KEY LINE SYSTEM
OF
GARMENT CUTTING.

TABLE OF PROPORTIONS.

Breast and Seat.	Waist and Scye.	Frock Coat.	Sack Coat.	Thigh.	Breast and Seat.	Waist and Scye.	Frock Coat.	Sack Coat.	Thigh.
30	25	26	$27\frac{1}{2}$	$16\frac{3}{4}$	40	$33\frac{1}{4}$	$35\frac{1}{4}$	$36\frac{3}{4}$	$22\frac{1}{4}$
31	$25\frac{3}{4}$	27	$28\frac{1}{2}$	$17\frac{1}{4}$	41	$34\frac{1}{4}$	36	$37\frac{1}{2}$	$22\frac{3}{4}$
32	$26\frac{3}{4}$	$27\frac{3}{4}$	$29\frac{1}{4}$	$17\frac{3}{4}$	42	35	37	$38\frac{1}{2}$	$23\frac{1}{4}$
33	$27\frac{1}{2}$	$28\frac{3}{4}$	$30\frac{1}{4}$	$18\frac{1}{4}$	43	$35\frac{3}{4}$	38	$39\frac{1}{2}$	$23\frac{3}{4}$
34	$28\frac{1}{4}$	$29\frac{3}{4}$	$31\frac{1}{4}$	19	44	$36\frac{3}{4}$	$38\frac{3}{4}$	$40\frac{1}{4}$	$24\frac{1}{2}$
35	$29\frac{1}{4}$	$30\frac{1}{2}$	32	$19\frac{1}{2}$	45	$37\frac{1}{2}$	$39\frac{3}{4}$	$41\frac{1}{4}$	25
36	30	$31\frac{1}{2}$	33	20	46	$38\frac{1}{4}$	$40\frac{3}{4}$	$42\frac{1}{4}$	$25\frac{1}{2}$
37	$30\frac{3}{4}$	$32\frac{1}{2}$	34	$20\frac{1}{2}$	47	$39\frac{1}{4}$	$41\frac{1}{2}$	43	$26\frac{1}{4}$
38	$31\frac{3}{4}$	$33\frac{1}{4}$	$34\frac{3}{4}$	$21\frac{1}{4}$	48	40	$42\frac{1}{2}$	44	$26\frac{3}{4}$
39	$32\frac{1}{2}$	$34\frac{1}{4}$	$35\frac{3}{4}$	$21\frac{3}{4}$	49	$40\frac{3}{4}$	$43\frac{1}{2}$	45	$27\frac{1}{4}$

KEY LINE SYSTEM

—OF—

Garment Cutting

—BY—

FRANK A. VAN AARLE.

PREFACE.

————✠————

THIS book is free from any intentional plagiarism, but as the subject treated on is one that has engaged the attention of many minds, it is not at all improbable that some ideas may coincide with those of others, who think themselves the originators of them. For such, whether they have seen the light of the world or not, I would respectfully beg pardon on behalf of the muses that inspired me with them.

Firmly believing this work to be entirely different from any ever published pertaining to this subject, to assure success to my patrons, I most respectfully *demand* an unalloyed obedience of the rules laid down, hoping hereby to fulfill its mission, that of raising the standard of the profession.

THE AUTHOR.

TABLE OF PROPORTIONS.

Breast and Seat.	Waist and Scye.	Frock Coat.	Sack Coat.	Thigh.	Breast and Seat.	Waist and Scye.	Frock Coat.	Sack Coat.	Thigh.
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32	$26\frac{3}{4}$	$27\frac{3}{4}$	$29\frac{1}{4}$	$17\frac{3}{4}$	42	35	37	$38\frac{1}{2}$	$23\frac{1}{4}$
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34	$28\frac{1}{4}$	$29\frac{3}{4}$	$31\frac{1}{4}$	19	44	$36\frac{3}{4}$	$38\frac{3}{4}$	$40\frac{1}{4}$	$24\frac{1}{2}$
35	$29\frac{1}{4}$	$30\frac{1}{2}$	32	$19\frac{1}{2}$	45	$37\frac{1}{2}$	$39\frac{3}{4}$	$41\frac{1}{4}$	25
36	30	$31\frac{1}{2}$	33	20	46	$38\frac{1}{4}$	$40\frac{3}{4}$	$42\frac{1}{4}$	$25\frac{1}{2}$
37	$30\frac{3}{4}$	$32\frac{1}{2}$	34	$20\frac{1}{2}$	47	$39\frac{1}{4}$	$41\frac{1}{2}$	43	$26\frac{1}{4}$
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39	$32\frac{1}{2}$	$34\frac{1}{4}$	$35\frac{3}{4}$	$21\frac{3}{4}$	49	$40\frac{3}{4}$	$43\frac{1}{2}$	45	$27\frac{1}{4}$

PART I.

Part I.

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THE FOUNDATION.

𝕿O complete any work of art, science or mechanism successfully, a solid foundation is indispensable.

Facts derived from close observation and successful experience, compose the most solid foundation.

The art of garment cutting has for its foundation the thorough knowledge of the measurements and proportions of the human form.

The first principle of the measurement of man is found in Holy Scripture, in the Book of Revelations of St. John, as follows :

'' And there came one of the angels and spoke with me and he that spoke with me had a measure, a golden reed to measure the city and the gates thereof and the wall, and he measured the wall thereof a hundred and forty-four cubits the measure of man,''

A cubit, in the anatomical sense of the word, is the length of the arm from elbow to wrist.

Enclosing man within the walls mentioned, that is drawing lines about him at his furthest projecting points, we find that we get a parallellopiped one-half wider from side to side than front to back.

Taking the arm comprising the cubit and enclosing that also within walls, making a cube thereof of four equal sides, and extending them the full length from elbow to wrist, we find that six will fill the parallellopiped from side to side ; three from front to back, and eight constitute the exact length, making a total of one hundred

and forty-four cubits, the measurement of man, be he dwarf or giant, and establishing the fact that all widths are divided by sixths, and all lengths or heights by eighths to obtain the proper proportions.   (See fig. 1.)

These proportions have been the subject of much thought and writing, but facts derived from observation and experiment dictate rules which are to the cutter of garments of the greatest importance, some of them in fact being indispensable, and are as follows :

Neck is $3\frac{1}{8}$ of breast.

Waist " 5-6 "   "

Hip   " same as "

Thigh " $\frac{2}{3}$ of waist.

Knee " $3\frac{1}{8}$ " breast.

Calf   is $3\frac{1}{8}$ of breast.

Ankle " $\frac{1}{4}$ "   "

Elbow " $\frac{1}{4}$ "   "

Wrist " $\frac{1}{6}$ "   "

Arm at shoulder is $\frac{1}{2}$ of waist.

Eight cubits make the total length of man, and are divided as follows :

1 from top of head to neck.

2 "   neck to armpit,

3 "   armpit to waist.

4 "   waist to seat.

5 from seat to centre of thigh.

6 "   centre of thigh to knee.

7 "   knee to bottom of calf.

8 "   bottom of calf to sole of foot.
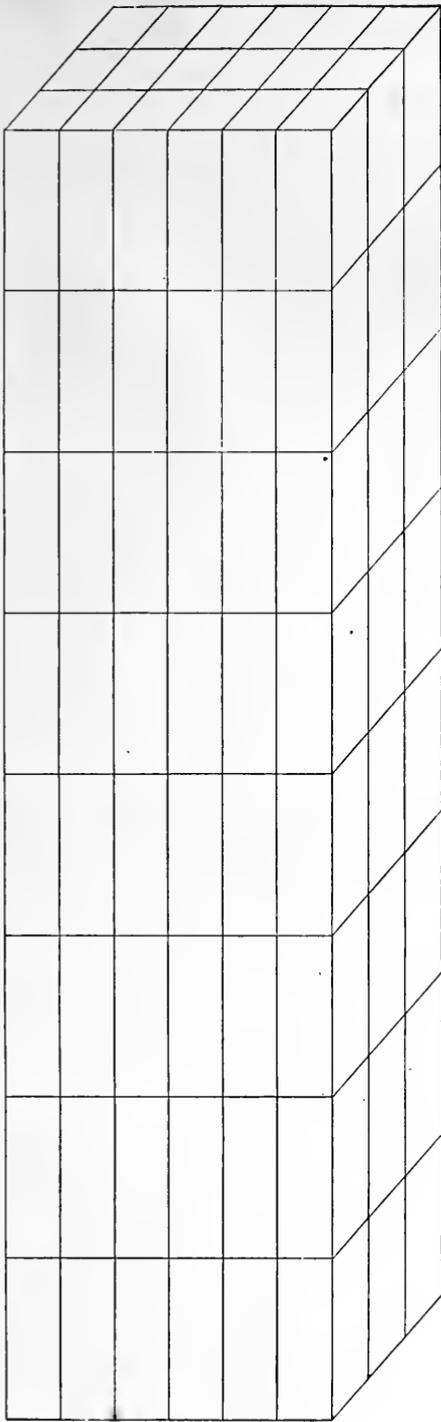
Fig. 1

Placing the forementioned proportions in their proper positions in widths and heights within the parallellopiped, tracing them from point to point, in graceful curves, we get the outlines of the proportionate man (see figs. 2 and 3), which con stitutes the foundation to garment cutting and from which we proceed to establish the several laws and principles necessary to the completion of any work of art or science.

<center>THE LAW OF BALANCE.</center>

The first law to be established is the law of balance.

The balance or equilibrium is the just place of a figure so that it may appear to stand firmly, and for this purpose must be a point equally distant from its opposite sides, which compels us to construct for all irregular bodies a rectangular cube with their furthest projecting points as their dimensions of width and thickness, when the following rule will be found to be correct and of the greatest value in garment cutting.

One-sixth of its circumference added to itself will be the measurement of the cube, of which one quarter will constitute the balance line, thus : 36 circumference with one-sixth added to it gives us 42, one quarter of which is 10½ inches, being the balance line for a garment of 36 inches breast measure, and whereas this holds good for any size, we derive from it the following rule :

One-third of breast measure less one twenty-fourth is balance line of garment.

When applying this in drafting by the ordinary division square, it may be better understood as follows :   Two-thirds less one-twelfth of breast measure is balance line.

The laws established by the balance line are five, viz :

1. The neck point.	4. Waist suppression,
2. Front of scye.	5. Spring of seat.
3 Back " "	

There are commonly speaking six different types of the human form, viz ;

1. The normal form.	4. The high-shouldered form.
2. " stooping "	5. " low- " "
3. " erect "	6. " corpulent "
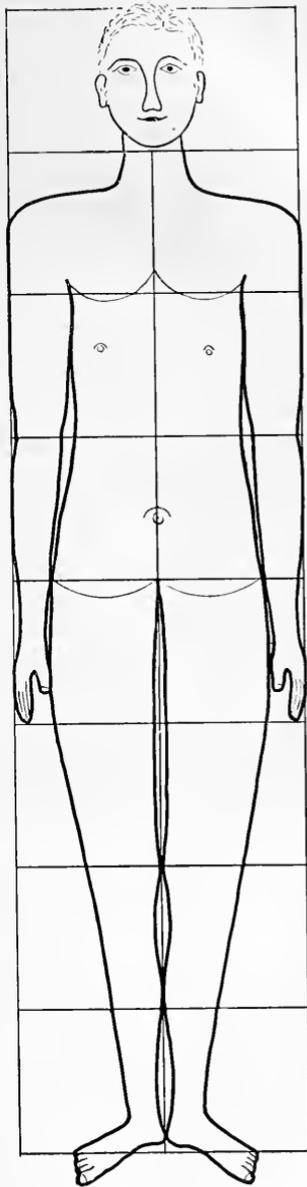
Fig 2   Fig. 3.

The last five of these forms are sometimes found in a decidedly positive degree and are the great stumbling blocks of the trade, yet these five types are merely a deviation from the proportionate or normal type, the foundation of garment cutting and are governed by the same laws as the normal form.

THE NORMAL FORM.

A well-proportioned man, when stretching out his arms, will be of the same length from tip to tip of his fingers that he is from the crown of his head to the soles of his feet.   Dividing this into eight parts, the same as we do the height, we find that from tip of fingers to wrist we have one part, from wrist to elbow two parts, elbow to end of shoulder blades three parts, and from this point to centre of body we have four parts.

The distance from centre of body to arm-socket, on each side, gives us the widths of the parallellopiped man is enclosed in, which is exactly half of his breast measure (see fig. 4), from which we obtain the following table of proportions of height to breast measure:

Height, Feet and Inches.	Skin Measure over Breast.	Two Inch Allowance for Clothing.	Natural Waist Length.	Height, Feet and Inches.	Skin Measure over Breast.	Two Inch Allowance for Clothing.	Natural Waist Length.
5. 4	32	34	16	6. 3	$37\frac{1}{2}$	$39\frac{1}{2}$	$18\frac{3}{4}$
5. 5	$32\frac{1}{2}$	$34\frac{1}{2}$	$16\frac{1}{4}$	6. 4	38	40	19
5. 6	33	35	$16\frac{1}{2}$	6. 5	$38\frac{1}{2}$	$40\frac{1}{2}$	$19\frac{1}{4}$
5. 7	$33\frac{1}{2}$	$35\frac{1}{2}$	$16\frac{3}{4}$	6. 6	39	41	$19\frac{1}{2}$
5. 8	34	36	17	6. 7	$39\frac{1}{2}$	$41\frac{1}{2}$	$19\frac{3}{4}$
5. 9	$34\frac{1}{2}$	$36\frac{1}{2}$	$18\frac{1}{4}$	6. 8	40	42	20
5.10	35	37	$17\frac{1}{2}$	6. 9	$40\frac{1}{2}$	$42\frac{1}{2}$	$20\frac{1}{4}$
5.11	$35\frac{1}{2}$	$37\frac{1}{2}$	$17\frac{3}{4}$	6.10	41	43	$20\frac{1}{2}$
6. 0	36	38	18	6.11	$41\frac{1}{2}$	$43\frac{1}{2}$	$20\frac{3}{4}$
6. 1	$36\frac{1}{2}$	$38\frac{1}{2}$	$18\frac{1}{4}$	7. 0	42	44	21
6. 2	37	39	$18\frac{1}{2}$				

FIG. 4.

It will be readily seen that proportionate forms are rare, especially above 38 breast size, and although the deficiency in size, according to breast measures, may be at different parts of the body, the distance from armpit to natural waist and even seat line, is so generally correct that it is absolutely necessary in drafting.

THE KEY LINE OF GARMENT CUTTING.

An accepted theory in garment cutting is that in the proportionate or normal form the waist should be four inches less than the breast.

The error of this theory has been fully explained in the proportions of the human form, giving the size of waist one-sixth less than breast,

Its general acceptance, however, proved its having a purpose, which either is not rightly understood or otherwise not deemed of sufficient importance to produce better fitting gatments, and accordingly discarded, and with it the Key Line of Gar-· ment Cutting.

Claims to this title of Key Stone or Key Line, have been theoretically laid by the shoulder or neck point and the waist suppression. I say theoretically, because practically they proved a failure, and to the actual difference between breast and waist which is established by the

RUN OF KEY LINE

alone belongs this title, which it will not alone bear out theoretically ; but the severest test in practice will fully establish its superior rights to this claim.

To prove the error of the theory that four inches should be the difference between breast and waist, for the purposes which it brings about, I shall take the human form proper, as described in the first part of this work (see fig. 5.)

A

B

C   D
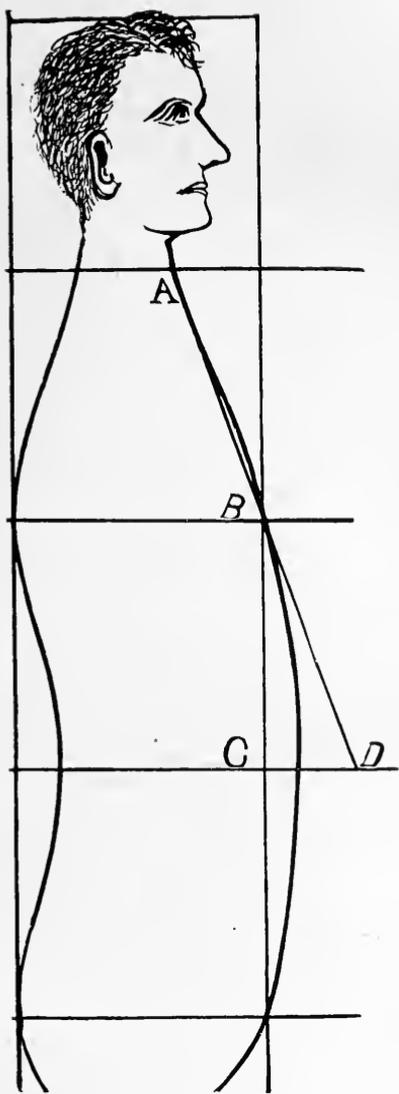
FIG. 5.

Drawing a line from front of neck A through the point of breast line B down to natural waist line, the difference between C, the size of normal waist and D will be one-twelfth of the circumference of the breast, which added to the size of the normal waist, as given in the illustration of Frock Coat (see fig. 8), from dotted line to 4 will give the size of waist necessary to complete the Key Line of Garment cutting, and for the different sizes of breast is as follows :

Breast.	RUN OF KEY LINE.		Breast.	RUN OF KEY LINE.	
	Sack.	Frock.		Sack.	Frock.
30	$27\frac{1}{2}$	26	40	$36\frac{2}{3}$	$35\frac{1}{6}$
31	$28\frac{5}{12}$	$26\frac{11}{12}$	41	$37\frac{7}{12}$	$36\frac{1}{12}$
32	$29\frac{1}{3}$	$27\frac{5}{6}$	42	$38\frac{1}{2}$	37
33	$30\frac{1}{4}$	$28\frac{3}{4}$	43	$39\frac{5}{12}$	$37\frac{11}{12}$
34	$31\frac{1}{6}$	$29\frac{2}{3}$	44	$40\frac{1}{3}$	$38\frac{5}{6}$
35	$32\frac{1}{12}$	$30\frac{7}{12}$	45	$41\frac{1}{4}$	$39\frac{3}{4}$
36	33	$31\frac{1}{2}$	46	$42\frac{1}{6}$	$40\frac{2}{3}$
37	$33\frac{11}{12}$	$32\frac{5}{12}$	47	$43\frac{1}{12}$	$41\frac{7}{12}$
38	$34\frac{1}{6}$	$33\frac{1}{3}$	48	44	$42\frac{1}{2}$
39	$35\frac{3}{4}$	$34\frac{1}{4}$	49	$44\frac{11}{12}$	$43\frac{5}{12}$

In cutting a garment, the Run of Key Line, according to the above table, must be retained, no matter what the form or size of waist may be, that is—

When every point of draft is placed in its normal position the Run of Key Line must be as though the waist was of corresponding size with breast, as per above table, which will form the necessary receptacle for the stomach, whether the same be large or small.

Fig. 6 illustrates the change necessary for a form measuring more than the size of waist formed by Run of Key Line. Point G is Run of Key Line, and K is one-half of amount what waist measures more than that formed by run of Key Line. Draw a line from K through L at breast.

From 3 to E is the same as 1 to F ($\frac{1}{6}$ of breast.).

Form shoulder scye and gorge.

Now fasten pattern at A, B, C and D, draw E to F, where it will be when garment is on the man and we find that 3–4 will fall directly over line 1–2, forming a pocket commencing directly under breast line, and extending downward, increasing between C and G and D and H, locating the extra cloth in the proper place to receive the corpulency.
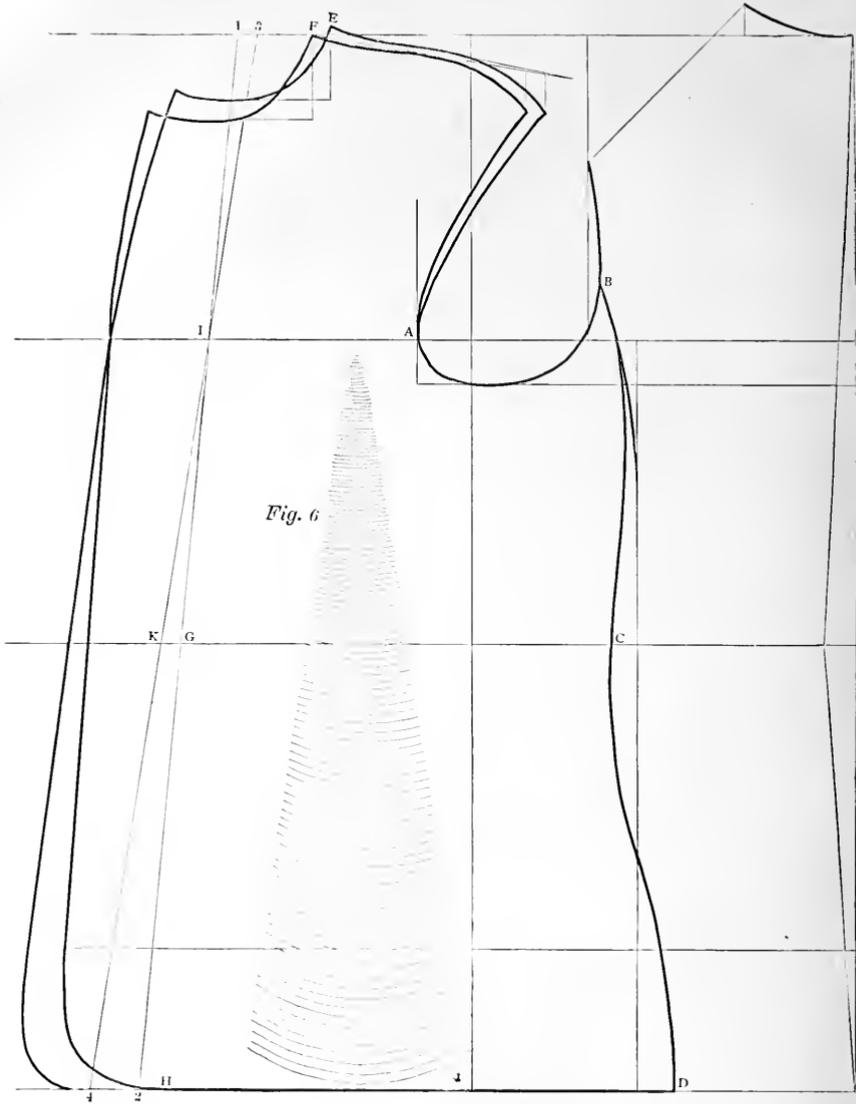
Fig. 6

Fig. 7 is just the reverse.

Where the placing together of points E and F, locating lines 1 and 2 and 3 and 4 directly over each other, produces fulness of cloth between points C–G and D–H to receive the corpulency in Fig. 6—here it is necessary to cut the pattern to reach those points, making a funnel-like receptacle for the stomach.

The accuracy of the measurement as given here and in the table of proportions for trousers may be cause for comment, but as one-twelfth of an inch either way was thought to make it more acceptable, a table of proportions is hereby furnished in forepart of book, based upon this idea.

The extra copy included in each book is intended to be hung or pasted in a convenient place about the cutting board, for reference to insure accuracy. It is customary in Frock Coats to make a fish in forepart, to produce a good form ; when so applied it is equivalent to the waist measure being that much less than amount given in table of proportions, and whereas this is a general rule and an advisable one, a basis of 1½ inches less than Sack has been given for Frock, allowing the fish to be ¾ inch, with seams included.

Fig. 7
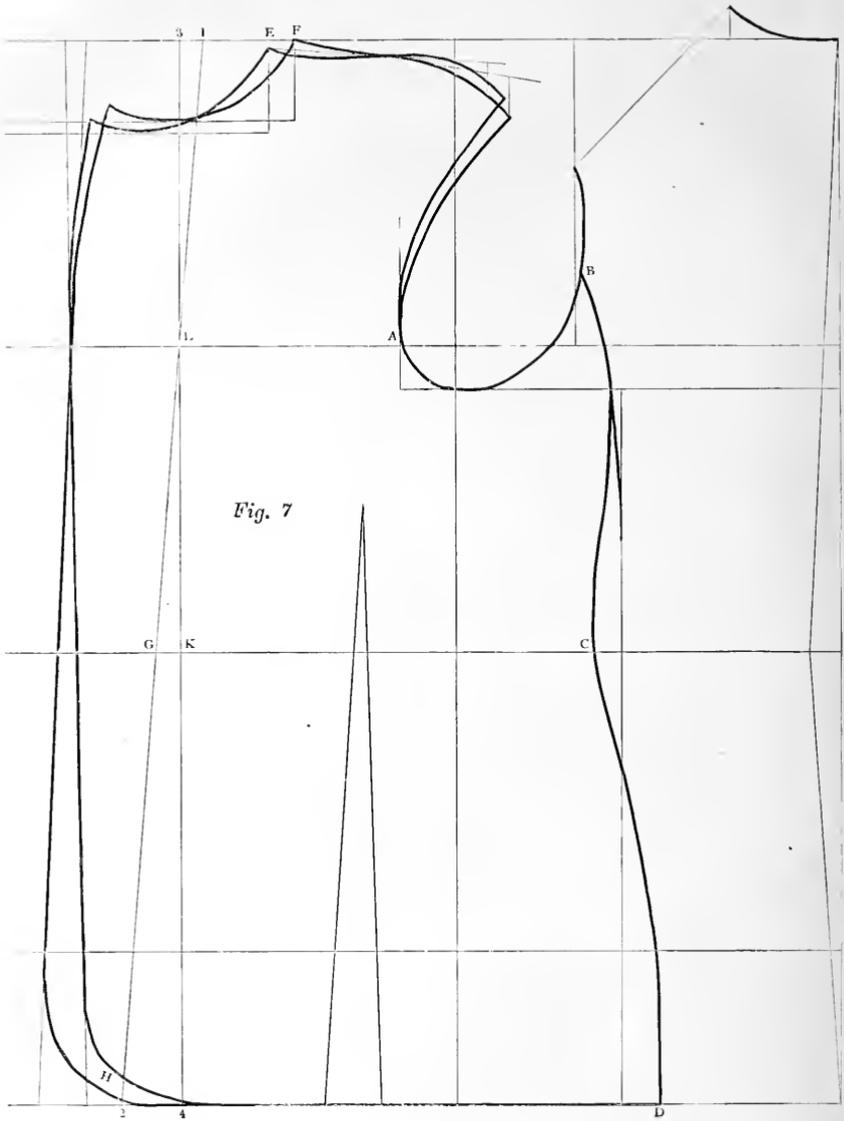
PROPORTIONATE DRAFTS.

FROCK COAT.

(See Fig. 8.)

To produce a correct draft for any form, whether proportionate or dispropor-
tionate, two things are absolutely necessary—a perfect balance and accurate cor-
respondence of proportions on draft with those of form. The principle of balance
having been explained, we proceed to obtain the accurate correspondence of pro-
portions on draft with those of form, as follows :

To obtain the length measures use skin measure, from the fact that although
taking a man's measure with his clothes on materially enlarges his breast size over
that of the skin measure, this does not lengthen his proportions. and considering
2 inches a fair average allowance for clothing, we draft the lengths on a scale 2 inches
less than breast.

Example: For a 36 breast use 34 in. lengths; 36 in. widths. For 40 breast,
use 38 in. lengths, and 40 in. widths.

Square lines A A A.

A to C is $\frac{1}{2}$ natural waist (skin measure.)

C to D is $\frac{1}{3}$ natural waist (skin measure.)

D to F is $\frac{1}{12}$ of breast for fashionable waist.

D to E is $\frac{1}{2}$ natural waist (skin measure.)

A to 10 is full length.

C to 1 is $1\frac{1}{4}$ inches always.

Square across from C D F and E.

Square halfway across from I.

C to Y is $\frac{2}{3}$ of breast less $\frac{1}{12}$.

Square up and down from Y.

[This constitutes the balance line.]

Y to H is $1\frac{1}{2}$ inches.

Square up from H and down to line I.

Y to K on line C, $\frac{1}{6}$ of breast.

Square up from K,

K to N is $\frac{1}{2}$ of proportionate waist on 3rds.

[See table of proportionate waist.]

N to L is $\frac{1}{16}$ of breast.

N to M is $\frac{1}{8}$ "

D to S is $\frac{1}{24}$ "

D to T is $\frac{1}{6}$ "

Balance line to O is $\frac{1}{3}$ of breast.

O to P is $\frac{1}{4}$ of breast.

R to R is $\frac{1}{24}$ "

Balance line to 7 is $\frac{1}{12}$ of breast.

7 to 8 is $\frac{1}{3}$ of breast.

Square up from P.

A to U is $\frac{1}{6}$ of breast.

U to V is $\frac{1}{24}$ "

Draw a line from A to S.

Shape back as represented.

B is halfway between V and N.

Shape side seam, reducing a large seam at scye, touching back line at C, then gracefully through O through 8.

Balance line to W is $\frac{1}{24}$ of breast.

W to X is $\frac{1}{6}$ of breast.

To obtain the proper location of the so-called shoulder point and height of shoulder, measure from A to point of intersection of balance and natural waist lines, and apply less width of back, less $\frac{1}{2}$ inch from A to U on line X for location of shoulder point, and from B to same point without deduction, and apply same measure on line W. Draw slope of shoulder through these two points.

Width of shoulder of forepart is same as back $\frac{1}{3}$ of breast as to *.

Square down $\frac{1}{16}$ of breast as to 13.

Shape shoulder as from 13.

     "   scye   "   13.

     "   under arm seam through R R.

Square down from X.

Shoulder point from 14 is $\frac{1}{8}$ of breast.

Square out from 14.

C to 1 is $\frac{1}{2}$ of full breast.

Advance square $\frac{1}{12}$ of breast with short arm down and mark on natural waist line, as at 4.

Draw line through these two points forming the Key Line, which on line A must be exactly $\frac{1}{8}$ of breast from X.

4 to 2 is $\frac{1}{12}$ of breast.

2 to 3 is $1\frac{1}{2}$ inches or allowance for seams.

