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## PREFACE

*The Fundamentals of Clothing Design and Grading of Men's and Boy's garments presented in the following chapters is the result of a long evolution in drafting proportionate figures using a system of flat pattern design. This material has been acquired thru practical and working experience in designing, fitting and making custom tailored and ready-to-wear clothing covering a period of over thirty years. The author's aim has not been to make the work the most perfect, but the most useful.*

*During the past several years the author has enthusiastically worked to improve methods for the use of the Block-Pattern-System. Each year new improvements are being developed and older methods discarded. This book contains the findings of years of research and supplementary material which should be of vital interest to the student, the specialist in the field--as a school or home-study-course, or for anyone who is sufficiently interested to make designing a lucrative career.*

*The following instructions on designing, if carefully studied and applied, will enable anybody to learn one of the most useful and oldest trades in the world. And in addition to teaching design and the adaptation of block patterns this work-book teaches the beginner to curb his natural impulse to jump hastily to conclusions; instead, to follow careful and precise instructions and to realize after the completion of a draft the underlying reasons for every step in the process.*

*It is hoped that the material contained in these pages will enable reader to cope better with his problems and that the results obtained will add to his satisfaction. It is with that spirit that this work is being presented.*

### "ATTENTION"

This is the new Modern Poly **EW** Cover, is virtually indestructible. It is impervious to water, solvent acids or cleaning fluids while remaining lightweight and washable. A fresh and vibrant product.

MASTER DESIGNER

CHAPTER ONE

General Terms

MEN'S

- ESSENTIAL TOOLS
- GENERAL INSTRUCTIONS
- DESCRIPTION OF TAILOR'S SQUARE
- ADAPTATION OF SQUARE
- REGULAR TROUSER DRAFTS
- STOUT TROUSERS
- PLEAT MANIPULATION

- OUTLETS AND CUFFS
- PATTERN ANALYSIS
- ADJUSTMENTS FOR ATTITUDE
- MEASUREMENT CHART

- WESTERN TROUSER
- RIDING BREECHES
- JODHPURS

- REGULAR SACK COAT DRAFTS
- VARIATION OF STYLES
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- LOUNGE DRAPE

- ALLOWANCE FOR OUTLETS
- ADJUSTMENTS FOR ATTITUDE

- LOAFER JACKET
- UNDER COLLARS
- MANIPULATIONS FOR SPORT JACKETS

- BOY'S
- TROUSER DRAFTS
- SACK COAT
- SPORT JACKET
- O'COAT DRAFTS

IN the following chapters a few terms will be repeated many times in the outline. Perhaps it would save much time and effort if they were explained before the reader gets to them.

**TRACE OUTLINE ON CLEAN SHEET OF PAPER:** This term would apply to transfer a section of the original draft to another sheet of paper so that it may be cut out, or for the purpose of additions to be made to it. This is done with the aid of a tracing-wheel by slipping a sheet of paper under the diagram.

**ADD OUTLETS AND SEAMS WHEREVER NECESSARY:** All patterns in the following chapters are drafted with seam allowances all around excepting, the Back of neck and Gorge-runs. The outlets may be added after the draft and styling have been completed.

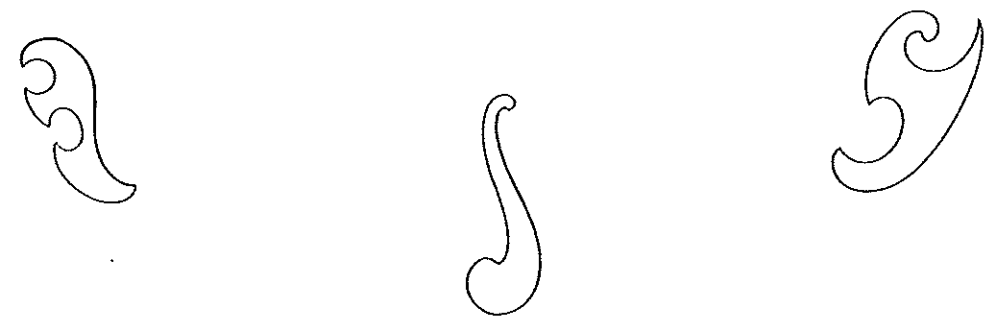
**PROCEDURE:** Explaining outline in detail.

**SQUARE OUT AND DOWN:** To form a right angle with aid of square from a given position.

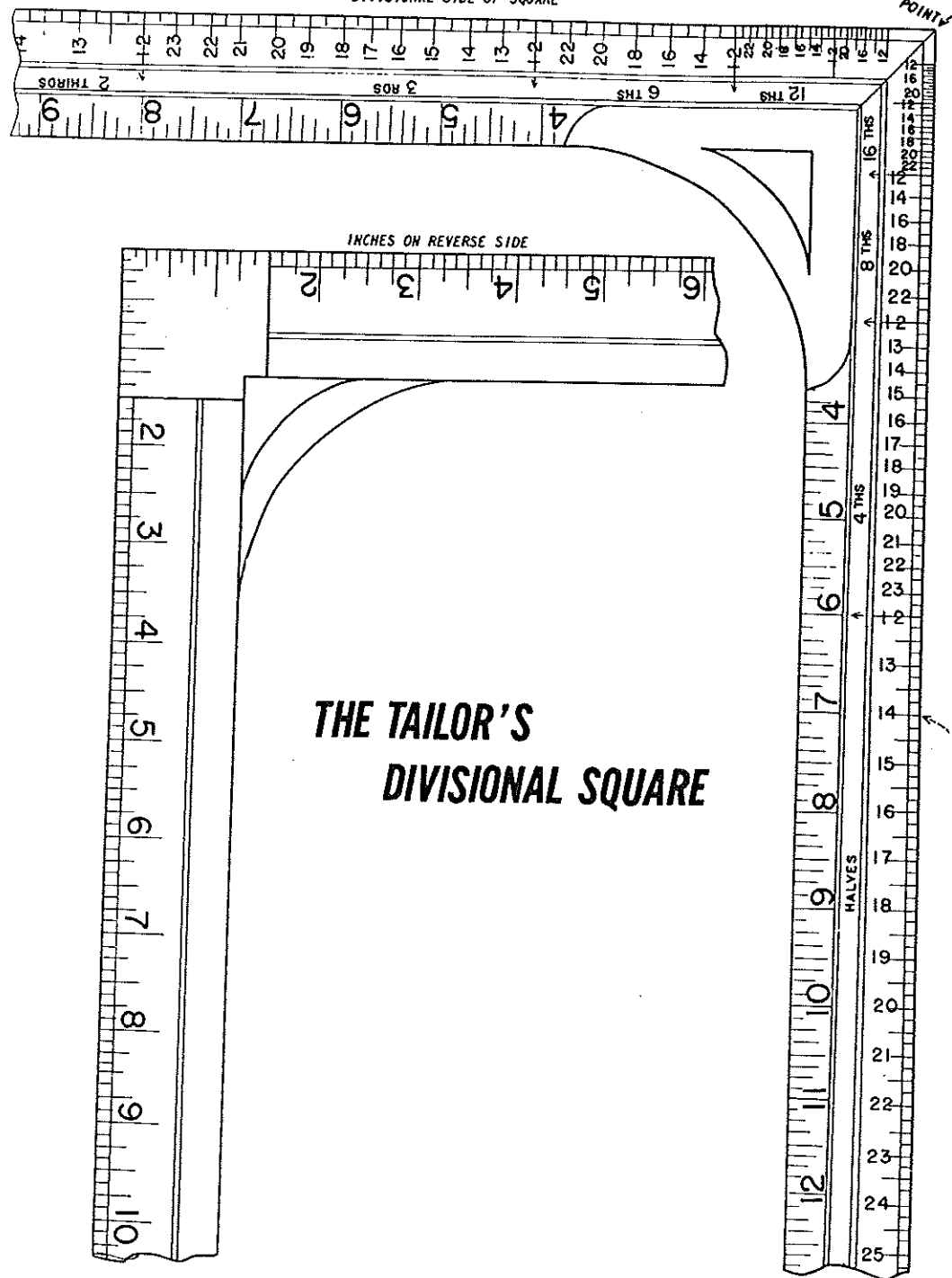
THIS new and authoritative course has been planned both for those who already know flat-pattern-design, and for those who have an ardent desire to learn how. Every step in designing clothes for the masculine figure, from the simplest to the most intricate, is clearly and fully explained in detail. Wherever a point or shaping procedure needs clarification, diagrammatic and easy-to-follow illustrations are shown.

