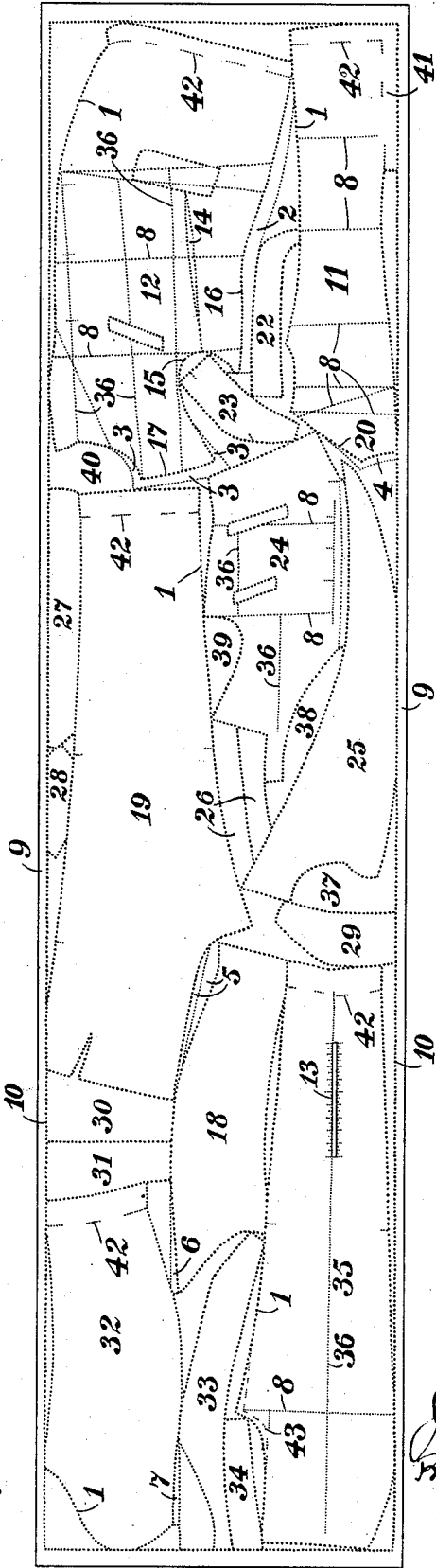


J. MARSDEN.
PROCESS OF MARKING CLOTH BY PERFORATED LAYS OR TEMPLETS.
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WITNESSES

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PROCESS OF MARKING CLOTH BY PERFORATED LAYS OR TEMPLETS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES MARSDEN, a subject of the King of Great Britain, residing at Wigan, in the county of Lancaster, in the Kingdom of England, have invented certain new and useful Improvements in the Process of Marking Cloth by Perforated Lays or Templets, of which the following is a specification.

10 This invention relates to a process by which the system of marking materials for the component parts of clothing or stock sizes by single perforated lays or templets, can be applied to marking materials for the
15 component parts of garments to fit persons who vary within certain limits in measure, figure and posture, and who may require their garments to be made to fit them as perfectly as in custom tailoring. The marking out of cloth for clothing of stock sizes, such as men's, youths' and boys' garments, ladies' costumes, jackets, skirts, water-
20 proofs, rain coats, etc., has been heretofore effected by perforated lays or templets, the lay being laid on the cloth and coloring material rubbed through perforations so as to mark the cloth for cutting by cutting machinery, or by hand, as shown for example in the patent to Schumacher, No. 353,508, of
25 November 30th, 1886. It has also been proposed to mark out cloth by laying outline patterns or models directly on the cloth, and shifting these outline patterns in order to increase the size of the pattern marked on
30 the fabric, as shown for example in the patent to Stillwell No. 4,083, of June 20th, 1845.

The object of the present invention is to enable the system of marking cloth for garments of stock sizes by a single perforated
40 lay or templet to be applied for the purposes heretofore mentioned, and thus the present invention enables me by means of a single lay, to gain the same economy in material in garments made to measure for custom
45 tailoring as has hitherto been possible for stock sizes only. Furthermore, in the use of my invention, the time that is spent in making a block pattern to fit each person and planning it upon the cloth for each person, is also saved.

50 A further feature of the invention is a method of making the lay by which the patterns of the component parts of a garment may be outlined on the lay in a close and compact manner, so that the cloth is economized to the greatest possible extent.

According to the present invention, block patterns or models in cardboard or other material are drafted and cut out to the right shapes of each single part of the garment, the models being respectively designed for
60 example, for the top side of trousers, the under side of trousers, coat forepart and back, top side of sleeves, under side of sleeves, vest, coat and vest facings, flaps, welts, collars, etc., that go to make up a complete garment or suit of garments.
65 These garments are exteriorly of the shape of the parts of the garments to be marked and cut out. I then take a length of lay paper or tough cloth and place these block patterns or models on the lay in a manner that will result in almost the whole of the lay being covered by them. To do this requires some ingenuity and study, but it will
70 be readily understood that the use of these cut out patterns and models in the use of a lay greatly facilitates the process. By using block patterns or models of say, cardboard, in accordance with my invention, and then laying out or assembling these
75 models on the lay, the operator can use ingenuity and study to assemble them in the most advantageous way altering them or rearranging them in such positions on the lay as may secure the best results.

