A COMPLETE SYSTEM

OF

CUTTING.

THE RESULT OF 30 YEARS PRACTICE & EXPERIENCE

BY

W. W. BRUNDAGE.

"Art is rule, Science is reason."

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A COMPETE SYSTEM OF CUTTING.

THE RESULT OF THIRTY YEARS PRACTICE & EXPERIENCE

by

W. W. BRUNDAGE.

"Art is rule, Science is reason."

Mr. Brundage, the author of this work has been personally and practically known to us for many years, having been connected with our establishment in the capacity of foreman since 1863 during which time an ample opportunity has been afforded of this „System of cutting" which he now proposes to introduce to the trade.

We take great pleasure therefore, in endorsing Mr. B. as a man possessing the highest order of talent and ability in his profession, and we cheerfully recommend this work, emanating from his pen, as a most valuable auxiliary, and one which we think will command the universal approval of the trade.

Runk & White.

Yours Respectfully
W. W. Brundage

PREFACE.

I wish to submit to the inspection of the trade some ideas upon the art of cutting garments, the result of thirty years study and experiment. I do not pretend to have found a perfect plan, but I do pretend to have found something practical and consistant, that will stand the test of reason easy to attain, and as clear as an idea can very well be made. And as I have had so many years practical experiance, I trust I will be dealt with leniently by an enlightened and inteligent fraternity, when I say, that in my humble opinion the trade is at this time more in want of a correct principal for their guide than at any former period, as the rapid changest hat take place in the different styles demands a plan to secure the wished, for results that will accommodate itself to any style and to any operators capacity. The simplicity of my ideas are (I think) their chief recommendation to particular notice. And as my object has been in getting this principal into operation, to benefit myself alone, and finding it work to my entire satisfaction, and with certainty there might be others that would like to avail themselves of it, I have been induced to place it before the public, in a form that will give all a chance to obtain it.

Respectfully, Yours

W. W. Brundage.

Introductory Remarks.

The author is fully sensible of the critical position in which he places himself by attempting to establish a true and practical plan for the government of the trade. The majority of the trade will by this mode be enabled to improve their previously acquired knowledge, and the young man without practice may now obtain a knowledge equal to the best in the trade, upon this simple and easy mode, which has been matured by the most assiduous application and study. What I have sought in my practice is to produce a result giving what a fine taste, both in the operator and wearer would desire. There are a great many systems in use and all purporting to have found the result required, but in my studies of the different plans that I have used, I have failed to discover the one thing needful namely the "how" to obtain a fine fitting garment, for all the varieties of form, that present themselves to test the abilities of the cutter as an artist and man of science. And what my experience is, has been the experience of almost every one in the trade; ask any one in the trade who has had some experience, what system he uses, and he will answer "none;" he can not find one that will do the work for which it was intended, and therefore has recourse to his own judgement obtained in many cases by long years of practice and expensive alterations, for, if a plan will not apply to every conformation of form and shape, it cannot be admitted to be of general use. The author having accomplished what others have in vain sought to do, namely, discovered a line which shall remain an unbroken straight line while all the other parts of the garment are projected from it with unering certainty, giving the forepart and back their true relative position, one to the other, causing one to follow the other, with a positive certainty, so that one may not be too long or too short for the other, so that it is not left to the judgement of the operator, to know whether he has made the correct variation or not, and in the end a large and expensive alteration, attending his best efforts with a wish that he might obtain a correct plan for all his future efforts.

I therefore solicit the attention of the trade to this important discovery, not doubting, but they will acknowledge, that it is not only useful to them as cutters, but a great saving of their property and reputation, all being more or less dependent on their knowledge of fitting the different garments to the great diversity of shape and form, that he has to contend with. This mode explains the cause of all the expensive alterations, that the trade has had to contend with. It clearly demonstrates the errors of all the proceeding authors and shows that their own calculations and anatonical and geometrical rules and systems for fitting the different garments, without being subject to doubtful variations as this mode makes its own variations which is clearly shown.

