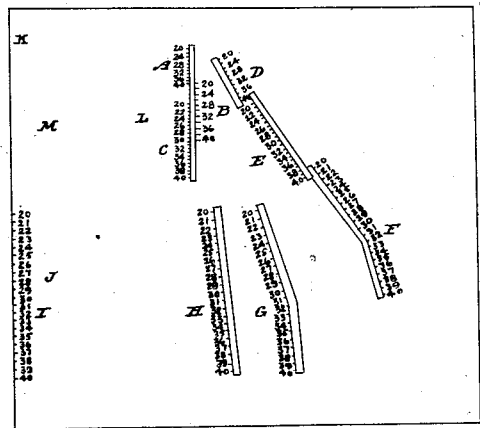
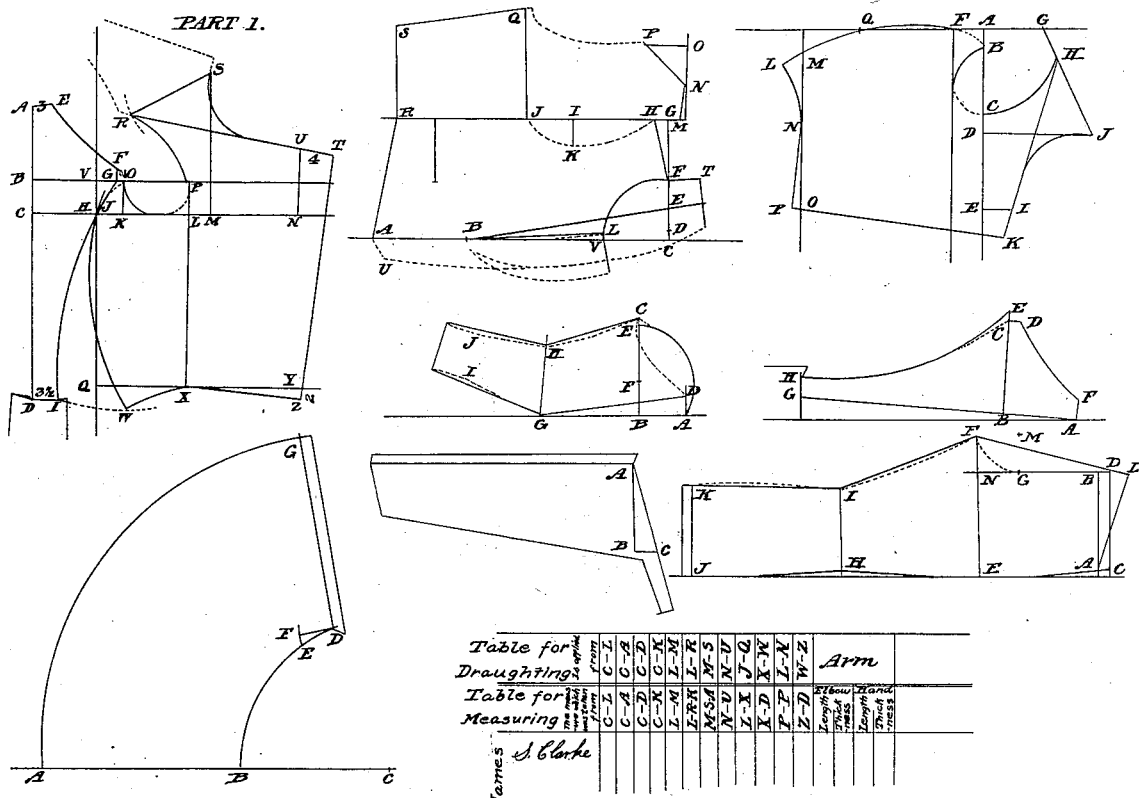
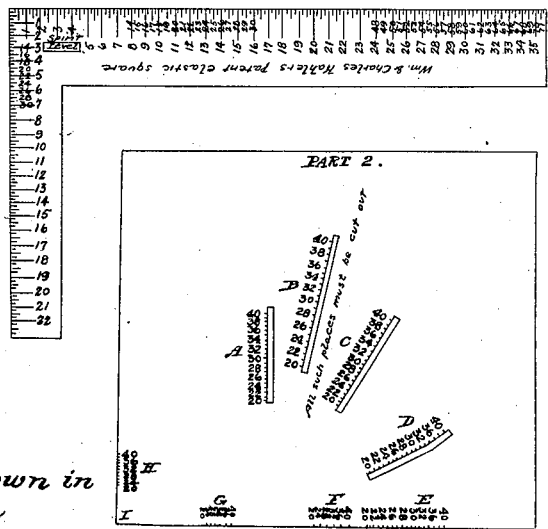


