ELEMENTS

OF

GARMENT CUTTING,

TOGETHER WITH

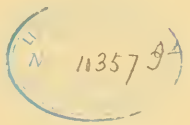
PRACTICAL HINTS TO CUTTERS;

A CHAPTER ON PROBABLE FAULTS; OPTICAL ILLUSIONS IN DRAFTING; ETIQUETTE OF THE CUTTING-ROOM; EXPLANATIONS OF MADISON'S RATIONAL SYSTEM; ECONOMY IN CUTTING; MAKING; HOW TO ALTER;

ANECDOTES OF CUTTERS, TAILORS, AND TAILORING;

AND AN APPENDIX, CONTAINING COPIOUS EXTRACTS FROM THE CELEBRATED WORKS OF THE AUTHOR'S FATHER.

By J. O. MADISON.



HARTFORD, CONN.:
THE CASE, LOCKWOOD & BRAINARD COMPANY, PRINTERS.
1878.

FACTS ABOUT THIS BOOK.

1. It is entirely unlike any other work in matter, manner, and purpose.

2. It is the largest book ever published on the subject of garment cutting.

3. It is not published in the interest of any system.

4. It thoroughly explains every principle employed in measuring and drafting.

5. It illustrates all the faults to which garments are liable, explains their causes and how to discover, avoid, and remedy them.

6. It expounds in a plain, comprehensive manner the peculiarities of deformities, and renders it as easy to fit a hunchback as an Adonis.

7. It minutely details a vast number of devices successfully employed by eminent cutters to assist in producing style and fit.

8. It instructs the cutter in regard to his duties, rights, and privileges, and gives valuable rules for his deportment.

9. It contains a large number of amusing and instructive anecdotes and incidents connected with the craft, which are of peculiar value to every cutter who has a fondness for, and is proud of his profession.

10. It contains explanations of coat, vest, and pantaloon systems (worth $40), which have no equals in simplicity or accuracy, which require only the inch tape and common square. The coat system is a self-balancing, shoulder measure, requiring the measures, ten only, to be taken over the vest.

11. It will enable any jour. to become a successful cutter with a little study and practice.

12. It contains a history of the late Otis Madison's professional career.

13. It illustrates how to save cloth, enabling the cutter to cut a suit out of from six to six and a half yards of cloth, instead of using from seven to seven and a half, as is generally done.

14. It contains copious extracts from the works of the late Otis Madison, the author's father.

15. It aims to elevate the craft to a scientific profession, and to make the cutter, in the highest sense of the word, an artist.

16. It contains about 150 original engravings.

17. Among the engravings, less than ten are appropriated to the system. The rest are applicable to any and all systems.

The engravings in this book were made by John L. Connelly & Co., designers and engravers on wood in all its branches, 248 Washington street, opposite the old *Herald* building, Boston, Mass.

PREFACE.

I have finished a difficult task, and it is with a feeling of relief that I now attempt to write a preface.

There is not much that I wish to say, and I am not an admirer of long prefaces; therefore this portion of my work will not occupy much space.

It has been my endeavor to treat upon nothing that was not of real importance, or that I did not thoroughly understand.

I am confident that I have been accurate, and hope that I have been lucid.

I believe that I have produced a work which is of real value to every cutter which will stand the test of time, and become a standard text-book.

I have denounced no man's teachings, belittled no system. I desire my systems and my book to stand upon their own merits.

Hoping that the first may be thoroughly tested, and the second carefully studied, I remain, sincerely yours,

THE AUTHOR.

INTRODUCTION.

Upon the science and art of garment cutting there has never been written a work of much practical value to the profession.

Hundreds of books and pamphlets have been published, but most of them, though containing a few valuable hints and some little information, have been very limited in their scope. Nearly all have been chiefly devoted to the explanation of some system, which, in the author's opinion, was the *ne plus ultra* of excellence.

On the subject of cutting outside of all systems, on the science itself and the laws which govern it, there has been little or nothing written.

I propose to make this work exhaustive, to make it a work which every cutter will find indispensable (no matter by what system he may draft), a work which will be to the entire profession as adaptable and as valuable as a standard work on rhetoric to a writer, no matter what peculiar style he may adopt.

I believe myself qualified to produce such a work. My father for over forty years was regarded as the most scientific man in the trade. He did more for our business than any other man. He first introduced the shoulder measures, and gave to the trade the first work on cutting that had any scientific claims.

He was a man of extraordinary ability, classical education, vast experience, and matchless taste.

Cutting was the study of his life, and as every cutter, outside of breast-measure fossils, employs the principles upon which his system was based, he may well be called (as he is very generally, and as he should be universally), the Father of the trade.

He did not teach me to cut. I learned it from him as a child learns to talk.

When I was a mere boy I could draft understandingly and well.

Cutting is an instinct with me, and under my father's tuition I was prepared to study deeper into the science, and to grasp in my mind the subtle laws which puzzle so many of our first artists, and reduce them to writing and diagrams which will render them as plain to all as they are to myself.

These laws are immutable, and to produce a good garment, whether it is required to be loose or tight, and whatever the style, they must be observed, and when observed, will invariably produce a garment graceful and excellent in fit.

Cutting requires mechanical skill and taste of a high order. A man deficient in these qualities can no more be a successful cutter than a mute can be an orator.

This book will be useful to, and appreciated by, only those who have talent for the profession, and to such only do I address myself.

I do not claim that I can make a cutter of every one. I have no sympathy with those quacks who attempt to convince carpenters and shoemakers that they can become cutters after a few weeks of study.

I have only contempt for those ignorant, egotistical teachers of systems who undertake to turn out finished cutters in a month; who advertise in execrable grammar and with disgusting bombast that there is nothing easier than to produce a good-fitting coat by using the system they have for sale.

There are many who succeed in making a great deal of money by loud and persistent talk of reform, who are so contemptible in soul that they bleed every cutter they can of a few dollars for a set of patterns that cannot fail to produce a fit, while at the same time they insult their patrons and strike a deadly blow at the fair valuation of a cutter's services, by proclaiming that cutting is so simple and easy that it can be done as well by a canal-driver as by an old experienced cutter, and that cutters, therefore, are perpetrating a gigantic fraud upon those who employ them, by demanding better wages than a common clerk or a stupid blacksmith's striker receives.

The reform they advocate is retrogressive; they propose to carry the trade back to what it was in the days of our grandfathers, and so put it upon the level of dress-making.

They decry drafting and advocate patterns; this they call reform. But

fortunately for the trade, cutters are not all unsophisticated, and do not, many of them, become victims.

This is such reform as it would be for architects to design nothing new, but, if a building is required to be constructed, to build it according to some old design of doubtful excellence.

Such reform would ruin our trade, and reduce it to the level of clothes-pin making.

They cry reform, and urge that cutting should be conducted in the manner of dress-making, to wit: measure your client, cut your garment by their patterns, which *always produce a fit*, and, confident that your garment is correctly cut, and can need *no* alteration, *try it on once or twice to see what alterations are required.*

All who advocate such reform as this are either dishonest or grossly ignorant, and many of them are both.

The only reform in cutting that can receive encouragement from honest and skillful cutters, is a reform that simplifies and secures accuracy in measuring and drafting.

This reform I strongly advocate, and I have almost invariably found that even those cutters who use the most complicated systems, who strap and harness a customer as though he were a horse, are as much in favor of it as myself, and only adhere to their old tortuous methods because they have not met with good success in the use of simpler systems.

In cutting a coat only a few measures are needed, and they can be correctly taken only with a tape measure.

Give me a man's height, the length of his arm, his breast and shoulder measures, and let me glance at him, and I will cut a coat that will fit him properly.

The measures required for a coat can be taken in less than a minute, and the draft can be easily completed in less than five.

I have cut beside eminent cutters who used patterns, more because they fancied it saved time to do so than because they believed it a better method than to draft, and I have always been able to make my draft and cut my garment with ease while they were applying their measures, making their variations, and cutting theirs.

This pattern business is a fraud. It saves no time, it wastes cloth, it is stereotyped, and consequently debars improvement, and it is uncertain.

The laws of the science of cutting, however, can be applied to any system with advantage.

I can take any shoulder-measure system extant, and after cutting a few garments by it so as to learn its peculiarities, apply the laws I propose to expound in this work to it, so as to be positive that every garment I cut will fit.

A system is merely a method of procedure. If a cutter understands the principles which the system he uses employs, he can dispense with the system, though he would probably use it as a convenience.

After a careful study of the principles which I shall endeavor to explain, a cutter of fair ability could easily invent a system which would serve him better than any he ever learned.

The system which I explain, explains itself so far as principle is concerned. It produces a draft to fit the form measured properly. It will fit any deformity, where both sides are alike, with no variation in drafting; for a hunchback, however, a slight change is necessary in the back, which I shall describe in the proper place.

In conclusion, I have only to say, that I believe it will profit any cutter, however skillful and experienced, or however ignorant and conceited, to study my work; and if, as I believe, the trade will be advanced and the cutter's labor be lessened by what I do, I shall be more than satisfied.

CHAPTER I.

PRINCIPLES OF CUTTING.

Coats.—Pitch of Shoulder.

To treat upon the principles which govern the science of garment cutting apart from their relation to any system is a task of no ordinary magnitude.

To one who has devoted a lifetime to their investigation, whose opportunities for research have been extraordinary, and who has enjoyed the advantage of the instruction of a father whose knowledge of them, for over half a century, was unrivaled, they are not difficult to comprehend, while at the same time, to reduce them from the chaos in which they now are, to logical, comprehensive, and available order, is so difficult an undertaking that I almost shrink back appalled from the task before me.

Works on logic are addressed to, and are understood by, only those who have a knowledge of grammar, so the language and method of this work will be adaptable only to those who have, at least, a rudimental knowledge of cutting.

The technical terms and axioms of the craft employed in this work will not, therefore, be explained.

I now invite your careful attention to the principles which govern coat cutting.

First in order are those which govern what is generally known as the shoulder point.

This point is regarded as the key to the whole coat.

Almost any cutter will assert that if that point is established, he can draft his coat correctly.

The delusion concerning this matter is remarkable, and I expect that when I assert that there is no possibility of failing to establish it, many will be, at first, disposed to doubt my sanity.

Yet, I do assert it to be a fact, that this point is always the same for every shape. I further assert that, as it is generally understood, it is no point at all.

Let me demonstrate this.

Take a piece of cloth of an oblong shape, place it about your shoulders, cut it to fit the neck smoothly, and you will find it to be shaped as represented in diagram 1.

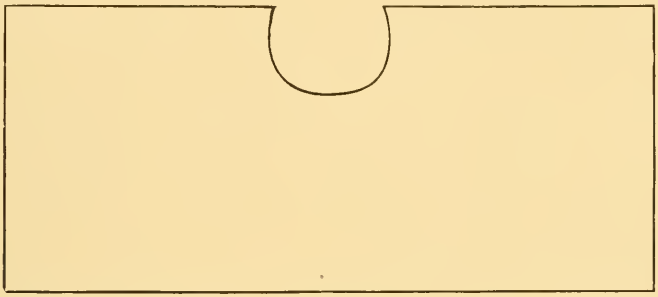


Diagram 1.

Now place it about the shoulders of any shaped man, and you will find that it will always fit. [In the center of the back there will be found too

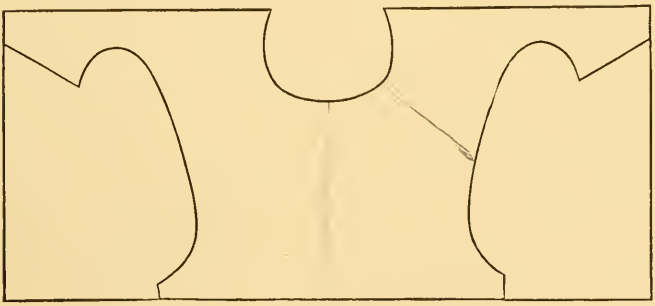


Diagram 2.

much cloth for sloping and too little for high shoulders, which fact, however, does not affect my proposition.]

It makes a perfect shoulder, and is, you will observe, a solid piece of cloth. The so-called shoulder point is established, and is the same for every shape.

This is the foundation of a coat.

Now if you cut the cloth so as to fit about the arms you will have the form of the upper portion of a coat, as in diagram 2.

You will now be able to perceive the fallacy of the would-be learned talk about the different pitch of the shoulder, for various shapes. The pitch is always the same.

Diagram 3.

To illustrate: suppose that the above diagram will fit about the neck and shoulders of a well-shaped man.

Now most cutters, if the client be extra erect, would change the shoulder as indicated by dotted lines.

The coat would fit, and they argue from this fact, that a change in the pitch of the shoulder has effected this desirable result. But they are mistaken. They have only placed more cloth upon the breast and taken a like amount from the back.

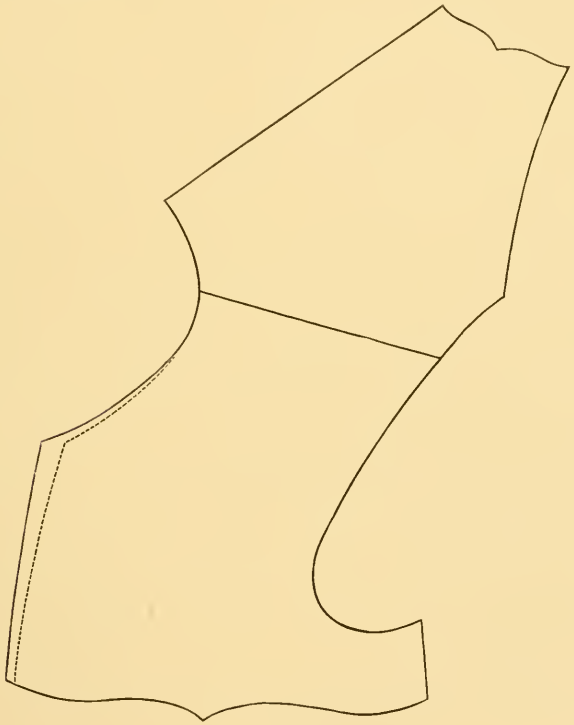


Diagram 4.

This fact will be evident if you allow your back to remain stationary while you move your forepart forward to fit it. You will have then the result I have indicated in diagram 4.

The dotted lines represent the first position of the forepart.

The shoulder is absolutely unchanged, yet the two coats will only fit different shapes.

Now let us examine the other extreme.

The dark lines in diagram 5 represent a draft for a well-shaped man. The dotted lines represent the change usually made for stooping shoulders.

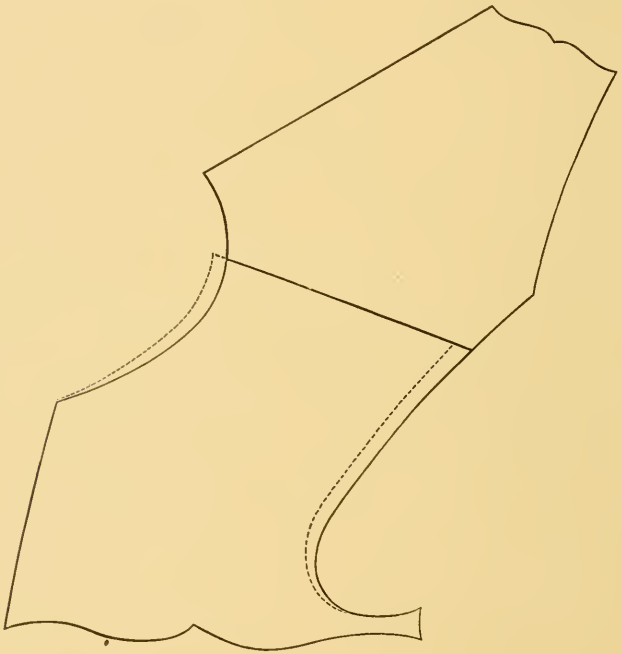


Diagram 5.

By moving the forepart as before to fit the back, you will discover that there has been no change made in the draft, except so far as affects the breast.

Diagram 6 represents the forepart changed in its position.
The dotted lines show the only change made in the front of coat.

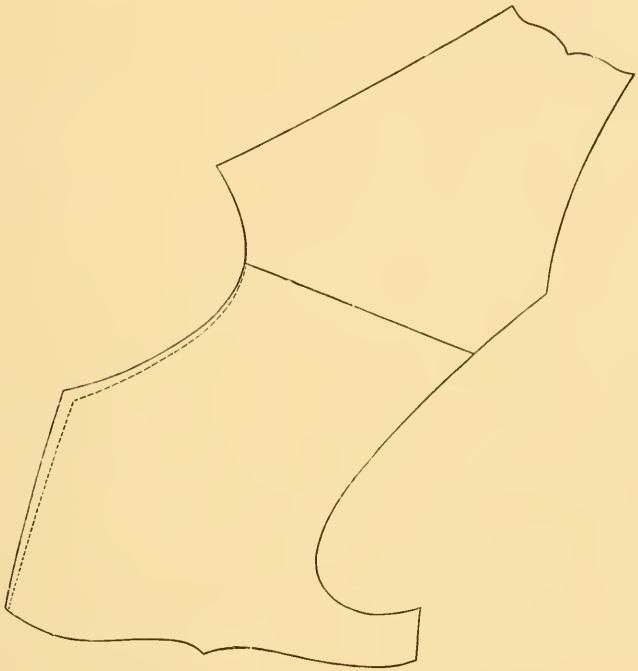


Diagram 6.

You will also observe that what is commonly called the shoulder point has no real existence, by omitting the shoulder seam, which leaves you an uncut piece of cloth as represented in diagram 7.

You can place the seam wherever you choose, as style or taste may dictate, without affecting the fit.

Diagram 7.

I think every intelligent, candid cutter must admit after this demonstration, that there is no shoulder point, or, more properly, that the neck, where the shoulder point is supposed to be, and the shape and direction of sye, must invariably be the same, however the body to be fitted may be shaped.

From these facts I deduce the following principle: *If a certain shoulder is right for one shape, it must be right for every shape.*

Illustration—

Diagram 8.

The dark line represents a draft that will fit one shape; place it upon a more sloping-shouldered man and you will find it necessary to cut from the back seam as indicated by broken lines.

Place upon a higher-shouldered man, and the change indicated by dotted line will be necessary.

But these changes do not affect the pitch, as it is called.

Application of Principle. If drafting for two men of different shapes, let the pitch of shoulder be the same for each. The reason for this will be apparent upon an examination of diagram 9.

[It will be observed that in previous diagrams the pitch of shoulder is not really changed, but in diagram 9 the change is actual: the shoulder in front of arm converging, in both drafts, to same point.]

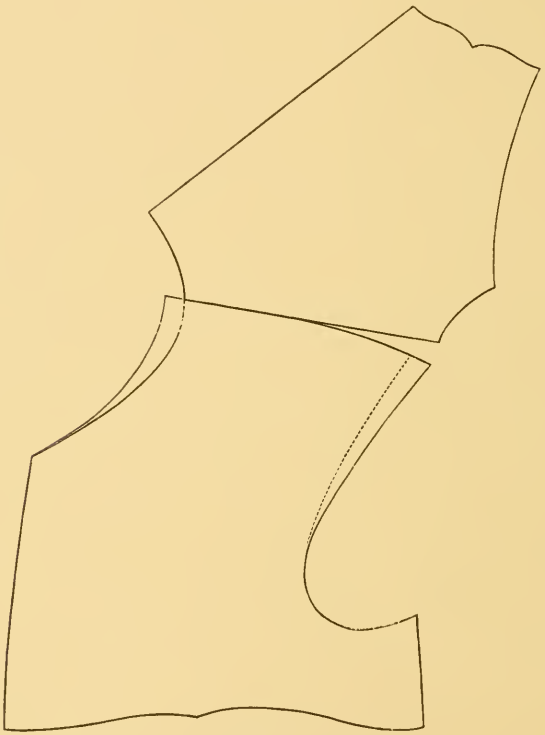


Diagram 9.

The dark lines represent a draft for an erect man; the dotted lines represent the shoulder as it is generally pitched for stooping shoulders.

That this actual change of pitch cannot be correct will be evident from a study of diagram 10, which represents the shoulders of both drafts fitted to the back.

The dotted lines, as before, represent the draft for one who stoops.

Now it is a self-evident proposition that the stooping form requires less cloth in front of arm than the erect, but the change of pitch has reversed this

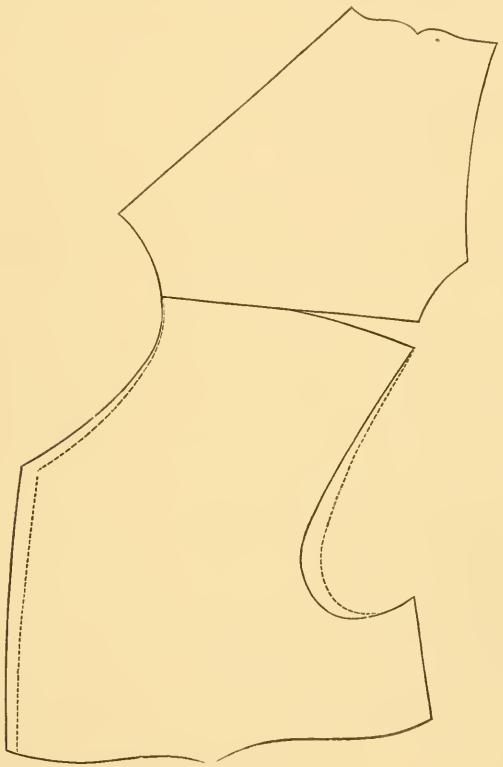


Diagram 10.

and given to the stooping form more cloth in front of arm than the other draft for the erect man gives, which must of necessity be wrong.

I think I have succeeded in establishing, in this connection, an irrefutable and immutable law, which I now give.

Law. *The pitch of shoulder must be the same for every form.*

CHAPTER II.

DISTRIBUTION OF CLOTH IN FRONT AND BACK OF SYE.

That the arm-hole should be farther to the front for one who is round-shouldered, than for a straight man, every cutter knows; but the placing of the sye in a different position for different shapes, is in perfect harmony with the law I have given in regard to the pitch of shoulders.

It may suggest itself to some thinkers that this cannot be the truth, for the reason that the distance from the front of sye to socket-bone is less for a round-shouldered than for an erect man, and that, therefore, the spread of cloth between these points should be less for one than for the other, and they may conclude from this that my theory is incorrect.

But my reasoning is based upon shoulder-measures, and their application to the draft; whether they are long or short measures, does not affect, in the least, the slope or pitch of shoulder.

This will be better understood upon an examination of diagram 11.

The dark lines represent a draft for an erect, and the broken lines for a round-shouldered man.

From a casual study of this diagram, one would naturally be impressed with the belief that the shoulders were differently pitched, but they are not.

The breast and upper shoulder of the two subjects are the same, but one is larger over the blade and flatter in the breast than the other, and his head is farther forward.

We draft, of course, from the back seam. The waist being the same for each, the coat remains stationary at the waist point; but the blade being larger for one than the other, throws front of sye farther to the front, draws in the top of sidebody, lowers and throws forward the socket-point, depresses the neck, and narrows the breast.

Yet the shape and pitch of shoulder is unchanged.

There is merely more cloth distributed back of the sye, and less in front for the stooping than for the erect man.

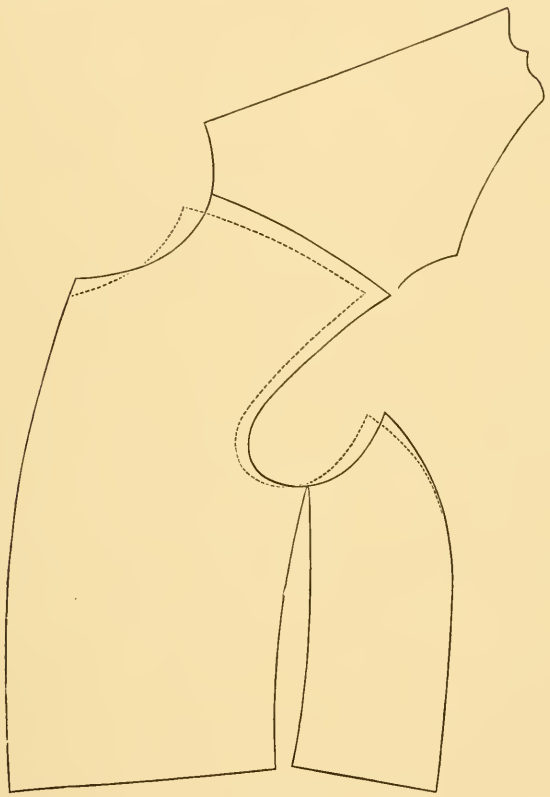


Diagram 11.

Diagram 12 represents the two foreparts fitted together.

The shoulders are alike, but the coat is differently balanced. The blade of one is larger than the other, the shoulders of both are of the same width

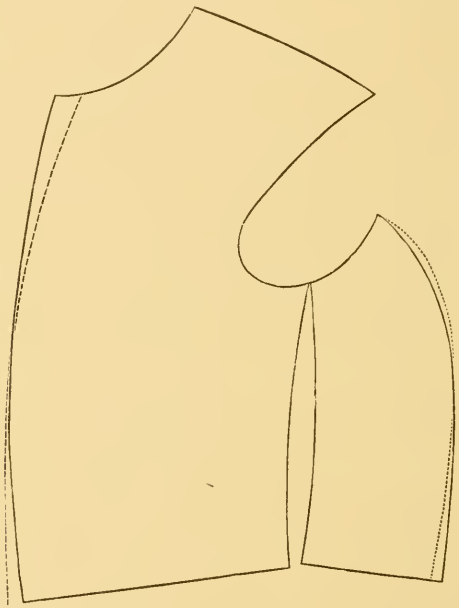


Diagram 12.

and pitch, the distance from socket-bone to front of sye on the one is *comparatively* less than on the other, because the distance from front of sye to the back is actually more.

The distribution of the extra cloth over the blade without disturbing the shoulder may be more plainly understood by an examination of diagrams 13 and 14.

Diagram 13 represents a well-proportioned coat, and diagram 14 the same, with an imaginary "fish" inserted under the arm to give the necessary size to

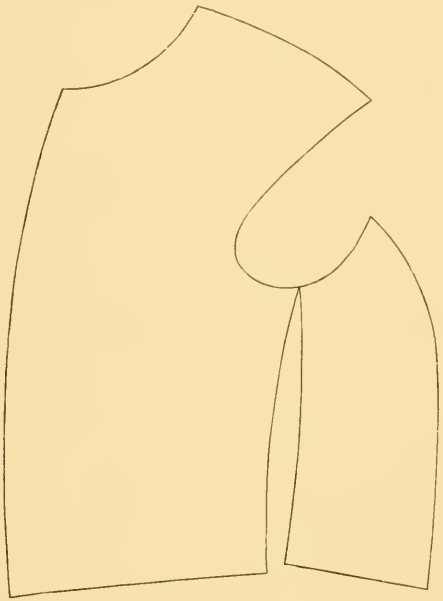


Diagram 13.

blade, and the top of sidebody cut down to preserve the shoulder measure, and the front as much narrower as blade is larger.

From these facts I deduce the following principle:

The coat for a stooping man should be drafted precisely as one for a well-shaped man, with this exception: the coat for the stooping man should be made as much larger back of the sye and over the blade as the size of blade requires.

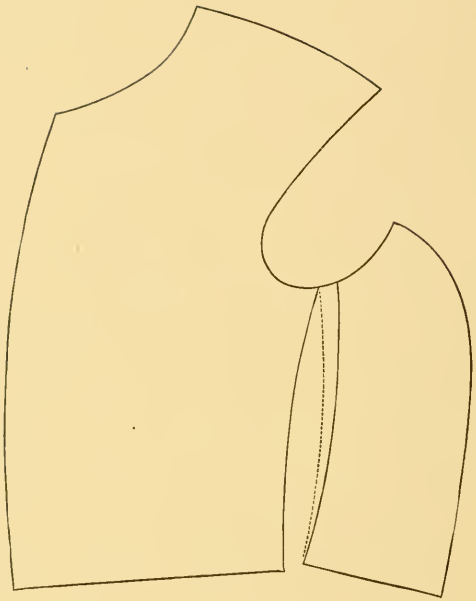


Diagram 14.

Diagram 15 is an illustration of this principle:

The dark lines represent a draft for a well-proportioned man; the broken lines represent the sidebody moved from the forepart to make the blade-measure prove; the dotted lines connect the round over the blade with the top of blade-point, which must not be changed from the position it occupies for a well-proportioned man, the shoulder-measures being equal.

Application: *The shoulder-measures being equal, the top of sidebody and the sidebody at waist for a stooping man should be the same as for a well-formed man,—the sidebody over the blade should be enlarged to make blade-measure prove.*

Reasons: If the top of sidebody is carried out proportionately with the enlargement over the blade, the shoulder-measure will be too large. If the sidebody does not retain its position at waist the coat will not balance properly.

LAW: *Draft your coat back of the front of the sye independently of the shoulder and front of coat, adding to or taking from the blade for round-shoul-*

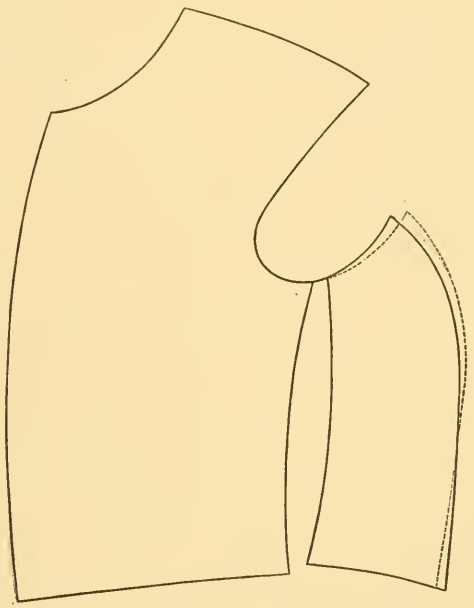


DIAGRAM 15.

dered or flat-backed men, without changing the position of top of sidebody or side body at waist, from what it would occupy in a well-proportioned draft for same shoulder-measures.

CHAPTER III.

BALANCE.

There is no more intricate and no greater problem in drafting the coat than how to balance it.

It is more talked about and is less understood than anything else that puzzles the cutter's brain.

A thousand methods have been devised to remove this great stumbling-block to success; some are based upon true scientific principles, but most are unworthy of the slightest respect.

A measure taken from front of sye to natural waist, if applied to draft, with proper allowance for making up, is a tolerable safe guide; but I incline more to long measures. I prefer one taken from socket-bone around front of arm to natural waist. This measure, taken as part of the shoulder-measures, so as to insure the same degree of closeness, if properly applied, is infallible.

But the difficulty with all measures is to apply them properly. They cannot be applied with any considerable degree of accuracy, from the fact that the sye of draft around which the measure passes is neither of the size nor in the position of the arm, around which the measure is taken. Again, the portion of draft over which the tape passes in applying it, is not the same as that over which it passed on the man.

There seems to me to be but one correct method, theoretically, of balancing a coat, and that is, to place the waist according to amount of lap necessary over the blade; that is, after establishing the blade, to pivot the top of side-seam of back upon the top of side-seam of sidebody, and swing in the back until the sidebody at blade laps the back a given amount, according to the relative value of the blade to the average of the shoulder and balance measures.

This theory will be more thoroughly explained hereafter.

The ignorance prevalent upon what constitutes balance is lamentable.

Probably a majority of cutters believe it is governed by the *position* of the shoulder—the more a man stoops, the farther forward, he holds, the shoulder should be pitched, and the more erect, the straighter it should be.

The fallacy of this I have already demonstrated by proving that the pitch of the shoulder should invariably be the same.

There is nothing easier than to correctly balance a coat if the cutter clearly understands what constitutes the balance.

The upper and the lower portions of the coat should be drafted independently of each other; that is to say, the portion of the coat above the most prominent part of blade and the round of breast should be drafted without

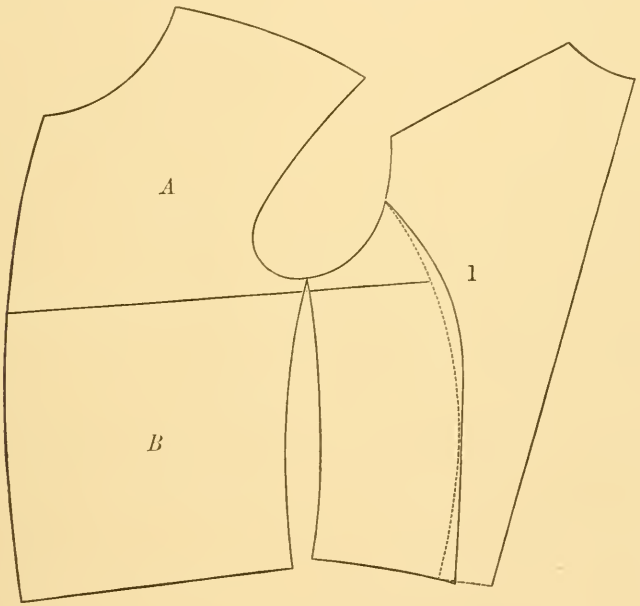


Diagram 16.

the least regard to the lower portion of the coat. The lower portion should be adjusted to the upper portion so as to place a proper round over the blade and to lay the cloth smoothly over the hollow of back.

