

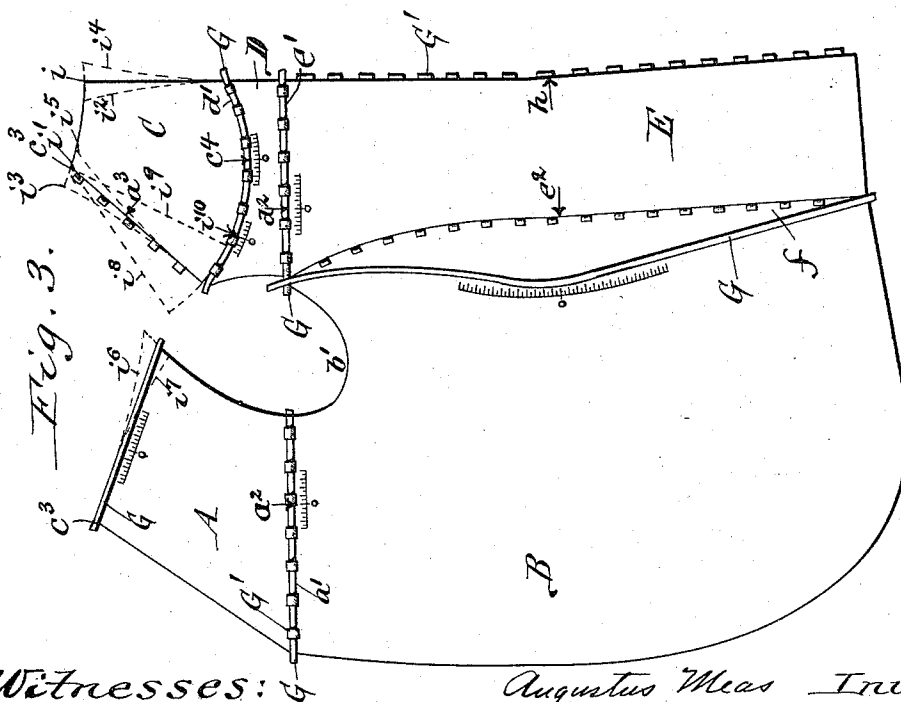
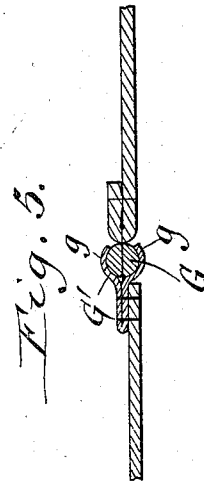
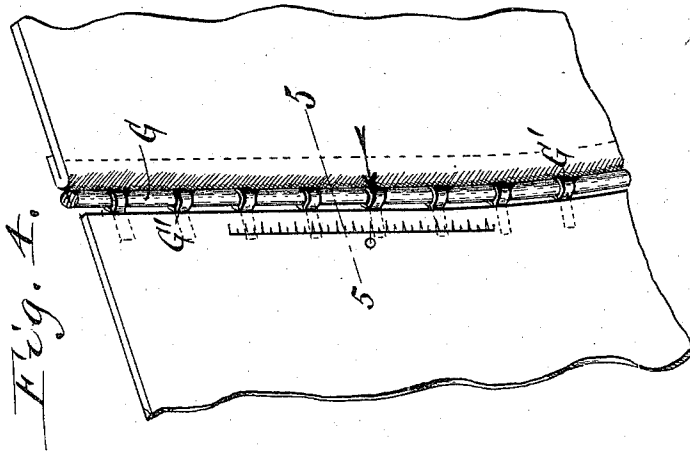
(No Model.)

2 Sheets—Sheet 2.

A. MEAS.
ADJUSTABLE GARMENT PATTERN.

No. 579,491.

Patented Mar. 23, 1897.



Witnesses:
Emmett P. Puleford.
Henry L. Deck.

Augustus Meas Inventor.
By William H. Pomeroy
Attorneys.

UNITED STATES PATENT OFFICE.

AUGUSTUS MEAS, OF NIAGARA FALLS, NEW YORK.

ADJUSTABLE GARMENT-PATTERN.

SPECIFICATION forming part of Letters Patent No. 579,491, dated March 23, 1897.

