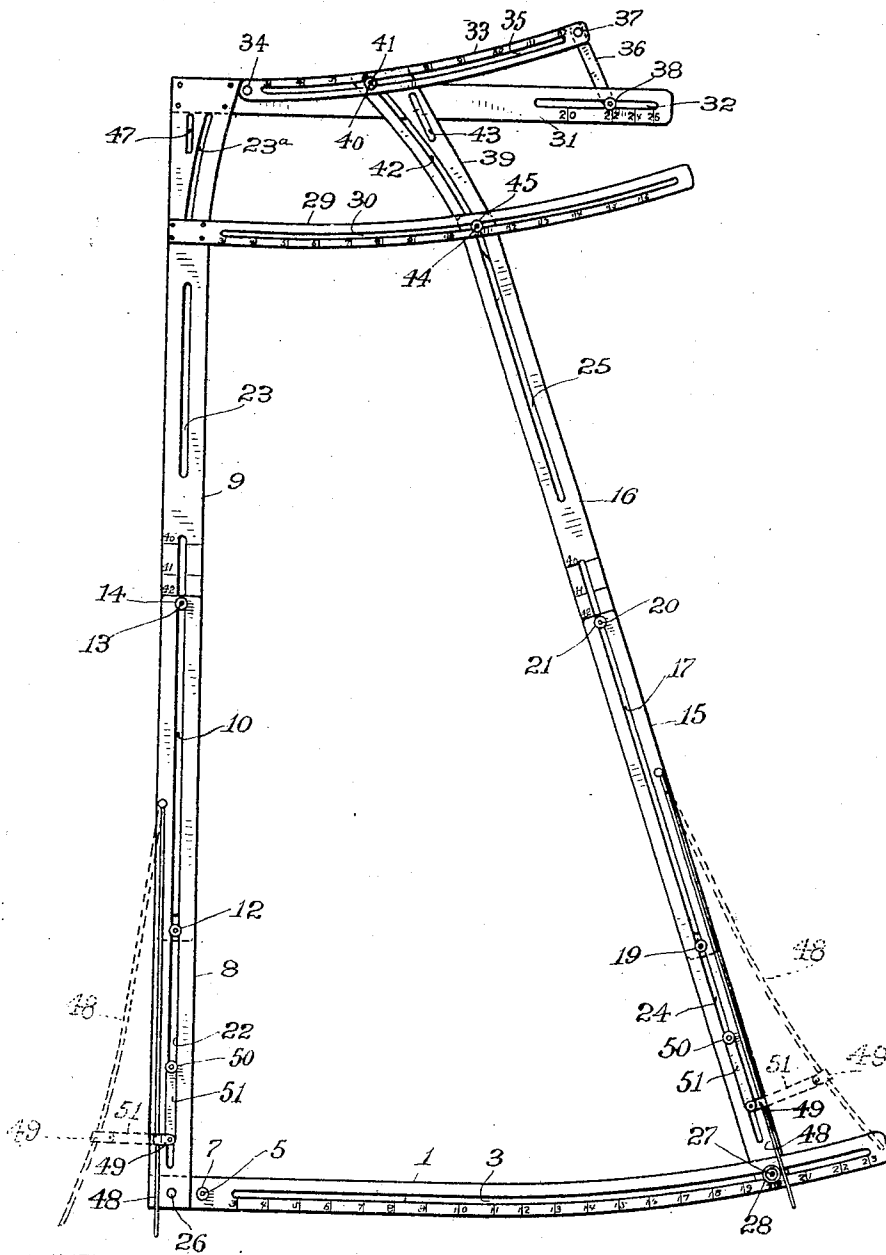


W. McDOWELL.
CHART FOR DRAFTING WOMEN'S SKIRTS.
APPLICATION FILED NOV. 10, 1904.

3 SHEETS—SHEET 1.

Fig. 1.



