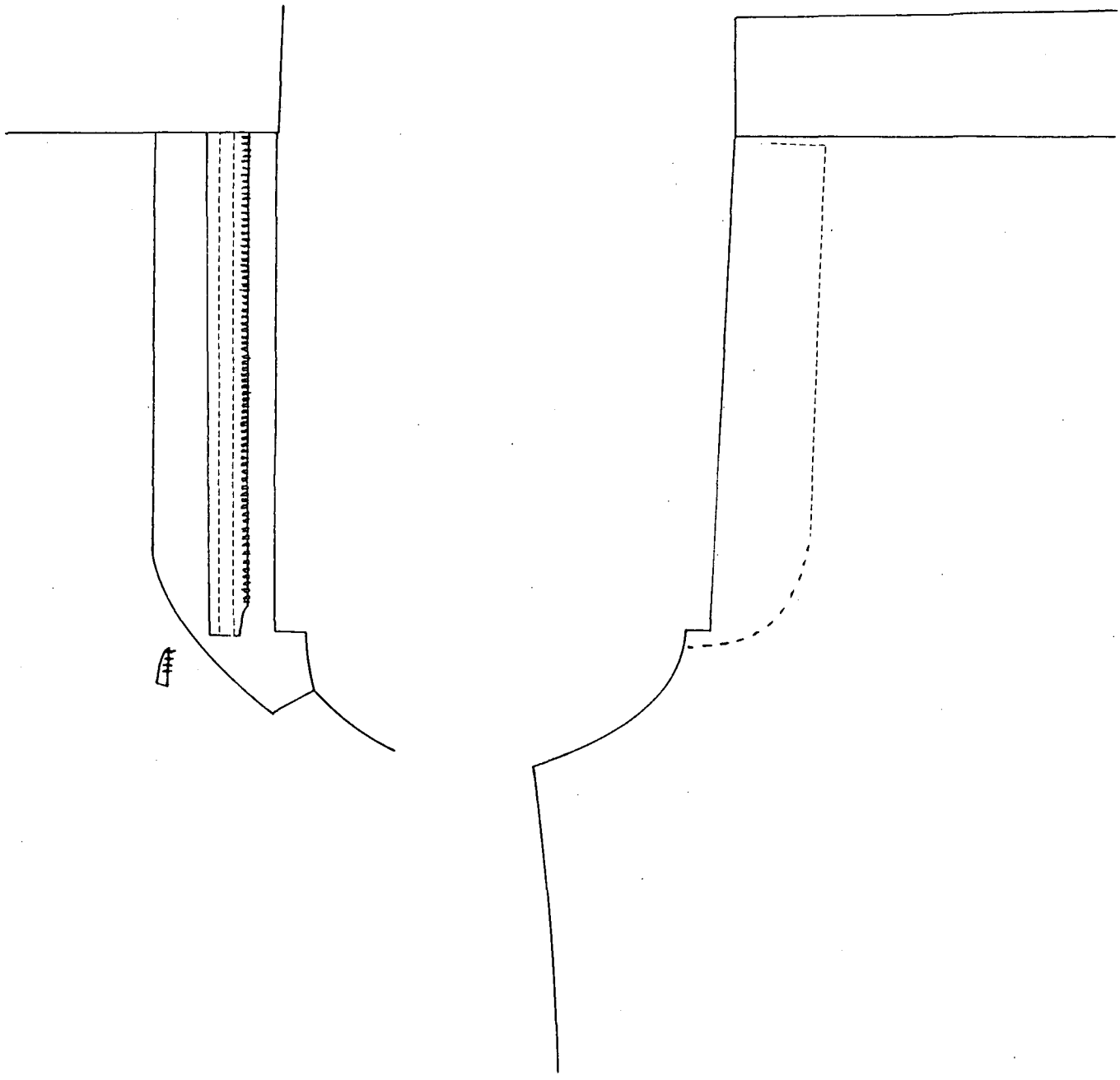
Method used by industry

49. Trim Zip

Cut off four teeth from fly side, trim extra binding off fly. Check hook and bar position.

51. Profile Stitching on Fly

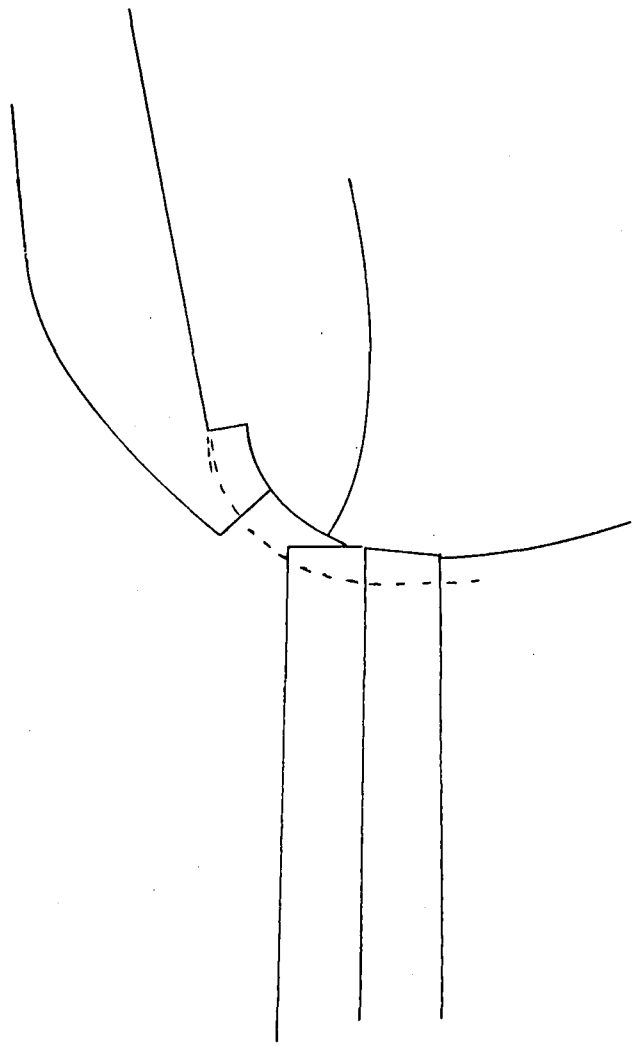
Stitch square at top 30mm wide down the zip to 5mm below the nick.



