(No Model.) 2 Sheets—Sheet 1.

H. HORN.

ADJUSTABLE PATTERN FOR DRAFTING GARMENTS.

No. 490,022. Patented Jan. 17, 1893.

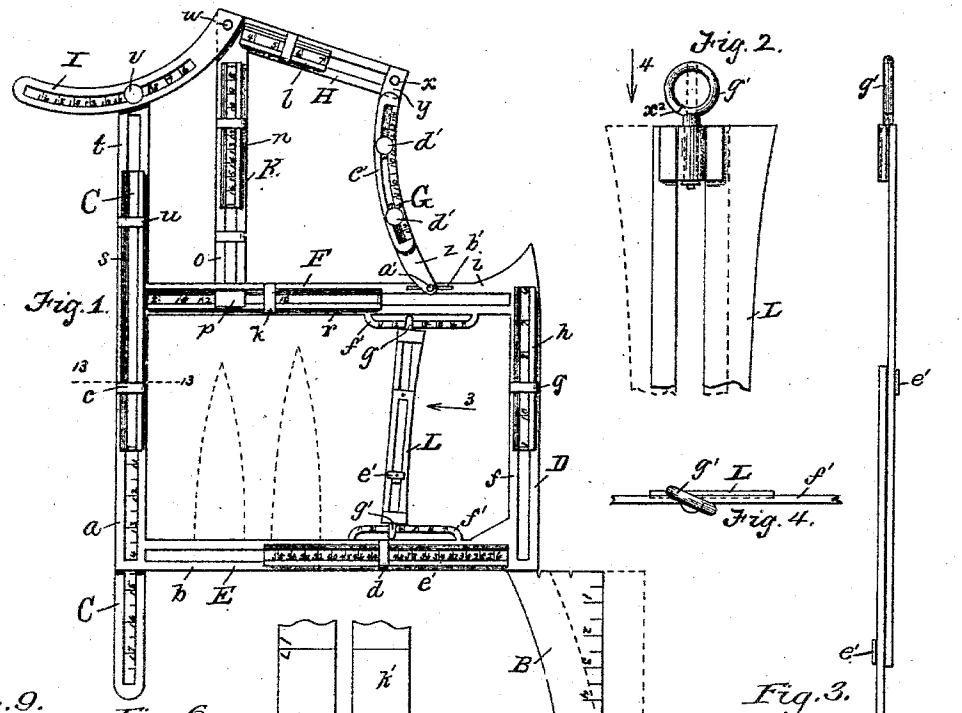

Fig. 1.

Fig. 2.

Fig. 4.

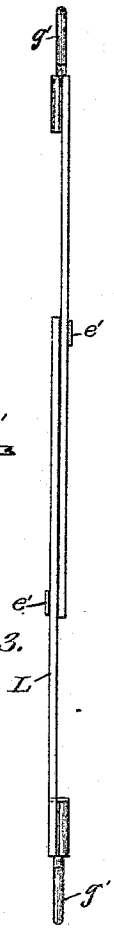

Fig. 3.