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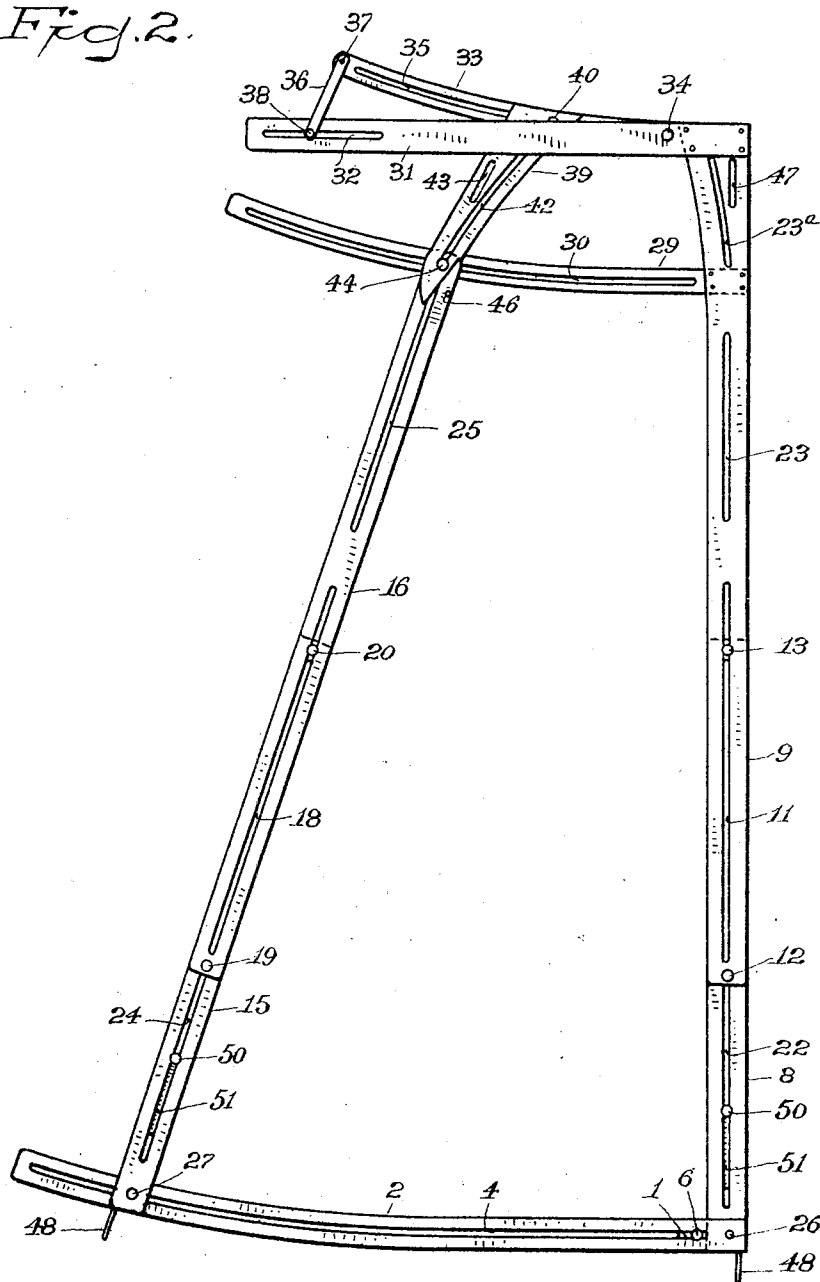
No. 803,778.

PATENTED NOV. 7, 1905.

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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

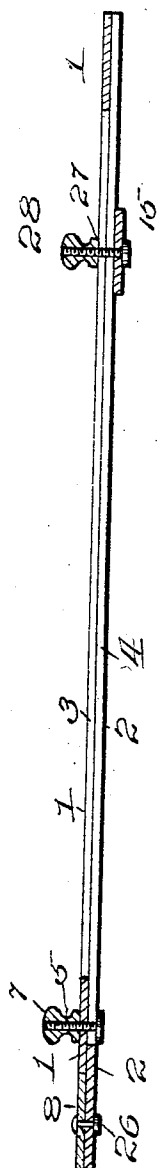
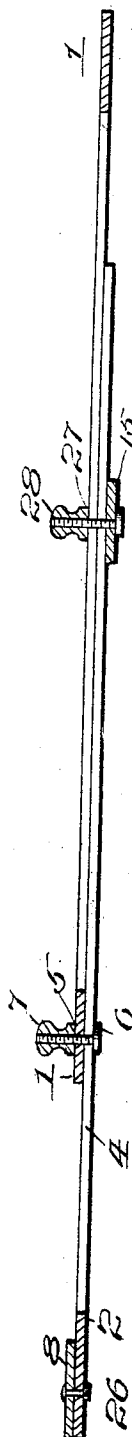


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CHART FOR DRAFTING WOMEN'S SKIRTS.

No. 803,778.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed November 10, 1904. Serial No. 232,216.