Method used by industry

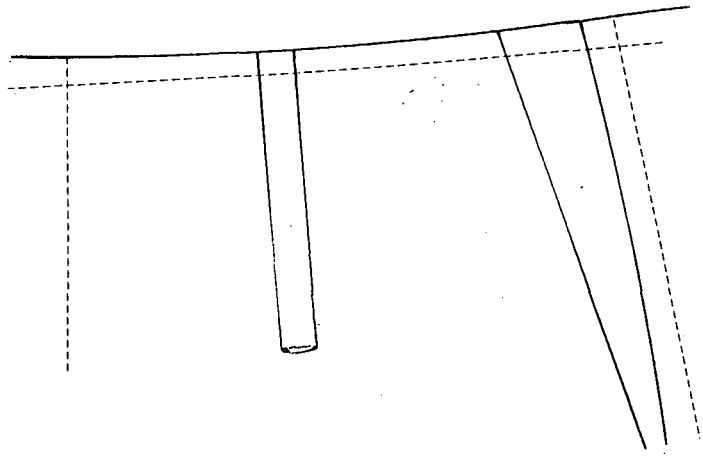
52. Front Tack

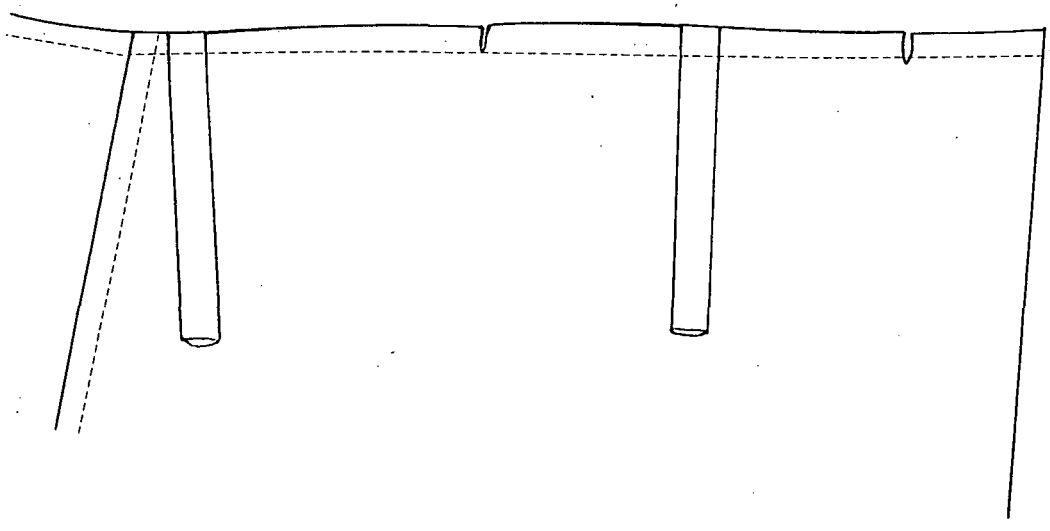
Balance fly and buttonstand sides. The fly must be 2mm back from buttonstand seam, fly 2mm above buttonstand at top. Sew a 10mm seam from nick to 20mm after in-leg seam.



42. 40. Fit Loops

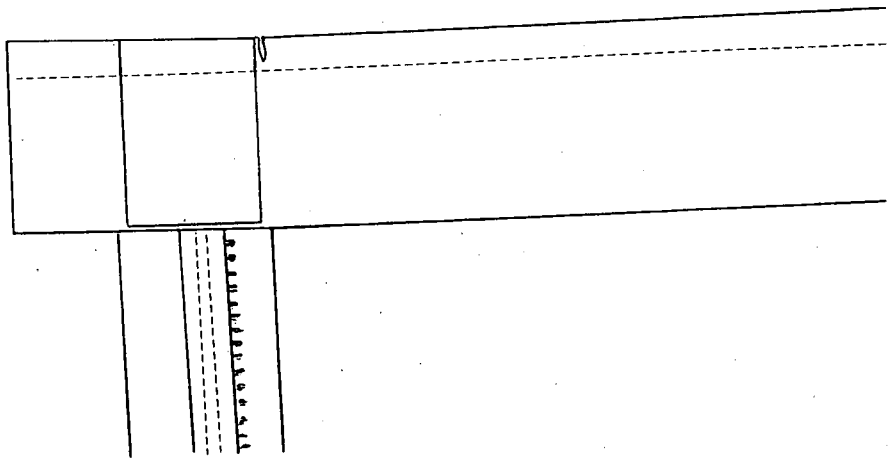
First loop 80mm from fly counterstitch.
Second loop 10mm behind side seam.
Third loop 80mm from edge of seat binding.
Fourth loop equal distance between second and third loop.
Sew down with a 6mm seam.

