

No. 689,685.

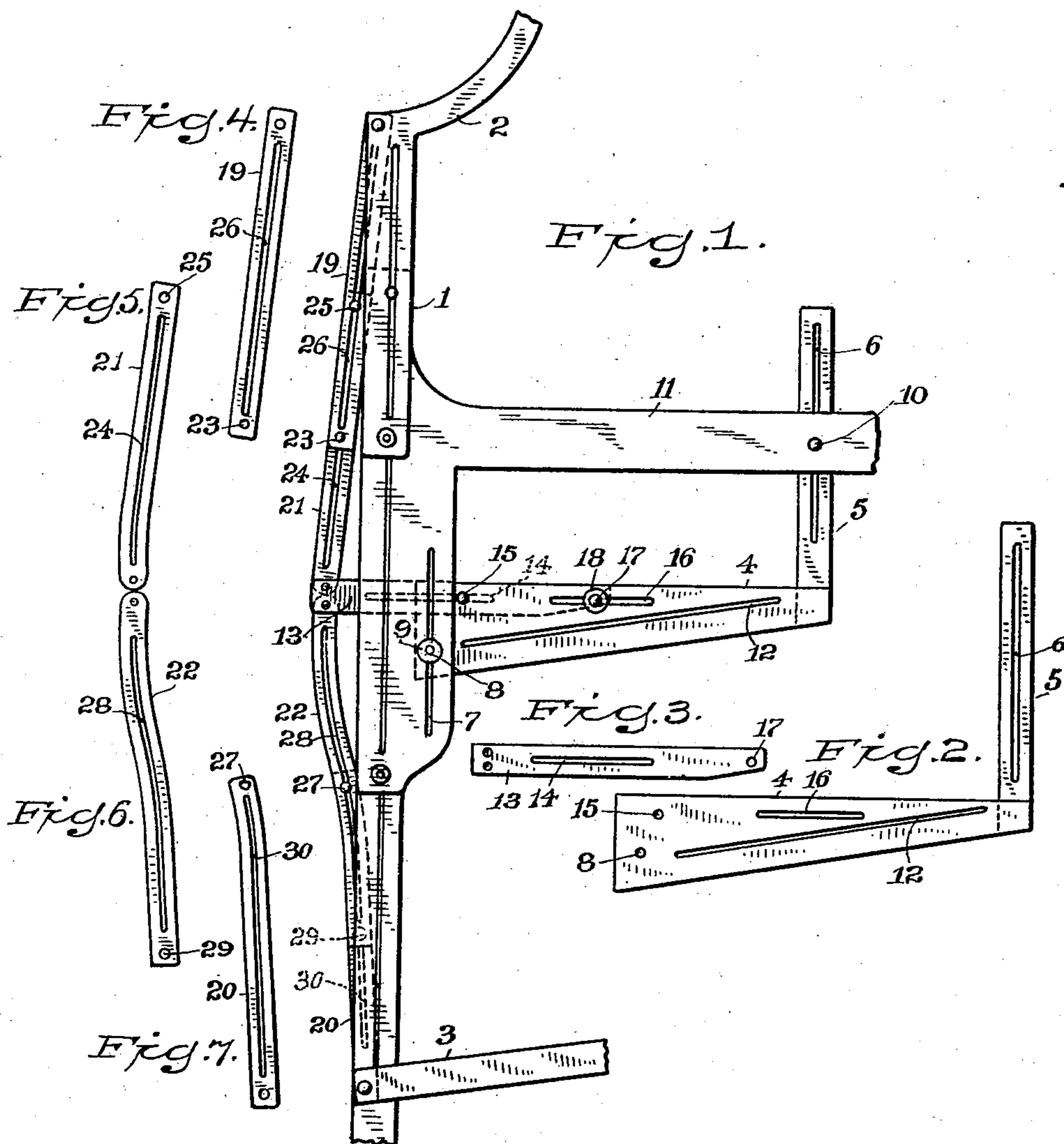
Patented Dec. 24, 1901.

W. McDOWELL.
ADJUSTABLE CHART.

(Application filed Oct. 10, 1901.)

(No Model.)

5 Sheets—Sheet 1.



WITNESSES:

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M. J. Longden.