Application filed February 20, 1896. Serial No. 579,998. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS MEAS, a citizen of the United States, residing at Niagara Falls, in the county of Niagara and State of New York, have invented a new and useful Improvement in Adjustable Garment-Patterns, of which the following is a specification.

This invention relates to a conformator or adjustable garment-pattern whereby the principal points or measurements of the customer may be accurately determined preparatory to making the draft of the garment, and which will render it possible to produce a perfectly-balanced garment without requiring a trial fit of the partly-finished garment on the person for which it is intended.

In the accompanying drawings, consisting of two sheets, Figures 1 and 2 are perspective views looking at the front and rear sides, respectively, of a pattern designed for fitting and balancing a sack-coat. Fig. 3 is a plan view of one-half of a sack-coat pattern. Fig. 4 is a perspective view showing the preferred means of movably connecting two adjacent sections of my pattern. Fig. 5 is a cross-section of the same in line 5 5, Fig. 4. Fig. 6 is a perspective view of my pattern adapted for fitting and balancing a frock-coat.

Like letters of reference refer to like parts in the several figures.

My improved conformator or adjustable garment-pattern has substantially the same form as the garment which the customer desires, with the exception of the sleeves, and is composed of a number of adjustably-connected sections, which are made of pliable material, which are capable of sliding one upon the other for producing a balance of the parts upon the form of the customer. The extent which the sections are shifted with reference to each other after producing a balance is indicated by suitable graduations and is utilized to locate the principal points on the draft for the garment.

In the sack-coat pattern shown in Figs. 1, 2, and 3, A A represent the upper front sections, which are adapted to rest on the front portions of the shoulders and chest and which are separated from each other by a vertical division *a*.

B B represent the lower front sections, which are adapted to rest on the front por-

tion of the body below the chest and which are separated from each other by a vertical division *b*. Each of the lower front sections is separated from the adjacent upper front section by a horizontal division or seam *a'*, arranged above the lowermost part *b'* of the armhole, which is technically known as the "depth of scye." Each of the upper front sections is connected with the opposing lower front section by a sliding connection, which permits one of these parts to be slid horizontally upon the other part along this seam for producing a balance between these parts.

C C represent the upper rear sections of the pattern, adapted to rest upon the rear portions of the shoulders and separated from each other by a vertical division *c*. Each of the upper rear sections is separated from the adjacent upper front section by a division or seam *c'*. This seam extends from the upper portion of the armhole inwardly along the uppermost part of the shoulder to the neck-opening *c''*, the inner end *c'''* of this seam being commonly known as the "shoulder-point" and forming one of the principal points to be established on the draft for the garment. Each of the upper rear sections is connected with the adjacent upper front section by a sliding connection which permits one of these parts to slide transversely upon the other along this seam for producing a balance between the front and back parts of the pattern.

D D represent the two rear intermediate sections, which are separated from each other by a vertical division *d* and which are adapted to rest upon the shoulder-blades. Each of the intermediate sections is separated from the adjacent upper rear section by a curved division or seam *d'*, which curve forms part of a circle having its center at the shoulder-point, and each upper rear section is connected with the adjacent intermediate section by a sliding connection which permits the upper rear section to be slid on the intermediate section and swung on the shoulder-point as a center for adapting the upper front and rear sections to the top of the shoulder.

E E represent the two lower rear sections, which are adapted to rest upon the back below the shoulder-blades and which are separated from each other by a vertical seam or division *e*. The two lower rear sections are

connected by a sliding connection along the seam *e*, which permits one side of the pattern to be raised or lowered with reference to the other side for adapting the pattern to persons having one shoulder higher than the other. Each of the lower rear sections is separated from the adjacent intermediate section by a horizontal seam *e'*, which is located at or above the depth of scye and in line or thereabout with the horizontal division between the upper and lower front sections. Each pair of opposing intermediate and lower rear sections is connected by a sliding connection along the seam *e'*, which permits these sections to slide horizontally upon each other for the purpose of aiding in determining the amount which a person stoops or stands abnormally erect and in establishing the shoulder-point on the draft. Each of the lower rear sections of the pattern is separated from the adjacent lower front section by a vertical division or seam *f*, which extends downwardly from the armhole. The lower front and rear sections are connected at this seam by a sliding connection, which permits one of these parts to be slid vertically on the other for balancing the front and rear parts of the pattern on the customer.