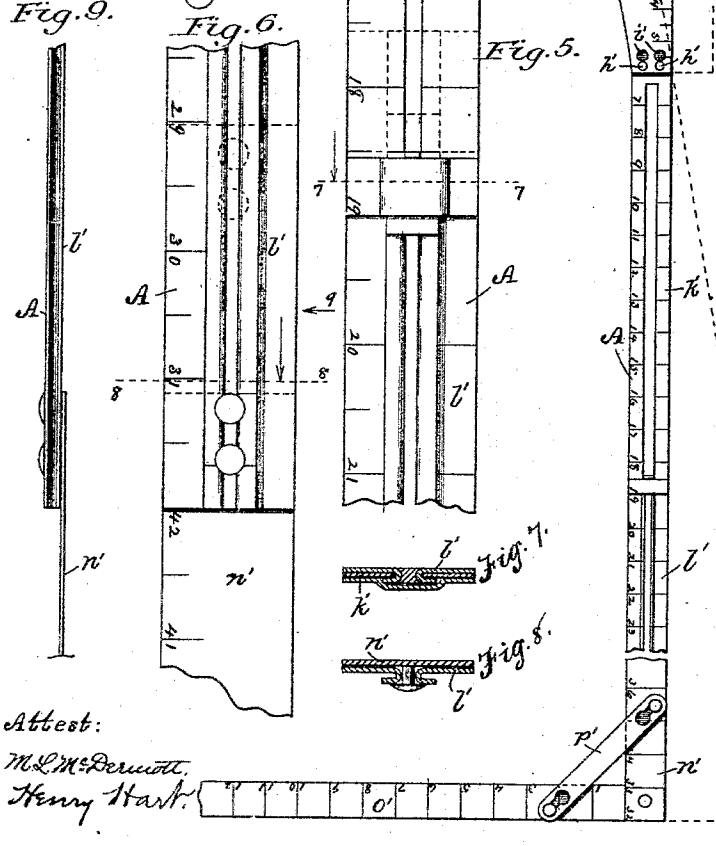

Fig. 9.

Fig. 6.

Fig. 5.

Fig. 7.

Fig. 8.

Attest:
M. L. McDermott.
Henry Hart.

Inventor:
Henrietta Horn,
By E. B. Whitmore, Atty.

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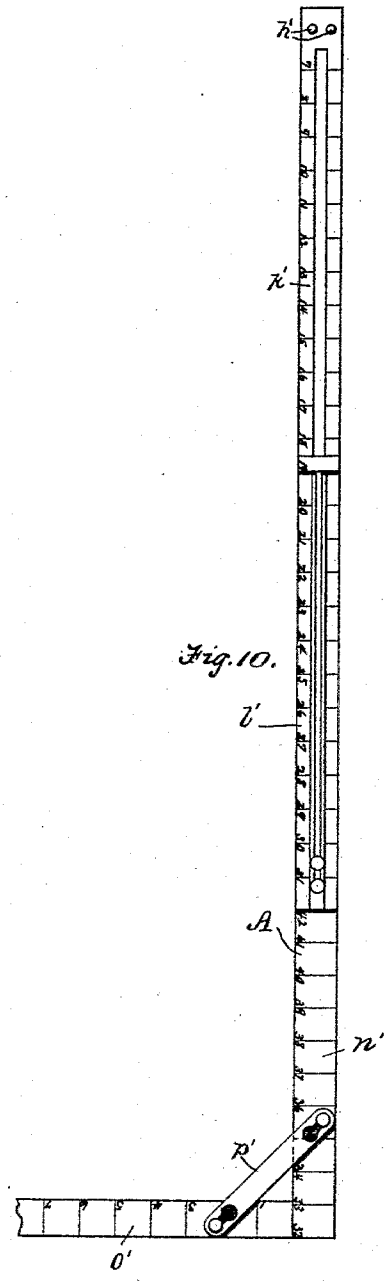

Fig. 10.

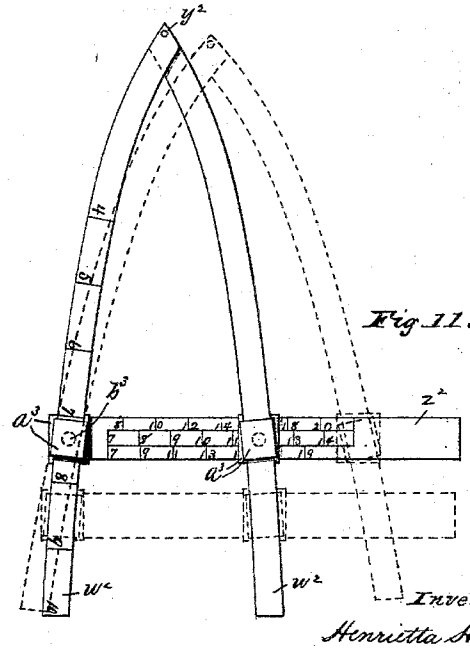

Fig. 11.

Attest:
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Henry Hart.

Inventor:
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By E. B. Whitmore, Atty

UNITED STATES PATENT OFFICE.