End of gorge 9 is $\frac{1}{4}$ of breast from X.

Key Line to Z on line 14 is $\frac{1}{12}$ of breast and $1\frac{3}{4}$ inches.

Draw a line from Z to 3.

Make lapel desired width.

Finish as represented.

In explanation of the second requisite, an accurate correspondence of proportions on draft with those of form, see fig. 8.

We commence with the base line from which we build and proceed to the line which is exactly half of the size for which we wish to draft the pattern (see dotted line). We next obtain the perpendicular balance line, $\frac{1}{3}$ less $\frac{1}{24}$ of the rectangular cube the body is contained in, which, in drafting by the ordinary division square, is $\frac{2}{3}$ less $\frac{1}{12}$ of the breast size we want.

The length measures are fully explained at beginning of draft.

The proportion of the neck is $\frac{3}{8}$ of breast. Measuring from A to U and X to dotted line, which is amount covering the neck, we find this to be exactly $\frac{3}{8}$ of the breast size, the amount required.

The breast line is, of course, the full width.

The proportion of the waist is $\frac{1}{6}$ less than breast.

Measuring from S to T, O to R, and R to dotted line, gives the exact proportion of the proportionate waist, which is $\frac{1}{6}$ less than breast; the fish taken out to give

shape to the forepart is not to be taken in consideration here, as due allowance is made for that in drafting.

The seat line is again the full width, without any deduction, as it is the same size as breast. The proportion of the scye is $\frac{1}{2}$ of waist size, and is oblong in shape.

To obtain the accurate size of scye, corresponding with the breast measure, we take the cube containing waist reduced to $\frac{1}{2}$ and place in oblong shape.

This is done by marking the distance from line K—$\frac{1}{2}$ of proportionate waist, on fourths back of Y—up to line N, $\frac{1}{2}$ of proportionate waist, on thirds of ordinary division square, and concludes the explanation of accurate correspondence of proportions on draft with those of form.

Fig. 8
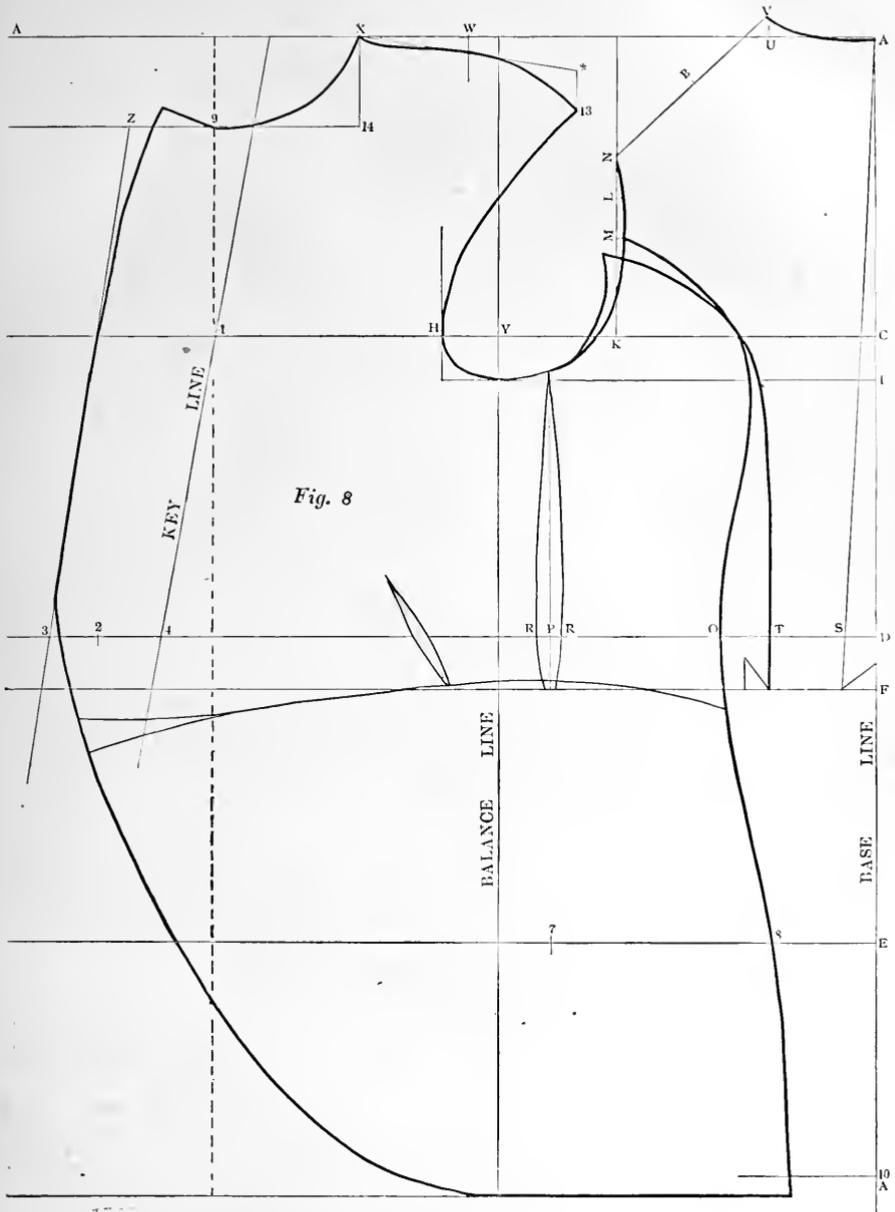
SACK COAT.

(See Fig. 9.)

Obtain measures for lengths and widths same as in Frock Coat.

Square lines A A **A.**

A to C is $\frac{1}{2}$ natural waist (skin measure.)

C to D is $\frac{1}{2}$ "   "   "

D to E is $\frac{1}{2}$ "   "   "

A to A is full length.

C to I is $1\frac{1}{4}$ inch always.

Square across from C D **E** A.

Square halfway across from I.

C to Y is $\frac{2}{3}$ of breast less $\frac{1}{12}$.

Square up and down from Y.

    [This constitutes the balance line.]

Y to H is $1\frac{1}{2}$ inches.

Square up from H and down to line I.

Y to K is $\frac{1}{6}$ of breast.

Square up from K.

K to N is $\frac{1}{2}$ of proportionate waist on 3rds.

N to L is $\frac{1}{16}$ of breast.

N to M is $\frac{1}{6}$ "

Balance line to 8 is $\frac{1}{24}$ of breast.

8 to O is $\frac{1}{6}$ of breast.

Balance line to 7 is $\frac{1}{24}$ of breast.

7 to 9 is $\frac{1}{4}$ of breast.

D to S is $\frac{1}{24}$ "

D to T is $\frac{1}{3}$ "

Balance line to W is $\frac{1}{12}$ of breast.

W to X is $\frac{1}{6}$ of breast.

A to U is $\frac{1}{6}$ "

U to V is $\frac{1}{24}$ "

Fig. 9

Shape back as represented.

B is halfway between V and N.

Shape side seam, reducing a seam at scye. touching back line at C, then through 9 to bottom.

For location of shoulder point and height of shoulder, measure from A to intersection of balance and natural waist lines, and apply less width of back, less $\frac{1}{2}$ inch on line X and from B to same point, and apply same measure without deduction on line W.

Draw slope of shoulder through these two points.

Width of shoulder of forepart is same as from V to N, $\frac{1}{3}$ of breast.

Square down $\frac{1}{16}$ as to 13.

Shape shoulder as from 13.

"   scye   "   "   13.

"   under arm seam.

Square down from X

X to 14 is $\frac{1}{8}$ of breast.

Square out from 14.

C to 1 is $\frac{1}{2}$ of full breast.

Advance square $\frac{1}{24}$ of breast, with short arm down, and mark on natural waist, as at 4.

Draw line through these two points, forming the Key Line.

End of gorge 10 is $\frac{1}{4}$ of breast from X.

Key Line to 2 is $\frac{1}{12}$ of breast and $1\frac{3}{4}$ inches.

4 to 2 is 1 inch for seams.

2 to 6 is $\frac{1}{12}$ of breast.

Draw a line from Z to 6.

Bottom of line to 5 on Key Line is $\frac{1}{24}$ of breast.

Draw a line from 11 to 5.

Make lapel desired width.

Finish as represented.

THE SLEEVE.

To properly join two articles and preserve the harmony of dimensions, it is necessary that they be of the same size and curvature, and which curves must fall in their proper places, or otherwise the harmony of outlines will certainly be destroyed. The coat and sleeve are two articles to which the above rule is to a certain extent applicable, because the purpose of the sleeve being to hold a solid body, hanging perpendicular with coat, necessitates a surplus or fulness which must be forced into a curve of the same dimensions as that to which it is joined, so as not to destroy the necessary harmony, and yet furnish the space required for the body it is intended to contain.

TO DRAFT SLEEVE.

(See Fig. 10.)

The most convenient way to draft sleeve is before cutting pattern and tracing it afterwards with tracing-wheel. This assures a sleeve to correspond with the shape of scye.

A to H is $\frac{1}{24}$ of breast.

L to D is $\frac{1}{6}$ " less $\frac{1}{24}$.

L to E is $\frac{1}{12}$ "

L to J is $\frac{1}{6}$ "

F to G is $\frac{1}{24}$ "

Shape from D through $\frac{1}{2}$ inch below point of back seam touching point J to A.

Shape from E through G touching $\frac{1}{4}$ inch above line Y to A.

Extend line A.

B on line A to C is $\frac{1}{24}$ of breast.

Draw a line from A through C.

Square by line C and point Y to P for inside length.

P to R is 1 inch.

P to S is desired width of bottom and $\frac{1}{2}$ inch, with seams added.

P to T is desired width of bottom less $\frac{1}{2}$ inch, with seams added.

Square down from D to natural waist line, K.

Square down from E to natural waist line, M.

Draw a line from K to S and M to T.

Finish as represented.

These drafts of the Frock Coat, Sack Coat and Sleeve, constitute the funda-

mental drafts essential in garment cutting, and must be thoroughly mastered, for no matter what kind of garment may be desired they must emanate from the funda-mental principles contained in these drafts.
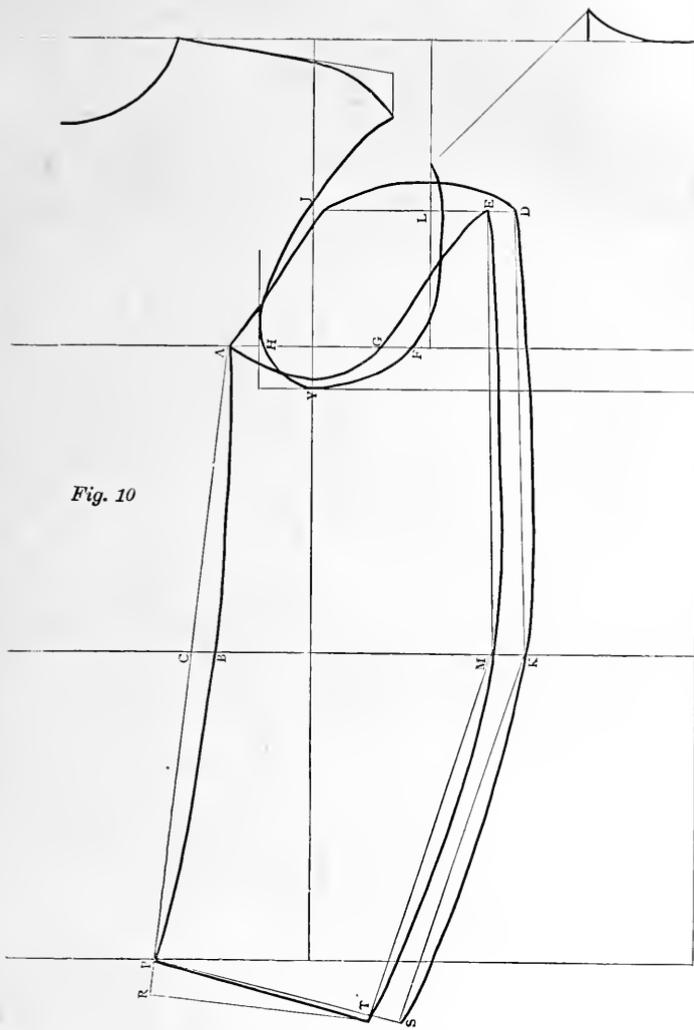
Fig. 10
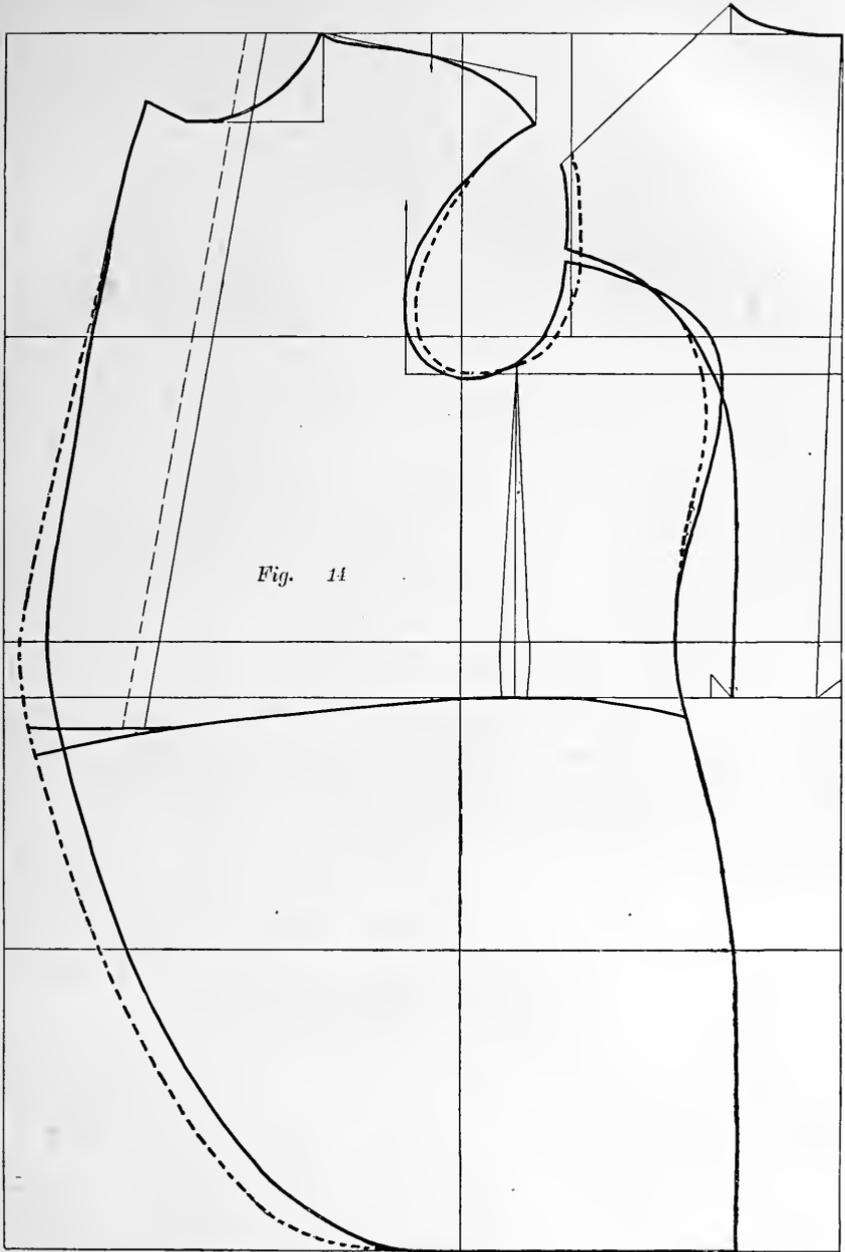
Fig. 14

THE ERECT FORM.

The erect form is but the reverse of the stooping form just described, causing a shorter scye front from base line, a smaller indentation at waist and larger spring of seat. The waist indentation and spring of seat are, as in the stooping form, the same distance from balance line as in the normal type. (See figures 15 and 16.)

Fig. 15

LINE

BALANCE

BASE LINE

Fig. 16

LINE
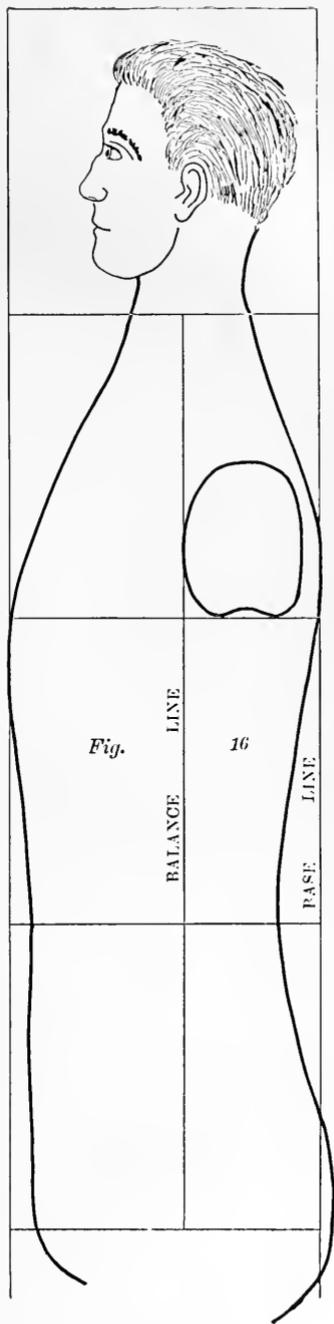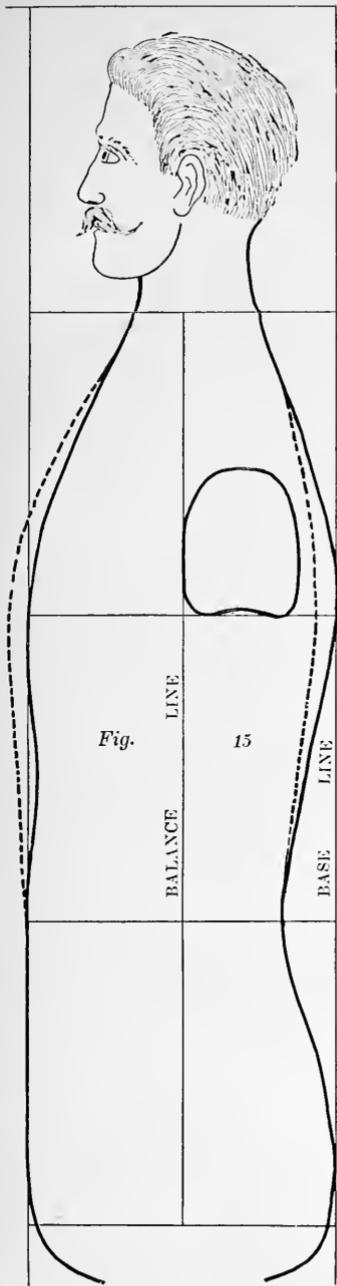
BALANCE

BASE LINE

Fig. 17 represents a pattern for an erect form, with dotted lines showing where balance line would be in normal form.
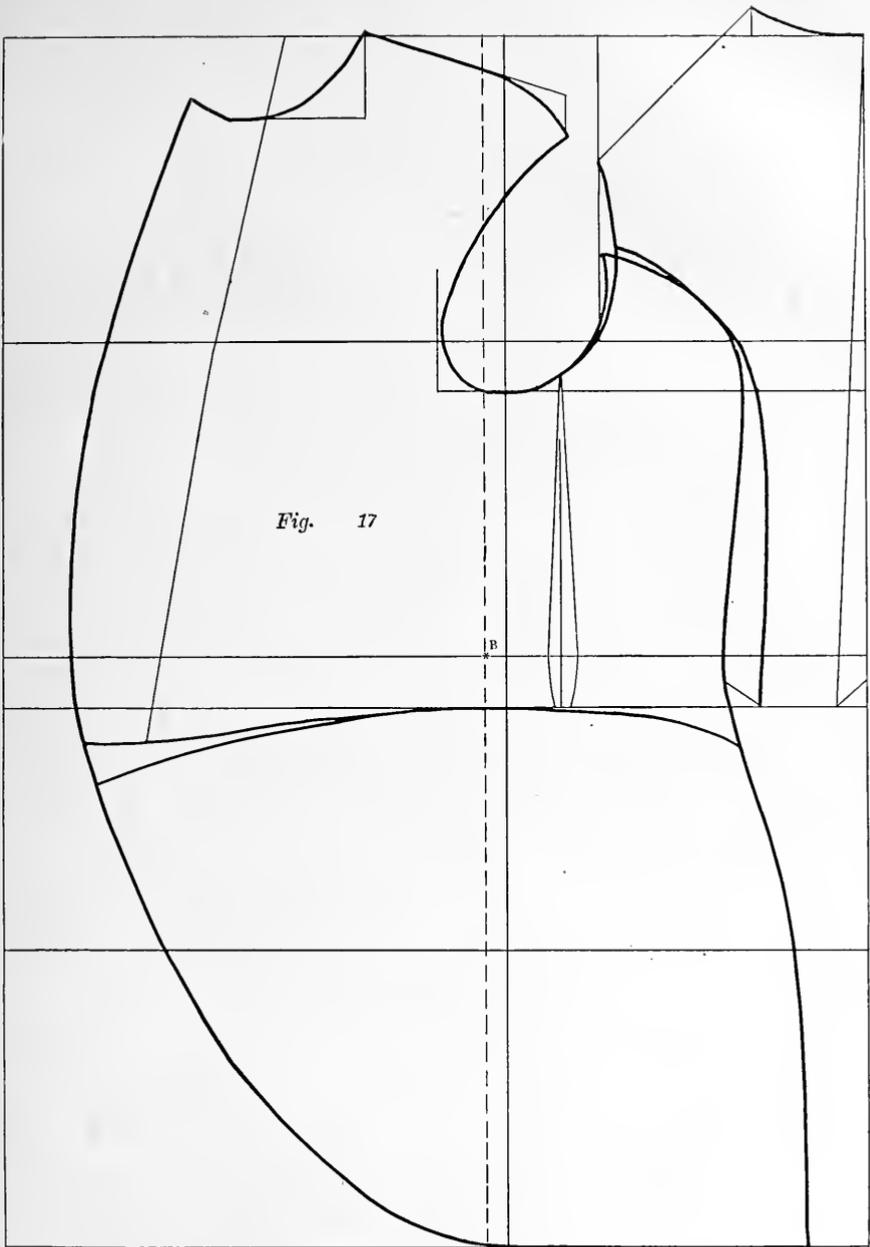
Fig. 17

Fig. 18 represents this pattern laid with balance and base lines on a proportionate pattern.

This produces a narrower blade and larger breast as required by figures 15 and 16 describing the erect form.
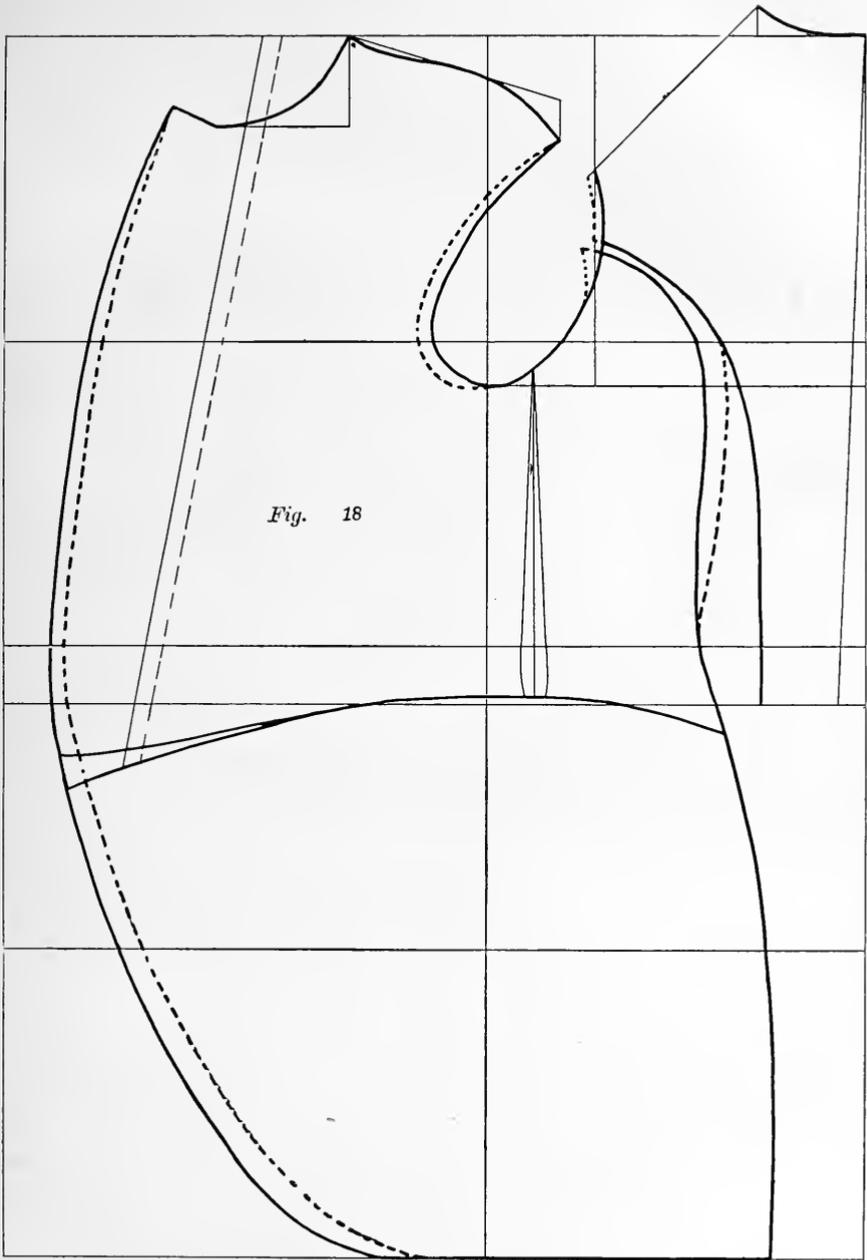
Fig. 18

THE HIGH-SHOULDERED FORM.

(See Fig. 19.)

The deviation of the high-shouldered form from the normal type is merely in the distance from the crown of head to the armpit, or more distinctly a shorter neck.

PART II.

Part II.

DISPROPORTIONATE FORMS.

THE KEY LINE IN DISPROPORTIONATE FORMS.

Whereas the Run of Key Line forms a basis of size of waist on a normal pattern, it follows that with the changes caused in the pattern by the disproportion a change in this part of the pattern ensues also, but the perfectly natural manner in which this change is brought about makes it very easy to understand.

In the stooping form where the enlarging of the blade gives us a larger waist suppression, we find that the exact amount which the blade is larger than in the normal blade is taken from the size of waist, for instance, where the size of waist in a 36 breast is 33, in the stooping form where the blade is $\frac{1}{2}$ inch larger, which increases the normal waist suppression, the amount covered is $\frac{1}{2}$ inch less than in normal pattern making the waist 32 inches.

In the erect form where the blade is $\frac{1}{2}$ inch smaller, which lessens the normal waist suppression, the amount covered is $\frac{1}{2}$ inch larger than normal pattern making the waist 34 inches.

The easiest way to obtain this is when marking the breast size advance $\frac{1}{2}$ for Frock, $\frac{1}{4}$ for Sack, and mark this point at natural waist line, when this and point of width of breast will form the Run of Key Line, which is enlarged or decreased from the table of proportions, according to the enlargement or decrease of blade, and in which the following rules, when committed to memory, will be of great assistance.

I.

When balance line advances from normal balance line, the waist size on draft, according to table of proportions, *gets smaller.*

II.

When balance line recedes from normal balance line, the waist size on draft, according to table of proportions, *gets larger.*

III.

When waist size actually required is larger than that obtained as above on draft, the shoulder point recedes and Key Line advances $\frac{1}{2}$ the amount that waist is larger.

IV.

When waist size actually required is smaller than that obtained as above on draft, the shoulder point advances and Key Line recedes $\frac{1}{2}$ the amount that waist is smaller.

By the Key Line we also prove the draft, and in disproportionate drafts it must differ from the $\frac{1}{8}$ of breast to X as much as the difference from normal to actual balance line.

THE STOOPING FORM.

A disproportionate form is but a deviation from the proportionate or normal type, and must be governed by the same laws as the normal type.

The solid lines of Fig. 11 represents the normal type or foundation of garment cutting ; the broken lines represent a stooping form.

The deviation in the stooping form is the enlargement of the shoulder blade at expense of the chest, leaving all other points proportionate and stationary, which produces further scye front from base line, a larger indentation at waist and smaller spring of seat (see fig. 12, which represents broken lines of fig. 11.)

Although front of scye is further from base line than in normal form, the indentation at waist and spring of seat is exactly the same distance from balance line, which it is in the normal form, showing that this part of garment is entirely independent from the upper part (neck to bottom of scye), and governed by laws intended only for that part of garment, from which we derive the following rules:

1st.   Waist indentation exactly alike for all forms.

2nd.   Spring of seat exactly alike for all forms.