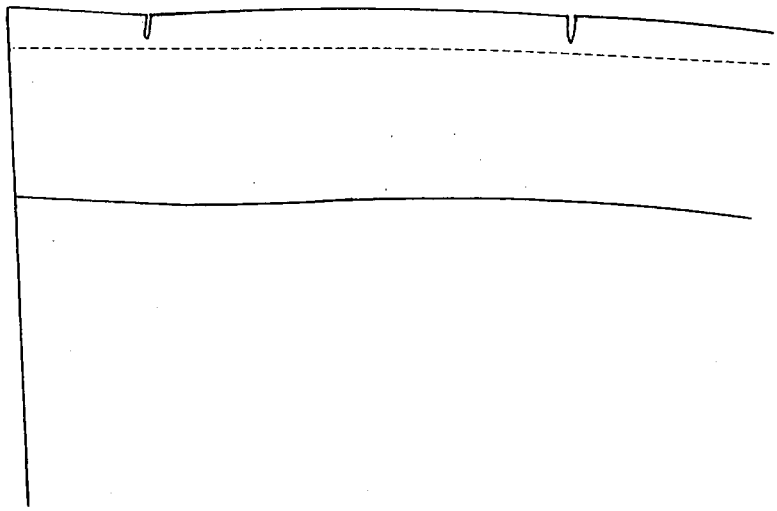


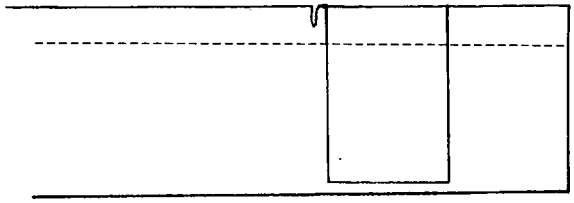


43. 41. Fit Waistband

Sew a 10mm seam.
Fly side, 70mm mark in line with fly crease, canvas piece in seam above zip. Buttonstand side, make sure nicks correspond with canvas piece in seam above zip.