Wm. & C. Kahler.
Art of Measuring and Cutting Garments.
 No. 574. Patented Jan. 20, 1838.



Drgs. made from sketches shown in original specification



UNITED STATES PATENT OFFICE.

WILLIAM KAHLER AND CHARLES KAHLER, OF BLOOMSBURG, PENNSYLVANIA.

ART OF MEASURING AND CUTTING GARMENTS.

Specification of Letters Patent No. 574, dated January 20, 1838.

To all whom it may concern:

Be it known that we, WILLIAM KAHLER and CHARLES KAHLER, of Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented new and useful Improvements in the Art of Measuring and Cutting Garments; and we do hereby declare that the following is a full and exact copy and representation, the whole of which we claim as originally invented by us, except the pantaloons and the mode of conducting a square rule upon a sheet of paper or pasteboard by cutting out slips and placing distances and figures upon the margin, as in the case of part 2 of this book.

Patent systems for cutting garments.—Part 1 consisting of an elastic square, and self-varying square rule, for measuring and drafting coats; also new and improved rules for drafting vests and pantaloons, to which is added another new and useful square rule for cutting sale or boys' coats; part 2 consisting of a rule for cutting ladies' dresses and habits in various forms, to accommodate the changes of fashions; by WM. and CHARLES KAHLER, Bloomsburg, Pa., 1837.

Preparation for measuring without having on a coat with the vest laced snug and the man standing naturally. N. B. It will be found necessary to observe how the customer naturally stands before he comes forward to be measured for after charging them to stand so they will generally stand too straight.

1. First place a mark by some means or draw a chalk line through the center of the back from A to D. Also draw a line from A to E and mark the distance to E.

2. Level the square under the right arm and draw a chalk line a few inches long both in front and behind the arm. Again level the square with the front line and obtain a small chalk line across the center of the breast. Again level it with the line behind the arm and obtain a mark in the center of the back. These marks will be denominated the horizontal line and is that which runs from C to N on draft. This line is the ground work of the system from which squares of the surface of the body are obtained as follows.

3. Level the square on the horizontal line at M the long arm extending to the right and obtain a square of the surface to S by pressing the short arm close the body from the bottom upward and moving the square back-

ward or forward until the inside edge of the short arm touches S and mark the parallel at M which will be at No. 3 on the long arm.

4. Obtain another mark on the horizontal line at L by placing the square under the right arm and letting the short arm extend from L to P and butting the square close against the front of the arm. Make the mark on the inside edge of the short arm.

5. Obtain a square of the surface from L to X and draw a chalk line a few inches long at X.

6. Then mark the length of the waist at X and D. Whatever number of inches the individual is in height the same number of the figures on the outside edge of the long arm of the square commencing at No. 24 will give the length of the waist from which you can vary a little as the case will sometimes require.

7. The term numbers on the square and tape measure always mean the half inch numbers unless some other intimation be given.

8. Some of the distances may be taken with the square or all with the tape measure.

9. Take the distance from C to L and whatever the number of the distance is the same number of the figures upon the outside edge of the long arm of the square will give the distance from B to G also the same on the short arm will give the distance from K to G in measuring and from C to B in drafting the back and from J to V in drafting the forepart.