Fig. 11

BALANCE LINE

BASE LINE

Fig. 12

BALANCE LINE

BASE LINE
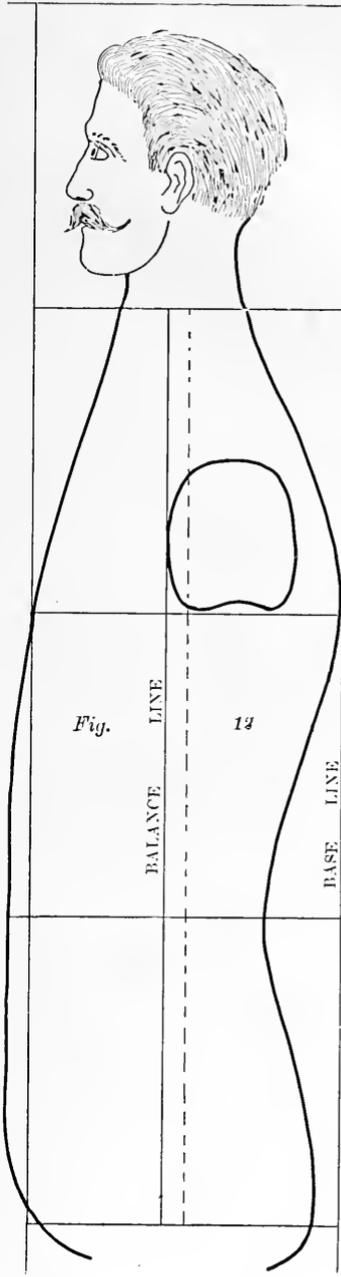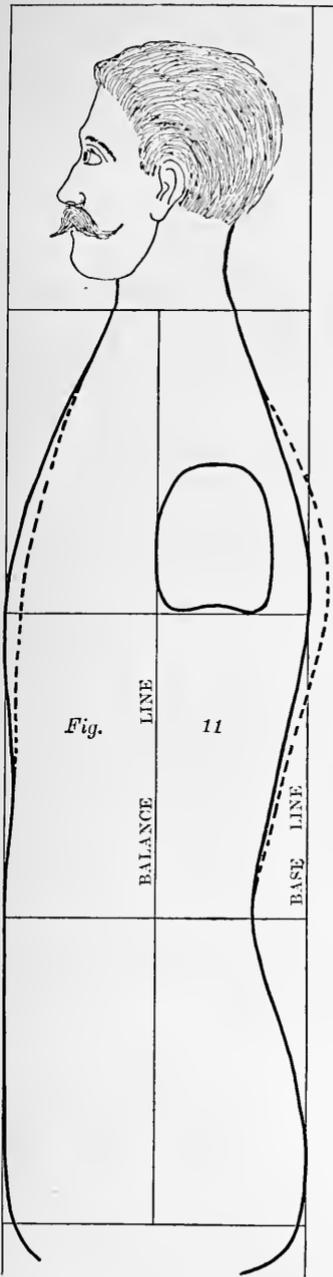
Figure 13. .

Figure 13 represents a pattern for a stooping form.   The dotted line shows the position of the balance line, where it would be in a normal form.   All points are obtained the same as in the draft for the normal type, from the balance line formed by the disproportion of the blade.

The balance of all disproportionate drafts is obtained from the normal balance point—$\frac{2}{3}$ less $\frac{1}{2}$ of breast from base line on natural waist line (see B, fig. 13), regardless of where the actual balance line formed by measures may come.
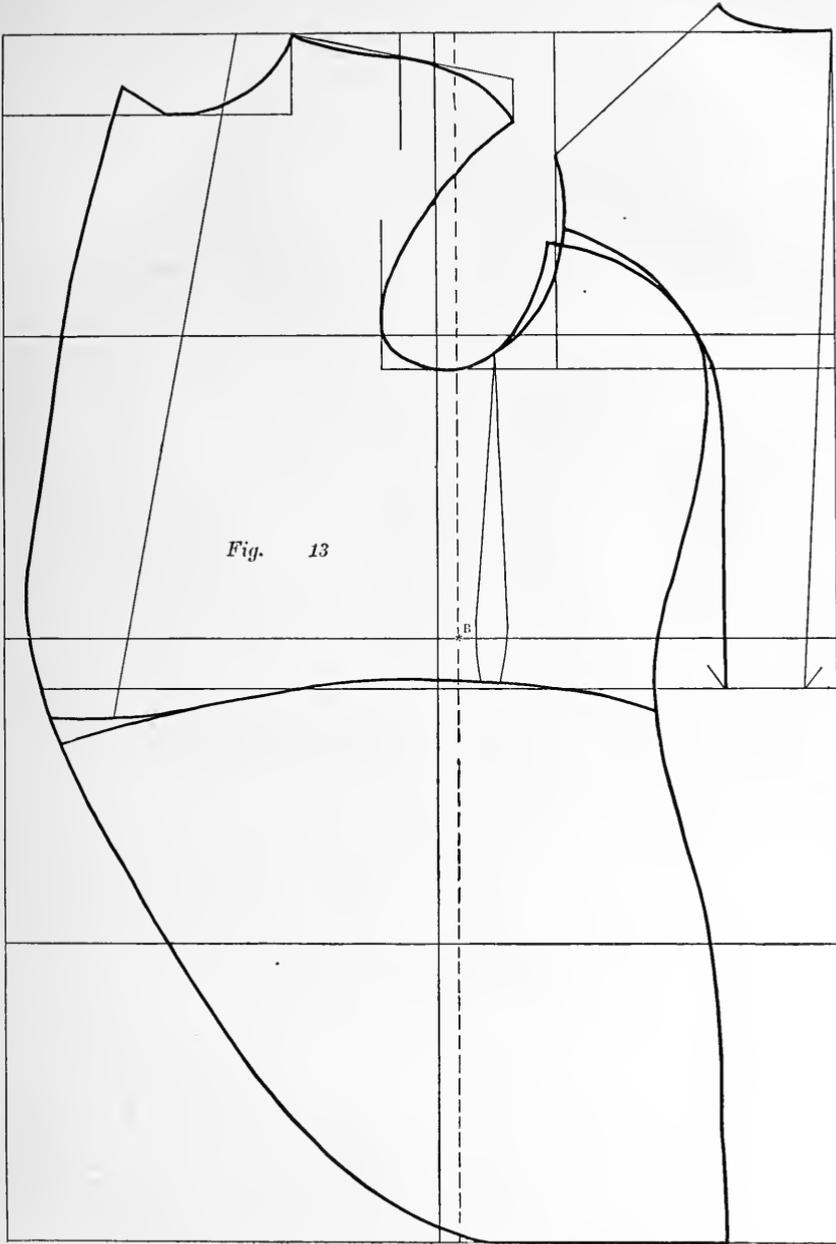
Fig.   13

Fig. 14 represents the same pattern laid with balance and base lines on that of a normal pattern.

The dotted lines showing the normal, the solid lines the stooping form.

This gives us a wider blade, narrower breast, a proportionate waist indentation and spring of seat, as illustrated by Figs. 11 and 12.
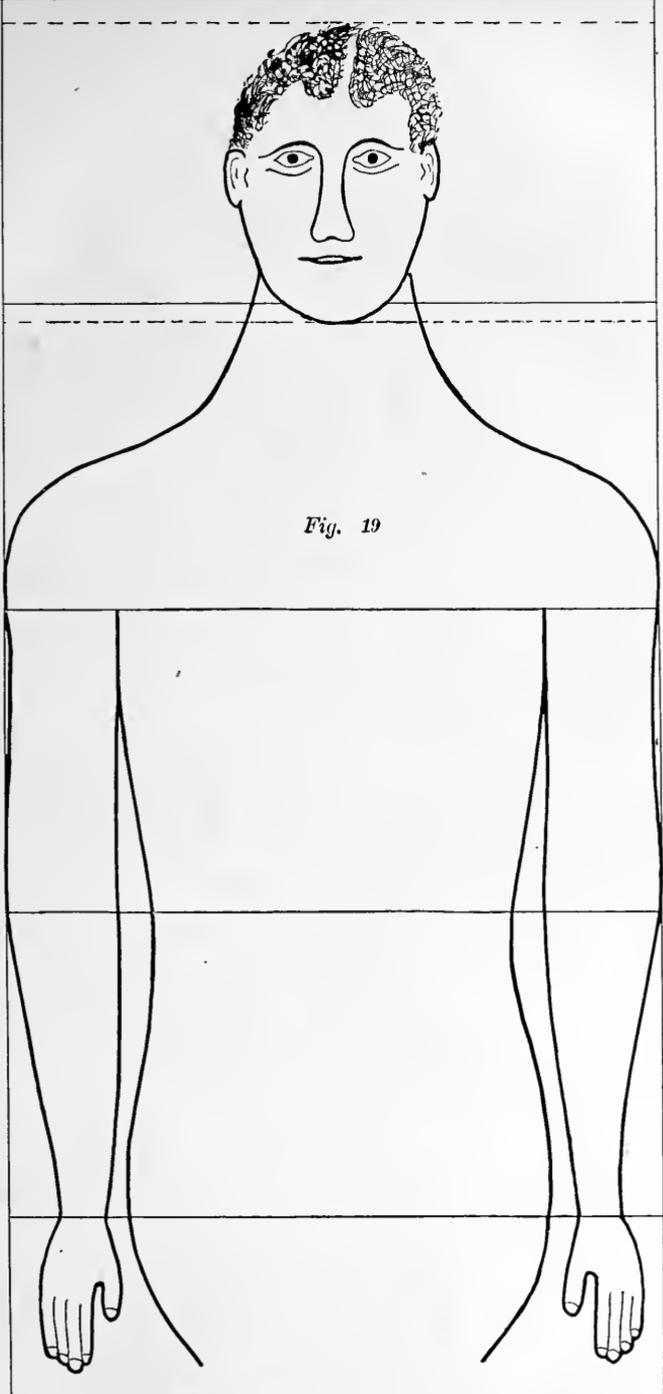
Fig. 19

Fig. 20 shows a normal pattern, changed for a high-shouldered form, the length of back and shoulder being reduced the desired quantity ; all other points as in the normal draft.
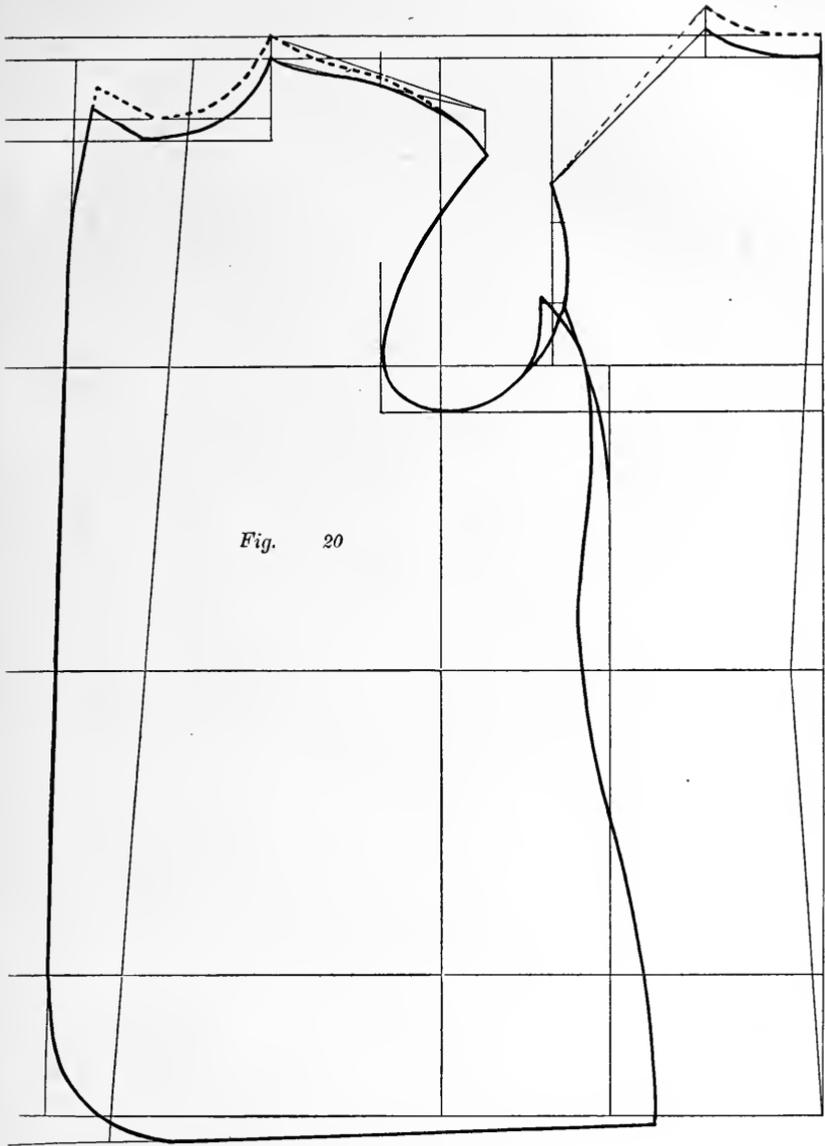
Fig.   20

THE LOW-SHOULDERED FORM.

(See Fig. 21.)

When the deviation in the high-shouldered form is the shortness of the neck in the low-shouldered form, it is the superfluous length that causes the deviation.
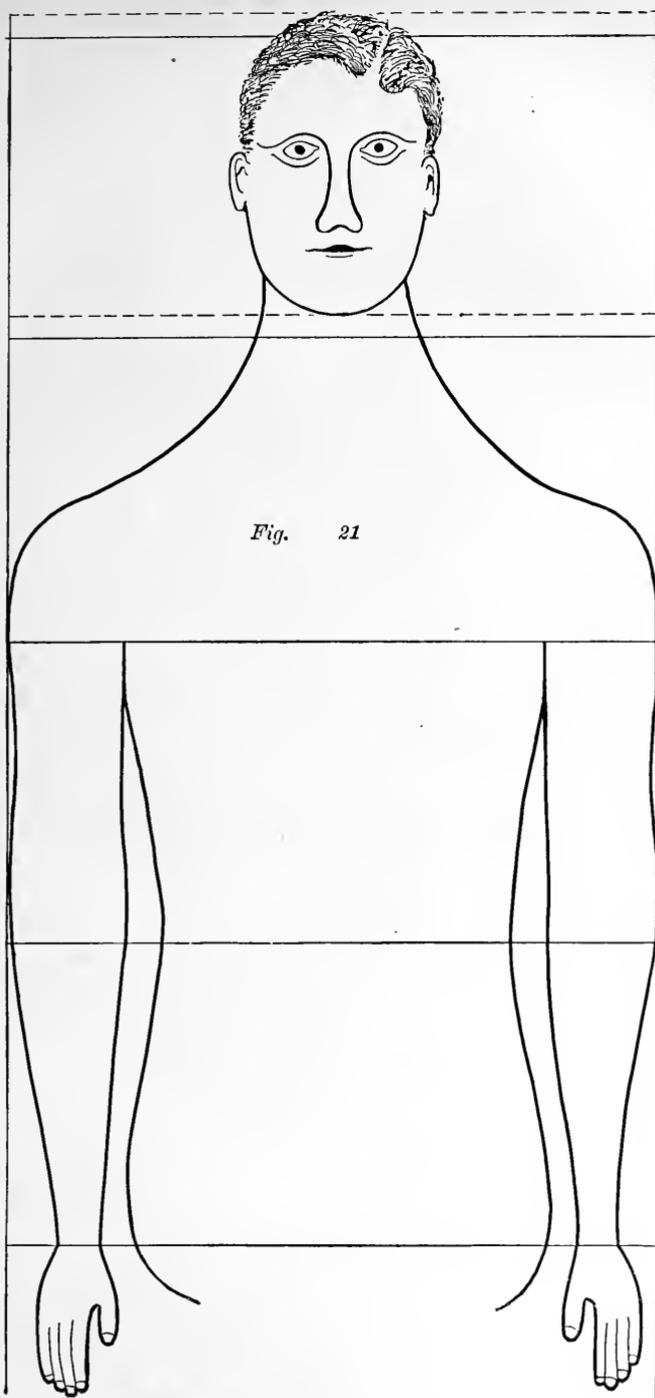
Fig. 21

Fig. 22 represents the changes necessary for a low-shouldered form ; the lengthening of back and shoulder as indicated by the solid lines.
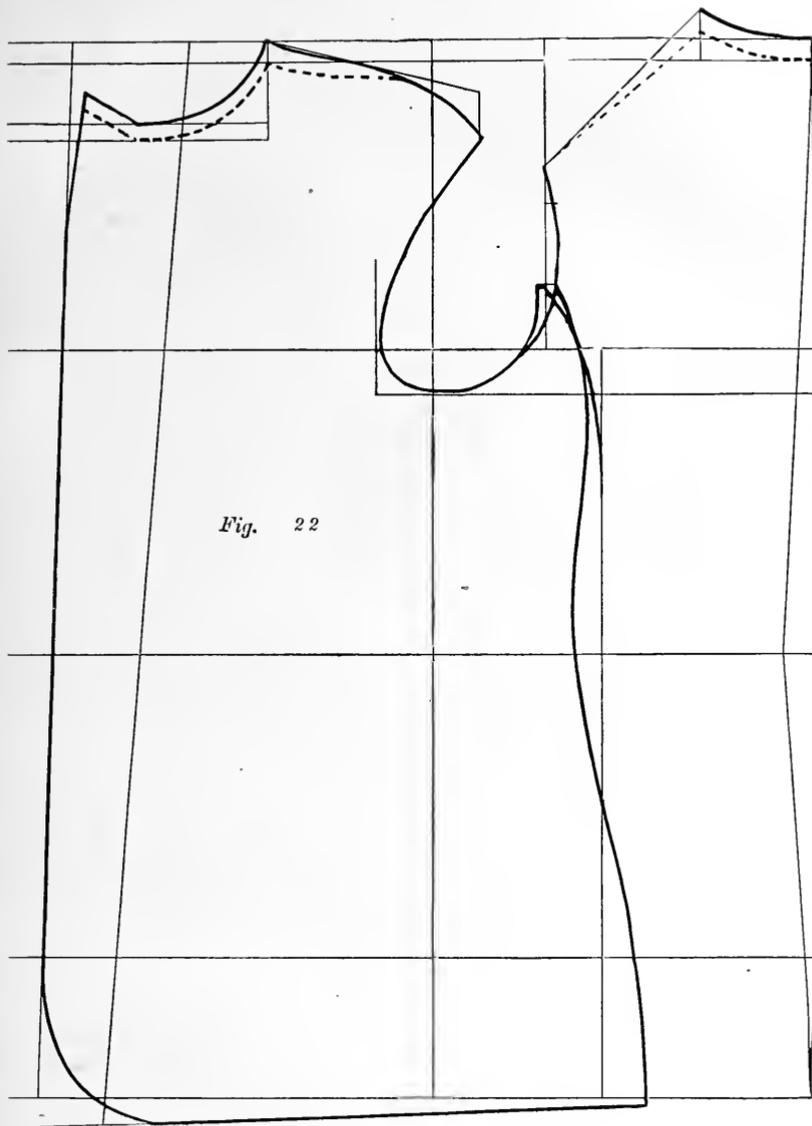
Fig. 22

THE CORPULENT FORM.

There is probably no other form more apt to have ill-fitting garments than the corpulent form.   A common excuse amongst cutters is—a big man wants a big coat.

Nothing more absurd could be invented, as all forms are governed by the same laws as the normal form ; the corpulent form is no exception.

Corpulency proceeds from an unnatural growth of the adipose tissues, which are located about the heart and abdomen ; while the body is. naturally developing in all other parts, about the breast and abdomen the body is developing more rapidly, which makes the disproportion.

In fig. 23 the development of the body, in the back, is on a par with line A, which would be the regular breast line ; the breast having developed unnaturally, however, stands out as indicated by line B.

The breast line B being called into requisition to govern other points of the garment, is the cause of the ill-fit.

Fig. 23

LINE B

LINE A

LINE

BALANCE
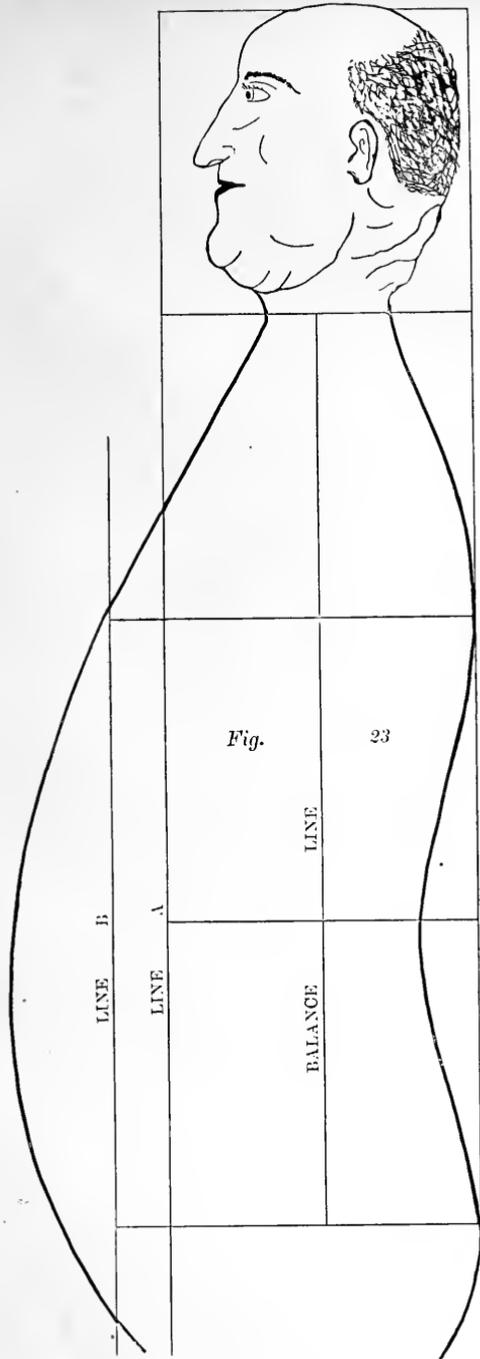
The dotted lines in figure 24 show a pattern of a corpulent form, with breast line B of fig. 23 called into requisition, and is a true illustration of the coat as it would be before it is altered and re-altered, when even then it does not fit.

The solid lines of fig. 24 represent the pattern of the same form. With breast line A called into requisition it is proceeded with the same as in the normal type, until we come to the size of the breast, when the full size, as per breast line in fig. 23, is given.

This will in all instances produce a nice fitting garment.

The question now is how to ascertain the width of breast, as per line A figure 23.

There are many ways, but one of the best is to take your client's measure around the arm at shoulder, which will measure one-half of normal waist, which is one-sixth less than breast, viz.: Suppose your client measures 45 inches around breast ; this is to all appearances very large ; measure his arm at shoulder and you will in all probability have 18 inches close measure ; this would make waist 36 and breast 43 full ; proceed to draft by 43 breast measure, and allow full 45 at breast. You will have a garment satisfactory all around, which it would be impossible to obtain by calling his actual 45 breast measure in requisition.
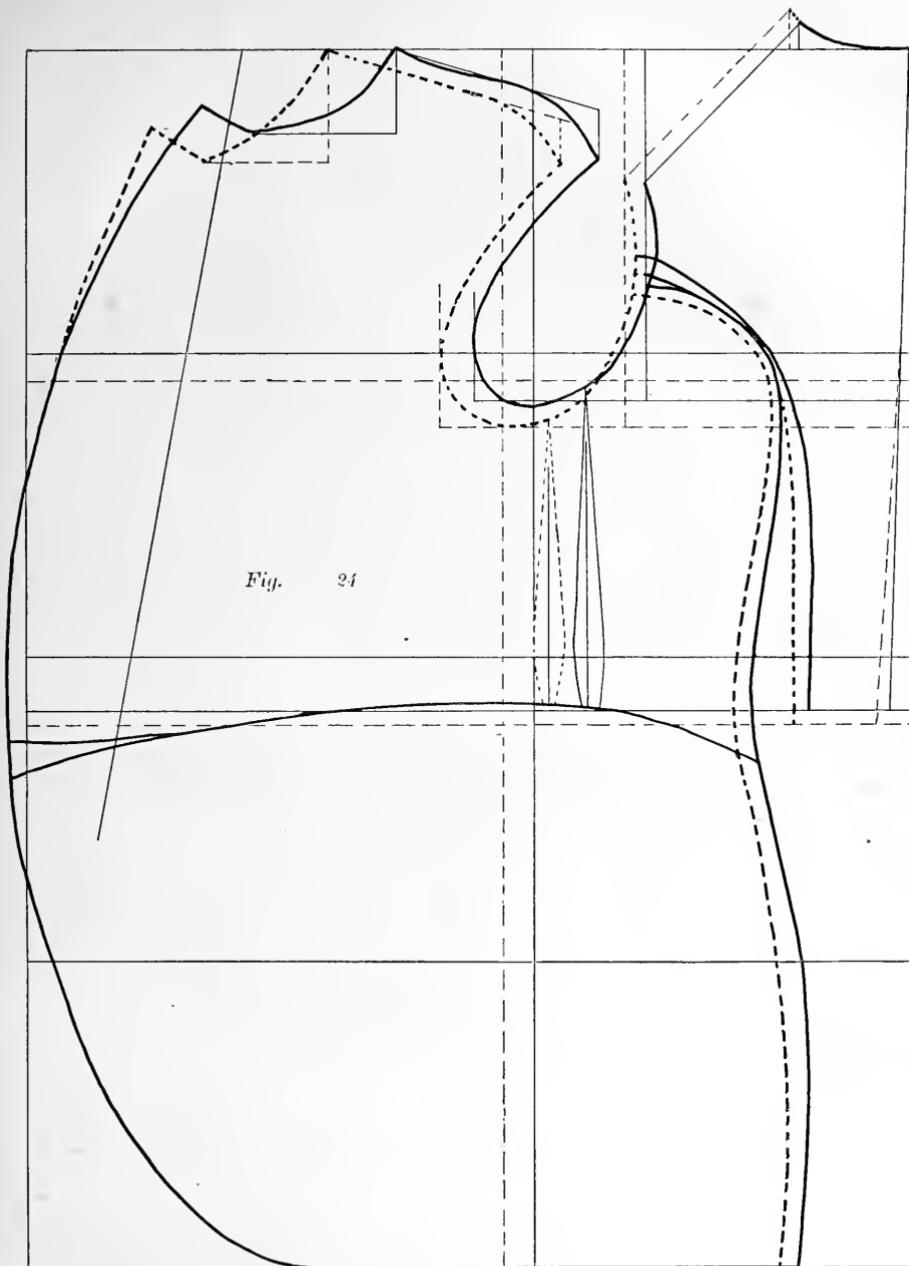
Fig. 24

Fig. 25 represents the different forms, viz. ;   the normal, the erect and corpulent form, within one cube.
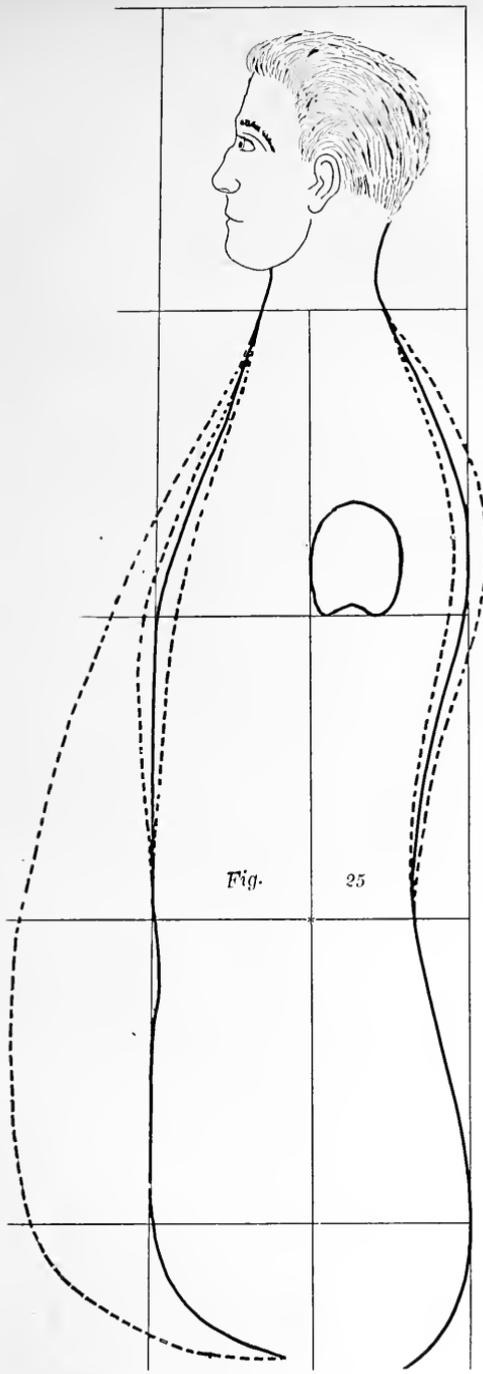
Fig.   25

The following principles and rules are illustrated here as well as in figure 26, which contains drafts for the normal, the stooping, the erect and corpulent forms, viz. ;

That shoulder point is exactly alike for all forms.

That waist suppression and spring of seat is alike for all forms.

It will be well to state here also, that the part of body least deformed in height is from armpit to seat, and consequently the distance from these places are to be used according to the table of proportions, as given in this work ; for instance, where the distance on a 36 breast, from line C to line D, and from line D to line E (see fig. 5), is $8\frac{1}{2}$ inches, so it must be $8\frac{1}{2}$ inches for all forms of 36 breast, short or tall, as the case may be, making the fashionable waist line to suit the size of man.