HENRIETTA HORN, OF NEWARK, NEW YORK, ASSIGNOR OF ONE-HALF TO GEORGE A. HORN, OF SAME PLACE.

ADJUSTABLE PATTERN FOR DRAFTING GARMENTS.

SPECIFICATION forming part of Letters Patent No. 490,022, dated January 17, 1893.

Application filed July 5, 1892. Serial No. 439,034. (No model.)

To all whom it may concern:

Be it known that I, HENRIETTA HORN, of Newark, in the county of Wayne and State of New York, have invented a new and useful Improvement in Adjustable Patterns for Drafting Garments, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

In cutting the cloth to be made into ladies' and children's dresses and other garments it is desirable to have adjustable metallic marking patterns with which to lay out the work. Such marking patterns have been heretofore produced, but in the ever changing styles and make-up of garments new requirements are made upon these patterns, and it frequently occurs that as constructed, they are not capable of meeting such new demands and requirements. On account of this the usefulness of these patterns is reduced and they do not answer the full purpose for which they were intended; and when they are employed considerable extra work is rendered necessary in making measurements and calculations to enable the dressmaker to mark out the cloth for the garments intended to be made. For example, the dress now and heretofore usually worn by ladies consists of a waist portion and a skirt, cut and made separately and joined at the waist or worn disconnected, as the case may be. But dresses called "princess" are more or less worn, in which the main pieces of cloth forming them extend from the neck to the bottom of the skirt in single pieces.

My invention consists in a new and novel construction of metallic adjustable marking patterns, and one of the main objects of the invention is to produce a marking pattern having its parts so constructed and related that it will enable the dress maker to accurately mark out the cloth making the Princess dress as well as dresses and garments heretofore more commonly worn. And the object of the invention is further to produce a set of adjustable marking patterns so constructed and arranged that their parts may be set to the measurements taken and the cloth directly marked out without need of additional calculations and computations, which are troublesome and consume time.

The invention is hereinafter fully described and particularly pointed out in the claims.

Referring to the drawings Figure 1 shows the pattern for the front and the under-arm pieces and hip curved piece and skirt rule. Fig. 2 shows the upper end of the adjustable under-arm bar, shown reversed in dotted lines. Fig. 3 is an edge view of the under-arm bar seen as indicated by arrow 3 in Fig. 1. Fig. 4 is an end view of the adjustable under-arm bar with rigid loop-bar, seen as indicated by arrow 4 in Fig. 2. Fig. 5 shows the joined ends of two sections of the skirt rule. Fig. 6 shows another joint of the skirt rule. Fig. 7 is a cross section taken on the dotted line 7 7 in Fig. 5. Fig. 8 is a cross section taken on the dotted line 8 8, Fig. 6. Fig. 9 is an edge view of parts shown in Fig. 6, seen as indicated by arrow 9. Fig. 10 shows more completely the construction of the skirt rule; and Fig. 11 shows the dart rule. Figs. 1 and 10 are drawn to the same scale. Figs. 2 to 9 inclusive are drawn to a scale four times as large as the scale of Figs. 1 and 10, and Fig. 11 is drawn to a scale one-half the full working size of the parts.

Referring to the parts shown, the pattern for the front and under-arm piece, Fig. 1, consists in part of a parallelogrammatic or rectangular frame composed of the front bar C, the back bar D, the waist bar E and the bust bar F. To this frame are attached the arm-eye G, the shoulder bar H, the neck bar I and the vertical arm-eye bar K, said parts G H and I together with the bars F and C forming a pentagon crossed by the bar K. L is a reversible adjustable under-arm bar attached at its ends to the bust bar and the waist bar respectively. These various parts are formed in pieces adapted to slide upon each other so that the pattern may be expanded or contracted to sizes ranging from those of large persons to children. Thus constructed the frame retains its rectangular form at all times whether contracted or expanded. The bar K always remains perpendicular to the bust bar F and parallel with the front bar C—it simply moves toward or from the front bar and lengthens or shortens as the pattern, as a whole, is expanded or contracted.