THE early designs in the course serve as a guide in the basic matters of drafting equipment, description of the Tailor's Square and its application to measurements of the human anatomy. Each of the steps are thoroughly treated to prepare the reader for the many diagrams to follow which are taken up in the later illustrations.

THE special problems of designing and grading Men's and Boy's garments are discussed at length with particular attention given to making changes for stooped, erect, high and low shoulder figures and numerous others.



## THE TAILOR'S DIVISIONAL SQUARE



## THE TAILOR'S SQUARE

THERE are different types of Squares. However, the one we recommend, is the Tailor's Square with the divisions of 8ths, 4ths, Halves and Full inches on the *short arm*.

THIS Square, shorter than a yardstick and a right angle corner is so exact its practical usefulness and time saving such that once acquainted with the general application, one would not do without it because of the surprising results obtained.

THE Tailor's Square without a doubt is always correct, and as it has the proportionate divisions on one side and inches on the other, makes it excellent for drawing the construction and guide lines on the draft.

ON the *short arm* of the Square are found divisions of 1/32, 16ths, 8ths, 4ths, Halves and Full inches. On the *long arm*; 24ths, 12ths, 6ths, 3rds and 2/3rd divisions.

DRAFTING, "By the Division of the Tailor's Square," hardly requires an explanation as it is very easy to master. However, the satisfactory pattern can only be constructed when the body measurements of the individual or drafting of the proportionate block patterns as outlined in following chapters are applied with accurate and precise calculations.

IF the Breast circumference, (first; or of the Seat circumference, second; the first as is known, gives the divisions of the Coat, and the second, the Trousers) is 36 inches, then it is 18 inches on the Square, which is used for the

Drafting Power, as only half of the garment is drafted.

IF for example the explanation reads: "3 from 1 is 1/3 Breast measure on division." (Breast is 36 inches) Then look for, "18 on 3rd division of the Square," which is the Drafting Power. If directions read: "4 from 3 is 1/2 Seat on division." (Seat measure is 38) Then because we are drafting only *half of the body*, the drafting-power is 19. So look for "19" on the division of Halves on the Square, and apply this distance from 3 to 4 on the diagram.

ANOTHER explanation may read: "8 from 2 is 1/2 Waist on division, less 1/4 inch." (Waist measure is 28") First establish half of Waist measure, (14 inches in this case) Look for "14" on division of halves, and from the *point* of the Square, (where arms join) apply this amount from 2 to 8, less 1/4". (2 to 8 would measure 6 3/4")

IF you wish to know what 1/3rd of the Breast or of the Seat is equivalent to, first determine the drafting power. For example, the Seat measure is 38.. We are working on half of the width of the body, so naturally the drafting power is 19, which is half of the Seat measure. The rule is: "Drafting-Power equals half-of-width of body-measure."

THE Divisional Square divides the drafting power by the fraction for you. 1/8 divided into 20 will give you 2 1/2 inches; 1/4 divided into 20 will give you 5 inches, etc.

THE Tailor's Square, is going to be your constant companion. Learn it well for it is a simple matter to accomplish.

# How to Figure Your Customer's Size,

THESE keys showing how to calculate a man's measurements, and the accompanying table of proportions are for the average or normal built individual. They can be used as a guide in checking up to determine whether a balanced set of measurements has been taken.

It must be remembered, however, that many measurements will be found to vary in some proportion or other from those shown in this scale, depending upon the particular build of the customer.

Be sure, therefore, to give measurements exactly as your tapeline calls for, and according to directions outlined on order blank.

If loose fitting or tight fitting garments are wanted, just mention this on the order blank and allowances will be made accordingly.

## KEYS FOR CALCULATING MEASUREMENTS

**Waist Length**—of coat is one-fourth the height measure. (Example: height 64 inches; waist length is 16 inches.)

**Coat Length**—is one-half the height, less 2½ to 4 inches. Length varies with style wanted and the season's preference.

**Outside Sleeve Length**—is one-half the height plus ½ of breast measure, less 6 inches. (Example: height 64 inches and breast 34 inches. 32 plus 4½ is 36½, less 6 equals 30½ inches for the outside sleeve length.)

# Proportions and Check Measurements

**Inside Sleeve Length**—is one-half of height less one-eighth of breast plus 11 inches. (Example: height 64 inches and breast 34 inches. 32 less 4½ is 27½ less 11 equals 16½ inches for the inside sleeve length.)

**Vest Opening**—is one-half of vest length. (Example: if vest length is 24½ for a man 5 feet, 4 inches with 34 breast measure, the vest opening should be 12¼.)

**Vest Length**—is one-fourth of height plus one-fourth of breast measure. (Example: height 64 inches and 34 breast measure. 16 plus 8½ is 24½ for the vest length.)

**Pants Waist**—is the breast measure less 4 inches for the normally built man. This, of course, varies according to age and physical activities. Younger men have smaller waist measures and older men have larger waist measures in proportion to breast measures.

**Seat Measure**—is breast measure plus 2 inches. (Example: breast is 36, seat measure is 38 inches.)

**Pants Inseam**—is ½ of height measure, less ¼ inch less one-fourth the seat measure. (Example: height 66 inches, seat 40 inches. ½ of height is 41½ less ¼ inch is 40½, less one-fourth the seat measure or 10 is 30½ for the pants inseam.)

**Overcoat Length**—may vary in accordance with model chosen and the season's style, as well as the preference of the wearer. Double breasted and Ulster models may be worn from 1 to 4 inches longer than single breasted overcoats.

**Weight**—multiply breast measure by 8 and height by 2. Add together and subtract from this total 285. (Example: 38 breast measure and 70 inches height measure. 304 plus 140 equals 444. From this subtract 285, giving 159 pounds as the weight.)

Weight	Height—5 feet, 4 inches										
	Breast Meas.	Waist Length	Coat Length	Width of Back	Outside Sleeve	Inside Sleeve	Vest Length	Pants Waist	Pants Seat	Pants Inseam	O'C. Length S. B. - D. B.
115	34	16	27½	7¾	29¾	16¾	24½	28½	36	30¼	41½ 42½
123	35	16	27½	7¾	29¾	16¾	24½	30	37	30	41½ 42½
131	36	16	27½	8	30	16½	25	31½	33	29¾	41½ 42½
139	37	16	27½	8½	30½	16½	25½	33	39	29½	41½ 42½
147	38	16	27½	8½	30½	16½	25½	34½	40	29¼	41½ 42½
155	39	16	27½	8½	30½	16½	25½	36	41	29	41½ 42½
163	40	16	27½	8½	30½	16	26	37½	42	28¾	41½ 42½
171	41	16	27½	8½	30½	15¾	26½	39	43	28¾	41½ 42½
179	42	16	27½	8½	30½	15¾	26½	40½	44	28¾	41½ 42½
187	43	16	27½	8½	30½	15¾	26½	42	45	28	41½ 42½
195	44	16	27½	9	31	15½	27	43½	46	27¾	41½ 42½
203	45	16	27½	9½	31½	15½	27½	45	47	27½	41½ 42½

Weight	Height—5 feet, 6 inches										
	Breast Meas.	Waist Length	Coat Length	Width of Back	Outside Sleeve	Inside Sleeve	Vest Length	Pants Waist	Pants Seat	Pants Inseam	O'C. Length S. B. - D. B.
119	34	16½	28½	7¾	30¾	17¾	25	28	36	31½	42½ 43½
127	35	16½	28½	7¾	30¾	17¾	25½	29½	37	31¼	42½ 43½
135	36	16½	28½	8	31	17½	25½	31	38	31	42½ 43½
143	37	16½	28½	8½	31½	17½	25¾	32½	39	30¾	42½ 43½
151	38	16½	28½	8½	31½	17½	26	34	40	30½	42½ 43½
159	39	16½	28½	8½	31½	17½	26½	35½	41	30¼	42½ 43½
167	40	16½	28½	8½	31½	17	26½	37	42	30	42½ 43½
175	41	16½	28½	8½	31½	16¾	26¾	38½	43	29¾	42½ 43½
183	42	16½	28½	8½	31½	16¾	27	40	44	29½	42½ 43½
191	43	16½	28½	8½	31½	16¾	27½	41½	45	29¼	42½ 43½
199	44	16½	28½	9	32	16½	27½	43	46	29	42½ 43½
207	45	16½	28½	9½	32½	16½	27¾	44½	47	28¾	42½ 43½