Fig. 26
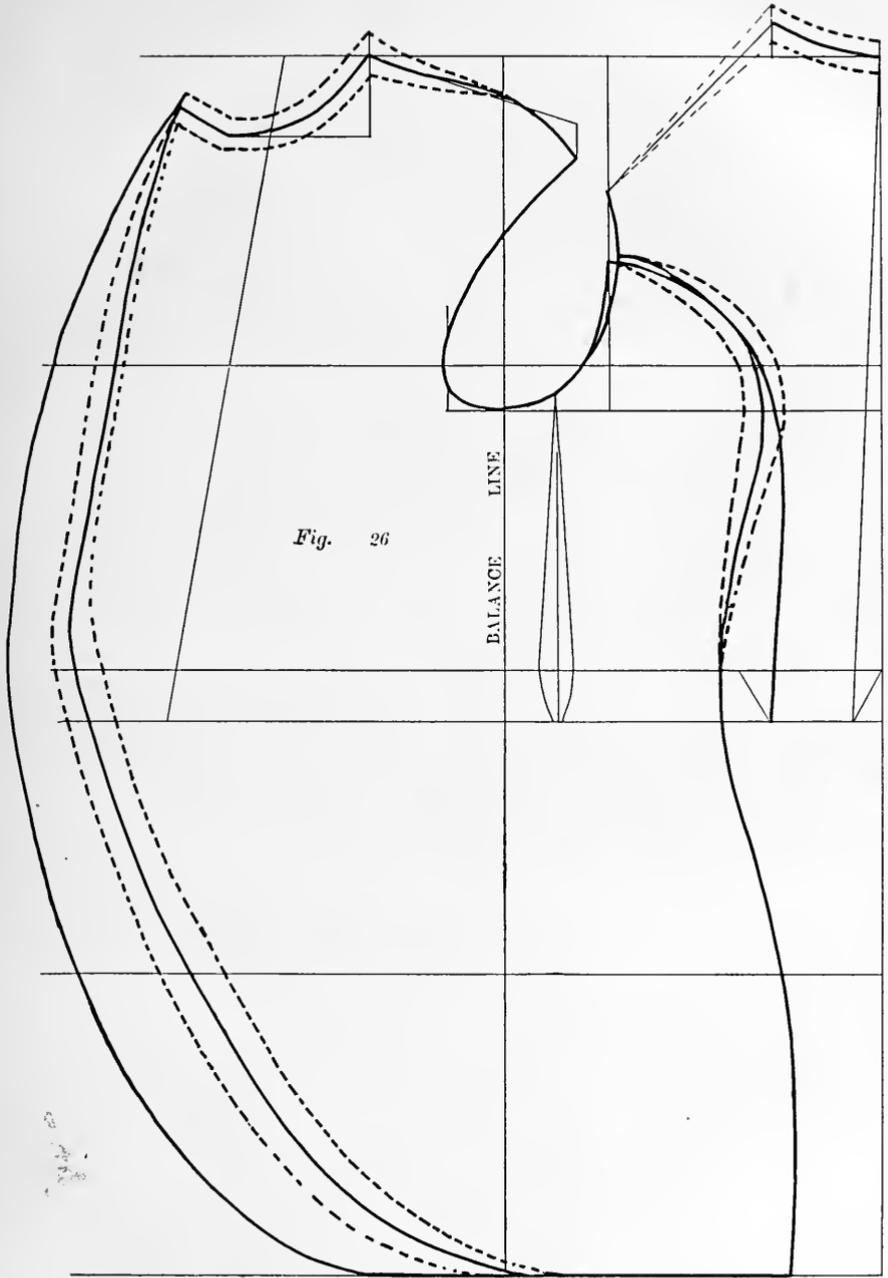
BALANCE LINE

BALANCE OF DISPROPORTIONATE DRAFTS.

It has been asserted in the beginning of Part II. that the balance of all dispro-portionate drafts is obtained from the normal balance point—$\frac{2}{3}$ less $\frac{1}{2}$ of breast from base line on natural waist line, regardless of where the actual balance line, formed by measure, may come.

In proof of this see fig. 27.

The solid lines indicate normal form and cube; the dotted lines the stooping form and cube; the balance line by changing the form has become advanced. Measuring from point A to actual balance line and applying same measure to point C we find it goes above the line of the cube, making this point too long. By marking the balance point its normal distance from D to E, $\frac{2}{3}$ less $\frac{1}{12}$ of breast, and measuring again from point A to this point, E, and applying this measure to C, it comes to exactly on the line of cube, and consequently balances perfectly.

Fig. 28, describing the erect form, is just the reverse. The balance line has receded, and measuring from A to B, and applying to C, causes the measure to fall short. By marking the balance point its normal distance from D to E, and applying the measure A to E, from E to C, this shortage is gained and a perfect balance obtained.

Fig. 27

Fig. 28

PART III.

Part III.

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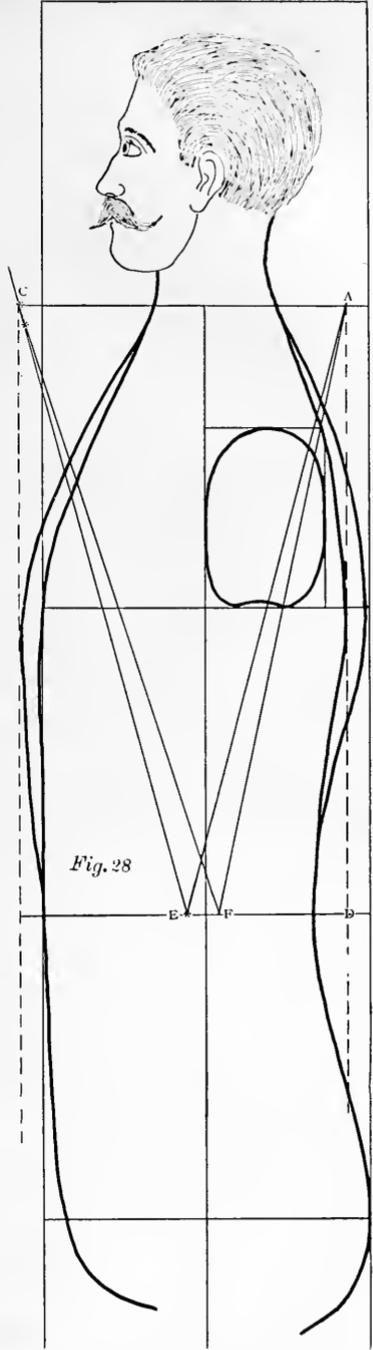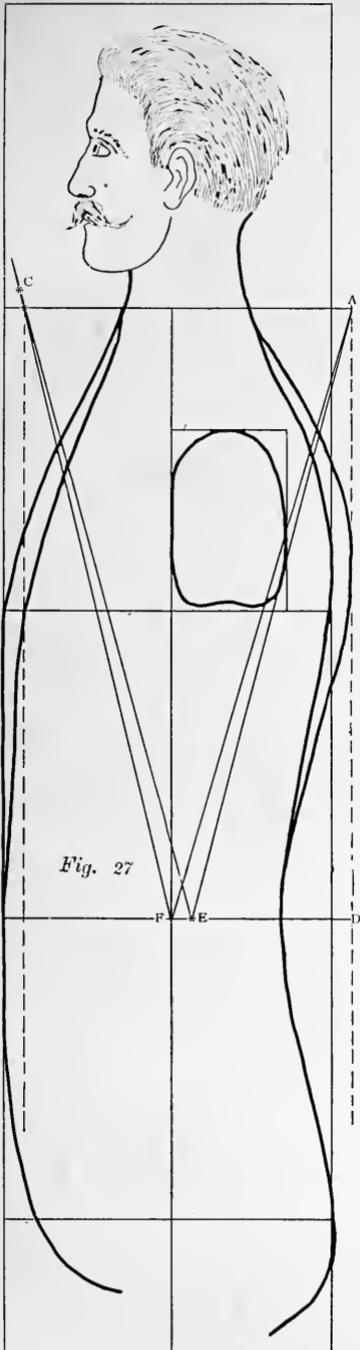
ACTUAL MEASUREMENTS.

The various degrees of the different types of the human form as described in Part II., necessitates the actual measurement of the form to produce a good fitting garment.

These measures to produce the desired results must be correct, for unless they are so they are of no avail, and not only must they be correct, but a thorough knowledge of the application and result of each and every measure is necessary.

Which is the best mode of measuring is an open and unsettled question, considering, however, that we have to reproduce measures taken over an irregular form on a smooth surface, we hold that the shorter and fewer the measures consistent with producing good fitting drafts, the more practicable they are for drafting as well as for illustrating the trifling or glaring deviations from the normal type.

To obtain the aforegoing requirements I use a pliable square, with hook at end to fasten on shoulder while taking blade measure, and marking depth of scye.

(This square may be obtained of the author, and will be sent to any address on receipt of $1.50.)

THE MEASURES.

The measures to be taken are :

    1st.   The inside sleeve length.
    2nd.   Width of blade.
    3rd.   Depth of scye.
    4th.   Fashionable waist.
    5th.   Full length.
    6th.   Breast.
    7th.   Waist.
    8th.   Seat.

In sack coats measure No. 4 is omitted.

HOW TO TAKE THE MEASURES.

Before your client takes off his coat, place square under his arm and note length of sleeve as desired, then request him to take off his coat.

Now raise his arm and place square as close as possible under the armpit, taking care to press the shirt well up under arm and fasten with hook on shoulder (see fig. 29); bend square over blade, holding as level as possible and make cross mark as A at middle of back, on top of square, for depth of scye, and note the figure on square giving the middle of back, which gives the width of blade.

Fig. 29
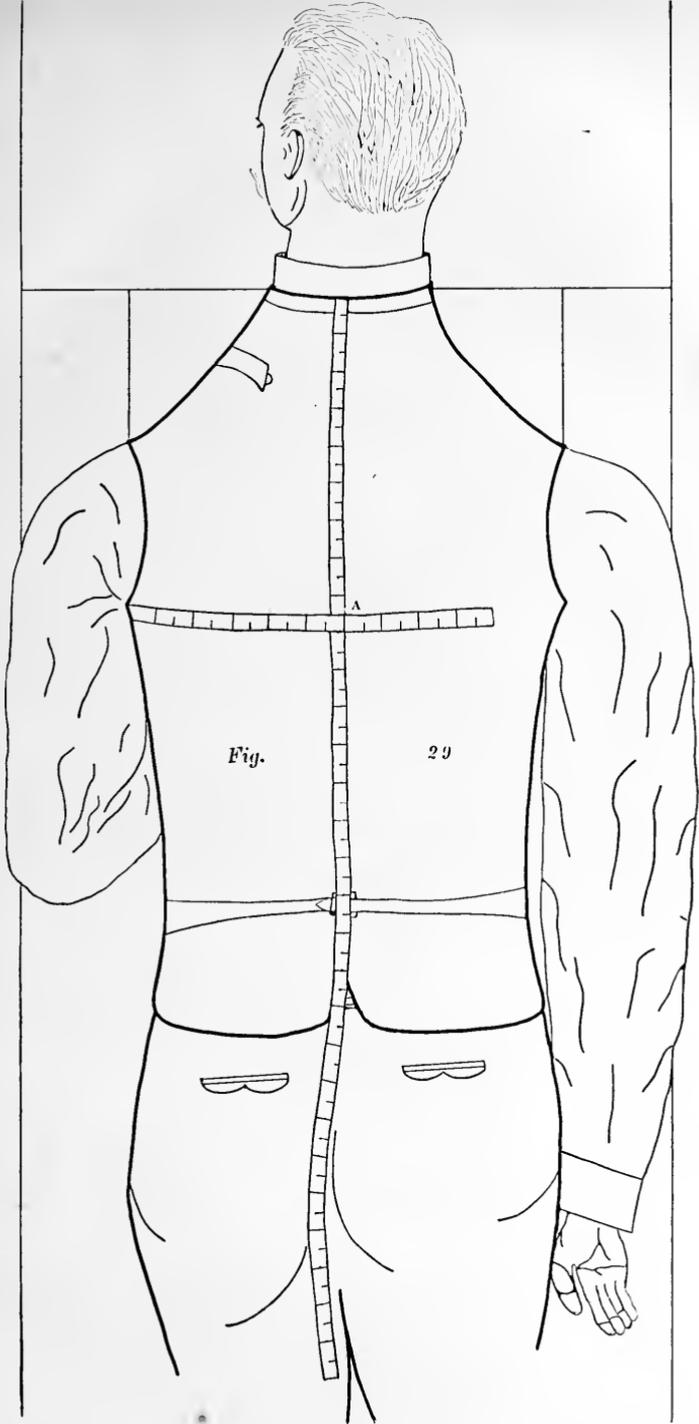
Take off the square and make a mark one inch below desired height of collar, from here measure to mark made on back for depth of scye ; then to fashionable waist ; then full length.   Next take breast (see fig. 30), waist and seat measures, in usual manner, which should be placed in measure book as follows :

$$17 — 10\tfrac{1}{2} — 8\tfrac{1}{2} — 18\tfrac{1}{2} — 33 — 36 — 31\tfrac{1}{2} — 36.$$

TO DRAFT FROM ACTUAL MEASUREMENT.

The first thing to be done in drafting from actual measurement is to use judgment.   The controlling power of the mind over the body renders this an absolute necessity.   All disproportionate forms being but a deviation from the normal type, all patterns for these forms must be only a deviation from the normal pattern, therefore any unreasonable deviation from the balance line of a normal pattern will easily convey the sometimes exultant spirit of the mind in obtaining a new suit, compelling the body to brace up most unnaturally, or again convey the unwillingness to please some reasonable request showing the utter contempt with which the request is granted.

In either of these cases, or any other where the deviation seems unreasonable from some cause or other, it is well to draft a proportionate pattern, and trust to good luck and the customary outlets on the goods, to produce a good fitting garment.
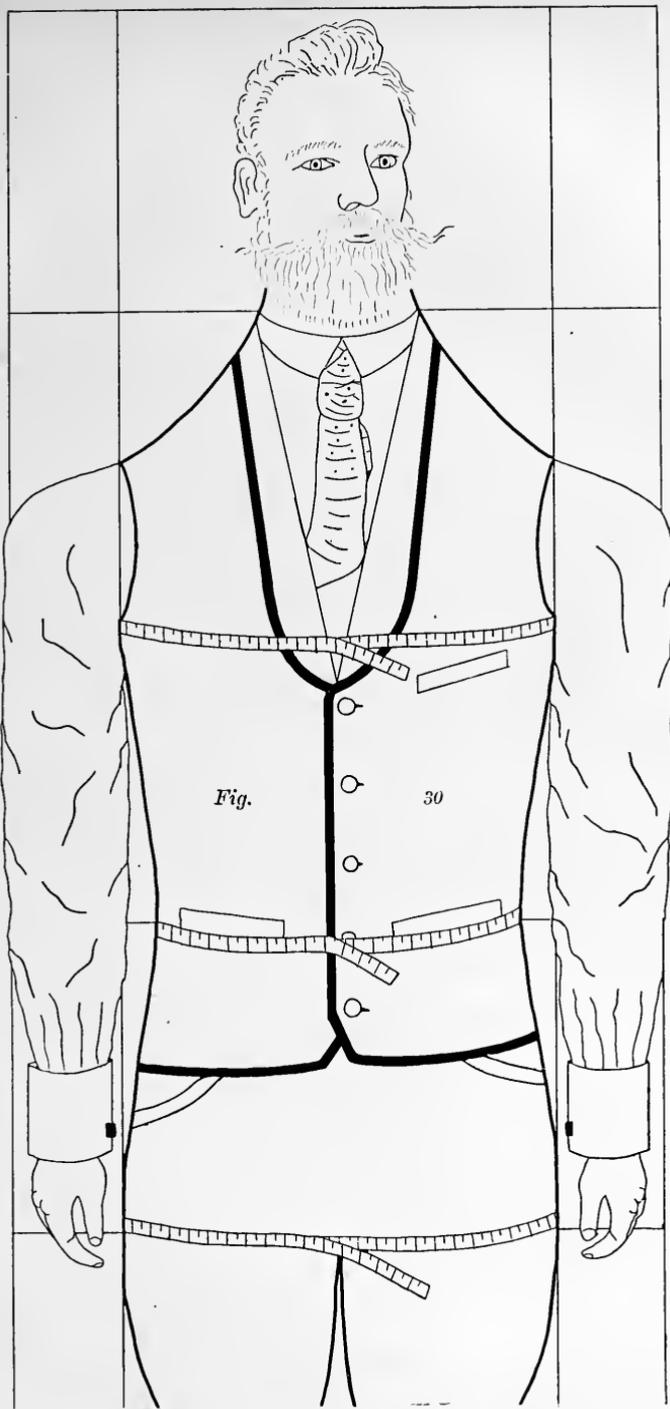
Fig. 30

From following measures :

$$10\tfrac{1}{2}—8\tfrac{1}{2}—18\tfrac{1}{2}—33—36—31\tfrac{1}{2}—36.$$

(Sleeve measure is omitted.)

Proceed with drawing lines, O O O (see fig. 31.)

Mark depth of scye $8\tfrac{1}{2}$ on line O, as at C, and square out from this. Lay $10\tfrac{1}{2}$ on line O and mark on line C; this produces point Y, which square up and down for balance line.

According to the size of blade this line will advance or recede from the normal balance point ($\tfrac{2}{3}$ less $\tfrac{1}{12}$ of breast), and before going further it is well to ascertain whether there is any unreasonable deviation here.

By an unreasonable deviation may be understood any advance or recedence from normal balance line over $\tfrac{1}{12}$ of breast measure.

Having done this, mark natural waist line, same as in normal draft fashionable waist, seat, same as in normal draft, and full length, and square out from each.

Fig.   31

Y   8½ C

10 ½

LINE

BALANCE
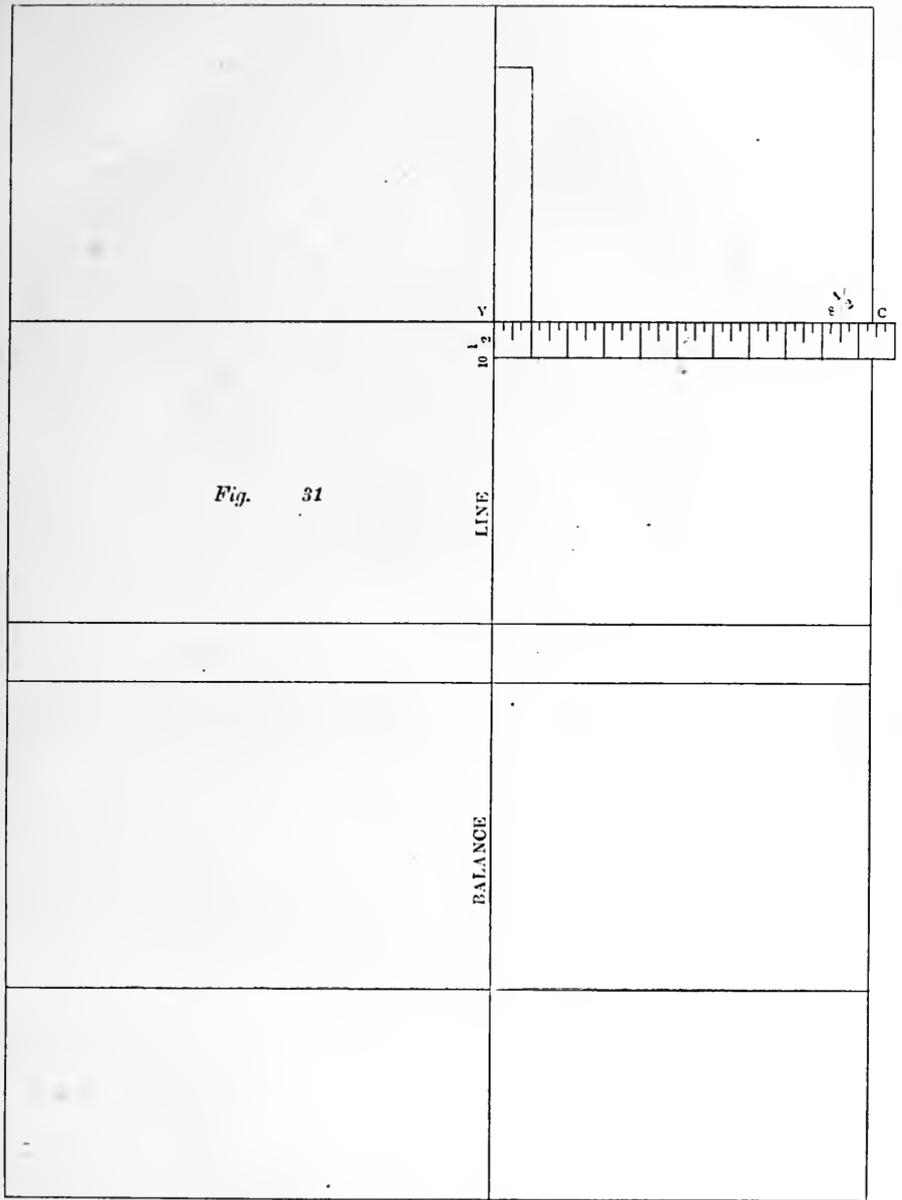
Groundwork of Draft.

Fig. 31 represents the foregoing, which is the groundwork of draft, on which proceed as follows: (See fig. 32.)

C to I is $1\frac{1}{4}$ inch.

Square halfway across from I.

Y to H is $1\frac{1}{2}$ inches.

Square up from H and down to line I.

Y to K on line C is $\frac{1}{6}$ of breast.

Square up from K.

K to N is $\frac{1}{2}$ proportionate waist on thirds.   (See table of Proportionate Waist.)

N to L is $\frac{1}{16}$ of breast.

N to M is $\frac{1}{8}$ "

D to S is $\frac{1}{24}$ "

D to T is $\frac{1}{6}$ "

Balance line to P is $\frac{1}{12}$ of breast.

       "   "   to O is $\frac{1}{3}$ "

R to R is $\frac{1}{24}$ "

Balance line to 7 is $\frac{1}{12}$ of breast.

7 to 8 is $\frac{1}{3}$ of breast.

Square up from P.

A to U is $\frac{1}{6}$ of breast.

U to V is $\frac{1}{24}$ "

Draw a line from A to S.

Shape back as represented.

B is halfway between V and N.

Shape side seam reducing a large seam at scye, touching back line at C, then gracefully through O through 8.

Balance line to W is $\frac{1}{24}$ of breast, and is advanced or receded according to the size of waist.

W to X is $\frac{1}{6}$ of breast.

To obtain the proper location of the so-called shoulder point and height of shoulder, mark on natural waist line *the proportionate balance point $\frac{2}{3}$ less $\frac{1}{12}$ of breast, and in all cases and for all forms* measure from O to this point, and apply less width of back, less $\frac{1}{2}$ inch, from A to U on line X, for location of shoulder point, and from B to same point, and apply same measure, without deduction, on a line the same distance from X that B is from V on back shoulder.
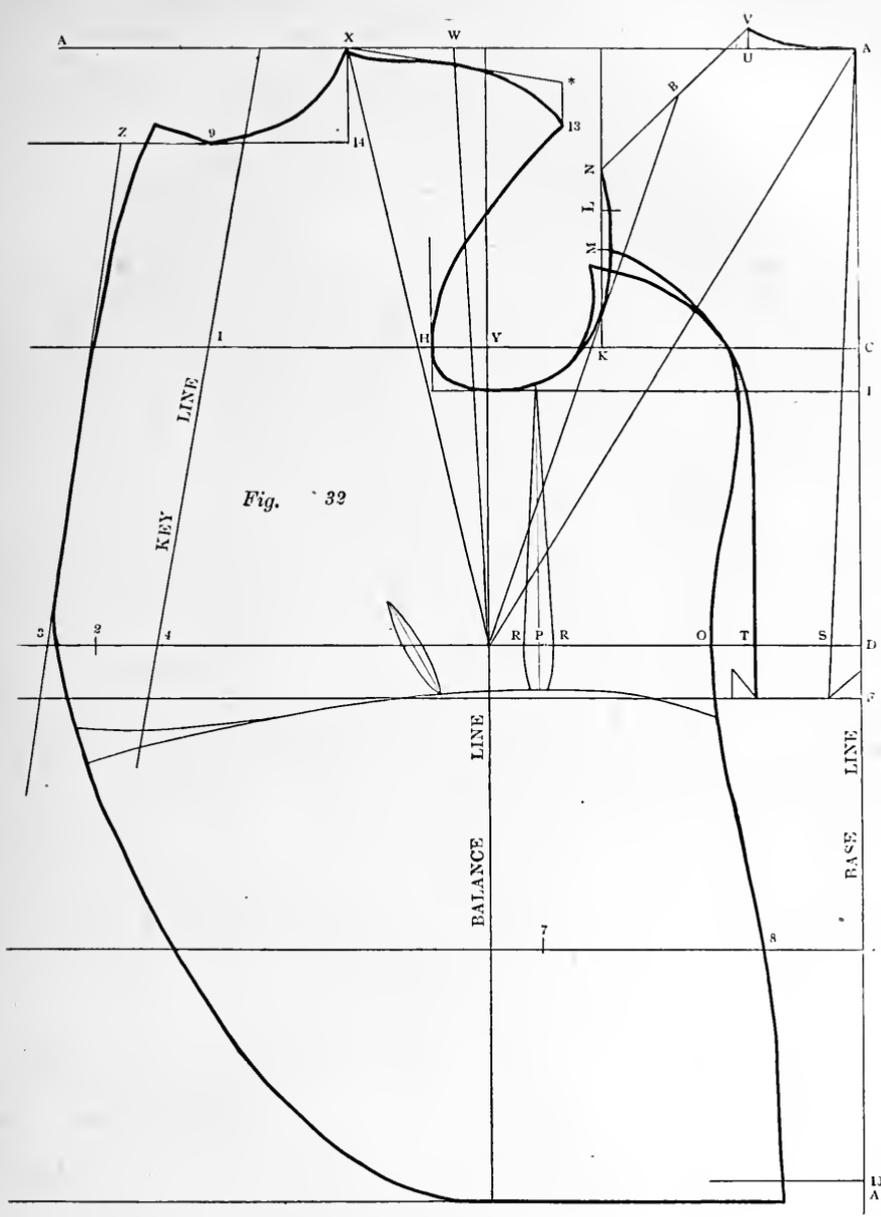
Fig. 32

Draw slope of shoulder through these two points.

Get width of shoulder of fore part as to * * by width of shoulder seam of back, and square down $\frac{1}{16}$ of breast as to 13.

Shape shoulder as from 13.

"   scye   "   "   13.

"   under arm seam through R R.

Square down from X.

X to 14 is $\frac{1}{8}$ of breast.

Square out from 14.

C to 1 is $\frac{1}{2}$ of full breast.

Advance square $\frac{1}{12}$ of breast, with short arm down, and mark on natural waist line as at 4; advance or recede this point as case may be.

Draw a line through these two points, forming the Key Line.

4 to 2 is $1\frac{1}{2}$ inches, or allowance for seams.

2 to 3 is $\frac{1}{12}$ of breast.

End of gorge is $\frac{1}{12}$ of breast, from Key Line on line 14.

End of gorge to Z is $1\frac{3}{4}$ inches.

Draw a line from Z to 3.

Make lapel desired width.

Finish as represented.

TO PROVE YOUR DRAFT.

On natural waist line mark $\frac{3}{4}$ inch back from Key Line—this is for fish taken out; measure your waist, which must be exact to this point—if this is correct the point of Key Line must, on a proportionate height on line X, be exactly $\frac{1}{8}$ of breast measure from X, allowing for the advancing or receding of balance line from normal, as explained in foregoing chapters.

SACK COAT.

To draft from actual measurement for Sack Coat, from the following measures:
$$10\frac{1}{2}—8\frac{1}{2}—29—36—33—36.$$

(Sleeve measure is omitted.)

It will be presumed that the ground work of drafting from actual measurement, which is alike for all forms and styles, is fully understood, and will therefore proceed from there on.   (See fig. 33.)
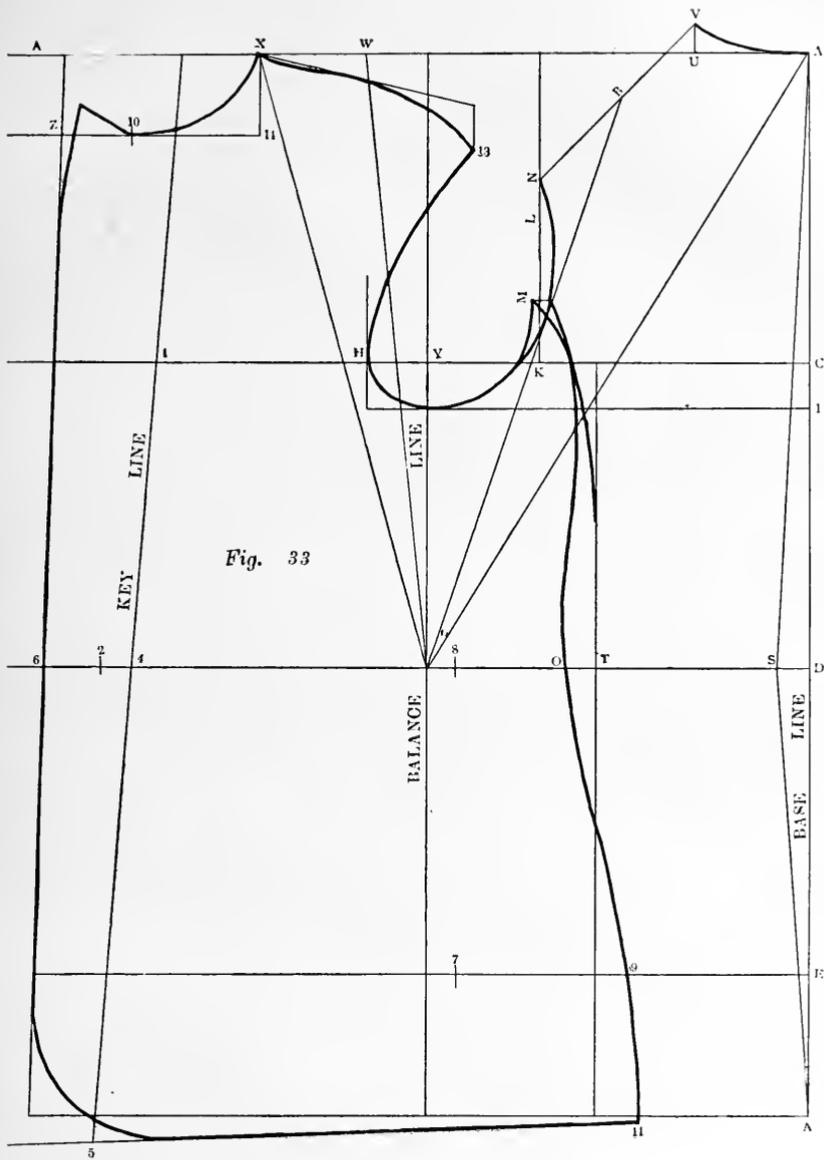
Fig. 33

C to I is $1\frac{1}{4}$ inch.