In the construction shown in Fig. 1 the corners of the frame are each formed of a rigid right-angle piece, the branches of which four pieces overlapping at their ends form the bars C, E, D F, above mentioned. That is to say, the slotted part *a*, coinciding with the front bar and the slotted part *b*, of the waist bar are in one piece and rigid, the cross bands or ties *c d* being also rigid with the respective branches *a b*. The slide *e* of the waist bar and the vertical slotted part *f* of the back bar are in a single piece and rigid, the tie or band *g* being rigid with *f*. The vertical slide *h* of the bar D is in one piece and rigid with the horizontal slotted part *i*, of the bust bar, the tie *k* being rigid with said slotted part *i*. The slide *r* of the bust bar is rigid with the front bar, the latter being formed with a slide *s*. The slide *l* of the shoulder bar is in one piece and rigid with the slide *n* of the bar K, and the slotted part *o* of the bar K is provided with a head *p* adapted to move horizontally in the slide *r* of the bust bar. A slotted part *t* connects the front bar C and the slotted curved neck bar I, said slotted part being provided with a cross tie *u*. In adjusting the pattern by expanding or contracting it the piece *t* moves vertically upon the bar C, and at its upper end it is provided with a rigid stud *v* which slides along the curved slot in the neck bar I. The bar I is pivoted, at *w*, to the angle-piece *n* of the arm-eye bar so as to turn thereon. At *x* a curved piece *y* is pivoted to the shoulder bar, which piece constitutes a part of the arm-eye G.

z is a piece similar to the piece *y*, forming a part of G, provided with a pin *a'* held to slide horizontally in a slot *b'* in the bust bar. The parts *y* and *z* extend toward each other but do not meet, the space between them being covered by a curved slotted bar *c'* held to said parts *y* and *z* by friction studs *d'*. When the pattern is adjusted as to size these studs slide in the slot of the piece *c'*.

The shiftable bar L consists of two slotted pieces overlapping each other at their ends, clearly shown in Figs. 1 and 3. These parts are joined by friction clips *e' e'*, one being rigid with each piece and passing through the slot in the other. The bars F and E are formed with extended or offset loop bars *f' f'*, the bar L being provided with swivel holders *g' g'* to encircle and move along said loop bars. The holders may be divided, as at x^2, to pass over the respective loop bars as a matter of convenience, and being swiveled in the ends of the bar L the latter is capable of being turned upon its axis so as to reverse its edges, as indicated in Fig. 2.

The sliding parts of the pattern shown in Fig. 1, all move upon each other with friction and no rigid fasteners are employed.

By constructing the pattern with the rectangular part and the pentagonal part, as shown and described, I am enabled to mark the bust scale upon the waist bar and have the bust bar for marking the scale for neck measure upon. This is a great advantage for it gives a much better and more convenient arrangement of the various scales of the pattern.

As a further advantage in this construction of pattern and further improvement, I form the scale for the arm-eye measures upon the straight vertical bar K instead of upon the arm-eye G. Figures may be made on the curved arm-eye G, as shown, if in any case found desirable, but I prefer to usually make this part without a scale or figures.

The dart or dart scale, shown at Fig. 11, consists of two flat curved strips or sides w^2 w^2 of metal or other material, joined to form a point and held together by a rivet y^2, at the apex. These strips are further connected by a cross bar z^2 movably connected with both, the parts being joined by swivel-sliding clips a^3 a^3. Each clip is composed of two pieces one clasping a side w^2 of the dart and the other clasping the cross bar. The two parts of each clip are connected by a swivel pin, b^3, so that the sides w^2 w^2 may be swung toward or from each other as well as slipped longitudinally through the clips. A scale of equal parts is formed both on a side w^2 of the dart and on the cross bar z^2, as shown. This dart is used upon the waist bar E of the pattern, as indicated by dotted lines in Fig. 1.