True science will always produce cause and effect, it assists the mind and removes all doubt and conjecture (which are harrasing to minds of very many of the trade) and enables the operator to pursue his calling with pleasure, profit and satisfaction to himself and his customers. Teachers of systems up to the present age generally inform new beginners at the finishing or last lesson, that their improvement will depend on their practice, they tell them now you have a system (intended) to fit all proportions and positions with which to commence business. The young man with a limited capital and high aspirations starts business and governed by said system may loose his money and connection before he has gained a practical knowledge by his experience, and if he should be so fortunate as to stand his ground, even then his one system prevents an increase of respectable connection. Why? because he has been cutting by that same old system for ten or twenty years, without being a practical cutter, or even the hope of his ever becoming what might be termed a passable mechanic: let him refer to his books and count the cost of his experiments and what a large amount of money he has expended in trying to gain a little insight into one of the neblest and most difficult trades, in fact it has become a general idea in the trade, that there is not nor can there be any such thing as a scientific plan devised to guide men in and through one of the most tangled labyrinths that ever come under the observation of mankind and made so entirely by the many erroneous ideas and systems that have from time to time been published and sewn broadcast over both, Europe and America. One will say my system is a system that works from proportions of the breast measure, and then (I would say there can be no such thing) another will say my system consists in taking the measure with a square and making the application to the Cloth as taken (I would say there can be no such thing.) Another will say my system consists in transfering the figure to the cloth and thereby producing a fine fitting garment (I would say there can be no such thing.) I have used almost every system that has from time to time made their appearance since I have been in the trade and with results that were not very pleasing and I am well acquainted with a great number of the different plans now in use, which I have taken the trouble to investigate and what merit they may be entitled to, I am perfectly willing to acknowledge as I expect I shall be judged according to the merits of my work. I shall try to prove that the balance of a coat depends upon the back and forepart, being the right dimensions for one another, and as I have been seeking and have failed to discover in any of the systems the solution of the matter above mentioned, I conclude that any thing new to the trade will be hailed with a feeling of greatfulness, at least to the great majority. I will give the three principles above named a passing notice; Ist. The division of measure principle does not, nor can it work, without making (what are termed by its admirers) variations which things I am pleased to say are very doubtful things, because they exclude all scientific ideas, and throws the whole matter upon the judgement of the cutter, and there are but very few men in our trade, that have ever lived (in my opinion) whose judgement is sufficient for all that is required, and therefore engenders doubt and confusion and bewilders the mind of the mechanic. making him exclaim: O, I wish I knew whether this coat will fit or not, and so with every coat he cuts, which keeps his mind on a continual stretch, and the tension is only taken off when he sees the coat on the customer, and has learned whether he has made a fit or an alteration.

I do not consider it worth my attention to give the names of any of the gentlemen, that have contributed their talent in this line, and that have sewn broadcast over Europe and Ame

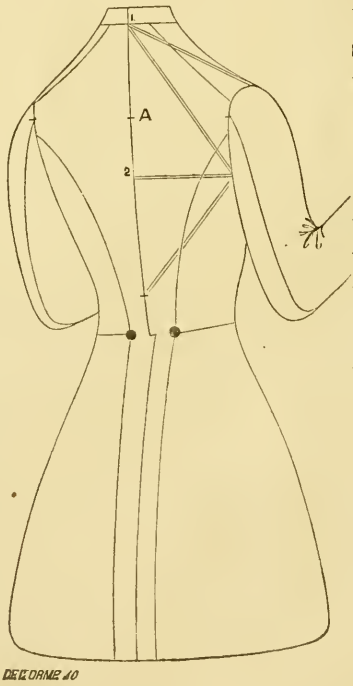
rica an amount of error, that it will take ages to counteract, their names are as familiar to the trade as household words, and in the principles they have laid down, there may be some merit, and done very well for the times in which they were published. But systems of division of measure are and ought to be consigned to the past as worthless trash not worth an hours notice. And as for the principal that takes the measure with a square, and through ignorance undertakes to make the application of the same to the cloth I merely say that such a thing is utterly impossible, that no such thing, as taking the measure of a conical figure with a square, and making the application on a plain, can exist with any degree of certainty and like the division principal at this day, it has its disciples and admirers for the want of something better, and as for the principle called the transfer. I have never seen any thing yet, that would do the work for which it was intended. But as this is a progressive age and people, all the different works, that have been published on the subject of cutting, has served to create a spirit of inquiry and has led to the accomplishment of securing to future ages a plan that will in its working produce a fine fitting garment, and accomodate itself to every variety of figure and style of garment with all the accuracy of a mathematical problem. It has often been said to me, that a tape measure was not, nor can be any thing accurate, whereby to obtain the form of all the different figurs, that the cutter meets in his practice. But I will here say, that superficial measurement with a tape line has answered my purpose beyond my most sanguine hopes, and is in my humble opinion the only means, that will ever be successfully used, to obtain the measures of the different figures of customers that present themselves before the cutter, and the only instrument, necessary to obtain the garment after the measure so taken, as far as measurement is concerned, all of which is respectfully submitted and dedicated to the trade.

By

The Author

DIRECTIONS FOR MEASURES FOR A COAT.

First mark for the top of back and then ascertain where the seam of sleeve will come in the back seye, let your tape measure extend across the back from back seye to back seye, and where the line crosses the back seam make a mark as at A, make as at 2, then mark at natural length of waist. Now place the measure at 1 and measure to A, say $5\frac{1}{2}$ inches to 2 x 9 inches, to the natural waist $16\frac{1}{2}$, to the full length of waist 19, and then to the length of coat 39 inches; then raise the arm and bend the elbow at right angles with the front of Breast and and measure to the width of back $7\frac{1}{2}$, elbow $21\frac{1}{2}$ and full length of sleeve 32, then measure how large you wish your armhole $15\frac{1}{2}$; then from the top of back at 1 around in front of arm to the same place, say 27 inches; from A around in front of the arm to A, say $26\frac{1}{2}$ inches, from 1 around in front to 2, say $23\frac{1}{4}$ inches from 1 to natural waist 24 inches, and size of breast and waist under the coat, breast 35, waist 30.