Square halfway across from I.

Y to H is $1\frac{1}{2}$ inches.

Square up from H and down to line I.

Y to K is $\frac{1}{6}$ of breast.

Square up from K.

K to N is $\frac{1}{2}$ of *proportionate waist* on thirds·

N to L is $\frac{1}{16}$ of breast.

N to M is $\frac{1}{6}$ "

Balance line to 8 is $\frac{1}{24}$ of breast.

8 to O is $\frac{1}{6}$ of breast.

Balance line to 7 is $\frac{1}{24}$ of breast.

7 to 9 is $\frac{1}{4}$ of breast.

D to S is $\frac{1}{24}$ of breast.

D to T is $\frac{1}{3}$ "

A to U is $\frac{1}{6}$ "

U to V is $\frac{1}{24}$ "

B is halfway between V and N.

Shape back as represented.

Shape side seam reducing a large seam at scye, touching back line at C, then through O through 9 to bottom.

Balance line to X is $\frac{1}{6}$ and $\frac{1}{24}$ of breast, and is advanced or receded according to the size or waist.

W is same distance from X that B is from V.

To obtain the proper location of the shoulder point and height of shoulder, *in all cases and for all forms*, mark on natural waist line *the proportionate balance point $\frac{2}{3}$ less $\frac{1}{12}$ of breast*, and measure from A to this point, and apply less width of back, less $\frac{1}{2}$ inch from A to U on line X for location of shoulder point, and from B to same point, and apply same measure without deduction on line W.

Draw slope of shoulders through these two points. Get width of shoulder of fore part as to * * by width of shoulder seam of back and square down $\frac{1}{16}$ of breast as to 13.

Shape shoulder as from 13.

      "   scye   "   13.

      "   under arm seam.

Square down from X.

X to 14 is $\frac{1}{8}$ of breast.

Square out from 14.

C to 1 is $\frac{1}{2}$ of full breast.

Advance square $\frac{1}{24}$ of breast with short arm down and mark down on natural waist, as at 4; advance or recede this point as case may be.

Draw a line through these two points, forming the Key Line.

End of gorge to 10 is $\frac{1}{4}$ of breast from X on line 14.

Eng of gorge to Z is $1\frac{3}{4}$ inches.

4 to 2 is 1 inch for seams.

2 to 6 is $\frac{1}{12}$ of breast.

Draw a line from Z to 6.

Bottom of line to 5 on Key Line is $\frac{1}{24}$ of breast.

Draw a line from 11 to 5.

Make lapel desired width.

Finish as represented.

TO PROVE YOUR DRAFT.

On natural waist line mark $\frac{1}{24}$ of breast back from Key Line; this is for under arm seam; measure your waist, which must be exact to this point; when the point of Key Line must on a proportionate height on line X be exactly $\frac{1}{8}$ of breast measure from X, allowing for the advancing or receding of balance line from normal, according to the form.

It will be noticed that with the exception of the measures produced with the square, everything else is obtained in the same manner as in the proportionate pattern. This holds good for the fitting proportions of any garment and makes the thorough knowledge of how to draft a proportionate pattern absolutely necessary.

THE SLEEVE.

But little more need be said about the sleeve. For any garment made up with only the usual allowance of wadding on the shoulder, the rules as laid down in illustrating figure 10 must be closely adhered to. Should the distance from point H around top of scye to L be greater than A to D of sleeve head, with necessary allowance, point D on line L must be extended the requisite amount; if shorter, point D must be shortened; but in no case must the round of sleeve head go below or above point $\frac{1}{2}$ inch below point of back seam, unless the shoulder is padded extra; in such cases only judgment can be used as to the exact amount necessary.

In cutting garments be particular to notch as marked on drafts, and see to it that the jour puts notch on notch as intended.

COLLARS

The various styles of the roll of front in garments, demand various shapes of collars. Too little attention, and generally to the detrim·nt of the garment, is paid to this part, and in the following illustrations will be found collars for every style of roll of front, which if carefully observed will greatly add to the beauty of roll as well as the perfect fit around the neck.

The first four illustrations are intended for soft and stationary rolls, while the latter four are for stationary rolls only,

In making up the collar for free roll, it is but natural that the softest and most pliable canvas be used, and crease line extended only a short distance on either side of middle of collar, and shaped as little as possible; for the stationary roll a heavier canvas is desirable, with crease line creased its whole length, and as marked and shaped according to style of roll required, which means, more for a stationary roll to waist seam, and less for a coat to roll to first button, as the necessary length from A to B is produced by drafting for the special style required.

Fig. 34 represents a collar for a coat to roll stationary to waist seam. Mark $\frac{1}{21}$ of breast from shoulder point as C, draw a line through this poin⁺ and touching at rounding of gorge; measure length of collar and allow $1\frac{1}{4}$ for collar stand; draw crease line to within $\frac{1}{2}$ inch from Key Line; make width of collar as desired and finish as represented.

Fig. 35 represents a collar intended to roll a little higher than the former; point C is here placed $\frac{1}{12}$ from shoulder point and balance is proceeded with as in fig. 34.

Collar illustrated by fig. 36 is intended to roll still higher, and we recede from shoulder point $\frac{1}{8}$ of breast, and finish as before to obtain the desired result.

Fig. 37 is a collar intended to button a coat at first button, and if free roll will button to neck, or roll where the fancy of wearer desires. Point C in this case is $\frac{1}{6}$ of breast from shoulder point, and collar needs less shaping than any of the former on account of the great length from A to B.

Fig. 34

Fig. 35

Fig. 36

Fig. 37
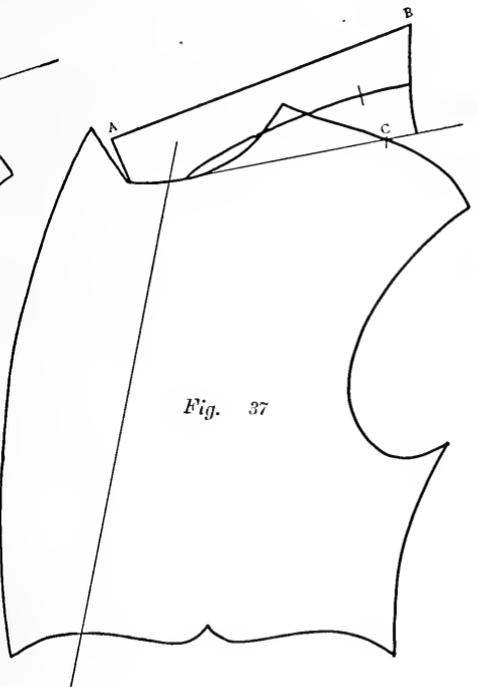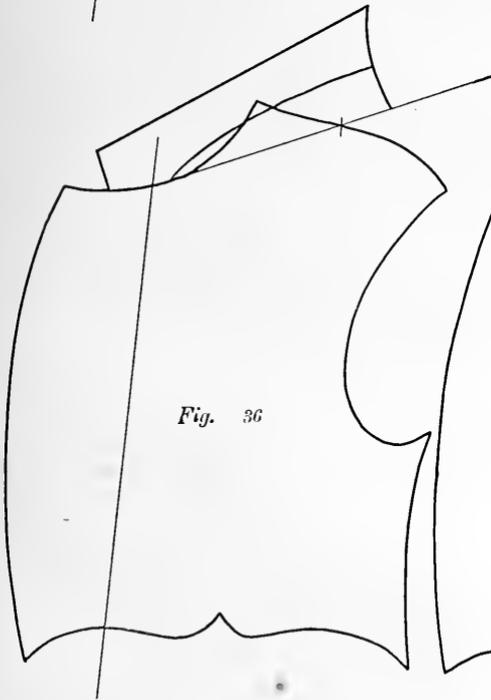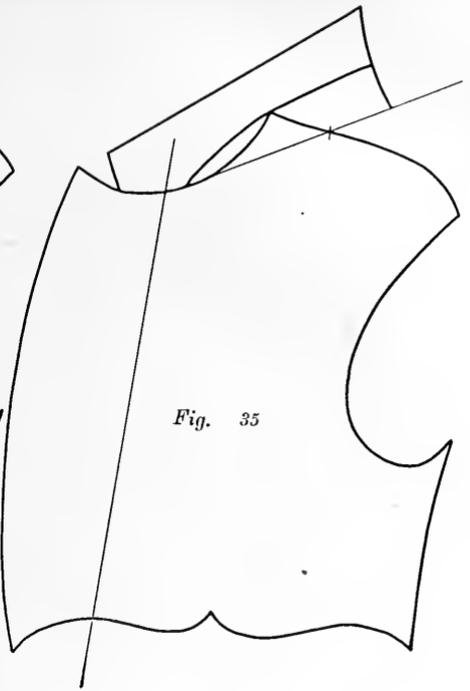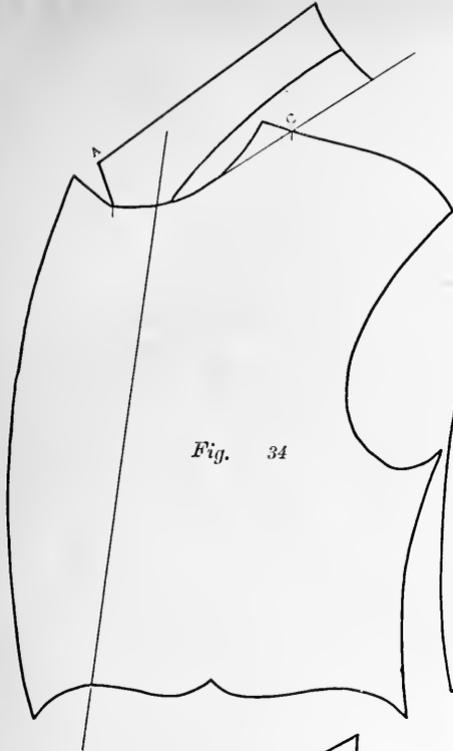
Fig. 38 represents the turn down or so called Prussian collar, intended for clerical, military and several other styles, where a buttoning to neck is necessary.

Fig. 39 represents the collar for a full stationary roll to bottom of coat, and is seldom used except for light weight overcoats, and then only by special demand of Dame Fashion or the wearer himself.

Fig. 40 is an illustration of shawl collar, the different degrees marked from shoulder point being intended for the different lengths of roll desired, as described before.

Fig. 41 gives the correct shape for the stand up collar used in military and clerical garments. Point C is here $\frac{1}{8}$ of breast from shoulder point; a straight line reaching the curve of gorge is drawn; measure length of collar desired, and make width as required, 1 or $1\frac{1}{4}$ inches, without seam, being generally right.

POCKETS.

The misplacement of pockets not only makes a garment unsightly and inartistic, but is as well many times a discomfiture to the wearer.

To properly locate the pocket for an under coat, lay square, long arm downward, on line C, even with front of scye, and mark pocket, according to length of coat, 4 to 5 inches shorter than length of sleeve; advance 1 inch for centre of pocket and make pocket width consistent with style and size of hand.

To properly locate pocket for an over coat proceed as above, making from 3 to 4 inches shorter than length of sleeve.

Fig. 38

Fig. 39

Fig. 40

Fig. 41
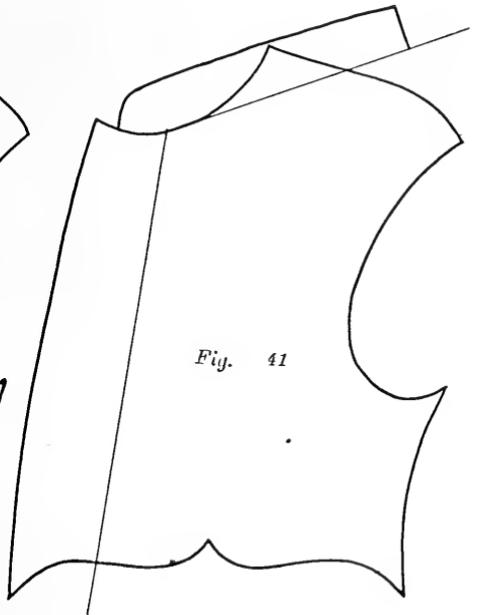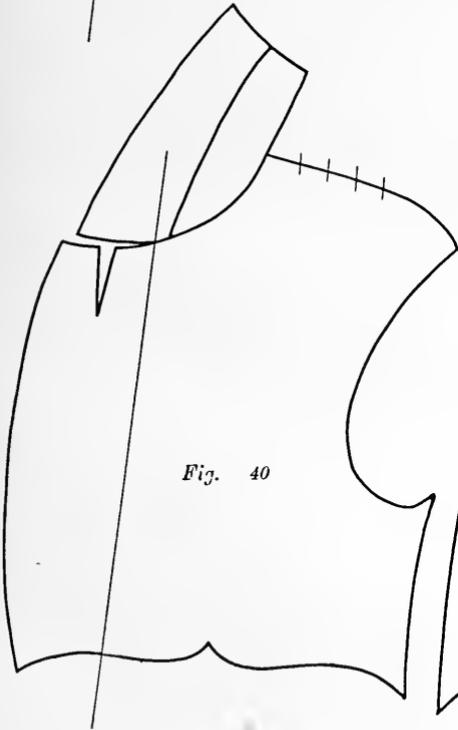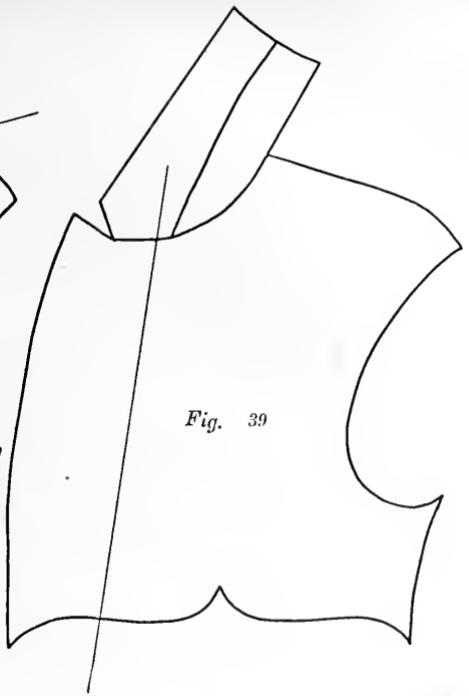
PROBABLE ERRORS AND THEIR ALTERATIONS.

The influence of circumstances upon man's mind causes errors to be probable in anything dealing with animate subjects, still, when the cause and effect of an error are understood it is no serious matter to correct them.

Except with the greatest carelessness, it is almost impossible, when instructions are strictly followed on the part of the cutter, to produce an ill-balanced garment, yet they will sometimes occur, but the reason thereof will appear very plain on examination of the garment, that either the cutter has forgotten to notch the different parts or notched them in wrong places, or the jour has not paid attention to them. If neither of these reasons is the cause, an examination of draft will reveal a wrong application of balance, which may be righted by altering the draft and re-cutting part affected.

The ordinary faults of too long back, indicated by a close hugging of the waist; or the too short back, indicated by a swinging away from the waist, should they occur through carelessness, can be remedied as follows:

For too long back—raise the notch of back $\frac{1}{4}$ inch, or as much as is necessary, above notch on side-body.

For too short waist—drop notch of back $\frac{1}{4}$ inch, or as much as is necessary, below notch on side-body.

Both of these errors will make themselves apparent only as described, the coat at shoulders, in these cases, being all that could be desired.

To remedy these faults by lengthening or shortening the shoulder point, as is too often done, would mean ruination to the garment, while the simple remedies as given will insure perfect satisfaction.

CLASSIFICATION OF FORMS.

Although, commonly speaking, there are but six different types of the human form, viz.: The normal, the stooping, the erect, the high-shouldered, the low-shouldered, and corpulent types, their various shapes and degrees of disproportions form five distinct classes, which may be described as follows:

I.   The form with normal waist.

II.   "   "   "   small   "

III.   "   "   "   abnormally small waist.

IV.   "   "   "   large waist.

V.   "   "   "   abnormally large waist.

Each type of the human form, except the corpulent type, is subject to these five distinct classes, and by virtue of the Key Line, which is obtained by the breast and waist size, we are enabled to give complete and accurate descriptions of each draft for the five classes of forms, which again forms five classes of drafts, containing in each class drafts for each form of each type, and are divided as follows:

CLASSES OF DRAFTS.

I.

The draft in which the waist is of such size that shoulder or neck point is normal.

II.

The draft in which the waist is of such size that waist suppression is enlarged.

III

The draft in which the waist is of such size that shoulder or neck point is receded.

IV.

The draft in which the waist is of such size that shoulder or neck point is advanced and waist suppression enlarged.

V.

The draft in which the waist is of such size that shoulder or neck point is receded and waist suppression decreased.

In illustrating the foregoing explanations, we will omit the high and low shouldered types, as their deviation has nothing to do with the waist size.

The classes of drafts will follow in their regular order, with explanations of type, and class of form they belong to.

By normal type, in this case, will be understood any form having its balance line corresponding with the normal or fundamental draft of garment cutting. viz : $\frac{2}{3}$ of breast less $\frac{1}{12}$ from base line.

By normal waist, Form Class I., will be meant any form with waist corresponding with table of waist proportions formed by Run of Key Line.

The degrees causing the change of classes are based upon $\frac{1}{12}$ of the whole breast measure, or $\frac{1}{24}$ as used in drafting.

CLASS I.

Drafts in which waist is of such size that shoulder or neck point is normal.

Fig. 42 represents the normal type, Form Class I., and is simply the normal or fundamental draft of garment cutting.
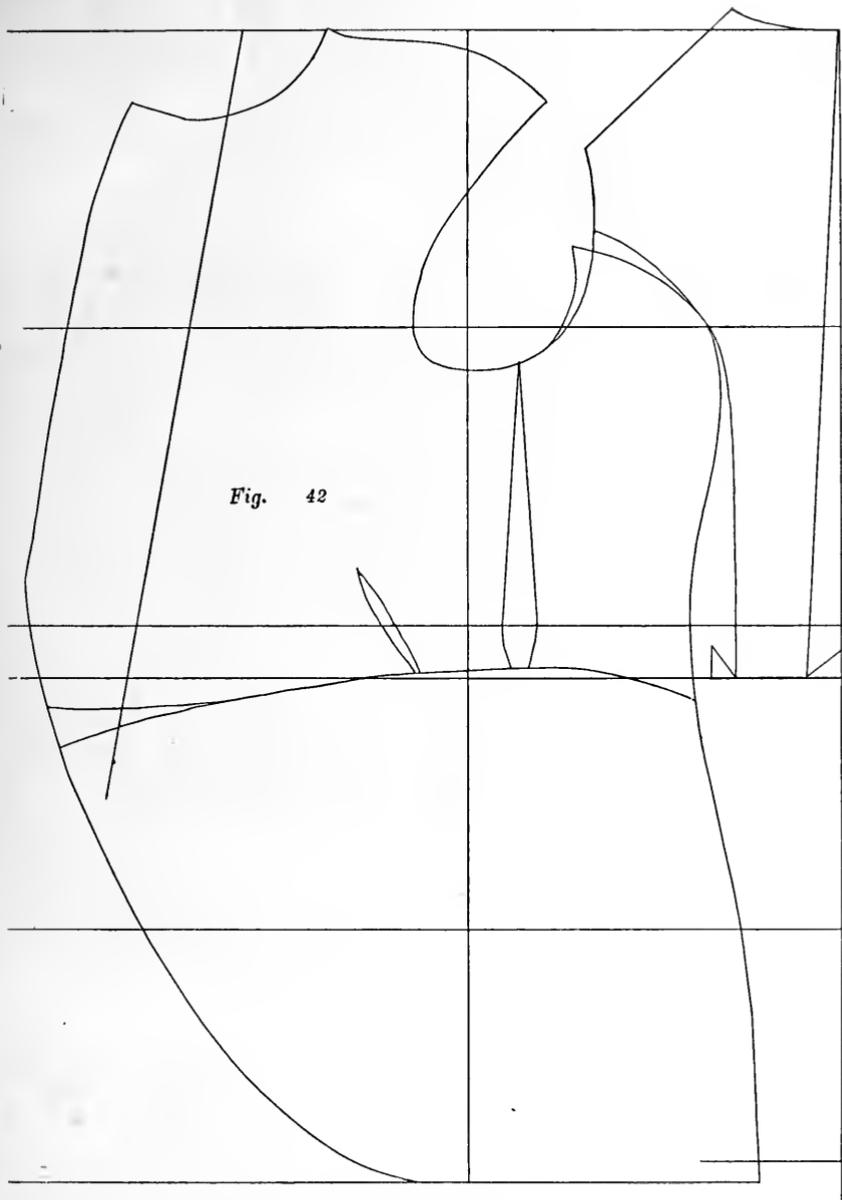
Fig. 42

DRAFT CLASS I.
Normal Type, Form Class I.

Fig. 43 represents the stooping type, Form Class II.   The size of the waist of this form is as much smaller as the distance from balance line, obtained by actual measurement, is from the balance line of normal form, as indicated by heavy lines at A.
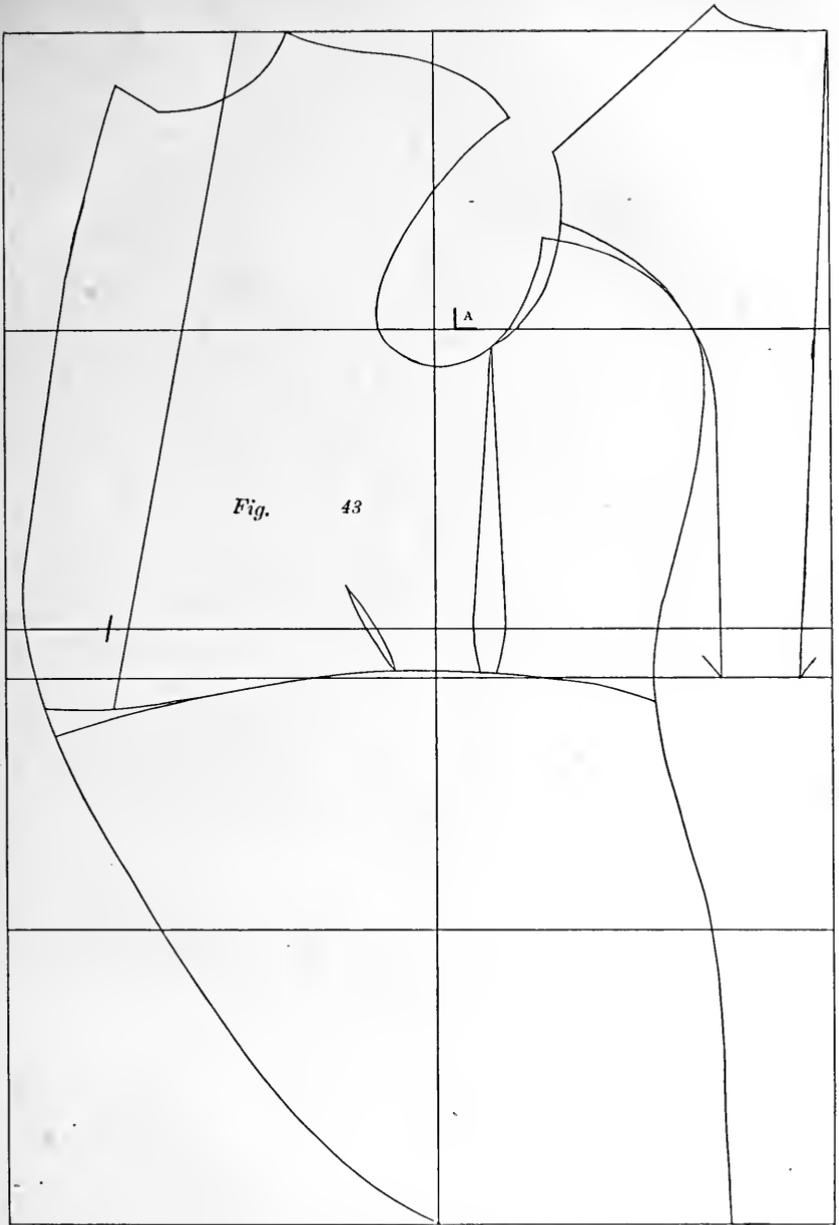
Fig.   43

DRAFT CLASS I.
Stooping Type, Form Class II.

Fig. 44 represents the erect type, Form Class IV.   The waist is as much larger as difference between actual and normal balance line, and is very general among erect forms.

Fig. 44

A
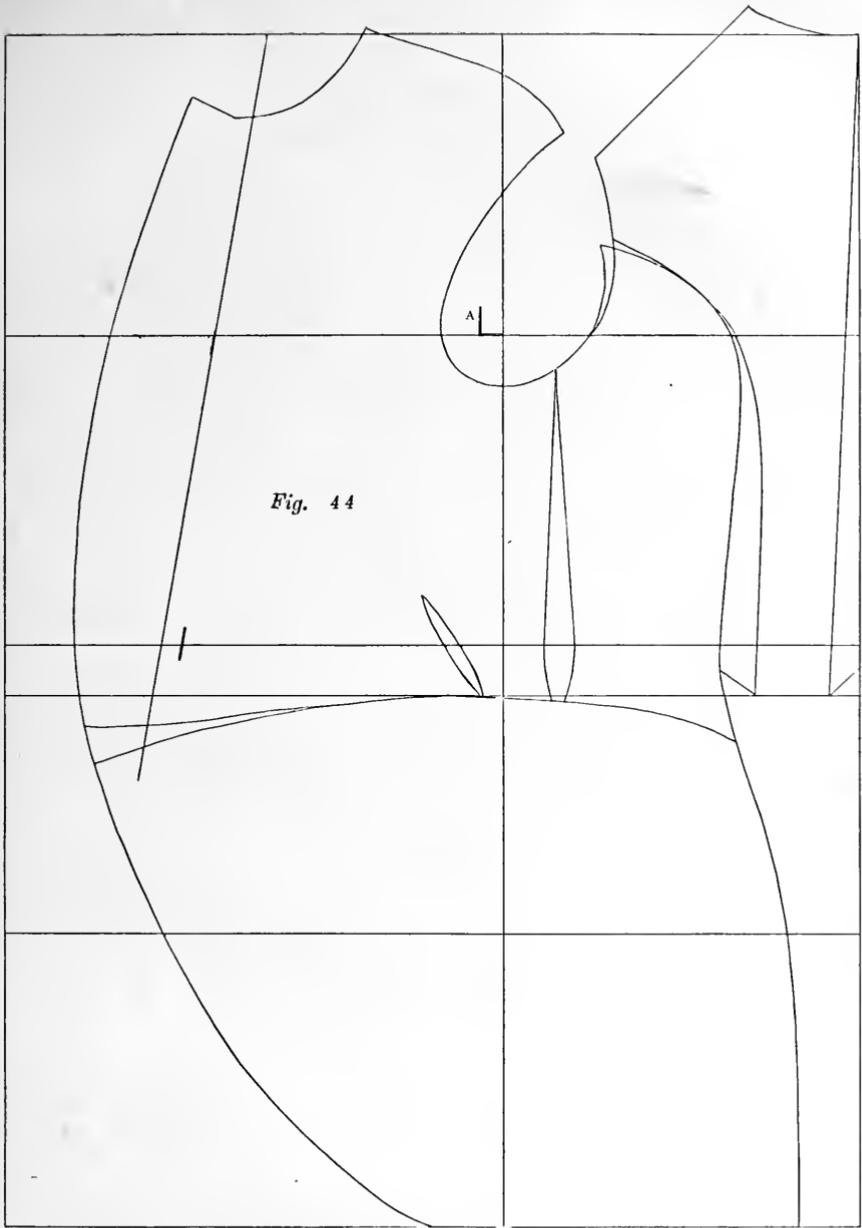
DRAFT CLASS I.
Erect Type, Form Class IV.

CLASS II.

Drafts in which waist is of such size that waist suppression is enlarged.

Fig. 45 represents the normal type, Form Class II.

The waist of this form is smaller than the normal form, and is frequently met with.
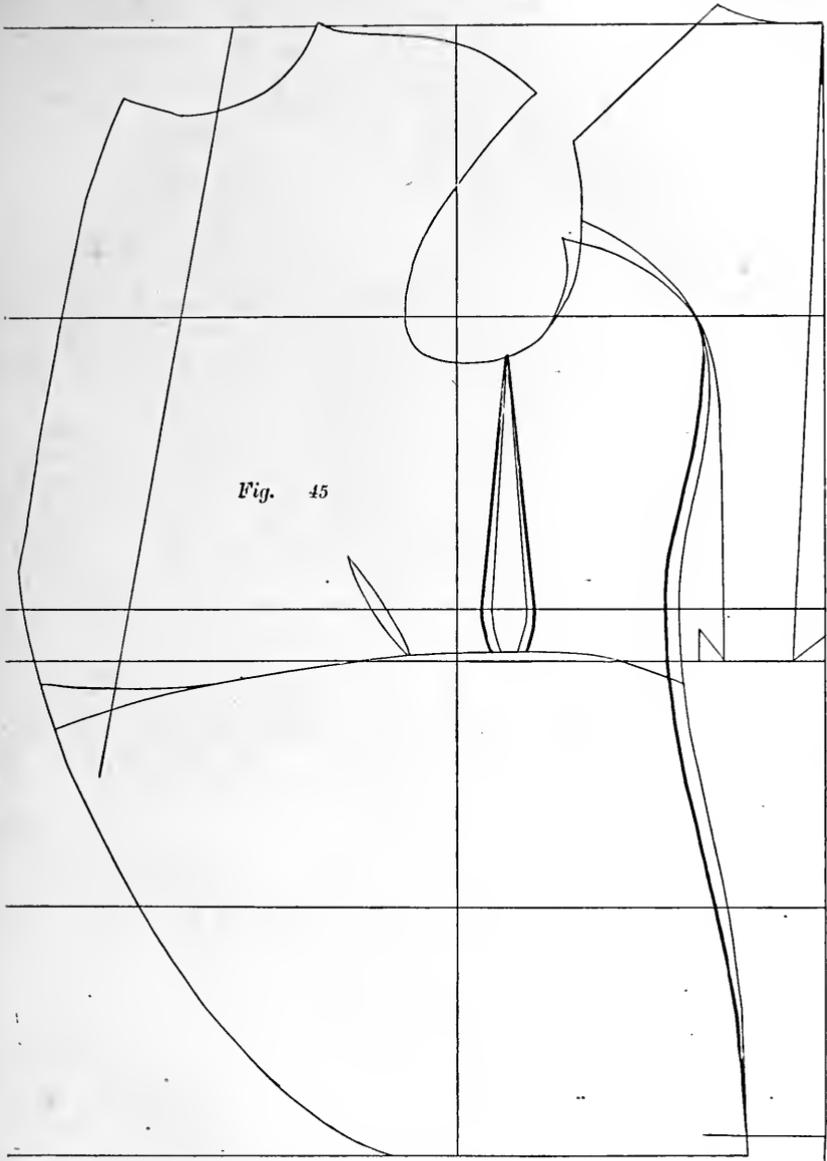
Fig. 45

DRAFT CLASS II.
Normal Type, Form Class III.