This can be better understood from an examination of diagram 16.

A represents the upper portion of the coat drafted independently of the lower portion.

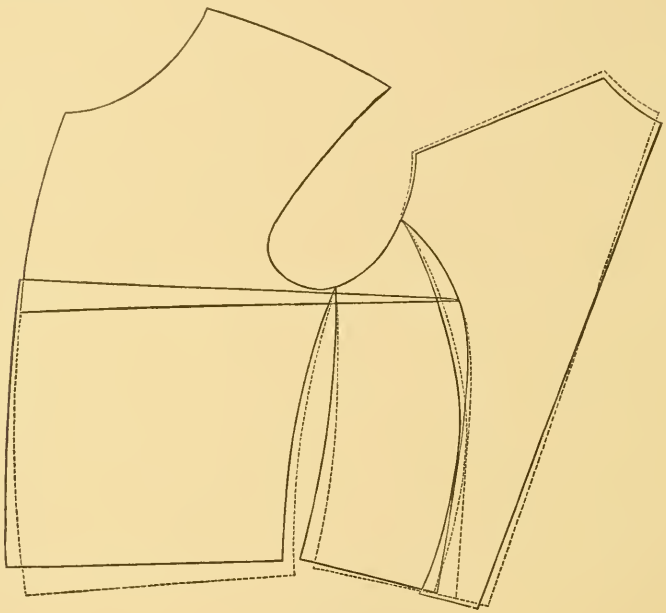


Diagram 17.

B represents the lower adjusted to the upper portion in such manner as to give one-half inch lap at point over blade marked 1, which is the proper amount for a well-formed man.

The side-seam of sidebody should close with the back at waist to balance the garment.

Diagram 17 represents a draft for a stooping form. The lower portion is adjusted to the upper portion to allow a lap at blade of three-quarters of an inch. The dotted lines represent the position the lower part occupies in diagram 16.

It will be observed that the balance is different for the two coats, and that the difference is effected by swinging in the back for the stooping form

to give the extra amount necessary over the blade. The lower and upper parts lap at the breast.

Diagram 18 represents the other extreme.

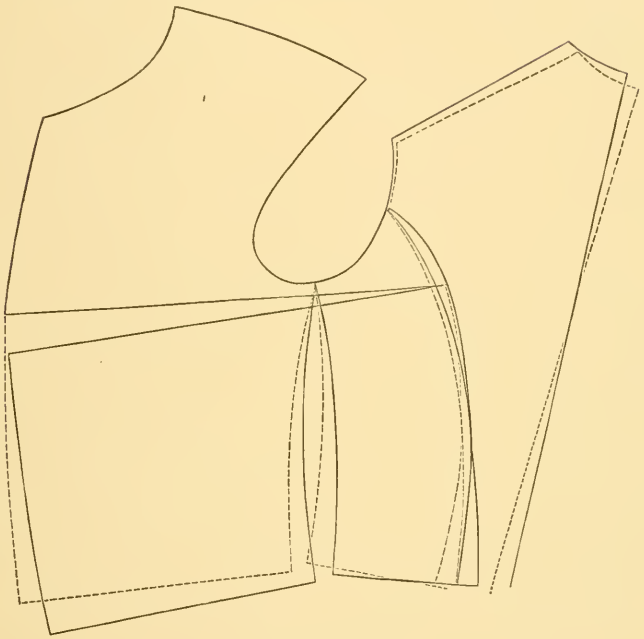


Diagram 18.

The dotted lines represent a draft for a well-formed man, and the dark lines one for an extra erect man who requires but one-quarter inch lap over the blade.

The shoulders are unchanged, but the adjustment of the lower to the upper portion of the coat is such as to carry the waist farther out, as it should be to fit an extra erect form.

It will be noticed that the upper and the lower parts do not close at the breast.

[In diagrams 17 and 18 the shoulder and blade measures are supposed to

be the same for each, while the balance-measure varies in length, being shorter for the stooping and longer for the erect forms.]

To show how many are led into the belief that a change of the pitch of shoulder regulates the balance, I introduce diagram 19.

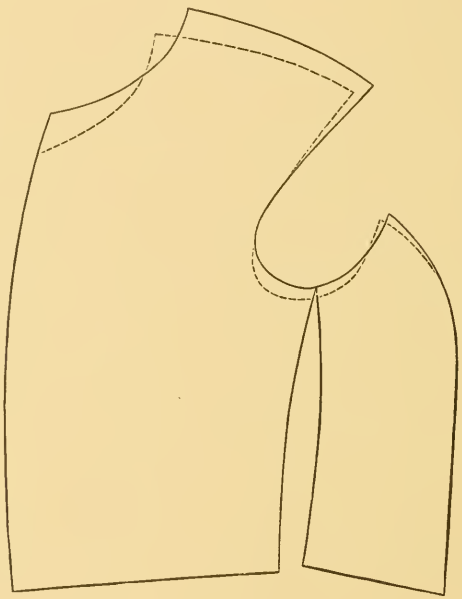


Diagram 19.

The dark lines represent the coat balanced for an erect man, the dotted lines for one who stoops.

The shoulder certainly seems to be farther forward for the latter than for the former, and the careless student would not suppose that one shoulder would fit both forms; but in reality the shoulders are alike, as can be seen in diagram 20, which represents the shoulders fitted to each other.

The shoulders are alike, the lower portions, however, are different.

It must be evident to every sensible cutter, after a study of what I have

written, that the balance of the coat is governed entirely by the adjustment of the lower to the upper portion.

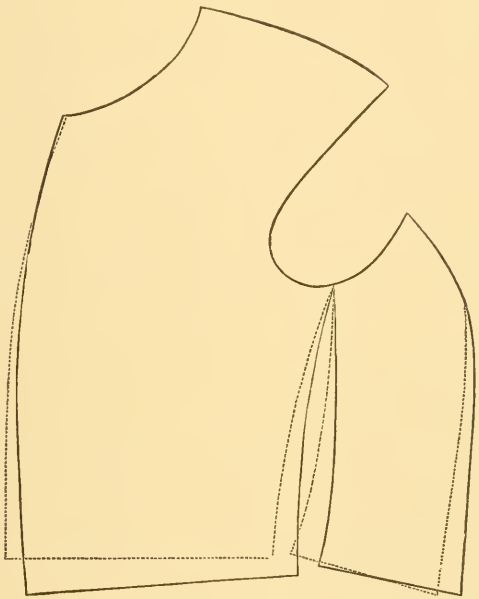


Diagram 20.

If I succeed in influencing those who have followed me so far to cease tinkering at the shoulder to balance the coat, I have done a good work.

Any cutter can perceive the fallacy of shoulder balancing by a simple experiment, which I borrow from one of my father's works:

Let him make a coat of padding or some other cheap material, for a well-formed man.

Let it be made in two parts.

The upper part to extend down to the round of the breast and most prominent part of blade, as in *A*, and the lower portion to cover the rest of body, as in *B*, of diagram 16.

Now, baste the two parts together and close the coat.

We will suppose, of course, that it fits your client, that it is properly balanced.

But let him round his shoulders and stoop, and the coat will kick at the waist.

Now, disconnect the two parts, and lap the lower over the upper more or less, and the coat will come in at the waist.

No one can be so dull as not to comprehend what I mean, nor so stupid, after such an experiment, as to deny that the adjustment of the lower to the upper portion of the coat regulates the balance.

From this reasoning I deduce the following principle: *The upper portion of coat being correctly drafted, the balance should be obtained by swinging in the back until it laps the sidebody at blade, the amount required by the difference between the blade-measure and the average of the shoulder and balance measures.*

What I mean by the difference between the blade and the average between the shoulder and balance measures is this: For instance, there is a difference in the value a blade-measure of 21 and a blade-measure of 22 bears to the shoulder and balance measures. Now, if for a blade-measure of 21½, with a shoulder-measure of 25 and a balance-measure of 23¼, the sidebody should lap the back half an inch, the lap should be a proportionate quantity greater if the blade-measure is 22 or the shoulder or balance measure less than 25 or 23¼ respectively.

By experimenting with the following table, which I have prepared after much study and with the greatest care, this important and beautiful principle may be better understood:

Blade Measure.	Shoulder $\frac{1}{4}$ inch.	Shoulder $\frac{3}{8}$ inch.	Shoulder $\frac{1}{2}$ inch.	Shoulder $\frac{5}{8}$ inch.	Shoulder $\frac{3}{4}$ inch.	Shoulder $\frac{7}{8}$ inch.	Shoulder 1 inch.
16	$19\frac{3}{8}$	$18\frac{7}{8}$	$18\frac{3}{8}$	$17\frac{7}{8}$	$17\frac{3}{8}$	$16\frac{7}{8}$	$16\frac{3}{8}$
$16\frac{1}{4}$	$19\frac{3}{4}$	$19\frac{1}{4}$	$18\frac{3}{4}$	$18\frac{1}{4}$	$17\frac{3}{4}$	$17\frac{1}{4}$	$16\frac{3}{4}$
$16\frac{1}{2}$	20	$19\frac{1}{2}$	19	$18\frac{1}{2}$	18	$17\frac{1}{2}$	17
$16\frac{3}{4}$	$20\frac{1}{4}$	$19\frac{3}{4}$	$19\frac{1}{4}$	$18\frac{3}{4}$	$18\frac{1}{4}$	$17\frac{3}{4}$	$17\frac{1}{4}$
17	$20\frac{1}{2}$	20	$19\frac{1}{2}$	19	$18\frac{1}{2}$	18	$17\frac{1}{2}$
$17\frac{1}{4}$	$20\frac{3}{4}$	$20\frac{3}{8}$	$19\frac{7}{8}$	$19\frac{3}{8}$	$18\frac{7}{8}$	$18\frac{3}{8}$	$17\frac{7}{8}$
$17\frac{1}{2}$	$21\frac{1}{4}$	$20\frac{3}{4}$	$20\frac{1}{8}$	$19\frac{5}{8}$	$19\frac{1}{8}$	$18\frac{3}{8}$	$18\frac{1}{8}$
$17\frac{3}{4}$	$21\frac{3}{4}$	$20\frac{7}{8}$	$20\frac{3}{8}$	$19\frac{7}{8}$	$19\frac{3}{8}$	$18\frac{7}{8}$	$18\frac{3}{8}$
18	$21\frac{1}{4}$	$21\frac{1}{4}$	$20\frac{3}{4}$	$20\frac{1}{8}$	$19\frac{5}{8}$	$19\frac{1}{4}$	$18\frac{5}{8}$
$18\frac{1}{4}$	$21\frac{7}{8}$	$21\frac{3}{8}$	$20\frac{7}{8}$	$20\frac{3}{8}$	$19\frac{7}{8}$	$19\frac{3}{8}$	$18\frac{7}{8}$
$18\frac{1}{2}$	$22\frac{1}{4}$	$21\frac{3}{4}$	$21\frac{1}{4}$	$20\frac{3}{4}$	$20\frac{1}{4}$	$19\frac{3}{4}$	$19\frac{1}{4}$
$18\frac{3}{4}$	$22\frac{1}{2}$	22	$21\frac{1}{2}$	21	$20\frac{1}{2}$	20	$19\frac{1}{2}$
19	$22\frac{3}{4}$	$22\frac{1}{4}$	$21\frac{3}{4}$	$21\frac{1}{4}$	$20\frac{3}{4}$	$20\frac{1}{4}$	$19\frac{3}{4}$
$19\frac{1}{4}$	23	$22\frac{1}{2}$	22	$21\frac{1}{2}$	21	$20\frac{1}{2}$	20
$19\frac{1}{2}$	$23\frac{3}{8}$	$22\frac{7}{8}$	$22\frac{3}{8}$	$21\frac{7}{8}$	$21\frac{3}{8}$	$20\frac{7}{8}$	$20\frac{3}{8}$
$19\frac{3}{4}$	$23\frac{3}{8}$	$23\frac{1}{8}$	$22\frac{5}{8}$	$22\frac{1}{8}$	$21\frac{5}{8}$	$21\frac{1}{8}$	$20\frac{5}{8}$
20	$23\frac{7}{8}$	$23\frac{3}{8}$	$22\frac{7}{8}$	$22\frac{3}{8}$	$21\frac{7}{8}$	$21\frac{3}{8}$	$20\frac{7}{8}$
$20\frac{1}{4}$	$24\frac{1}{8}$	$23\frac{5}{8}$	$23\frac{1}{8}$	$22\frac{5}{8}$	$22\frac{1}{8}$	$21\frac{5}{8}$	$21\frac{1}{8}$
$20\frac{1}{2}$	$24\frac{1}{2}$	24	$23\frac{1}{2}$	23	$22\frac{1}{2}$	22	$21\frac{1}{2}$
$20\frac{3}{4}$	$24\frac{3}{4}$	$24\frac{1}{4}$	$23\frac{3}{4}$	$23\frac{1}{4}$	$22\frac{3}{4}$	$22\frac{1}{4}$	$21\frac{3}{4}$
*21	25	$24\frac{1}{2}$	*24	$23\frac{1}{2}$	23	$22\frac{1}{2}$	22
$21\frac{1}{4}$	$25\frac{3}{8}$	$24\frac{7}{8}$	$24\frac{3}{8}$	$23\frac{7}{8}$	$23\frac{3}{8}$	$22\frac{7}{8}$	$22\frac{3}{8}$
$21\frac{1}{2}$	$25\frac{7}{8}$	$25\frac{1}{8}$	$24\frac{5}{8}$	$24\frac{1}{8}$	$23\frac{5}{8}$	$23\frac{1}{8}$	$22\frac{5}{8}$
$21\frac{3}{4}$	$25\frac{7}{8}$	$25\frac{3}{8}$	$24\frac{7}{8}$	$24\frac{3}{8}$	$23\frac{7}{8}$	$23\frac{3}{8}$	$22\frac{7}{8}$
22	$26\frac{1}{8}$	$25\frac{5}{8}$	$25\frac{1}{8}$	$24\frac{5}{8}$	$24\frac{1}{8}$	$23\frac{5}{8}$	$23\frac{1}{8}$
$22\frac{1}{4}$	$26\frac{1}{2}$	26	$25\frac{1}{2}$	25	$24\frac{1}{2}$	24	$23\frac{1}{2}$
$22\frac{1}{2}$	$26\frac{7}{8}$	$26\frac{1}{4}$	$25\frac{3}{4}$	$25\frac{1}{4}$	$24\frac{3}{4}$	$24\frac{1}{4}$	$23\frac{3}{4}$
$22\frac{3}{4}$	27	$26\frac{1}{2}$	26	$25\frac{1}{2}$	25	$24\frac{1}{2}$	24
23	$27\frac{1}{4}$	$26\frac{3}{4}$	$26\frac{1}{4}$	$25\frac{3}{4}$	$25\frac{1}{4}$	$24\frac{3}{4}$	$24\frac{1}{4}$
$23\frac{1}{4}$	$27\frac{3}{8}$	$27\frac{1}{4}$	$26\frac{3}{8}$	$26\frac{1}{8}$	$25\frac{3}{8}$	$25\frac{1}{8}$	$24\frac{5}{8}$
$23\frac{1}{2}$	$27\frac{7}{8}$	$27\frac{3}{8}$	$26\frac{7}{8}$	$26\frac{3}{8}$	$25\frac{7}{8}$	$25\frac{3}{8}$	$24\frac{7}{8}$
$23\frac{3}{4}$	$28\frac{1}{8}$	$27\frac{5}{8}$	$27\frac{1}{8}$	$26\frac{5}{8}$	$26\frac{1}{8}$	$25\frac{5}{8}$	$25\frac{1}{8}$
24	$28\frac{3}{8}$	$27\frac{7}{8}$	$27\frac{3}{8}$	$26\frac{7}{8}$	$26\frac{3}{8}$	$25\frac{7}{8}$	$25\frac{3}{8}$
$24\frac{1}{4}$	$28\frac{3}{4}$	$28\frac{1}{4}$	$27\frac{3}{4}$	$27\frac{1}{4}$	$26\frac{3}{4}$	$26\frac{1}{4}$	$25\frac{3}{4}$
$24\frac{1}{2}$	29	$28\frac{1}{2}$	28	$27\frac{1}{2}$	27	$26\frac{1}{2}$	26
$24\frac{3}{4}$	$29\frac{1}{4}$	$28\frac{3}{4}$	$28\frac{1}{4}$	$27\frac{3}{4}$	$27\frac{1}{4}$	$26\frac{3}{4}$	$26\frac{1}{4}$
25	$29\frac{1}{2}$	29	$28\frac{1}{2}$	28	$27\frac{1}{2}$	27	$26\frac{1}{2}$
$25\frac{1}{4}$	$29\frac{7}{8}$	$29\frac{3}{8}$	$28\frac{7}{8}$	$28\frac{3}{8}$	$27\frac{7}{8}$	$27\frac{3}{8}$	$26\frac{7}{8}$
$25\frac{1}{2}$	$30\frac{1}{8}$	$29\frac{5}{8}$	$29\frac{1}{8}$	$28\frac{5}{8}$	$28\frac{1}{8}$	$27\frac{5}{8}$	$27\frac{1}{8}$
$25\frac{3}{4}$	$30\frac{3}{8}$	$29\frac{7}{8}$	$29\frac{3}{8}$	$28\frac{7}{8}$	$28\frac{3}{8}$	$27\frac{7}{8}$	$27\frac{3}{8}$
26	$30\frac{5}{8}$	$30\frac{1}{8}$	$29\frac{5}{8}$	$29\frac{1}{8}$	$28\frac{5}{8}$	$28\frac{1}{8}$	$27\frac{5}{8}$
$26\frac{1}{4}$	31	$30\frac{1}{2}$	30	$29\frac{1}{2}$	29	$28\frac{1}{2}$	28
$26\frac{1}{2}$	$31\frac{1}{4}$	$30\frac{3}{4}$	$30\frac{1}{4}$	$29\frac{3}{4}$	$29\frac{1}{4}$	$28\frac{3}{4}$	$28\frac{1}{4}$
$26\frac{3}{4}$	$31\frac{1}{2}$	31	$30\frac{1}{2}$	30	$29\frac{1}{2}$	29	$28\frac{1}{2}$
27	$31\frac{3}{4}$	$31\frac{1}{4}$	$30\frac{3}{4}$	$30\frac{1}{4}$	$29\frac{3}{4}$	$29\frac{1}{4}$	$28\frac{3}{4}$

The figures in left-hand column represent the various blade-measures, those in the other columns the various probable averages of shoulder and balance measures.

Example 1st. Shoulder-measure 25, balance-measure 23, blade-measure 21.
The average of shoulder and balance measures is obtained thus:

Half of shoulder-measure, - - - - -	12½
Half of balance measure, - - - - -	11½
Average of the two measures, - - - -	24

Now proceed to find the blade-measure in the left-hand column. I have marked it thus, *. Find 24 or its closest approximate upon the same line, as the blade-measure, among the columns to the right of blade column, marked thus, *; and looking at top of column you will see how much the sidebody should lap the back at blade point, viz., ½-inch. Pivot top of side seam of back on top of side seam of sidebody, and swing the back in until it laps the sidebody at blade point ½-inch. Then shape side seam of sidebody to close with the back at the waist, and your coat will be properly balanced.

Diagrams 21, 22, and 23 will illustrate this more fully.

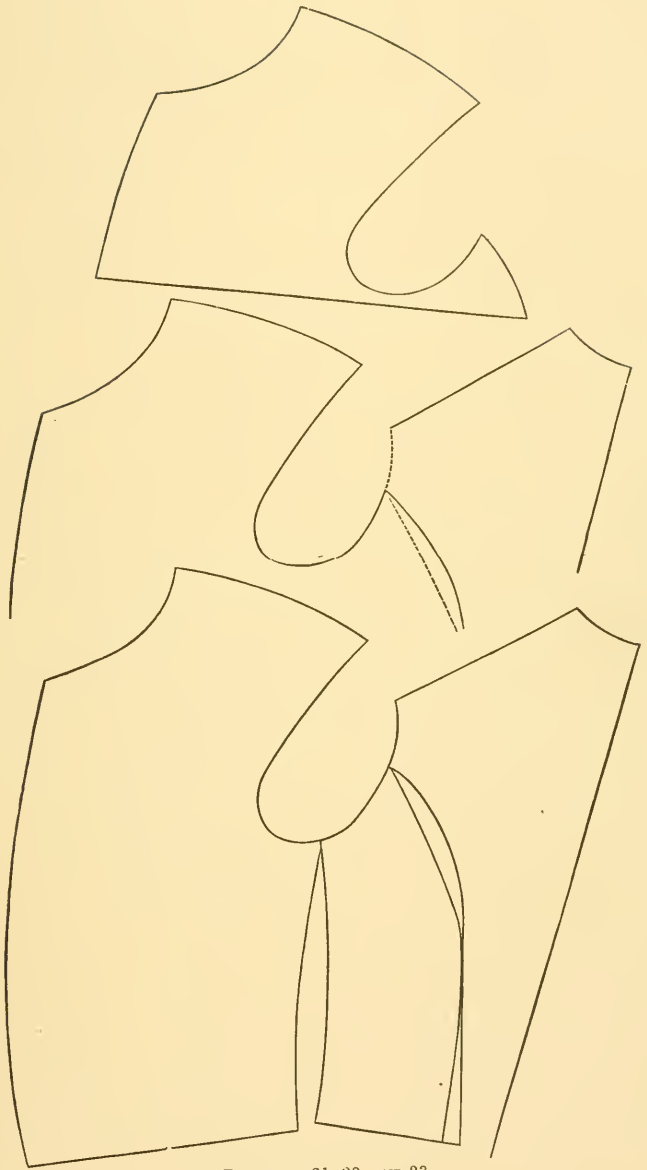
21 represents the upper portion of coat drafted to fit the shoulder. 22 represents the back lapped over the blade of sidebody the required amount. 23 represents the side seam of sidebody shaped to close with back.

Example 2.—Shoulder measure, 26, Balance measure, -	24
Half of shoulder measure, - - -	13
Half of balance measure, - - -	12
Average between the two measures, - - -	25

Blade measure, 22¾.

Note.—If, for instance, blade measure should be 21¼, and the average between the shoulder and balance measures should be 24½, you will find that 24⅜ in the fourth column is ⅛ inch too large, and 23⅞ in the fifth column is ⅛ inch too small, 24⅜ require ⅛ inch, and 23⅞ require ⅜ inch lap; you will therefore lap sidebody over back ¼ inch and a sixteenth, that being the mean between ⅛ and ⅜ inch.

Proceed in like manner with any average which is not found in the table.



Diagrams 21, 22, and 23.

Opposite the blade measure, in the sixth column from the left, we find the average of shoulder and balance measures, 25. Looking at top of column we find that three-quarters of an inch is the lap required.

Now proceed to balance coat as before, lapping back and sidebody at blade point, three-quarters instead of half inch, as illustrated in diagram 24.

Diagram 24.

CHAPTER IV

HEIGHT OF NECK.

There are but few cutters, I apprehend, who thoroughly understand the principles which govern the height of neck.

So long as the form to be fitted is well proportioned, most cutters have no difficulty in cutting the coat so as to fit properly about the neck; but when it is stooping, or has extra high, or sloping, shoulders they are at fault.

The expedients that are resorted to to overcome this difficulty are frequently laughably absurd.

I have one in my mind now, which, though it is ingenious, is peculiarly laughable from the fact of its being such a roundabout and awkward manner of doing a very simple thing.

It is especially amusing to me, because so many young cutters have shown it to me as a new and particularly brilliant "bright."

Diagram 25 represents the "bright."

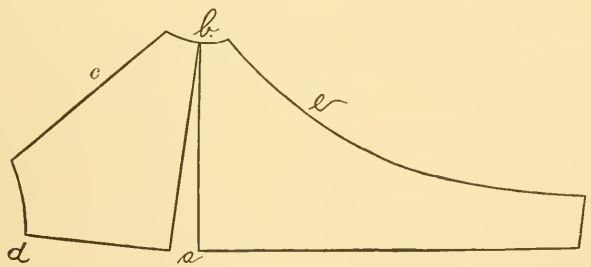


Diagram 25.

The back has been cut as for a well-formed man, then cut across from *a* to *b*, and opened out as represented. This certainly raises the neck, but not, as many suppose, simply because the back seam is lengthened. The secret of

its bringing the coat higher about the neck is, that it increases the amount of cloth between *a* and *c*, and between *d* and *e*, thereby making room for the large round of the client's shoulders.

The objections to this method are that it destroys the shape of the back, and is unscientific and unreliable.

The desired result may be effected in a simple and surer manner, as represented in diagram 26.

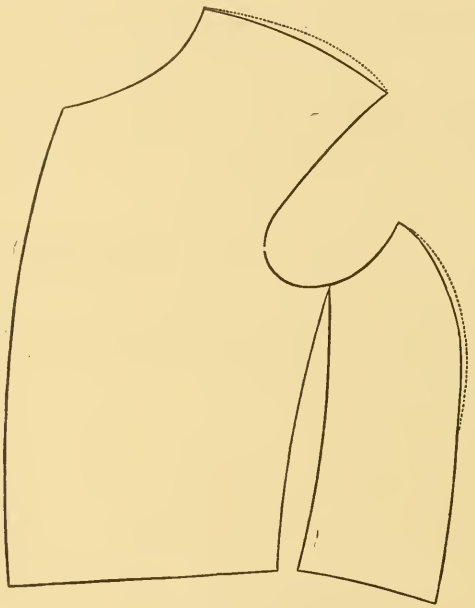


Diagram 26.

The dotted lines represent the only alteration necessary from a draft for a well-proportioned man, of the same upper-shoulder and balance measures.

The extra cloth over the shoulder and blade enables the coat to round smoothly over the prominent blades and round shoulders.

That it produces the same result as that produced by the unsightly rounding of the back, will be evident from a careful examination of diagram 27.

The dark lines represent the coat as changed from a draft for a well-shaped man to fit another who has round shoulders, by opening the back as repre-

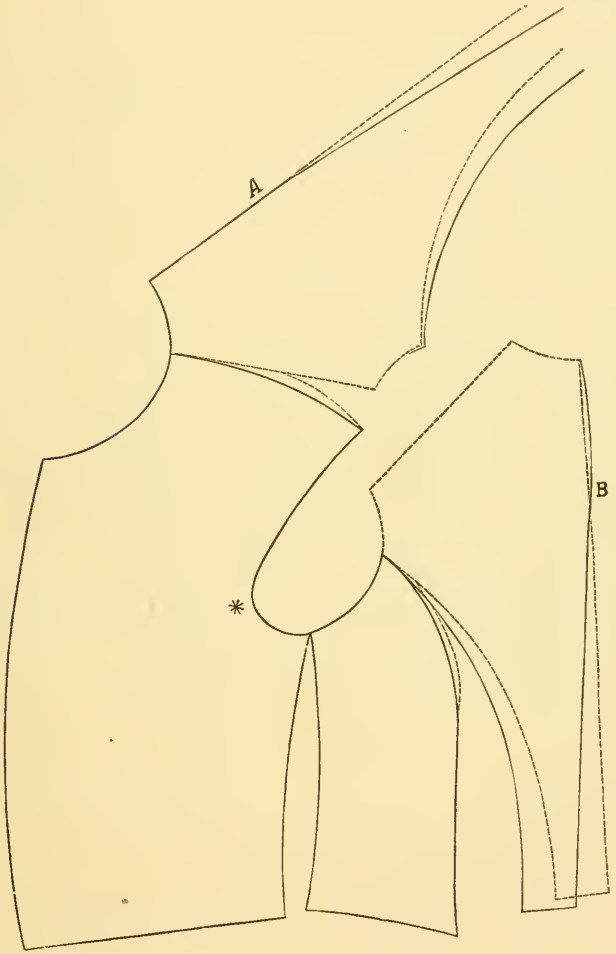


Diagram 27.

sented in diagram 25: the dotted lines represent the same draft with proper additions made to blade and droop of shoulder.

It will be observed that the distance from point at front of sye to *A*, from same point to *B*, and from same point to top of back, is the same in each draft, and also that both coats are balanced alike.

The following experiment will illustrate the principles which govern the height of neck.

Take a coat that fits a well-formed man, and rip the back and side seams, let him then put it on and round or hunch his shoulders as much as he can. You will find that the neck will remain of the right height, and that the coat will preserve its balance; but the back seam and the side seams will gap as illustrated by figure 1.

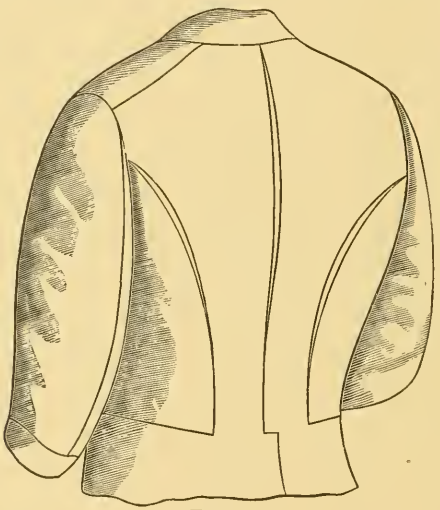


Fig. 1.

It is evident that there is nothing the matter with the coat except that it is not large enough across the back. More cloth added to the top of back would merely make the back too long for the forepart.

Now close the back seam and rip the shoulder seam to within one inch of the neck, and place the coat again upon your client, who, of course, is still stooping; you will find the coat to lay smoothly down the back and to be of the right height at the neck, but the shoulder and side seams gap, as in figure 2.

It is clear, then, that all that is necessary to preserve the height of neck, is to add more cloth to the shoulder and over the blades.

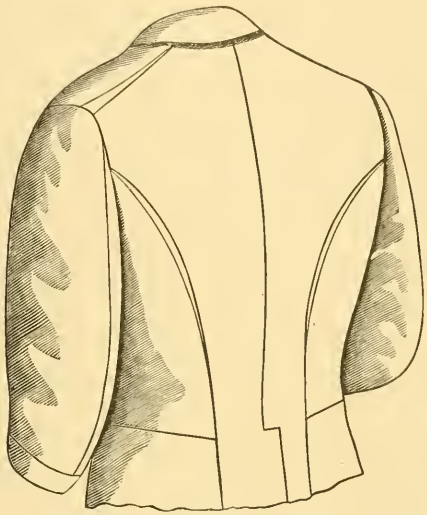


Fig. 2.

You can experiment, also, to advantage with sloping and high-shouldered men.

Take a coat to fit a well-formed man whose shoulder measure is, say, 26, try it on a high-shouldered man of the same shoulder-measure, and it will be too high at the neck, but rip the shoulder seams and the coat will settle about the shoulders and fit him properly.

Take the same garment and try it on a sloping-shouldered man whose shoulder-measure is the same. You will find it too low in the neck, but raise the coat until it is the right height at neck, and you will find that there is too much cloth over the droop of shoulder; pin this up and the coat will stay to its place.

From these facts I deduce the following principle: *The height of neck is governed by the depth of sye and the amount of cloth placed over the blades and shoulders.*

Application. For all whose upper shoulder measures are alike (measure from socket-bone around arm, back to socket-bone), make length of back above bottom of sye the same, but add to or take from the blade, and shoulder except at neck, as required by blade and lower shoulder measures, or their equivalents.

By lower shoulder, I mean a measure taken from center of back opposite sleeve seam, around arm and back.

Law. *The top of back must for all shapes be placed at a distance from bottom of sye proportionate to the upper or first shoulder-measure, or its equivalent.*

CHAPTER V.

PROBABLE FAULTS.

In the four previous chapters I have treated upon principles which are strictly fundamental.

As I remarked at the outset, I am addressing myself to those only who have at least a rudimental knowledge of the science of cutting.

All who have, are of course able to draft a coat that will fit a well-proportioned man.

These fundamental principles, although they enable an expert to draft a coat for any and every shape, will be chiefly useful to a majority of cutters as sure guides to variations necessary to be made from a draft for a well-proportioned coat, for various shapes of the same upper shoulder-measure.

They will enable cutters to work understandingly.

I believe that most cutters are men of superior intellect, and that they will be able to apply correctly these principles when they once comprehend them.

I shall now offer a few remarks in regard to the shoulder.

If the shoulder be too long or too short, the coat will of course be wrong.

Every cutter knows this, and yet so firmly do many believe that the balance is governed by the shoulder that they frequently cut it too short, and less frequently, though quite often, too long.

