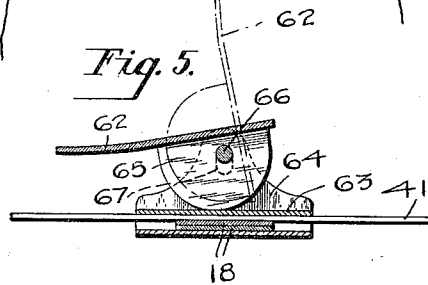
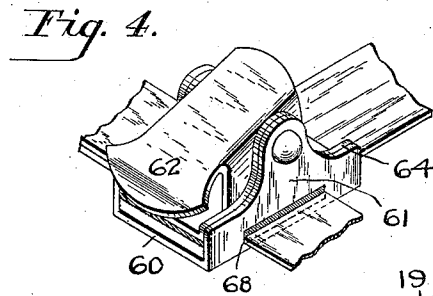
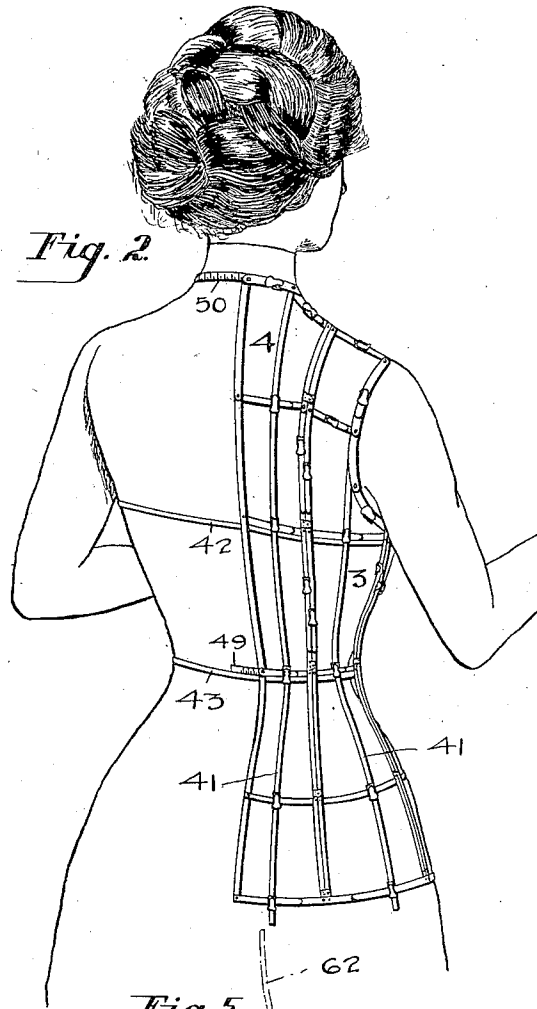
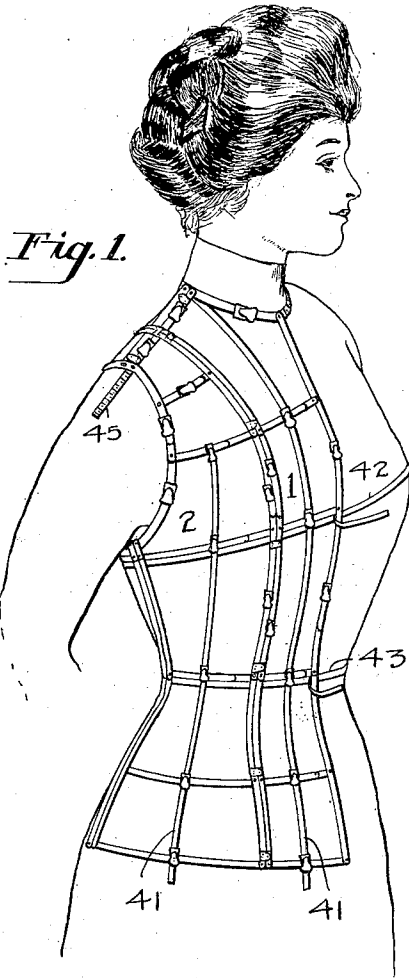


A. ROGATI & L. MONTILLI.
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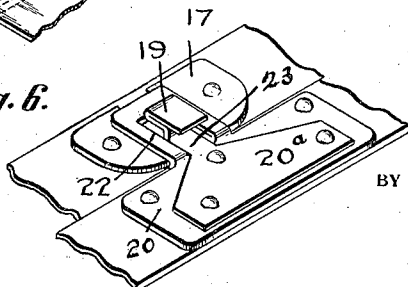
1,045,440.