Fig. 46 represents stooping type, Form Class III., and owing to the great decrease in size of waist is but seldom met with.
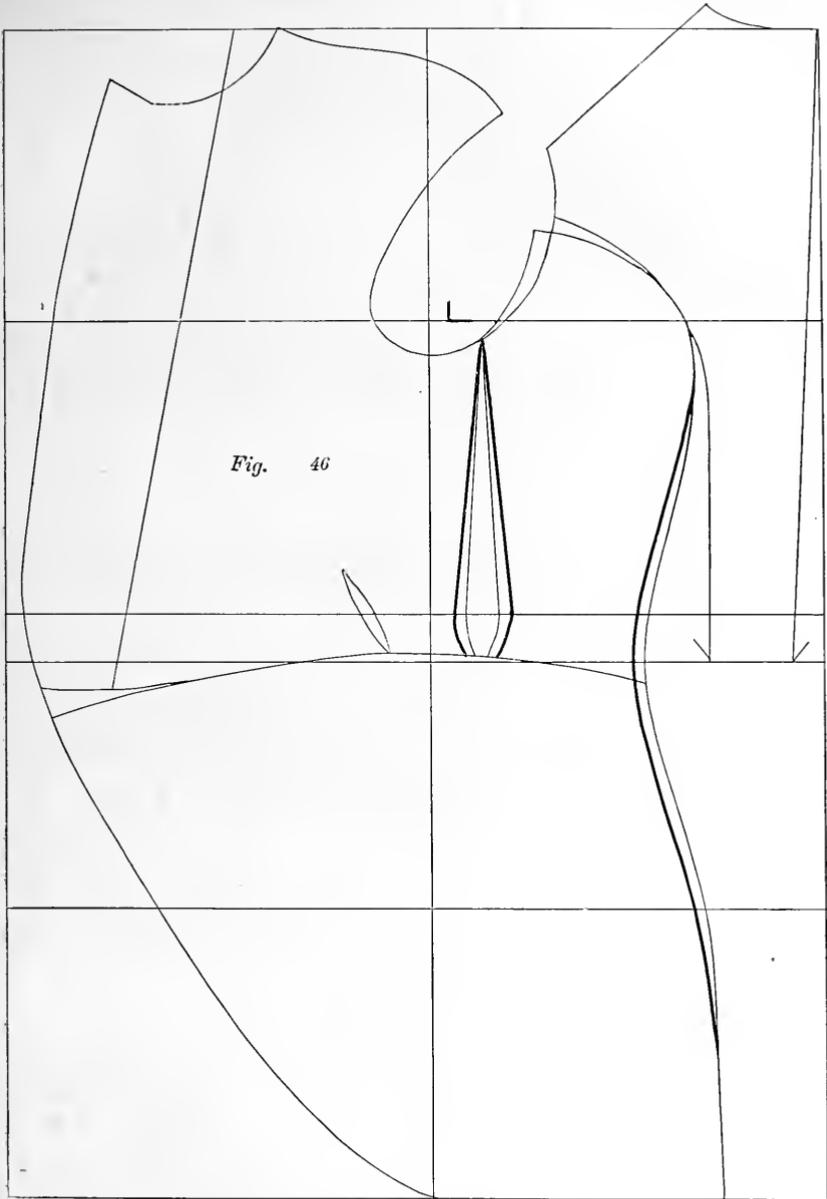
Fig. 46

DRAFT CLASS II.
Stooping Type, Form Class II.

Fig. 47 represents erect type, Form Class I.   It is a form quite frequently met with, and owing to its owner generally being well aware of its gracefulness, a cutter is apt, from eagerness to please his customer, to overdo himself and take out the extra waist suppression at the wrong place, making an ill-looking as well as ill-fitting garment.

<div align="center">CLASS III.</div>

Drafts, in which the waist is of such size that shoulder or neck point is receded.

Forms demanding drafts of this class are probably met with more than any other, and as often ill-fitted as any other, owing to the wrong application of the size of waist.

Until the increase of waist does not exceed the allotted $\frac{1}{24}$ (on draft), do not attempt to enlarge the waist measure by decreasing the waist suppression at under arm seam or side body seam, for as sure as this is done, will garment be too large at breast, if it is buttoned to waist seam, and hang away from waist if unbuttoned.

L
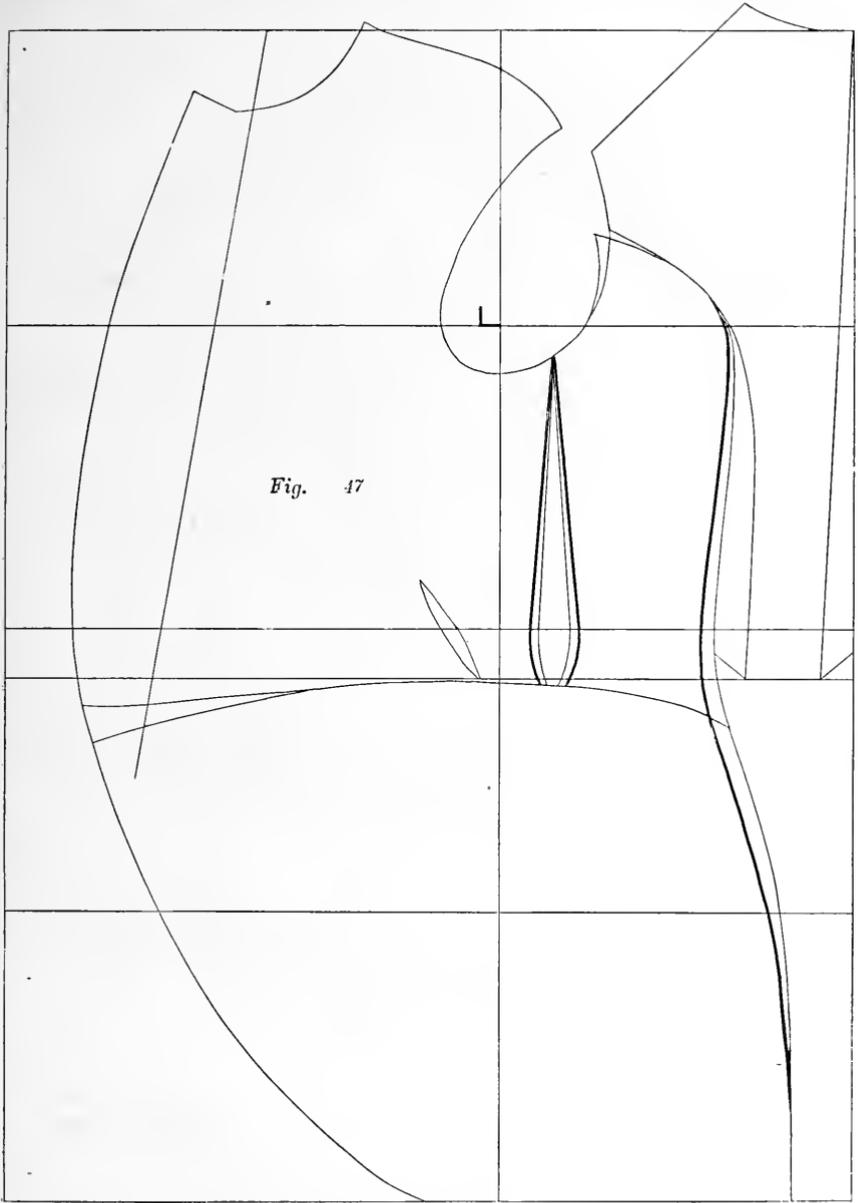
Fig.   47

DRAFT, CLASS II.
Erect Type, Form Class I.

Fig. 48 represents the normal type, Form Class IV. The size of waist may be from $1\frac{1}{4}$ to $1\frac{3}{4}$ inches larger than normal waist, according to size of breast, and only added on to front, causing the shoulder or neck point to recede correspondingly.
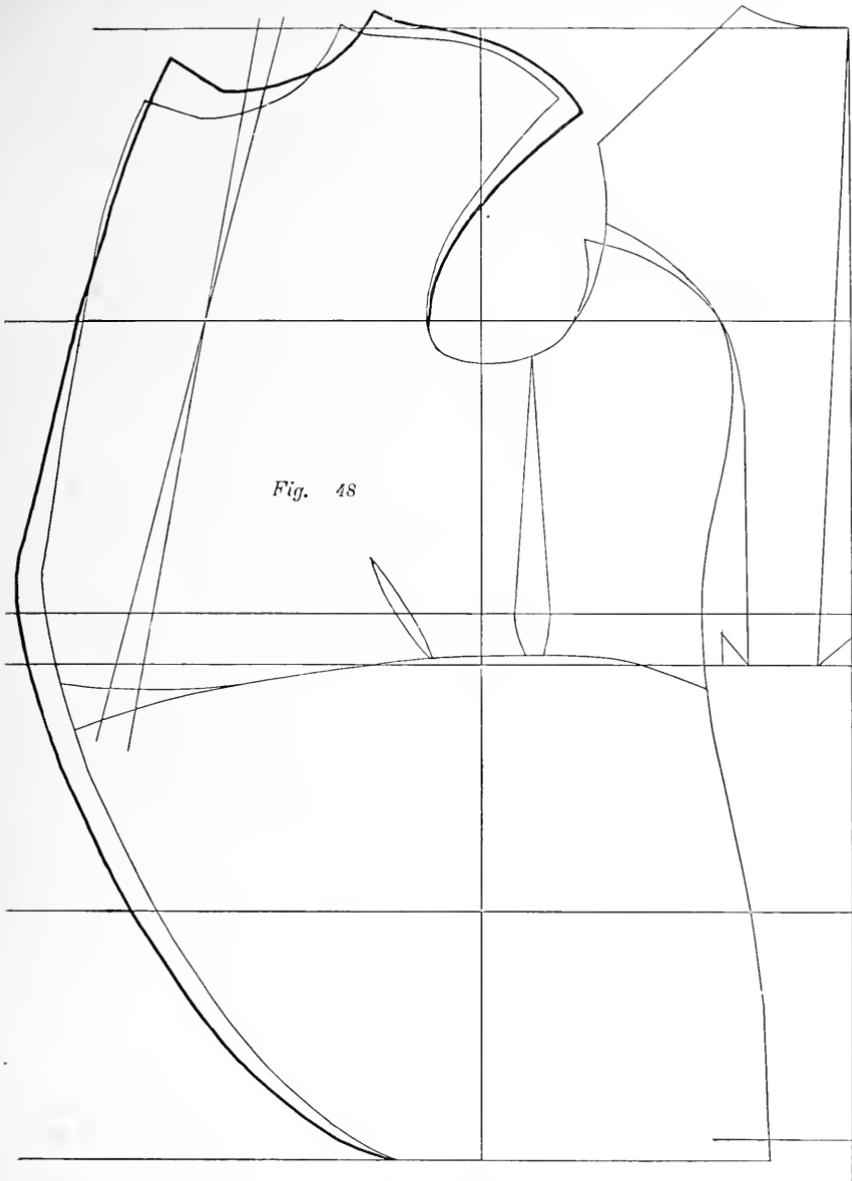
Fig. 48

DRAFT, CLASS III.
Normal Type, Class IV.

Fig. 49 represents the stooping type, Form Class I.

Fig. 49

L
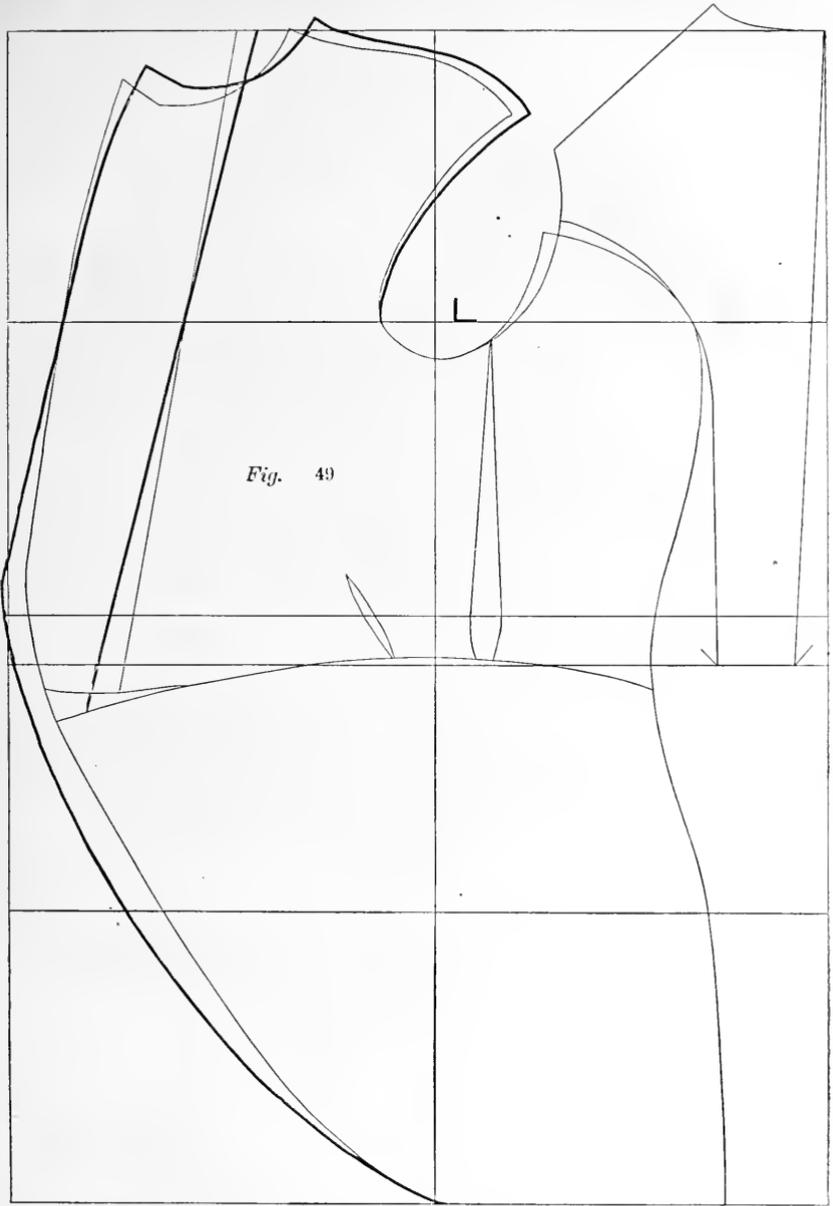
DRAFT CLASS III.
Stooping Type, Form Class I.

Fig. 50 represents the erect type, Form Class IV.   This form is quite frequently met with, and perhaps more liable to the error described at head of this class than any other, and consequently deserves careful observation.
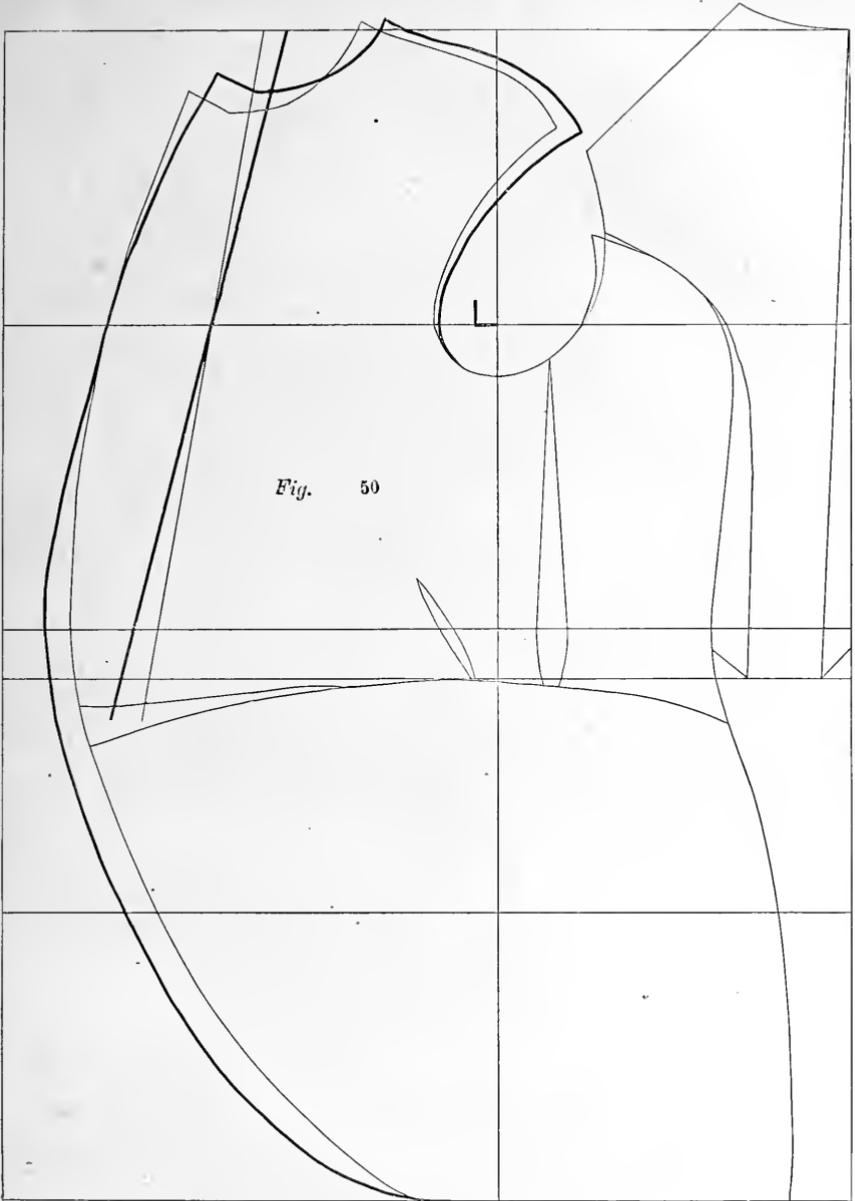
Fig. 50

DRAFT CLASS III.
Erect Type, Form Class IV.

CLASS IV.

Drafts, in which waist is of such size that shoulder or neck point is advanced and waist suppression enlarged.

But little need be said in explanation of these forms, as they are but seldom met with, yet most every cutter can recall a form coming under this class, and the trouble they caused him.

Fig. 51 represents the normal type, Form Class III., and is for a form almost feminine in appearance, or more properly termed the French form.
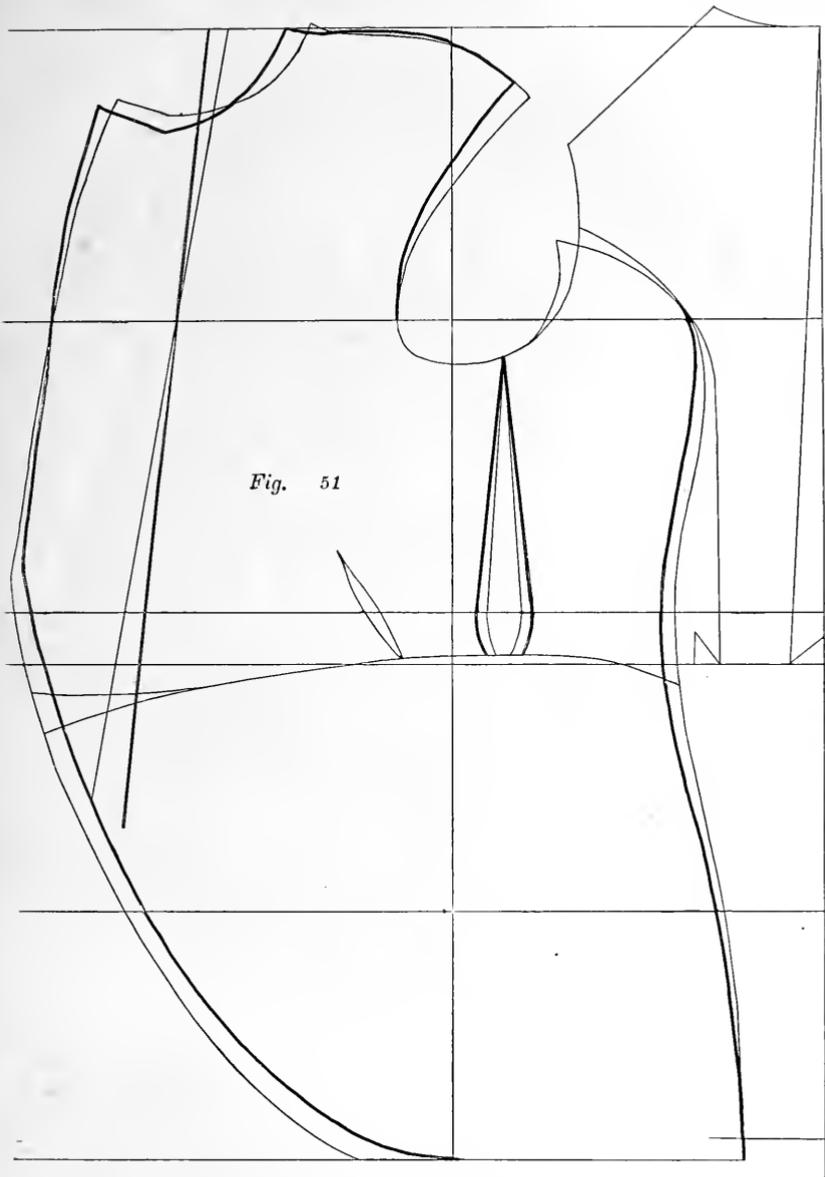
Fig. 51

DRAFT CLASS IV.
Normal Type, Form Class III.

Fig. 52 represents the stooping type, Form Class III. This is rarely if ever met with.

Fig. 52
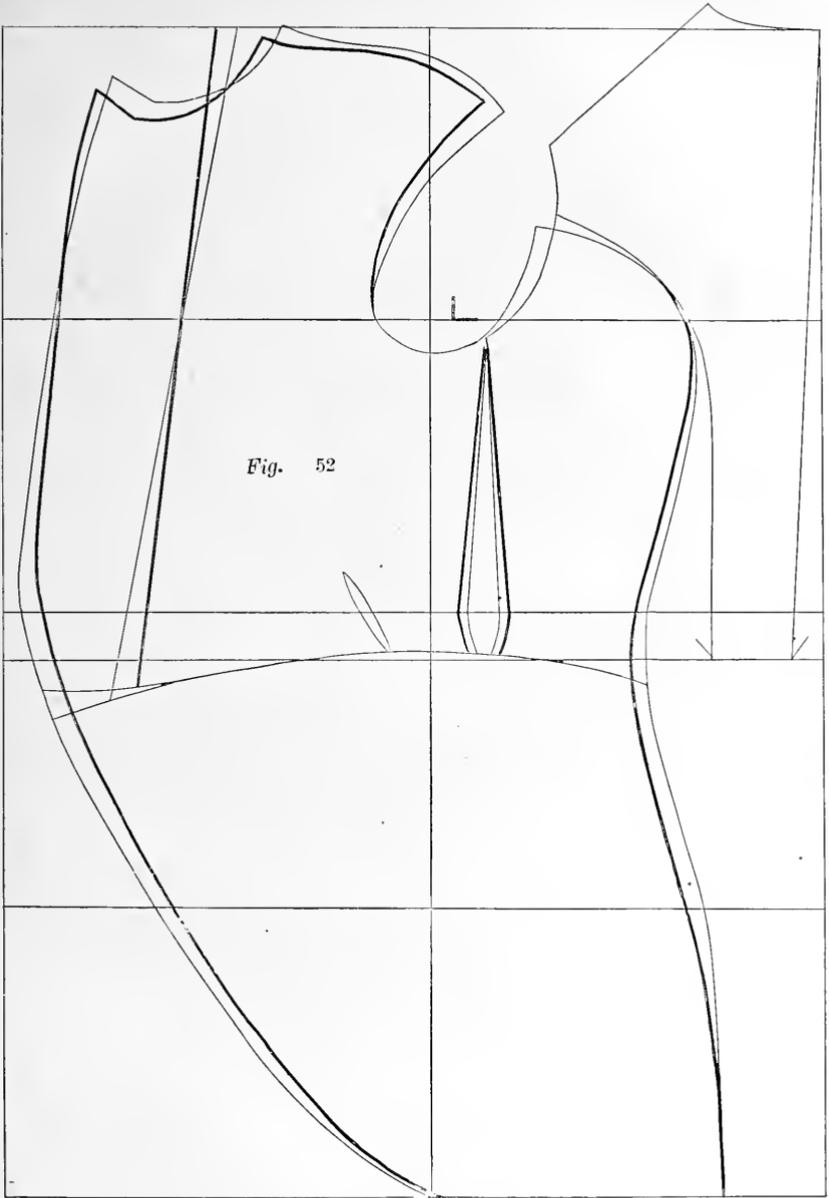
DRAFT CLASS IV.
Stooping Type, Form Class III.

Fig. 53 represents the erect type, Form Class III., and may be termed the high-breasted or pigeon-breasted form, whose owner will never fail to call your attention to it.

Fig. 53
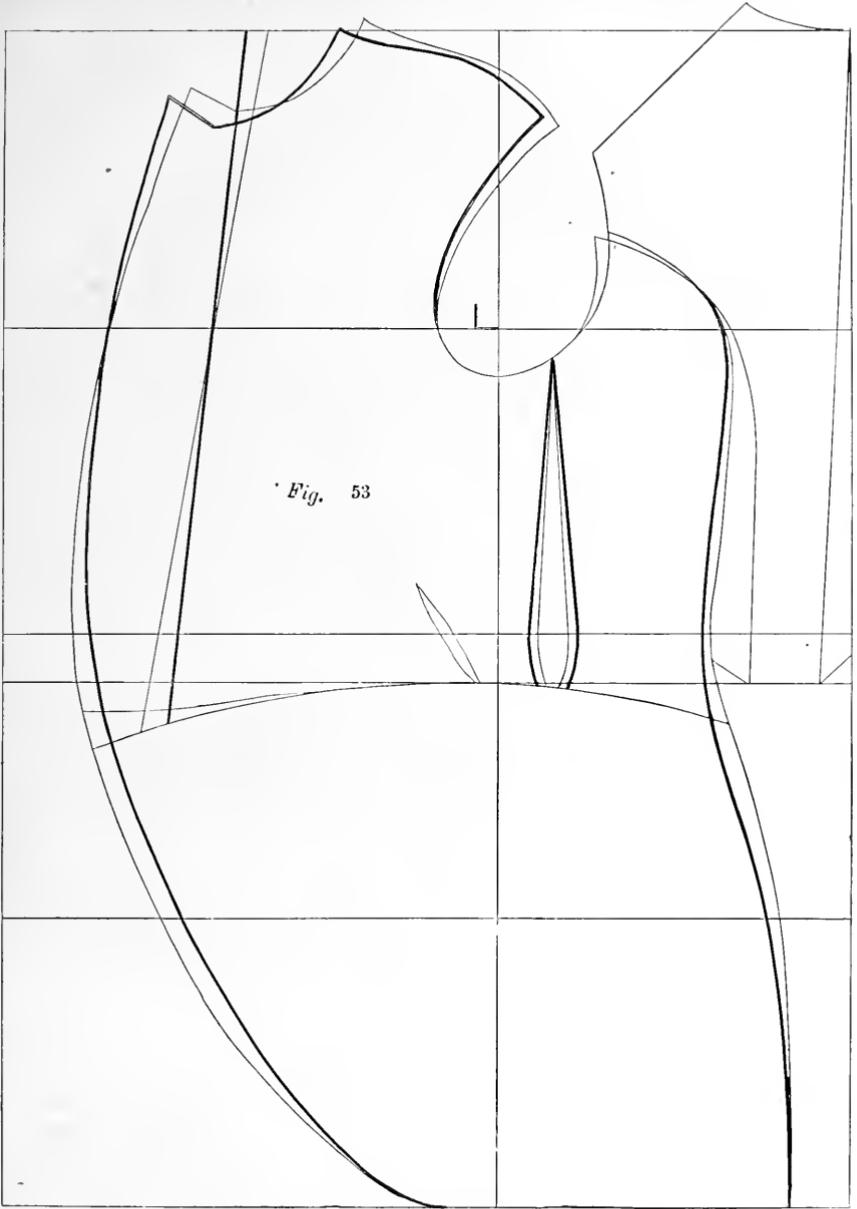
DRAFT CLASS IV.
Erect Type, Form Class III.

CLASS V.

Drafts, in which waist is of such size that shoulder or neck point is receded and waist suppression decreased.

Forms requiring drafts of this class are those bordering on corpulency and are very frequently required. The increase of waist size here is distributed around the body, $\frac{1}{24}$ being added to the front and balance equally divided on each side of side body; they are generally short, thick-set bodies requiring but little spring over hips.