Recapitulation of measure: $5\frac{1}{2}$, $16\frac{1}{2}$, 19, 39, $7\frac{1}{2}$, $21\frac{1}{2}$, 32, $15\frac{1}{2}$, 27, $26\frac{1}{2}$, $23\frac{1}{4}$, 24, 35, 30.

The measures for an over garment are the same as for the frock coat.

For a round shouldered man a measure as from 1 to the middle of back seye should be taken which would make the measures stand, say $5\frac{1}{2}$ down, $7\frac{1}{2}$ wide and $8\frac{7}{8}$ inches to 1.

FOR PANTS.

Place the measure at the hip as high as you wish the pants, and measure the outside seam, say 42 inches; then measure the length of inside seam, 32 inches; size of waist 30, hip 36, and the size required at bottom, say 18 inches.

FOR A VEST.

The measures for a vest are the shoulder measure, 27, breast 35, waist 30, length 25, and then as high as you wish the vest to close, say $10\frac{1}{2}$ inches.

I have endeavoured to give all the measures that are necessary, and as few as possible, because I think, that many measures only tend to confuse the operator.

Explanation for Frack Coat Plate 1.

It will be perceived, that the measure from 1 around in front of arm to 1 is 27 inches, and the measure from 1 around in front of arm to 2 is $23\frac{1}{4}$.

Now the great question is,— what shall we do with these measures, the breast measure being 35 inches, Now suppose we make a few figures by way of illustration.

Lenght of waist.	Breast measure.	Shoulder measure.	Blade measure
$16\frac{1}{2}$	35	27	$23\frac{1}{4}$
$16\frac{1}{2}$	34	27	$22\frac{3}{4}$
$16\frac{1}{2}$	33	27	$22\frac{1}{4}$

Now the above figures are nothing more than every man meets almost every day in his practice, and after we have found the measures to vary to such a great degree, the question naturally comes up — what shall we do with them to produce the same results for one figure, that we do for another, namely a good fitting coat for all? Now we will make a few more figures.

Shoulder measure.			Blade measure.		
27	9	36	$23\frac{1}{4}$	$11\frac{5}{8}$	$34\frac{7}{8}$
27	9	36	$22\frac{3}{4}$	$11\frac{3}{8}$	$34\frac{1}{8}$
27	9	36	$22\frac{1}{4}$	$11\frac{1}{8}$	$33\frac{3}{8}$

You will perceive, by observing, that one third added to the shoulder measure of itself that you have the remainder of 36 inches for the whole three of the figures, and that the blade measure varies itself by the addition of one half of itself to itself, producing two distinct scales. to get out the shoulder of the coat (or any other garment fitting the shoulders) by (and what I man by scales) are graduated inches 27 producing the exact inch and all other measures are inches in the proportion that the measures are in proportion to 27, So to draft the garment to 27 and $23\frac{1}{4}$ you will use the scales, agreeing with half of 36x18 and half of $35x17\frac{1}{2}$ inches, which agrees with $23\frac{1}{4}$ blade. Now to vary this for 27 shoulder and $22\frac{1}{4}$ blade, you will use 18 and $16\frac{1}{4}$ scales, and the application makes the variation in the draft complete, which will be explained as we go along. It will be found necessary to cut a pattern, as the back and forepart are drafted at the same time. The scale produced by the blade measure is used from K to $16\frac{3}{8}$ as $3\frac{1}{2}$, 9, 12 and $16\frac{3}{8}$ numbers and from the back seam for the width of back $8\frac{1}{4}$ and $7\frac{1}{2}$ No. And the scale produced by the first or upper shoulder measure produces the balance of the shoulder as follows: lines B and C form a square and from K on line C $3\frac{1}{2}$, 9, 12 and $16\frac{3}{8}$ of blade measure. Now square line H from $16\frac{3}{8}$, you now take the scale by the shoulder measure, and from 9 to strike line H at P, $14\frac{1}{4}$ as represented by dotted lines, and from 12 to 0 at top of back $14\frac{5}{8}$, after obtaining the top of back you go from 0 down the back seam $4\frac{1}{2}$, $5\frac{3}{8}$, $6\frac{1}{4}$, $16\frac{1}{2}$ and 19 inches and to the full length of the coat. Now square the lines and go across the back $8\frac{1}{4}$ No. from $4\frac{1}{2}$ and $7\frac{1}{2}$ No. from $6\frac{1}{4}$. (Or a very good plan is to get out the back entirely by measurement). You now square from $3\frac{1}{2}$ and carry in your back as represented, making

the natural length of waist, strike on line M, square line D from B, at the full length of waist. The distance from K to 21 is obtained by a scale agreeing with the breast measure, 35 inches or whatever it may be, and the curve is cast from K. You now follow down line E $4\frac{1}{2}$ No. from P and square to I, which gives the neck gorge. You now take the second shoulder measure, and from $5\frac{3}{8}$ on the back seam to 12 and to curve N (which is cast from 12) will be 1 inch more than the measure From P $5\frac{3}{8}$ No. to strike the curve N. gives the close of the shoulder. The dotted line representing the side seam, gives from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch well, if the customer is flat $\frac{1}{2}$ inch, if round $\frac{3}{4}$ of an inch.