If the man stoop, they will shorten the shoulder instead of adjusting the lower to the upper portion of coat in a different manner.

The result is a bad coat.

Not more than one cutter in three cuts his shoulder long enough.

This prevalent error arises, I believe, from undertaking to make what are called "actual measures" prove.

For instance: If a man's shoulder measure 25½ inches, it is difficult to

convince a cutter that the draft should measure 28 inches or more; hence they allow to draft but little if any more than for the seams. The play of muscles and necessary ease for grace are not considered,—the result is too short a shoulder.

Half the coats we see upon the street have this failing.

It is singular how cutters will go on year after year turning out coats which are too short from front of sye to socket-bone in front, and never discover wherein they are at fault.

They are afraid to cut the shoulder longer, fearing it will cause the coat to be loose about the neck, or to hang off at waist.

Their coats when first put on may, if well made and considerably stiffened with hair cloth, set smoothly about the shoulders, but after they have been worn a week or so they will wrinkle and break through the shoulders, as represented by figure 3.

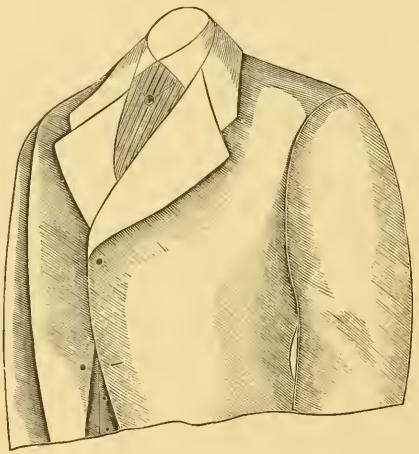


Fig. 3.

The shoulder of this coat from socket-bone to front of sye is at least three-quarters of an inch too short; that amount added to it would make it smooth and would not affect the balance.

The length of shoulder should be the same for all shapes that measure

alike from the points I have indicated, *id est*, from socket-bone around arm and back; so that if you can place a good shoulder upon one man, you may upon all.

How to find the proper length I do not propose to demonstrate, as it is a matter that every cutter can determine by a few experiments.

I merely call attention to a common fault in coats, and to its remedy.

There is no occasion for any cutter ever to produce a coat the shoulder of which bears any resemblance to that represented by figure 3.

The shoulder is too short, and should be lengthened as represented in diagram 28.

A shoulder too long is a less frequent, though quite a common fault.

Figure 4 represents a coat the shoulder of which is too long.

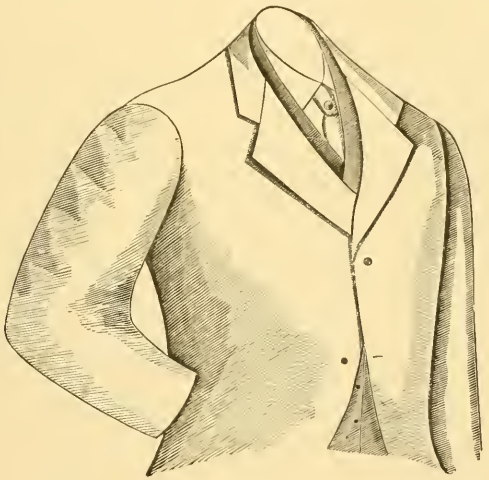


Fig. 4.

It will be observed that it hangs from the neck.

Many cutters who have this fault, instead of cutting the shoulder shorter between the front of sye and socket-bone, add cloth to droop of shoulder so as to *allow* the coat to fall to its place, as represented in diagram 29.

The result is, that although the coat falls to its place about the neck, whenever the wearer sits it will climb up toward his ears, the armhole being made too deep.

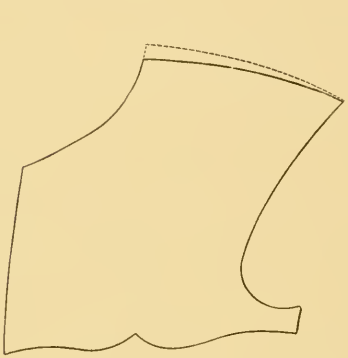


Diagram 28.

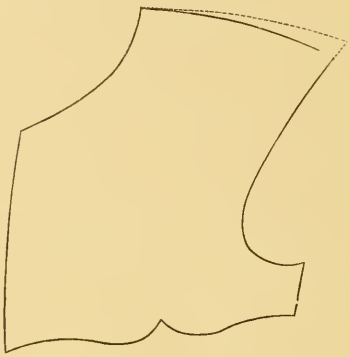


Diagram 29.

Another very frequent fault with coats is that when they are buttoned the roll flares out instead of lying smoothly over the breast, as represented by figure 5.

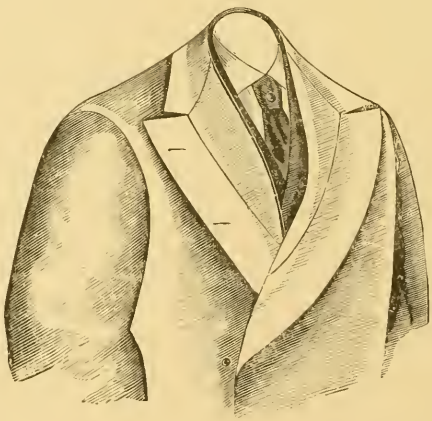


Fig. 5.

There are two causes for this: one is the balance. If the coat is improperly balanced and swing from the waist, when it is drawn to its place by being buttoned there must be loose cloth in the break.

The other cause is that there is not enough cloth over droop of shoulder.

If your coat have this fault and swing at waist, carry the side seam of sidebody farther forward at the waist, and you will remove it.

But if your coat hang properly, add more cloth to shoulder over droop, as represented in diagram 29.

Another common fault with coats is, that they wrinkle from under arm to side seam, as represented in figure 6.

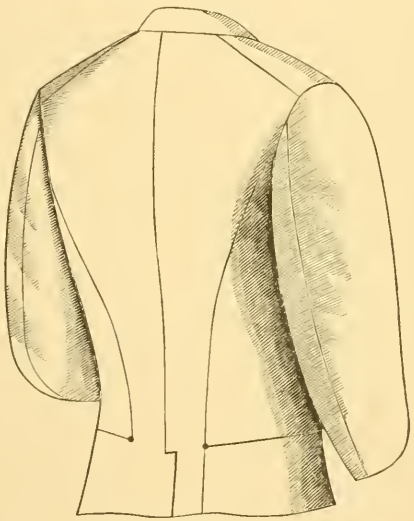


Fig. 6.

This is sometimes caused by the coat striking too closely at the hips; sometimes by there being too little cloth over the blades; sometimes by the shoulder being too short; and more frequently by cutting out too much under the arm between sidebody and forepart, as represented in diagram 30.

When the sidebody is joined to the forepart, it is thrown out and down at A, so that when it is held to its place by the back it is twisted, and loose cloth is thrown in wrinkles under and back of the arm, as represented.

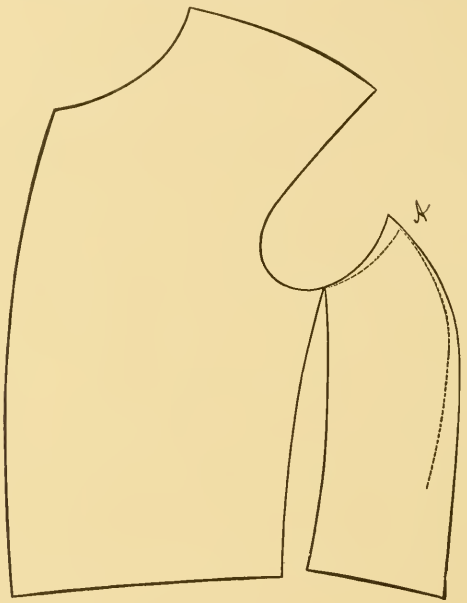


Diagram 30.

This fault is also not infrequently the result of cutting too little cloth over the droop of shoulder, which prevents the back seam of back coming naturally to its place, as represented in diagram 31.

The broken lines represent the vest, the solid lines represent the backs, which, it will be observed, do not come together below the neck.

Now, it is evident that when they are seamed there will be loose cloth forced to their closing edges, which will give the back a baggy appearance, and cause the coat to draw into wrinkles, as represented in plate.

After these explanations a cutter should be able to see which of these errors in drafting has caused the fault we are discussing, and to remedy it by

adding more cloth to blade or hip, by cutting out less under the arm, or by adding more to the droop of shoulder.

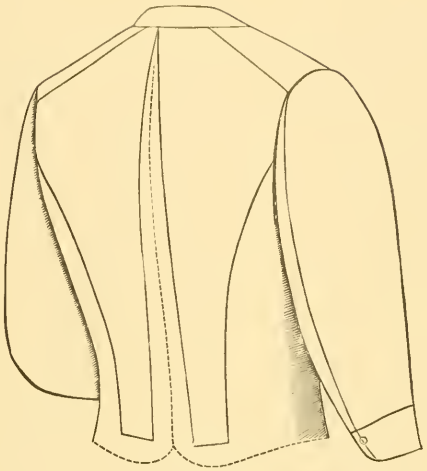


Diagram 31.

Another common fault which arises from cutting too much out from under the arms is, that the coat when unbuttoned flares at the hips.

To cut a graceful coat you must cut but little out under the arm, unless the hips are extremely prominent.

The coat should be cut large, so as to button without any forcing whatever.

A good guide is to take a hip-measure and to cut the hip by it, adding two and a half inches for making and necessary ease. This relieves you of the necessity of cutting out so much under the arm to allow coat to spring over the hips.

Half an inch is enough to cut from under the arm for ninety-nine men out of every hundred. Even if a man requires more it is better not to cut it, or at least not to cut out over three-quarters of an inch.

The coat will hang more gracefully if but little is cut out, and will not splay if unbuttoned.

Another common fault is represented by figure 7.

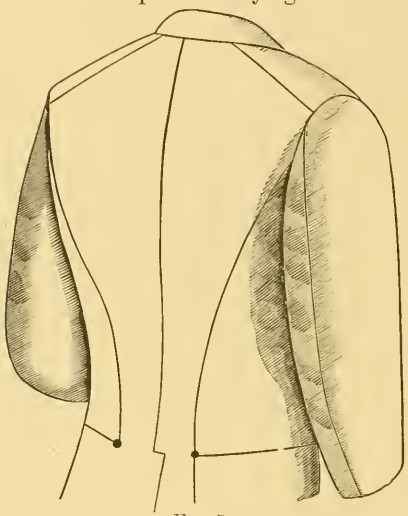


Fig. 7.

This is generally caused by cutting too much cloth on sidebody over blades, and is an easy matter to avoid after you find your coats incline to this fault.

Sometimes it is caused by cutting too much cloth over droop of shoulder.

This error probably originates from cutters endeavoring to make a square and handsome shoulder, as represented in diagram 32.

Diagram 32.

The dark lines represent a coat that will fit, but the shoulder-seam is round and homely.

The broken lines represent the shoulder-seam straight and square, but the coat will have the fault we are discussing.

This error arises from the cutter forgetting or not knowing enough to take from top of sidebody some of the extra cloth he has added to the shoulder, or building the shoulder up with wadding.

Had diagram as represented by dark lines been manipulated as indicated by diagram 33, the fit would have been preserved, and the shoulder-seam would have been straightened and squared.

The dotted lines represent the changes made.

From top of sidebody it will be observed there is taken nearly as much as has been added to the shoulder.

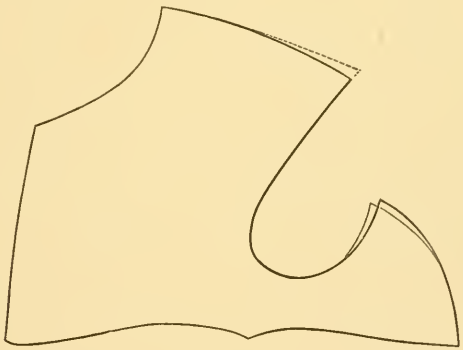


Diagram 33.

Sometimes the back is cut too long; this can be easily detected, and can always be avoided by governing your draft by my method of regulating the height of neck as explained in my system.

There are several faults that arise from the collar.

Figure 8 represents one.

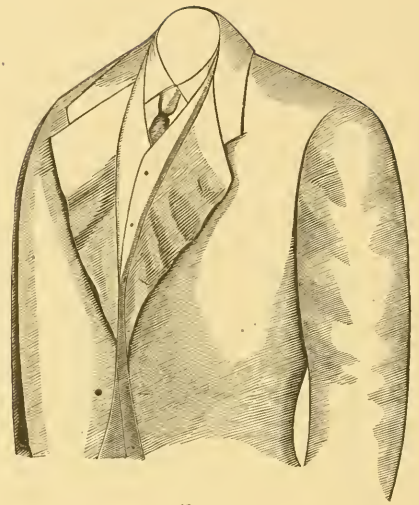


Fig. 8.

In this the breast is made to break lower than was intended, by the collar having been cut too crooked.

Wrinkles frequently appear in the shoulder from the collar being too tightly put on.

Many coats are too high at side of neck. This is caused by collar being cut with too much cloth below the break.

It happens frequently when short rolls are in vogue, the gorge being then generally cut straight while the same amount of cloth is placed on collar below the break.

Diagrams 34 and 36 will more fully illustrate my meaning.

Diagram 34 represents a crooked gorge; more cloth being cut from the forepart, more should of course be cut to the collar.

Diagram 35 represents a straight gorge; more cloth being cut to forepart, less should of course be cut from collar.

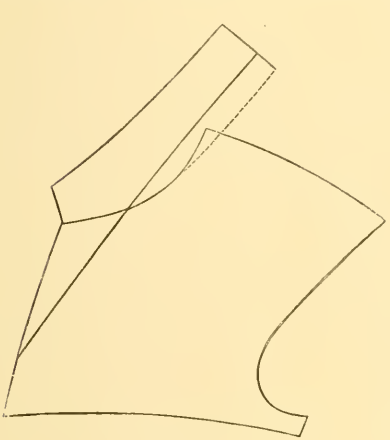


Diagram 34.

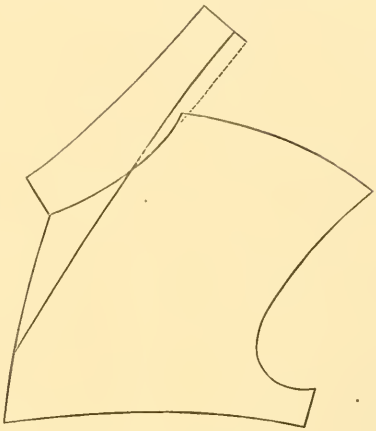


Diagram 35.

A simple and excellent rule for drafting a collar may be found among explanations of my Rational System.

Though perhaps a little out of place, as it has nothing to do with the fit, I wish to call your attention to the cutting of the breast of the coat.

Very many coats which roll low are ruined in appearance by the timidity and ignorance of the cutter, who will not add to or take from the size of the breast.

Diagram 36 will make what I mean more fully understood.

The dotted lines represent a coat drafted to the size of breast, with the usual amount, two and a half inches, added.

The roll of this coat would be too light, yet the ordinary cutter would so cut it rather than go beyond his measure at breast.

The dark lines represent the breast rounded so as to give a full, graceful roll.

This does not, as so many suppose, affect the size, as the coat buttons below the breast, and the extra cloth turns over and does not change the size of the garment.

Diagram 37 represents the other extreme.

The dotted lines, as before, represent the coat drafted with usual allowance to breast-measure. This would make too heavy a roll, yet the ordinary

Diagram 36.

Diagram 37.

cutter would not dare to cut down the breast as he should to reduce the size of roll as represented by dark lines.

The fit of a coat is not infrequently ruined by the sleeve. If the sleeve is not properly cut, or if it is put in wrong, it will affect the coat.

A very common error is to cut all sleeves for the same sized armhole by the same pattern; the result is, that some have too much, while others have too little, round over the top.

The sleeve should be cut according to width of shoulder, flat or round, as the shoulder is wide or narrow.

A simple and infallible rule for drafting the sleeve may be found among the explanations of my Rational System.

Faults in the skirt are very common; sometimes the skirts will lap and sometimes spread apart.

They are also very frequently cut too full or too scant in front.

These faults, however, never occur with first-class artists; they result from a lamentable lack of judgment. They are very unsightly, and ruin the appearance of a garment, however perfect it may be in other respects.

A very simple and accurate skirt-rule may be found among the explanations of my Rational System.

Sacks.

The sack is a garment that is always more or less worn.

Strange as it may seem, it is only a few years since it was almost universally drafted by the breast-measure, and even now many cutters use nothing else.

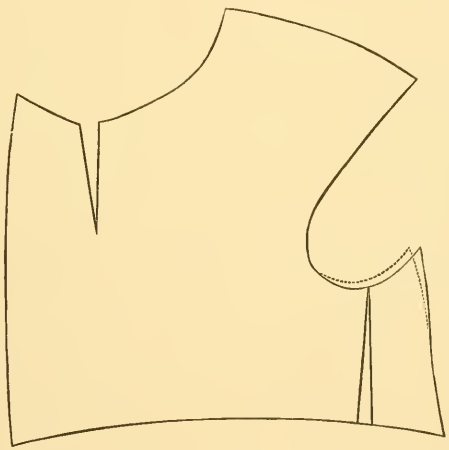


Diagram 38.

It is a garment that is decidedly unsightly unless well cut, but is graceful and becoming to certain forms if cut in an artistic manner.

A popular error in regard to the sack is that the shoulder should be cut different from that of the frock, but such certainly cannot be the case.

The upper portion of the sack should be cut precisely as that of a frock.

The only change that is ever necessary is when no cut is made under the arm; when this is the case, the blade should be cut down to the size a frock would be with the sidebody seamed to the forepart.

Diagram 38 illustrates my meaning.

The dark lines represent the coat drafted as a frock with cut under the arm, the broken lines represent the side seam where it would be with the edges of cut lapped for seams, and as it should be drafted were the cut under the arm omitted.

The coat should be balanced in the same manner as a frock, adding about an inch at the waist for fullness.

There is no difference between the frock and sack, so far as principles are concerned. The same principles govern both. In detail there are differences which will be fully treated upon under the heading of Hints to Cutters.

PRACTICAL HINTS TO CUTTERS.

In entering upon this branch of my work I feel considerable diffidence from the fact that some of my ideas will clash with the pet prejudices, the fond delusions, and the fossilized notions of many.

Diffidence, however, will not prevent my giving full expression to my views, nor does it imply that I lack confidence in the soundness of anything I advocate or teach.

I advise nothing that I have not tested thoroughly myself and seen so tested, time and again, by others.

Many of my ideas are not original with myself, but have been picked up in my intercourse with thousands of our best cutters.

Many of them will be familiar to metropolitan cutters, but there are very few, I fancy, who will not find something new and valuable.

To young cutters they will be especially valuable, and such will do well to devote to them considerable careful attention.

The Sye.

The comfort, and to a great extent the style of a coat, depend upon the shape and size of the arm-hole.

The sye may be cut small, and yet, if properly shaped, it will not be too close.

It is better, however, to cut the sye of a medium size, as it is safer, and prevents the breast breaking from the forward motion of the arms.

I am aware that some will disagree with me about the shape of sye, nevertheless, I am confident that I am right.

I have tried every conceivable shape, and have found but one that operated with unvarying success.

The sye in diagram 39 is shaped, I think, precisely as a sye should be shaped, with a back of medium width.

It will be observed that the sye is cut well out at *A*. This is done to give room to prominence of arm at this point.

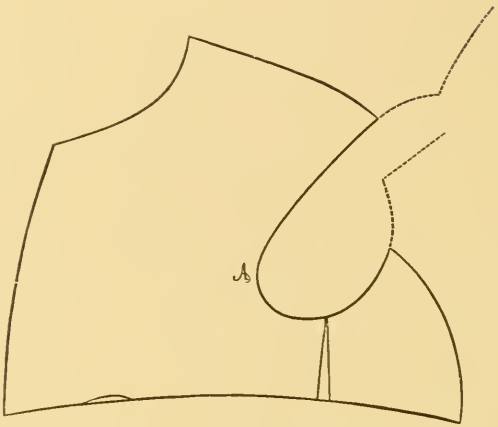


Diagram 39.

It will also be observed that the bottom of sye is flat. This is to prevent the coat having a tendency to climb when the arms are raised.

An arm-sye cut in this shape should measure about 17 inches for a 25-inch shoulder.

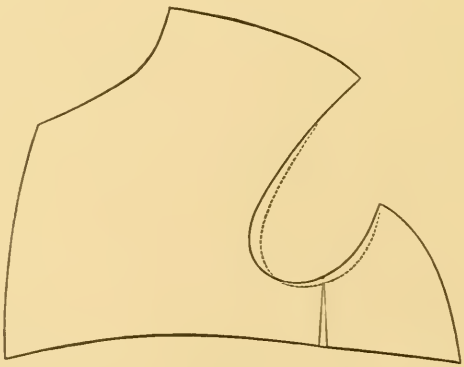


Diagram 40.

It will be large and comfortable, and will make an elegant shoulder.

There are many faults common in the shaping of sye, to a few of which I propose to call attention.

Diagram 40 represents one which is extremely prevalent.

The dark lines represent a sye properly shaped. The broken lines one shaped in the faulty manner to which I refer. The latter will bind the arm and cause wrinkles, and will permit the coat to climb with the raising of the arms.

Another common fault is cutting the sye so that at the shoulder and the side-seams there are corners. What I mean may be readily understood by an examination of diagrams 41 and 42.

Diagram 41.

The sye portion of the back does not range with the other portion of sye. The result is a badly fitting sleeve and an unsightly coat.

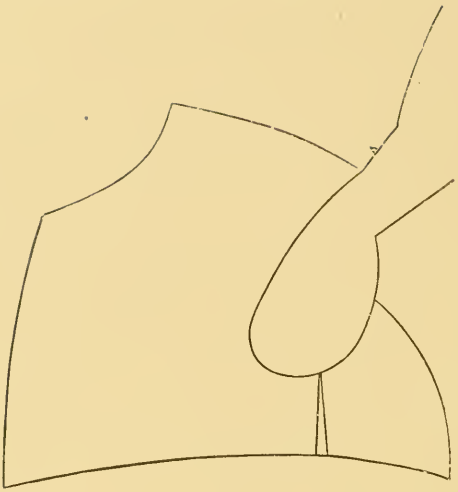


Diagram 42.

Another common fault is illustrated in diagram 43.

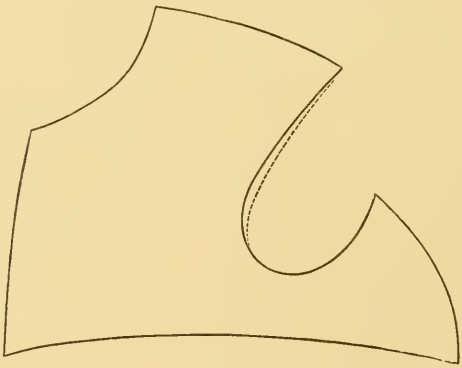


Diagram 43.

The cutter desires to cut a large, easy sye, but instead of doing so, merely cuts down the shoulder without giving the arm any extra room; the dotted lines represent the sye before its shape was changed.

More than half the cutters for such a sye would draft precisely the sleeve they would if sye were shaped as indicated by dotted lines. As a natural consequence, the sleeve will swing too far forward, and draw the shoulder out of shape.

Many cutters are deceived in regard to the size of the sye by the number of inches it measures.

This, though it seems paradoxical, is perfectly consistent.

The sye, however many inches it measures, if it bind the arm, is small, and however few it measures, if it is easy and comfortable, is large.

The sye may be made to require a large sleeve-head, and to seem large, by cutting it large where it is unnecessary to do so.

Diagrams 44 and 45 illustrate my meaning.

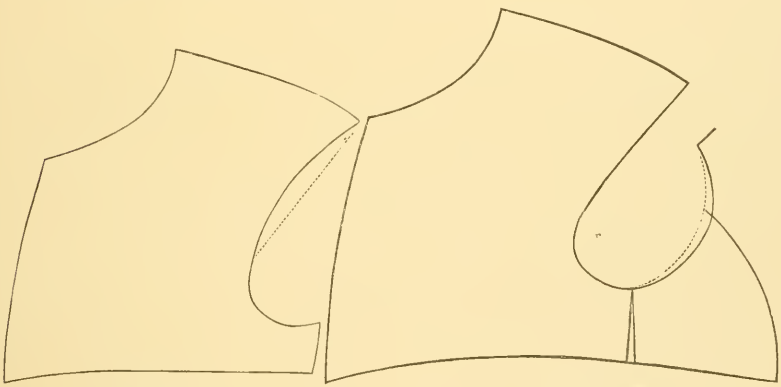


Diagram 44.

Diagram 45.

In diagram 44 the dark line represents the change the unskillful cutter has made from the original draft, as represented by dotted lines, to give his customer ease.

In diagram 45 the dark lines represent a common error which makes the sye very wide and apparently large without giving it real, practical increase of size.

The dotted lines represent where the sye should be cut; the dark lines where it is frequently placed.

In both of these examples the sye will look and measure large, but of course will be no easier to the customer.

The fault represented in diagram 45 is often caused by a badly-shaped back, as represented in diagram 46.

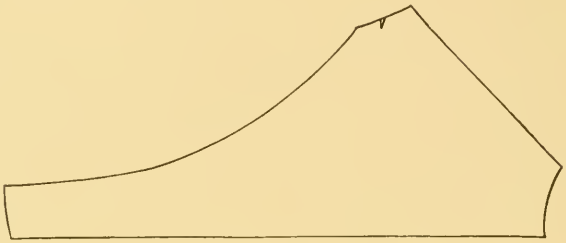


Diagram 46.

The sye portion of back is cut at too great an angle with the back seam, and unless the back is of extraordinary width, will, if sye portion of sidebody is made to range with it, cause too much cloth to be cut from back of arm.

The Back.

The shape of the back has very little to do with the fit of the coat, though it has much to do with the style and appearance.

It has little to do with the fit, because the rest of the coat, in drafting, is always shaped according to the shape of back.

For instance: if the shoulder seam of back is cut high over droop, or wide at top, the forepart over droop is cut shorter, or the shoulder point not so long, as it would otherwise be.

Diagram 47.

So also, if side-seam of back is cut thick over the blade, the side-seam of sidebody over that portion is cut narrower, and *vice versâ*.

The shape of back affects the fit to a small extent. For instance: if your client is round-shouldered, the back should be slightly rounded on back-seam, as in diagram 47.

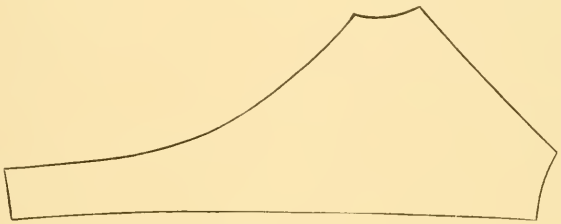


Diagram 48.

Or, if your client is very hollow in the back, the back-seam should be hollowed at waist, as in diagram 48.

Or, if your client is very hollow in the back and narrow between the shoulders, the back should be hollowed, as in diagram 49.

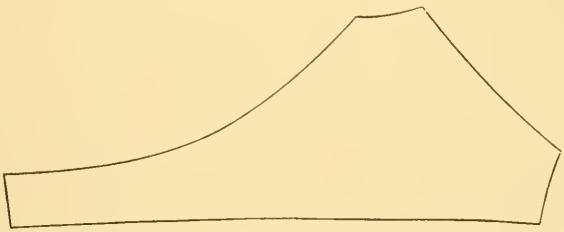


Diagram 49.

Care should be taken, when back is so hollowed, not to place the amount taken from back upon the shoulder, as is sometimes done.

The shoulder should be drafted as though the back-seam were straight, as illustrated by diagram 50.

The dark lines represent the shoulder drafted as though the back-seam were straight, which is right. The broken lines represent it drafted to fit the

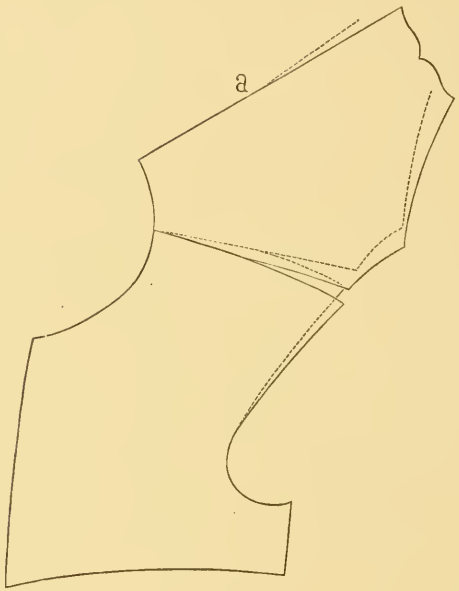


Diagram 50.

back, with hollowed back-seam even with the straight back-seam at point marked *a*, which is wrong—the result being too much cloth over droop of shoulder.

It is things little in themselves which constitute the difference between a good cutter and a poor one. Therefore I shall call attention to a number of little things in regard to shaping of back, which, though they may seem trivial, are nevertheless not to be disregarded without detracting from the appearance of the coat.

Cutters, as a general thing, admire a high and square shoulder, as it improves the appearance of the customer, and consequently of the coat.

But in cutting the back with an extra amount of cloth over droop, they are unable to make the forepart look exactly right.

It seems too long and sharp at shoulder-point, as illustrated in diagram 51.

Diagram 51.

To obviate this, he cuts the back wider at top; this improves the appearance of draft, but injures the appearance of the coat. The top of back being wide and the shoulder-seam straight, it will appear to be extremely wide when

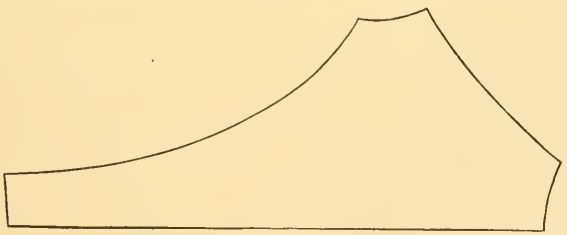


Diagram 52.

the collar is turned over it, giving to the neck of coat a thick, heavy, and clumsy appearance.

There are two remedies for this.

One is to spring out the back at top, as represented in diagram 52.

The effect of this method is illustrated in diagram 53.

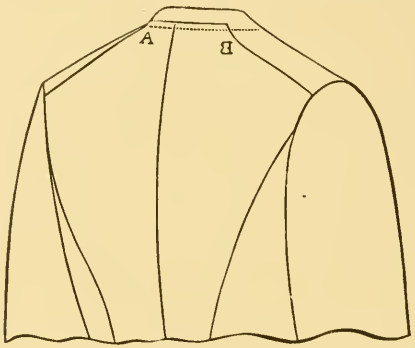
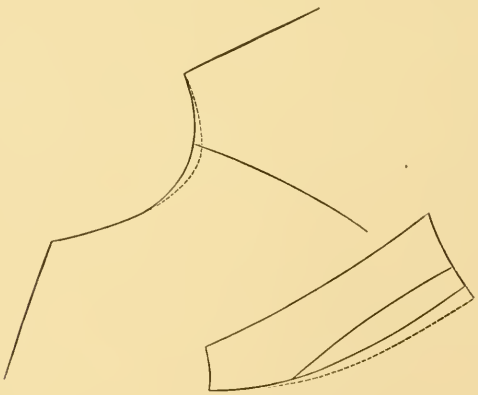


Diagram 53.

The broken lines represent the edge of collar.

It will be observed that the springing out of back at top decreases the



Diagrams 54 and 55.

width between *A* and *B*, preserves the straightness and squareness of the shoulder-seam, and prevents the shoulder-point of draft from being too sharp.

The second method can only be employed when collars are cut tolerably wide. This method is to cut down the top of back and curve of gorge, and to add to stand of collar, as illustrated by diagrams 54 and 55.

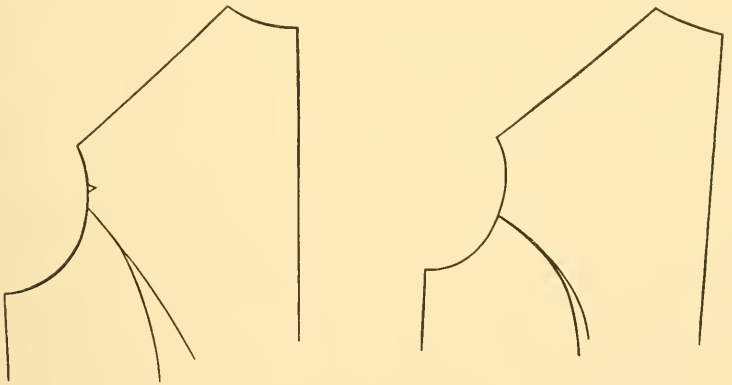
The dotted line of diagram 54 represents the neck cut down; while that of 55 represents the amount cut from 54 added to collar to preserve the height of neck.