Fig. 54 represents normal type, Form Class V., is generally a solid man and knows it.
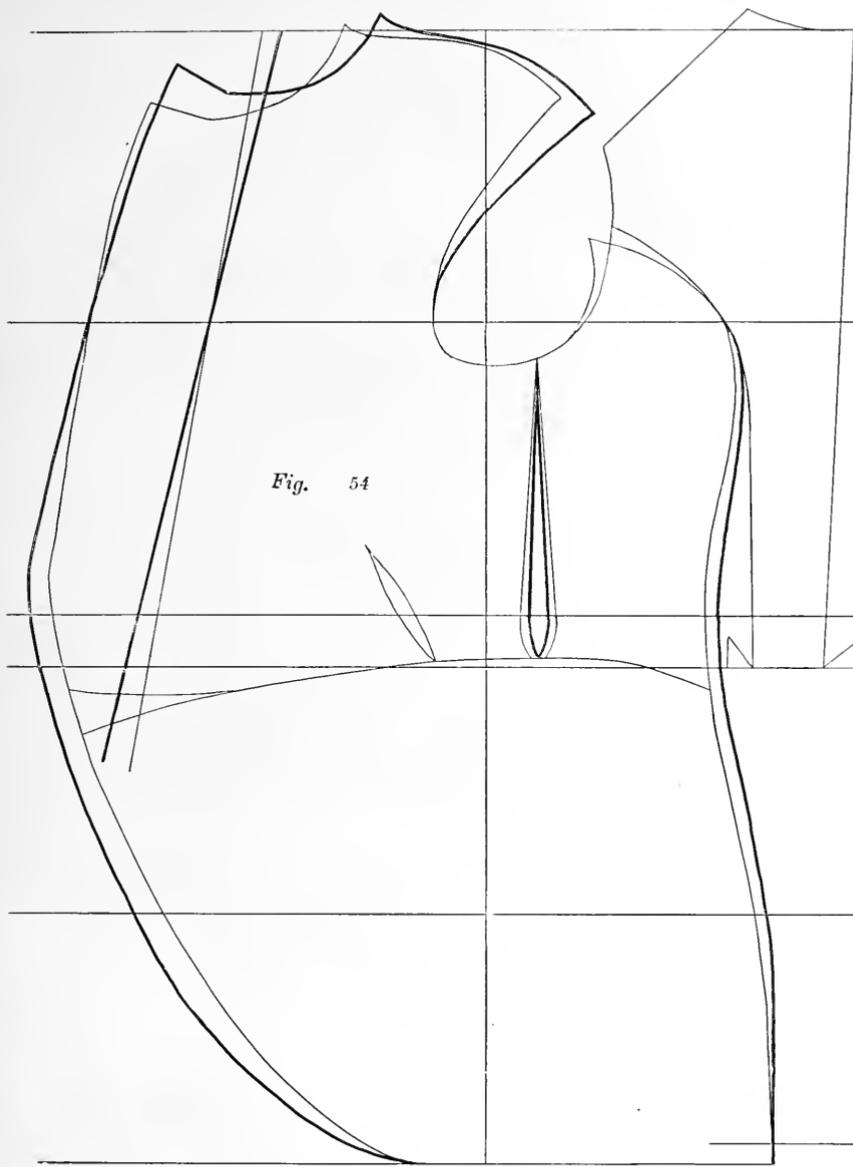
Fig. 54

DRAFT CLALS V.
Normal Type, Class V.

Fig. 55 represents the stooping type, Form Class V. The size of blade measure in this form is at first sight puzzling, owing to his apparent normal build, which is explained afterwards by the increase of waist size at back seam of side body, giving the draft a normal appearance, to correspond with the normal appearance of form.
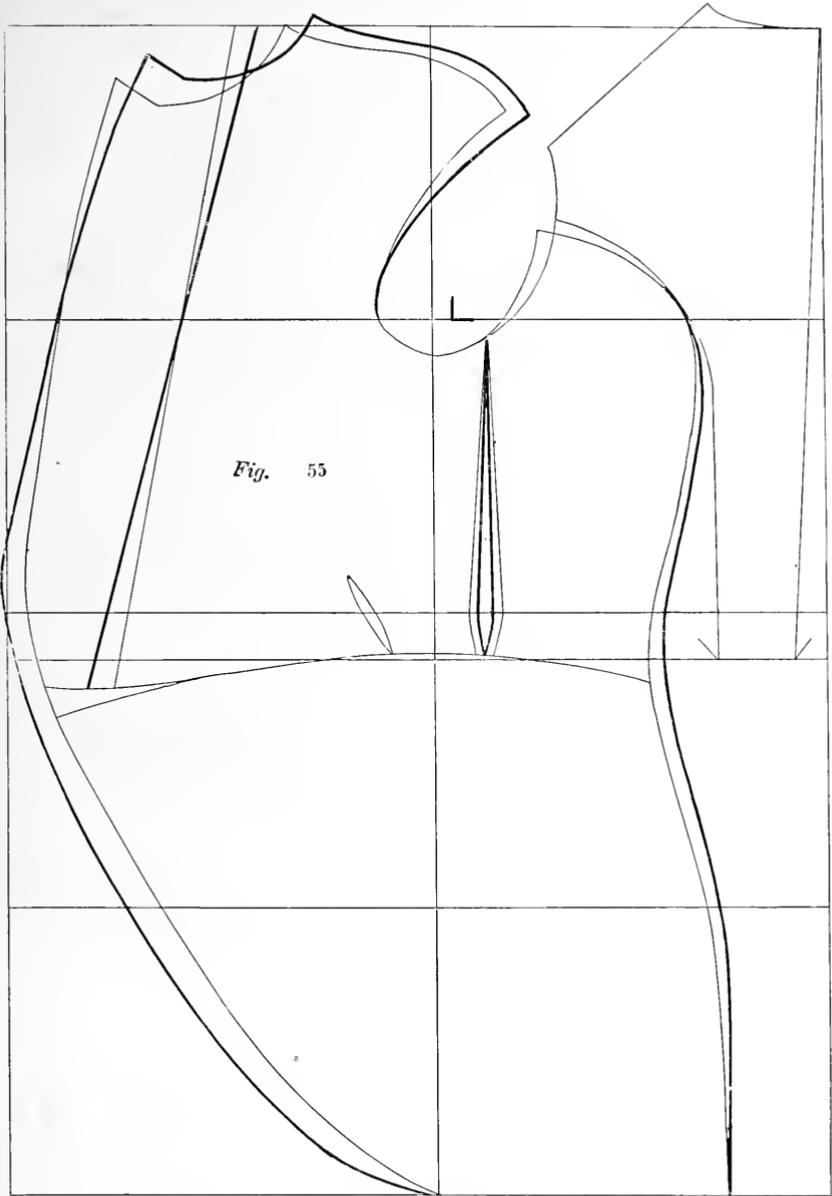
Fig. 55

DRAFT CLASS V.
Stooping Type, Form Class V.

Fig. 56 represents the erect type, Form Class V. When built in or nearly proportionate height, this form is imposing in appearance, which can be greatly heightened by a good-fitting garment.

A thorough understanding and familiarity with the different classes of drafts for their respective classes of form, cannot fail to be of great aid to the cutter; the reproduction of the form in his mind, from the formation of draft, gives him an assurance of his work, worth the consideration required to gain the understanding and familiarity.

Fig. 56
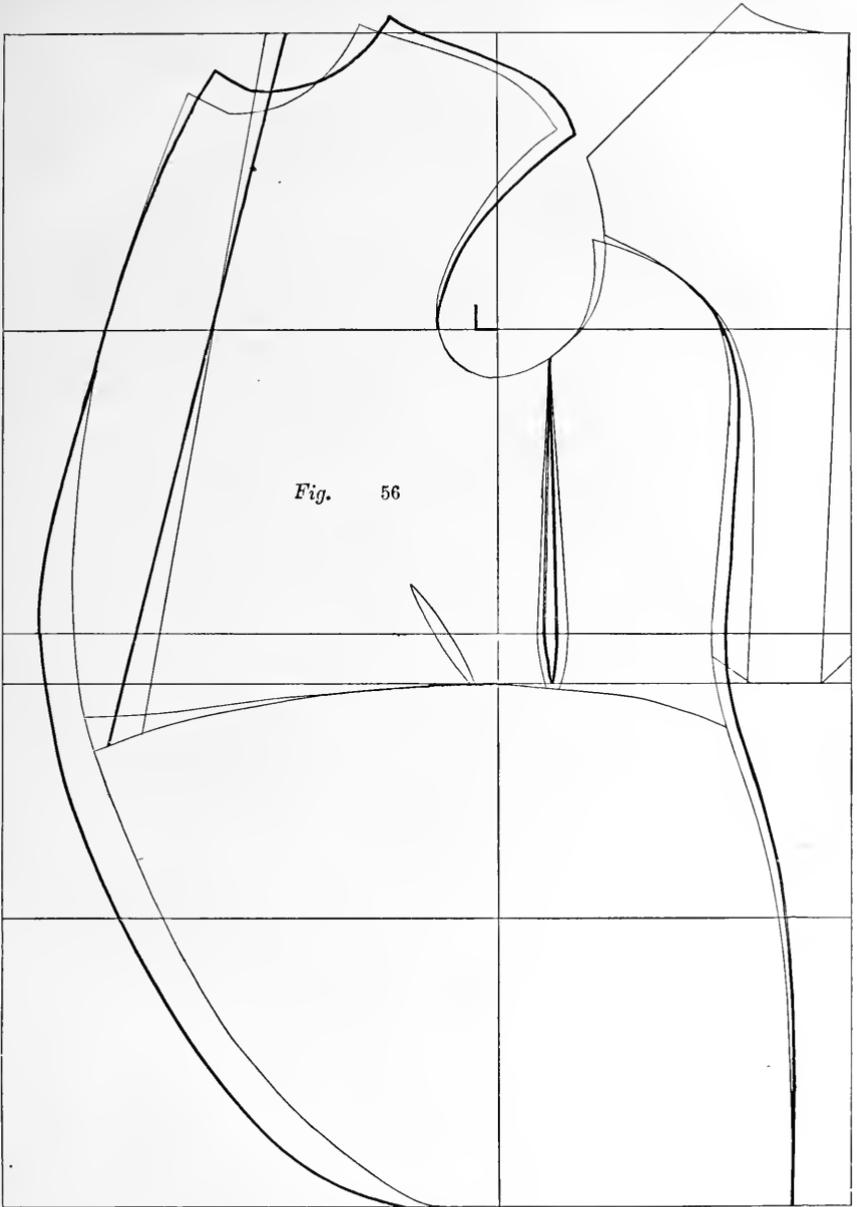
DRAFT CLASS V.
Erect Type, Form Class V.

PART IV.

Part IV.

DIFFERENT STYLES.

For convenience sake but two styles of drafts have been used for illustrating purposes, as fitting proportions were only taken in consideration.

In the following illustrations of different garments usually worn, these same proportions up to the seams added to Key Line of garment are given, for although we may and must change the lines of form according to the dictates of Dame Fashion to preserve the fit, the proportions must be preserved. Line A B therefore in the following illustrations will represent seams added to Key Line of draft.

Solid lines of Fig. 57 represents a sack coat to be buttoned to bottom.   From point 1 on seam line is to be added $\frac{1}{12}$ of breast to 2, and the same from 3 to 6; lapel is $1\frac{1}{2}$ inches.

The inside dotted lines show the cutaway sack, which may be varied according to fancy, and for which line to button to bottom may be taken as a guide.

The outside dotted lines give the proper amount for a double breasted under sack.   From point 1 on seam line to 3, add $\frac{1}{12}$ of breast and $1\frac{1}{4}$ inches; 3 to 7 is the same; lapel is $2\frac{1}{4}$ inches; take out a V at lapel.

These widths may be made wider or narrower to suit the fancy of the wearer or the demand of fashion.

2 1/4 in

1/2 in

A

5 2 1

LINE

KEY

Fig. 57

7 6 3

B
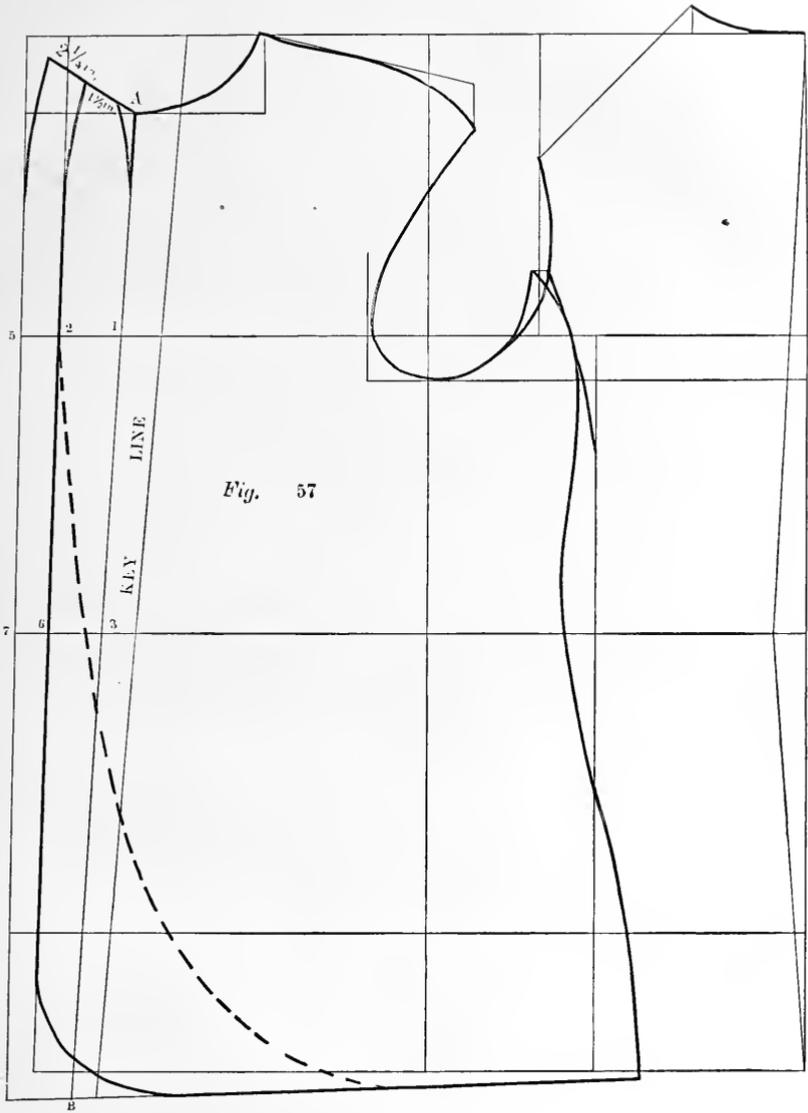
Fig. 58 represents the double-breasted Frock Coat, a garment much in vogue and handsome in appearance. $\frac{1}{24}$ of breast is added to seams, which is slightly rounded at top and bottom to almost reach seam line, to enable the wearer to button without producing wrinkles caused by tightness; lapel varies in size, and no definite width can be given.

The skirt is drafted same as the ordinary frock and is squared down from line C; $\frac{1}{24}$ of breast is added from E to D, to give proper spring.

2 in.

A

2 ½ in.

¼ of Breast

Fig. 58

2 in.   line   C

B

E ½ D
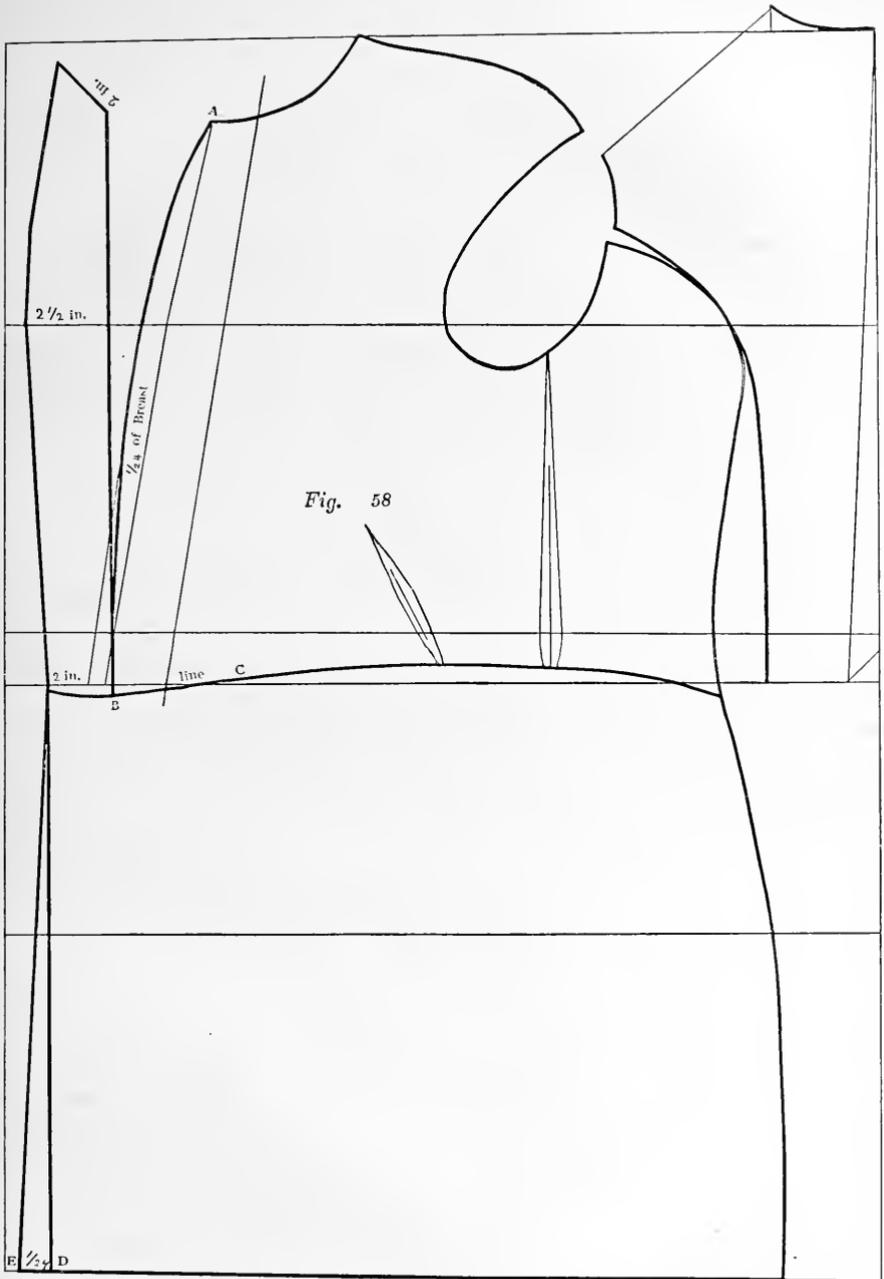
Fig. 59 gives the proper amount for the Military Coat.

Square down from C, add $\frac{1}{16}$ of breast from seam line, and round slightly to B; for front of skirt draw line from B to D.

Fig. 59

1/6 of Breast

A

B

C

D
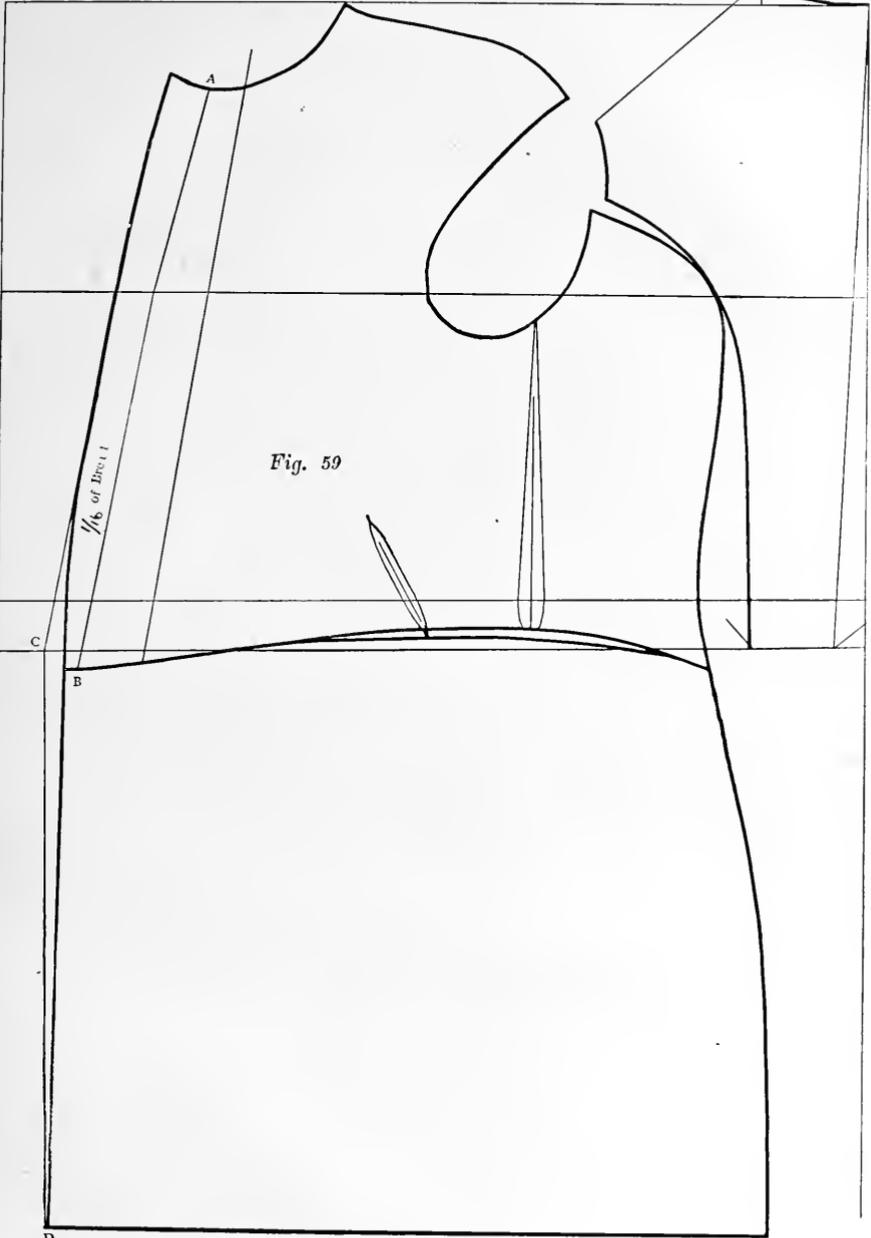
Fig. 60 illustrates the Full Dress Coat. One seam is added to seam line A B and gracefully rounded off so that at point B it is reduced $\frac{1}{2}$ inch; lapel is made as much longer than forepart as the desired width of strap of skirt.

From C to D is $\frac{1}{3}$ of breast.

"   E to F is $\frac{1}{3}$ "

Draw a line from D to F and gracefully round the corners.

These variations as given here are *not laws.* Fashion dictates changes to be observed, and close intimacy with trade journals and a never lagging desire to keep up with the spirit of the times is the surest way of obtaining a thorough knowledge of a most important factor in connection with the " Art and Science of Garment Cutting, that of PLEASING YOUR CUSTOMER.

Fig. 60

¾ inches.

2 ¼ in.

Seam

Reduce ½ in. at B

1 ¼ in.

1 ¼ in.

⅓ of Breast

⅓ of Breast

A

B

C

D

E

F

OVERCOATS.

(See Fig. 61.)

The measures for overcoats are the same as for undercoats, but taken over same.

Obtain the groundwork of draft, as for any other, and proceed as follows:

C to I is $1\frac{1}{2}$ inches.

Square half way across from I.

Y to H is $1\frac{1}{2}$ inches.

Square up from H and down to line I.

Y to K on line C is $\frac{1}{6}$ of breast.

Square up from K.

K to N is $\frac{1}{2}$ proportionate waist on 3rds and $\frac{1}{4}$ inch.

N to L is $\frac{1}{16}$ of breast.

N to M is $\frac{1}{6}$ of breast.

Balance line to 8 is $\frac{1}{24}$ of breast.

Balance line to 9 is $\frac{1}{12}$ of breast.

8 to O is $\frac{1}{6}$ of breast.

9 to 7 is $\frac{1}{4}$ "

D to S is $\frac{1}{24}$ "

D to T is $\frac{1}{3}$ "

A to U is $\frac{1}{6}$ "

U to V is $\frac{1}{24}$ "

B is half way between V and N.

Shape side seam, through O to 7 to bottom.

Balance line to X is $\frac{1}{4}$ of breast, and is subject to changes according to size of waist.

To obtain the proper location of the shoulder point and height of shoulder for overcoats mark on natural waist line the proportionate balance point $\frac{2}{3}$ less $\frac{1}{12}$ of
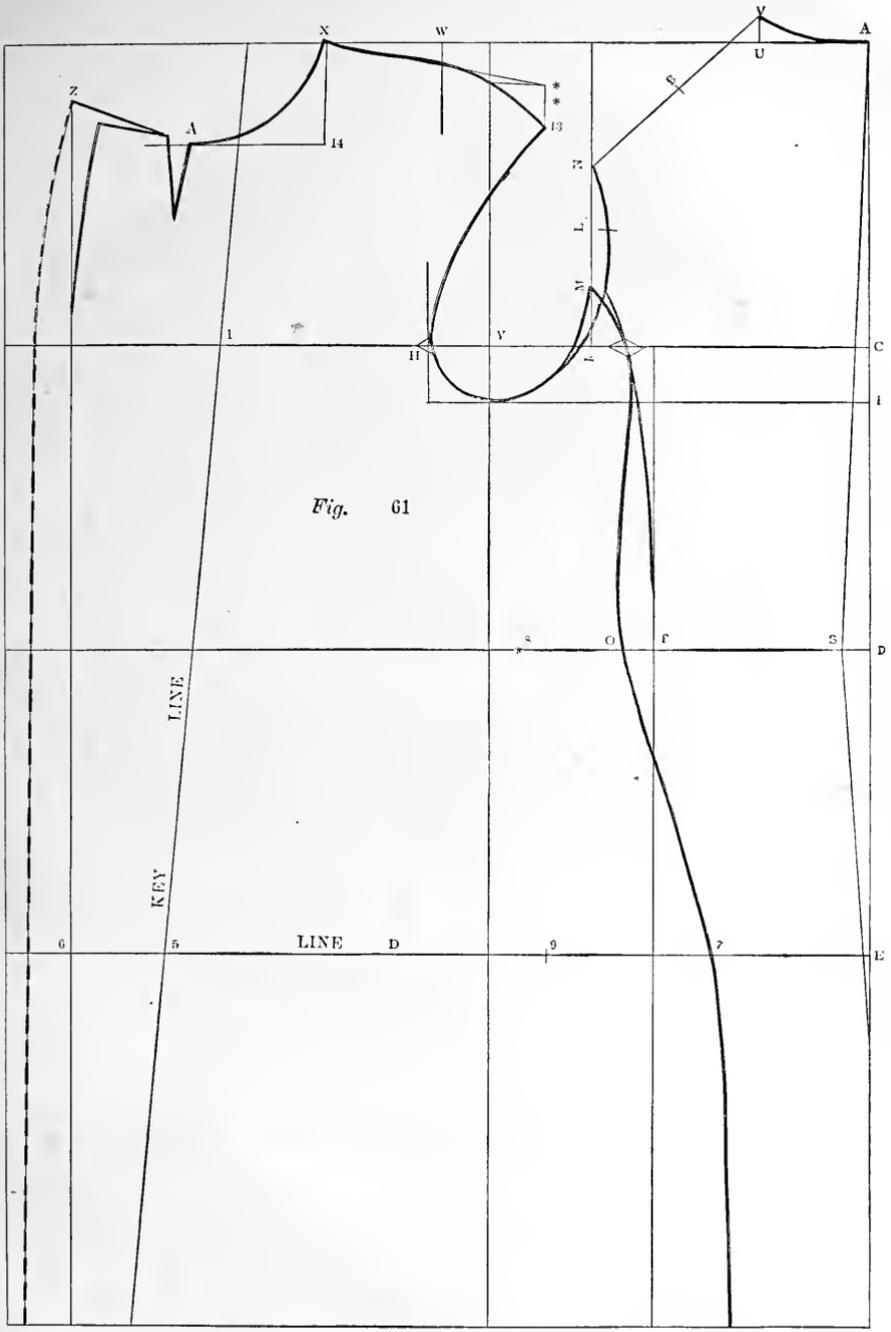
Fig. 61

breast, and measure from A to this point and apply less width of back, less ½ inch from **A** to U on line X, for location of shoulder point, and from B to same point, and apply same measure, without deduction, on line W.

Get width of shoulder of fore part as to * * by width of shoulder seam of back and square down $\frac{1}{16}$ of breast as to 13.

Shape shoulder as from 13.

"   scye   " *   13.

"   under arm seam.

Square down from X.

X to 14 is $\frac{1}{8}$ breast and $\frac{1}{4}$ inch.

Square out from 14.

C to 1 is $\frac{1}{2}$ of full breast.

Advance square $\frac{1}{24}$ of breast, with short arm down, and mark on natural waist, as at 4.

Draw line through these two points, forming the Key Line.

End of gorge to A is $\frac{1}{4}$ of breast and 1 seam.

End of gorge to Z is $3\frac{1}{4}$ inches.

5 to 6 on line D is 3 inches.

Draw a line from Z through 6.

Shape lapel and finish as represented.

For D. B. Sack Overcoat add 1 inch to front all the way down and $\frac{3}{4}$ inch to lapel.

D. B. FROCK OVERCOAT.

(See Fig. 62.)

Take the measures the same as for Frock undercoat, but over same.

Obtain the groundwork of draft as for any other, and proceed as follows:

C to I is $1\frac{1}{2}$ inches.

Square halfway across from I.

Y to H is $1\frac{1}{2}$ inches

Square up from H and down to line I.

Y to K is $\frac{1}{6}$ of breast.

Square up from K.