Patented Nov. 26, 1912.

2 SHEETS—SHEET 1.



WITNESSES
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John C. Kopp



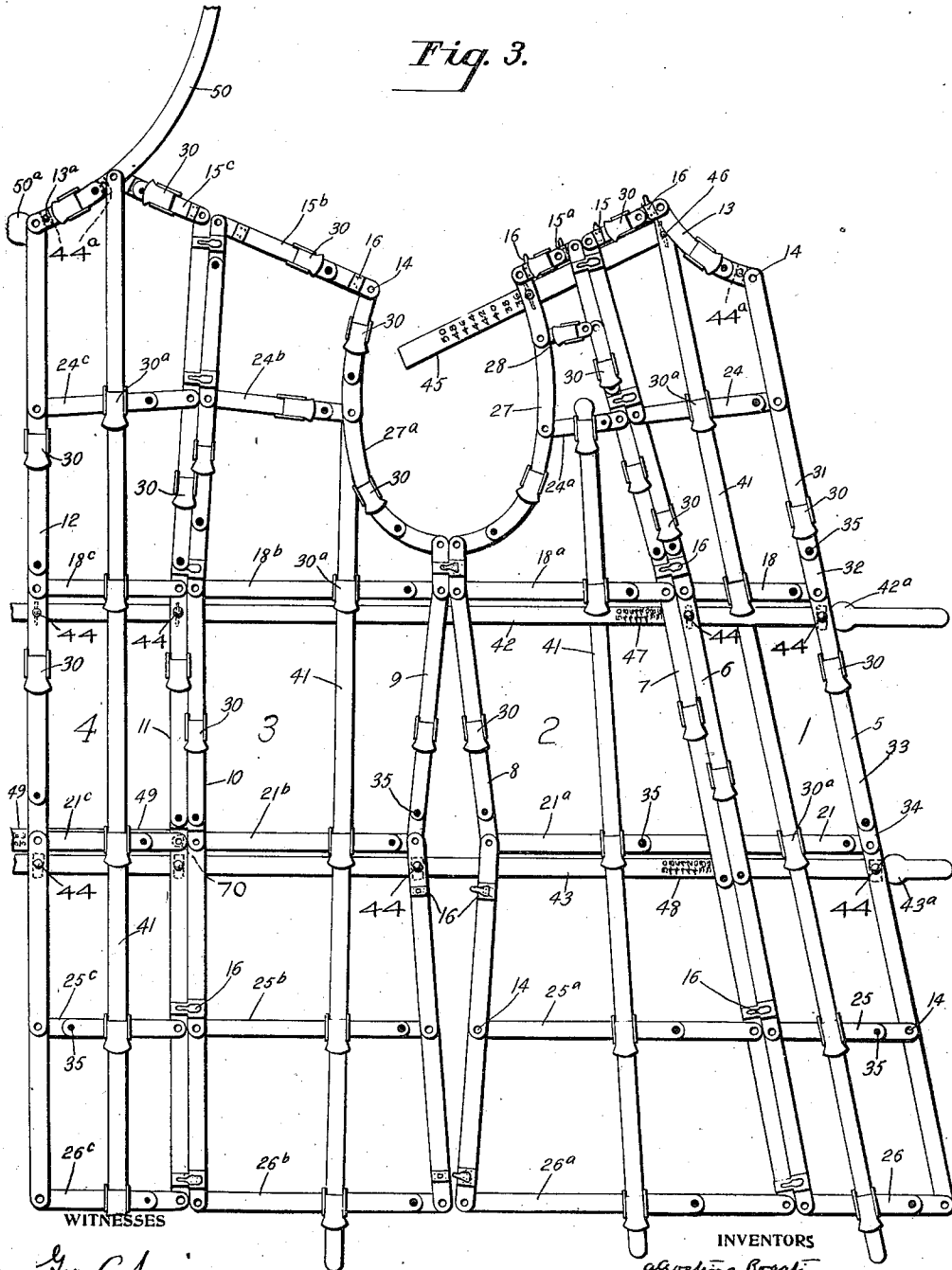
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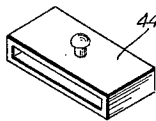
Patented Nov. 26, 1912.