By this method the distance between the shoulder seams at neck seems less than it would without the change we are discussing, for the reason that the turn-down part of collar extends but very little below neck-seam, and covers less of the top of back than it would if cut otherwise.

The shape of side-seam of back has much to do with the appearance of the coat. It should not be carried too high nor be cut too low.

The first will make the top of sidebody too long and narrow to look well, besides rendering it liable to stretch out of shape; while the second makes it thick and clumsy, and destroys the gracefulness of the lines of the back.

If carried too high it forces the sidebody into a bad shape, as illustrated in diagram 56.



Diagrams 56 and 57.

If cut too low, as stated above, it makes the sidebody thick and clumsy, as can be seen in diagram 57.

The Sidebody.

The shape of the sidebody, unlike the shape of the back, greatly affects the fit of the coat.

In these "hints" I am treating on matters pertaining to taste and the artistic in cutting, more than of the principles which govern the fit.

Therefore I shall not refer to the amount of cloth required over the blade, to the height of top, or to the balance.

These matters have already been considered.

The sye portion of sidebody should be cut to range exactly with the sye portion of back; any neglect in this particular will ruin the appearance of the back of the coat, or may tempt the jour to use his shears to the ruin of the garment.

The curve of the side seam should be smooth and graceful, and the lap should not be extended very far down the seam, else the back of coat will have a baggy appearance, as though the back were too long.

Diagrams 58 and 59 will illustrate my meaning.

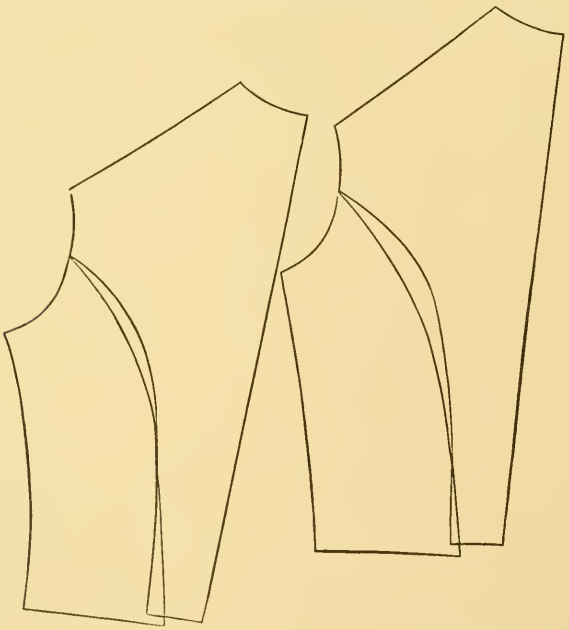


Diagram 58.

Diagram 59.

Diagram 58 represents the side seam of sidebody falling into that of back about half way between blade-point and natural waist.

Diagram 59 represents the side seam of sidebody joining that of back nearly as low down as the waist, which cannot fail to produce an ungraceful garment.

The amount of spring over the hip should depend, of course, upon the shape of the form to be fitted and the length of waist

Many cutters form the side-seam with no guide but the eye.

This is a dangerous method, as any considerable change in the shape of side-seam of back will be liable to mislead their judgment.

The better and safer way is, after establishing point for top of sidebody, blade-point, and waist-point, to lay the back upon the draft, the top of side-seam resting upon point for top of sidebody, and its side-seam touching point for side-seam of sidebody at waist, then to mark down the side-seam and remove the back, as illustrated in diagram 60.

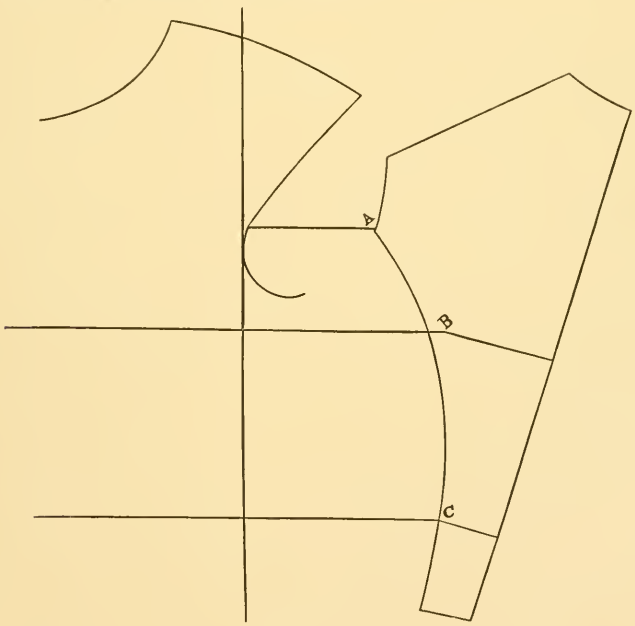


Diagram 60.

The side-seam of sidebody is not formed in diagram 60, but the points marked *A*, *B*, and *C*, have been obtained.

The back touches upon points *A* and *C*, and a line is marked down the side-seam.

When the back is removed the draft will have the appearance of diagram 61.

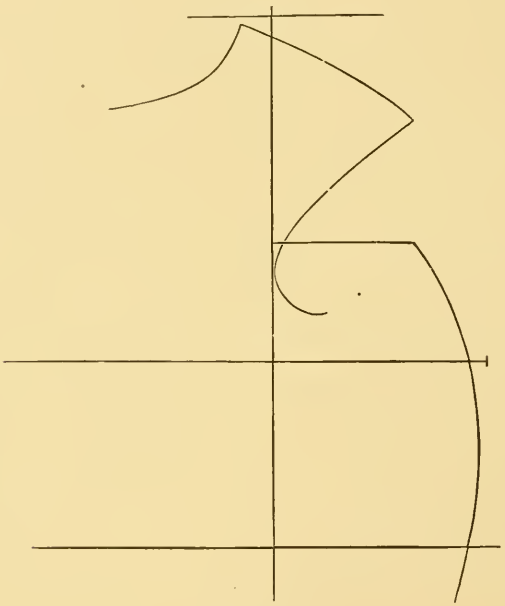


Diagram 61.

Now you have to shape the side-seam of sidebody. The line made down the side-seam of back is an excellent guide, as it enables you to see exactly how much cloth you are cutting over blade, how far down you are making sidebody and back lap, and how much you are springing sidebody over hip.

Diagram 62 represents diagram 61 with the side-seam of sidebody and back of sye formed.

Diagram 62.

A is the length of side-seam of back with about one-quarter of an inch added, and is the point to which bottom of sidebody must come.

The side-seam of sidebody should be drafted longer than the side-seam of back, because in making up it is shortened while the back is lengthened.

The amount of spring over the hip should vary for different lengths of waist and for different forms, from one-quarter of an inch to one inch over the guiding line made along side-seam of back.

For a well-proportioned man whose waist is extended three inches below the hollow of back, the side-seam of sidebody should lap the back three-quarters of an inch at *A*, the hip point; while for a stooping man whose back from

blade to hip has but little curve, it should not lap more than one-quarter of an inch.

Forepart.

The length of neck and shape of gorge are, of course, governed to a great extent by fashion. As a general rule, however, the lower the roll the shorter should be the neck and the lower and straighter the gorge, else you will have too heavy a breast, and your coat will pull from the neck.

It sometimes occurs that your client measures small about the shoulders while his breast-measure is very large.

In such a case your neck will be too long, or you will have too much round over the breast. From this dilemma you can release yourself by cutting a V, as in diagram 63.

Diagram 63.

On the other hand, your client will sometimes have enormous shoulders and a narrow breast.

In such a case you should never insert a V in the neck, as it will make it too short, and throw unnecessary fullness in the breast.

Omit the V, and make the gorge extend a reasonable distance beyond the break, making the breast flatter, taking out, if you choose, a V between the forepart and lapel to assist in forming the roll.

In drafting the lapel, it should be borne in mind that the larger the breast the larger the V should be which is cut between it and the forepart.

Cutters frequently are annoyed by finding that the space between the

lapel and the collar is greater than they designed, and attribute the fault to the jour. But they have only themselves to blame.

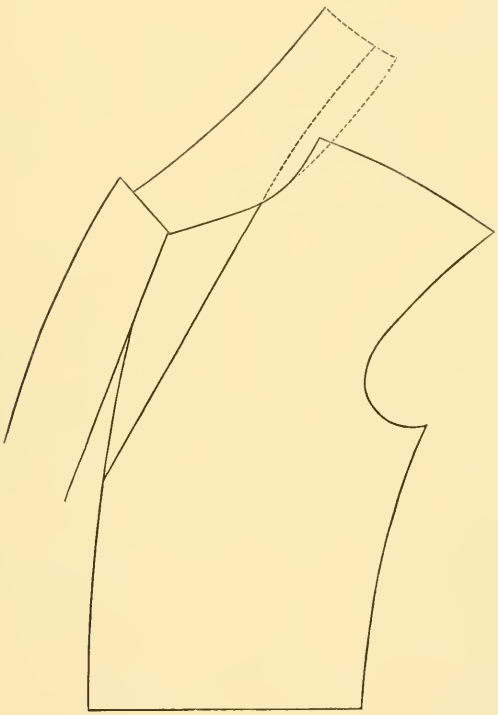


Diagram 64.

Diagram 64 represents the lapel and collar placed to draft as they will seam.

It certainly looks as though there would be no daylight between them when made up, but there will be.

If you desire the collar and lapel to close when made, you must draft the collar so as to lap lapel from one-quarter to one-half an inch, for a low or high roll respectively.

Diagram 65 illustrates what I mean.

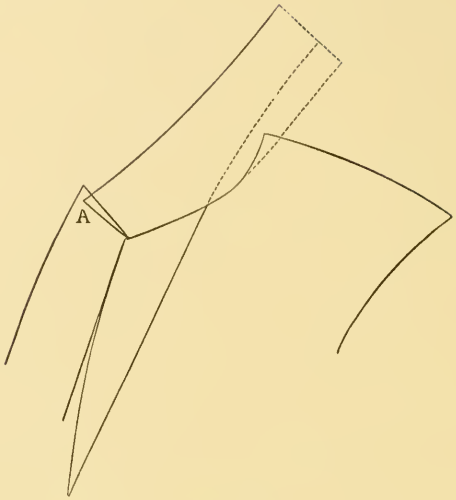
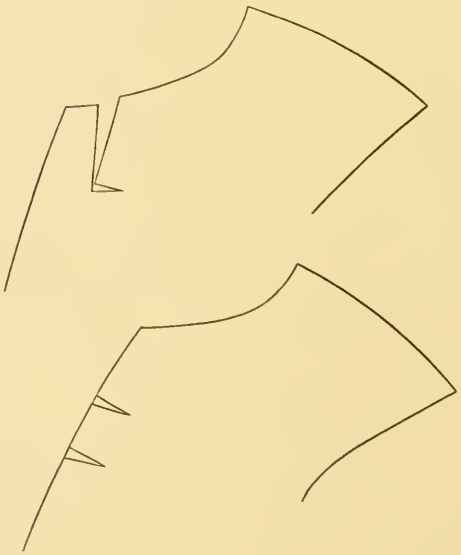


Diagram 65.



Diagrams 66 and 67.

The collar at A1 projects over the lapel one-quarter of an inch, but when the coat is finished the two edges will just meet.

In coats for full-breasted men, it will greatly assist the jour. in forming the breast to cut one or two V's in forepart according to the fullness of your client's breast, as represented in diagrams 66 and 67.

In cutting the ordinary V between lapel and forepart, considerable trouble may be saved, and you will be able to design your roll with greater accuracy, by adopting the method illustrated in diagram 68.

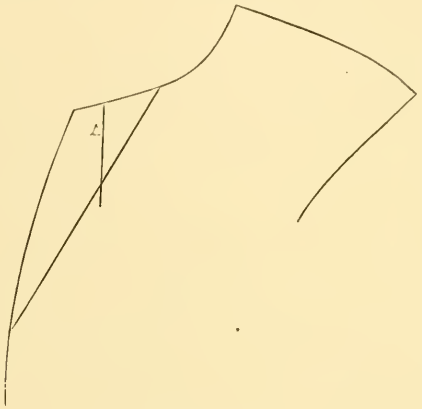


Diagram 68.

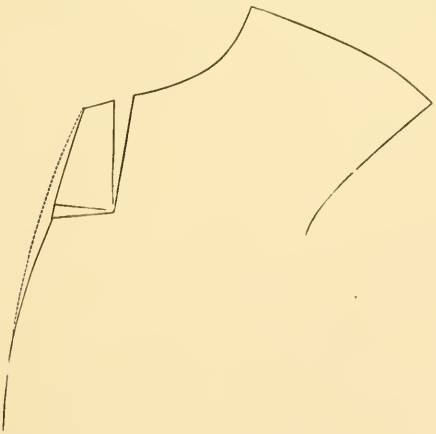


Diagram 69.

Draft forepart with lapel as represented.

The line marked A is for the V; cut down this line and open it out to the size of cut you desire. This will throw loose cloth over the breast. Pinch this together and press it down with your nail. Your draft will then present the appearance indicated by dark lines of diagram 69.

A represents the fullness caused by opening the V pressed down.

All you have to do now is to fill out the breast as represented by broken line, when you lay out the coat upon the cloth.

In cutting single-breasted cutaways, cutters sometimes get their coats too small to button over the breast. This results from cutting the front with an even taper from round of breast to bottom, instead of rounding it to point where it is to break and cutting it away as desired from that point down, as illustrated in diagram 70.

Diagram 70.

A represents a line drawn from the breast to the waist point.

The dark lines represent the breast drafted in the faulty manner we are discussing.

The distance from this line at bottom of roll to line A, is not more than an inch, which will not permit the coat to button without forcing.

The dotted line represents the breast shaped so as to permit the coat to button.

This may seem a small matter to those who have no difficulty in this respect; but I rarely ever passed a day while traveling without meeting some cutter who was annoyed by this very fault.

In shaping the bottom, considerable taste may be displayed.

Whether it be made to droop or to come straight around the form, is, of course, regulated to a great extent by fashion.

But whatever the fashion may be, the bottom should never be made too short or too long in front.

A slight droop always looks well and is never unfashionable.

A V should be cut in the bottom except for very narrow-chested men.

Many cutters labor under a strange delusion in regard to this V, thinking that its purpose is to give spring over the hip.

A moment's reflection should disabuse their minds of this. Unless the V is cut very large it cannot be made to give any perceptible spring, and if it could, it would place it where it is not required. It would make the coat splay at the hips, than which there are few faults more detrimental to the appearance of a coat.

The V in the bottom is to enable the jour to form the breast, and should be cut with that single purpose. It should also be cut in such a manner as not to disarrange the form of bottom when it is seamed.

This is done by making the edges run parallel for an inch or more from the bottom.

Diagrams 71, 72, 73.

In 71, the V is cut to give fullness to the breast, it is the same size at the bottom that it is two inches above: the two sides are parallel for that distance; when seamed, the shape of bottom will be unchanged.

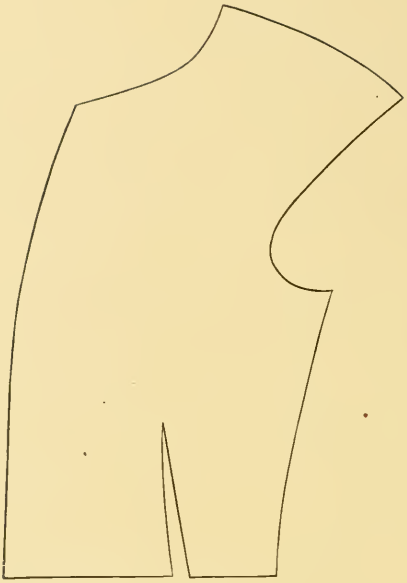
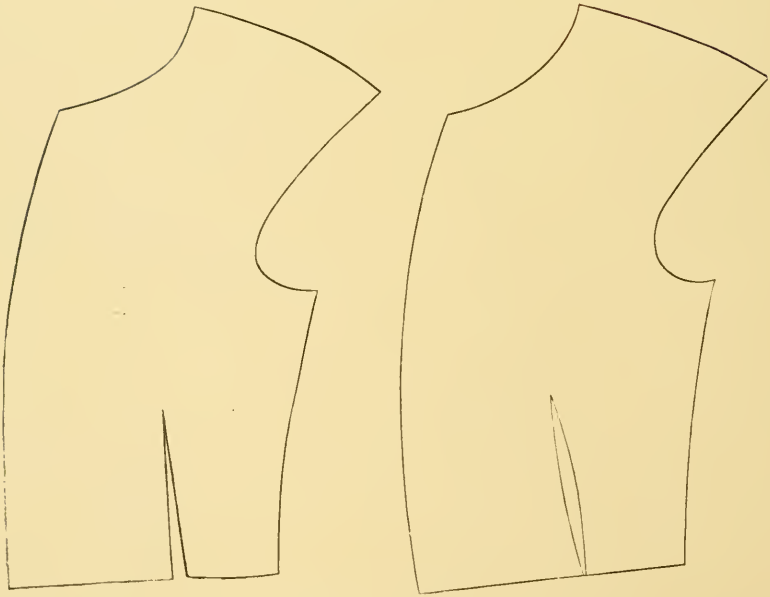


Diagram 71.



Diagrams 72 and 73.

In 72, the V is cut so as to produce the same effect without springing the hips, but it is widest at the bottom and tapers in straight lines to a point. When it is seamed, the shape of bottom will be the reverse of that illustrated in diagram 75.

In diagram 73, the V is shaped to spring the hip; when it is seamed the bottom will have the shape of bottom in diagram 75.

Diagram 75.

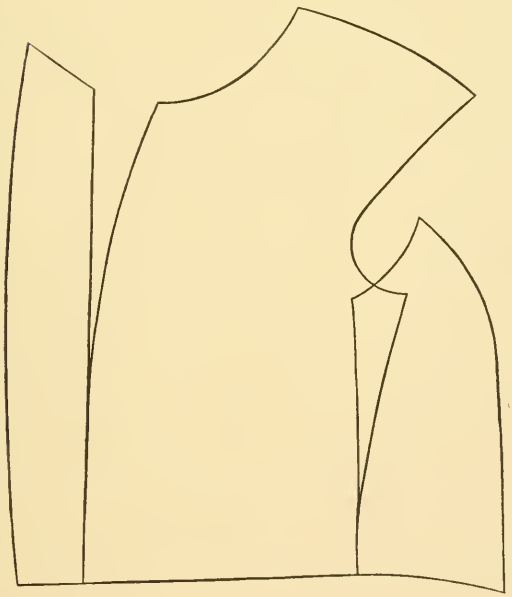


Diagram 76.

The shape of bottom can of course be preserved by trimming the pattern when the edges of the V are closed, but not one cutter in a hundred who so cuts his Vs, changes the shape of the bottom from what it would be without the cut, the consequences are the coat splays at hip, and the skirt hangs badly.

Skirt.

The first thing to be done in drafting the skirt is to shape the top. The manner in which it should be shaped depends upon the fashion in vogue.

Sometimes fashion requires the skirt to have considerable drapery, and sometimes, as at this writing, the skirt is cut with no drapery whatever.

We will consider the latter first.

It may be laid down as an axiom, that a skirt without drapery should be

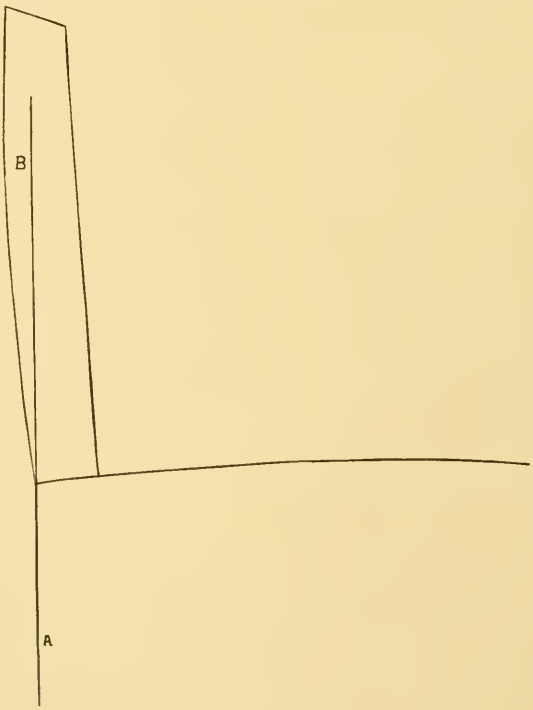


Diagram 77.

draped to fit the bottom of forepart and sidebody exactly; this will make it hang as though the body and the skirt were one uncut piece of cloth.

The following method will be found very simple and accurate.

Lay your lapel, forepart, and sidebody upon your cloth with their edges evenly joined at bottom, as illustrated by diagram 76.

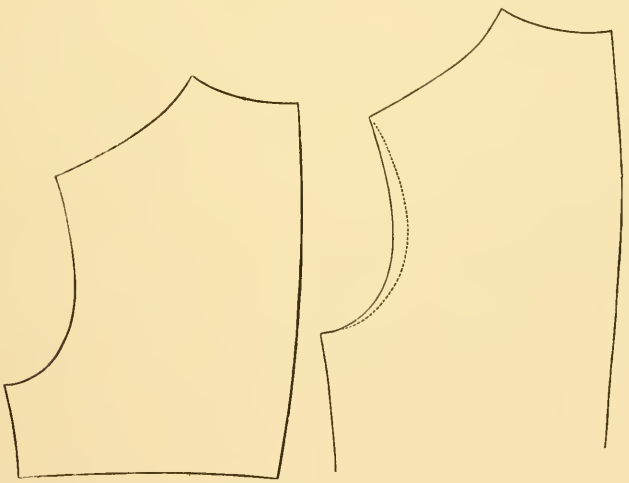
Mark across the bottom, and, after marking width remove the forepart and sidebody, leaving the lapel; now shape the front, letting it be at an angle which will lap the lapel at the most prominent point one inch, as illustrated in diagram 77.

A is the line for front of skirt, it laps the lapel at *B* one inch. This will give the proper amount of spring for the front.

The spring of back is more difficult to regulate, as some forms require more spring than others. It should, however, be ranged with sidebody, and if that is properly drafted the spring must be right.

Vest.

Many cutters are extremely slovenly about the manner in which they cut their vest backs, and, as a natural consequence, very seldom produce a good vest.



Diagrams 78 and 79.

The practice of cutting the back without a seam is a bad one; it should never be done except for very fleshy men, and even for them only occasionally.

It necessitates the drawing in of the vest by the back straps, which is something the cutter should always seek to avoid, not only because it injures the vest, but chiefly because it ruins the appearance of the coat, unless it is of very heavy material, or is a sack.

There is nothing that is more offensive to the artistic cutter than a protuberance at the waist caused by the cloth in a vest-back puckered together by the strap.

The back, as a rule, then, should always be hollowed.

In cutting the shoulder, the vest may be made to fit about the neck smoothly, by giving it proper shape.

Diagrams 80 and 81.

Instead of cutting it straight, hollow it near shoulder point, as in diagram 78.

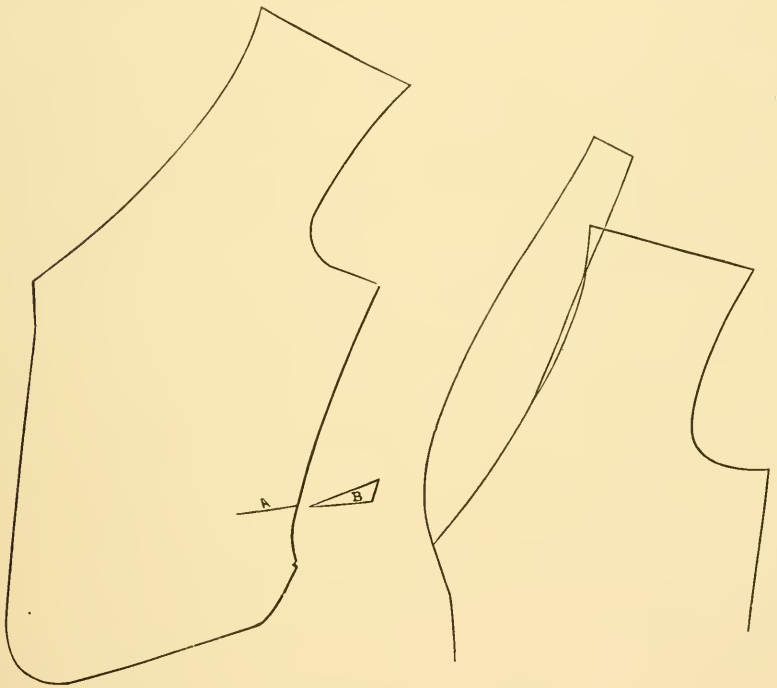
In shaping the sye, too much cloth should not be cut out; a large amount of shirt sleeve exposed over the back shoulder, always looks bad, and should be avoided.

Diagram 79 will show the difference between the proper and improper manner of forming the sye.

The broken line represents, of course, the faulty manner.

Forepart.

The shoulder of forepart should be shaped in the same manner as that of back, *id est*, as in diagram 80.



Diagrams 82 and 83.

The neck should be cut tolerably straight, especially for long rolls. If cut too crooked the silesia will sometimes show between the collar and lapel.

Unless the roll is very short, a V should be taken from the gorge, to prevent loose cloth in break, and to give fullness to the breast.

For a very obese man, cut a large V in forepart, as illustrated in diagram 81.

This will draw the vest in at bottom and throw extra cloth where it is required.

For very long vests this V may be taken out. Its width should be about one-half inch, and it should extend the width of pocket.

For small-waisted men with prominent hips, insert in same place a "fish," as illustrated in diagram 82.

Collar.

The collar should be cut from one-half to one inch shorter than the neck, according to length of roll.

Vests are frequently too high at the side of the neck. This may be avoided by cutting the collar as illustrated in diagram 83.

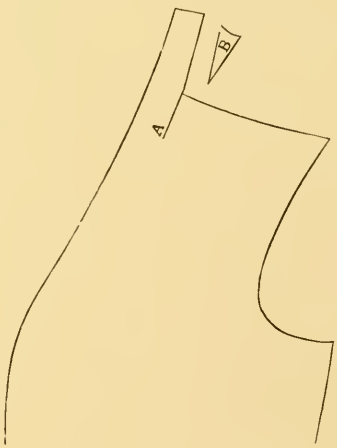


Diagram 84.

It will be observed that between the collar and forepart, at curve of neck, there is some space. This lowers the break and improves the appearance of the neck.

Many cutters experience some difficulty in getting their vests to lay properly about the neck when cut collarless.

This may be avoided in several ways.

First, by stretching the neck, which is a dangerous method, unless done by a workman of skill and excellent judgment.

Second, by inserting a "fish," as illustrated in diagram 84.

A represents a cut made into forepart, and *B* the "fish" to be inserted.

Third, by cutting the back wider, as in diagram 85.

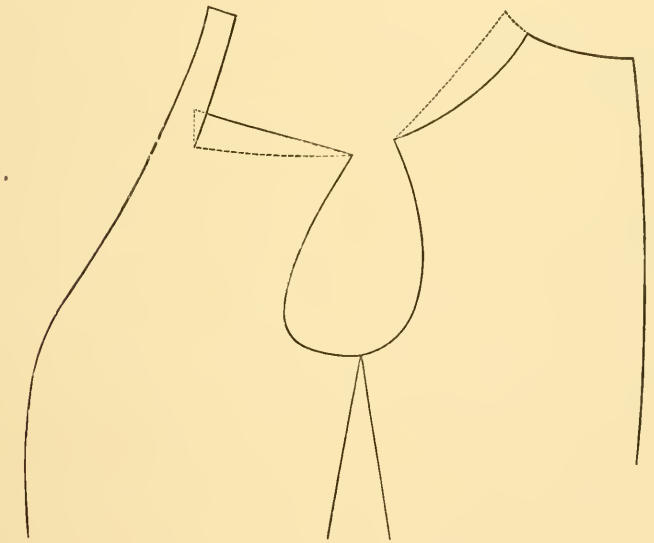


Diagram 85.

The dotted lines represent a piece cut from shoulder of forepart, and added to that of back. This gives the same spring to the neck that a collar would.

This is a simple method, and will be found very effective.

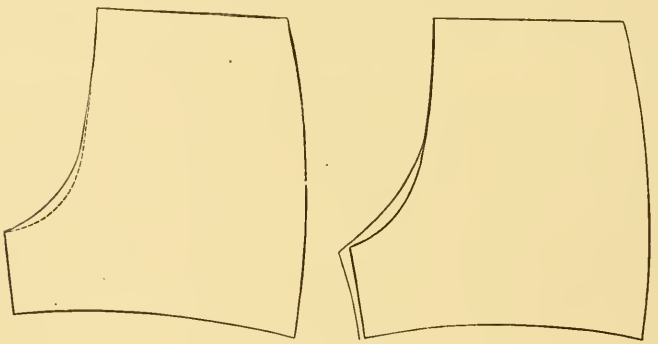
Pantaloons.

There are a few points in connection with pantaloon cutting to which I shall briefly refer.

Many cutters seriously injure the appearance of their pantaloons by cutting the crotch of forepart with too great a curve. This causes too much cloth to appear in front, and often draws them too tight about the hips.

The curve of crotch should be quite straight.

Diagram 86 illustrates the difference between a straight crotch and one curved too much.



Diagrams 86 and 87.

In adding the dress, many cutters destroy the fit of the pantaloons.

If the dress is added in such manner as to lengthen the distance from top of forepart around crotch to top of backpart, the pantaloons must inevitably be injured.

The pantaloons must close without fullness, and if they are cut as described above, the extra length must be cut from top of backpart. The inside seams will not come evenly together, and, as a consequence, the two legs cannot hang alike, and the pantaloons will be liable to twist.

In adding dress, the left side should be enlarged, so as to give the extra cloth required without having it show too conspicuously at one place.

The dress should be distributed between top of forepart and half way between crotch and knee.

From three-quarters of an inch to an inch is enough to add ordinarily.

This should be added as represented in diagram 87.

The curve of the left side is straighter so as to make the length of both sides the same.

For large men the top of forepart at front should be raised from one-half to two inches, according to the relative size of waist and belly measures.

The front should be curved over the most prominent part of abdomen, as illustrated in diagram 88.

The dotted line represents the shape for lean form. The dark line represents the shape for man of same waist and hip measure, but with a large abdomen.

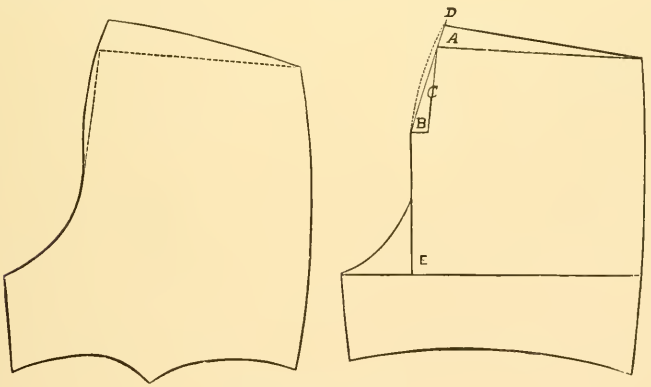
The proper amount of round to be given in front, and rise to be added to top of forepart, for any shape, may be determined in the following simple manner:

Establish your waist and hip points, square down from waist-point by top of forepart; at most prominent part of abdomen add one-eighth inch for every inch the belly-measure exceeds the waist-measure.

Draw a straight line from this point through waist-point and to hip-point, and then curve gracefully.

Square from line extending through waist-point to the top of forepart at side seam, and you will have the correct rise and round.

Diagram 89 is an illustration of this method.



Diagrams 88 and 89.

Waist-measure 40, belly 43, height of top of forepart from most prominent part of abdomen, 4 inches.

A is waist-point. *C* is line squared down from this point by top of forepart. *B* is distance from top of forepart to most prominent part of abdomen (4 inches); at this point three-eighths inch is added for round, this being one-eighth inch for each inch the belly-measure is larger than the waist-measure. *D* and *E* are straight lines running from this point through waist and hip points. *F* is squared by line *D* to top of forepart at top of side seam.

Shape as represented by broken lines.

The top of pants should, of course, be made to come just over the hips, with the waistband added.

Sometimes, however, customers desire their pantaloons to rise two or even three inches higher. In such cases, besides the length of outside seam, the length from just above the hip should be taken, and the pantaloons at this height should be cut to the waist-measure, as represented in diagram 90.