Weight	Height—5 feet, 8 inches										
	Breast Meas.	Waist Length	Coat Length	Width of Back	Outside Sleeve	Inside Sleeve	Vest Length	Pants Waist	Pants Seat	Pants Inseam	O'C. Length S. B. - D. B.
123	34	17	29½	7¾	31¾	18¾	25½	27½	36	32¾	43½ 44½
131	35	17	29½	7¾	31¾	18¾	25¾	29	37	32½	43½ 44½
139	36	17	29½	8	32	18½	26	30½	38	32¼	43½ 44½
147	37	17	29½	8½	32½	18½	26½	32	39	32	43½ 44½
155	38	17	29½	8½	32½	18½	26½	33½	40	31¾	43½ 44½
163	39	17	29½	8½	32½	18½	26¾	35	41	31½	43½ 44½
171	40	17	29½	8½	32½	18	27	36½	42	31¼	43½ 44½
179	41	17	29½	8½	32½	17¾	27½	38	43	31	43½ 44½
187	42	17	29½	8½	32½	17¾	27½	39½	44	30¾	43½ 44½
195	43	17	29½	8½	32½	17¾	27¾	41	45	30½	43½ 44½
203	44	17	29½	9	33	17½	28	42½	46	30¼	43½ 44½
211	45	17	29½	9½	33½	17½	28½	44	47	30	43½ 44½

Weight	Height—5 feet, 10 inches										
	Breast Meas.	Waist Length	Coat Length	Width of Back	Outside Sleeve	Inside Sleeve	Vest Length	Pants Waist	Pants Seat	Pants Inseam	O'C. Length S. B. - D. B.
127	34	17½	30½	7¾	32¾	19¾	26	27	36	34	44½ 45½
135	35	17½	30½	7¾	32¾	19¾	26½	28½	37	33¾	44½ 45½
143	36	17½	30½	8	33	19½	26½	30	38	33½	44½ 45½
151	37	17½	30½	8½	33½	19½	26½	31½	39	33¼	44½ 45½
159	38	17½	30½	8½	33½	19½	27	33	40	33	44½ 45½
167	39	17½	30½	8½	33½	19½	27½	34½	41	32¾	44½ 45½
175	40	17½	30½	8½	33½	19	27½	36	42	32½	44½ 45½
183	41	17½	30½	8½	33½	18¾	27½	37½	43	32¼	44½ 45½
191	42	17½	30½	8½	33½	18¾	28	39	44	32	44½ 45½
199	43	17½	30½	8½	33½	18¾	28½	40½	45	31¾	44½ 45½
207	44	17½	30½	9	34	18½	28½	42	46	31½	44½ 45½
215	45	17½	30½	9½	34½	18½	28½	43½	47	31¼	44½ 45½

Weight	Height—6 feet										
	Breast Meas.	Waist Length	Coat Length	Width of Back	Outside Sleeve	Inside Sleeve	Vest Length	Pants Waist	Pants Seat	Pants Inseam	O'C. Length S. B. - D. B.
131	34	18	31½	7¾	33¾	20¾	26½	28½	36	35¼	46½ 47½
139	35	18	31½	7¾	33¾	20¾	26½	29	37	35	46½ 47½
147	36	18	31½	8	34	20½	27	29½	38	34¾	46½ 47½
155	37	18	31½	8½	34½	20½	27½	31	39	34½	46½ 47½
163	38	18	31½	8½	34½	20½	27½	32½	40	34¼	46½ 47½
171	39	18	31½	8½	34½	20½	27¾	34	41	34	46½ 47½
179	40	18	31½	8½	34½	20	28	35½	42	33¾	46½ 47½
187	41	18	31½	8½	34½	19¾	28½	37	43	33½	46½ 47½
195	42	18	31½	8½	34½	19¾	28½	38½	44	33¼	46½ 47½
203	43	18	31½	8½	34½	19¾	28½	40	45	33	46½ 47½
211	44	18	31½	9	35	19½	29	41½	46	32¾	46½ 47½
219	45	18	31½	9½	35½	19½	29½	43	47	32½	46½ 47½

Weight	Height—6 feet, 2 inches										
	Breast Meas.	Waist Length	Coat Length	Width of Back	Outside Sleeve	Inside Sleeve	Vest Length	Pants Waist	Pants Seat	Pants Inseam	O'C. Length S. B. - D. B.
135	34	18½	32½	7¾	34¾	21¾	27	26	36	36½	47½ 48½
143	35	18½	32½	7¾	34¾	21¾	27½	27½	37	36¼	47½ 48½
151	36	18½	32½	8	35	21½	27½	29	38	36	47½ 48½
159	37	18½	32½	8½	35½	21½	27¾	30½	39	35¾	47½ 48½
167	38	18½	32½	8½	35½	21½	28	32	40	35½	47½ 48½
175	39	18½	32½	8½	35½	21½	28½	33½	41	35¼	47½ 48½
183	40	18½	32½	8½	35½	21	28½	35	42	35	47½ 48½
191	41	18½	32½	8½	35½	20¾	28½	36½	43	34¾	47½ 48½
199	42	18½	32½	8½	35½	20¾	29	38	44	34½	47½ 48½
207	43	18½	32½	8½	35½	20¾	29½	39½	45	34¼	47½ 48½
215	44	18½	32½	9	36	20½	29½	41	46	34	47½ 48½
223	45	18½	32½	9½	36½	20½	29½	42½	47	33¾	47½ 48½

## ESSENTIAL TOOLS

**TAILOR'S SQUARE:** As described on previous page.

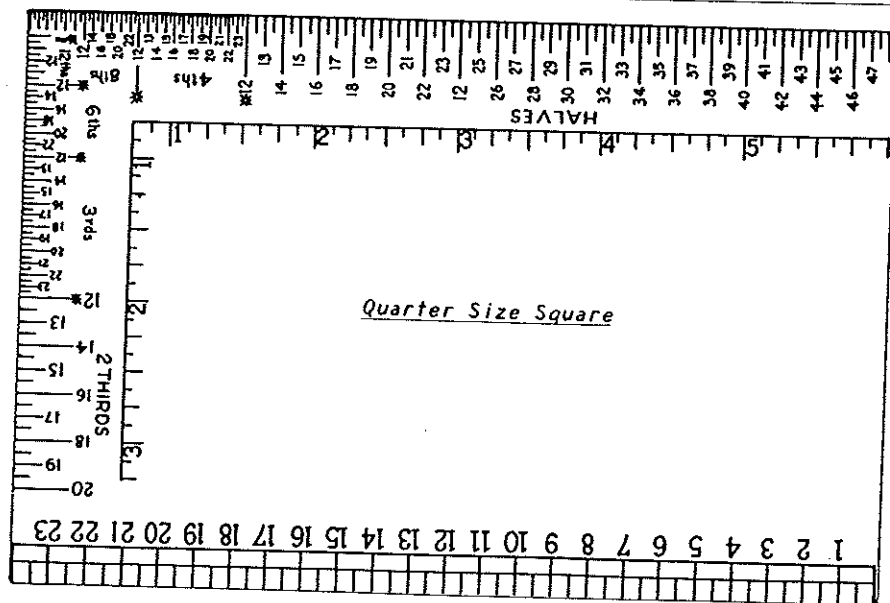
**FRENCH CURVES:** Dietzgen Clearcite #2152-16. Used to shape accurate rounded lines for neck-run, arm-scyce (technical term for arm-hole) etc. A small french curve, (12152-8) for drafting on the miniature scale.

**CURVE STICK:** To shape side seams, lapels, etc.

**GRAPHITE CRAYON:** Used for drawing free hand curved lines. Should be sandpapered down to a sharp edge. For a soft base, drafting paper should be laid on piece of heavy material which will aid in shaping accurate runs.

**TRACING WHEEL;** With sharp toothed edge. For proper application of the tracing wheel, use heavy piece of cloth or several sheets of newspaper as a base, to transfer a part of a pattern on another sheet of paper.

THESE tools may be purchased in any artist's supply or trimming store.



## GENERAL INSTRUCTIONS

DIAGRAMS in this book contain heavy and light lines. The finished results are represented by *heavy lines*, while the *light lines* indicate the construction or guide lines.

IN any flat pattern manipulation that is done, the pattern must retain its *original balance* regardless of how many sections have been cut into and changed for style effect.

IF the reader wishes to practice drafting on a miniature scale, remove *tailor's quarter size square* from below this page. Then mount on cardboard of medium weight and cut out.