The sliding connections whereby the adjacent sections are connected may be constructed in any suitable manner, the preferred form shown in the drawings being constructed as follows:

G represents a cord or band of leather or other suitable material which is secured lengthwise with one side to the edge of one of the sections and which is preferably round in cross-section.

G' represents a number of clasps or slides whereby the opposing section is slidably connected with this cord. Each of these clasps is formed out of a single piece of folded flat metal, which is secured with its folded portion by stitches or otherwise to one section and provided at the outer ends of the folded portions with a pair of concave jaws *g*, which embrace the cord from opposite sides thereof. The jaws of each clasp loosely embrace more than one-half of the round cord, thereby enabling the clasp to slide freely on the cord while retaining a firm hold on the same.

In order to enable the extent which one section is shifted on another to be determined after the adjustment of the pattern has been effected on a person, the sections on opposite sides of the principal seams or divisions are provided with devices which indicate the relative position of the sections. A simple indicating device for this purpose consists of an indicator arrow or mark arranged near the margin of one of the sections and adapted to traverse a graduated scale arranged lengthwise on the marginal portion of the opposite section, said scale beginning with zero and having its graduations extending in opposite directions from zero, as shown in the drawings.

The manner of using my improved pattern for preparing a draft from which the garment

of the customer will be made is as follows: All the necessary measurements of the customer for which the garment is intended are first taken according to any suitable system. Heretofore the tailor made such changes in these measurements in preparing the draft from which the garment is made as from experience were found necessary to compensate for peculiarities in the form of the customer, which changes were purely arbitrary and speculative, but can now be determined exactly by the use of my pattern. A pattern approximating the size of the customer is now placed on the body of the latter the same as an ordinary garment, a number of such patterns being preferably provided for different sizes of persons. The lower front and rear sections of the pattern are drawn around the body of the customer and secured in place by any suitable means, preferably by pinning or clasping the lower front sections together in front of the chest. The arrows and zero-marks on the several sections of the pattern are so arranged that when these marks are all opposite each other the pattern fits perfectly on a person of that particular size having a normal formation of all the parts of the body and indicates that the shoulder-point, depth of scye, and height of shoulder must be located in their normal position on the draft for the garment. If the form of the person is abnormal, the various sections of the pattern are shifted one upon the other until the whole pattern is balanced on the customer and all the parts hang or balance properly without wrinkling. The adjustment of the different sections of the pattern may be effected in any desired or convenient order until all of the parts are balanced and all the wrinkles have been taken out of the pattern. If the arrows *e*² of the lower rear sections have been shifted upwardly on the scales of the lower front sections in adjusting these sections of the pattern with reference to each other along the vertical seams or divisions *f*, it indicates that the person stoops forwardly, which necessitates an addition to the length of the normal depth of scye in order to make the back part of the garment longer than the front part, the extent of the relative difference between front and back parts being indicated by the distance which the arrows are moved upwardly from the zero-marks. In the case of a person standing abnormally erect the arrows *e*² would stand below the zero-marks and indicate the amount that must be deducted from the length of the normal depth of scye and the extent which the front part of the garment must be made longer than the back part. If the arrow *h* on one of the lower rear sections is shifted above or below the zero-marks on the other lower rear section, it indicates that one shoulder of the person is higher or lower than the other and that the length of one side of the garment must be made longer or shorter than the other side,

the extent of the difference being shown by the position of the arrow on the scale.