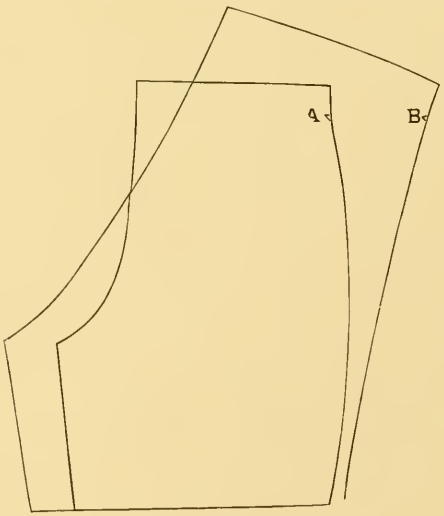


Diagram 90.

A and *B* are the top of hip; at this height the pantaloons should be no larger than around the top.

An almost universal fault with pantaloons is, that when a man sits they draw up badly.

This may be caused by the fork being too short, the rise being too little, or the top of back at side-seam not being sufficiently sprung out, and sometimes by all these faults combined.

The remedies are obvious: to increase the length of fork, the height of rise; to spring the top of backpart out farther, or to do all three.

The reasons for the two first remedies are plain, but the reason for the last is not so easily understood.

Diagram 91 will make it plain.

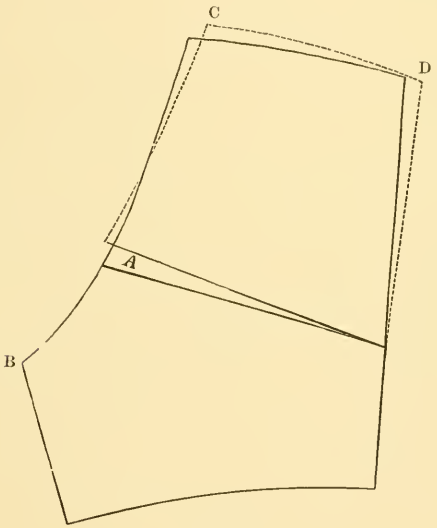


Diagram 91.

The dark lines represent the backpart drafted with the top of side-seam not sufficiently sprung out.

A represents a cut made across the back and opened out as much as required to give the necessary spring to top of back at side-seam.

This gives, it will be observed, greater length from *B* to *C*, and from *B* to *D*, without in any way interfering with the size of body around either waist or hips.

Pants must be properly balanced or they will inevitably hang badly.

A very simple and perfect method of hanging the legs to the body may be found in the explanations of the principles upon which my Pantaloon System is based.

Waistbands should be cut from one-half to three-quarters of an inch longer than waist-measure, to allow for making up.

Whole-Fall Pantaloons.

These differ from ordinary pants only about the fronts.

All old cutters, of course, understand how to cut them.

But as this style of pants is now seldom worn, there are hundreds of young cutters to whom a little light on the peculiarity of this style of garment will be acceptable.

It is especially for their benefit that diagram 92 and the explanations following it are given.

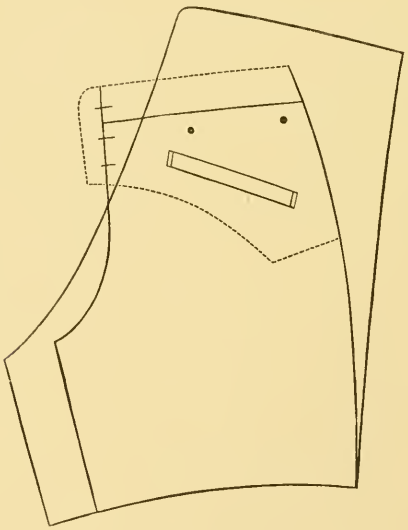


Diagram 92.

The top of forepart is cut one-half an inch longer than the measure requires, to allow it to turn in. The waistbands are cut on—not on to the forepart, however—but on to the fall-bearer, as represented by broken lines.

The side-seam is left open to notch on forepart.

Overcoats and Military Coats.

Overcoats should be measured for over the coat, and should be drafted precisely as undercoats, except that there should be more added to the breast; say three inches.

Military coats should be well rounded over the breast and the round worked out by the jour, care being taken not to press the fullness too far back toward the sye.

They should be cut closer about the body than other coats, and should therefore be given more spring about the hips.

The collar for a military coat or an overcoat, to button under the chin, if it turn down, should be cut as illustrated in diagram 93.

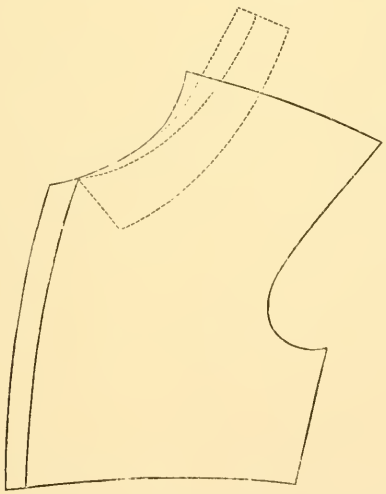


Diagram 93.

OPTICAL ILLUSIONS.

This at first thought may seem a strange subject to treat upon in a work of this description. I shall demonstrate, however, that it is a subject which very nearly concerns every cutter, and which it behooves him to carefully study.

More good cutters are ruined and more garments are killed through optical illusions, than through any other cause.

This assertion, I apprehend, will seem rather enigmatical, but it is, nevertheless, true.

Why is it that many cutters, who, ten or fifteen years ago, were regarded as first-class artists; cutters whose garments rarely needed alteration, and were always tasty and graceful, have now lost their prestige, and are old fogyish and uncertain?

Their garments do not fit as they used to; they do not hang so well. Why have they degenerated?

It is because of optical illusions.

When they were successful they became accustomed to, and fell in love with, a certain form of forepart, back, sidebody, skirt, sleeve, collar, etc.

They could, then, almost tell whether a coat would fit or not by a glance at the pattern.

But the styles changed, necessitating a different formation of the various parts of the coat.

The back and shoulder, we will say, for illustration, became wider, changing the shape of sye.

The side seam became straighter, or more curved, changing the form of sidebody, and so on through the entire garment.

They designed a coat: the shoulder of forepart, the sye, the sidebody, all looked wrong; they were so different from the forms they had so long used, that it seemed impossible they could be right.

They looked at each part by itself, and so viewed each seemed badly shaped.

The shoulder of forepart appeared to have too little cloth over the droop, the sye seemed not deep nor broad enough, the sidebody was too narrow over the blade and too sharp at the hip.

They used their judgment (?) and whittled, and pared, and added until their draft conformed more nearly to their preconceived ideas,—and so injured and often killed their coats,—and so fell from the first to the rear rank of cutters.

Had they viewed their draft as a whole, keeping in mind the modifications and changes of the parts made by style, they would have seen that the draft was essentially the same as that with which they had been successful.

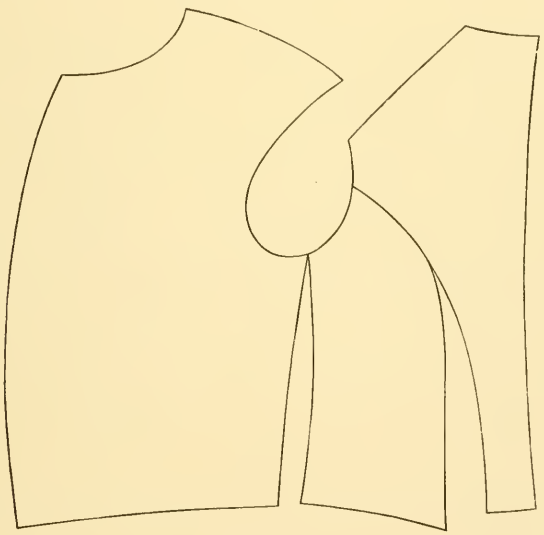


Diagram 94.

The faults they seemed to see were merely optical illusions, but they seemed so glaring that they could not bring themselves to leave the shape of the various parts unchanged.

Optical illusions are killing coats every day.

A cutter drafts his back a little narrower than usual, and his sidebody looks as though it would bag at top, so he cuts it down.

He cuts the shoulder seam of back higher at the sye, which makes the shoulder of forepart look too short over the droop, so he adds to it, and his coat is too large about the back seam of sleeve.

Following are examples of such optical illusions as we are discussing which so frequently tempt the cutter to alter his draft to the ruin of his coat.

Diagrams 94, 95.

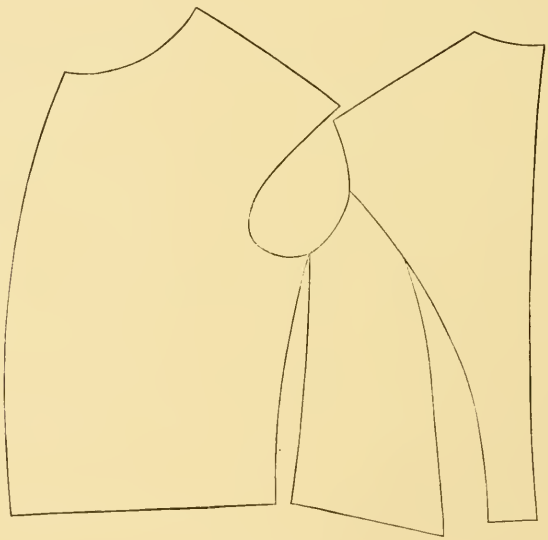


Diagram 95.

The cutter, we will suppose, has been making drafts proportioned as in diagram 94, narrow back with curved sided seam, and shoulder seam cut down at sye. He changes to wide back, straight side, and high shoulder seam. The various parts of draft will be proportioned then as represented in diagram 95.

To the cutter's eye, accustomed as it is to such widely different forms, each part of 95 seems out of proportion.

He thinks the coat will kick at the waist, that there is not sufficient cloth over the blade, that the sye is too narrow, and that the forepart over droop of shoulder is too short.

Therefore he tinkers his pattern to the ruin of his coat.

Diagram 96 illustrates the changes he would probably make.

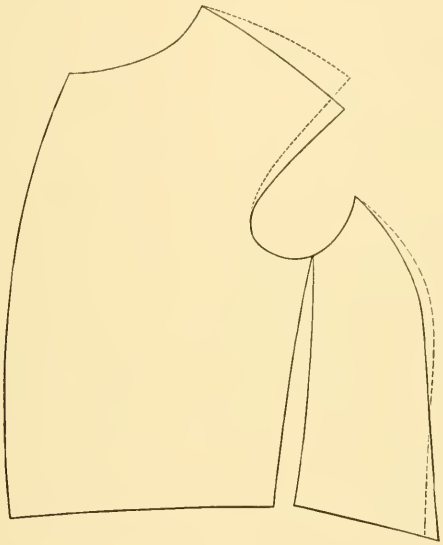


Diagram 96.

These changes would certainly destroy the fit of the coat, any one of them would injure it.

Of course it is not often that such complete changes of style come at once. They come one by one, but each one as it comes leads the cutter into more or less trouble, through some optical illusion.

Diagrams 94 and 95 placed together will appear as represented in diagram 97.

Diagram 94 is represented by the broken lines, and diagram 95 by those which are solid.

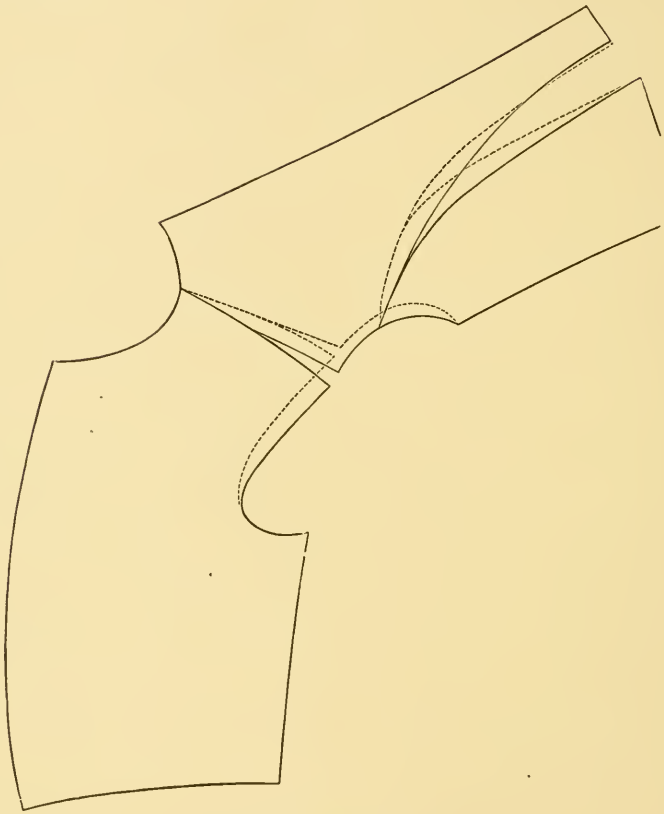


Diagram 97.

It will be observed that the outlines of the two drafts are precisely alike, except that the shoulder of 95 is wider than that of 94.

Diagram 98 represents the draft changed as represented in diagram 96, placed upon diagram 94.

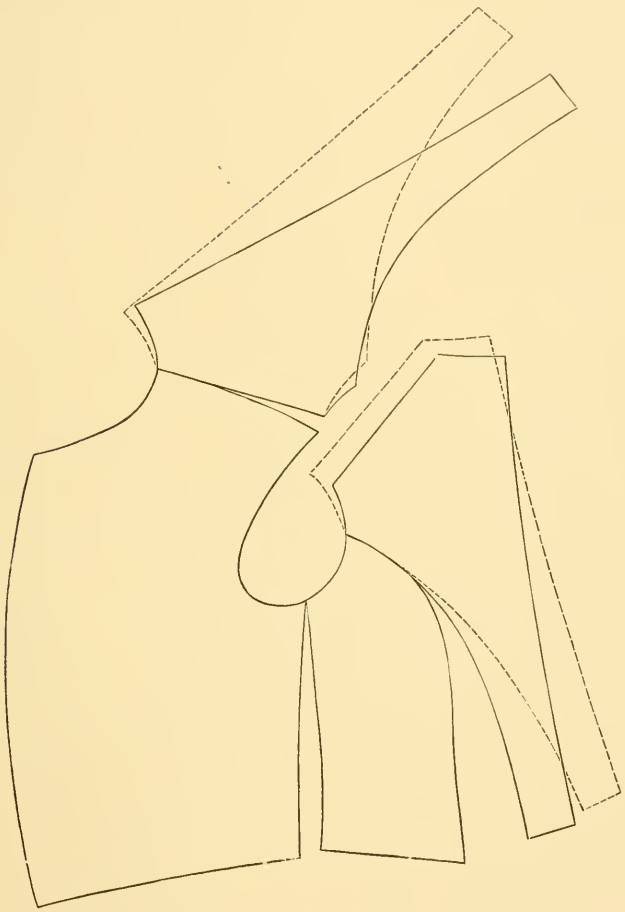


Diagram 98.

The dark lines represent diagram 96, the broken lines diagram 94.

Unquestionably if draft 94 would fit, draft 96 would not. The changes the cutter made to make draft 95 resemble 94 have killed the coat.

In drafting sacks, cutters are especially liable to be misled by optical illusions.

They undertake to make the forepart to conform to an ideal form regardless of the manner in which the back may be shaped, and, as a consequence, their sacks frequently have too much or too little spring, and are too tight or too loose about the blade.

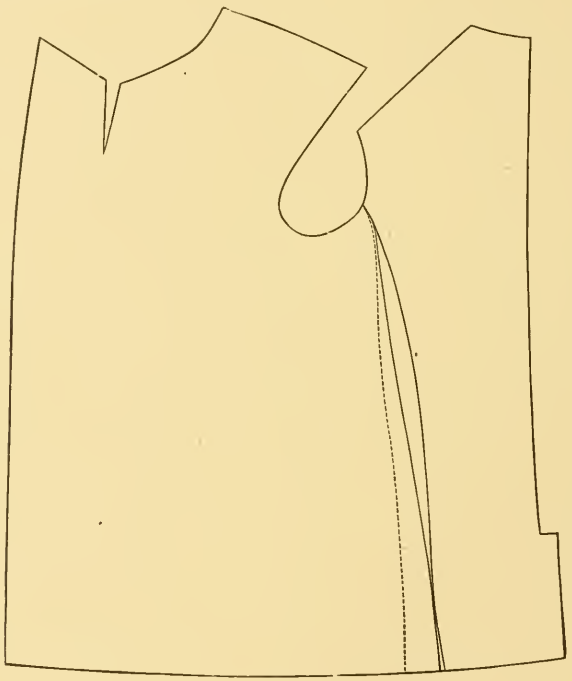


Diagram 99.

Narrow backs, we will suppose, have been fashionable for some time, the style has changed and backs are cut wider.

The cutter drafts his forepart to fit the wide back, and when he has finished, fancies there is not enough spring, he therefore adds more, and has to make an alteration in consequence.

On the other hand, wide backs have been in vogue for some time, the style changes and backs are cut narrower. The cutter drafts his coat to fit the narrow back, and when he has finished, fancies he has too much spring, he therefore cuts down the forepart, and perhaps kills the coat.

Diagrams 99 and 100 represent the illusions we are discussing.

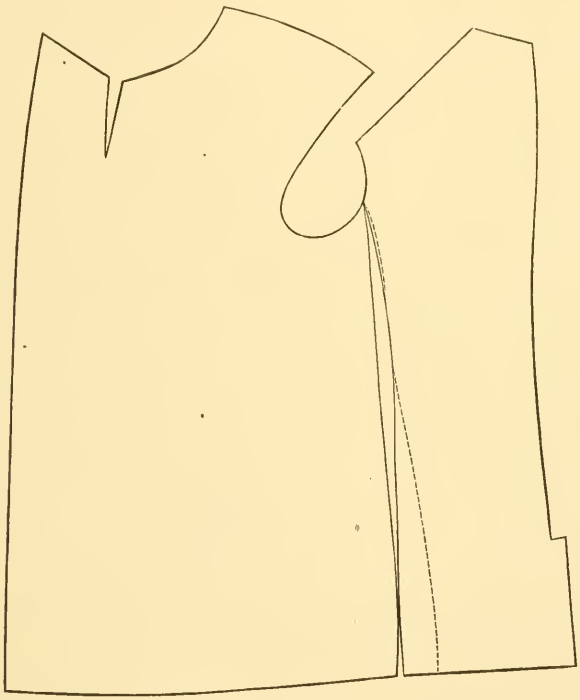


Diagram 100.

Diagram 99 represents the sack with narrow back, which we will suppose the cutter has been drafting until the form of that style of sack is thoroughly impressed upon his mind.

He desires to cut a wider back, the style having changed.

His draft, when finished, is represented by diagram 100, which, if placed

upon diagram 99, will be found to be exactly the same garment, except in regard to the position of the seams.

The cutter, however, accustomed to the greater apparent spring of diagram 99, and not bearing sufficiently in mind the difference between the widths of backs, is impressed with the idea that more spring should be added.

The draft 100 appearing to have less spring than 99, is, of course, only an optical illusion.

But the cutter stupidly adds more spring, as represented by dotted lines. Of course his coat is too full in the skirt.

On the other hand, let us suppose that he has been cutting wide backs, until the form of that style of sack is thoroughly impressed upon his mind.

He has occasion to cut a narrow back.

His draft, when finished, does not suit him.

It has, he thinks, too much spring.

It is mere fancy—merely an optical illusion, of course, as can be readily understood by regarding diagram 100 as the style to which he is accustomed, and diagram 99 as the draft he has just made.

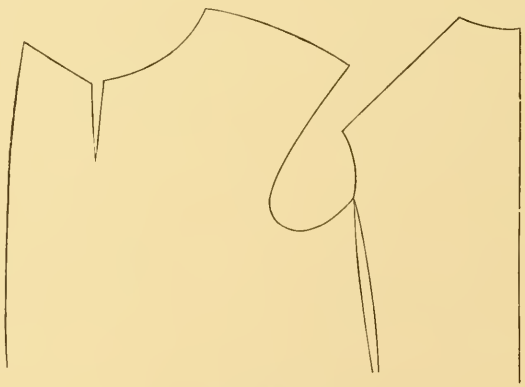


Diagram 101.

He is confident, however, that his rule has given too much spring, so he cuts down his pattern, as represented by dotted lines in diagram 99.

His coat is killed through an optical illusion.

With the one-shaped back his judgment is good; with the other it is ruinous.

Let us suppose another case.

The cutter is accustomed to a wide back, which requires a forepart shaped as represented in diagram 101.

The side-seam of forepart, it will be observed, is cut straight over the blade.

But the style changes to a narrow back, necessitating a side-seam shaped as represented in diagram 102.

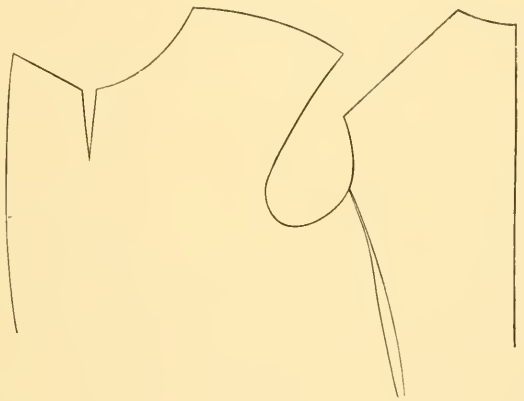


Diagram 102.

The side-seam is slightly curved over the blade.

The cutter, looking at his draft, so shaped, concludes that it must be wrong, and so shapes it to resemble that required for the wider back.

The result is a bad fitting garment.

These are but a few of the cases in which cutters are misled by optical illusions.

I have pointed them out from among the many others, because of their more frequent occurrence.

The principal object of these remarks is to point out the danger of

judging of any part of a draft by some preconceived idea of what its shape should be.

The only safety is to examine your draft without regard to the shape of the seams, that is, to look only to the outlines. If they are as they should be, the position of the seams may be such as taste or fashion dictates.

These facts came to my knowledge once as a Godsend, and hoping they may come as such to the knowledge of others, I dismiss the subject.

MAKING.

Very few directions are necessary for making, except for tight-fitting garments.

Coats.

Coats are now worn so large that they need very little stretching or shrinking.

For extra erect men the gorge should be stretched a little for a couple of inches from the shoulder seam.

The breast should be cut with sufficient round to allow for its being shrunk in to give shape.

The collar should never be put on tight.

The edge stay should be put on fair.

It is never necessary to shrink or stretch the sidebody. If it is stretched lengthwise it will shrink again and cause the back to become full.

For round-shouldered men, the sidebody should be put on a trifle short to the back over the round of blade.

For tight-fitting coats the sye should be stretched from one-half to three-quarters inch in front.

Pants.

For spring-bottom pants the canvas should be cut on the bias, as it can be more easily shaped if cut in that manner.

The backpart, before seaming, should be stretched on the in-seam one-half inch between the crotch and the knee, and a like amount on the side-seam between the hip and knee.

The extra length caused by stretching should be kept full on the forepart over the calf of the leg.

After the pants are seamed, they should be shrunk from the seat to the top of the calf of the leg on the backpart, and pressed into shape.

Vests.

For rolling-collar vests, the collar should be put on short opposite the largest part of breast. This shortens the crease, preventing it from flaring, and produces a graceful round on the breast.

The back should always be joined to the forepart at the neck, and under the arm even; any extra length should then be cut from the lower part of the shoulder-strap and from the bottom.

HOW TO ALTER.

Coats which Swing at the Waist.

If the coat fit properly about the neck, and fastens or buttons as it should, that is, without force, the sidebody should be cut down.

If the coat when buttoned hang off from the neck, or does not button at the waist naturally, the shoulder is wrong, and should, if the neck is of the right height, be cut down, but if the neck is short, the shoulder should be moved further back.

If the neck is too short and have a tendency to hang off when the coat is unbuttoned, you can do no better than to cut another coat.

Coats that Ride the Hips.

If a coat ride the hips and is loose about the top of the sidebody it should be altered as illustrated in diagram 103.

Broken lines represent the changes to be made.

If the coat is not loose about the top of sidebody, it is unalterable.

Bad Necks.

If the coat is too high at the neck and fit properly elsewhere, cut the neck down, or lower the stand of collar if it can be done sufficiently.

If too short in the neck and the fit is otherwise proper, lengthen the top of back and front shoulder if you have outlets, if not, shorten the shoulder-strap and drop the sye.

If the coat hang off from the neck and the sye does not bind the arm and the fit is otherwise good, cut down the shoulder-point and shorten the collar.

If the coat have this fault and bind the arm, let the shoulder out over the droop and the coat will fit properly about the neck.

Bad Shoulders.

If the shoulder wrinkle and draw diagonally from the neck to the sye, the shoulder is too crooked, or too short, or both. If too crooked the wrinkles will disappear if the arms are thrown well back, and the coat can be altered by carrying the shoulder farther back and letting it out at the neck.

If the wrinkles do not disappear when the arms are thrown back the shoulder is too short and should be lengthened.

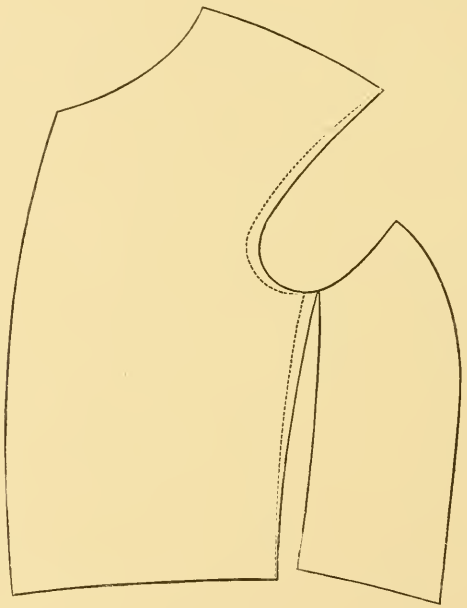


Diagram 103.

If the shoulder is both too short and too crooked, the coat may, perhaps, be altered, but I should not have courage enough to try.

If the shoulder have a tendency to fold horizontally, if it is full and baggy, it is too straight and should be carried further forward, and shortened a trifle over the droop.

Bad Blades.

If the coat draw in wrinkles from under-arm to side-seam, the back is probably too short. If this is the fault, it can be remedied by lifting the sidebody, cleaning out back sye and paring down bottom of forepart.

The fault is, however, frequently caused by the sidebody being entirely out of harmony with the back.

By the following method you can easily discover where the trouble is: Rip the side-seam to waist and try on the coat; if the back is too short it will draw up from the waist, but if the fault be in the sidebody, it will lap the back as illustrated in diagram 104.

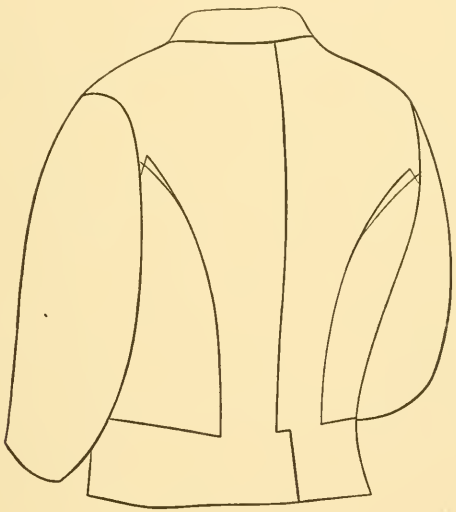


Diagram 104.

There is no other remedy in this case than a new and properly cut sidebody.

Sometimes these wrinkles are caused by there not being cloth enough from front of arm to back seam; in this case the sye will bind the arm; to enlarge the sye will remedy the fault.

If the coat is baggy back of the arm, the fault may be in the shoulder or at the blade. If the shoulder is too far forward, the coat will ride the hips, and should be altered as illustrated in diagram 103.

If the shoulder is too long over droop, the loose cloth will disappear if you lift the shoulder or place a handkerchief upon it under the coat. In this case the shoulder should be cut down or padded more.

If the coat is otherwise as it should be, and the loose cloth remain when the shoulder is raised, the sidebody should be cut down either on side-seam or under arm-seam.

This defect is sometimes accompanied with a baggy appearance across the back; when this occurs the back is too long, the back must be raised and cut down at the top and across the shoulder.

Bad Skirt.

If the skirts lap they may be made to hang right by altering, as in diagram 105.

Diagram 105.

Dotted line represents the alteration.

If they spread apart they may be made to hang right by altering as in diagram 106.

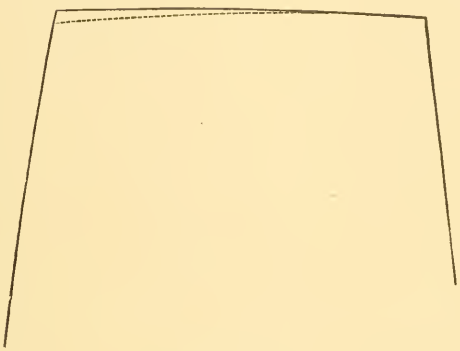


Diagram 106.

DUTIES OF THE CUTTER, AND ETIQUETTE OF THE CUTTING-ROOM.

Your duty to your employer requires you to treat him with respect, to conform to the established rules and usages of his house, to be at your cutting board at a reasonable hour, to work diligently through working hours, if you have work to do, to give him your best work of head and hand, to cut your cloth to the best advantage, to treat his customers with politeness, to manifest a disposition to please, and to be a gentleman.

Your duty to your employer, requiring what I have mentioned, makes it incumbent upon you to allow nothing that can be prevented to interfere with the successful execution of your work.

If your employer, or any in his employ, annoy you by unnecessary suggestions while ascertaining the style of garments desired by your client, or while securing his measure, mention it at once, giving your reasons for desiring the annoyance to be discontinued.

If they interfere with you while trying on a garment, insist that they do so no more. This is your business, no one has a right to meddle with it—no one should be permitted to do so.

Be independent, but not impertinent.

Many confound the two.

Independence requires you to do what your duty to yourself demands, what is necessary to the building up or the sustaining of your reputation, to demand from all the consideration due from one gentleman to another, and to permit no interference or meddling with your duties, and no usurpation of the authority pertaining to your position.

You cease to be independent and become impudent, however, when you presume upon the value of your services, when you neglect your business, or slight your work, because you think your employer cannot get along well without you.

The first will make you respected; the second contemptible.

If a customer ask your advice concerning a piece of cloth, the style of a garment, or any other matter in connection with your department, give him honestly the benefit of your experience and superior knowledge.

Be dignified: remembering always that "familiarity breeds contempt."

If a customer desire a certain style not in vogue, nor suitable to the goods, nor becoming to himself, tell him so, and courteously try to persuade him to have a more desirable style of garment made, but don't press him; if his mind is firmly made up, do your best to meet his ideas.

Manifest a desire to please your customers, ascertain and carefully note anything peculiar which they desire, number of extra pockets, etc., and be sure their garments are so made.

When a customer tries a finished garment on, do not jump about him like a jumping-jack, and offend his good sense by telling him how admirable is the fit.

Ask his opinion of it, and if he suggest any fault, examine it, and if it be a fault, remedy it cheerfully.

If you see anything that should be changed, tell him so, and have it changed.

Never try to persuade a customer that a bad garment is a good one.

Never allow yourself to become irritated by the fault-finding of the fastidious, unless they offer you insult, or are impertinent.

When a customer departs from the deportment of a gentleman in his dealings with you, tell him so, and resent it like a gentleman.

If your garment is as it should be, and your customer, as is sometimes the case, finds fault without reason, tell him firmly that he is mistaken, but at the same time express your willingness to humor his whim, unless you care nothing about his trade or influence.

Never be afraid to acknowledge any fault in your garments; never refuse to see one when pointed out; and never take offense at the criticism of a garment by the one who is to wear it.

If a customer complain that his coat is too long or too short, or find fault with a garment in any way, and he is mistaken, call his attention to your fashion reports, or to garments you are making for others, and let him see that he is

wrong; then if he desire an alteration to be made, it must be as a favor, and not as a right; and instead of regarding you as an unskillful workman, he will consider you a courteous and accommodating gentleman.

If you sometimes act as salesman, as cutters not infrequently do, never be guilty of the impertinence of showing a piece of goods with some such remark as, "This is exactly what you want," or, "I know this will please you."

Your duty is to exhibit goods for his inspection, to assist him in making a choice, to advise him, if necessary, and to take his order, not to act as though you considered him unable to think for himself.

Never criticise a garment cut by another in the presence of a customer; this savors too much of the common impudence of a barber, who remarks about the bad manner in which your hair was cut by some one else.

Never promise to have a garment finished at a given time, unless you intend to have it finished at the time promised; and never disappoint a customer if it can possibly be avoided.

Never misrepresent; a reputation for integrity is of almost or quite as much value in your profession as a reputation for skill and taste.

Your most valuable customers are refined gentlemen; you will do well, therefore, to bear in mind that gentlemen love gentlemen.

