

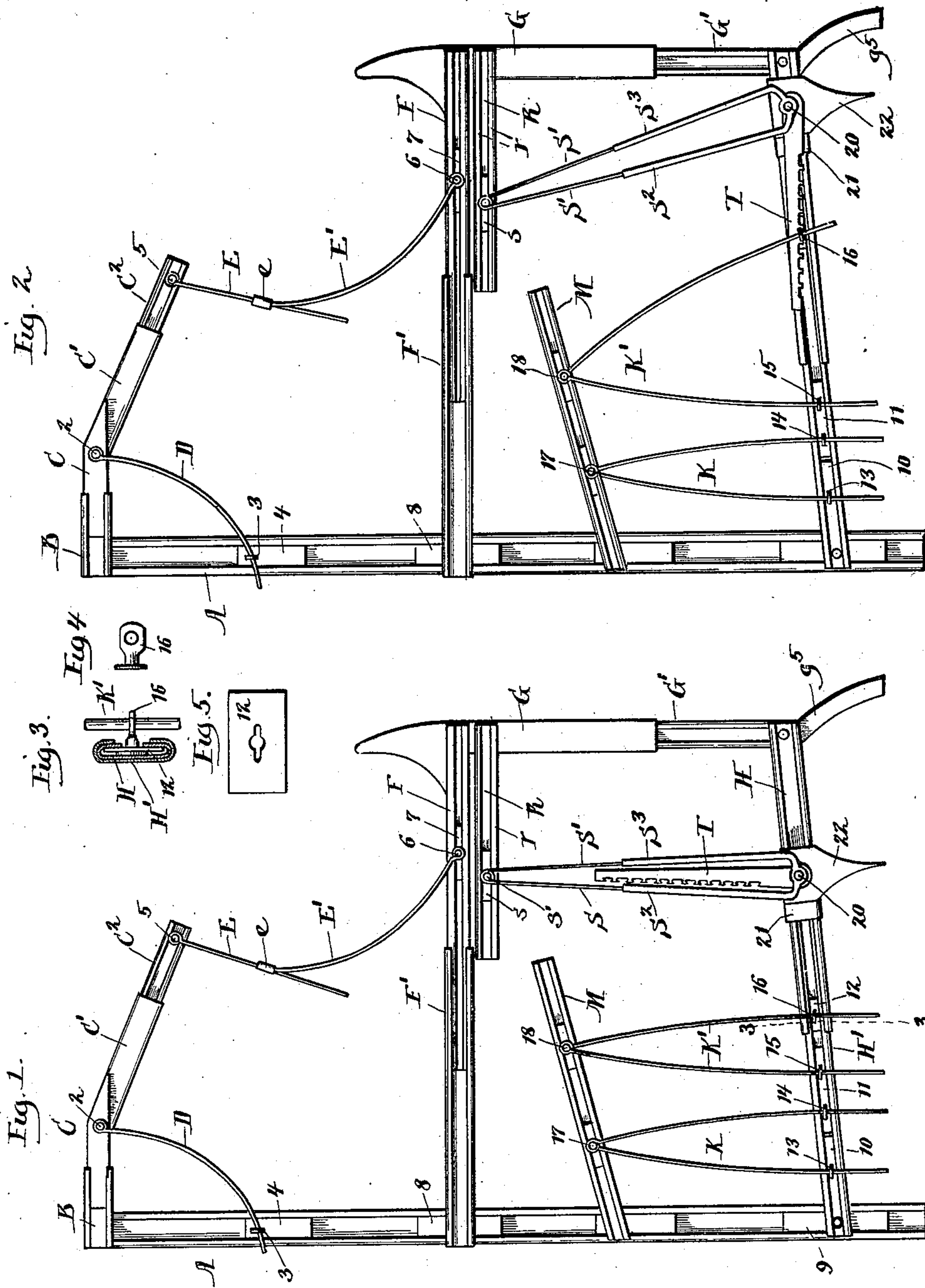
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Patented Jan. 31, 1899.

**F. E. BUDDINGTON.**  
**ADJUSTABLE PATTERN DRAFTING APPARATUS.**

(Application filed Jan. 5, 1898.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE PATTERN-DRAFTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 618,392, dated January 31, 1899.