**INCLUDE TO FINAL PATTERNS:** Seam allowances to all sewing edges, addition for hems, outlets, cuffs, etc., wherever necessary.

**INDICATE GRAIN LINE:** Marked parallel to *center front* and *center back runs*. The *Straight-of-Grain* on the material is parallel to the selvedge edge.

**NOTCHES:** Corresponding notches are used as an aid for proper joining of different parts of the garments.

## TROUSER MEASUREMENTS

ONE cannot stress too much in taking proper measurements. The tape-line should be checked for accuracy because often-times it has a tendency to stretch or shrink. Would be using good judgement to check tape-line against a yard-stick periodically.

ALL measurements are taken in sequence. The six major details in men's trouser measuring are taken in the following order: 1-Outside seam; 2-Inside seam; 3-Waist measure; 4-Seat measure; 5-Knee measure; 6-Bottom measure.

**1-OUTSIDE SEAM:** The outseam measurement is taken for the purpose of locating the length of the *rise* and begins at top of waistband, which is  $1\frac{1}{2}$  inches above the hip-bone and continues to heel-seam of shoe.

**2-INSIDE SEAM:** Inseam is taken after trousers have been drawn well up into crotch--Start of tape being close up in the crotch and continuing down on inside of leg to heel-seam of shoe; and deduct one inch.

**3-WAIST MEASURE:** Taken over shirt above hip-bone, placing four fingers inside tapeline for ease.

**4-SEAT MEASURE:** This is one of the most important measurements and should be taken around the seat at the largest part. Tape should be drawn medium snug and not too tight or too loose placing four fingers inside tapeline for ease. The actual seat measure must be taken with no other allowances. Everything of a bulky nature are removed from pockets. Sufficient ease at this point is allowed for in the trouser draft.

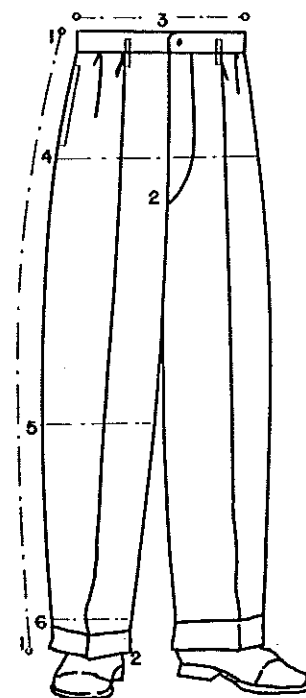
**5-KNEE MEASURE:** This measurement is considered style. However, to acquire the proper knee measure on customer's trousers, feel for knee-cap and at this point of line, measure from back to front of crease line and double the amount. Example: At knee line trousers measure 12 inches; double this amount equals 24 inch knee measure.

**6-BOTTOM MEASURE:** Measure from back to front of crease line and double this amount.

2 to 3: The RISE is determined by deducting the inseam from the outseam. Example: Outseam measure, 43; inseam, 31. 43 minus 31 leaves 12 inches; minus  $1\frac{1}{2}$  inches for waistband, the rise to be drafted is  $10\frac{1}{2}$  inches.

WHEN extremely high rise, or high waisted trousers are desired, add from  $\frac{1}{2}$  inch to  $1\frac{1}{2}$  inches to outside seam measure. For extremely low rise, deduct about the same amount.

BELTS LOOPS; dropped up to half inch have been allowed for in measurements quoted for average figure on rise.



## Regular Trouser Foundation

DIAGRAM shows the basic lines established in drafting trousers. It also demonstrates use of Tailor's Square in miniature forms, how points are squared out to a right angle.

**PARENTHESIS;** ( ) will indicate procedure explained in detail.

**DRAFT** is based on the standard height 5 feet 8 inches.

### MEASUREMENTS:

Rise	10 inches
Inseam	32"
Waist	33 "
Seat	40 "
Knee	22 "
Bottom	19 "

**DRAFTING POWER** is half of seat measure, 20.

### FRONTPART:

A, is starting point, square out and down procedure: (Lay point of square at A, with long arm parallel to length of paper. Draw lines out and down forming a right angle, and obtaining the line of construction and waistline. Label point-of-square A, as shown in diagram.)

1 from A, is rise-length, 10". Label point 1 (Measure down 10" from A to 1).

2 from 1 is inseam length, 32". Label point 2 (Measure down 32" from 1 to 2).

3 from 1 is half inseam less 2". Label point 3 (Measure down 14" from 1 to 3).

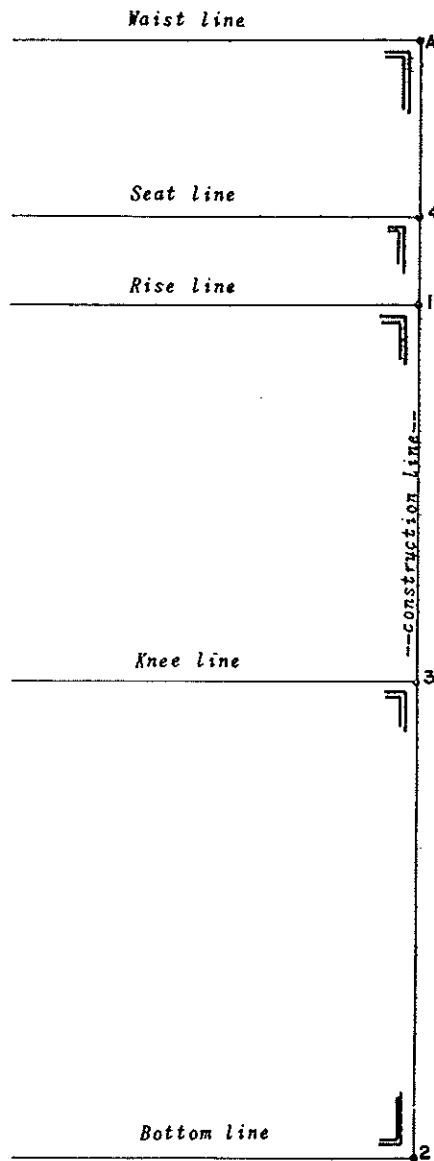
4 from 1 is  $\frac{1}{6}$  Seat on division..About  $3\frac{2}{3}$ ". Label point 4 (Drafting power is half seat measure, 20--Look for 20 on the 6th division of the square, and apply this amount from 1 to 4).

Square out from points 4, 1, 3 and 2 as indicated (Place long arm of square on construction line with point resting on 4; then square out at a right angle. Repeat this procedure at points 1, 3 and 2).

WHEN drafting for the proportionate figure, the rise is attained by taking  $\frac{1}{8}$  of the entire height plus  $1\frac{1}{2}$ ". Add or take away  $\frac{1}{8}$ " using 40 seat as key (See measurement chart).

**PROPORTIONATE INSEAM:** Half of entire height less 2 inches.

(continued on next page)



## REGULAR TROUSER FOUNDATION -ADAPTATION OF SQUARE-

(continued from page 8)

5 from 1 is  $\frac{1}{2}$  seat on division plus  $\frac{1}{2}$ ". Label point 5. Square up to waistline from point 5 (Look for 20 on division of Halves, then add  $\frac{1}{2}$ ". Distance from 1 to 5 is  $10\frac{1}{2}$ " in this instance. Lay long arm of square on rise line with point resting on 5, and square up to waist-line).

6 falls at intersection of seat-line, and line 5-7. Label point 6.

7 falls on waistline. Label point 7.

8 from 5 is  $\frac{1}{8}$  seat on division. Label point 8 (Look for 20 on the 8th division of square and apply this amount from 8 to 5).

### CREASE LINE:

9 is center between 8 and 1. Label point 9.

10 from A, is same distance as 1 to 9;  $6\frac{1}{2}$ " in this instance. Label point 10.

11 from 2 is same distance as A to 10 plus  $\frac{1}{2}$ ". (7". The rule is: Distance from 2 to 11 is same as A to 10 plus  $\frac{1}{2}$ ". Label point 11. Draw line 10 to 11 establishing crease line.

12 falls at intersection of knee-line and crease line. Label point 12.

### INSIDE SEAM RUN:

13 from 11 is full bottom measure on 4th division less  $\frac{1}{4}$ ".  $4\frac{1}{2}$ ". Label point 13 (Look for 19 on 4th division, deduct  $\frac{1}{4}$ ", and add this amount from 11 to 13).

14 from 8 is  $\frac{1}{2}$ ". Draw line 14 to 13.