To all whom it may concern:

Be it known that I, WILLIAM McDOWELL, a citizen of the United States, residing at New York city, borough of Manhattan, county of New York, and State of New York, have invented certain new and useful Improvements in Charts for Drafting Women's Skirts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain improvements in charts for drafting women's skirts, and has for its object to provide a device of this character which may be adjusted from actual measurement, insuring a perfect fit and giving the proper lines and curves for any form.

With these ends in view my invention consists in certain details of construction and combination of parts, such as will be hereinafter fully set forth and then specifically designated by the claims.

In the accompanying drawings, Figure 1 is a front view, and Fig. 2 a back view, of my improved chart. Fig. 3 is a central longitudinal section through the bottom strips of the chart and showing the same retracted one upon the other, and Fig. 4 is a similar view showing said strips extended longitudinally.

Similar numbers of reference denote like parts in all the figures of the drawings.

The bottom of the chart is composed of two slightly-curved metal strips 1 2, each having, respectively, elongated slots 3 4. The strip 1 is placed upon the strip 2, and a pin 5, having a head 6 at the bottom, extends loosely through the slot 4 upward through the body of the strip 1 and is threaded at its upper end, and on the latter is run an ordinary set-nut 7. By relaxing the nut 7 these two strips may be adjusted so as to vary the length of the lower edge of the chart, and the tightening of said nut secures them in any desired adjustment.

The front edge of the chart is composed of two superimposed metal strips 8 9, having slots 10 11, respectively, a guide-pin 12 extending from the back strip 9 loosely through the slot 10, while a set-screw 13 extends loosely through the slot 11 through the body of the strip 8, and on the end of said screw is run a set-nut 14, so that it will be clear that said strips may be adjusted to vary the length of the front edge of the chart and secured in any desired adjustment by means of the nut 14.

The back edge of the chart is composed of

two superimposed metal strips 15 16, having slots 17 18, respectively, said strips being secured together by guide-pin 19 and set-screw 20, with nut 21, so as to provide for suitable adjustments precisely as in the instance of the strips 8 9. The strip 8 is provided with another slot 22 below the slot 10, while the strip 9 has slots 23 23^a above the slot 11. Likewise the strip 15 has a slot 24 below the slot 17, while the strip 16 has a slot 25 above the slot 18, the object of which slots 22, 23, 24, and 25 will be presently explained.

The strip 8 is pivoted at its lower end at 26 to the end of the strip 2, and a set-screw 27 extends from the body of the strip 15 through the slots 3 4 and is engaged by a set-nut 28, so that it will be clear that the strip 15 may be adjusted along the bottom of the chart and secured in any suitable adjustment by means of the nut 28, while the pivoting of the strip 8 to the strip 2 allows the bottom of the chart to adapt itself to any adjustments of the front and back edges of said chart.

29 is the hip-size strip, which is secured to the strip 9 and is slightly curved and has an elongated slot 30.

31 is the waist-size strip, secured to the top of the strip 9 and having an elongated slot 32, and 33 is the waist-line strip, pivoted at 34 to the strip 31, said strip 33 being slightly curved and having an elongated slot 35.

36 is a link one end of which is pivoted at 37 to the free end of the strip 33, while the other extremity of said link carries a set-screw 38, which extends through the slot 32, so that it will be readily understood that by adjusting the set-screw 38 along the slot 32 the strip 33 will be swung on its pivotal point, so as to provide for the curve or dip desired at the waist-line.

39 is the hip-link, which carries a set-screw 40 at the top, that extends loosely through the slot 35 and is provided with a set-nut 41, and 42 43 are respectively curved and straight slots in said link.

Extending loosely through the slots 30 42 is a set-screw 44, which is carried by the upper end of the strip 16 and is engaged by a set-nut 45. A stop 46 is provided at the back of the strip 16, against which the lower end of the link 39 may abut to prevent any overthrow of said link.

A short straight slot 47 is provided at the top of the strip 9, which slot is in alignment with the elongated slots in the strips 8 9.

After adjustments have been made for the

proper waist size and curve thereof and hip-size the upper end of the link 39 is swung along the strip 33 toward the back end thereof as far as it will go and then fastened by the set-screw 40, and this will establish the proper proportion between the top widths of the waist and hip of the skirt-gore to be marked and cut.

The several strips heretofore mentioned have marked thereon suitable scales, so that the various adjustments may be properly made.