10. Then place the corner of the square at G and level it, letting this same number on the long arm touch the center of the back and the same on the short arm touch the horizontal line at K. Then press the short arm close to the body and obtain a mark, at K.

11. The table for measuring with its notes of explanation referred to by the figures on the margin will show how the measures are taken from one letter to another and set down under their respective letters. The table for drafting will in like manner show how these measures are applied from one letter to another. Thus the measure taken from C to A marked C—A applied from C to A marked C—A.

12. The measures are all to be taken with the half inch numbers except from D to Z, from P to P around the elbow and hand, which are to taken with the inch numbers.

13. The table for measuring or both must be transcribed upon the top of your measure book.

Notes explaining the table for measuring.—1. U is the top of the breast bone. 2. From P to P means from the front of one arm to the front of the other. 3. From Z to D means around the waist.

Notes explaining the table for drafting.—4. A square line must be drawn from K to O, and O is always the point of the side seam whether O and G come united or not. 5. By bending the square to the shape of that part of the scye and leaving off the distance from F to K but first apply the back from S to R and sweep as shown by the draft placing the thumb on S. 6. By leaving off the distance from S or E to A. 7. By leaving off the distance from D to I, but first sweep from I to W, placing the thumb on O. 8. By leaving off the distance from D to I.

Directions for drafting the back.—The figures found on the draft indicate that those spaces should be so many numbers which may be varied to suit either size or fashion. The back may be drafted with the back seam toward you. The lines which are to be drawn square will be easily known by looking on the draft. To get the distances from C to B and from B to G see preparation for measuring paragraph 9. The length of the waist and a number of inches according to fashion added will give the length of the skirt. Sweep the side seam by the length of the waist, letting the sweep come 1 no. outside of G and bring it to G by dots to prevent the point of the side seam on forepart from being too blunt. Sweep the shoulder seam by three times its length. In cutting it out allow a seam all around and cut a small notch at H.

Forepart.—Draw a line upon the back edge of the cloth. To get the distance from J to V see preparation for measuring paragraph 9 and after the square lines are drawn through the forepart bring H and J together (see draft) and proceed according to the table. N. B. In applying the measures that end at or start from the center of the back an allowance for 2 seams must be made. Sweep the side seam by the length of the waist. Mark the shoulder seam straight. In cutting it out allow a seam all around.

Sleeve.—Measure around the scye with inch numbers and half that number on the square will give the distance from A to B, and the whole of that number will give the distance from B to C, also from C to D, by bending the square to the shape of the top of the under sleeve. From C to E is 1 number. Sweep from A to C by placing the thumb on F. From G to H apply the measure adding 3 numbers. From I to J apply the measure adding 2 seams.

Skirt.—From A to B is 18 numbers, from

B to C is 4 numbers, and in every other respect according to fashion.

Overcoat.—Use the same measure for an over as for a frock or dress coat and add from C to B and consequently from J to V $\frac{1}{2}$ number. From C to L add $1\frac{1}{2}$ numbers. From M to S and from L to R add $1\frac{1}{2}$ numbers. From L to N add $1\frac{1}{2}$ numbers, and from W to Z add 2 numbers. In drafting the back increase its width at the top and bottom as much as fashion or fancy dictates.

Frock overcoat skirt.—From A to B apply the back. The distance from B to C must be to correspond with the fullness of the skirt. If you wish to have a very full skirt make that distance shorter than you would for a more plain skirt. Place the thumb on C and sweep from B to D. From D to E is 6 numbers. Sweep from E to F by D. From E to F is $1\frac{1}{2}$ numbers. Place the corner of the square on D, letting the long arm touch F. Then the short arm will give the pitch from D to G. From D to G apply the back. Sweep the bottom by a distance of 6 numbers less than the distance from A to C.

