

No. 672,487.

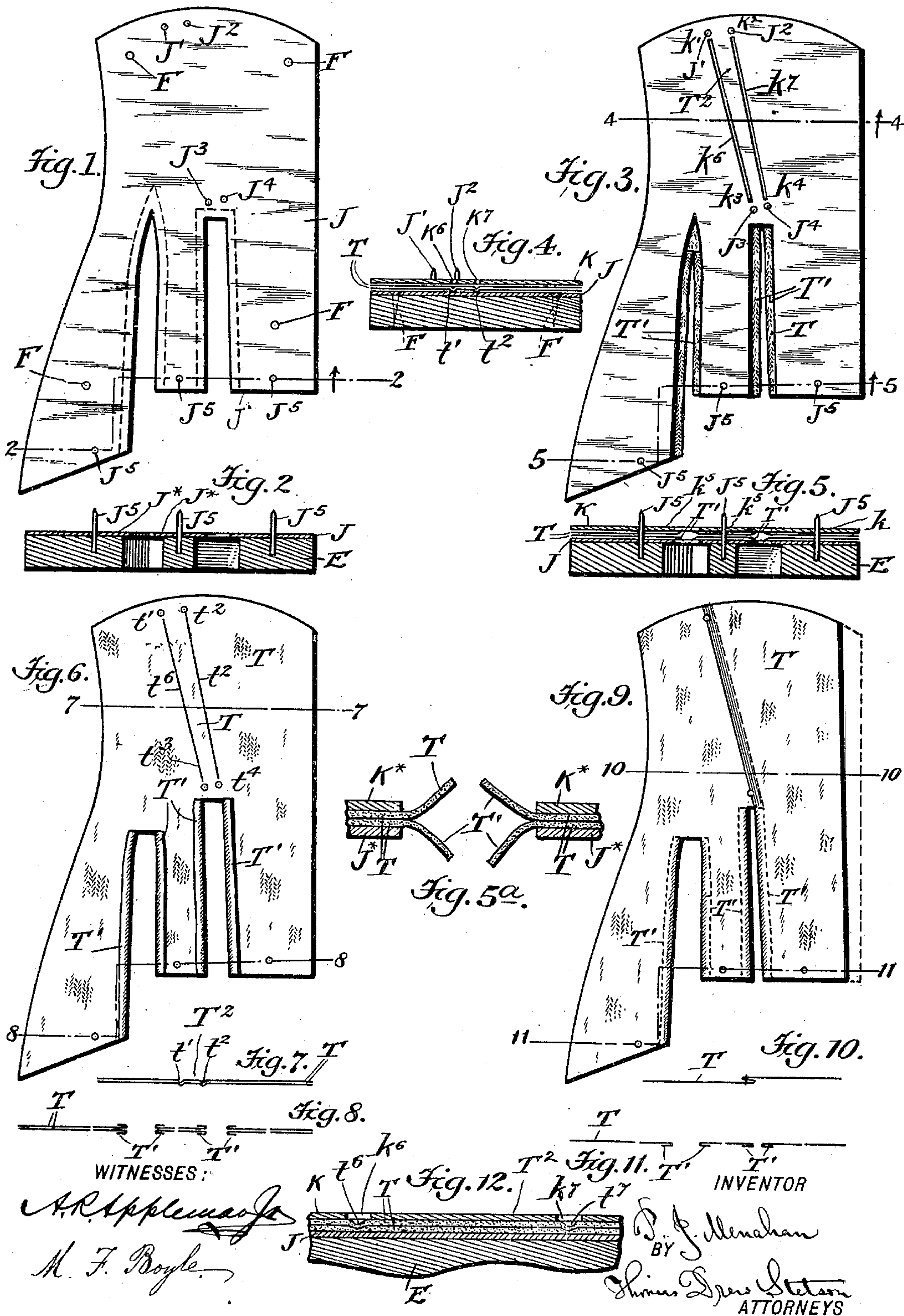
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P. J. MENAHAN.

PATTERN PLATE FOR FOLDING AND MARKING GARMENT SECTIONS.

(Application filed Dec. 10, 1900.)

(No Model.)



UNITED STATES PATENT OFFICE.