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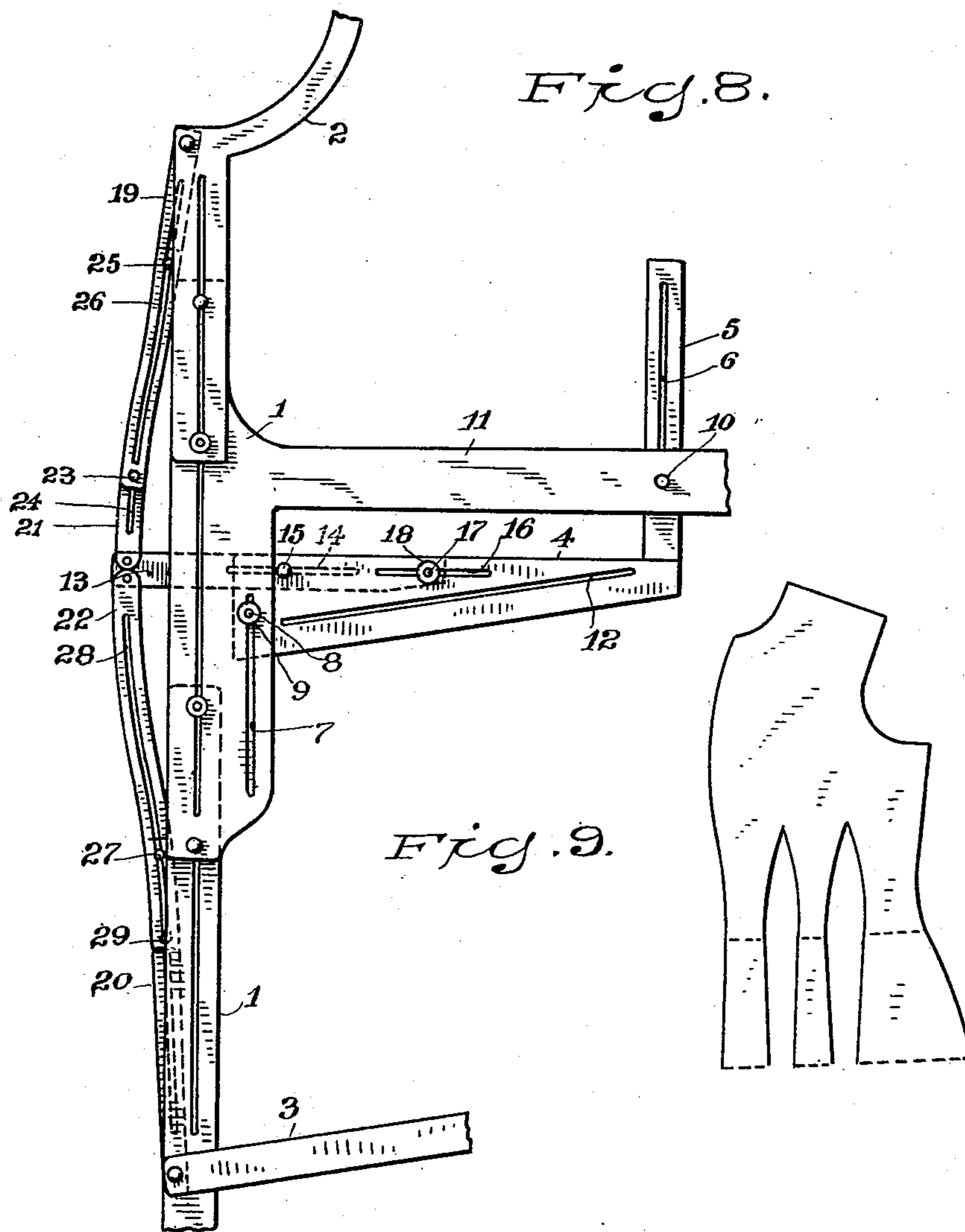
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