Remarks on making up the shoulder of a coat.—It is well known that coats generally have too much cloth about the top of the breast and lower part of the neck which causes them to stand out there when buttoned and drop down when open and consequently swing off at the waist. To obviate this and have the shoulder set smooth pursue one of the following plans:

1. Add 2 nos. in drafting to the distance from L to M, and 1 no. from L to R. Cut the shoulder seam on forepart 1 no. shorter than on back. After the shoulder seam is sewed and the canvas fastened to the padding draw every thickness of the shoulder in 1 no. from a little above P to the bottom of the scye and press out the fullness gradually. In pressing the shoulder seam stretch it out in such a manner as to throw the flare in the narrow part of the shoulder. To accommodate this flare stretch out the facing along the back pad and along both edges of the shoulder. The neck facing and all should be drawn in as much as possible between U and the narrow part of the shoulder.

2d plan: Make a mark in the center of the breast on the horizontal line, which will be N, and instead of taking the measure from P to P with inch numbers take it from L to N with half inch nos. Take another from A to U and apply it in the same place and cut the surplus out in the neck canvas padding and all. Stretch out the facing and shoulder seam as above directed. Another measure may be taken should any one think it necessary. Make a mark in the center of the back 4 inches above D and another 2

inches above X and take the measure from one to the other and apply it the same.

Vests.—First measure around the breast and waist under the coat and take the length from the socket bone over the shoulder and down in front. One half of the breast measure will be termed the breast measure, which divide into thirds, sixths, twelfths, and twenty fourths, again into halves, fourths, eighths, sixteenths, and thirty seconds. From A to B is $\frac{1}{3}$. From C to D is $\frac{1}{32}$. From C to E is $\frac{1}{8}$. From C to F is $\frac{1}{4}$. From F to G is $\frac{1}{4}$. From G to H is $\frac{1}{16}$. From G to I is $\frac{1}{3}$. From I to J is $\frac{1}{6}$. From I to K is $\frac{1}{8}$. Sweep from F to L by D. For a rolling collar cut the collar and forepart together. From F to T is $\frac{1}{8}$. If it is to be single breasted bring the lapel in to B. If double continue the dots on to U. For every other kind of vests go in from V to L $\frac{1}{32}$. In drafting the back the distance from R to G will give the distance from R to M by adding 1 inch. From M to N is $\frac{1}{4}$. From N to O is $\frac{1}{8}$ and $\frac{1}{32}$. From O to P is $\frac{1}{8}$. From J to Q is $\frac{1}{2}$ and $\frac{1}{12}$. From A to S apply the measure adding 2 inches.

Pantaloons.—Measure the length and the size around the waist. One half of the waist measure will be termed the waist measure, which divide into halves and fourths. From C to A is $2\frac{1}{2}$ nos. From the front line to A is $1\frac{1}{2}$ nos. From A to B is $\frac{1}{2}$ and 1 no. One third of the whole length gives the distance from C to E by lacking 2 nos. From N to G is $\frac{1}{4}$. From N to F is $\frac{1}{4}$. From F to M and from G to M is $\frac{1}{4}$. Sweep from F to G by M. From A to L is $\frac{1}{2}$ and 1 no. The line from H to I should be 2 nos. above half way between E and J. The distance from H to I and from J to K is regulated by fashion.

Square rule for cutting sale or boys' coats.

Measurement.—First measure around the breast and waist under the coat. Take the height or measure the length of the waist. Then the length of sleeve. The breast measure must be divided the same as for a vest. *Back.*—From A to B is $\frac{1}{3}$ lacking $\frac{1}{32}$. From B to C is $\frac{1}{4}$ and $\frac{1}{32}$. From C to D is $\frac{1}{16}$. From C to E is $\frac{1}{32}$. From A to F is $\frac{1}{12}$. From G to H is $\frac{1}{8}$ lacking $\frac{1}{32}$. Sweep the side seam by the length of the waist. Sweep the shoulder seam by three times its length.