K to N is $\frac{1}{2}$ of proportionate waist on 3rds and $\frac{1}{4}$ inch.

N to L is $\frac{1}{16}$ of breast.

N to M is $\frac{1}{8}$ "
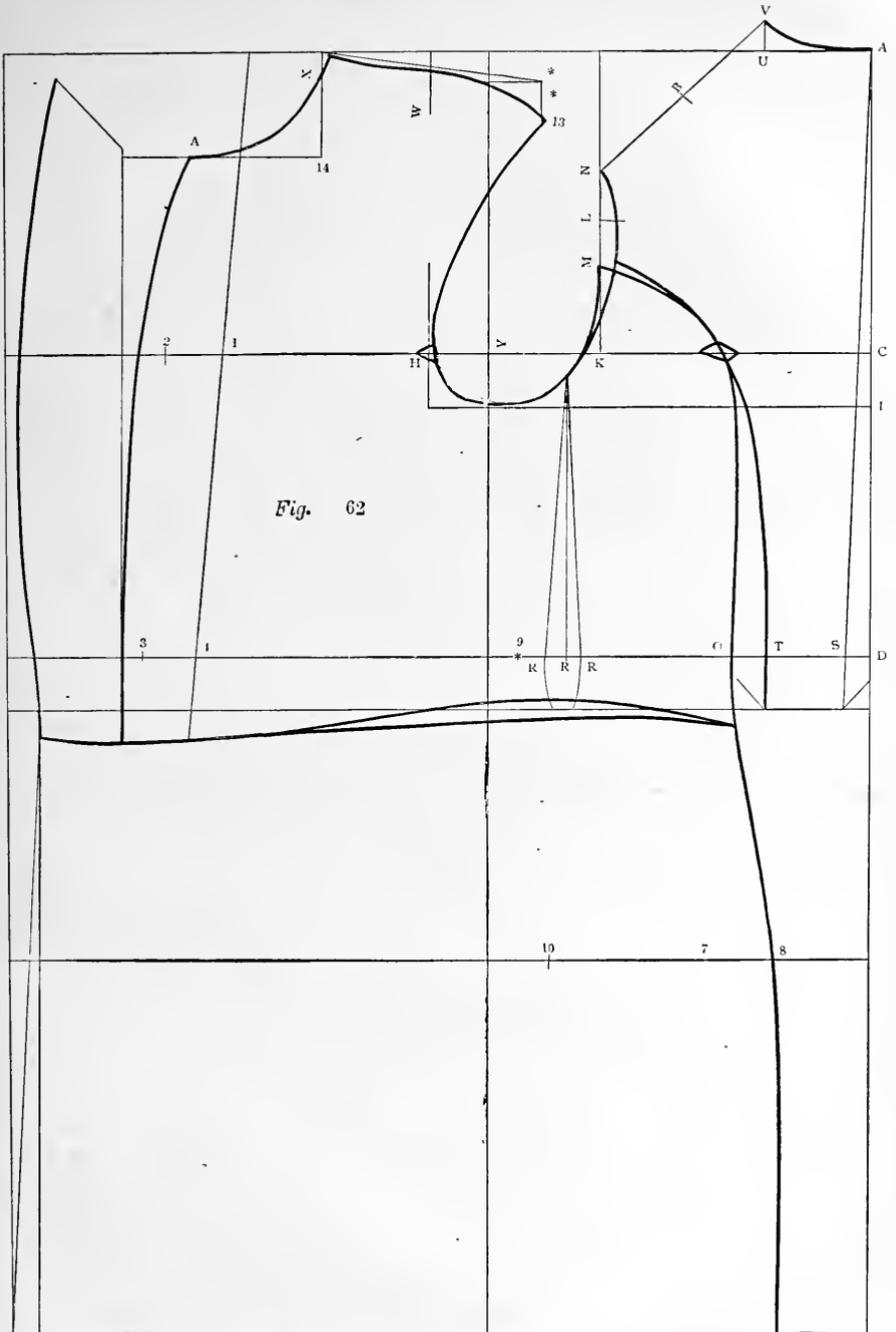
Fig. 62

Balance line to 9 is $\frac{1}{24}$ of breast.

"   " to 10 is $\frac{1}{12}$ "

D to S is $\frac{1}{24}$ of breast.

D to T is $\frac{1}{6}$ "

9 to O is $\frac{1}{3}$ "

O to P is $\frac{1}{4}$ "

R to R is $\frac{1}{24}$ "

10 to 7 is $\frac{1}{3}$ "

7 to 8 is $\frac{1}{12}$ "

Square up from P.

A to U is $\frac{1}{6}$ of breast.

U to V is $\frac{1}{24}$ "

Draw a line from A to S.

Shape back as represented.

B is halfway between V and N.

Shape side seam, touching back line at C, then gracefully through O through 8.

Balance line to X is $\frac{1}{4}$ of breast and is subject to changes, according to size of waist.

X to W is same distance as B to V.

To obtain the proper location of the shoulder point and height of shoulder for overcoats, mark on natural waist line the proportionate balance point, $\frac{2}{3}$ less $\frac{1}{12}$ of breast, and measure from A to this point, and apply less width of back, less $\frac{1}{2}$ inch, from A to U on line X, for location of shoulder point, and from B to same point, and apply same measure, without deduction, on line W.

Draw slope of shoulder through these two points.

Get width of shoulder of fore part as to * * by width of shoulder seam of back, and square down $\frac{1}{16}$ of breast as to 13.

Shape shoulder as from 13.

"   scye   "   "   13.

"   under arm seam through R R.

Square down from X.

X to 14 is $\frac{1}{8}$ of breast and $\frac{1}{4}$ inch.

Square out from 14.

C to 1 is $\frac{1}{2}$ of full breast.

Advance square $\frac{1}{24}$ of breast, with short arm down, and mark on natural waist line as at 4; draw a line through these two points for Key Line.

End of gorge to A is $\frac{1}{4}$ of breast from X and 1 seam.

1 to 2 is allowance for seams.

4 to 3 is same.

Add $\frac{1}{24}$ of breast and curve in very slightly at bottom.

Make lapel to fancy or style.

Draft skirt same as for double-breasted frock and shape as represented.

The closing lines of article on Different Styles should always be carefully considered in drafting overcoats, and it is not to be supposed that the dimensions given from line A B are definite, any more than anything else subject to changes in style and finish.

PART V.

PART V.

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THE VEST.

The measures necessary for vest are—

Depth of scye.	Waist.
Width of blade.	Length of opening, and
Breast.	Full length.

In determining size of waist, by Key Line, use Sack Coat measure.

TO DRAFT PROPORTIONATE VEST.

(See Fig. 63.)

Square lines A A A.

A to C is $\frac{1}{4}$ of natural waist (skin measure.)

A to D is $\frac{1}{2}$ "   "   "   "

Square across from C D.

C to I is $1\frac{1}{4}$ inch.

C to Y is $\frac{2}{3}$ of breast less $\frac{1}{12}$.

Square up and down from Y.

This constitutes the balance line.

Square out halfway from I.

Y to H is $1\frac{1}{2}$ inches.

Square up from H and down to line I.

Y to K is $\frac{1}{6}$ of breast.

Square up from K.

K to N is $\frac{1}{2}$ of proportionate waist on 3rds.

A to U is $\frac{1}{6}$ of breast.

U to V is $\frac{1}{24}$ "

Draw a line from V to N.   B is halfway between these points.

Balance line to X is $\frac{1}{4}$ of breast.

X to W is same as B to V.

Obtain shoulder point and height of shoulder same as for coat.

X to 13 is $\frac{1}{3}$ of breast less $\frac{1}{4}$ or any desired width.

V to M is same as X to 13.

Shape scye as from 13 to F.

    "   "   "   M to G, $\frac{1}{2}$ inch below point F.

D to S is $\frac{1}{24}$ of breast.

Draw a line from A to S.

S to T is $\frac{1}{24}$ of breast.

Shape from C on line A S to T.

S to R is $\frac{1}{2}$ of breast.

R to P is $\frac{1}{16}$ "

C to 1 is $\frac{1}{2}$ of full breast.

Advance square, with short arm down, $\frac{1}{24}$ of breast and mark as at 4 on natural waist line.
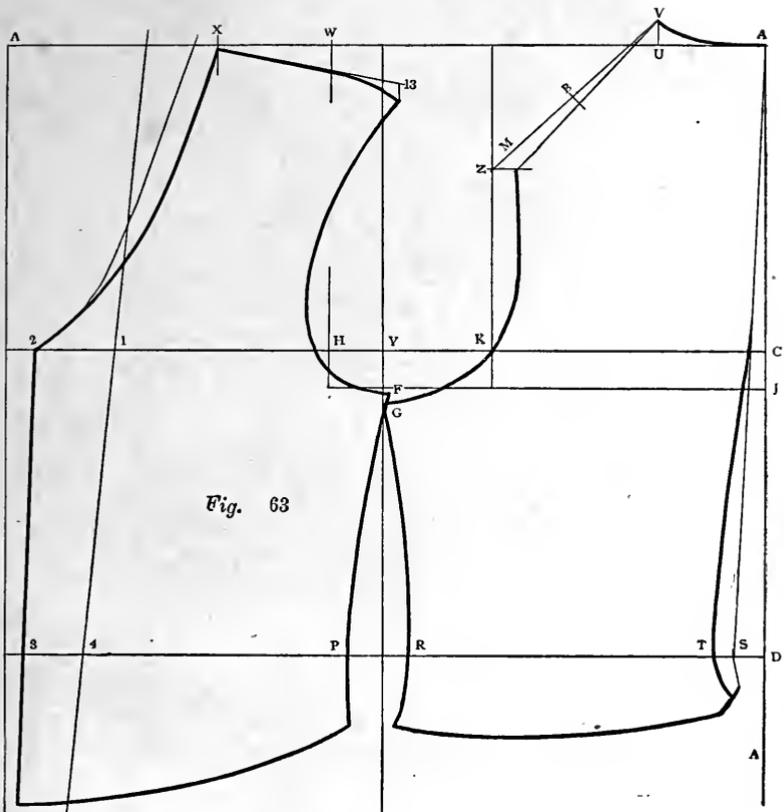
Fig. 63

Draw a line through 1 and 4, for Key Line.

1 to 2 is 1 inch and $\frac{1}{16}$ of breast for button stand.

3 to 4 is $\frac{1}{2}$ inch less than 1 to 2.

Add $\frac{3}{4}$ inch for collar stand.

Get length of opening and full length on Key Line and finish as represented.

TO DRAFT VEST FROM COAT PATTERN.

Most cutters are aware that a good many bad-fitting vests are worn, or else had to undergo alterations before customers would wear them.

This arises from the fact that a great many vests are cut from a bloc& and the necessary changes *guessed* at, with bad results.

This can be prevented by drafting vest directly from coat pattern and afterwards tracing it out. This must produce a fit like the coat and requires no more time than looking for a block of the size, guessing at its changes and afterwards making the alterations.

TO DRAFT VEST FROM SACK COAT PATTERN.

(See Fig. 64.)

S to T is $\frac{1}{24}$ of breast.

S to R is $\frac{1}{2}$ "

R to P is same amount as that taken out in coat between back and side seams.

A to 1 is 1 inch for seams and $\frac{1}{16}$ of breast.

B to 2 is $\frac{1}{2}$ inch less than A to 1.

Add $\frac{3}{4}$ inch for collar stand.

Get length of opening and full length on Key Line of coat.

Reduce width of shoulders, front and back, as desired.

Shape scye, making back scye $\frac{1}{2}$ inch lower than front scye, to give necessary length over blade.

Finish as represented.
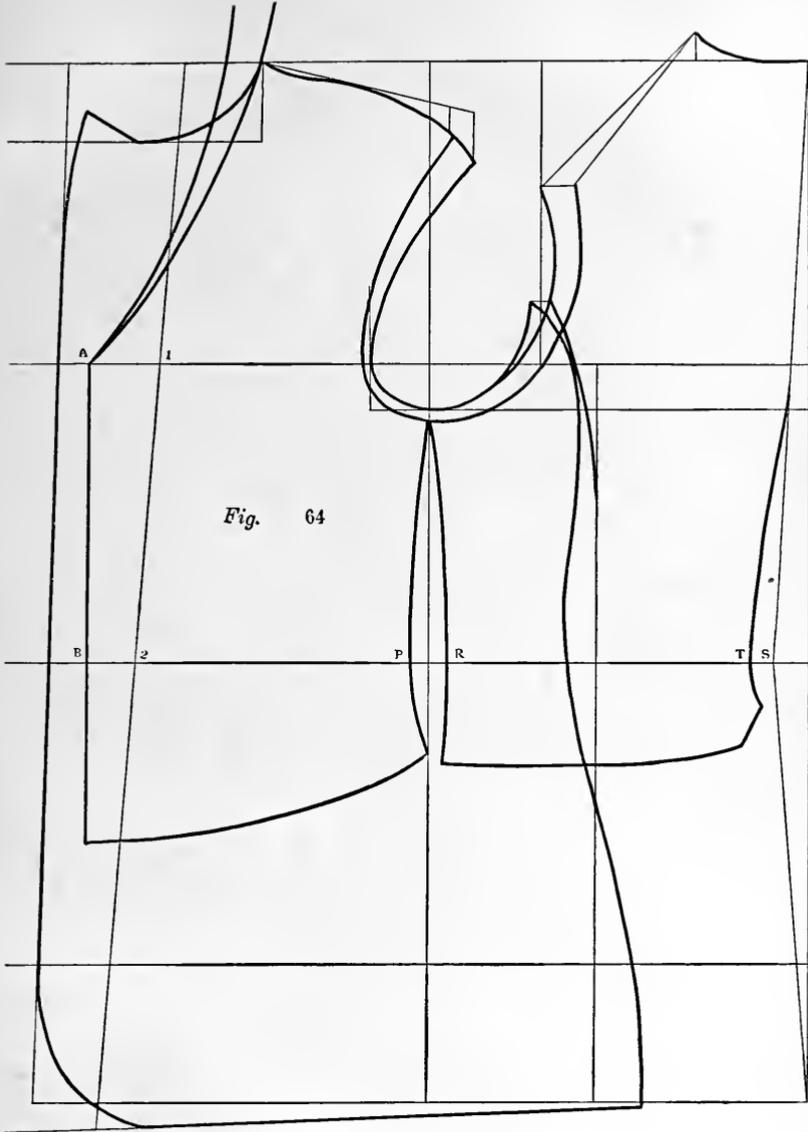
Fig. 64

TO DRAFT VEST FROM FROCK COAT PATTERN.

(See Fig. 65.)

Advance shoulder point $\frac{3}{4}$ inch and recede Key Line at natural waist $\frac{3}{4}$ inch; this is done to offset the V taken out at waist in Frock Coats.

Draw through points 1 and 2 for Key Line of vest.

S to T is $\frac{1}{24}$ of breast.

S to R is $\frac{1}{2}$ "

R to P is amount taken out between back and side body.

1 to A is 1.inch for seams and $\frac{1}{16}$ of breast.

2 to B is $\frac{1}{2}$ inch less than 1 to A.

Reduce shoulders front and back to desired width.

Shape scye making back scye $\frac{1}{2}$ inch lower than front scye, to give necessary length over blade.

Get length of opening and full length on Key Line of vest, add $\frac{3}{4}$ inch for collar stand, and finish as represented.

Fig. 65
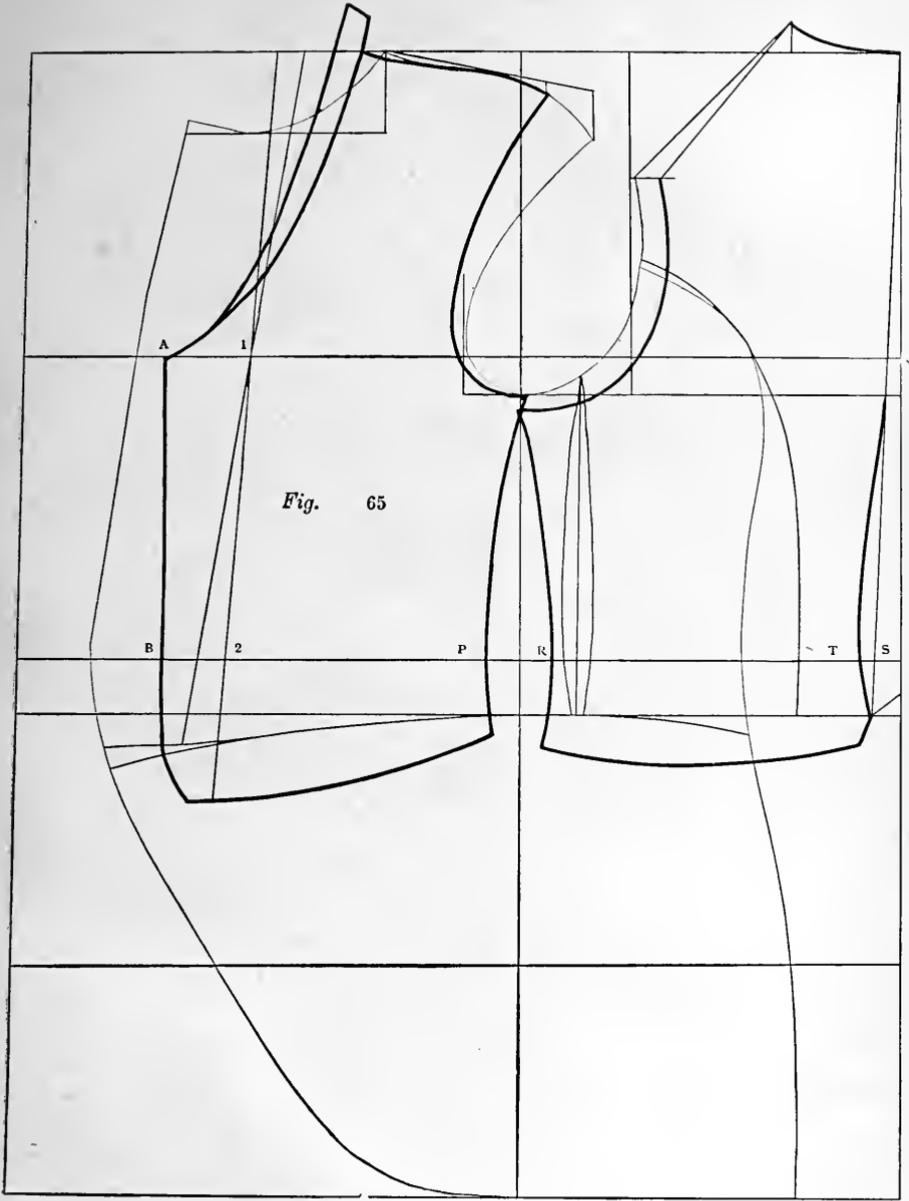
VEST COLLARS.

There are two ways of putting on vest collars and both being in vogue, we deem it but proper to explain both as there is a slight variation between them.

To draft vest collar as in fig. 66, the gorge of vest must be hollowed a little more than in draft of proportionate vest, as crease line of collar forms the shape of opening.

The stand of collar should be $\frac{3}{4}$ inches, including seam; turn of collar may be made to suit the artistic fancy of cutter. An examination of draft makes any explanation further unnecessary.

The shape of collar notched or round is entirely optional with wearer or dictated by Dame Fashion.

In fig. 67 the stand of collar is added to shoulder point, and from this point the desired curve of opening is given, as the collar is cut so as to be laid on flat to correspond with this opening, and, as in the former, the shape is dependent on circumstances.

Fig. 66
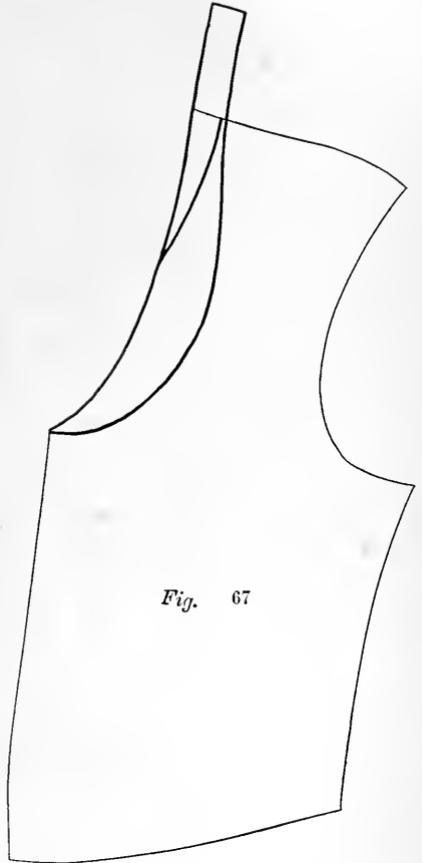
Fig. 67

PART VI.

PART VI.

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TROUSERS.

The measures for trousers consist of—

Inside seam.   Bottom.
Outside seam to knee.   Waist.
Knee width.   Seat.

To take these measures properly, ask your customer to draw his trousers well up; place end of tape close in crotch and measure to heel of shoe.   For the outside seam, place measure exactly over hip, measure to knee-cap and to bottom, same as for inside seam.   Next measure width of knee and bottom as desired, and then waist right above hips, and seat over the most prominent part.

The balance line for trousers is $\frac{1}{3}$ less $\frac{1}{24}$ of proportionate thigh measure at bottom, and $\frac{1}{3}$ less $\frac{1}{24}$ of seat measure on seat line; and front line of waist is added or receded from the proportionate waist to seat, as per following table.

SEAT.	WAIST.	THIGH.	SEAT.	WAIST.	THIGH.
30	25	$16\frac{2}{3}$	40	$33\frac{1}{3}$	$22\frac{2}{9}$
31	$25\frac{1}{6}$	$17\frac{2}{9}$	41	$34\frac{1}{6}$	$22\frac{7}{9}$
32	$26\frac{2}{3}$	$17\frac{7}{9}$	42	35	$23\frac{1}{3}$
33	$27\frac{1}{2}$	$18\frac{1}{3}$	43	$35\frac{5}{6}$	$23\frac{8}{9}$
34	$28\frac{1}{3}$	$18\frac{5}{9}$	44	$36\frac{2}{3}$	$24\frac{4}{9}$
35	$29\frac{1}{6}$	$19\frac{4}{9}$	45	$37\frac{1}{2}$	25
36	30	20	46	$38\frac{1}{3}$	$25\frac{5}{9}$
37	$30\frac{5}{6}$	$20\frac{5}{9}$	47	$39\frac{1}{6}$	$26\frac{1}{9}$
38	$31\frac{2}{3}$	$21\frac{1}{9}$	48	40	$26\frac{2}{3}$
39	$32\frac{1}{2}$	$21\frac{2}{3}$	49	$40\frac{5}{6}$	$27\frac{2}{9}$

For table to use in actual practice, see Table of Proportions.

TO DRAFT FOREPART.

(See Fig. 68.)

Draw lines A A A.

A to C is length to knee and $\frac{1}{4}$ inch.

A to D is outside length   " $\frac{1}{4}$ "

B to D is inside   "   " $\frac{1}{4}$ "

Square out from B C D.

D to E is $\frac{1}{3}$ less $\frac{1}{24}$ of proportionate thigh.

B to F is $\frac{1}{3}$ less $\frac{1}{24}$ of proportionate seat.

Draw a line from E to F.

Square up from F.

B to G is $\frac{1}{2}$ seat.

G to H is $\frac{1}{8}$ seat.

H to I is $\frac{5}{8}$ inch.

J to K is desired width of forepart equally divided on each side of line E.

Draw a line from I to K.

Draw a line from B to J.

A to L is $\frac{1}{12}$ of seat.

Square up from G; this gives $\frac{1}{4}$ of proportionate waist from L to M.

If waist size desired is larger than proportionate waist add $\frac{1}{2}$ of this amount to M, but not to exceed $\frac{1}{24}$ of seat; if more is required add from L, and if not yet sufficient add to back part, as will be explained.

If extended from M, draw a line from M to G and form to I; add $\frac{1}{4}$ inch for dress from M and form to H, which finishes forepart.

TO DRAFT BACK PART.

(See Fig. 68.)

Extend lines A B C and D.

1 to 2 is $\frac{1}{12}$ of seat.

Square up from 2,

2 to 3 is $\frac{1}{6}$ of seat.

Draw a line from 3 to G.

X to 4 is $\frac{2}{3}$ of seat less $\frac{1}{6}$.

4 to 5 is 1 inch.
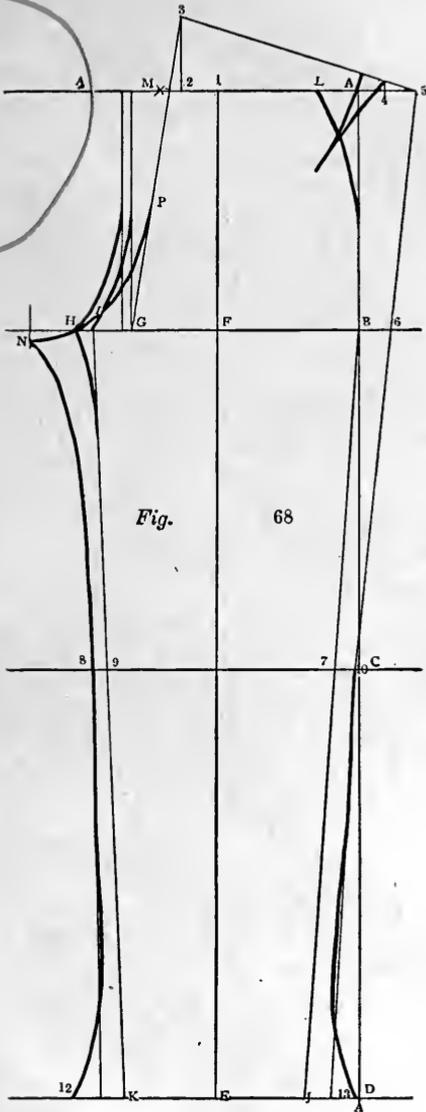
Fig. 68

B to 6 is $1\frac{1}{4}$ inch.

7 to 8 is $\frac{1}{2}$ knee and $\frac{1}{2}$ inch.

9 to 10 is $\frac{1}{2}$ knee and $\frac{1}{2}$ inch.

J to 12 is $\frac{1}{2}$ of bottom and $\frac{1}{2}$ inch.

K to 13 is $\frac{1}{2}$ "   " $\frac{1}{2}$ "

I to N is $\frac{1}{8}$ of seat.

G to P is $\frac{1}{8}$ of seat.

Curve seat line from P to N, as represented.

Draw a line from 3 to 5.

Make V $\frac{1}{12}$ of seat less $\frac{1}{2}$ inch.

Shape from 5 through 6, through 10 to bottom.

Shape from N through 8 to bottom, curving in from knee to give desired spring to bottom, according to style.

TIGHT TROUSERS.

The only change necessary for tight trousers is at knee.

Should width of forepart at knee, when drafted as per foregoing, exceed the desired width, mark half of size required on either side of balance line and proceed as usual.

CORPULENT TROUSERS

(See Fig. 69.)

Corpulency in trousers has reference only to an abnormally developed waist, all other points being undisturbed, and we therefore consider it only necessary to explain the part affected.

Draft trousers as in usual drafts; ascertain the difference between proportionate waist size and size required; use one-half of this.

Add $\frac{1}{24}$ of seat from M, $\frac{1}{24}$ of seat from L, $\frac{1}{24}$ of seat on back part at 5, and all required above this add to the $\frac{1}{24}$ from **M**.

Raise forepart from L to $\frac{1}{24}$ for moderate corpulency $\frac{1}{24}$ of seat; for extreme, $\frac{1}{12}$ of seat add enough to 6 to make a graceful line from $\frac{1}{24}$ added to 5, and finish as in proportionate trousers.
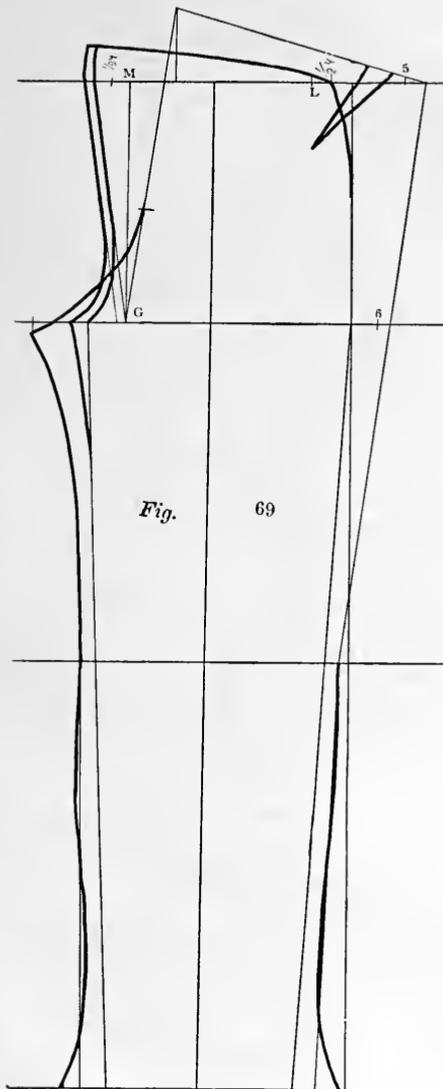
Fig. 69

KNOCK-KNEED TROUSERS.

(See Fig. 70.)

To correctly draft trousers for a knock-kneed form, we follow the deviation from the normal form, by causing the balance line to bend inward to as much as $\frac{1}{24}$ of seat, and making lines on either side correspond with them, same as in normal draft (see fig. 70); the dotted lines represent the normal draft, the solid lines the change necessary for a knock-kneed form.

BOW-LEGGED TROUSERS.

(See Fig. 71.)

This form is just the reverse from that just described and must consequently be treated just the reverse; where in the former the balance line is changed inward, in this case it is changed outward and further proceeded with as in normal draft. In fig. 71, illustrating bow-legged trousers, dotted lines are for normal form; solid lines, the changes required.

Fig. 70   Fig. 71

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