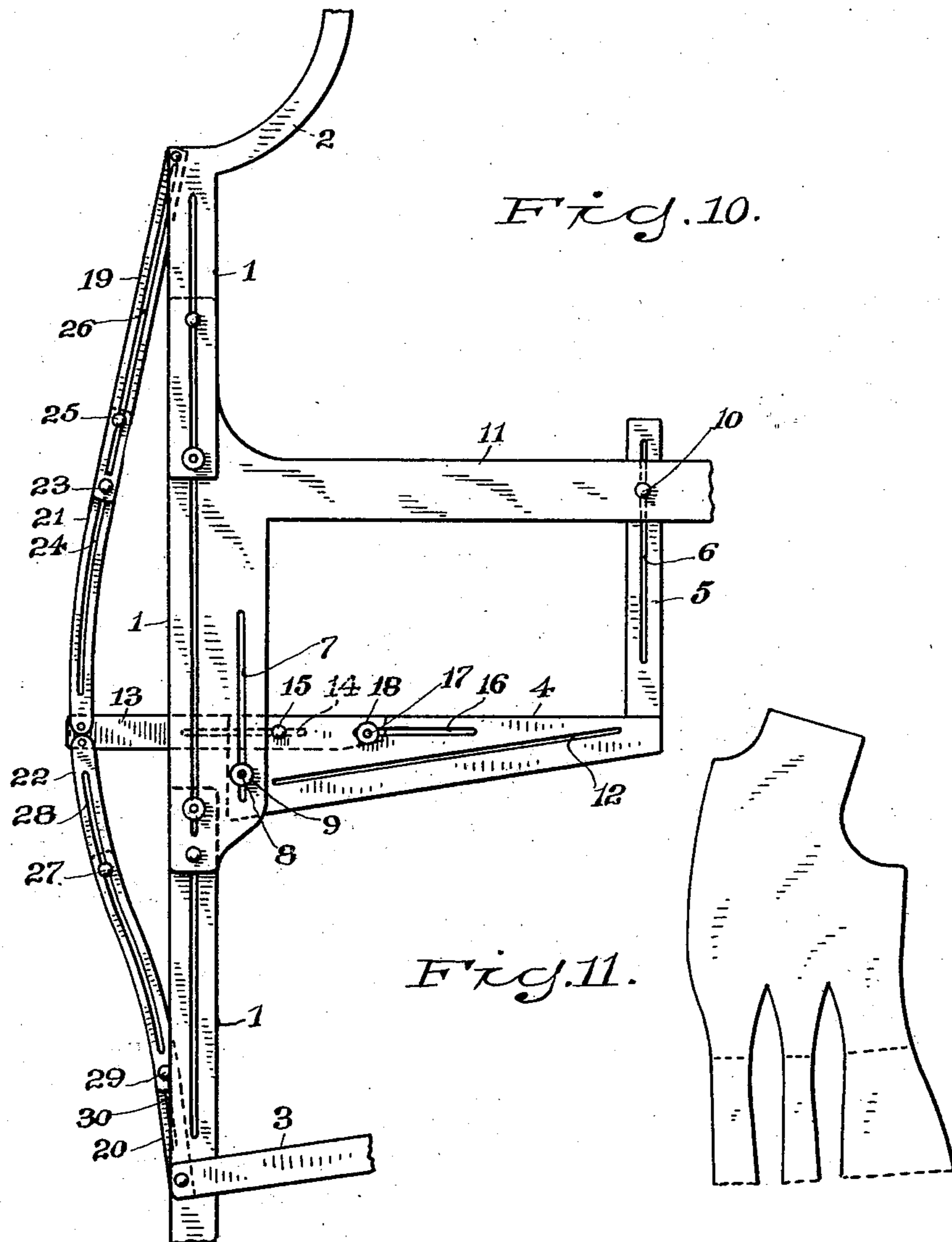
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