In cutting out skirt-gores a flare is sometimes desired at the bottom, and I have provided for this in the following manner: Secured to each of the strips 8 15 are flexible wires 48, to which and near their lower ends are fixedly secured clips 49. 50 represents set-screws arranged within each of the slots 22 24, and 51 represents links whose ends are pivoted in each instance to said clips and set-screws. By forcing these set-screws down the slots 22 24 the wires, constituting flare-outlining means, will be extended, as shown in dotted lines at Fig. 1; but when said screws are moved upwardly as far as they will go these wires will be drawn inwardly, as shown in solid lines in said figure.

Women's skirts are usually made up of several gores that are sewed together to form the completed article, and my improvement is intended for use in marking out these gores preparatory to cutting them, and I will explain the use of my chart in connection with drafting the front gore of a skirt composed of five gores.

In the first place the measurements required for using my improvement are waist measure, hip measure, front length of skirt, back length of skirt, and side length of skirt.

We will assume in the present instance that the waist measure is twenty-two inches, the hip measure forty-eight inches, and the front, back, and side lengths of skirt forty-two inches each, the measurement around the bottom of the skirt being predetermined by the above-named measurements. In the first place the set-screw 38 is adjusted to the waist measure "22," noted on the scale appearing on the strip 31. The set-screw 44 is then adjusted to "11" on the hip-size strip 29, which adjustment is a known quantity based upon a hip measurement of "48." Then move the set-screw 40 as far to the right as it will go, which in the present instance is at "6" on the scale appearing on the waist-line strip 38. Next the strips 8 9 and 15 16 are adjusted to "42" on the scale which appears on the strips 9 and 16. The bottom width of this front gore is less than the length of the top strip 1, and assuming that such width is twenty inches the set-nut 28 is adjusted to the figure "20" of the scale appearing on the face of this strip 1.

Right here I would say that the lower strip

2 has no function in providing for adjustments less than twenty-four inches, since the top strip 1 is twenty-three inches long; but when adjustments over twenty-three inches are to be made the top strip 1 is moved to the right, which lengthens the bottom edge of the chart.

If a flare is desired at the bottom of the gore, the set-screws 50 are moved down the slots 22 24 to extend the wires 48, as hereinbefore set forth.

The various adjustments having been made, as described, the chart is placed upon the goods and the gore marked out along the outer edges of the front and back strips, bottom strips, and waist-line strips, and the lines of sewing are marked through the slots.

Sometimes the upper side edges of the gore are cut straight, and in this instance the marking in the straight slots 43 47 for the line of sewing is utilized and the cutting of these upper side edges is made parallel with these slots; but in case these upper side edges of the gore are to be curved then the marking is made through the curved slots 23^a and 42 for the line of stitching, and the cutting is made parallel with said slots.

I have heretofore described the manner of using my improvement in laying out each of the two front gores of a skirt; but it is not deemed necessary to continue this description in connection with the laying out of the two side gores and the back gore, since the manner of using my improvement for laying out these last-named three gores is precisely the same as in the instance of the front gores, the only difference being in the measurements themselves.

The measurements as heretofore noted with respect to the scales on the several strips are fictional in that they are not as accurate as they should be in laying out a gore for a perfect-fitting skirt; but such measurements are nevertheless suitable for the purposes of illustrating the manner in which my improvement is utilized.

In drafting a skirt composed of more than five gores and as many as eleven gores the manner of using my improved chart is the same as above described, the sole difference being that the adjustments along the scales for the waist, hip, and bottom will be different.

In drafting a skirt composed of more than eleven gores two gores can be drafted at the same time, and in drafting a circular skirt the chart may be adjusted to lay out one-half of the skirt and would then be used twice to get the full width.

Having thus particularly described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A skirt-chart, comprising front and back edge adjustable strips, bottom adjustable strips having a hinged connection with the front edge strips, waist and hip size strips rig-

idly secured to the upper front edge strip, the pivoted waist-line strip, the link pivoted to the waist-line strip and adjustably connected with the waist-size strip, and the hip-link adjustably connected with the waist-line strip and with the hip-size and upper back edge strips.

2. A skirt-chart comprising vertically-disposed and adjustably-connected strips at the front and back edges, adjustably-connected strips at the bottom edge having at one end a hinged connection with one of the front edge strips and at the other end an adjustable connection with one of the back edge strips, the immovable hip and waist size strips, the pivoted waist-line strip, adjustable connections between the waist-size and waist-line strips whereby the waist-line may be determined by a fixed waist size, and adjustable connections between the waist-line, hip-size and adjacent back edge strips, whereby the relative waist and hip measurements may be determined.