When the cutter is satisfied that the most economical arrangement or assemblage of the cardboard models on the lay has been obtained, and those portions that may require to be lengthened or shortened are so placed as to be longitudinally of the lay, he then, but not until then, outlines all the models on the lay by tracing with a piece of
80 crayon around their outlines. This operation is a mere mechanical one, as it only entails drawing a crayon around the edge of each model so as to reproduce the pattern of the model on the surface of the lay.

In laying out the models on the lay in the most advantageous manner, the model of the fore-part or top side pattern of the coat should be placed at or near one side edge of the lay, and the back part at or near the opposite side edge; the top and under-
85 side sleeve and the top and under side of trousers should alternate in the same way, and so on. The models in those patterns that require to be narrowed or widened to suit the measurement of each customer, should be spaced on the lay a short distance apart, so as to leave "inlays" between those
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patterns, the inlays following approximately their outline. Besides the inlays aforesaid, I indicate upon the lay for the purpose hereinafter described, the construction and check measurement lines that have been used to draft the block patterns or models. I then perforate the lay with lines of fine perforations along the various lines so marked out by the crayon, by means of a perforating machine or by hand. Around the edges of the lay I perforate straight border lines, those at the sides being the same distance apart as the width of the cloth to be marked and the outline patterns, inlays, and construction lines being contained within these border lines. In the center or at any suitable part of the lay, and arranged longitudinally thereof, I provide a measuring device consisting of a slot or slots with a scale or scales at the sides. This slot forms a graduated straight edge, enabling in conjunction with a mark on the cloth, the exact measurements to be made of the distance the lay has to be moved longitudinally in order to lengthen or shorten a garment for any particular figure. The lay is now laid on the cloth and a powder or marking material rubbed through the perforations, thereby forming outline patterns on the cloth ready for cutting by machinery or by hand. Within certain limits these patterns may be lengthened or shortened by simply moving the lay longitudinally any given distance. Also within limits the breast, waist and width of the patterns on the cloth may be increased or reduced in size by the tracing direct on the cloth by hand of other lines following the contour of the lines on the cloth that have been marked by the material passed through the perforations, but at such distance therefrom, as to increase or reduce the width of the patterns to be cut in the cloth to the measurements of the customer.

The accompanying drawing illustrates a lay for a man's sack suit, 38 inches breast, 35 waist, and $31\frac{1}{2}$ leg, in which the dotted outlines of the patterns, represent approximately the shapes required for the largest garment or garments for which the lay is intended to be used. These outlines consist of fine lines of perforations, some of which are designated by the reference numeral 1. The inlays are designated by the numerals 2, 3, 4, 5, 6 and 7, and the construction or check measurement lines by 8 and 36, 8 being the transverse lines and 36 the longitudinal ones. The cloth for the garment is spread upon a cutting table and the edge of the cloth is brought near to the edge of the table. Then the perforated lay is placed on the top of the cloth with the margins 9 overhanging the edges of the cloth. The perforated side lines 10 are caused to register exactly with the edges

of the cloth to be marked. Weights are placed at each end of the lay to prevent it moving. The powder is rubbed by a pad over the perforations in the lay so as to pass through the perforations and reproduce the patterns, the inlays, and the construction and check measurement lines on the cloth, the lay being retained on the cloth until all the outlines are marked by the marking material through the perforations. If however it is desired to shorten any of the patterns marked on the cloth to suit the measures for any individual (as is necessary in custom tailoring), say *e. g.* the jacket back 11 and the forepart 12, the lower parts of the back and foreparts respectively would be rubbed through the perforations with the powder, and the lay dropped or moved longitudinally the required distance as shown by scale 13. Then the upper parts of the forepart 12 and the back 11 are rubbed over in the altered position, thus effecting the shortening of those parts of the garment. All the other parts of the garment or garments can be shortened the same manner to the customer's exact measurements. The effect is to save the material to the same extent, as if a separate lay were specially planned for the shorter dimensions. For lengthening any parts of the garment, the reverse process is followed:—The lay is now removed from the cloth, leaving the cloth marked out.