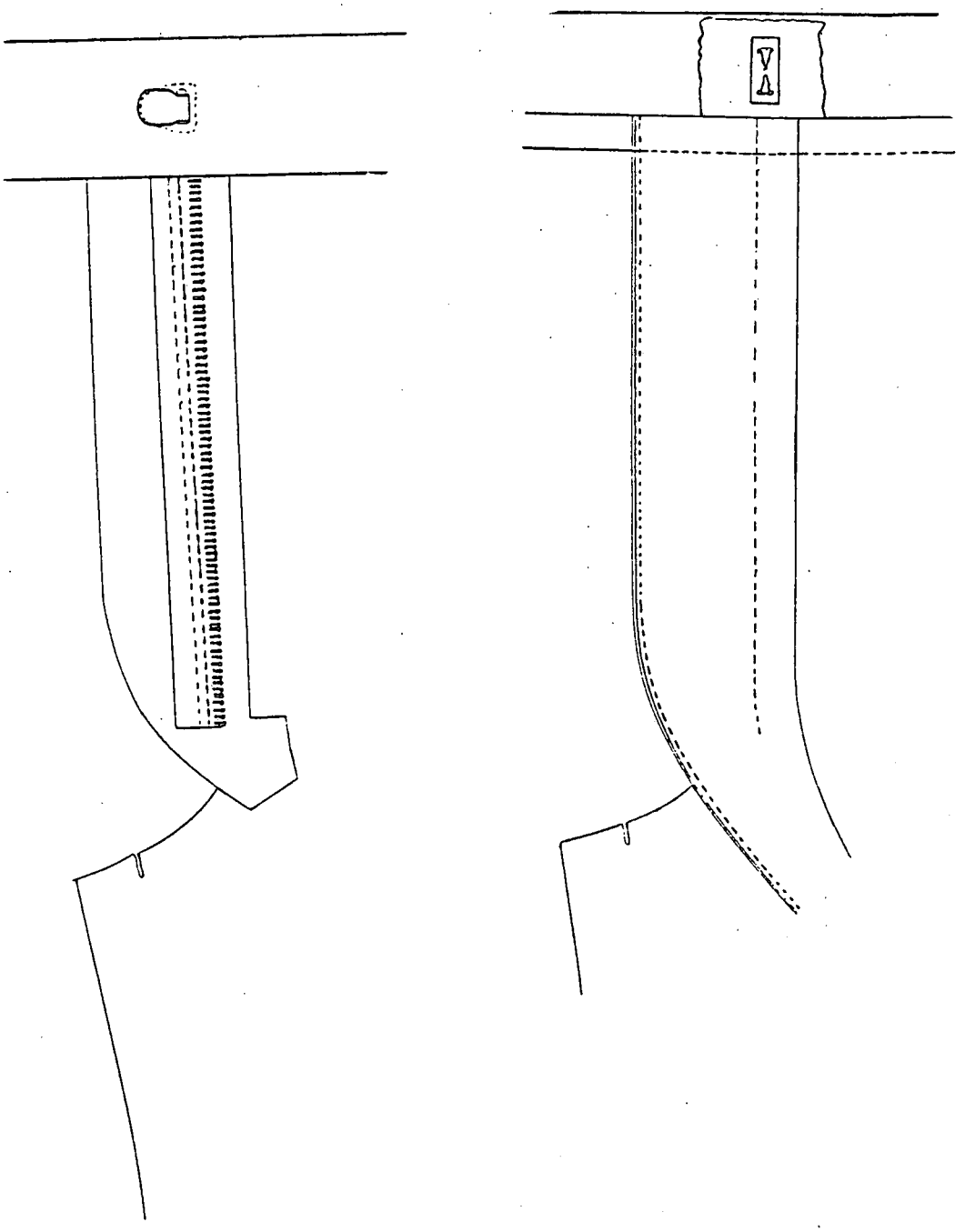






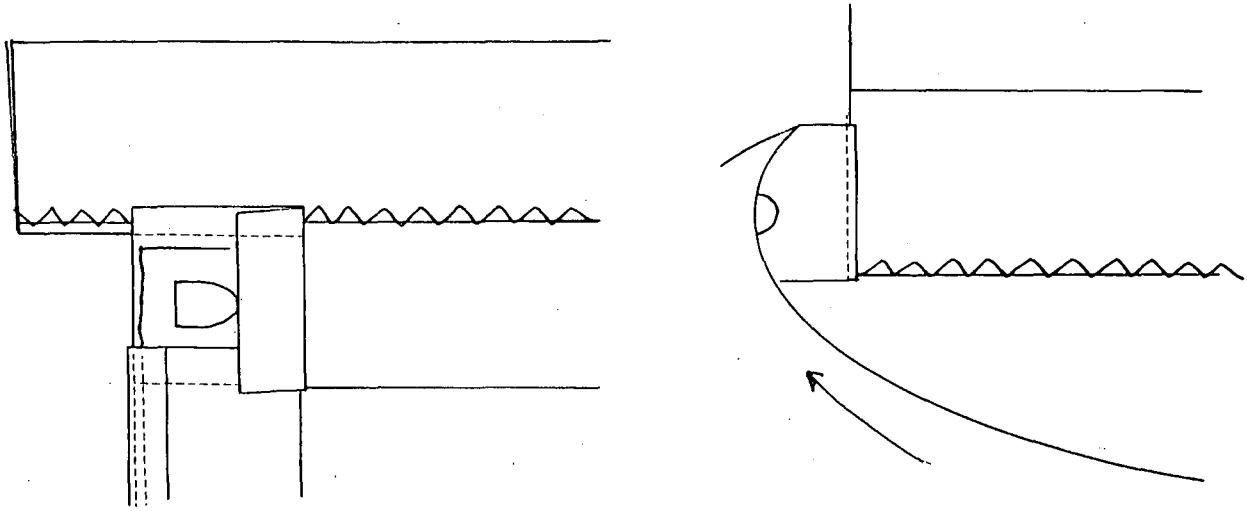
45. 42. Attach Hook and Bar

Attach the hook in line with the zip on the fly side. Attach the bar ± 3mm higher than the hook on the buttonstand side.



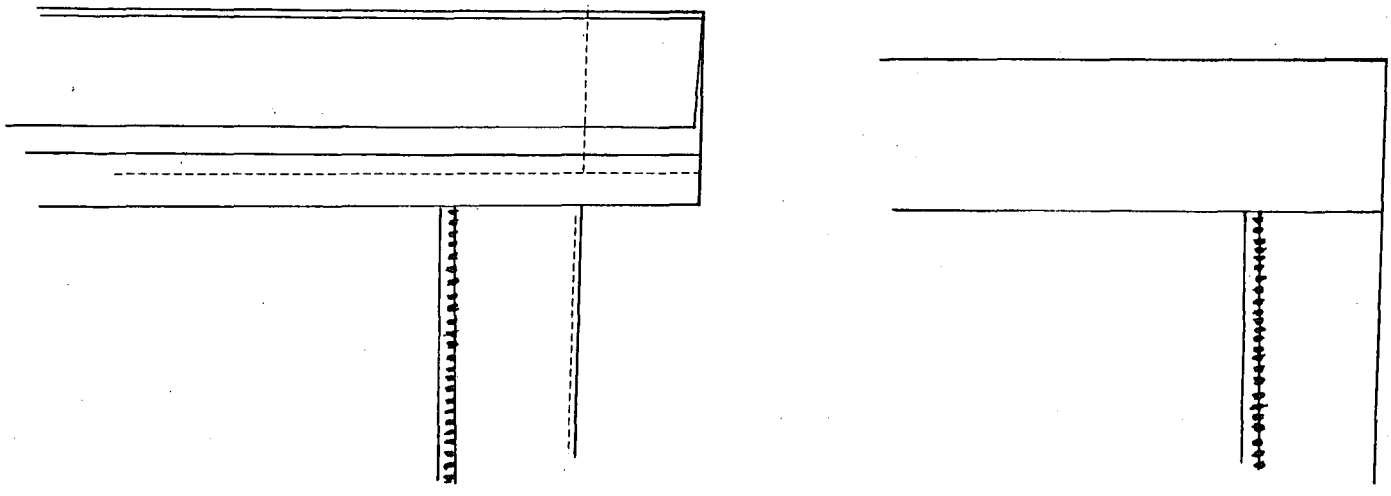
47. 43. Make Waistband Corner at Fly Side

Fold the 70mm square back, face side to face side. Fold excess band over fly and stitch in line with ban roll. Backtack at start and finish. Fold from previous seam over onto waistband linking. Topstitch 2mm wide, the width of the band.