A true gentleman respects another, and will rather deal with him, even though not remarkably skillful, than with a person not a gentleman, however great his skill.

Never appear to be in haste with a customer; rather make him feel that he is not interfering with your work, nor discommoding you.

In measuring a gentleman do not prod him with your thumbs or fingers; when you touch him, do so with your open hand, and gently.

Don't jerk, or push, or pull him, it is awkward and disagreeable.

Don't breathe in his face.

Don't call out your measures like an auctioneer, to do so is coarse and rude.

If he have any deformity, do not refer to it unnecessarily, but note it in your book without remark.

Some cutters imagine it impresses their customers with a respect for their carefulness and ability to call out for entry upon the book such directions as

"Left shoulder one inch lower than the right;" "Round shoulders;" "Very stooping;" "Prominent blades;" "Narrow chest," etc. To do so is simply ungentlemanly and rude.

Do not be guilty of boasting to your customers, it only lowers you in their estimation.

On the other hand, do not depreciate yourself, this will not give you a reputation for modesty, but for affectation.

Let your address and manner be such as to convey the impression that you suppose your ability to be undoubted, not such as to give the impression that you are desirous of having it acknowledged.

The former is the perfection of tact, the latter is folly.

The one, the manner of the acknowledged artist and skilled mechanic, the other, that of his ambitious counterfeiter.

Dress well, but not foppishly.

Let your linen be clean.

Your garments should fit well, be stylish and of good material, but not necessarily extravagant.

Avoid wearing garments whose colors are not in harmony, above all things else, in this regard, do not wear garments cut in an exaggeration of the fashion, to do so will make you appear ridiculous.

These rules and suggestions are imperative, and cannot be disregarded with impunity.

If followed, you cannot fail to please your employer, and to be popular with his customers.

If disregarded, you cannot command respect, you cannot hold your customers, nor can you make a valuable reputation.

If the deportment of cutters were more generally up to the standard of these rules, our profession would receive the recognition, the science and art required for its success, deserve.

ECONOMY IN CUTTING.

A large majority of cutters cannot take a suit out of less than from seven to eight yards, which is much more than is necessary, unless the customer is of great size, or the coat is a long double-breasted frock.

In my own practice, I rarely use more than six-and-a-half yards, and frequently not more than six.

If the cloth is wide, say twenty-nine inches, I can cut a business suit for a man five feet eight inches tall, thirty-eight breast, coat thirty-five inches long, out of six yards. If the cloth is twenty-eight inches wide, I require six and a quarter, and if it is only twenty-seven inches wide, six and a half yards.

To explain the manner in which I do this, I will give illustrations of how I place my patterns for a man of the size mentioned, on the various widths; but before I do this, I wish to give a few hints in regard to the plan I adopt.

I invariably cut my pantaloons first and save as much of the piece which comes from between the legs as possible. This is often enough for a sidebody, and invariably enough for the collars, and sometimes for the vest-facings too; or, if my vest is double-breasted, it will make the collar. This piece I lay aside to use in the coat or vest. Then I draft my patterns for coat and vest. In laying these patterns on the cloth, I make my outside sleeve wider or narrower as will best serve my purpose. If I am crowded for cloth I cut an inch, more or less, from the forepart of vest, from the sye down, which I add to the back part; sometimes I cut the shoulder of vest one-half inch shorter and add a like amount to the back. I never do any piecing, except to the facing or top of lapel.

Those cutters who are proprietors can well appreciate the value of economy in cutting, and so will all who deserve success. It is very easy to save from one to two thousand dollars' worth of cloth in a year, if you average four suits per day and save half a yard per suit.

It is this consideration which induces me to give numerous diagrams to illustrate how this may be done.

The following diagrams explain themselves.

Coat—Length 35, breast 38, sleeve 33. Vest—Length 28. Width of cloth, 29 inches. Vest collar saved from pants. Amount required, 3½ yards.

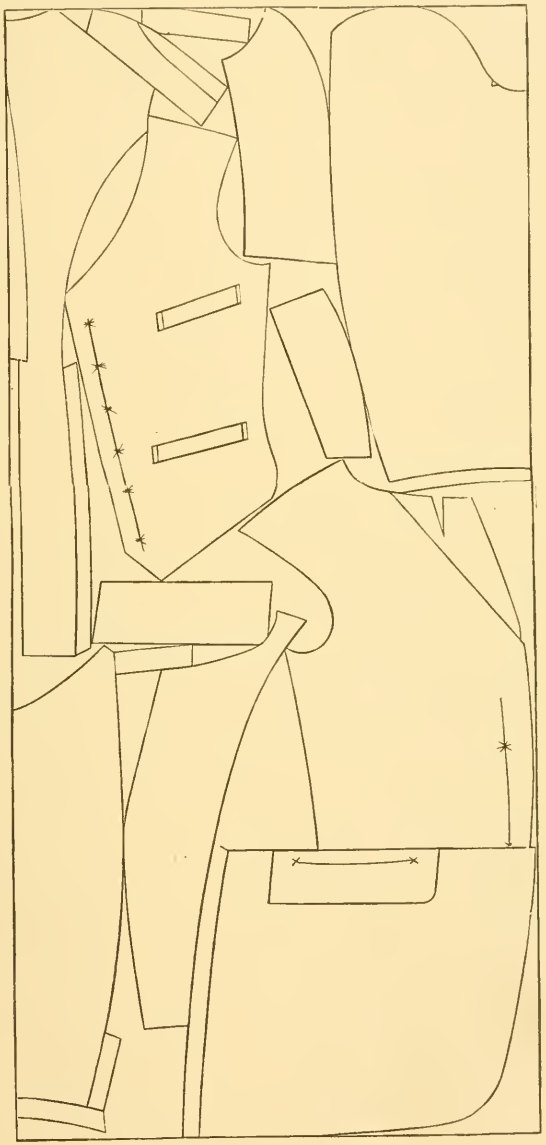


PLATE A.

Coat—Length 35, breast 38, sleeve 33. Length of vest, 28. Width of cloth, 28 inches. Amount required, $3\frac{3}{4}$ yards.

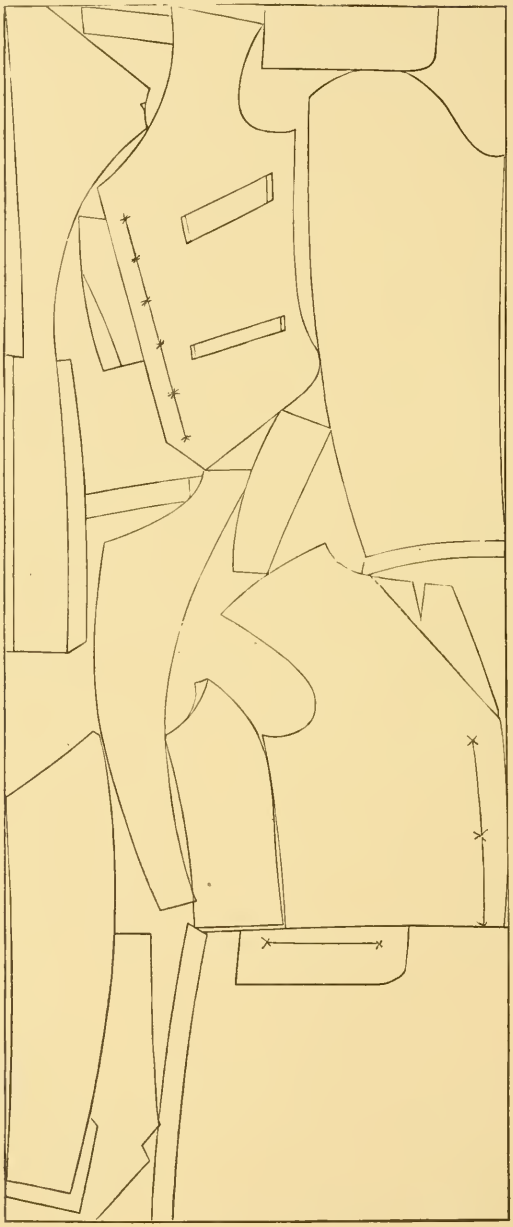


Plate B.

Coat—Length 35, breast 38, sleeve 33. Length of vest, 28. Width of cloth, 27 inches. Amount required, 4 yards.

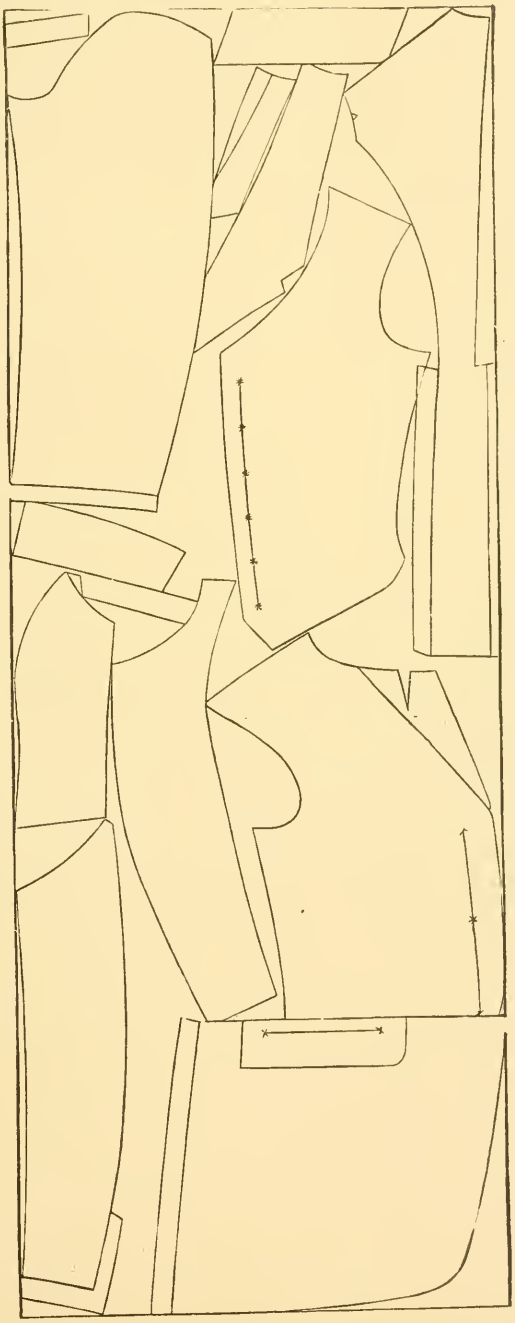


PLATE C.

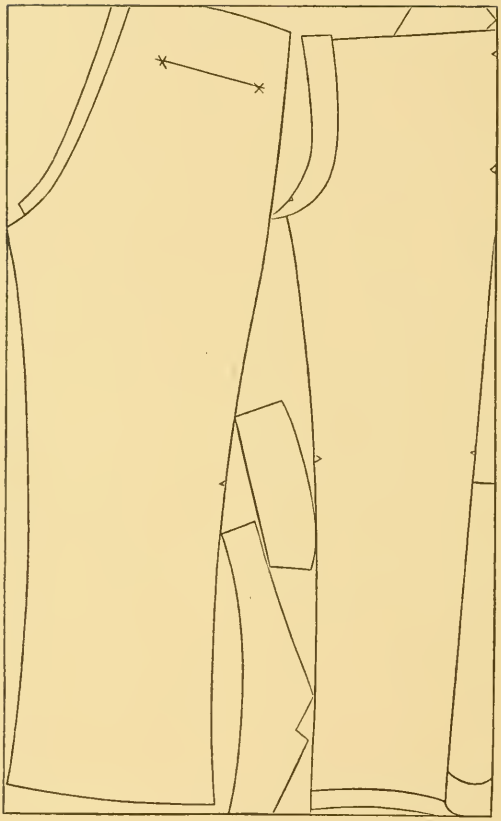


PLATE D.

Vest collar saved from pants.

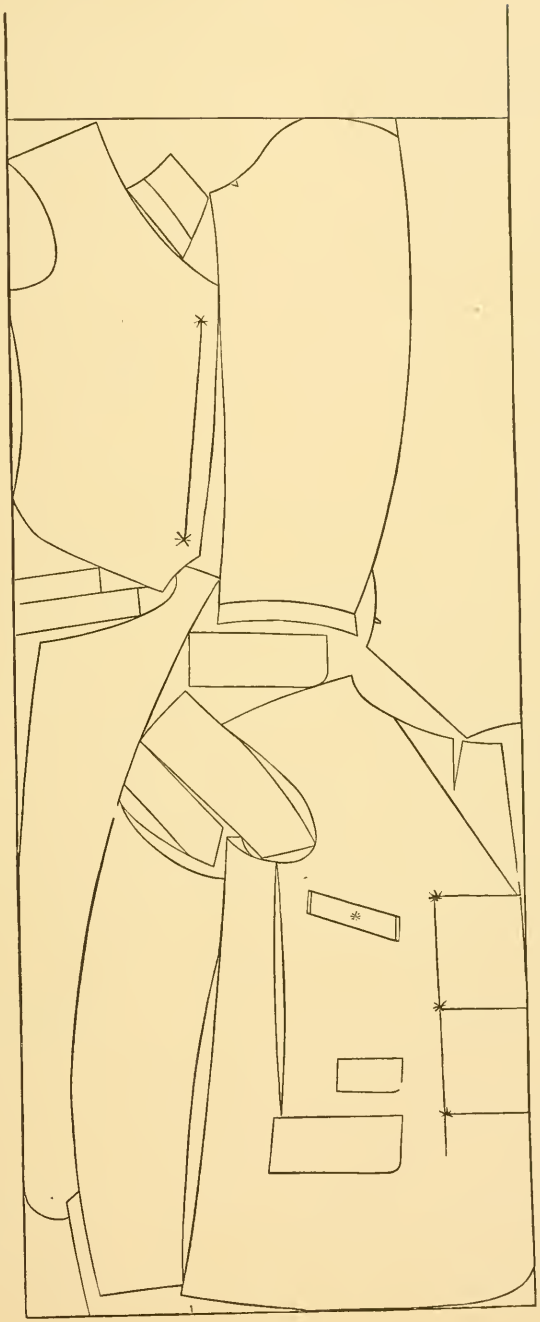


Plate E.

EXPLANATION OF MADISON'S RATIONAL COAT SYSTEM.

This system is the outgrowth of my father's systems and my "Simplified System" which was brought out in 1875.

It is entirely different from both, very much simpler, and in many respects vastly superior.

Besides the lengths, breast, waist, and hip measures, but two measures are required: the upper and the lower shoulder, taken under the coat.

The lower shoulder measure governs the width of back, the amount of cloth back of sye, the amount over droop of shoulder, and the position of shoulder.

The upper shoulder measure governs the height of neck, the depth of sye, and the length of shoulder.

The two combined govern the balance.

Only a common square and tape measure are used.

Measurement.

There should be as much method in taking measures as in delineating. If the measures are taken in a loose and careless manner, accuracy in cutting will avail but little. But the common-sense principle which pervades this system of delineating, renders unnecessary that *excruciating* process of measuring so painful to the artist, which is required by some proof-measure systems. *If a system be right, it needs no proof-measures.*

The following rules and order of measuring should be carefully observed:

To measure for an undercoat you will request your client to take off his coat; this done, make a mark on vest back where you wish the top of back to come, and place the end of tape measure upon it and measure to the hollow of back.

I. Natural length of waist, 16½ inches.

II. Fashionable length of waist, 19 inches.

III. Whole length of coat, 38 inches.

IV. From neck joint around the shoulder to place of beginning, 26 inches. This is called the Upper Shoulder measure.

V. Drop the end of measure down the back seam, directly between the two back syes, and carry tape around the arm to place of beginning, 25½ inches. This is called the Lower Shoulder measure.

VI. From back seam to elbow, 20 inches.

VII. From back seam to hand, 32 inches.

VIII. Circumference of breast, 37 inches.

IX. Circumference of hip, 34 inches.

These are all the measures that are required for any coat. The waist measure is needed only for the vest. They are registered in the book as follows:

16½, 19, 38, 26, 25½, 20, 32, 37, 34.

These measures should be copied for use as follows:

16½, length.	~~31~~, half of upper shoulder.	20, sleeve.	18½, half of breast.
19, length.			
38, length.	12¾, half of lower shoulder.	32, sleeve.	17, half of hip.

More explicit directions in regard to measuring may be found after the explanation of sack. (See Plate F.)

Directions for Drafting.

The coat is drafted by the lower shoulder measure, or rather by the half of it, as follows:

Place the square on the paper as represented by line from *B* to *A* and from *A* to *C*, and make a line on the long and short arms.

From *A* to *B* is half of lower shoulder, 12¾ inches.

From *A* to *C* is half of lower shoulder, 12¾ inches.

From *C* to *D* is 2¾ inches.

Make a line from *D* to *B*.

From *B* to *E* is half of lower shoulder, 12¾ inches.

Square down from *E* to *F*.

Make a line from *B* through *F*.

Square down from *B* and extend the line up.

Square by this line to *D* for height of back.

Square by same line through *A*.

G is half of lower shoulder, 12¾ on the division of halves on the square, with 1½ inches, or three sizes added, from the back seam.

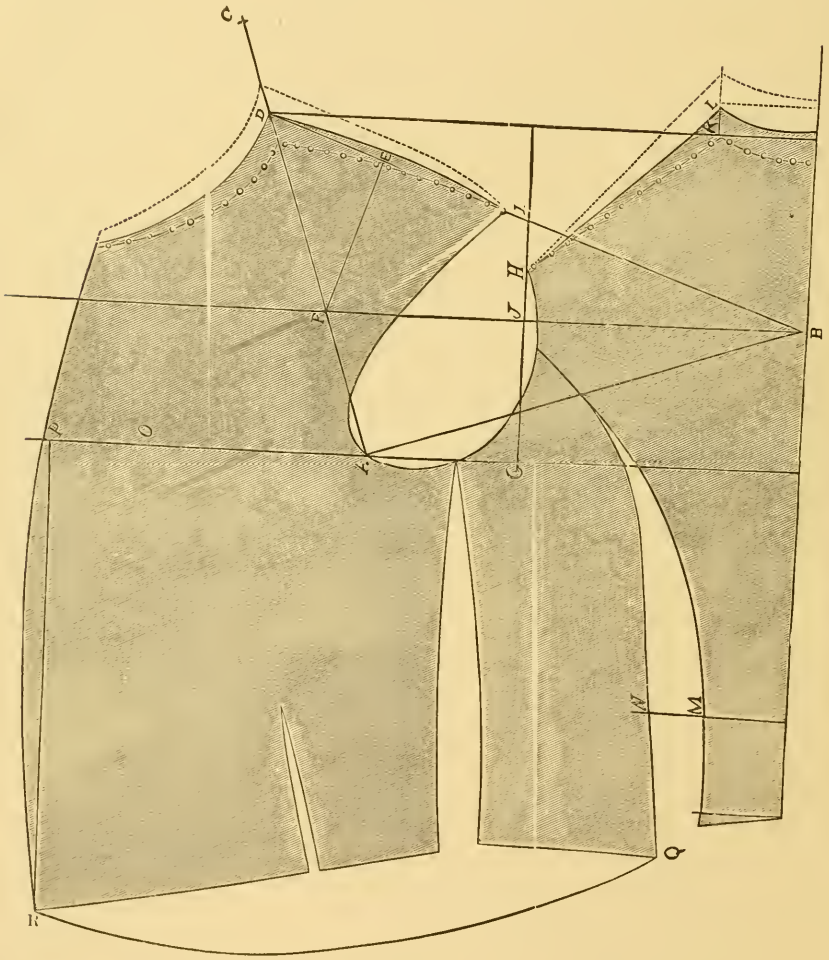


Plate F.

In other words it is $\frac{1}{4}$ of the whole lower shoulder with $1\frac{1}{2}$ inches added, from back seam, as follows:

One-fourth of $25\frac{1}{2}$, lower shoulder,	$6\frac{3}{8}$ inches.
Added,	$1\frac{1}{2}$ "
	$7\frac{7}{8}$

Square up from *G*.

H is half way between *I* and *J*.

K is $2\frac{5}{8}$ inches from back seam.

L is $\frac{3}{4}$ of an inch from *K*.

Make a straight line from *L* to *H*.

Make width of shoulder from *D* the same as width of shoulder on back from *L* to *H*.

Shape arm-hole and neck as represented.

Square in from Natural and Fashionable lengths of waist.

Shape side-seam of back.

From *M* to *N* is $1\frac{1}{2}$ inches.

Shape side-seam of sidebody through *N*.

O is half of breast.

P is $2\frac{1}{2}$ inches from *O*.

Square down from *P*.

Q is length of sidebody to match length of side-seam of back.

Sweep from *Q* to *R* by *D*.

Square in by back-seam from *Q* for bottom of sidebody.

Make the cut under the arm as represented, taking out a V $1\frac{1}{2}$ inches wide at waist, and three-quarters of an inch wide at the hip.

Make a line from the bottom of sidebody at the V to *R* for bottom of forepart.

Shape front and finish.

The upper shoulder measure is half an inch longer than the lower shoulder, in the measure by which we are drafting, therefore we add a quarter of an inch at top of back, and the same amount at shoulder-point from *D*, as represented by dotted lines, which gives the necessary increase.

If the upper-shoulder measure is smaller than the lower, we reverse the process as illustrated by draft.

I sometimes find as much as two inches difference between these measures

on very sloping-shouldered men. I draft, of course, by the lower-shoulder and add to top of back half the difference, and to shoulder at *D* the other half.

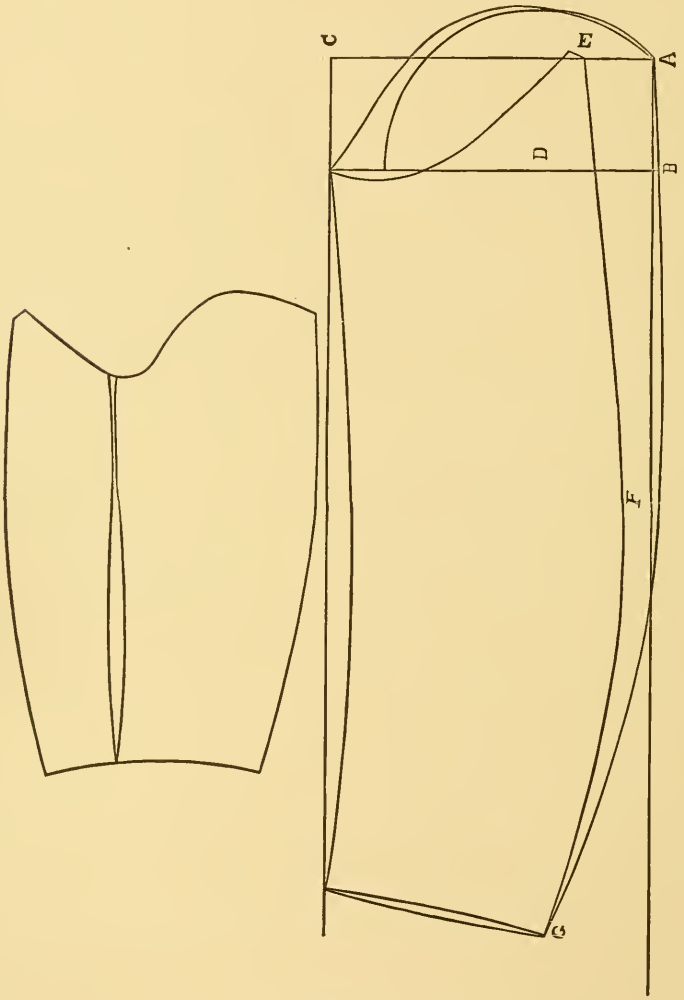


Plate G.

If both shoulder-measures are alike, the draft as first made is, of course, correct.

The Sleeve.

No. 1.

The sleeve is drafted by the size of the arm-hole. Before cutting the forepart of coat, measure the sye, and note the size on the pattern.

From *A* to *B* is one-sixth of sye.

From *A* to *C* is one-half of sye.

Square across from *B*.

Square down from *C*.

From *B* to *D* is one-sixth of sye.

Sweep from *A* by *D*.

From *A* to *E* is one and a half inches.

Shape sleeve-top as represented.

Allow width of back and measure from *A* to *F* length to elbow,—to *G* full length of sleeve.

Sweep from *G* by *A*.

Make width at hand, say six to six and a half inches for an undercoat, and seven to seven and a half inches for an overcoat.

Hollow forearm as represented.

No. 2.

In actual practice, I always cut the outside sleeve from two to three inches wider than the inside sleeve, as illustrated by diagram No. 2. Whatever I add to outside sleeve I take from the under sleeve. This is not only an improvement to the appearance of the sleeve, but it is a material aid to the saving of cloth.

The Skirt.

No. 1.

To draft the skirt for a double-breasted frock proceed as follows:—

A is a line drawn parallel with edge of cloth, and about three-quarters of an inch from it.

Measure up from bottom of cloth the length of skirt, as at *B*.

Place lapel at *B* as represented, so that the line *A* laps it one inch at

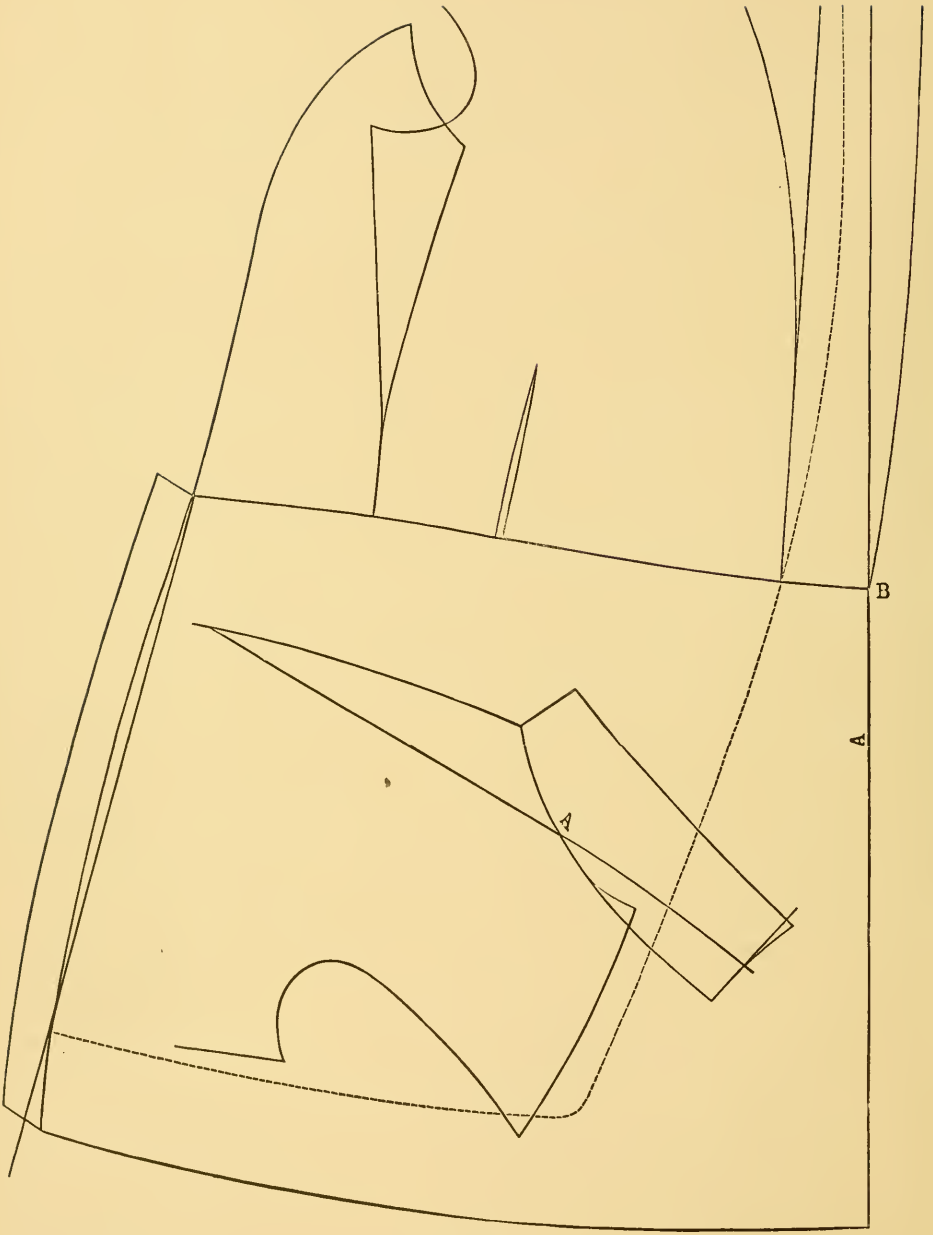


Plate H.

most prominent point. Fit forepart to lapel, and sidebody to forepart as represented.

Carry spring of skirt to range with side-seam of sidebody, and finish as represented.

No. 2.

The break line is run to pass the shoulder-point half an inch, that is, for the forepart. For the collar, run it from *A* to pass shoulder-point a quarter of an inch from it, and continue the length of collar in a gentle curve; let collar project above shoulder quarter of an inch more than width of back, and shape to suit taste or fashion.

The Sack.

The sack is drafted exactly like the frock, with these exceptions:—

The back is cut any width that taste or fashion dictates, hollowed on the back seam at waist about half an inch, and sprung out at bottom a corresponding amount.

From *A* to *B* is one inch.

Spring forepart over the back below the hips about one and a half inches, at the length of thirty inches, increasing it with a regular slight curve to the bottom of coat.

The front is squared down from breast-line.

The notch in back above *A* is half an inch nearer sye than the notch on forepart at *B*. The back is stretched the half inch, and the forepart cut half an inch longer at *C*, to give the required length.

Overcoats.

Overcoats are drafted the same as undercoats, except that three inches are added to breast-point instead of two and a half inches.

The measures for overcoats are taken over the undercoat.

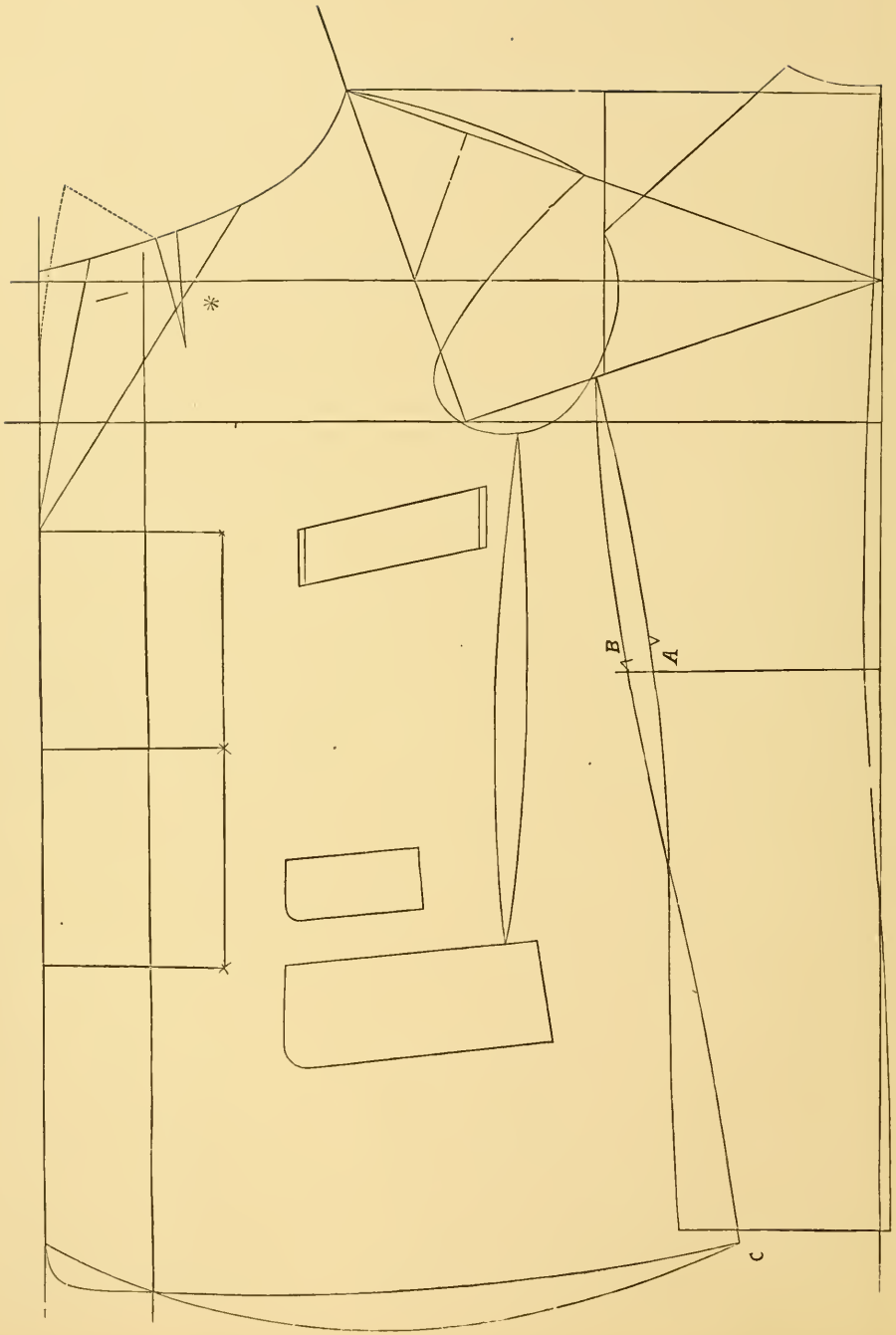


Plate I.