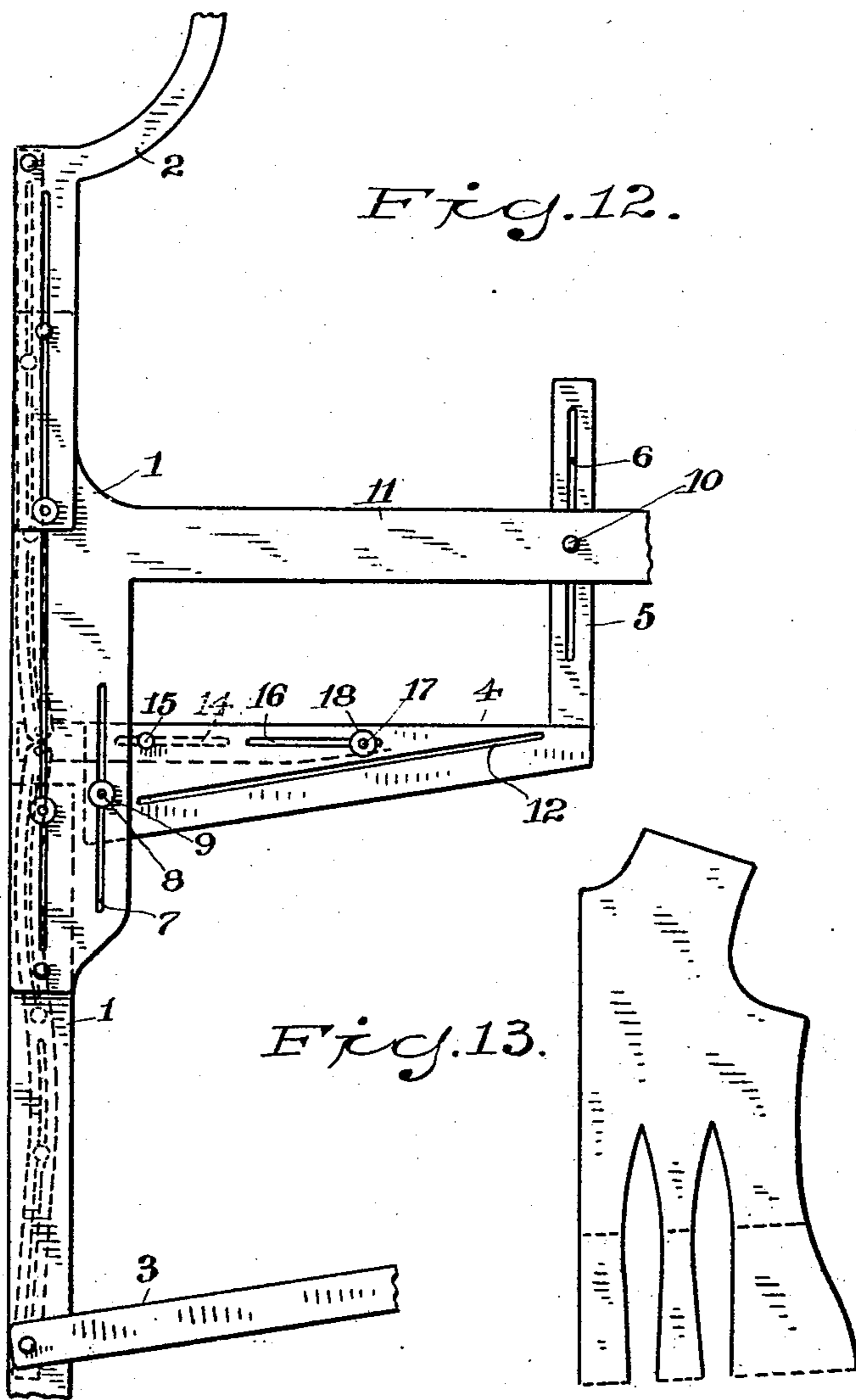
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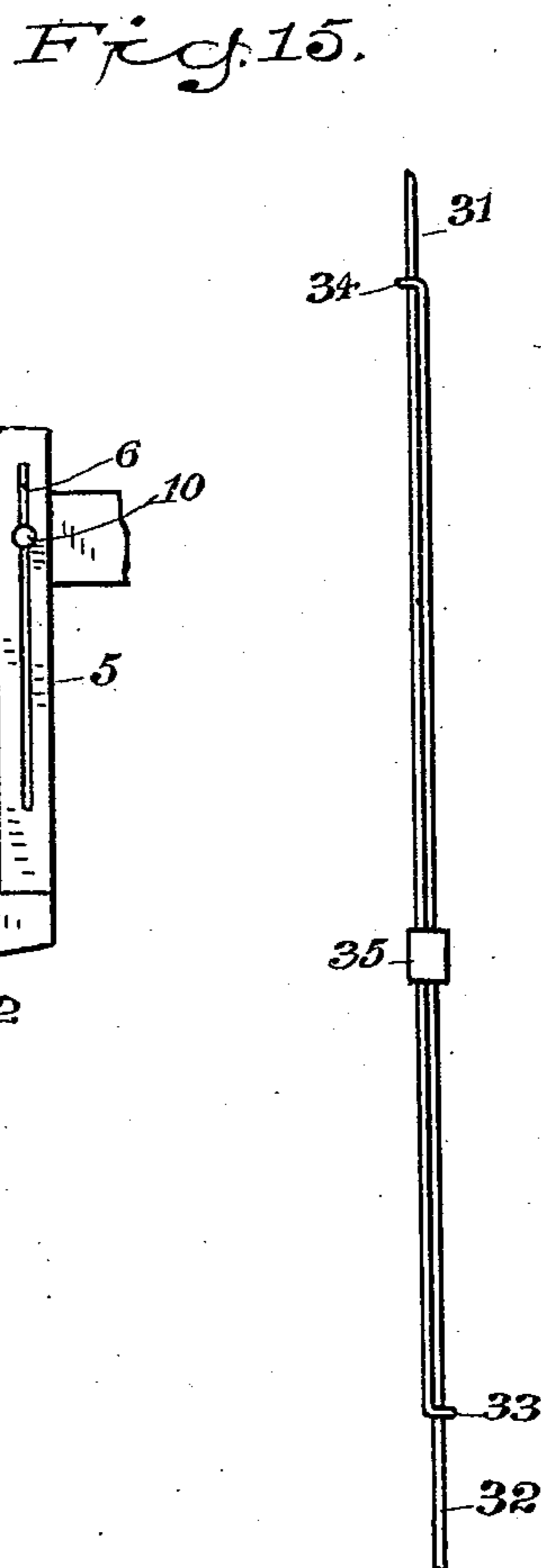