Application filed January 5, 1898. Serial No. 665,691. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK E. BUDDINGTON, a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Adjustable Pattern - Drafting Apparatus, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My present invention is designed more especially as an improvement upon the pattern-drafting apparatus set forth in Letters Patent of the United States No. 541,311, granted to me June 18, 1895. In the apparatus illustrated in Figure 1 of said patent and which was that part designed for drafting the patterns for the front of the garment the bar or wire whereby the bust-bar was connected to the waist-bar was formed of movable sections, the upper section of the wire being pivotally connected to the same slide-plate to which was attached the lower end of the arm-scyce wire. This construction was found disadvantageous, first, because under certain conditions it is desirable that the arm-scyce bar or wire and the bar or wire that connects the bust-bar and the waist-bar shall be adjustable independently of each other. Moreover, when a single wire of movable sections extends between the bust-bar and the waist-bar no allowance can be made for the seam of the cloth between the sections cut along the line of this bar without the necessity of shifting the bar to make such allowance.

In cutting the upper or waist portions of women's dresses it is frequently desirable in order to secure a more perfect fitting of the garment that the cloth forming certain portions of the garment should be cut on the bias, the portions so cut usually being the parts below the bust and approximately under the arm. By my present invention I provide means whereby the cutting of the cloth upon the bias at such points may be effectively accomplished and in such manner that the under-arm edge of the front piece shall correspond with the edge of the adjacent dart.

Fig. 1 is a plan view showing my invention applied to an apparatus designed for drafting the patterns for the front of the garment. Fig. 2 is a view similar to Fig. 1, but show-

ing the parts in different position. Fig. 3 is a sectional view, on an enlarged scale, taken upon line 3 3 of Fig. 1. Figs. 4 and 5 are respectively detail views of the swivel-eye and sliding blocks shown in Fig. 3.

A designates the front-bar of the main frame, to the upper end of which is fixed the short transverse bar B. The bar A is shown as formed of sheet metal, being provided with a channel or groove, and the bar B is similarly formed and has a grooved way, wherein the upper end of the shoulder-bar C will slide. From the shoulder-bar C extends a part C', into which slides an adjustable section C<sup>2</sup>, whereby the shoulder-bar is rendered extensible. To the headed pin 2 on the shoulder-bar C is pivoted a curved neck-wire D, the lower portion of which passes through a sleeve 3, that is fixed to a plate or block 4, held in manner free to slide within the groove or bar A. To the outer end of the extensible section C<sup>2</sup> of the shoulder-bar is pivotally connected, as at 5, the sectional arm-scyce wire that is formed of the parts E and E', one of these parts having fixed thereto a sleeve e, through which the other part passes. The lower end of the wire E' is pivoted, as at 6, to a plate or block 7, that moves within a groove or channel of the section F of the adjustable bust-bar, this section F being formed of sheet metal, having bent-over edges that are telescopically held within the section F', being attached to a slide-plate 8, that works within the slideway or channel formed by the reverted edges of the front-bar A. To the outer end of the section F of the bust-bar is fixed one section G of the under-arm bar, this section G being formed with reverted edges to form a groove or slideway that receives the section G' of the under-arm bar. The lower portion G' of the under-arm bar has fixed thereto one section H of the expansible waist-bar, the opposite end H' of this bar being mounted to slide telescopically within the section H and having one end fixed to a plate 9, that slides within the groove of the front-plate A. The sections H H' of the waist-bar are formed of sheet metal, with their edges reverted, thus forming slideways to receive the blocks 10, 11, and 12, the block 10 being either fixed or movable, while the blocks 11 and 12 are movable lengthwise of the waist-



bar. To the blocks 10, 11, and 12 are connected, respectively, the swivel-eyes 13, 14, 15, and 16, that receive the lower ends of the dart-wires K and K', the upper ends of these  
5 dart-wires being pivoted, as at 17 and 18, to the slide-blocks 19 and 20, that are mounted in manner free to slide within the groove of the dart-bar M.

The construction of parts as heretofore described (with the exception of the swivel-eyes 13, 14, 15, and 16) is the same as set out in my Letters Patent No. 541,311, and the front-bar, the shoulder-bar, and bust-bar, the dart-bar, the under-arm bar, and waist-bar  
10 will be provided with suitable scales, as in my prior patent. My purpose in providing the swivel-eyes 13, 14, 15, and 16 is to allow a free movement of the lower ends of the dart-bars with respect to the blocks 10, 11, and 12, and inasmuch as the swivel-eyes 13, 14, 15, and 16 pass through and are pivotally  
15 connected to the blocks whereby they are carried these swivel-eyes turn freely as the dart-bars are shifted. This feature I regard as of material importance over the construction set forth in my above-mentioned patent, whereby the dart-bars were connected to the  
20 sliding blocks. To the section G of the under-arm bar is fixed a bar R, having reverted edges *r*, forming a slideway, in which is mounted a block or sliding plate *s*, having projecting therefrom a pin *s'*, to which are pivotally connected the upper ends of the  
25 wires S S', the lower ends of these wires entering and being telescopically held by the tubular rods S<sup>2</sup> and S<sup>3</sup>, that form practically continuations of the wires S S'. The lower ends of the rods S<sup>2</sup> S<sup>3</sup> are pivoted, as at 20, to a sliding plate 21, that is mounted in manner  
30 free to slide on the section H of the waist-bar. The sliding plate or block 21 is preferably formed of sheet metal, having its edges turned to inclose the section H of the waist-bar. To the sliding plate or block 21 is connected a  
35 dart-plate 22. To the sliding plate or block 21 is also pivotally connected one end of a latch bar or plate T, the lower edge of which is formed with teeth or notches to engage the swivel-eye 16 or some part connected with the  
40 sliding plate 12. The purpose of this latch-plate T will be hereinafter more fully described. The lower end of the under-arm-bar section G' has a depending portion *g*<sup>5</sup>, as in my above-mentioned Letters Patent.