GENERAL REMARKS ON THE COAT.

The coat system is so simple, and the explanations so plain, that I think no one will have any difficulty in mastering it.

For a single-breasted coat to fasten with one button, add two inches to the draft, that is, two inches beside the two and a half inches which is always added to the half of breast-measure.

For a single-breasted coat to fasten with two or more buttons, but one and a half inches should be added.

For a double-breasted cut-away, add three inches, setting the buttons that fasten five inches from the edge.

Cut shoulder of forepart half an inch narrower than that of back, and stretch it its entire length; this gives to the shoulder of coat when finished, if properly made, a square, graceful appearance, which cannot be so easily obtained in any other way.

The buttons for a double-breasted coat should be squared for from the button-holes by line squared down from breast.

For double-breasted frock, the bottom of forepart should be rounded slightly in front, else the buttons and holes will not match.

The collar for low rolls should be rounded up below the break, from the break to lapel.

Never stretch the shoulder in front of arm.

The shoulder requires eight, and the blade four-ply of wadding. If less are used, the sidebody over the blade should be pared down more or less as required.

Measuring.

The whole science of drafting rests upon the truthfulness of the measures obtained, and if the points of the coat you may have produced are not all of them right, it is that some or all of the measures are wrong, and not owing to

anything in the form of the client, or error of the system; and by again obtaining the measure of your client you will be convinced of this fact.

The importance of correct measurement cannot be easily over-estimated, and when it is considered that it is easier to measure correctly than incorrectly, if you know how, and that a little study and practice will teach you how, you will have no one but yourself to blame if you do not measure as you ought, and have many alterations and numerous misfits in consequence.

In studying to measure, it will assist you much to have some one read the following rules and directions, one after another, until you have followed all:

Rule 1. Do not hold the end of the measure with your thumb when taking the shoulder-measures.

Rule 2. Take all measures of circumference sufficiently tight to feel firm, but not so tight as to indent or compress the part measured.

Rule 3. Take the measures equally tight for every customer, whether he wishes a tight coat or a loose one.

Rule 4. Endeavor to make your manner of measuring as agreeable to your customer and yourself as possible.

Directions.—You will request your client to take off his coat, then mark on the vest at back of neck at the height to which you wish the top of back to come, generally about half an inch above the neck-joint.

Next, mark at the natural length of waist, or hollow of back.

Now measure from neck to waist, to fashionable length of waist, and the length of coat.

Place the end of measure on the mark at neck, and hold it there by pressing the first and second fingers (not thumb) of the left hand on it, carry the tape over in front of the arm with your right hand, having the first finger extended on the measure for the purpose of pressing it close against the arm; bring the measure up to your left hand and place it between the thumb and knuckle of the first finger of the left hand; hold it firmly, then let go with your right hand, and, still holding the measure with your left, with your right hand press down your client's shoulder if it is hunched up, and press his arm around the shoulder of which you are measuring to his side; then place the first finger of the right hand on the end of the measure, and press hard enough to keep it in its place; then with the left hand bring the tape up to the end

of the tape at the neck-joint, and see how many inches it is,—this is the *upper shoulder-measure.*

Next, place the end of measure directly between the shoulders, about one-fifth of the upper shoulder-measure below the mark on the neck, and carry the tape around the shoulder in the same manner as in taking the first or upper shoulder-measure, and bring it to the place of beginning; this is the *lower shoulder-measure.*

Now measure from back seam to elbow and hand, for the length of sleeve.

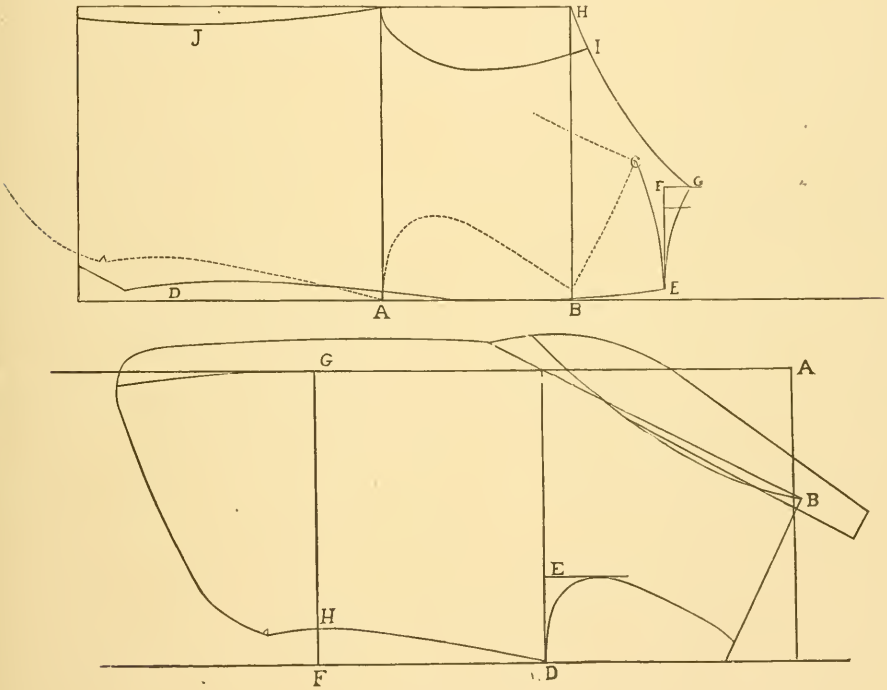


Plate J.

Still standing at the back of your client, carry the measure under his right arm to directly in front of him, reach around with your left hand and take the end of tape-measure and bring it around, drawing the tape through

the right hand to the center of back, then with the right hand bring the tape around to meet the end held by the left hand; this is the breast-measure.

The waist and hip-measures should be taken in the same manner as the breast-measure.

The Vest.

The measures necessary for the vest are the breast, waist, and lengths, as follows:

14 Roll,	18 half of breast.
27 Length,	16 half of waist.

Forepart.—Place the square on the paper or cloth, and mark on outside edges the length of each arm.

A is breast-measure on division of halves, one inch added for making.

Square down from *A*.

B is one-quarter of breast from *A*.

C is one-third of breast from *B*.

D is breast on division of halves, nine inches.

F is length of waist.

Square across from *D* and *F*.

E is one-sixth of breast from *D*.

H is three-quarters of an inch more than half the waist, from *G*.

Measure lengths and finish as represented, adding from *G* from three-quarters of an inch to one inch for button-stand, according to cloth or finish.

Back.—Place forepart on silesia as represented by dotted lines.

Make a point at *A*, *B*, and *C*.

Sweep from *C* by waist at *D*.

Square from *E*, *B*, and *A*.

F is one-sixth breast from *E*.

G is three-quarters of an inch from *F*.

H is breast-measure on division of halves, with one inch added for making.

Square down from *H*.

Mark shoulder from *G* to *H* as represented.

I is from *G* the width of forepart from *B* to *C*.

D to *J* is three-quarters of an inch more than half the waist.

Shape neck, back-seam, sye, and under arm-seam as represented.

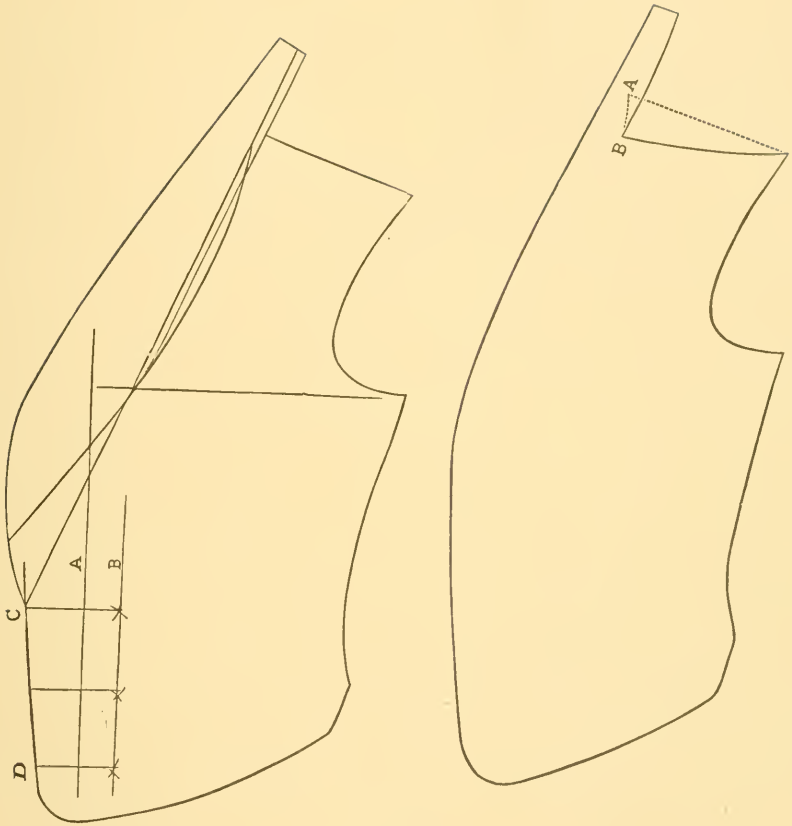


PLATE K.

DOUBLE-BREASTED VEST.

Draft the same as for a single-breasted vest except the front.

A is line squared down from *A* on Plate J.

A to *B* is one and a quarter inches.

A to *C* is two and a half inches.

A to *D* is one and three-quarter inches.

Vest without Collar.

Drafted same as in Plate J, except that shoulder is cut down one and a half inches from *A* to *B*, and the shoulder of back is increased a corresponding amount.

Pantaloons.

The measures required are the lengths, foot, knee, thigh, hip, and waist, which are taken in the following order: outside seam, inside seam, foot, knee, thigh, hip, waist, which are entered in the measure-book thus:

42, 32, 19, 21, 21, 37, 30.

To Draft the Forepart.

A represents a line drawn upon edge of goods.

Square in from *B*.

B to *C* is one-third of foot-measure.

C to *D* is one-sixth of foot-measure.

D to *E* is inside seam.

Sweep from *E* by *D*.

F is half an inch more than half the thigh-measure from *G*, or one size more than thigh-measure on division of halves.

H is two inches less than half of inside seam.

Square from *H* and *F* by line drawn from *D* to *F*.

K is one inch less than half the hip-measure, that is, in measure above the hip-measure is thirty-seven; as we draft only half the pants in forepart, we use half of thirty-seven, which is eighteen and a half, which we term the hip-measure, therefore, as half of eighteen and a half is nine and a quarter, the distance from *G* to *K* would be eight and a quarter, that being one inch less. The simpler way, however, is to use the square, and on division of halves, mark from *G* to *K* two sizes less than hip-measure, eighteen and a half.

Square up from *K*.

I is length of outside-seam from *C*.

Square toward you from *I*.

J is half-waist measure on division of halves, or if waist is sixteen inches, eight inches; if fifteen inches, seven and a half inches.

Add from three-quarters to one inch at *F*, for dress, and finish as represented.

Plate L.

To Draft the Back.

Cut the forepart, and without turning cloth, place it so that the fork just comes to edge of cloth.

Square out to *L*, *M*, *N*, and *O*.

D to *L* is half an inch more than half the foot-measure.

B to *M* is half an inch more than half the foot-measure.

Width of forepart from *H* and *H* to *N* is one inch more than the knee-measure.

G to *K* and *K* to *O* is one and a half inches more than half of the hip-measure (eighteen and a half), that is 20 inches.

Sweep from *K* by *O*.

Sweep from *J* by *O*.

J to *P* is one-third of waist-measure.

Now measure width of forepart from *I* to *J*, add one inch, thus, width of forepart seven and a half, one inch added, eight and a half. Place eight and a half on short arm of square at *P*, let long arm rest on sweep from *K*, and mark from *P* to *Q*, and from *Q* to sweep.

Finish as represented.

Spring-Bottom and Peg-tops. (Plate M.)

From *A* to *B* for spring-bottom pants is half an inch less than half the knee, equally divided between the straight lines.

From *C* to *D* for peg-top pants is half an inch less than half the knee, equally divided outside the straight lines.

To Draft Forepart on Striped or Figured Goods. (Plate N.)

A is line drawn on edge of cloth.

A to *B* is half an inch more than half thigh.

C is half way between *A* and *B*.

C to *D* is one-sixth bottom.

D to *E* is one-twenty-fourth bottom.

E is one inch from bottom of cloth.

E to *F* is inside length.

Mark line through *E* and *F*.

Square by this line from *F*, and from knee and waist.

Mark line from *G* through *E*.

Square bottom by this line to *E*.

Finish as before.

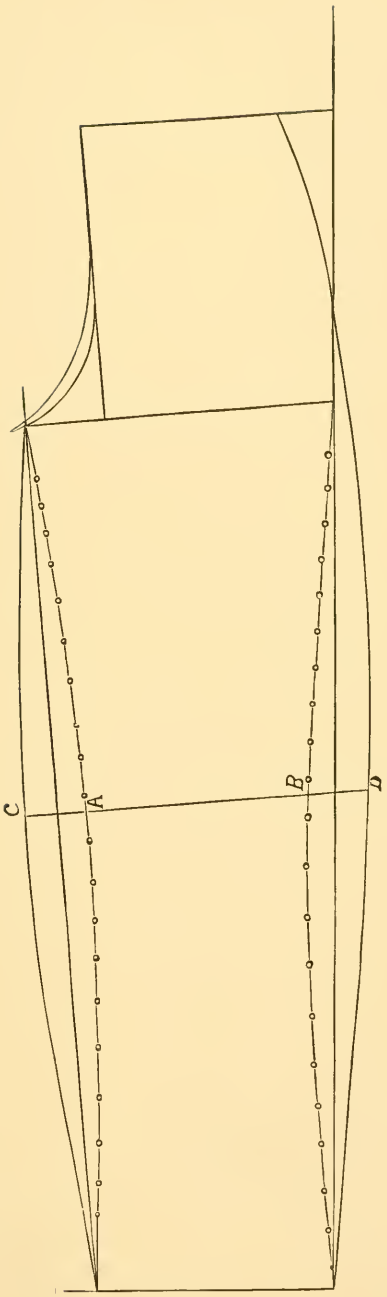


PLATE M.

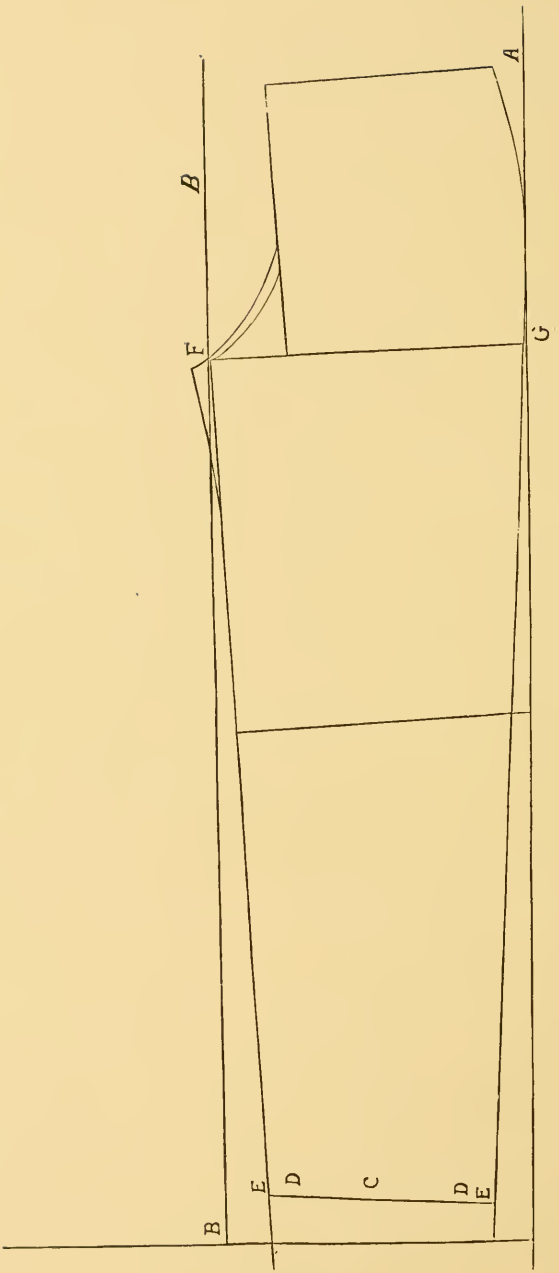


Plate N.

Deformities.

It is generally believed that no system will fit a hunchback that will fit a well-formed man, but any one who will give this system a trial will find that it is as easy to fit one form as another.

Plate O represents a draft for a hunchback who measures twenty-four upper and twenty-six lower shoulder.

We draft by lower-shoulder the same as for a well-formed man, the only change made is at *A* and *B*. The upper-shoulder being two inches smaller than the lower-shoulder we reduce the shoulder-point at *A* one inch and the back a like amount at *B*.

Cut the back and forepart (in paper, of course).

Cut the back across, and open it out on a clean piece of drafting-paper, as represented.

The back should spread at *C*, the amount of difference between the shoulder-measures, which, in the above measures, is two inches.

Mark around back as opened and remove it.

Come down at *D* one-half the difference between shoulder-measures which is one inch, and shape and cut a new back as represented by broken lines.

To Draft for Boys. (Plate P.)

Draft as for men. But a boy's neck is much smaller than a man's, therefore a slight change is necessary.

The top of back should not be more than two inches wide, therefore we make it narrower as represented by broken lines at *A*.

The curve should be smaller, therefore we raise at *A* about a quarter of an inch.

At *B* we lengthen the shoulder as much a we shortened it by cutting the back narrower, and carry it forward as much as we raised the neck at *A*.

These are all the changes necessary.

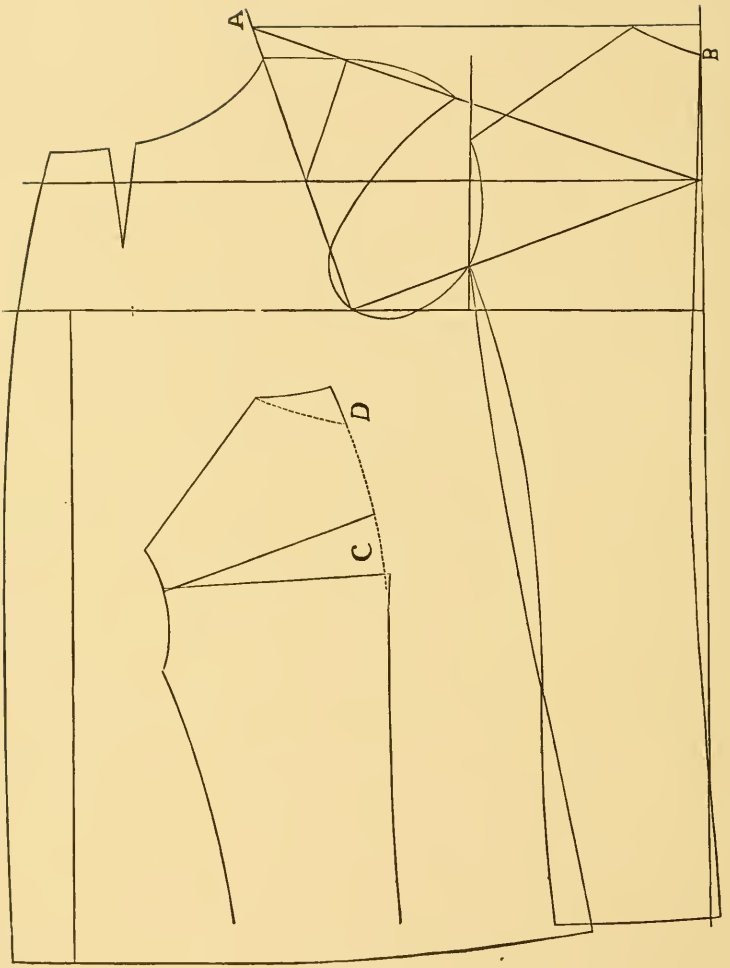


PLATE O.

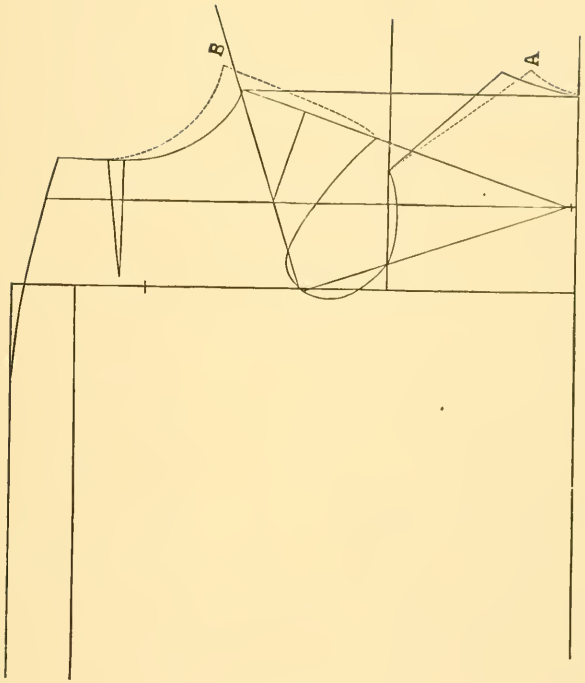


Plate P.

Ladies' Coats.

Measure and draft the same as for gentlemen, with the following exceptions:—

From breast-line to *A* is ten inches. Square out from *A*.

A to *B* is two inches; this gives the front.

Shape back-seam the same as for a sack coat.

Make bottom of back at *C* same width as back at *D*.

Cut out one and a half inches at waist between side-seams.

Make side-seam of sidebody at *E* to range with bottom of back; this gives the correct amount of spring.

Commence under-arm cut at *G*, and let the bottom at *F* be as far from line *D H* as the cut at *G*.

Spring forepart to *H*.

Sweep from *H* to front by shoulder-point and finish.

1 is breast-measure.

2 is two and a half inches from one.

3 is three inches from two for a double-breasted garment.

This is the foundation for any style, and can easily be made to produce any vagary desired.

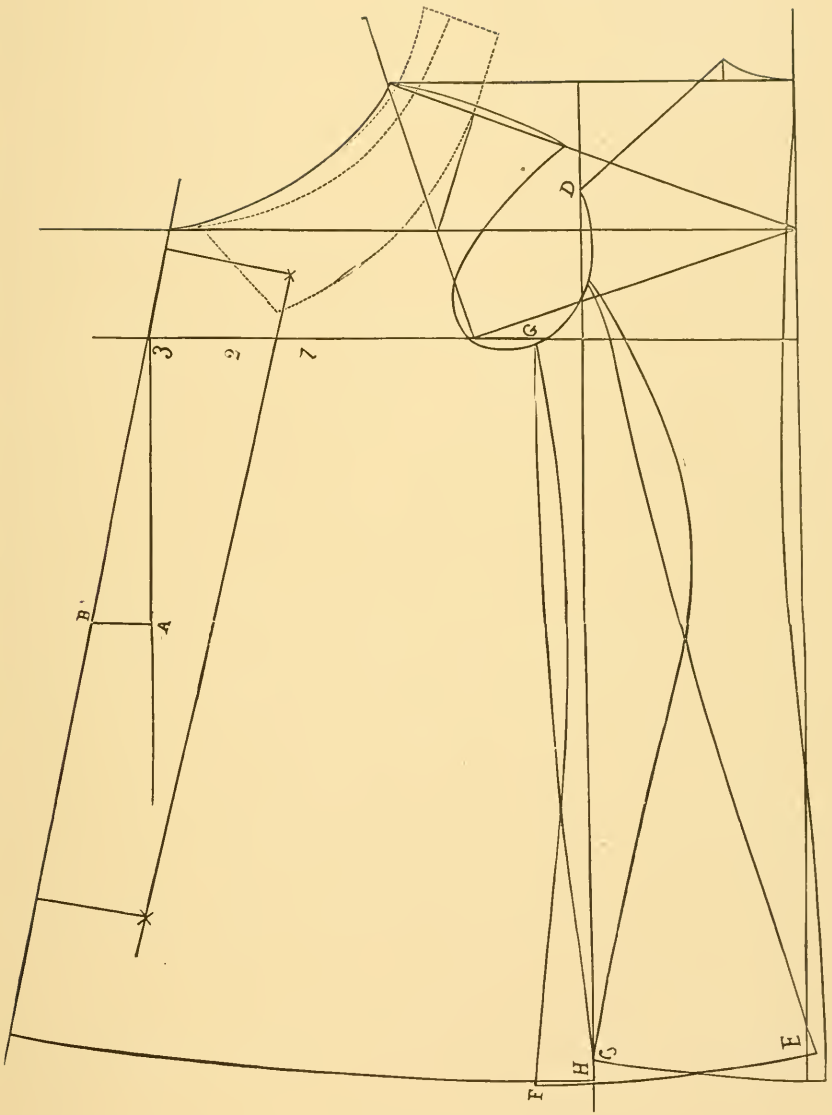


PLATE Q.

THE MYSTIC NINE.

In one of our large cities, a few years ago, a number of cutters organized themselves into a secret society, under the name of the "Mystic Order of Nine." This order enjoyed great popularity for a long time, and afforded much amusement to its members. As it has now ceased to exist, I violate no pledge in disclosing its work. The order derived its name from the old saying, that it takes nine tailors to make a man. The initiation fee was nine dollars; there were nine officers, and, in fact, nine of everything, so far as practicable.

The ceremony of initiation was the great feature of the order; outside of this there was nothing in it.

The officers were as follows:

Most Worshipful Boss.

Senior Cutter.

Junior Cutter.

Trimmer (outside sentinel).

Honorable Coat-maker.

Honorable Vest-maker.

Honorable Pants-maker (inside sentinel).

Apprentice, } *Conductors.*
Trotter, }

The Lodge-room was arranged in the following manner: In the East was a small circular office, like the cash office in a store. In this contrivance sat the worshipful boss, upon a high stool. In the West was a cutting-board with shelves, squares, long rulers, tape measures, etc., emblematically arranged upon it, behind which sat the senior and the junior cutters—the senior-cutter being secretary, and the junior treasurer. In the North and South were work-boards, on one was seated the honorable coat-maker, and on the other the honorable vest-maker. In the center of the room was a press-board with a monster goose upon it.

The candidate being present in the ante-room, was waited upon by the conductors, accompanied by the secretary and treasurer, when the following questions were put to him by the secretary:

Question. What is your name?

Answer. A. B.

Q. Do you desire to become a member of the Mystic Nine?

A. I do.

Q. Have you nine dollars to spare?

A. I have.

Q. Will you spare them? If so, please transfer them to the treasurer.

[The initiation fee is then paid.]

Q. Is this an act of your own free will?

A. It is.

Q. Are you brave?

A. I trust so.

Q. You need to be, for you will encounter dangers. Are you strong?

A. I trust so.

Q. You will need your strength. Are you able to bear pain?

A. I will try.

Q. Well, you will certainly have it to bear.

The candidate is then divested of all his clothing except his shirt and pants and his stockings, and his pants pockets are emptied. The secretary and treasurer then re-enter the lodge and report to the worshipful boss, immediately after which the candidate is conducted to the door, upon which nine distinct knocks are given, which are answered by a like number from within, and the question asked, "Who comes here?" To which the trotter replies, "A poor jour-tailor, kicking for a job."

"By what right does he expect to gain admittance to this Right Worshipful Lodge, and obtain a job?"

"By the right of kicking and of a chronic inclination to growl at current prices."

"Is he a white man?"

"He is."

"Is he knock-kneed?"

"He is not."

"Do his clothes fit him?"

"They do."

"Then he may enter and be received in due and ancient form."

The door is then thrown open and the candidate admitted. Immediately upon entering the lodge he is received in a wet sponge-cloth, which is wrapped around him tightly. He is then laid upon the cutting-board, when the W. B. pronounces over him the following oration:

Mr. A. B., Upon entering the lodge-room of our mystic order you are hospitably received in a damp sponge-cloth, rolled in it in due form, and placed upon the cutting-board. This is to teach you the beautiful lesson, that as a piece of cloth shrinks when folded in a damp sponge-cloth, and is improved thereby, so should your pride and self-conceit be shrunk in the figurative sponge-cloth of humiliation, in order that you may be improved as a man, and our order benefited by your connection with it. Brothers, let the candidate be unrolled.

The candidate is then conducted around the room nine times, while the brothers sing the following song:

Welcome, stranger, to our order,
Welcome to our mystic lore,
Thou hast had one useful lesson,
Thou shalt have a dozen more.

Thou hast been in mystic sponge-cloth,
Sponged in due and ancient form,
'Twas a cool reception of thee,
We will give thee now a warm.

The candidate at the conclusion of the singing is laid upon the work-board in the north, and so closely surrounded by the brothers that he cannot see beyond them, when the handkerchief is removed from his eyes. The W. B. then says:

Mr. A. B.—You now behold the most excellent goose of the mystic nine. It is properly heated and will perform its work well. You require pressing in order that the folds and creases may be smoothed out of you.

The candidate beholds with feelings of alarm a gigantic goose, about six feet long, and large in proportion otherwise, suspended over him. This

goose is made of wood, and is very light, its face, which is black-leaded, has been heated until it is quite hot; slowly it descends upon him, and is moved slowly forward and backward. It is lifted up and brought down upon him with its full weight nine times, when it is removed, and a brush nearly as large is passed over him several times in a manner that is far from pleasant.

In a few minutes the W. B. examines the candidate, and pronouncing him properly pressed, orders the handkerchief to be again bound about his eyes.

The candidate is then conducted several times around the room to the work-bench in the south, when the brothers flock about him, and pretending that he is a piece of cloth, examine him by pinching, rubbing, etc., discussing meanwhile its merits. "Badly finished, short wool," "Half cotton," "Poor dye," "shoddy," are some of the remarks they pass upon him. At the conclusion of this ceremony, he is addressed by the senior cutter in the following manner: "You are not to suppose, Mr. A. B., that we are trifling with you; this is a beautiful lesson which we teach, and one you should thoroughly learn. It is a ceremony which is intended to impress upon your mind the truth that a man's character must be good, or it will be picked to pieces, and condemned, even as a poor piece of cloth is, and it behooves us all to see to it that our lives are pure and blameless as we can make them."

The candidate is again conducted several times around the room to the W. B., in the east, who asks,

"Is that my coat?"

A. "It is, sir."

"Let me see it. Ah, it is badly cut. There is no character to it. It is not graceful. It fits badly. The work is also very bad. The collar is on too tight. The button-holes are badly worked. The linings are too short. It is not half pressed. It is killed!"

"What shall we do with it?"

To this the senior cutter replies, "Let's throw it among the buzzards."

"Agreed," says the W. B.

The candidate is then hustled about by the brothers, and finally tumbled upon a pile of old clothing in a dark closet, where he is left for some little time. At length the conductor takes him into the center of the room where he is addressed by the W. B. in the following language:

Mr. A. B.,—You have been taught several valuable lessons, not the least

of which is the last, which should impress upon your understanding the fact, that as a bad coat is thrown among the buzzards, so a bad man is kicked out of good society. Therefore, be virtuous if you would be happy.

If you are still willing to proceed, we will now administer the oath of the Mystic Nine. If you are not, we shall in all kindness pitch you out of the window into the street.—"Are you willing to proceed?"

"I am."

The candidate is then requested to kneel with his hands resting upon something which he is informed is sacred to the order, and is required to repeat the following promise after the W. B.:

"I, A. B., kneeling upon my two knees, my hands clasping the great emblem of this ancient and worshipful order, do solemnly promise and avow, that I will always keep the secrets that have been or may be given me in this or any other lodge of this order, that I will comply with its laws and usages, and assist a brother in distress, if I am able, and he is worthy. All this I promise of my own free will and accord, under the no less penalty than that of being severed in twain with a pair of shears, and of being pressed as flat as a seam by the great goose of our order."