Forepart.—From A to B is $\frac{1}{12}$. From B to C is $\frac{1}{3}$ lacking $\frac{1}{32}$. From C to D is $\frac{1}{12}$. From C to E is $\frac{1}{2}$ lacking $\frac{1}{12}$. From A to F is $\frac{1}{6}$. From A to G is $\frac{1}{4}$ lacking $\frac{1}{16}$. From D to J is $\frac{1}{2}$ lacking $\frac{1}{16}$. From J to H apply the back. From E to I is $\frac{1}{6}$ lacking $\frac{1}{32}$. From I to K is $\frac{1}{8}$. From F to Q is $\frac{1}{3}$. Sweep the side seam by the length of the waist touching F and Q. From L to

M is $\frac{1}{8}$ lacking $\frac{1}{32}$. From L to N is $\frac{1}{2}$ lacking $\frac{1}{12}$. Get the size of the waist. From O to P is $\frac{1}{16}$. All the other pieces of the coat the same as the self varying rule, except on sleeve from G to H is $\frac{1}{3}$ and $\frac{1}{16}$. From I to J is $\frac{1}{4}$ and $\frac{1}{32}$.

Ladies' dresses and habits.

Measurement.—First, measure around the body close under the arms with a tape measure, raising the measure a little in front, so that it may pass around above the greatest swell of the breast, drawing the measure snugly; second, measure around the waist; third, measure from close under the arm to the length of the waist in the side.

Drafting.—We recommend to draft on paper and cut it out for a pattern which can be applied on the cloth to better advantage.

Back.—Draw a line upon the near edge of the paper and lay the near edge of the rule sheet upon it. If the lady measure 32 inches around under the arms then make a cross at Fig. 32 at F, G, C, B, and A (and so proceed with any size). From G downward apply the length measure and mark the distance. Then place the corner at I upon the mark and use the figures H. N. B. Never use any other figure on this rule sheet except the one which coincides with the measure around under the arms. The figures marked E and D on the back and F and G on the forepart are to be used only in cutting high dresses and habits. Sweep the shoulder seam from C to B by twice its length. Sweep the side seam by the length of itself, leaving a projection at A the width of one seam. Allowances must be made for all lap and turning in, but none for seams.

Forepart.—Draw a line upon the back edge of the paper and lay the back edge of the rule sheet upon it. Then make a cross at A, B, C, D, E, and H. The mark at B must be made against the left hand side of the opening. Sweep from A to L by placing the thumb on B. Sweep from H downward by placing the thumb on A, and sweep the shoulder seam by twice its length. Then apply the length measure from L down to M, adding 2 seams and mark the distance. Then place the rule sheet upon the line as before, letting the left hand edge of the rule sheet touch the mark at M and draw a line along that edge of the rule sheet and use the figures at I, which produces the point J. This point must be carried back $\frac{1}{3}$ of an inch for every inch that the lady measures less around the waist than breast. The back being cut out bring A on back and A on forepart together and apply the waist measure from J backward, adding $\frac{1}{2}$ inch, and mark the point K, which point must be about $\frac{3}{4}$ ths of an inch below the back or it will not come out even in joining them together. Then sweep the side seam by the length of itself,

leaving it blunt at A the width of one seam.
When the case does not require a swell in
front it may be cut whole by taking it in at
J one seam. When the point J does not fall
5 far behind I, so that it will decrease the
swell of the breast, then drop your thumb
below A as much as the case may require in
sweeping from H downward. This rule is
sure to fit without the trouble of trying on
10 the dress before finished.

Habit.—In cutting a habit cut it in the
first place like a high dress and add one seam
to the shoulder seams. Sew them together
and cut another shoulder seam in the proper
place through the pattern.

WILLIAM KAHLER.
CHARLES KAHLER.

Witnesses:

Mo. PAINTER,
Wm. ROBISON.