You are now ready to close up all the points and give shape to the garment. It will, I think, be readily perceived that it matters not what shape you cut the back, as the forepart must of necessity follow. The sleeve and skirt are so plain, I do not consider it necessary to give any explanation further than I have given in the diagrams, and the directions here laid down is the same for all the different coat forms except the change of No. on the scales and the application of the 2nd shoulder measure, which you will find noted for each draft. My ideas are a little different from most men in the trade in as much as I take for my model a first rate fitting garment of the style I wish to cut, and by supplying the same conditions in all cases, I produce in all cases the same results.

On plate 2 from $5\frac{3}{8}$ on back seam to 12 and to curve N is $\frac{3}{4}$ of an inch more than the measure.

Plate 4, $\frac{1}{2}$ inch more;

Plate 5, $2\frac{3}{4}$ inches more;

Plate 7, $2\frac{1}{2}$ inches more;

On Plate 6 the second shoulder measure is not applied, as you will see by refering to the plate.

All over garments are drafted by the same scales that body coats are, the addition being made in the draft instead of the measure and here let me observe, that a man can never be too careful in taking his measure.

THE VEST PLATE 8

Is drafted in the same way, that the coat is with 3 scales, and will I think, very readily be got. The distance from A to B will always be $1\frac{1}{2}$ inches more than $\frac{1}{8}$ of the whole waist measure, and then I always make from B to C, and D to E 3 inches more than half the waist measure.

THE CAPE PLATE 7

From 1 to 6 the length of cape from 6 to 5, $1\frac{3}{4}$ inches, and the neck of cape is cut by the back and forepart with the shoulber, closing at 4 as 1, 2, 3, take off the same length in front that you do back and find a sweep between 1 and 3, that will strike both points for the bottom of cape.

EXPLANATION OF PLATE 3.

The first move in drafting a pair of pants is to select scales agreeing with the hip and botton measures as for example; if the hip measure is 36 and the botton measure 18 inches the same scale of 36 will do the whole. But suppose you should wish to cut to 36 hip and 16 bottom you will use two scales, the scales of 36 and 32 and so for every variation of measures the numbers will follow as given on the plate, A being the base line, line D is drawn through $4\frac{1}{2}$ at bottom and 9 at hip from D to B is $\frac{1}{4}$ of the waist measure curve C from 9. (The dotted lines show how a pair of paints are made to take the shape of the leg.) A straight line from line A to cut curve C for the raise of back part. And form the pants as represented.

EXPLANATION OF PLATE 10.

Draw line D from o to $16\frac{1}{2}$ and 19 inches From $16\frac{1}{2}$ inches to curve A $1\frac{1}{8}$ inches more than the balance measure. From o curve B $14\frac{3}{4}$. From o curve E $19\frac{3}{4}$ draw line from G to F and from G $4\frac{1}{2}$ and $13\frac{5}{8}$ square from $4\frac{1}{2}$ by line C and square from the back seam to strike line I 21 of the Breast measure scale, From o $5\frac{3}{8}$ down line D. From $5\frac{3}{8}$ to F and curve J $\frac{5}{8}$ of an inch more than the 2nd shoulder measure from G to strike curve J $5\frac{3}{8}$. From F to curve K $14\frac{1}{8}$. Now lay the back in, at the top from $16\frac{1}{2}$ which will find the scye point as represented. Curve L by H from 21.

You are now ready to close up the shoulder of the coat.

M is curved from G and to form the waist seam you raise from the point of the sideseam 2 inches and take from M at the size of the waist 2 inches, which completes the draft. This draft I consider far in advance of the one I have given on Plate 1 and combines the measures in such a way as to produce a proof for any system that is now in use or that has been used or ever will be used. The dotted lines follow the application of the measures. The Blade measure scale is not used in this draft. The Breast measure only once fromt he back seam to number 21. All the rest of the numbers by the 1st shoulder scale. Plate 9 is drafted in the same way that plate 10 is drafted with the exception of the change of the numbers.