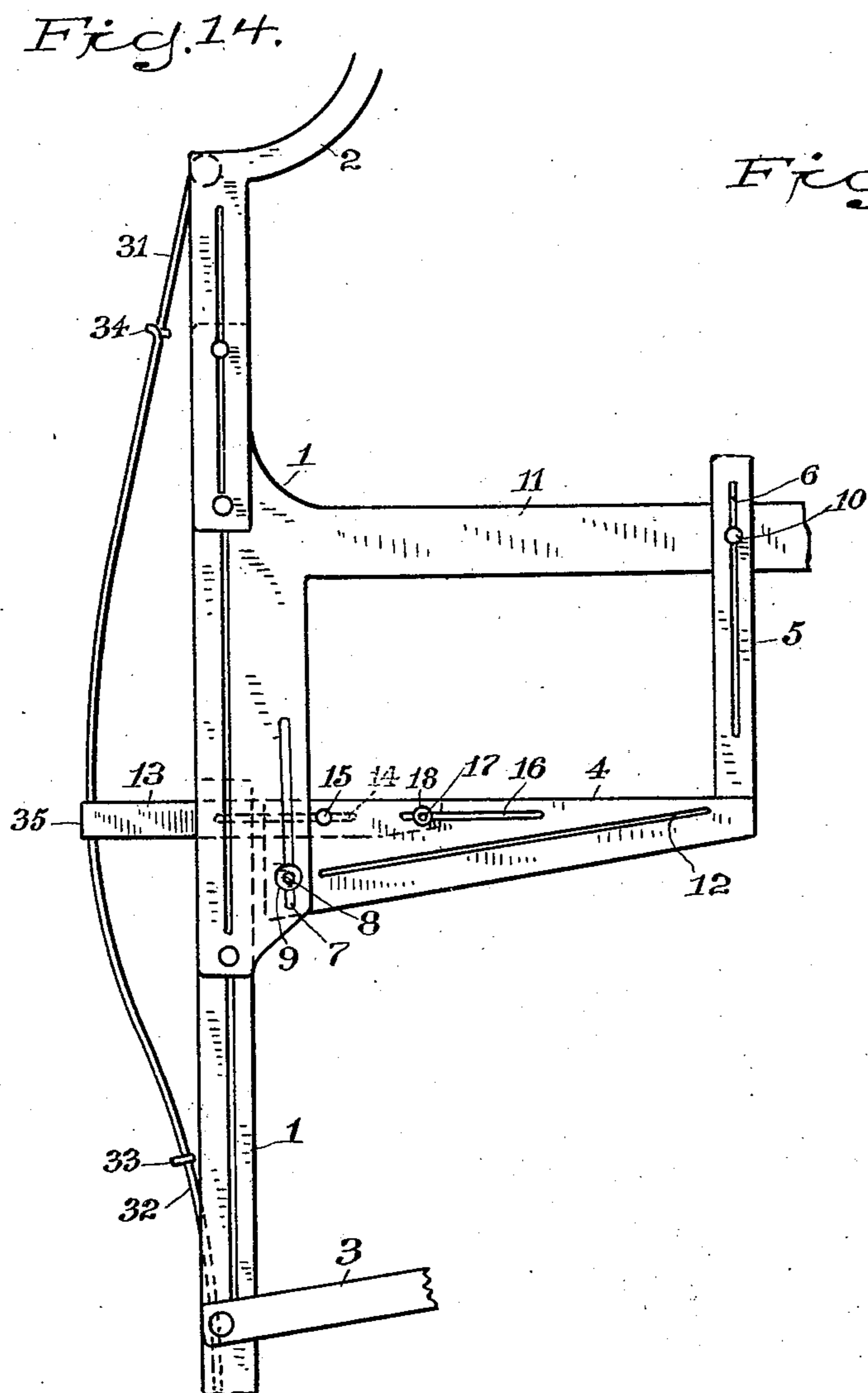
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UNITED STATES PATENT OFFICE.