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PATTERN-PLATE FOR FOLDING AND MARKING GARMENT-SECTIONS.

SPECIFICATION forming part of Letters Patent No. 672,487, dated April 23, 1901.

Application filed December 10, 1900. Serial No. 39,290. (No model.)

To all whom it may concern:

Be it known that I, PATRICK J. MENAHAN, a citizen of the United States, residing in the borough of Brooklyn, in the city and State of New York, have invented a certain new and useful Improvement in Pattern-Plates for Folding and Marking Garment-Sections; and I do hereby declare that the following is a full, clear, and exact description thereof as applied to the manufacture of corsets.

The invention treats two pieces at a time and prepares them rapidly and very perfectly without requiring highly-skilled labor. The apparatus required is relatively inexpensive and very simple and durable. The treatment is applicable to the manufacture of various garments where any considerable number are to be produced alike. I will first describe the invention as applied to the preparation of back pieces for a pair of corsets.

In the manufacture of corsets there are separately-made back pieces of muslin or other fabric which require to be accurately shaped and formed each with a tapering plait applied in each side. These pieces properly treated at their edges are set in differently-formed spaces in the main body of the corset, secured by two parallel lines of stitches near each edge, and modify the form of the garment at those points. For each back piece there is a counterpart of the same size and a reversely-corresponding form to apply in the opposite half of the corset. Blanks for these pieces of the proper outline and so much larger along certain edges than the completed pieces as will allow about the ordinary margin for the infold are previously cut from the fabric. This cutting is an old and well-known step. It may be effected by any ordinary or suitable means, as extending the material smoothly in many layers—say forty-eight—and cutting through the whole at one operation by a knife moved by hand around a template of the required form and size. When very many are required, these blanks may be more economically produced by forcibly depressing a cutting-die of the required size and form. The blanks for each pair of back pieces are afterward treated by holding, marking, and folding by the aid of my apparatus in the manner fully described below.

My apparatus comprises two nearly similar plane plates of metal and a block for holding them in a horizontal position a little above the table.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a plan view of the lower (the main) plate and block, the strong lines indicating the outline of the plate and the dotted lines within certain edges indicating the inner margin of the smaller block which underlies and supports it. Fig. 2 is a cross-section on the line 2 2 in Fig. 1. Fig. 3 is a corresponding view after the pair of blanks and the top plate have been applied in position ready for the treatment of the blanks. Fig. 4 is a cross-section on the line 4 4 in Fig. 3. Fig. 5 is a cross-section on the line 5 5 in Fig. 3 with the overhanging portions of the fabric of the pair of blanks deflected apart to make their condition more conspicuous. Fig. 5^a is a corresponding section of a portion on a larger scale. Fig. 6 is a plan view of the pair of blanks with the portions which previously overhung completely folded, the uppermost upward and the lowermost downward. Fig. 7 is a cross-section on the line 7 7 in Fig. 6. Fig. 8 is a cross-section on the line 8 8 in Fig. 6. Fig. 9 is a corresponding view of the lower of the blanks, that intended for the left side of the corset after the plait or double fold has been formed by folding along the proper lines. The dotted lines show how it has been contracted by the forming of the plait. It will be understood that the upper blank will be separately and similarly treated and will present a similar appearance in the reversed position. Fig. 10 is a cross-section on the line 10 10 in Fig. 9. Fig. 11 is a cross-section on the line 11 11 in Fig. 9, and Fig. 12 is a cross-section of a small portion on the line 10 10 in Fig. 9 on a larger scale.

Similar letters of reference indicate like parts in all the figures where they appear.

The thickness of the several plates is exaggerated to show the construction and effect plainly.

J is the main plate, of metal, having the form and size of a completed back piece.

E is a small block of wood or other suitable material upon which the plate J is firmly and permanently secured by nails F, with their heads sunk flush. I employ permanently-set
5 pins extending up from the plate J.

The bounds of the double fold or plait are indicated by the pins J' J² near the upper end, which constitute a pair, accurately set in the position to define such bounds by plainly-
10 visible, though small, holes produced in the pair of blanks. Another pair of the pins J³ J⁴ similarly produce holes which indicate the border of the narrower portion of the plait near its lower end. The pins J⁵ are set at
15 distant points.