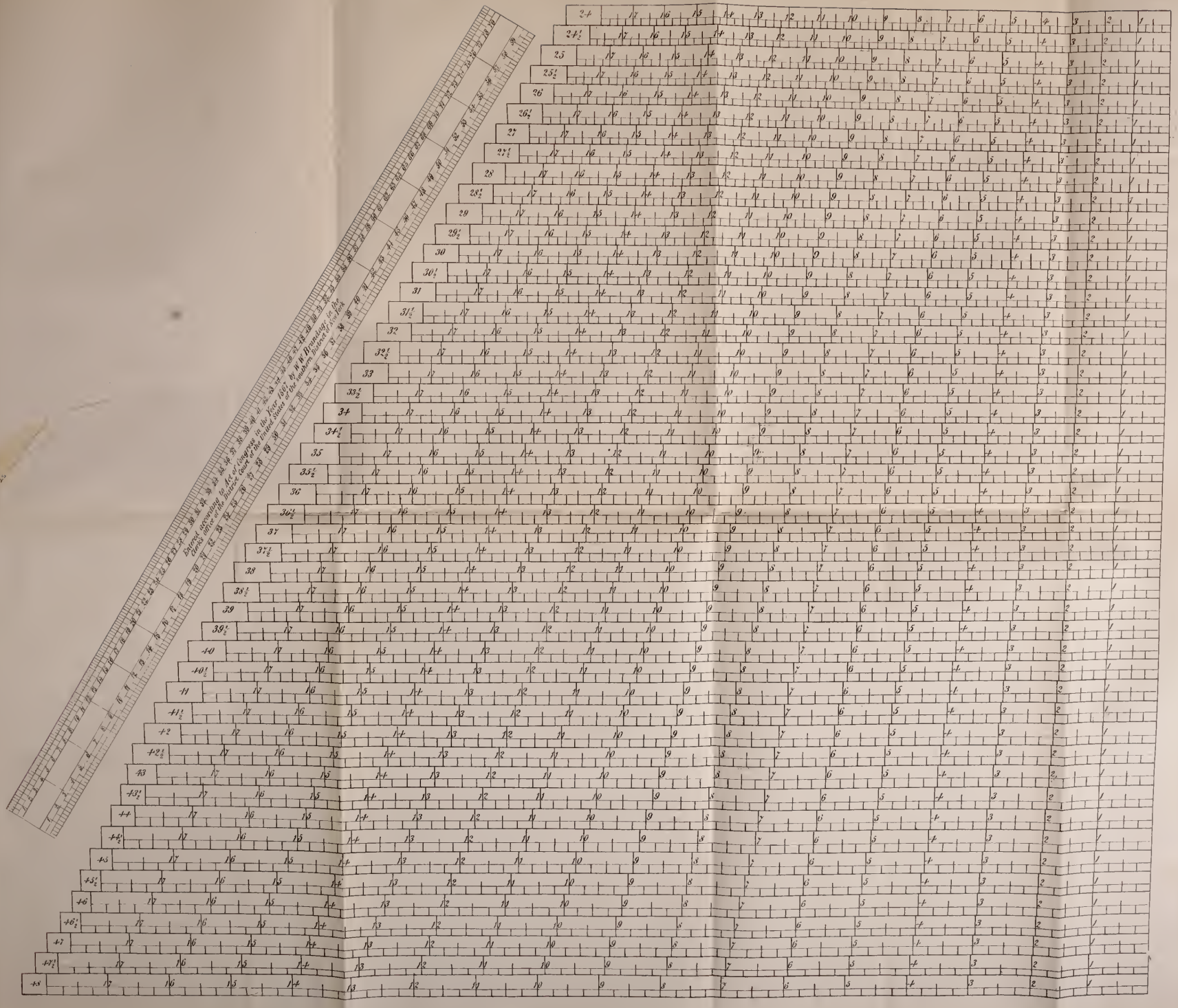

Entered according to Act of Congress in the year 1861, by W. W. Bronaugh, in the Clerk's office of the District Court of the United States for the southern District of New York

PLATE I.

PLATE II.

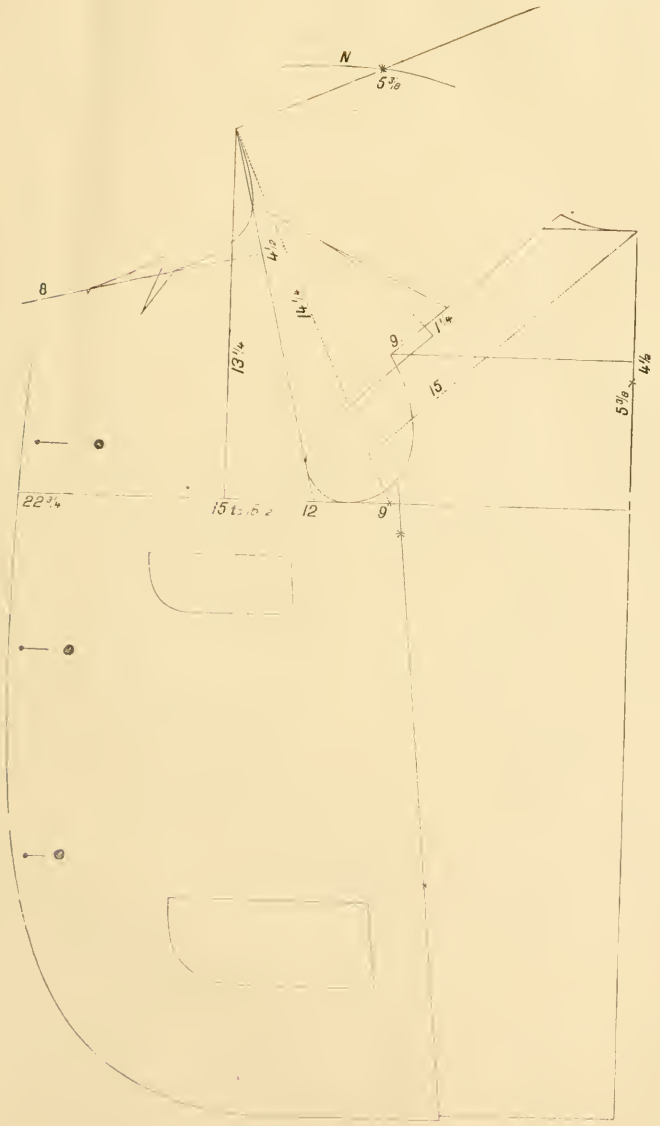
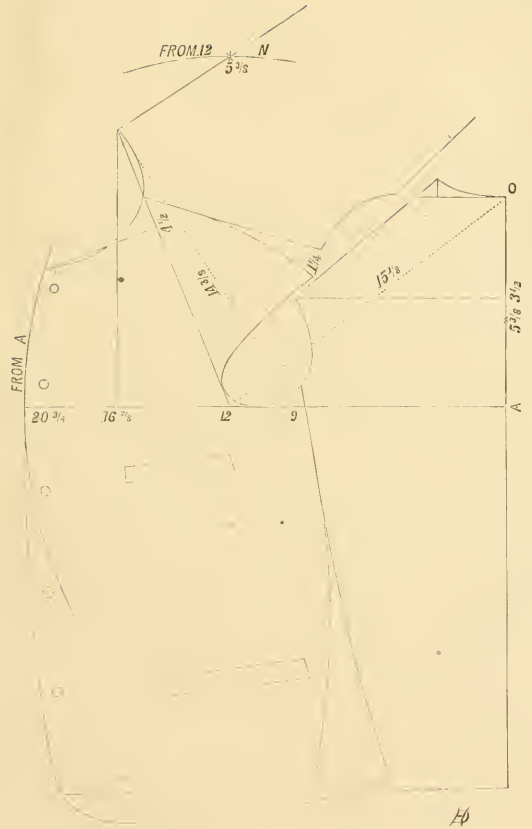