WILLIAM McDOWELL, OF NEW YORK, N. Y.

ADJUSTABLE CHART.

SPECIFICATION forming part of Letters Patent No. 689,685, dated December 24, 1901.

Application filed October 10, 1901. Serial No. 78,260. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM McDOWELL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Charts for Drafting Women's Waist-Fronts; 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 new and useful improvements in charts for drafting women's waist-fronts, and has for its object to obtain an outline for the front of a woman's waist in conformity to the size and nature of the bust.

In the accompanying drawings, which form a part of this application, Figure 1 is a plan view of my improvement. Figs. 2, 3, 4, 5, 6, and 7 are detail plans of the various parts which make up the construction shown at Fig. 1. Fig. 8 is a plan view of my improvement adjusted for a medium high bust. Fig. 9 is the outline-draft of a waist-section such as would be laid out from the adjustment shown at Fig. 8. Fig. 10 is a plan of my improvement adjusted for a large low bust. Fig. 11 is an outline-draft of a waist-section such as would be obtained from the adjustment shown at Fig. 10. Fig. 12 is a plan view of my improvement as it appears when adjusted to lay out a straight front where no curve is desired. Fig. 13 is a detail plan view of a waist-section such as would be obtained by an adjustment shown at Fig. 12. Fig. 14 is a plan view showing a modified form of my improvement, and Fig. 15 is a detail front view of the extensible limbs which form a part of the construction shown at Fig. 14.

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

1 is the general frame of my improvement, preferably made from sheet metal. The front edge of this frame is straight, and from the upper end of the frame extends the neck-piece 2, while the waist-line piece 3 extends from the bottom portion of this frame.

4 is the dart-plate, which is horizontally disposed and has an upwardly-projecting extension 5, so that this plate is L-shaped.

Elongated slots 6 7 are cut within this extension and the frame 1, respectively, and the dart-plate 4 is provided with a threaded pin 8, which projects upwardly through the slot 7, a thumb-nut 9 being driven on said pin for the purpose presently to be explained. An ordinary guide-pin 10 projects from an extension 11 of the frame through the slot 6, so that it will be readily understood that the dart-plate may be elevated or lowered and secured in any adjustment. The dart-plate is provided with an elongated slot 12 parallel with its lower edge, and through this slot are adjustably secured the devices which determine the darts of the waist. My present improvement, however, has nothing to do with the formation of the darts, and I therefore have not shown the same.

13 is the adjusting-bar, having an elongated slot 14, through which projects a pin 15 from the dart-plate, and 16 is an elongated slot in the dart-plate, through which a pin 17 projects from the adjusting-bar, a thumb-nut 18 being driven on said pin, so that this bar and dart-plate may be locked at any suitable adjustment, as will be presently explained.

From the foregoing it will of course be clearly understood that the various elongated slots referred to in connection with pins extending from adjacent parts through said slots provide means for guiding the parts and permit them to have sliding movements on each other in order to get proper adjustments, while the function of the nuts 9 and 18 is merely to lock the parts together when the proper adjustments have been determined.