K is a top plate, of metal, coinciding in form and dimensions with the plate J and adapted to be applied thereon. It is provided with holes k', k², k³, k⁴, and k⁵, which match on the
20 pins and maintain the plate in the true position horizontally while in use. The top plate is further provided with a narrow slot k⁶, extending along the line between the holes k' and k³. A corresponding slot k⁷ extends along
25 the line between k² and k⁴, inclined relatively to the slot k⁶.

A pair of pieces of fabric cut to constitute the proper blanks are marked T T'. Each is of such size and form as to produce the
30 back piece corresponding to the plates J and K, with sufficient margins extending over certain edges to fold and form the seam margins or infolds T', by which this complete piece shall be joined to the other parts of the
35 corset. (Not shown.)

To operate the invention, the plate K is temporarily removed. A pair of blanks T T' and T T' in the extended condition are placed on the main plate J, with all the pins J' J²,
40 &c., extending up through the fabric, so as to hold the two pieces (the blanks) reliably against horizontal displacement. The holes t' t² t³ t⁴ produced by the pins remain in the blanks and are of importance. Next the top
45 plate K is applied, and marks are made by any suitable implement, as the edge of a dull knife pressed upon the pair of blanks T T' and T T' in the slots k⁶ k⁷ and moved along the entire length of each slot successively.
50 This treatment produces, besides the holes t' t² t³ t⁴ t⁵, two indented marks t⁶ t⁷ on both blanks, which indicate the proper lines, the mark t⁷ indicating the line on which a sharp fold in the fabric is to be made to produce
55 the proper bound for one side of the plait—the right side in the figures—and the mark t⁶ indicating the line along which such fold is to be held and secured to produce the plait. Next the projecting edges T' of the blanks
60 are wetted by a sponge or otherwise and are separated, the lower one folded downward under the adjacent edges J of the main plate J and the upper one folded upward upon the upper face of the adjacent edges K of the
65 plate K. The support or block E, which holds up the main plate J, is sufficiently smaller to allow the margins for the seams to be thus

folded smoothly under. The support E is shown as of the same form; but this is not
70 important, as it performs no function in directly shaping. Now the use of my apparatus on this pair of pieces (the blanks) is completed and the pair of matched blanks T T' and T T' are lifted off together and laid
75 on the bench or on the pile of previously-prepared pieces. It may be preferable when there is much piling of these completely-formed pieces that the seam margins or infolds T' be not flattened out, but, on the contrary, be held folded still flatter as the weight
80 of succeeding instalments is applied above. I have determined by experiment that it is easy to mark the required lines t⁶ t⁷ on the blanks T T' and T T' and that the marking shall not only be clearly shown on the upper-
85 most of the pair of blanks, but will also be shown with nearly equal distinctness on the corresponding blank which lies below and which being a counterpart of the upper is
90 properly shaped and marked to serve in a corresponding reversed position on the opposite half of the corset. Thus the marking and the folding fit each of the two pieces T T' and T T' to serve on their respective
95 sides. After removal from my apparatus the two blanks are separated and extended singly, each with the proper face upward. In this condition the thin fabric, moistened, if desired, along the proper lines, is double folded or plaited, the mark t⁶ in each blank being
100 brought to coincide with the nearly-parallel mark t⁷ in the same, and the blank thus conditioned is passed through the sewing-machine and a line of stitches put in, which secures the folds and forms the plait.
105

My invention gives great perfection with little labor and may be worked by relatively-unskilled operators.

The sewing of the back piece to the other parts of the corset may be as usual, except
110 that little labor is required to form the proper folds or to determine the correct position of each.

Modifications may be made without departing from the principle or sacrificing the ad-
115 vantages of the invention.

When a fabric is used having a right and a wrong side, as is the case with satins and with many other kinds of goods, the layers of fabric must be reversely arranged. Such pil-
120 ing, the lower one with its right face upward and the next with its right face downward, may be done either in arranging the goods before the blanks are cut or after they are cut and when they are being applied on the
125 main plate J.