PLATE IV.



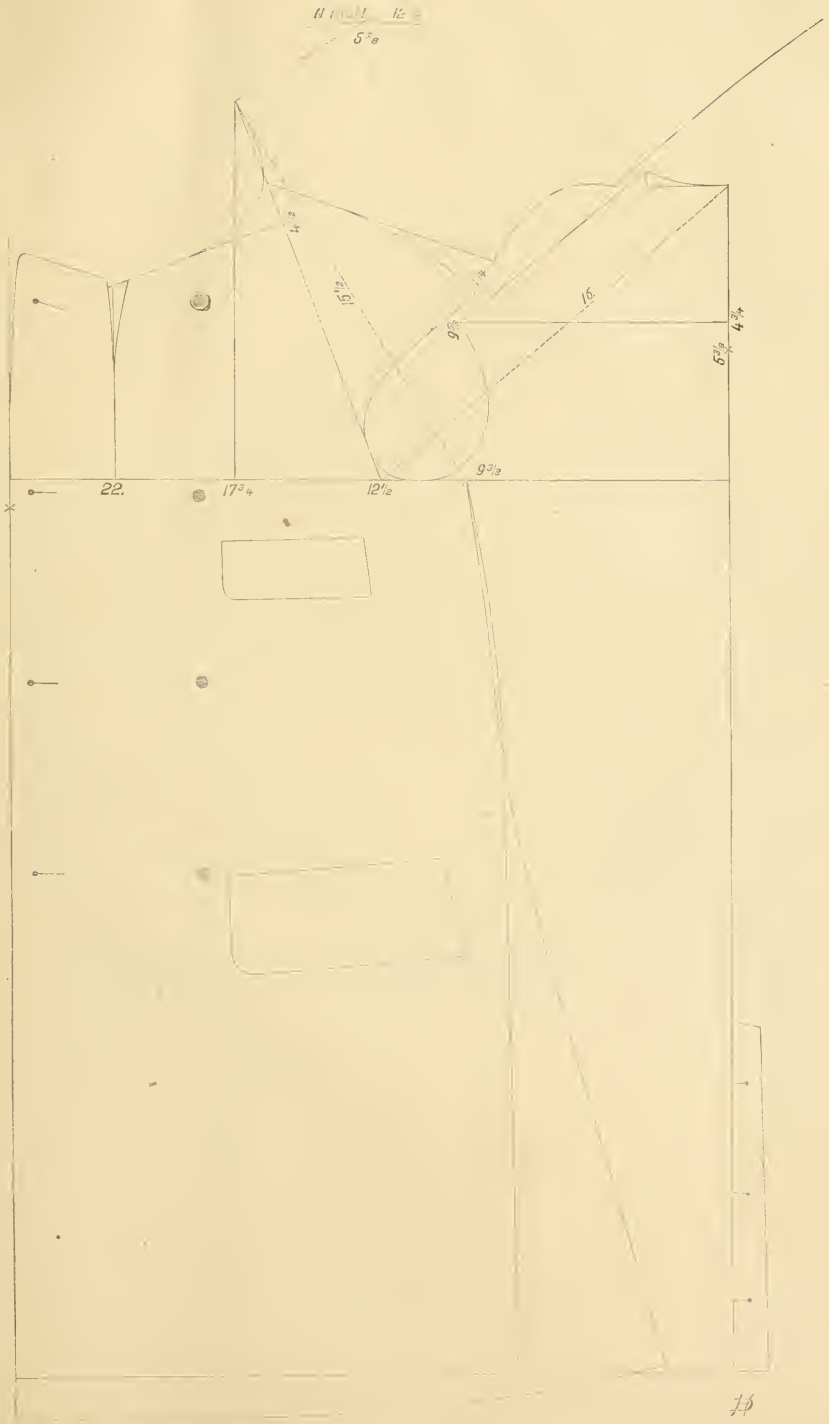
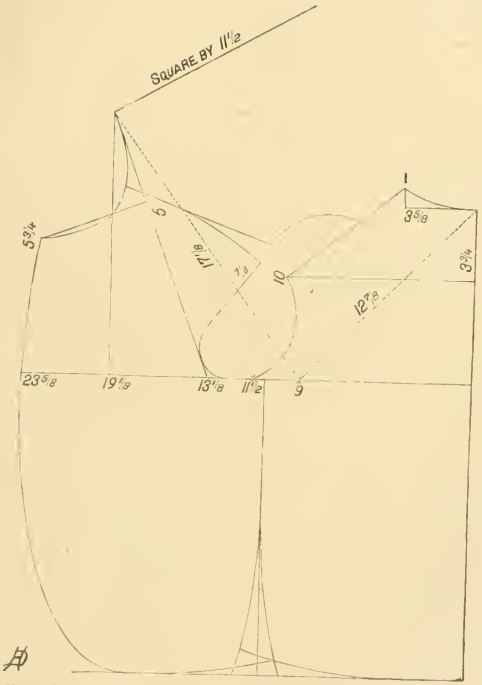