The means which I employ for determining the front outline of the waist comprises extensible limbs or sections whose outer edges are more or less curved. It is immaterial how many of these extensible pieces are employed, and I do not wish to be limited in this respect, although I prefer to use four of these pieces, as shown at Figs. 1, 4, 5, 6, and 7. Referring to these last-named figures of the drawings, 19 20 are the top and bottom front-line sections, while 21 22 are the intermediate or middle sections. The outer edges of these sections are more or less curved, as may be desired, and these sections are all provided with elongated slots in the direction of their length. The two upper sections are placed one over

the other, so as to overlap, and a guide-pin 23 extends from the section 19 through the slot 24 in the section 21, while the guide-pin 25 extends from the section 21 through the slot 26 in the section 19. Likewise a guide-pin 27 extends from the section 20 through the slot 28 in the section 22, while a guide-pin 29 in the section 22 extends through the slot 30 in the section 20. The inner ends of the middle sections 21 22 are pivoted to the outer extremity of the adjusting-bar 13, while the extreme outer ends of the sections 19 20 are respectively pivoted to the frame 1 at the upper and lower portions thereof. When the pin 17 is thrown forward through the slot 16, the bar 13 will be projected, and the sections 19 20 21 22 will be thrown forward and will dispose themselves as to their outer edges in a general curve. Of course it will be clear that these sections will readily extend or contract, according as the bar 13 is thrown outwardly or inwardly. A very full bust-pattern is obtained by throwing the bar 13 to the limit of its forward movement, and the extent to which said bar is thrown forward will of course depend upon the fullness of bust desired.

The high, medium, or low bust is obtained by moving the pin 8 through the slot 7, which of course carries the dart-plate and the adjustable bar 13 up or down, as the case may be. A high bust is therefore obtained by throwing this pin to the limit of its upward movement, while a low bust is of course obtained by throwing the pin to the limit of its downward movement, the medium bust resulting from an adjustment of the pin between these two limits.

Fig. 1 shows an adjustment of the parts for a small medium bust, Fig. 8 shows the adjustment for a small high bust, while Fig. 10 shows this adjustment for a large low bust.

At Fig. 12 I have shown the bar 13 withdrawn, so as to bring the sections 19 20 21 22 fully within the front straight edge of the frame 1, so that in using the chart adjusted in this manner no bust-curve whatever is obtained at the front of the waist.

The results obtained from the use of my improved chart as adjusted at Figs. 8, 10, and 12 are clearly shown at Figs. 9, 11, and 13.

Instead of employing the sheet-metal sections for the bust-line I can make these sections from two pieces of wire 31 32, as shown at Figs. 14 and 15, the outer extremities of these wires being pivoted near the upper and lower ends, respectively, of the frame, the wire 31 being provided at its lower extremity with an eye 33, through which the wire 32 passes,

while the wire 32 is provided at its outer end with an eye 34, through which the wire 31 passes. The bar 13 at its outer end is formed into a box 35, through which these wires pass loosely. When the bar is thrown outwardly, the wires will assume a curved outline and will slide readily one upon the other to produce this effect, and when the pin 8 is moved downwardly in the slot 7 the bar 13 will slide along the wires, so as to produce the low-bust effect, the high-bust effect being obtained by moving this pin in the upper end of the slot 7, while the medium bust is of course obtained by an adjustment of this pin within the slot midway between these two limits.

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

1. In a chart for drafting women's waists, the combination of the frame, a plurality of bust-line sections secured together and capable of sliding movements along each other, the free ends of the outer sections pivoted respectively near the upper and lower portions of said frame, the adjustable bar loosely connected at its outer end with these sections, means for adjustably securing said bar to the frame, means for projecting and retracting said bar, and means for throwing said bar toward either end of the frame, substantially as set forth.

2. In a chart for drafting women's waists, the combination of the frame having a straight front edge, the extensible bust-line sections having slot-and-pin connections whereby said sections are capable of free sliding movements while the free extremities of the outermost sections are pivoted to said frame respectively near the upper and lower ends thereof, the dart-plate adjustably secured to said frame by slot-and-pin connections whereby free sliding movements of said plate may be had in a parallel direction with the length of said frame, the adjustable bar secured to the dart-plate by slot-and-pin connections whereby said bar may have sliding movements in a direction at right angles to the length of said frame, and means for loosely connecting the outer end of said adjustable bar with said sections, substantially as set forth.

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

WILLIAM McDOWELL.

Witnesses:

JAY LIESER,

MABEL L. JOHNSON.