Upon shifting the rear intermediate sections horizontally on the lower rear sections, together with the upper rear sections, until these parts are balanced with reference to each other, the distance which the arrows d^2 on the intermediate sections are shifted from one side or the other of the zero-marks on the lower rear sections determines the extent which the form of the person departs from the normal and where the shoulder-point must be located on the draft to make the garment fit a person that stoops or stands abnormally erect. In the case of a person of normal form the arrows d^2 will remain in line with the zero-marks after the intermediate and lower rear sections have been adjusted upon each other, which indicates that the upper portion of the line for the center back seam must be drawn perfectly straight on the draft for the garment and the shoulder-point must remain in its normal position, as shown by full lines $i' i'$, Fig. 3. If a person stoops, the intermediate sections will be moved outwardly on the lower sections, more or less, upon adjusting the same, which indicates that the draft of the garment must be so drawn that the upper portion of the center back line of each half of the garment must be curved outwardly and the shoulder-point must be shifted outwardly to the extent of the distance indicated by the arrows, as shown by dotted lines $i^2 i^3$, Fig. 3. If the person upon which the pattern is placed should be unusually erect in stature, the arrows of the intermediate sections will be moved inwardly from the zero-marks, which indicates that the center back line and the shoulder-point must be carried inwardly on the draft, as shown by the curved dotted lines $i^4 i^5$, Fig. 3. Upon shifting the upper front sections of the pattern horizontally on the lower front sections these parts can be properly balanced with reference to each other, and the distance which the arrows a^2 on the upper front sections are displaced on either side of the zero-marks on the lower front sections indicates the extent which the shoulder-point must be shifted on the draft in either direction from the normal position in substantially the same manner as the balance of the rear intermediate sections is effected. The upper rear sections are swung on the shoulder-point as a pivot until they conform properly to the shoulders, and if after adjustment the arrows C^4 on the upper rear sections are in line with the zeros of the corresponding scales on the intermediate sections it indicates that the shoulders are of normal height. If the arrows are moved outwardly beyond the zeros, the shoulders are above the normal height, and the indicated distance is added to the normal measurement on the draft, as shown by dotted line i^6 , Fig. 3. If the shoulders are below the normal in height, the draft must be changed from the normal to the indicated

extent, as shown by dotted lines i^7 in Fig. 3. These variations in the height of the shoulder are usually made on the shoulder-seams of the front parts of the garment, although the same result would be produced if these departures from the normal size or form were made on the shoulder-seams of the rear parts of the garment, as shown by dotted lines $i^8 i^9$, Fig. 3. If desired, each upper rear section and the adjacent intermediate section of the pattern may be made in one piece, and the height of the shoulder may be obtained by dividing each of the upper front sections by a seam which curves from the shoulder-point as a center.

In order to properly determine the height of the shoulders, the extent which the intermediate sections have been shifted must be taken into consideration. If the intermediate sections have not been shifted from their normal position, the arrows and graduations of the upper rear sections after adjustment will properly indicate the height of the shoulder. If the intermediate sections have been moved out of the normal position, during which movement they carried the upper rear sections along with them, the extent of this movement is either deducted from or added to the total adjusting movement of the upper rear sections, according to whether the shoulder-point was shifted inwardly or outwardly. As the intermediate sections move horizontally in a straight line and the upper rear sections move in an arc, the relative distance which the upper rear sections must be set forward or backward is a trifle less than the actual distance which the intermediate sections have been moved in either direction from the normal position on account of the difference in the extent of the lateral movement of these parts. In order to enable this addition or deduction to be made with accuracy, separate indicating-arrows i^{10} and scales of proportionately finer graduations are arranged on the upper rear sections and the intermediate sections, and on these scales the compensating adjustment is effected.

Upon shifting the upper front and upper rear sections along the shoulder-seams until the front and rear sections of the pattern are balanced the position of the arrows a^3 on the upper rear sections with reference to scales on the upper front sections indicates the distance which the shoulder-point must be shifted on the draft to produce a balance between the front and rear parts of the garment.

After the pattern has been perfectly balanced and fitted on the customer the various scales are compared with the measurements which were originally taken by means of the tape to determine what changes or allowances must be made on the draft in order to produce a perfectly-balanced garment.

A separate tape measurement may be dispensed with, and the draft may be made directly from the measurements indicated on the pattern. By the use of this pattern

all the principal points on the draft can be accurately determined for producing a perfectly-balanced garment without requiring the garment to be tried on the customer in a partly-finished condition for the purpose of discovering and correcting any inaccuracies before finishing the garment, as heretofore practiced.

For the purpose of properly supporting the pattern upon the body of the customer while adjusting the sections the upper rear sections are yieldingly connected above the shoulder. This connection may be made in any desired manner, for instance, by two bands d^3 d^4 , which rest upon the shoulders and which are adjustably connected at their inner ends by buttons, buckles, or otherwise and connected with their outer ends to the upper rear sections adjacent to the shoulder-points.