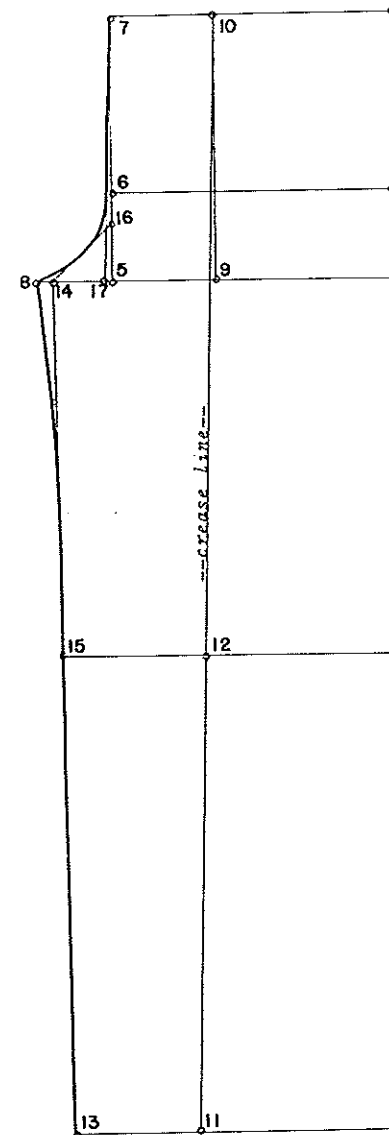
15 falls on knee line. With aid of curve stick, shape inseam run from above 15, and to 8 as indicated.

### FORK AND FRONT RUN:

16 from 5 is same as 5 to 14..2"..Draw guide line 16 to 14.

17 from 5 is  $\frac{1}{4}$ ". Draw line 17 to 7. Label point 17. With aid of french curve, shape front and fork run as shown.

(continued on next page)



REGULAR TROUSER FOUNDATION  
-ADAPTATION OF SQUARE-

(continued from page 9)

**OUTSIDE SEAM:**

18 from 7 is 1/2 Waist on division..8 1/2". (Half of waist measure is 16 1/2"; look for 16 1/2 on division of halves, and apply this amount from 7 to 18).

19 from 6 is 1/2 Seat on division..10" (Half of seat measure is 20; look for 20 on division of halves on the square, and add this amount from 6 to 19).

20 is squared down from 19 (Lay long arm of square on seat line with point resting on 19, and draw line to rise line).

21 is center between 19 and 20.

22 from 11 is same distance as 11 to 13..4 1/2".

23 from 12 is same distance as 12 to 15..5 1/2". (15 to 23 equals half of knee measure less 1/2" ..10 1/2"..)

Connect points 22 to 23, 23 to 21; then with aid of graphite, shape from 21 to 18. Add 1/4" at 18 and shape to 10 as indicated.

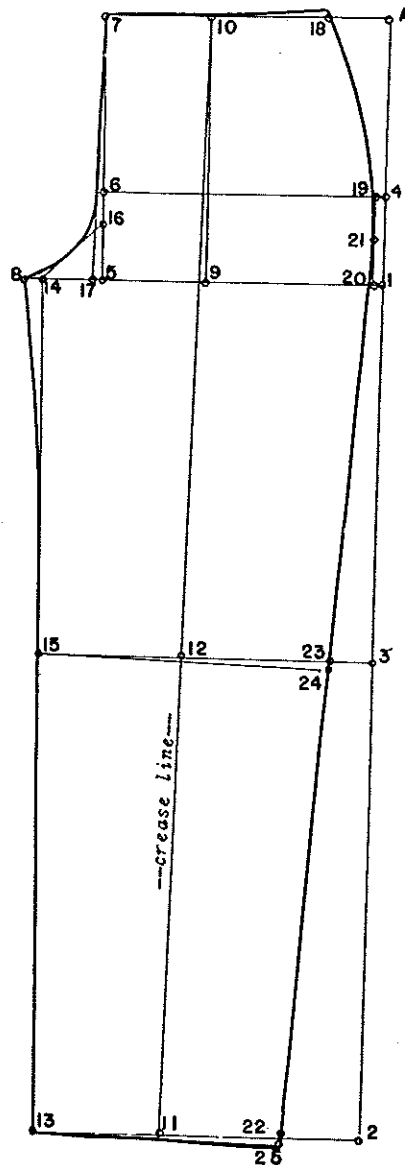
24 from 23 is 1/4". Draw new knee line, 24 to 15.

25 from 22 is 1/4". Draw new bottom line, 25 to 13.

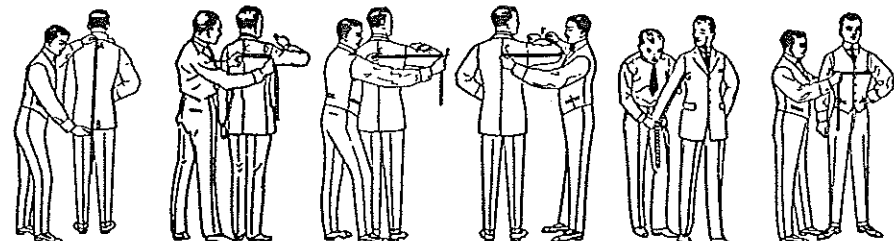
Cut out frontpart (heavy lines) and trace outline on clean sheet of paper, as indicated by dash lines on next page.

The backpart can also be drafted over frontpart, which would simplify drafting of backpart. When applied in this manner, use tracing wheel to trace outline of frontpart on another sheet of paper, after completing draft of backpart.

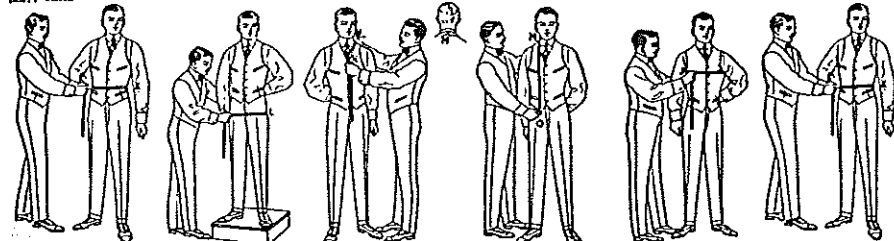
(continued on next page)



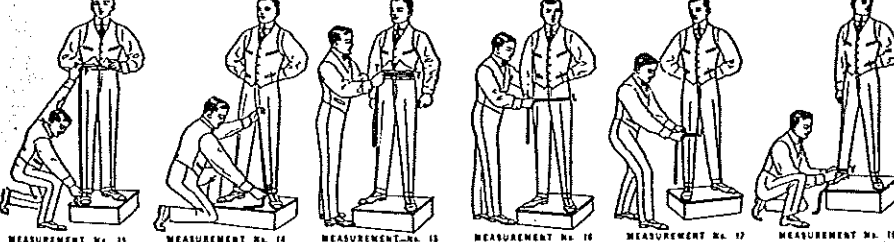
Correct Positions and Complete Instructions for Taking Measurements.



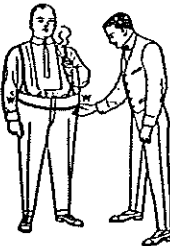
MEASUREMENT No. 1 LENGTH OF COAT—Start at top of shoulder and go down to the bottom of the coat. For OVERCOATS—Proceed to the top of the coat and then to the bottom of the coat. MEASUREMENT No. 2 WIDTH OF BACK—Start at center back of coat and go to same point on other side. MEASUREMENT No. 3 SLEEVE MEASURE—From shoulder to the wrist. MEASUREMENT No. 4 SLEEVE LENGTH—From shoulder to the wrist. MEASUREMENT No. 5 INSEAM OF SLEEVE—From shoulder to the wrist. MEASUREMENT No. 6 WAIST MEASUREMENT—Take measurement in the waist with the tape line over the hips and under the arms.



MEASUREMENT No. 7 WAIST MEASURE—Around the body at the natural waist line. MEASUREMENT No. 8 SEAT MEASURE FOR COAT—This is very important. This gives over the breadth of the seat. MEASUREMENT No. 9 VEST OPENING—Start at the collar and go down to the waist. MEASUREMENT No. 10 FULL LENGTH OF VEST—Measure from the collar to the bottom of the vest. MEASUREMENT No. 11 BUST OF TURTLE—Measure from the top of the neck to the bust. MEASUREMENT No. 12 WAIST OF VEST—Measure at the waist line.