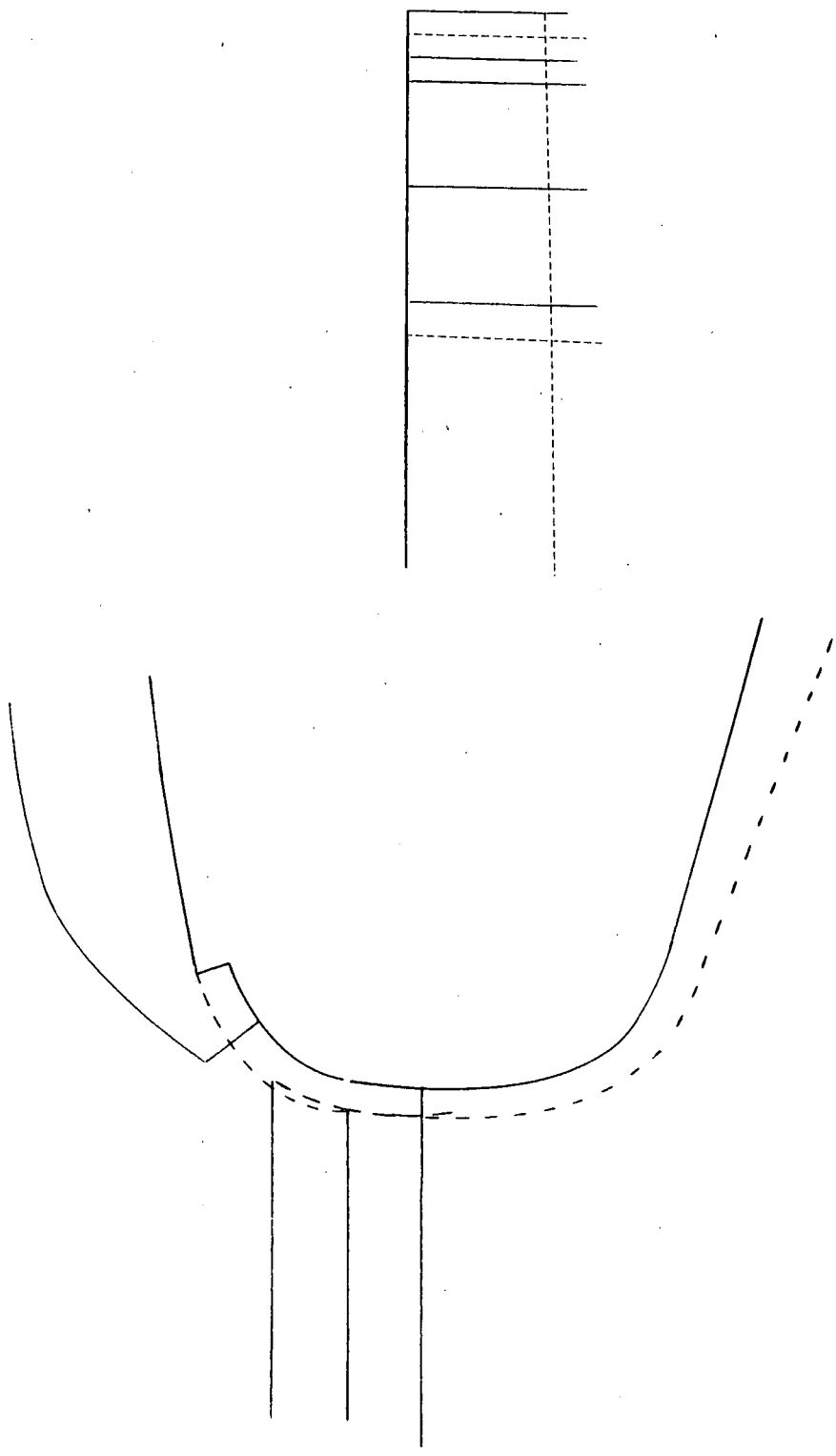
48. 44. Make Waistband Corner at Buttonstand Side

Turn the waistband inside out, fold in line with ban roll and stitch across the width of the waistband 2mm out from buttonstand, square with the waist seam. Trim and turn the corner.



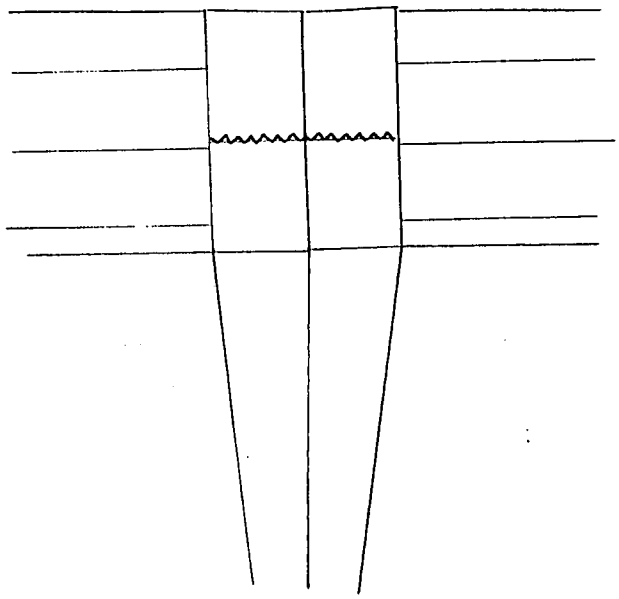
53. 45. Close Seat Seam

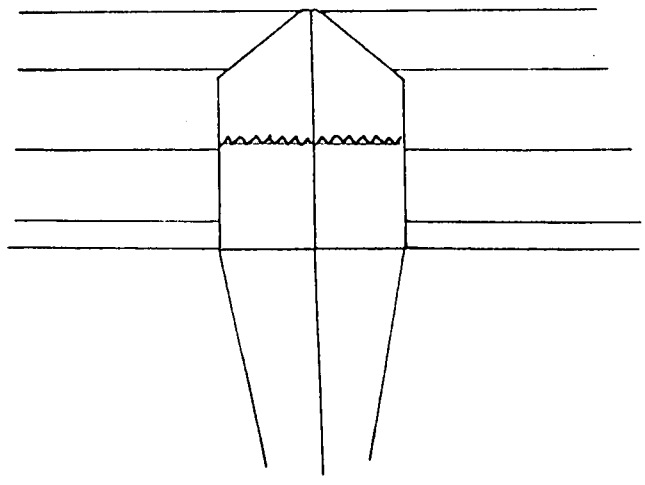
Trim ban roll. Measure the waist, half waist. Join fly tack stitching, sew a 10mm seam for curve of seat, run from 10mm to waist size, waist size across waistband incorporate 4mm spring on waistband lining.