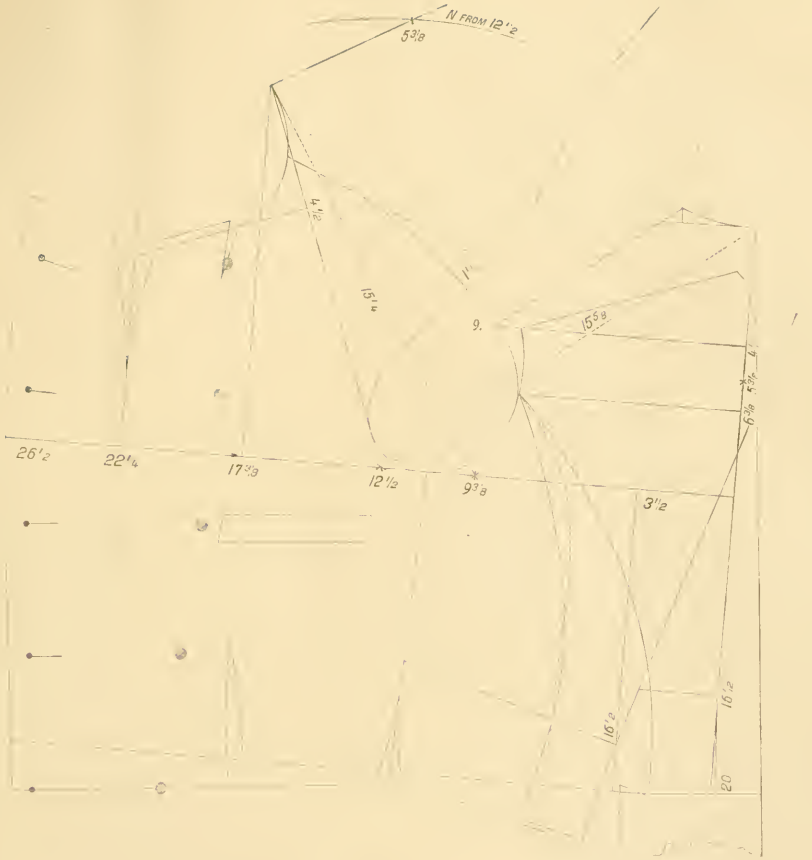


PLATE VI.





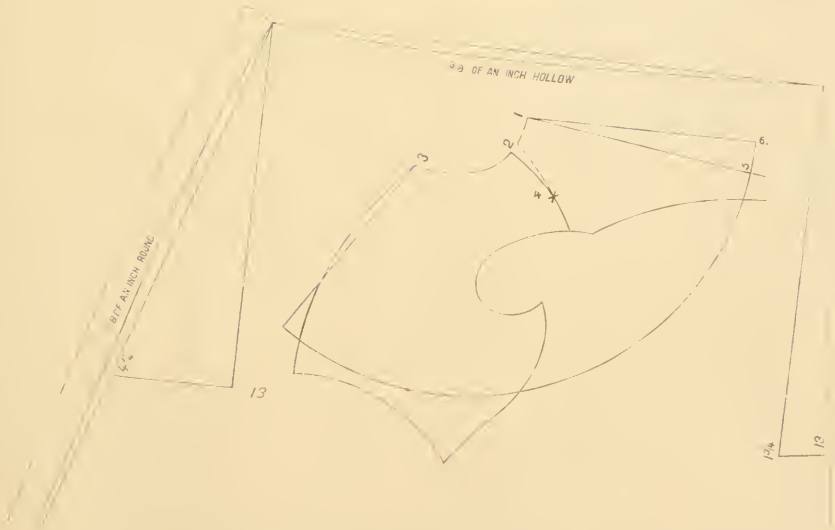


PLATE VIII.