MEASUREMENT No. 13 OUTSIDE SEAM OF TROUSERS—Start at the top of the waistband and go down to the bottom of the leg. MEASUREMENT No. 14 INSIDE SEAM—From the top of the waistband to the bottom of the leg. MEASUREMENT No. 15 WAIST OF TROUSERS—Measure around the body at the waist. MEASUREMENT No. 16 KNEE MEASURE—Measure around the knee. MEASUREMENT No. 17 KNEE MEASUREMENT—Measure from the top of the knee to the bottom of the leg. MEASUREMENT No. 18 BOTTOM MEASURE—Measure from the top of the bottom to the bottom of the leg.

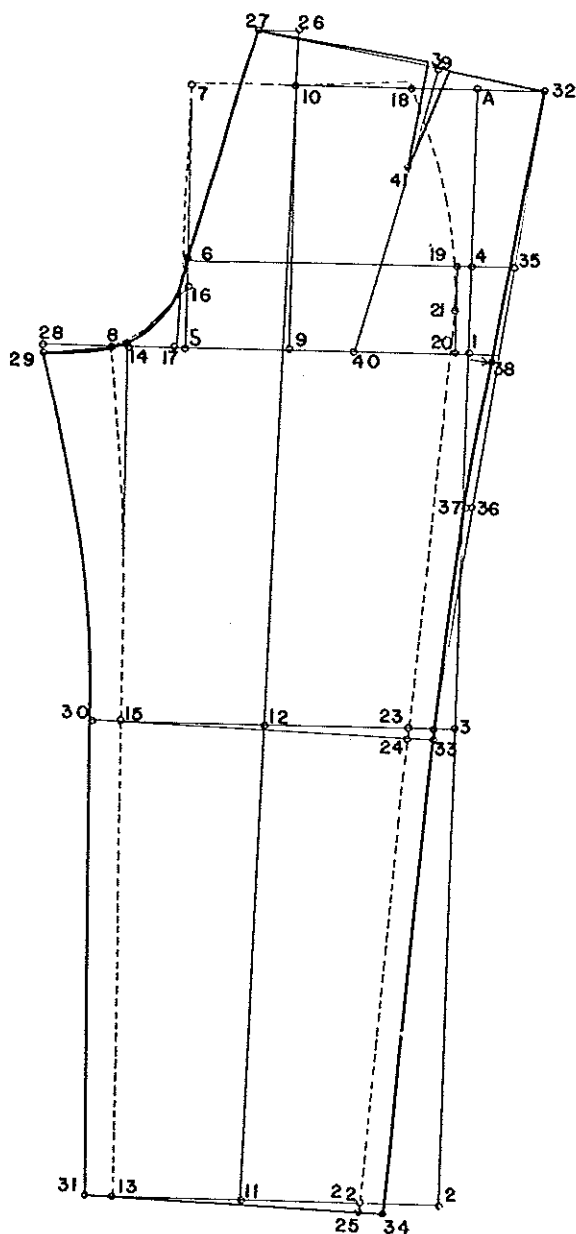


MEASUREMENT No. 19 FOR COMPLET MEN—Take additional measurement at the waist.

Very Important!

An accurate description of your customer is just as important as correct measurements. At all times give us the height, weight and age of your customer, also a complete description of his build, such as square or sloping shoulders, stooped or erect position. If he has any physical peculiarities mention same as it requires special designing. At all times take only actual measurements. If customer desires loose fitting garments make note of same on order blank but give us only his body measurements. Be sure and take crotch device off when using tape line—except when taking inseam of sleeve and inseam of trousers. A great many men put a knot at the further end of tape so that they will not make the error of measuring from wrong end.

REGULAR TROUSER FOUNDATION  
-ADAPTATION OF SQUARE-



REGULAR TROUSER FOUNDATION  
-ADAPTATION OF SQUARE-

(continued from page 10)

**BACKPART:**

Extend Waist, Seat, Rise, New-knee and Bottom lines forward and back.

**CENTER BACK RUN:**

Extend Crease line toward 26;

26 from 10 is 2". Square out toward 27 (Lay long arm of square on crease-line with point resting on 26, and square out toward 27). Label point 26 as shown.

27 from 26 is  $\frac{1}{16}$ th Waist on division, plus  $\frac{1}{2}$ ". Label point 27. (Look for half of Waist measure on 16th division of square; add  $\frac{1}{2}$ " to this amount. Half of Waist measure is  $16\frac{1}{2}$ " in this instance). Distance from 26 to 27 would equal about  $1\frac{1}{2}$  inches.

28 from 8 is  $\frac{1}{8}$  Seat on division, plus  $\frac{1}{4}$ "; label point 28. Will equal  $3\frac{1}{4}$  inches (Look for half Seat measure on the 8th division on the square; add  $\frac{1}{4}$ ", locating point 28).

29 from 28 is  $\frac{1}{2}$ "; draw guide line from 8 to 29; label point 29.

Draw a line from 27 to 6; with aid of french curve, shape run of Center-back using points 6, 8 and 29 as a guide.

**INSEAM:**

30 from 15 is 1"; label point 30.

31 from 13 is 1"; label point 31.

Draw line 31 to 30, then with aid of curve stick shape from 30 to 29 as indicated.

32 from 27 is  $\frac{1}{2}$  Waist on division, plus 2" for six seams, plus  $\frac{1}{8}$ " for each inch Waist is smaller than Seat. Equals  $11\frac{1}{8}$ " (Look for  $\frac{1}{2}$  Waist on division of halves on the Square-- $8\frac{1}{2}$ "; add 2" for seams and makeup; add  $\frac{1}{8}$ " for each inch Waist is smaller than Seat-- $\frac{7}{8}$ ". The Waist measure is 7" smaller than Seat in this instance. Add this amount from 27 to 32; label point 32).

33 from 24 is 1"; label point 33.

34 from 25 is 1"; draw line 34 to 33, 33 to 32; label point 34.

35 falls on seat line; label point 35.

36 is center, between 33' and 35; label point 36.

37 from 36 is  $\frac{1}{4}$ "; shape side-seam from 37 to 32, 37 to 33 as indicated.

38 is  $\frac{1}{4}$ " below straight line. Equals the rise notch.

39 from 32 is  $\frac{1}{4}$  Waist on division; equals  $4\frac{1}{8}$ "; label point 39 (Look for  $16\frac{1}{2}$  on 4th division of square and add this amount from 32 to 39).

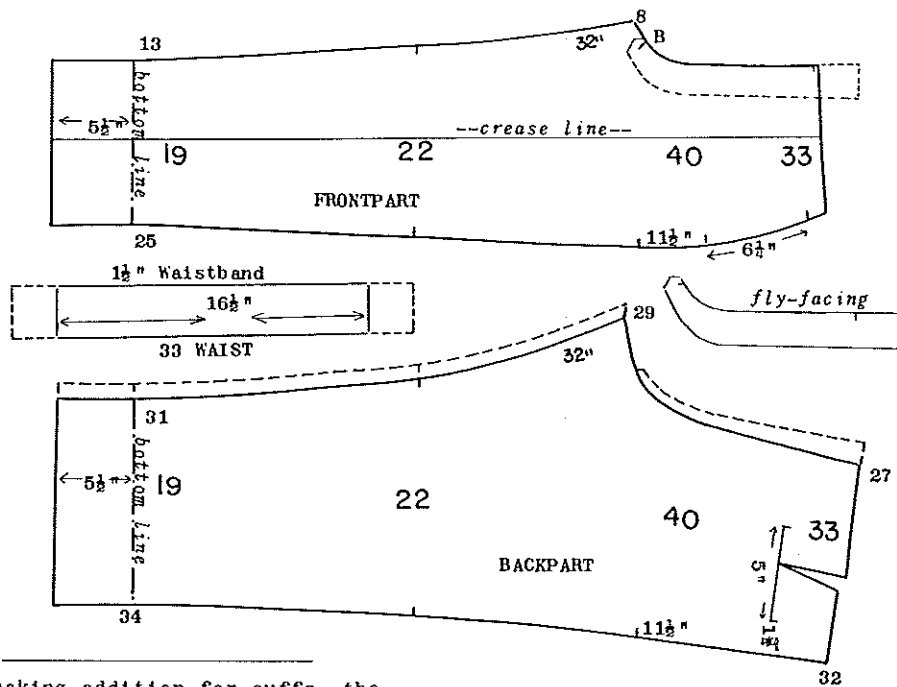
40 from 9 is  $\frac{1}{8}$  Waist on division; equals  $2\frac{1}{16}$ " for 33 Waist measure. Draw line 39 to 40 (Look for  $16\frac{1}{2}$  on 8th division of square, then add this amount from 9 to 40),

41 from 39 is  $3\frac{1}{4}$ "; equals length of Back Dart.  $\frac{1}{8}$ " is cut out at dart, which equals  $\frac{1}{8}$ " for each inch Waist is smaller than Seat. Take out half of this amount on each side of 39, then connect points as illustrated in diagram.