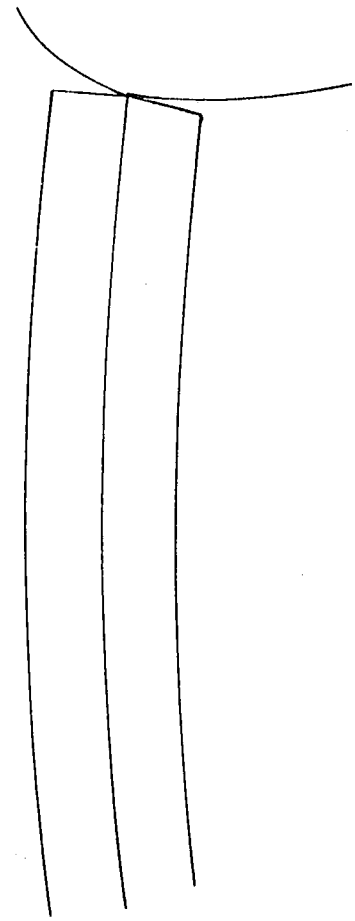


54. 46. Press Seat Seam and Inside Leg Seam

Press the seat seam open and fold the waistband lining under. Press inside leg, stretch back top, from top.

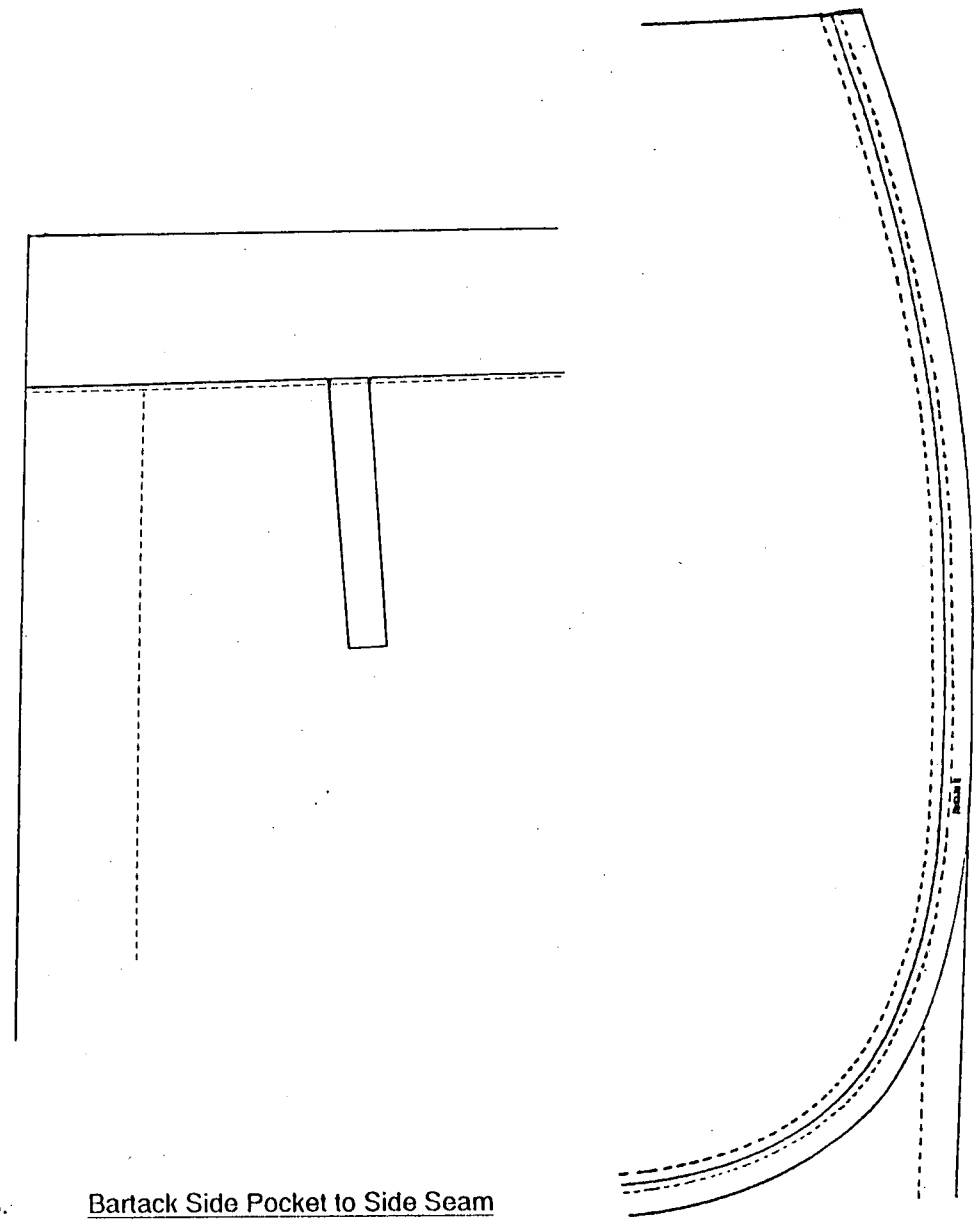






57. 47. Close Waistband

Start from fly side, run guide along edge of waistband. Centre back seam on seam, fold lining buttonstand corner.