At the conclusion of this pledge the handkerchief is removed from the eyes of the candidate, and he beholds the great wooden goose which pressed him a short time ago, and a monster pair of shears upon a table before him. The W. B. then approaches him from the east, and grasping him by the hand says, "Are you a crook?" to which one of the conductors replies for the candidate, "I am an artist among woolen fabrics."

"To what do you incline?"

"To the great Mystic Nine."

"How may I know you to be a member of that great order?"

"By trial. Try me."

"I will. Are you a good cutter?"

"I am."

"Did you ever make a misfit?"

"Never."

"Did you ever have an alteration?"

"Never."

"Do you know any one more skilfull than yourself?"

"No one."

"Then you are the word?"

"Ego—I am."

"Tism—You are the word. Egotism is the word, and we are its embodiment."

The new member is then shown to a seat, and the regular business transacted.

This description of the work of the order conveys but a poor idea of the amusement it afforded.

The initiation ceremony was varied now and then, to make more boisterous fun, and it never was monotonous or dull.

A tailor and his son were in the olden days doing a day's work in a farmhouse. The prudent housewife, to secure a good day's work, lighted candles when daylight began to fade. The tailor looked at his son and said, "Jack, confound them that invented working by candle-light." "Ay," replied the snip, "or by daylight either, father."

There is a learned scientist who insists that money is the missing link between a man and a tailor.

A professor was expostulating with a student for his idleness, when the latter said, "It's no use; I was cut out for a loafer." "Well," declared the professor, surveying the student critically, "whoever cut you, understood his business."

A man, whose tailor's name was Uttermule, becoming incensed at some of his blunders, said, "Uttermule, you're an utter jackass!" Whereupon the tailor gave him a kick that sent him out of the shop, and exclaimed, "Dem kicks shows you vat my name is petter den you can read."

What is the difference between charity and a tailor? The first covers a multitude of sins; the other a multitude of sinners.

A tailor, in skating, fell through the ice; he was afterward heard to declare that never again would he leave his "hot goose" for a "cold duck."

"Yes, gentlemen, certainly, of course," said a polite clothier, "if you want a pair of pants, step right into my pantry; if a vest, walk right up to my vestry; and if a coat—here, Jacob, show this gentleman into the coterie. This way, this way, gentlemen."

Some Assurance.

Tailor to Artist.—I say, Landscape, give me a nice sketch, and I'll have it handsomely framed, and hang it in my room.

Artist to Tailor.—I say, Threadneedle, give me a handsome suit of clothes, and I'll put them on, and wear them.

A Slight Difficulty.

Two tailors named Smith and Brown, rivals in love and business, quarrelled upon the public square.

"You are a *goose*," said Smith.

"I'll put an *outlet* on your nose," threatened Brown.

"*Just try it on*, and I'll give you a *basting*," responded Smith.

With that they commenced fighting.

Smith gave Brown a *welt* over the eye, and Brown administered a tremendous *cuff* to his opponent's ear.

The battle *waxed* fierce, Smith succeeded in getting a *twist* upon Brown's leg, and *felled* him to the earth; Brown, however, would not stay underneath, but quickly turned Smith, and getting on top of him, *pressed* upon his *waistbands* with his knee.

Smith meanwhile did some *fine drawing* with his nails upon Brown's face, which brought the *gore*.

By a tremendous effort, Smith threw off his opponent, and springing to his feet, seized a *cabbage* and hurled it at his head. At this point, several bystanders interfered and separated the combatants, who *repaired* to a doctor's office and had their wounds *bushcled*.

In a few days they made friends, and now they sigh (sye) over the remembrance of their unfortunate difficulty.

Not Smart Enough for a Cutter.

Mr. Hull, the author of a system which had quite a reputation some years ago, gave a memorable answer to a lawyer who was examining him in court.

His son, who was practicing at the bar, and was quite eminent is his profession, was present.

"I understand, sir," said the lawyer, "that you are a cutter."

"Yes, sir."

"You are probably acquainted with a great many cutters?"

"Yes, sir, with a great many."

"Now, sir," said the lawyer severely, "how large a salary does a cutter demand?"

Mr. Hull straightened himself, and answered slowly, "According to his experience, connection, and ability, from $1,500 to $5,000."

"Why, sir," exclaimed the lawyer, in great surprise, "that is more than many lawyers make!"

"Yes, sir, their services are worth more," said Mr. Hull, with great emphasis and dignity; "it requires greater ability," he continued, "to be a successful cutter than to be a successful lawyer; there is my son, for instance, who practices at the bar, he has this reputation of being a first-rate lawyer. But I tried for five years to make a cutter of him, and had to give it up; he hadn't brains enough, so I made him a lawyer, and he succeeds very well."

The court was convulsed with laughter, and Mr. Hull was dismissed by his discomfited interrogator.

Goose.

Much difficulty is experienced about the plural of the word *goose*, when the article meant is a tailor's smoothing-iron. The article, however, was so named because of the resemblance of its handle to the neck of a goose, hence, the correct plural, whether of the fowl or the smoothing-iron, is *geese*.

A good story has been told on the subject. A country merchant ordered two tailor's irons from a firm of hardware merchants in the city. He wrote the order thus: "Please send me two tailor's gooses." This did not seem right, so he destroyed it, and wrote another after this fashion: "Please send me two tailor's geese." Upon reflection he destroyed this one also, lest he should receive living geese. He thought over the matter until his brain was on fire, whereupon, in a fit of desperation, he seized his pen and wrote as follows: "Please send me one tailor's goose——and, hang it, send me another."

His Habit.

"One more question, Mr. Parker. You have known the defendant a long time. What are his habits—loose, or otherwise?" "The one he has on now, I think, is rather tight under the arms, and too short-waisted for the fashion." "You can stand down, Mr. Parker."

He Knew what He Wanted.

A gentleman called at a stationer's to order some note-paper, with a heading. On being shown various designs—monograms, etc.,—he said: "No, I want something simpler—just a forget-me-not." "But, sir, that would surely be more suitable for a lady." "I know what I want," was the prompt reply; "I'm a tailor, and the paper is for my customers."

Was it Heartlessness?

The following article, under the above heading, appeared recently in the local columns of a city paper, and as it is not a bad sort of advertisement, I copy it: "Last Thursday afternoon, about four o'clock, a prominent business man of this city had a remarkable fit. He was conversing quietly with a number of gentlemen upon art matters, when he was observed to throw his arms about in an energetic and erratic manner, and his whole body seemed to be convulsed. It was evident that he was in a pronounced fit. As the gentleman in question is now in perfect health, we would not refer to the matter but for the conduct of the gentlemen who were present at the time. Instead of manifesting sympathy and promptly sending for a physician, they seemed to be moved only with admiration. One gentleman, who is studying medicine, remarked, 'It is a most remarkable fit;' another, an artist, observed, 'It is the most elegant fit I ever saw;' another said it was 'Exquisite;' and Mr. ——, after the others had expressed their admiration, said with quiet dignity, 'Gentlemen, that is the kind of fit we give every one who orders garments from us.'"

A New System.

At Jackson, Michigan, in 1873, I called upon a cutter who was a curious specimen of his kind.

"I am having very good success," he said, "with the system I use."

"Whose are you using?" I asked.

"It's one you never heard of."

"I may have heard of it; there are very few that I haven't seen."

"You never heard of this," he asserts very positively.

This put me on my mettle somewhat, and I said, "I think you must be mistaken; I can draft by about a hundred."

"You couldn't draft by mine."

"My dear sir, will you be so good as to tell me whose it is?"

"It's nobody's in particular."

"Has it a name?"

"It has."

"What is it, please?"

"Well, sir," he answered, "it's by guess and by thunder, and to tell the truth, it's by thunder about half the time!"

A Broadway Cutter.

My friend, Mr. T. J. Neil of Chicago, one of the best cutters in the West, told me the following. He was cutting in one of the first houses in the city, when one of the coat-cutters left. An elegantly-dressed gentleman, with a gold-headed cane, and the air of a grand duke, made application for the position.

He was a Broadway cutter, he said, and would like to introduce New York styles in Chicago.

The firm engaged him, and he commenced work at once.

A prominent business man, who was a regular customer of the house, left his order for a suit the day our Broadway man commenced work.

"Would you like a Broadway cut?" asked our friend.

"I think I would; can you give it to me?"

"Oh, yes; I'm from Broadway. I'll give you the real thing."

"Ah—thank you."

Saturday the suit was sent home, and Monday the gentleman came in with it on. He walked up the entire length of the store, calling the attention of the clerks and salesmen as he went to his "Broadway suit."

"Fine, isn't it?" "Beautiful cut, eh?" "How do you like Broadway style?" and, "It beats Chicago, don't it?" were some of the questions he asked.

The establishment was in an uproar. The proprietors could not help laughing, and the poor cutter was terribly chagrined.

The suit was a monstrosity. It had neither style nor fit.

The poor fellow said he could not understand it. He had measured and drafted according to his system, and had supposed it must fit.

As this was about the tenth suit he had killed in a week, his explanation was hardly satisfactory.

"Where did you say you cut in New York?" inquired one of the proprietors.

"I cut at ——— Institute,—patterns only. Mr. —— said I was thoroughly instructed, and gave me my recommendations."

"Oh! I see, you are a manufactured cutter. What did you do before you went to ——— Institute?"

"I was a hotel clerk."

"Ah! that accounts for your cheek. I admire your assurance, but I don't think you will answer for our establishment." The Broadway cutter of course was discharged, and perhaps returned to Broadway Institute for further instructions. What became of him, Mr. Neil does not know.

An Experienced Cutter.

Capt. T. G. Sutherland, who has taught my system extensively in the Western States and in Canada, and is well known by a great many in the profession, is an inimitable wag. He was cutting, not many years ago, in a city in Ohio. One day, when he was quite busy, a rather seedy-looking individual came in and handed him his card,—

"Oliver La Libertie,
Professor of Garment Cutting."

"I am introducing," said Mr. La Libertie, "a new system of garment cutting. It is undoubtedly the greatest invention of the age. It is a death-blow to West, Madison, Glencross, Luthicum, and——"

"What sort of a system is it?" interrupted Mr. Sutherland.

"It is a double-shoulder, actual-measure, treble-balance, geometrical, trigometrical, and mathematical combination. It is founded upon all the known sciences, and is absolutely infallible upon any conformation——"

Here he stopped for want of breath.

"Who is using it?"

"It is used, sir, by nine hundred and ninety-nine out of every thousand cutters in New York, Boston, Philadelphia, Baltimore, Cincinnati, Chicago, St. Louis, and, in fact, in all the large cities. It is pronounced unapproachable by everybody who tries it. I have a trunk full of indorsements, and another full of gold, silver, copper, brass, iron, and leather medals, presented to me by my admiring pupils. If you have time I would like to make a draft for you."

"I don't wish to put you to any trouble, Mr. La Libertie. I am not in want of any system at present."

"It is no trouble to make a draft. The price of my system is only $25, and it will be worth $500 to you."

"Just so. But I'm using a system which suits me very well, and have no wish to change."

"Do you never have alterations?"

"I have alterations sometimes, and sometimes I don't alter when I should."

"Exactly—now by my system you will never have any. I can teach you more in one hour than you could learn yourself in ten years. My experience is very extensive. I have been a cutter for more than a quarter of a century."

"Ah! indeed!"

"Yes, sir, and with respect due all, permit me to observe, that you really know nothing about the art and science of garment cutting. How long have you been cutting?"

Mr. Sutherland laid his shears down thoughtfully, and in the most earnest, impressive manner imaginable, said: "My dear sir, your thirty years' experience are as a drop in the ocean compared with mine. I have been cutting for more than two thousand years. I held the best situation in Jerusalem when St. John was preaching; I was tailor to His Royal Highness Pontius Pilate; I have cut garments for Cæsar, Brutus, and Peter the Hermit. I made the suit in which Charles the First was executed; I have cut garments for Napoleon Bonaparte, George the Fourth, and for the immortal George Washington. I have cut the inaugural suit for every president of the United States, and have to-day received an order by cable from General Grant for sixteen suits, which he wishes me to have ready upon his return from England."

"Good gracious, sir! what do you mean?"

"I mean, sir, that I am the greatest cutter the world ever knew. I have cut in every city in Europe, Asia, Africa, Australia, the British Isles, and America. I have not killed a coat for eight hundred and seventy-five years, eight months, and eleven days. I have cut 273,652,281 coats, 576,——"

"I guess you don't want to look at my system. Good-day, sir," said Mr. La Libertie, making toward the door with undignified haste.

Mr. Sutherland followed him to the door, and clutching him by the arm just as he was going out, continued,—

"Yes, sir, I have invented seven hundred and eighty-two shoulder-measure systems, nine hundred and fifty-seven breast-measure——"

"Good-day, sir; I'll call again," said Mr. La Libertie, releasing himself from Mr. Sutherland, and leaping into the street.

"So do," shouted Sutherland after him; "come soon, come often. I would like to show you a few thousand of my inventions. Be sure to come."

An Excellent Fit.

Many years ago my father was teaching his system in New York. One day, when quite busy with some half a dozen cutters whom he was teaching, Mr. S——, a Broadway cutter who was celebrated for his inordinate self-conceit, and was anything but a first-class cutter, came in and was introduced to my father.

After a little conversation Mr. S. remarked, "I think one system as valuable as another; they are all useless to a real artist. I threw away every system I had learned two years ago, and now depend entirely upon my judgment and experience."

"Both are no doubt very fine," said my father courteously.

"Yes, sir,—I take a man's height and breast-measure, and shape and balance the various parts of the coat by my eye, in the same manner as a painter sketches a landscape."

"Your success is probably remarkable?"

"Very. My coats have a peculiar appearance which no system could give."

"Ah, indeed!"

"Yes, sir. You would no doubt be surprised to see me draft. It has become an instinct with me,—I seem to know by intuition precisely what the shape requires."

"Your eye must be very accurate."

"Wonderfully so! I can carry a man's shape in my eye for months."

"Remarkable!"

"The coat I am wearing is an illustration of my power. I took my height and breast-measure, stood before the mirror for five or ten minutes, studying my shape, then sketched the draft inside a square equal to half my size with two and a half inches added. You can see the result."

"It seems to be a very graceful garment," said my father.

Mr. S. straightened himself, and by his attitude invited inspection of his coat.

My father smoothed down the fronts so that the coat laid about the neck, shoulder and breasts naturally.

"Beautiful!" "Admirable!" "Remarkable!" he exclaimed as he did so, to the intense delight of Mr. S.

Then he reached his hand around to the back, keeping the fronts in position, and gathered up some eight inches of surplus cloth.

"A very fine garment, gentlemen," he said, suddenly changing his position, and placing himself at the back of Mr. S., still holding the loose cloth in the back. "The architecture of this coat, gentlemen, is of the same quality of excellence as the coats my dear old grandmother used to make me out of home-spun, when I was a boy. I don't think, Mr. S., that any one else can hope to rival you. You are unapproachable!"

Mr. S. was of course greatly chagrined, and in great confusion withdrew with some unintelligible excuse about having to meet some one.

My father escorted him to the door, expressing regret at his departure, and remarked as he passed out, "Mr. S., when you have leisure, I shall be pleased to have you call upon me with another specimen of your wonderful skill. Good-day, sir."

Good Advice.

However long I may live, I shall never forget an interview I had with Mr. James H. Croney, of New York, some three years after I commenced to cut.

I had been cutting successfully in an inland town in New Hampshire, and was firmly convinced that I was about the best cutter in the world. I fan-

cied my father could teach me but little more than I already knew, for I flattered myself that there was very little worth knowing that I did not thoroughly understand.

I had accepted a lucrative engagement with a prominent firm in one of the largest and most fashionable cities in the New England States, and my father, desiring me to be well posted, carried me to New York and introduced me to Mr. Croney.

Now I had a very high respect for that gentleman, for my father had remarked to me hundreds of times that he was the model tailor of the world; but I confidently expected that I should be able to astonish him with my skill in drafting, and with my wonderful knowledge.

After shaking hands, my father and Mr. Croney stepped aside, and I was greatly mortified and chagrined to hear my father remark to Mr. Croney in an undertone, "He's green, brighten him up a little."

During the forenoon I made a draft. It was good, for I could always draft well, and using a pencil instead of chalk, my lines were clean and fine. Mr. Croney said that it looked very well indeed, complimented me on my command of hand and—told me that I must guard against sacrificing the beauty of my garment to the beauty of my draft, as he feared I was inclined to do. He then kindly suggested changes for the better in my draft, and explained several points which he saw I was not clear about.

My ignorance seemed like a mountain to me, my self-conceit was completely crushed—for the time being, (I have plenty of it now,)—and I realized that I had more to learn than I had ever dreamed of.

In the afternoon, having a little time at his disposal, Mr. Croney engaged in conversation with me, and gave me the following wholesome advice: "You have a laudable ambition," he said, "to become a great cutter. You have the ability, and can succeed if you do not prevent yourself; but you have much to learn, and must make up your mind to study all your life. You must study men and their manners, you must thoroughly acquaint yourself with the philosophy of dress, and with the laws of color. The center of dress is the neck, everything should radiate from and center at the neck-tie. Your knowledge concerning these matters should be so perfect, so accurate, that your clients will acknowledge you as an authority, and be governed by your advice. The

effect of an elegant suit may be destroyed by an awkward hat, a bad pair of boots, or a wrongly-dressed neck. You must make it your business to prevent, so far as possible, such mistakes in the toilet of the gentlemen you dress. Never contradict a customer. Never become careless. Never slight anything. Never become satisfied with what you know, but always strive to learn something more. Read and carefully study Chesterfield, make him your constant companion and favorite author, and above all, remember that there is one royal road to success, and that can be achieved only by hard study and earnest labor."

This is the advice he gave me, almost word for word. It fixed itself firmly in my mind, and has done me great good.

His words deserve to be written in letters of gold. They should be in the possession of every cutter who has ambition. They are invaluable to the profession. They should stand for centuries as a monument to the rare skill and exquisite taste of him who first uttered them,—as a monument more lasting than brass, to the great artist and accomplished gentleman, Mr. James H. Croney.

Sir Peter Lansie, a shrewd, sagacious Scotchman, was originally a saddler. By thrift, industry, and foresight, he accumulated a large fortune. Subsequently he served as alderman, Sheriff, and Lord Mayor of London. But, not unlike men who have risen from a low position to eminence, he ignored his humble origin. Some years after he had been sheriff of London, a Mr. Nicoll, a tailor and clothier, was proposed for that office. Sir Peter was somewhat indignant, and publicly expressed the opinion that the election of a tailor would be a degradation to the office. "I don't see the objection," said a brother Scotchman, "if a saddler can be sheriff, why not a tailor? Indeed, a tailor is the superior of the two. A saddler makes clothes for horses, but a tailor makes clothes for men." Mr. Nicoll was elected.

The following was told by Mr. Donohue of Walsh's, under McVicker's Theatre, Chicago:

One of their customers was an immense eater, and very fond of lager beer.

He ordered a frock-coat one afternoon, and called for it during the next week, in the morning. The coat was much too large for him about the body.

Mr. Donohue stepped aside with Mr. Walsh and conversed with him a moment, when his face lighted up, and he said to his customer,—

"Mr. B——, we have discovered what is wrong with the coat, and will remedy it. Can you call for it at about five o'clock this afternoon?"

"Certainly, of course."

Mr. Donohue hung the coat up and left it until five, when the gentleman returned.

"The coat will fit you right, now, I think," said the genial Dan.

And it did. It would just button comfortably.

"Altered by a big dinner and lager beer," exclaimed Mr. Donohue, when the customer had departed.

He Hadn't Any.

While I was teaching Mr. McDaniel's cutter in Dayton, Ohio, a fine-looking elderly gentleman, who could not have weighed less than two hundred and fifty pounds, entered the store.

Mr. McDaniel was at the extreme end. "Mr. McDaniel," shouted the elderly gentleman, "have me a black cloth vest made by to-morrow night."

"All right," answered Mr. McD.

"And, by the way, Mr. McDaniel, tell your cutter that I haven't any belly, and if I have, it isn't round; and I'll murder him if he doesn't cut the front edges as straight as a line."

APPENDIX.

CONTAINING EXTRACTS FROM THE WRITINGS OF MY FATHER, THE LATE OTIS MADISON.

Instruments for Measuring.

The least that can be said with truth against all machines and instruments for measuring live men, is, that they are all useless.

Actual Measure Rules.

Actual measure rules, so called, have been plenty for many years. I have examined all I could find of them, but have never seen one that contained any evidence that the author, compiler, or getter-up, knew how to take with accuracy, any measure for a coat.

Surface Measures.

The first purpose of the cutter is to shape the cloth with an exactness that will fit the surface. Therefore, he has nothing to do with the size of his client's liver or spleen. An ideal measure of his brain may be useful to the artistic cutter.

Measurement.

"A long time ago," I was teacher of cutting during fifteen years; was patronized by all the best cutters then in America; but in all that time, I did not know how to take measures, nor did I exchange views with any cutter who knew any better than I did. I am the first person that ever published a word about the shoulder-measures, and taught their use fifteen years before I knew how to take them. I believe I am the first person who ever knew how to take the measure for a coat, as they ought to be taken.

The Principle.

This plan of drafting rests wholly on *actual measurements;* proportions have nothing to do with the fitting of the garment. *Actual measures* locate every point in the draft. These measures are arbitrary, and must be obeyed, no matter where they lead, no matter how the draft may look; the coat will look well on the customer, whatever may be his shape. To draft a coat by actual measures, without counting the play of the muscles, is like navigating the ocean without reckoning lee-way. A cutter, after many years of painful practice, may succeed generally; but he cannot impart his knowledge to another, for he is governed by no definite principles of science; and he cannot sell his experience to his neighbor. Talents, taste, and experience have made some eminent cutters; yet it would be impossible for any of them to teach another the skill they possess. Let not such object to this work as a leveller, for it will aid them as much as it will the less gifted. Much of the time that the fitting now costs them, may be devoted to the artistic branch of their profession; and what admirable styles and beautiful garments may they not then create.

The principle of this plan, is, that if appropriate measures of any part of the human form are so arranged as to produce the desired fit and shape of that part of the coat which is to be applied to the part whence the measures were taken,—it is immaterial what may be the shape of that part, because the measures will vary according to it,—then, if the several parts or divisions of the coat be obtained by their respective measures, and joined together in such a manner that one part will not keep an adjoining part out of the place for which it was designed, the fitting of the coat must be certain. Therefore, if a system resting on this principle be right for any one form, it will, for the same reason, be right for every form.

Judgment.

Many cutters talk a great deal about using their judgment in drafting garments, and seem to think that if a rule will draft to fit any form, they will have no use for this article with which they are so abundantly supplied. Let them not be alarmed. However perfect the science of cutting may be, the cutter will always have use for all the gumption he possesses. His profession

makes it necessary to judge of his customer's taste, as it is his duty to cater for it to a degree that will not injure his reputation. He must, to be successful, be a good judge of the fabric he is to cut, that he may lessen or enlarge his measures, to insure the desired size. He must provide for the different manner of trimming, etc. He should be a close observer of men and their manners, and by no means neglectful of his own manners and appearance.

If a cutter aim to be eminent in his profession, he can give his judgment an "airing" often enough to keep it bright and vigorous, notwithstanding his perfect knowledge of the true science of drafting garments.

Attitude.

Most gentlemen, when they stand to be measured, will assume an attitude that is not natural. One will straighten himself up and swell out his chest, as much as to say, "Make me a coat for a well-formed man." It would be folly to ask him to stand natural; he can't do it; if he should attempt it, he would work himself into a shape that he was never in before, and never will be again. Place your hands in a gentle manner upon his shoulders, divert his attention, and by the time you have obtained the length measures, he will be in his natural posture. The next difficulty is your customer's temper. If he is of a combative disposition, as soon as you place the measure in front of his shoulder, the muscle will enlarge, and his shoulder press forward, and unless you are watchful your measure will be too large. If your customer is of a mild, timid disposition, the muscle will shrink, and the shoulder recede, as soon as he feels the pressure, and your measure will be too small, unless you put your hand gently on his shoulder and place it in its proper position. Some will enlarge the chest or waist from one to three inches. This requires only your attention. Your own judgment will direct you what to do.

Genius and Taste.

Genius consists in the power of executing. Taste in the power of judging of the appropriate, of symmetry and beauty. Now, the cutter, in the first process of his work, should concentrate his ideas with the sole view of producing the fitting of the garment; then when this is done to his satisfaction, which science will enable him to do, he will have accomplished the first part of his work, and produced a basis on which to rear the temple of beauty he

desires. Now, his genius may rest, and taste be exercised. If the cutter had mixed these talents, one might have destroyed the other, and his effort proved an abortion; but having the fitting of the garment secure, the cutter can fearlessly use his taste. Taste does not always demand a good fit, but having the draft before you that you know will fit, taste will teach you where to put on or take off, so as to produce a coat that will improve the appearance of your client, and give character to the garment, without endangering the balance.

There are many forms that good taste would not lead you to fit; yet the artistic cutter will first make the draft to fit, then he will know how to improve the appearance of his patron.

Cutting.

There are a few rules that should always be observed in cutting. Make up your mind to blame no one but yourself for a misfit or an awkward looking garment. Cut every piece to the exact length for its position. Let the curve of one piece fall gracefully into the curve of its neighbor, so as not to invite the shears of the journeyman. Avoid as much as possible force work, such as holding on, shrinking, stretching, etc. You can fit better without such work, and the garment will keep its easy, graceful appearance much longer. In obtaining the measures, never ask your customer to assist you; it is your business, not his. His duty is to be passive while you are securing his dimensions. It would be as absurd for you to ask your client to stand natural, as it would be for a barber to make faces at him while he is shaving you.

Theory.

By the circumference of a sphere, we can draft an envelope in many pieces that will fit the surface of the sphere, as boys cover their bat-balls, and the process requires but one measure,—the circumference. The surface of the ball is not "a level plain," yet it is measurable. The body has points that divide the surface; therefore, every point requires a separate measure and each measure must shape the cloth for the part over which the measure was taken; consequently, the envelope for the shoulders and body, like the covering of a ball, must be cut in separate pieces; and then, the great *desideratum* is to join these several parts or pieces together, in a manner that will produce harmony among the different sections, so that each part will rest at ease without struggling to displace its neighbor. Thus, the two shoulder-measures shape the

cloth for the shoulder and armhole, no matter what the shape of the shoulders may be. Thus much these two measures enable us to do, and nothing else. The blade-measure gives us the exact quantity of cloth to cover the blade, without pulling on the shoulder, and nothing more. The shoulder and blade being now supplied with the cloth they require, we have no further use for these measures. The basis of the coat is established and must not be disturbed. Now, if we are required to envelop a cone ten inches long, twelve inches in circumference at one end, and sixteen inches at the other, we will draft for one end by the smaller circumference, and for the other end by the larger circumference, divide the two measures into equal parts, draft for each end by its measure, then the cloth will wind straight round the cone, no matter which end it stands on, the fitting will be the same. The body of our client is a cone; and it matters not whether the waist is the larger or smaller end, the same process enables us to button the cloth smoothly around his body.

Now, having produced the desired fit for the shoulders, and the wished-for fit for the body, what remains to be done? Simply to connect these two halves, upper and lower half, in such a manner that one part will not disturb the other part. Now, if these two halves are placed upon our client, we can baste them together, and the coat will be complete in its balance, but we must have no seam in this direction, therefore, we produce the same effect by the balance and blade measures, and nothing more and nothing less.

Plausible Error.

Buckle a metallic strap around the body under the arms, press the vertical slide up against the front of the arm; then measure from a point on, or made by the strap and slide, to the neck-joint; and does it not look as if you were sure of the right length of upper-shoulder point? Then measure from points on the strap to hip, hollow of waist, and other points on the body; and does it not seem plausible that you have obtained the right dimensions? Yet you have not. It is a live man that you have been measuring.—You become disgusted with this strap and slides, water-level, or plumb-line, and kindred instruments, yet you will not give up the idea that from some point in front of the arm you can get the shoulder-points right. Then you poke sticks, squares, or pasteboards under his arm and make another failure. Still you stick to this fallacy, and next try a jacket nicely buckled on, chalk points on it with a little

better success, simply because you have fewer useless things in the way; still adhering to this *plausible error* you think you have succeeded, yet you hesitate to complete the job until you do as grandmother does—baste and try on. Then if not more than one coat in ten needs busheling, you imagine that you have reached the *ne plus ultra*, and will stick to the *sticks*, squares, jackets, etc., etc. One who has this *plausible error* on the brain, says, "In giving my opinion, I would say that if the science was divided into one hundred parts, that the finding or locating of the front shoulder-point is ninety-nine points in the hundred."

Common-sense teaches us that the first point we make in drafting is always right, no matter where it is made, or for what point. It is the beginning, and if all the points are in harmonious positions, and proper distances from it, so as not to pull the first point from its position, the coat must be right, no matter where you start from. The easiest and surest way to get rid of this *plausible* and common error, that I know of, is to try an experiment, "it will pay well," if it cost you a thousand dollars.

Select from your customers the straightest one, fit him exactly with a coat, even if you call upon grandmother to help you. Now, you have produced for the very erect client a perfect fitting coat, faultless in its balance—keep the pattern. Now, select a gentleman of the extreme opposite form, let him be as crooked as possible, and his shoulder-measures the same as the straight man's, which often happens; put the straight man's coat on him, and you will see that it will fit him about the shoulders exactly as it did the straight man's shoulders, but the lower half of the coat will stick out a ridiculous distance behind him, because his blade-measure is much longer, and the balance much shorter than were these measures for the straight man. Now, take the upper-half of the pattern of the straight man's coat, and get the quantity of cloth over the blade by the crooked man's blade-measure, and bring it in at the hip, by his balance-measure, and the fitting will be as perfect on one as the other.

I recommend this experiment, for I know of no better plan of eradicating from your mind this error—this plausible and damaging error—and make you sensible of the folly and danger of using straight-jackets, squares, girths, saddles, or any other kind of harnesses.

Observations.

A cutter should not attempt to cut any garment without first taking correct measurement, and knowing for what purpose each measure is taken; he should, in all garments, discard proportions, if he wishes to fit, and balance his garments agreeable to the endless variety of conformations. The theory of proportions is as true for pantaloons as it is for coats. In fact, there is more consistency in it, because, in the perfect form, the hip-measure is the same as the breast, and the thigh is just one-half as large as the hips. But in a country like this, the close application of nearly every man to some profession, or some branch of industry, has strengthened and enlarged some part of his structure at the expense of other parts, and this disproportion is greater in the chest and shoulders than in the limbs, because all the muscles pervade the chest; hence two boys, of equal age, size, and of perfect form, will be much unlike at manhood, if one becomes a shoemaker and the other a soldier. At manhood the circumference of their breasts may be equal, say thirty-six inches. Yet, if by any rule of proportion you cut a coat for the soldier by his breast-measure, it will be much too large in the back and armhole; and if for the shoemaker, it would be as much too small, and your rule of proportion would fit neither. If cutting their pants the disproportion would be less,—the soldier's hip-measure would probably remain the same as his breast, and his thigh would remain half the size. The shoemaker's hip-measure would probably be two or three inches larger than his breast, and his thigh would be less than the soldier's.

In view of these facts, would it not be better to rely upon the several measures, regardless of antiquated notions of proportions, whether you draft a coat, a waistcoat, or pantaloons? There should be something to distinguish garments made to order, from those made to sell; the latter are always cut on the principles of proportion.

About Sacks.

There are many cutters who succeed in cutting all kinds of coats except sacks or jackets; but in getting up these garments they are compelled to call upon the mantua-maker or grandmother.

For the benefit of such cutters the following remarks are made:

A loose garment of any kind shows more conspicuously an error in the

balance than a close fit does. The ideas of cutters generally are vague on this subject. Some will talk and act as if it was all, or nearly all, contained in the upper-shoulder point,—a point that has nothing to do with the balance. Others, that the balance depends upon some point in front of the arm,—another point that has nothing to do with the balance, and they will measure from this point to the hip-point and other points.

Such cutters can show you how to hang a coat on a man's back by the arms, as a boy hangs his hat against the wall by a bracket, but he knows nothing about balancing a coat. Yet a child knows how to balance a stick on his shoulders, he does not attempt to balance the stick on the neck-joint, but throws it instinctively across his shoulder, between his neck and shoulder-joint. Have cutters forgotten the instinct of their boyhood? Can they not see that the cloth must lie smoothly upon the shoulder, between the neck and shoulder-joint, and must not be disturbed in the least by the cloth shaped for the body? If cutters understand this balance, they will see the absurdity of attempting to keep a coat in its place by pressing against the arms. Balance a coat or sack right, and it must keep in its proper place, even if it does not touch the arms within an inch. Why do not cutters use common-sense, and not be eternally poking around the front of the arms?

A sack balancing rightly on, and from the top of the shoulders, can be a perfect garment, no matter how large it is: no matter if it does not come within an inch of the front of the arms.