Trace outline of Frontpart and Backpart, then make additions for outlets and cuffs as described on next page.



ADDING OUTLETS  
CUFFS--TRIMMINGS



WHEN making addition for cuffs, the rule is: Add twice the desired width plus 1 1/2" for turnup--5 1/2" for a 2" cuff or 5" for 1 1/2" cuff.

ADD 1/4 inch for outlets at inseam of backpart, 29-31; add 1 1/4 inches at center back, 27. Dash lines illustrate allowance for outlets.

1/4" SEAMS are allowed for in all Men's and Boy's trouser drafts. If larger seams are desired, add all around pattern accordingly.

THE waistband is figured for half of waist measure. Add 2" to each end; cut 2" wide, to finish 1 1/2" in width.

FLY NOTCH, (B) is 1 1/2" from 8. Fly facing is 1 1/2" wide, and notched a seam below waistline. Trace outline of fly on clean sheet of paper, as indi-

cated by dash lines. Mark Side and Back pocket openings as shown in diagram. Two cuts are required for Side and Hip pocket facings. Cut slightly longer than opening.

THE 'Regular Trouser' may be drafted with 5, 6, 7, or 8 inches difference between waist and seat measures. If difference is greater than 8 inches, see the, 'Large Seat Trouser Change'.

WHEN the difference between waist and seat is less than 5 inches, refer to the, 'Stout Trouser Draft'. These measures are used as a guide so as to adapt the proper drafts for all types of figures. The Rise, Inseam and Outseam measures are optional.

PLEAT manipulation illustrated on next page.

PLEATED TROUSER MANIPULATION

I  
REVERSED PLEATS

Mark outline of frontpart on clean sheet of paper as shown by solid lines. Extend waist, seat, rise and knee lines toward outside seam.

Label points 1, 2, 3, along crease line.

Label points 4 and 5 as shown.

6 from 1 is 2".--Large pleat allowance-- Draw line 6 to 3.

7 falls on seat line.

8 from 4 is 3 1/4". Equals 2" for large pleat; 1 1/4" allowance for the pinch pleat.

9 from 5 is same distance as 2 to 7..

10 is 2" above bottom line.

10, is pivot point--Using frontpart as a guide, pivot from 10 and shift frontpart from 5 to 9, and re-mark from 10 to 9. With aid of french curve, shape from 9 to 8 as indicated by dash lines.

PINCH PLEAT:

11 is center between 6 and 8. Square down to seat line. Add half of the allowance (1/2") for the pinch pleat, on each side of 11, and connect points as indicated.

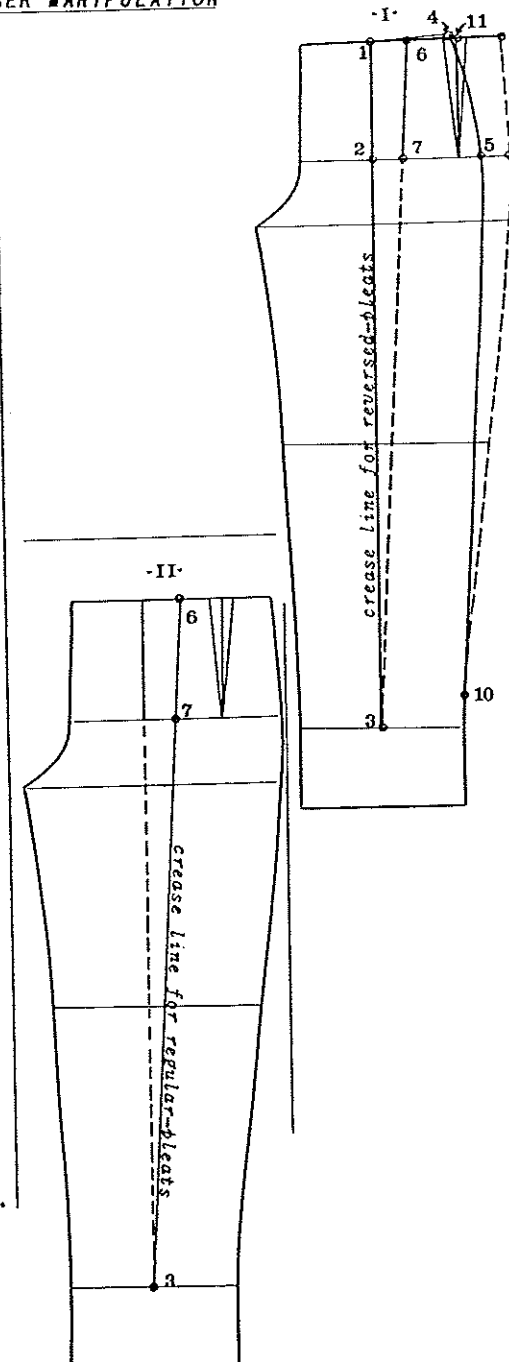
The crease line (1-3) is laid on the straight-of-material. Reverse pleats are sewn off on the wrong side of material, and finished to face outside seam, (outward) on right side of cloth.

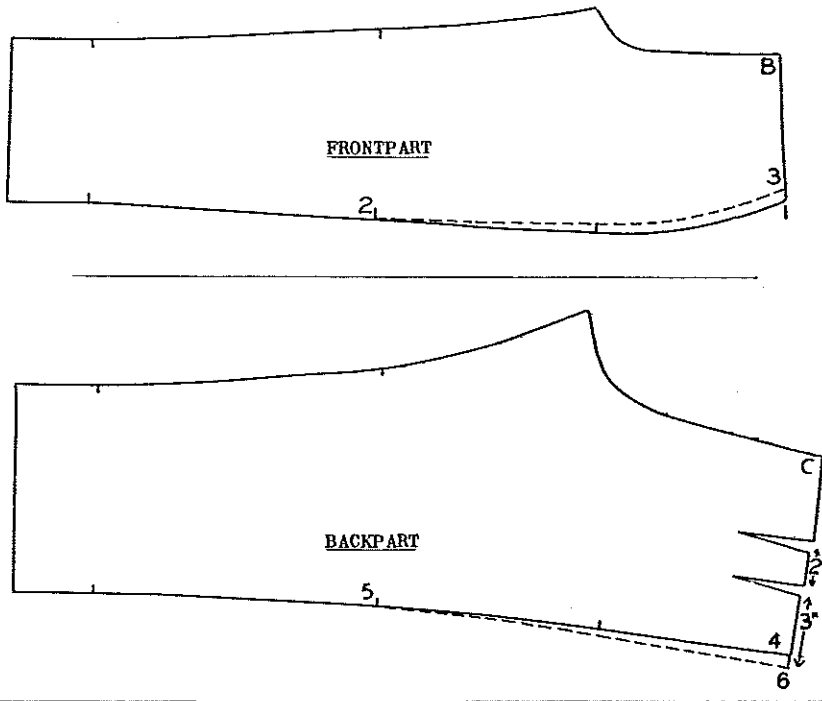
II  
REGULAR PLEATS

Using the Reverse pleat pattern as a guide, (solid lines) make following changes:

The Regular pleats face the front run, (inward) and are also sewn off on the wrong side of cloth.

Line 6-3 is used as the crease line and is laid on the straight-of-grain.



LARGE SEAT TROUSER CHANGE

THE 'Large-Seat-Trouser' is referred to as such, due to the difference between the waist and seat measure; 10" in this instance.

THE seat measure is 40, the waist measure 33, on the block pattern. To make waist measure finish 30", proceed as follows: Mark outline of front and back on clean sheet of paper as shown by solid lines. Void marking original back-dart.

FRONTPART:

Label points 1 and 2 as indicated.

3 from 1 is  $\frac{1}{4}$ " for each inch waist is to be reduced... $\frac{2}{3}$ " in this instance. Point 2, (knee notch) is pivot point. Pivot from 2, and shift Front  $\frac{2}{3}$ " from 1 to 3. Re-mark as per dash lines.

BACKPART:

Label points 4 and 5.

6 from 4 is same distance as 3 to  $1\frac{1}{2}$ ". Pivot from 5, and shift back  $\frac{2}{3}$ " from 4 to 6. Re-mark as per-dash lines.