The skirt rule A is employed when marking the cloth for the skirt of a dress or for the "princess." The skirt rule is connected with the hip-curve piece B by headed studs *h' h'* rigid with the skirt rule and passed through key-hole openings *i' i'*, in the hip-curve piece. This latter piece is six inches in vertical length and three inches in width at the top, with a curve at the left side, as shown. In using the hip-curve piece with the skirt rule its upper end is placed to coincide with the lower line of the waist bar, the skirt rule extending vertically downward from the hip-curve piece, as shown in Fig. 1. The skirt rule is preferably made in three vertical sections, *k' l'* and *n'*, fitted to slide upon each other so that the rule as a whole may be extended or contracted according to the length of the skirt. The hip-curve piece, as has been stated, is six inches in length and divided into inches numbered downward, which numbers continue consecutively upon the sections *k'* and *l'*, the latter finishing with thirty two inches. The lower section *n'* is numbered in reverse order or upward, as shown in Fig. 10, and the reading for the length of the skirt is taken at the lower end of section *l'*. The skirt rule has a horizontal arm *o'* pivoted to the lower end of section *n'* and held at right-angles thereto by a removable tie *p'*. The arm *o'* is preferably one-half yard in length and divided into inches and numbered as shown.

The parallelogrammatic form given the pattern for the front, shown in Fig. 1, enables me to use "square measure," and apply the exact measurements taken with a tape or

square. And the devices constructed as shown enable the operator to set the patterns directly from measurements taken of the form to be fitted and to work directly therefrom without having to make additional computations or calculations usually necessary in employing similar devices.

What I claim as my invention, is:—

1. An adjustable pattern for drafting the front and the under-arm piece of a dress, comprising a square frame formed with four right angle pieces one at each corner, the angles of said pieces being rigid, and the arms or branches overlapping each other and formed to slide longitudinally upon each other, two opposite parts of the frame being formed with opposite inwardly projecting loop bars, in combination with a bar held by said loop bars, substantially as shown and described.

2. A pattern for drafting the front and the under arm piece of a dress, consisting of four right angle pieces overlapping at their ends to form a rectangular frame and adapted to slide longitudinally upon each other, the opposite arms of two of said contiguous right angle pieces being formed with inwardly projecting loop bars, in combination with an adjustable under-arm bar held by said loop bars, said under-arm bar being in two pieces adapted to slide longitudinally upon each other and held together by friction clasps or buttons, substantially as shown and described.

3. A pattern for drafting the front and the under-arm piece of a dress, consisting of four right angle pieces overlapping at their ends to form a parallelogrammatic frame and adapted to slide longitudinally upon each other, the opposite arms of two of said contiguous right angle pieces being formed with inwardly projecting loop bars, in combination with an adjustable under-arm bar held by said loop bars and provided at its ends with swivel holders to pass over said loop bars so that the under-arm bar may be turned upon its axis, substantially as and for the purpose specified.

4. An adjustable pattern for drafting the front of a dress or similar garment, consisting in part of a pentagon formed of the bust bar, the neck bar, the shoulder bar and the arm-eye, in combination with an arm-eye bar crossing the pentagon parallel with the front bar, with its foot resting in a slot in the bust bar and adapted to slide therein toward or from the front bar, the upper end of said arm-eye bar being bent to an acute angle to form a part of the shoulder bar, substantially as shown and described.

5. An adjustable pattern for drafting the front of a dress or similar garment, consisting in part of a pentagon formed of the bust bar, the front bar, the neck bar, the shoulder bar and the arm-eye, in combination with an arm-eye bar within the pentagon parallel with the front bar, the arm-eye being circular and made up of a part y pivoted to the shoulder bar, a part z held to move in a slot in the bust bar and a slotted part c' lapping across the free ends of said parts y and z, and friction studs rigid in said parts y and z and passing through the slot in said part c', with heads to hold said part c', substantially as shown.

6. In combination with the adjustable pattern for drafting the front and the under-arm piece of a dress, a hip-curve piece, and a skirt rule joined to said hip-curve piece for drafting the skirt of a dress, said skirt rule being longitudinally contractible and expansible and formed with an arm at right angles to the main part, substantially as shown.

In witness whereof I have hereunto set my hand, this 10th day of June, 1892, in the presence of two subscribing witnesses.

HENRIETTA HORN.

Witnesses:
ENOS B. WHITMORE,
M. L. MCDERMOTT.