3. In a skirt-chart, the combination with the adjustably-connected strips for laying out the side and bottom edges, of the fixed waist-size strip, the pivoted waist-line strip, and adjustable connections between said waist-size and waist-line strips whereby the adjustment of the waist-line strip may be effected simultaneously with the adjustment according to waist size.

4. In a skirt-chart, the combination with the adjustably-connected strips for laying out the side and bottom edges, of the fixed hip-size strip, the pivoted waist-line strip, means for adjusting the waist-line strip, and an adjustable connection between the waist-line, hip-size and adjacent back edge strips, whereby the relative waist and hip measurements may be determined.

5. In a skirt-chart, the combination of the slotted adjustable front and back edge strips, the adjustable bottom edge curved strips provided with curved slots and having a hinged connection with the lower front edge strip, and an adjustable connection with the lower back edge strip, the rigid hip-size strip having a curved slot, the rigid waist-size strip having a straight slot, the curved waist-line strip provided with a curved slot and pivoted at one end to a stationary part of the chart, the link pivoted at one end to the free extremity of the waist-line strip and loosely connected at the other end with a set-screw which is capable of adjustment through the slot in the waist-size strip, and the slotted hip-link provided at its upper end with a set-screw which is adjustable through the curved slot in the waist-line strip, while a set-screw carried by the upper back edge strip extends through one of the slots in said hip-link and also through the curved slot in the hip-size strip and is adjustable along this last-named slot.

6. A skirt-chart having slotted adjustable front and back edge strips and provided with

flexible wires secured at their upper ends to the lowermost of these strips at each edge, and adjustable connections between said strips and wires whereby the latter may be extended or drawn inwardly.

7. A chart of the character described comprising adjustable front and back portions, an adjustable bottom portion movably connected thereto, means rigidly secured to the front portion for indicating waist and hip sizes, a waist-line strip, and means for adjusting said strip in relation to the waist-size-indicating means.

8. A skirt-chart comprising an adjustable measuring device, a waist-size-indicating device rigidly connected thereto, a waist-line strip, and means for adjustably connecting said strip with the waist-size-indicating device.

9. In a device of the character described, the combination with a non-adjustable waist-size-indicating strip; of a waist-line strip pivoted thereto, and means for securing said strip in a desired relation with said waist-size-indicating strip.

10. In a device of the character described, the combination with a waist-size-indicating strip, of a waist-line strip pivoted thereto, an adjusting-link movably connected to the waist-line strip, and means for adjustably securing said link to the waist-size-indicating strip.

11. In a device of the character described, the combination with a front portion, of hip and waist size indicating strips rigidly secured to said front portion, a waist-line strip movably connected to the waist-size-indicating strip, and means for adjusting said waist-line strip to a desired relation with the waist-size-indicating strip.

12. In a device of the character described, the combination with a front strip, hip and waist size indicating strips rigidly secured to the front strip, of a back strip adjustably connected to the waist-size-indicating strip, a waist-line strip adjustably connected to the waist-size-indicating strip, and an adjustable connection between the waist-size-indicating strip and the waist-line strip.

13. A device of the character described having front and back portions, a flexible connection fixedly secured at one end to one of said portions, means for adjusting the other end of the connection from or toward the portion to which it is secured, and means connecting said front and back portions.

14. A device of the character described having front and back portions, flexible connections fixedly secured at one end to said portions, adjusting devices fixedly secured to the connections and movably mounted on the front and back portions, means for locking the adjusting devices in adjusted positions, and means connecting said front and back portions.

15. In a device of the character described,

the combination of front and back portions,
means connecting said portions, resilient mem-
bers, respectively, rigidly secured at one end
to each of said front and back portions, and
5 means for adjusting said members.

16. In a device of the character described,
the combination of front and back portions,
means connecting the lower parts of said front
and back portions, waist and hip size indicat-
10 ing means connecting the upper parts of said

front and back portions, waist-line-indicating
means carried by said waist-size-indicating
means, and flare-outlining means carried by
one of said portions.

In testimony whereof I affix my signature in 15
presence of two witnesses.

WILLIAM McDOWELL.

Witnesses:

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CHARLES E. McDOWELL.