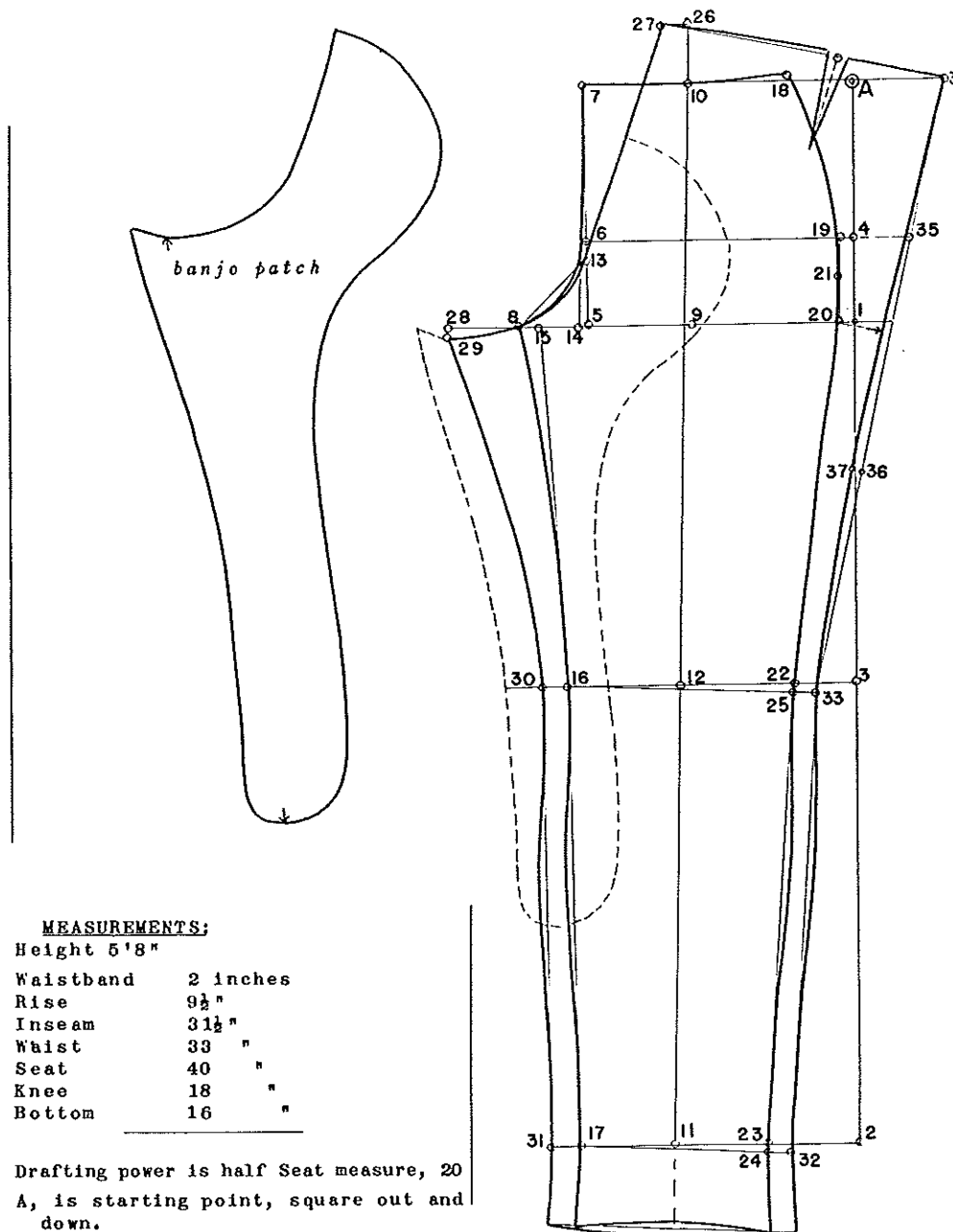
BACK DARTS:

Two back darts are required so as to throw enough fullness over the proper area. Check half waist (15") by measuring frontpart from B to 3; ( $7\frac{1}{2}$ " ) apply this amount at C, on backpart, and mark off 15" along waist-line. Now mark off  $2\frac{1}{2}$ " for makeup and 8 seams to be sewn off at waistline... $1\frac{1}{2}$ " will be left over. In this instance, cut out  $\frac{2}{3}$ ", and  $\frac{1}{2}$ " out of darts, which will compensate for the  $1\frac{1}{2}$ " left over. Mark darts as illustrated, and check waist measure.

## SUGGESTED ACTIVITIES

1. Examine carefully "The Tailor's Square" on page 2; note location of *POINT of SQUARE*, where both arms join. Study the divisions located on the *LONG ARM*; divisions located on the *SHORT ARM*.
2. Employing the quarter size Tailor's Square, design the "Regular Trousers," using 5, 6, 7 and 8 inches difference between waist and seat measures. Where the difference between the waist and seat measure is greater than 8 inches, apply manipulation for "Large Seat Trousers." Also vary the rise and inseam lengths.
3. After producing a draft, make the manipulation for pleats; add outlets and cuffs, measure the finished product for accuracy.

# Western Trousers



### MEASUREMENTS:

Height	5'8"
Waistband	2 inches
Rise	9½"
Inseam	31½"
Waist	33"
Seat	40"
Knee	18"
Bottom	16"

Drafting power is half Seat measure, 20  
A, is starting point, square out and  
down.

- 1 from A, is length of Rise.
- 2 from 1 is length of Inseam.
- 3 from 1 is half the inseam less 2".
- 4 from 1 is 1/6 Seat on division. Square out from all points.
- 5 from 1 is 1/2 Seat on division, plus ½ inch. Square up to waistline.
- 6 falls on intersection at Seat-line.
- 7 falls on intersection at Waist-line.
- 8 from 5 is 1/8 Seat on division.
- 9 is center between 8 and 1.
- 10 from A is same distance as 1 to 9.
- 11 from 2 is same distance as A to 10 plus ½"; draw crease line 11 to 10.
- 12 falls on intersection of Knee and crease line.
- 13 from 5 is same distance as 5 to 8; Draw line 13 to 8.
- 14 from 5 is ¼"; draw line 14 to 7, and shape front and fork run to 8.
- 15 from 8 is ¾ inch.
- 16 from 12 is 1/4th Knee measure, less ¼". (4½")
- 17 from 11 is 1/4th Bottom measure, less ¼" (3¾"). Shape inseam from 17, 16, and 16 to 8 as indicated.
- 18 from 7 is 1/2 Waist on division.
- 19 from 6 is 1/2 Seat on division.
- 20 is squared down from 19.
- 21 is center between 19 and 20.
- 22 from 12 is 1/4th Knee, less ¼".
- 23 from 11 is 1/4th Bottom, less ¼". Shape outseam 23, 22, 21 and to 18.
- 24 from 23 is ¼"; draw new bottom line, 17 to 24.
- 25 from 22 is ¼"; draw new Knee line 16 to 25.

### BACKPART:

- Extend lines A, 4, 1, 25, 24 forward and back.
- 26 from 10 is 2½"; square out toward 27.
  - 27 from 26 is 1/16th Waist on division; (1 1/16") draw line 27 to 13.
  - 28 from 8 is 1/8 Seat on division plus ¼".
  - 29 from 28 is ½"; draw line 29 to 8. Shape run of seat 13 to 8, 8 to 29.
  - 30 from 16 is 1 inch.
  - 31 from 17 is 1". Shape inseam 31, 30, 29.
  - 32 from 24 is 1 inch.
  - 33 from 25 is 1 inch.
  - 34 from 27 is 1/2 Waist on division plus 2 7/8" (11 5/8"); draw line to 33 and 33 to 32.
  - 35 falls on Seat line.
  - 36 is center between 35 and 33.
  - 37 from 36 is ½"; re-shape as shown. Back-dart is suppressed 1/8". (Follow waist procedure as in preceding drafts).
- Shape the Calves (between knee and bottom lines) as indicated.
- THE BANJO PATCH** is used, to reinforce the Seat, and extends about midway between knee and bottom line. The length at center back is about midway between points 6 and 27. To extend a portion of the patch onto the frontpart, add 1½" at 29 as indicated.

**HOLLOW INSTEP:** For the plain bottom trouser, (no cuffs) add 3" to inseam line for a turn-up, and shape for a hollow instep. (½" shorter at crease-line of frontpart; ½" longer at crease line of backpart).