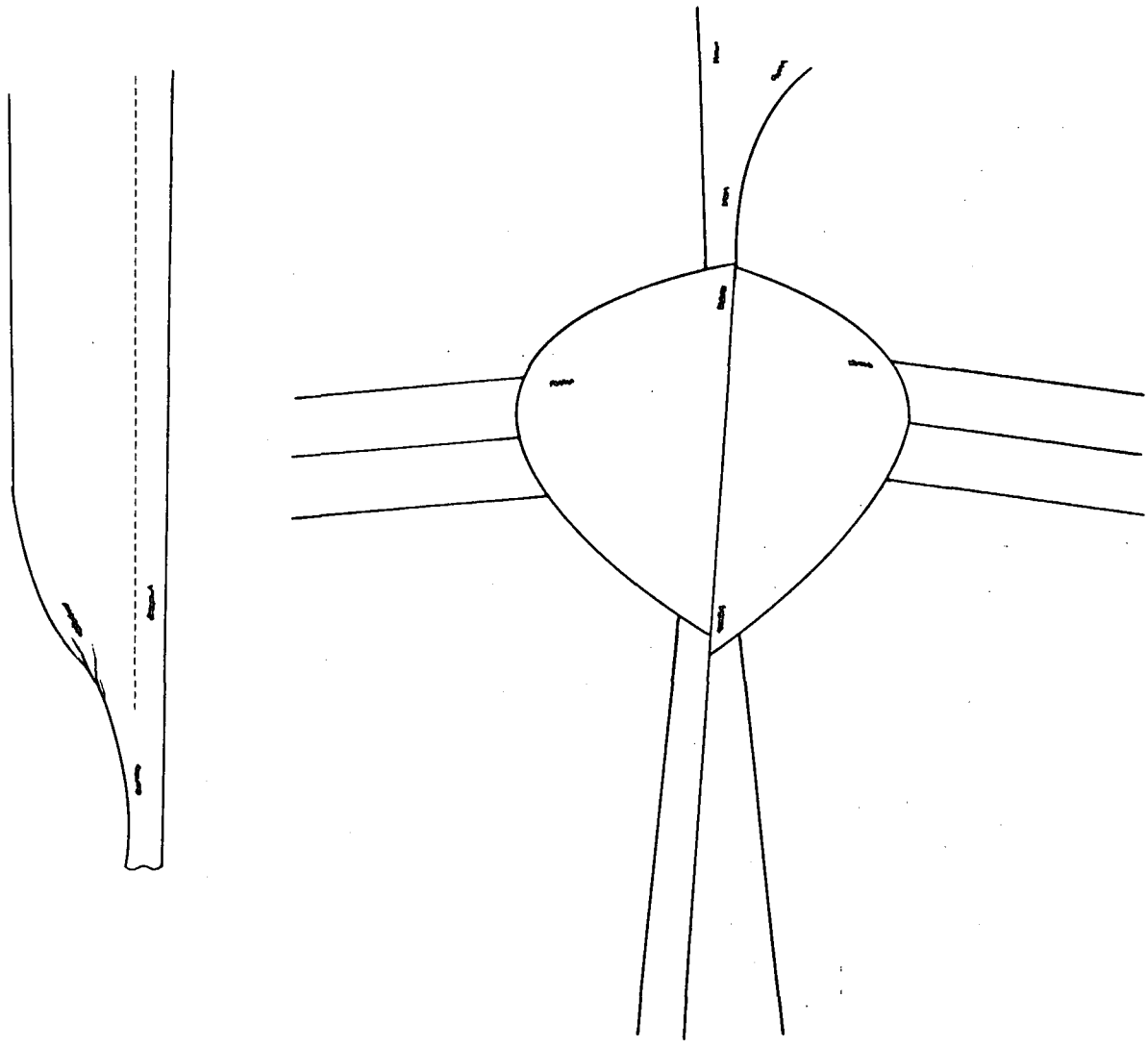
44. 48. Bartack Side Pocket to Side Seam

Sew a bartack to join the pocket bag to the side seam 20mm below the nick.

Method used by industry

63. Bartack Inside Fly and Crotch Piece

Fold buttonstand lining over seam and sew a bartack below the buttonstand seam.
Align buttonstand to fly bottom and stitch a bartack below the zip stitching.

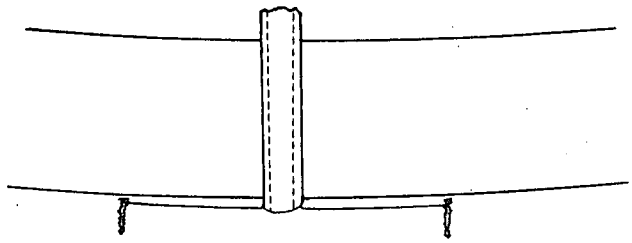


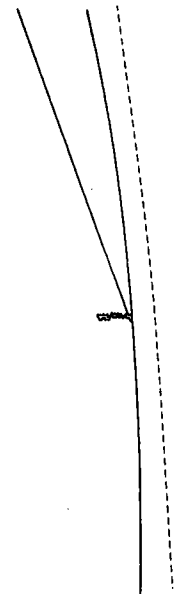
Crotch Piece

Position on buttonstand lining, 20mm from inside leg, on to one side of the back seam and onto front half inside leg seam.

46. 49. Bartack Side and Cash Pocket

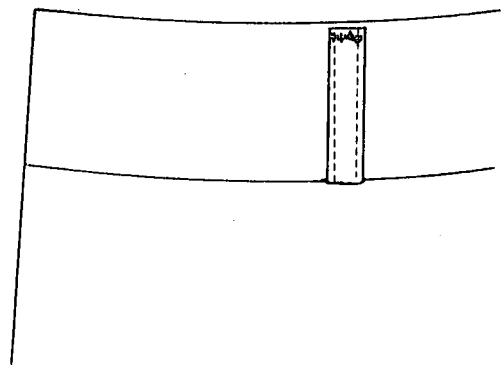
* Bartack machine 28 stitches per 25mm.
Sew a bartack at each end of the cash pocket square to waist seam. Sew a bartack at the bottom of the pocket mouth, square to side seams.