Along the edge or edges not to be treated the support E may be flush with the edge of the main plate J or may extend out beyond it. The edge or edges T' to be folded are shown
130 along open slots within the border of the piece. Other portions of the edges may similarly project and may be wetted and folded instead of the edges shown or in addition thereto,

taking care to provide suitable plates and pins and also suitable supports to allow space for folding under the lower plate and over the upper plate along the required lines. The plaiting can be along other lines.

Parts of the invention can be used without the others. I can treat single blanks instead of pairs. For such use the upper plate may be applied in the same manner, and the marking may be done on the single fabric alone, which may be wetted and folded downward under the main plate in the same manner as the lower of each pair above described.

I can adapt the invention to the production of other parts of the corset or of parts of other garments.

In treating blanks for all forms of pieces the main plate J instead of having a hard metal surface may be faced on the upper side with a soft material, as blotting-paper or velvet, or both. Such would allow the dull knife or other marking-tool by sinking somewhat into the soft material to more distinctly mark both fabrics. I can use hard material and slightly groove along the lines to be marked. I have succeeded well with a hard plane surface, the marking by moderate pressure with a hard-metal tool being sufficiently visible after the goods have been allowed to lie several days. It is not common to make a delay in the treatment of more than a few seconds, thus effecting the sewing while the folding is fresh and while the edges are still wet and the remainder of the piece retains the greater stiffness due to its dry condition.

I do not in this patent claim the features of the apparatus for treating the edges except in combination with the features for marking the plait, nor the method of operating, such being made the subjects of separate applications for patent.

I can dispense with the pins and employ any other convenient means to hold the plates and the fabrics against displacement, and still use the internal edges presented by the slots $k^6 k^7$ along which to mark the slightly-indented lines t^6 and t^7 , and then use such marks alone to determine the boundaries of the plait.

Some of the advantages due to certain features of the invention may be separately enumerated as follows:

First. By reason of the fact that my main plate J has an edge J \times carefully arranged and supported, with a clear space underneath, and also is provided with pins J' J² and J³ J⁴, arranged in pairs carefully placed with regard to the plait to be required at a later stage, I cause said pins to perform the double function of holding the properly-cut blank of fabric T T' in position for folding to form the edge-seam and also of indicating by the holes $t^1 t^2 t^3 t^4$, which remain in the fabric, the lines

which are to be brought together to form the plait.

Second. By reason of the fact that I employ two plates and that the plates and the fabric are firmly held against relative displacement laterally and that the top plate has slots $k^6 k^7$, which present edges arranged in the lines required, I am able by marking along such edges to plainly show by such marks the lines along which the plaits are to be folded.

Third. By reason of the presence of all three features—the provision for edge-folding by the prepared edges J \times , puncturing by the pairs of pins J' J² and J³ J⁴, and marking the lines $t^6 t^7$ along the edges of the slots $k^6 k^7$ —I am able at a single operation to very perfectly and easily and without much skill locate and complete the edge-folding T' and efficiently prepare for the plaiting.

I claim as my invention—

1. In an apparatus for folding and marking portions of garments, a bottom plate and pins extending upward therefrom, with the pins arranged in pairs so as to perform the double function of holding the blanks in position horizontally for folding a projecting edge and also of leaving holes properly located to serve as marks for subsequent plaiting, all substantially as herein specified.

2. In an apparatus for folding and marking portions of garments, having two plates, and means for holding the plates with fabrics confined between against relative lateral displacement, the slots $k^6 k^7$ in the top plate presenting internal edges arranged to serve as guides along which to produce marks $t^6 t^7$ on the fabrics for plaiting the blanks, all substantially as herein specified.

3. In an apparatus for preparing portions of garments having a plate adapted to support a blank and held on a support providing a clear space under an edge of the plate to allow the corresponding infold portion of the blank to be folded downward, and having pins extending upward from such plate arranged in pairs performing the double function of holding the blank against horizontal displacement and leaving pairs of holes in the blank, the combination therewith of a top plate having holes matching said pins and also internal edges $k^6 k^7$ arranged to serve as guides along which marks may be made so that both the holes and the marks may serve as guides for plaiting the fabric, all substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

P. J. MENAHAN.

Witnesses:

J. B. CLAUTICE,
M. F. BOYLE.