The general operation of the parts hereinbefore described is the same as in my Patent No. 541,311, and it will be understood that in the use of this present apparatus a chart similar to that shown in said patent will be  
45 employed. In the present construction, however, by employing the wires S S' and the tubular rods S<sup>2</sup> S<sup>3</sup>, forming extensions of said wires, I provide for the cutting of the cloth so that a space for the seam is allowed between the lines that will be drawn on each  
50 side of the wires S S' and tubes S<sup>2</sup> S<sup>3</sup>, and hence the necessity of shifting the parts in

order to make such allowance is avoided. It will be observed that the wires S S' and tubes S<sup>2</sup> S<sup>3</sup> are arranged not only a sufficient distance apart to allow for the seam, but are preferably set upon an incline—that is to say, broader at the base than at the top—in order to contract that part of the cloth nearer the waist-line of the garment. Moreover, by employing an independent slide for the upper  
70 ends of the wires S S' the adjustment of these wires can be had without disturbing the adjustment of the lower end of the sections E' of the arm-scyewire. 80

In cutting on the bias the cloth that forms that part of the waist below the bust and slightly in front of the arm-scyewire the latch-plate T will be swung down into engagement with the swivel-eye 16, as is clearly shown in  
85 Fig. 2 of the drawings, thus locking these parts together, and the slide-plate 21 will then be moved outward, drawing with it the adjacent dart-wire K. By this operation the dart formed by the wires K will be increased in size; but inasmuch as the rods and wires S, S', S<sup>2</sup>, and S<sup>3</sup> are interlocked with the adjacent  
90 dart-wire K it will be seen that the parts will be shifted in unison and the proper shape and width of the bias strip of cloth will be preserved. 95

It is manifest that the precise details of construction above set out may be varied without departing from the spirit of the invention. Thus, for example, the feature of  
100 employing a separate slide block or plate *s* might be used with advantage in connection with a single wire leading therefrom to the waist-bar, as in my above-mentioned patent. So, also, the latch or latch-plate T might also  
105 be used in connection with the construction set forth in said patent.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 110

1. An apparatus for drafting the fronts of garments comprising the combination with a front-bar, a waist-bar and a bust-bar extending from said front-bar, a shoulder-bar and an arm-scyewire bar or wire having its lower end  
115 movably sustained, of a grooved slideway extending beneath the bust-bar, a sliding plate or block adjustably mounted within said grooved slideway and a connection pivotally united to said sliding plate or block at its upper end, and a sliding block pivotally united to the lower end of said connection and adjustable lengthwise of the waist-bar. 120

2. An apparatus for drafting the fronts of garments comprising the combination with a front-bar, a waist-bar and a bust-bar extending from said front-bar, of a connection leading upward from said waist-bar, the upper end of said connection comprising two adjustable wires mounted upon a single pivotal support and the lower part of said connection comprising two double tubes extending in line with said wires and into which said wires  
125 telescopically fit, the lower ends of said tubes 130



being connected to a single pivotal support and being adjustably mounted with respect to said waist-bar.

3. In apparatus for drafting the fronts of  
5 garments, the combination with the front-bar, the waist-bar and the dart-bar and adjustable dart-wires, and with a connection leading upward from the waist-bar and adjustably at-  
10 lower end of said connection may be united with the adjoining dart-wire, said latch being arranged to swing upward into line with said connection and downward to lock said con-  
15 nection with the adjacent dart-wire.

4. In apparatus for drafting the fronts of

garments, the combination with the front-bar, the waist-bar and the dart-bar and adjustable dart-wires, and with a connection leading upward from the waist-bar and adjustable lengthwise thereof, of a suitable latch where- 20  
by the lower end of said connection may be united with the adjoining dart-wire, said latch being provided with a series of teeth or notches whereby it may be adjustably con- 25  
nected with the dart-wire and being arranged to swing upward in line with said connection.

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