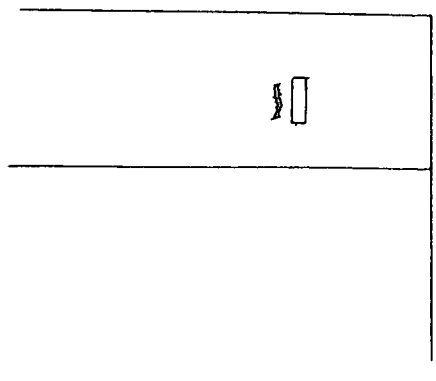


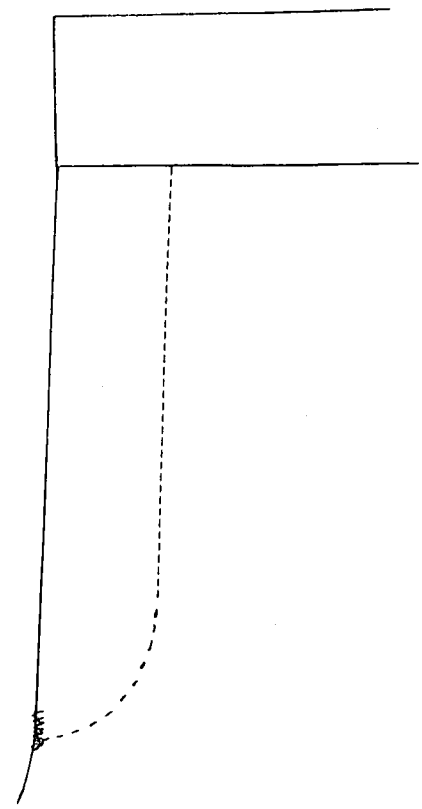


58. 50. Bartack Loops, Fly and Waistband

Fold loops flush with top of waistband, square with top of waistband, sew tuck, 2mm below top of loop. Bartack at bottom of fly, tuck above fly stitching. Bartack the waistband at the side of bar.

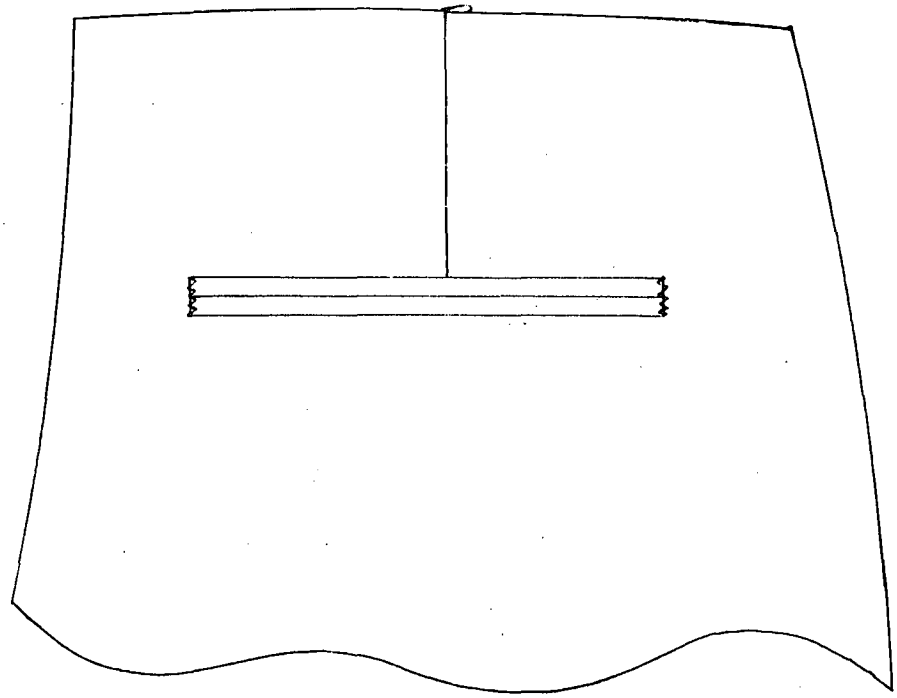






29. 51. Bartack Hip Pocket

* Bartack machine
Sew a 1 x 42 stitch bartack at each end of the pocket, stitch over pocket corners.



64. 52. Trim loops

Trim back of loops.

61. 53. Overlock Trouser Bottoms

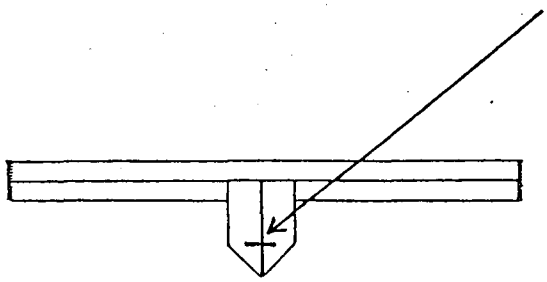
Trim off frayed edges and stitch flush with edge.

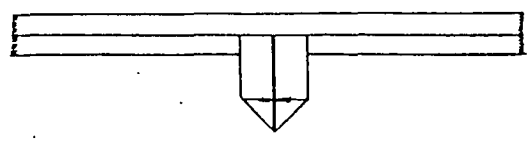
62. 54. Blindstitch Bottoms

* Blindstitch machine.
Blindstitch bottoms, leisurewear 40mm, suits 50mm. Stitch to run along edge, circle bottoms one and a half times and stitching to be locked off.

60. 55. Mark Hip Pocket Button Position

Use pencil, keep jets together and square, mark according to diagram.





67. 56. Sew Back Pocket Button

Use correct shade button and sew to mark.

65. 57. Off Press Legs

Press seam on seam up to knee, displace 10mm at crotch. If the front is darted, press dart to dart, if front is pleated, press pleat to pleat.

66. 58. Off Press Tops

Press the fly.
Front and the pocket.
Side seam and back.
Centre seam and back.
Side seam and back.
Front and pocket.
Buttonstand.
Re-tack front crease.

Method used in Industry

59. Remove soabars and production checkpoint.
68. Attach ticket.
69. End line examination.