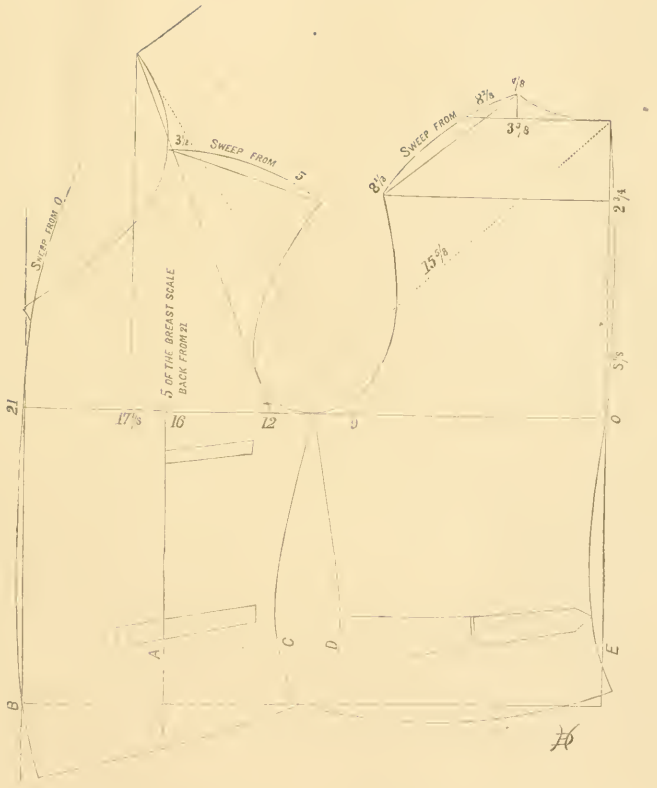


PLATE IX.

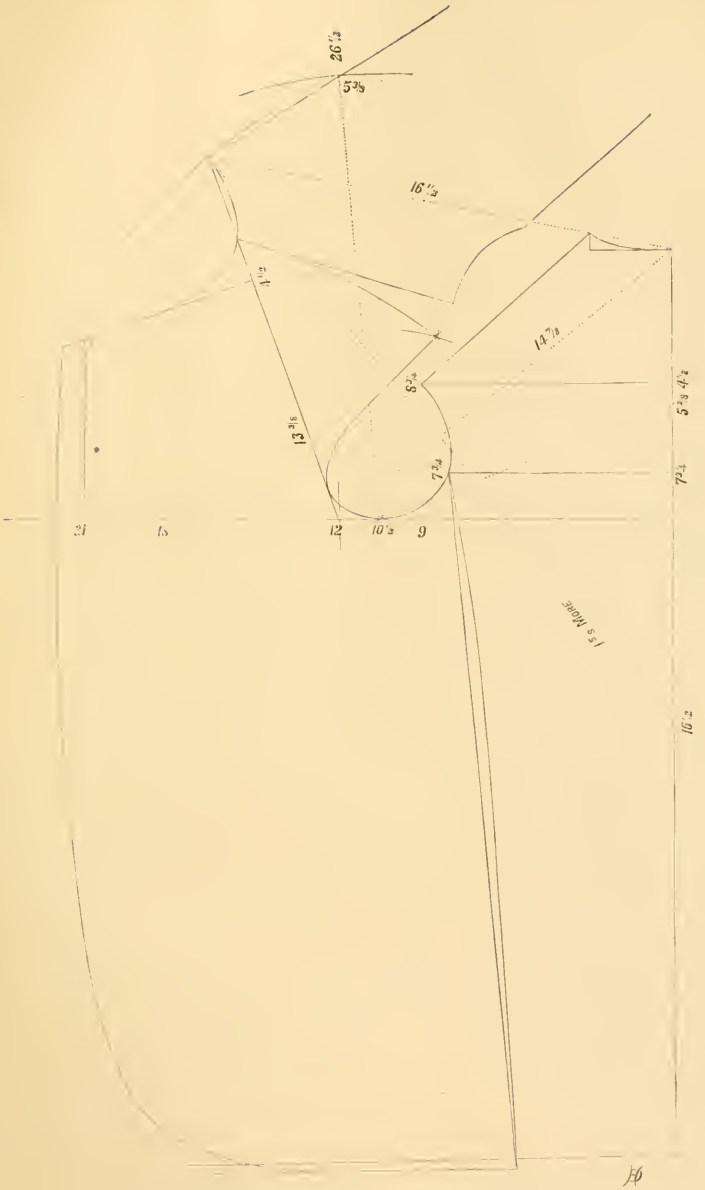


Plate X.