For the purpose of keeping the inner portions of the upper rear sections in position while adjusting the same the parts may be adjustably connected in any suitable manner, for instance, by a light rubber band d^5 , which connects two buttons secured to the upper rear sections. The upper front sections may also be adjustably connected by suitable means, preferably by means of a buttonhole-tab d^7 , secured to one of the upper front sections and adapted to receive one of a series of buttons secured to the other section.

The sections of my improved pattern may be made of any suitable pliable material and may be arranged for balancing any kind of garment for men, women, or children.

In Fig. 6, which shows my pattern designed for balancing a frock-coat, J represents the back-skirt sections of the pattern, which are connected with the lower ends of the lower rear sections, and K represents the front-skirt sections arranged on opposite sides of the back-skirt sections and separated at their upper ends from the lower ends of the lower rear sections by horizontal seams k' . The front-skirt sections are connected along the seams k' with the lower rear sections by sliding connections similar to the connections between the other sections, which permits the front-skirt sections to be adjusted laterally on the lower rear sections for producing a balance between these parts, and each of the front-skirt sections is also provided with an arrow k^2 , which traverses a scale on the lower rear section. Each of the upper rear sections is provided with a slit l , which is arranged in line with the place where the back seam of the side body of the finished garment would be located and which extends from the outer side of the adjacent back skirt upwardly to the waist. If the arrows stand opposite the zero-marks of the scale after the balancing adjustment has been effected, it indicates that the person is of normal form and that the back line of the side body must be drawn on the draft for the garment in its normal position, as indicated by the full lines l in

Fig. 6. If after adjusting the pattern on the customer the portions on opposite sides of the slits l are spread apart, it indicates that the front skirts require more spring and that the back lines of the side bodies must be drawn on the draft somewhat toward the rear, as indicated by dotted lines l' , Fig. 6. If after adjusting the pattern on the customer the portions on opposite sides of the slits l lap one over the other, it indicates that the spring must be decreased and that back lines of the side bodies must be shifted forwardly on the draft, as shown by dotted lines l'' . The extent of the departure from the normal amount of spring is determined by sliding the front-skirt sections either rearwardly or forwardly until the rear edges of the front-skirt sections meet the rear-skirt sections, and the extent of this departure from the normal is indicated by the distance which the arrows k^2 of the front-skirt sections are shifted from one side or the other of the zeros on the scales of the rear sections.

I claim as my invention—

1. In an adjustable garment-pattern, the combination with the lower flexible pattern-sections, of two upper flexible pattern-sections separated from each other by a vertical division and from the lower sections by a horizontal division extending across the pattern from one armhole to the other, said upper sections being connected at their lower edges with the upper edges of said lower sections by horizontal slides, whereby each upper section can be bodily shifted horizontally on the adjacent lower section, substantially as set forth.

2. In an adjustable garment-pattern, the combination with two upper flexible sections separated from each other by a vertical division, of two lower flexible sections separated from said upper sections by a horizontal division extending across the pattern from one armhole to the other and from each other by a vertical division arranged in the vertical center line of the pattern, said lower sections being connected at their upper horizontal edges with said upper sections by horizontal slides, and with each other in the vertical center line of the pattern by vertical slides, whereby each lower section can be bodily shifted in a vertical direction and each upper section can be bodily shifted in a horizontal direction, substantially as set forth.

3. In an adjustable garment-pattern, the combination with the lower rear sections, of intermediate sections having horizontal lower edges which are connected by horizontal slides with the upper edges of said lower sections, and upper sections having their lower edges curved substantially concentric with the shoulder-points and connected by curved slides with the correspondingly-curved upper edges of said intermediate sections, substantially as set forth.

4. In an adjustable garment-pattern, the combination with the lower rear sections and

the back-skirt sections, of two front-skirt sections arranged on opposite sides of the back-skirt sections, and horizontal adjusting-slides which connect the front-skirt sections with the lower sections and which permit the front-skirt sections to be adjusted horizontally toward and from the back-skirt sections, substantially as set forth.

5. In an adjustable garment-pattern, the combination with two sections separated by a seam or division, of a cord secured length-

wise to the edge of one of said sections and a clasp secured to the edge of the other section and provided with jaws which embrace said cord, substantially as set forth.

Witness my hand this 13th day of February, 1896.

AUGUSTUS MEAS.

Witnesses:

GEO. L. SOUTHWICK,
ROBT. S. FERGUSON.