If it is desired to narrow or widen the widths of the patterns marked on the cloth (after the alterations in length have been made) this is effected by drawing in chalk on the cloth the desired lines by hand so as to follow the contour of the dotted lines produced by the lay, but just within or outside those lines as provided for by the inlays 2, 3, etc.; the construction and check measurement lines 8 marked upon the cloth being of great assistance to the cutter in altering the shape of the patterns to the customer's measurements. For example, a jacket is cut to fit a man 38 inches breast and 35 inches waist of normal build. If it is desired to increase the breast to 39 and the waist to $36\frac{1}{2}$, the extra width would be obtained from the inlay 2 down the side seam and in addition by omitting the dart 14 under the arm. This operation is performed by hand by a skilful cutter. The difference however in width of some of the various sizes is small in comparison to the difference between the other parts, thus the width of the scye or arm opening 15 would be increased or reduced in width much less in comparison than the width of the side seam 16 and shoulder 17 of the coat, inside sleeve 18 and back of leg 19 of trousers and of course a skilful cutter allows for this.

A further object of the construction lines 8 is to act as a guide to assist the cutter in

altering the length or shape of the shoulder 17, the position of the scye 15 (backward or forward), the top of the shoulder 17 and back 11, to provide for a slightly stooping figure or an erect figure, according to the measures of the customer, within the limits of the inlays provided by the cutter in the drafting of the lay. The invention therefore provides for producing in the lay not only all the parts of the garment necessary to be cut, but also the construction and check measurement lines.

Indicating or reference letters, words or symbols or other devices, characters or numerals may be produced on the lay to denote what component parts of the garment the outlines on the lay represent, thus:—11 on the drawing represents the jacket back, 12 the forepart, 22 the trousers fly, 23 the coat collar (inside), 24 the vest forepart, 25 the jacket facing, 26 the trousers pocket facings, 19 the trousers undersides, 27 the trousers waistband, 28 the trousers backstrap, 29 the coat collar (outside) and 18 the underside sleeve. 30 is the flap and 31 and 40 the welts (these are not shaped because the cloth marked may have a check or stripe which has to match the forepart of the jacket). 32 is the topside sleeve, 33 is the vest facing, 34 is the vest bottom facing, and 35 is the trousers topside, 37 is the hip pocket, 38 is the jacket pocket facing, 39 is the neck bit. 42 are broken lines of perforations to indicate the width to be allowed for the hem of the garment, and 43 are similar lines to indicate the dress side.

The lay can be reproduced as many times as required, varying the alterations in length and width for a suit of clothes to be made to measure for any particular wearer, in far less time than would be occupied in marking separately each suit by ordinary hand marking. Furthermore when a standard lay is produced by a highly skilled cutter, a cutter of less skill using one of these standard lays, can do the routine work of marking out on the cloth the standard patterns or shapes and leave it ready for the superior cutter to make all the variations and alterations by hand, and infuse into the pattern his own individuality, fit and style.

When the marking out of the patterns on the length of cloth has been completed the garments are then cut either by machinery or by hand.

By the present invention the following important advantages are obtained:—1. The system of marking garments by the use of perforated lays or templets is applied for the first time to custom tailoring *i. e.* to the marking of garments for the varying measures and figures of the wearers. 2. Lays

can be used for marking out the component parts of garments made to measure, and to those made to stock sizes. 3. The same accuracy and economy of material in the marking of garments made to measure, are by this invention obtained as previous systems have effected in stock sizes only. 4. As the same lay can be used for marking out the component parts of garments to the varying measures and figures of different customers, and without waste of cloth, the time and expense that would be consumed in making a new lay are entirely saved. 5. The old system in custom tailoring of planning a plurality of separate patterns or models on the cloth, and then shifting those patterns on the cloth in order to vary the size of the outline to be marked on the fabric, is replaced by a single perforated lay so perforated that cloth for garments can be marked to fit persons who vary within certain limits in measure, figure and posture, thus not only effecting a great saving in time, but enabling cutters of less skill to do work which formerly could only be done by more highly skilled ones.

I declare that what I claim is:—

The process of marking cloth comprising the placing of a lay or templet having perforated outlines of the patterns which it is desired to mark on the cloth, said patterns being so disposed that those which require lengthening or shortening shall be located substantially longitudinal of the lay, while those which require varying in width, length, shape or posture to suit the requirements of customers are spaced apart so as to leave inlays, said lay or templet having a scale thereon, whereby the amount of longitudinal shift of the lay or templet may be determined, rubbing a marking material through certain of the perforations of the lay or templet, moving said lay or templet longitudinally, and rubbing the marking material through the remainder of the perforations, removing the lay from the cloth and marking by hand within or about the limits of the inlays such auxiliary lines as are necessary to vary the widths and shapes of the patterns on the cloth, whereby the pattern transferred to the cloth from the lay or templet is varied in size and shape from the pattern on the lay or templet.

In witness whereof, I have hereunto signed my name this 2nd day of March, 1911, in the presence of two subscribing witnesses.

JAS. MARSDEN.

Witnesses:

G. C. DYMOND,
H. O. DIXON.