2 SHEETS—SHEET 2.



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Fig. 7.



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AGOSTINO ROGATI AND LEONARDO MONTILLI, OF NEW YORK, N. Y.

DRESSMAKER'S MEASURING APPARATUS.

1,045,440.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed May 11, 1912. Serial No. 696,564.

To all whom it may concern:

Be it known that we, AGOSTINO ROGATI and LEONARDO MONTILLI, subjects of the Kingdom of Italy, residing at New York city, county of New York, in the State of New York, have invented a new and useful Improvement in Dressmakers' Measuring Apparatus, of which the following is a specification.

This invention relates to a tailor's or dressmaker's apparatus whereby the results of the usual measuring operations are attained in a more direct and reliable manner. It may be called a pattern harness since it is a skeleton structure to be adjusted to the person so as to afford a pattern or patterns from which the pieces of the garment may be cut.

The object is to provide an apparatus of this character which is simple in construction and adapted for quick and convenient use.

In the accompanying drawings illustrating the invention: Figure 1 is a front perspective showing the apparatus applied to the person; Fig. 2 is a similar view looking at the back; Fig. 3 is a view of the harness sections spread out and partly connected together, no attempt being made to show the members at any harmonious adjustment; Fig. 4 is a perspective view of a clamp connection shown in holding position, with portions of tapes therein; Fig. 5 is a longitudinal section through the same; Fig. 6 is a perspective view of a form of separable connection; and Fig. 7 is a perspective view of a keeper, these keepers being on the undersides in Figs. 1, 2 and 3, but being represented in Fig. 3 by the studs which secure them.

The harness is shown as corresponding to half of a garment, in particular a woman's coat. It is unnecessary to have a complementary half-harness, because the pieces for the other half of the garment are merely reversed.

The apparatus consists of a plurality of sections corresponding to the garment to be made. It is shown as comprising four sections 1, 2, 3, 4, corresponding, respectively, to the front piece, side front piece, side back piece and back piece of a woman's coat. If the coat is to have no center back seam, section 4 represents half of the back panel of the coat, the other half being merely the reverse of it.

Each section is of skeleton form and is adjustable, consisting of tapes of comparatively stiff though flexible material, preferably fairly heavy celluloid. In general, the sections have vertical margin or side members, which are extensible and contractible, and transverse members which may be adjusted up and down and adjustably connect the vertical members at different heights.

Section 1 comprises the vertical members 5 and 6, a neck member 13, connected by a rivet 14 to the upper end of the member 5, a transverse shoulder member 15 riveted at its opposite ends to the end of the neck member 13 and the upper end of the vertical member 6, a transverse bust member 18 riveted at its ends to the vertical members 5 and 6, a transverse waist member 21 riveted at its ends to said vertical members and other transverse members 24, 25 and 26, riveted at their ends to the members 5 and 6. In like manner section 2 comprises vertical members 7 and 8, shoulder member 15^a, an arm member 27, transverse bust and waist members 18^a and 21^a, and other transverse members 24^a, 25^a, 26^a and 28. Section 3 comprises vertical members 9 and 10, shoulder member 15^b, arm member 27^a, transverse bust and waist members 18^b and 21^b, and other transverse members 24^b, 25^b and 26^b. Section 4 comprises vertical members 11 and 12, shoulder member 15^c, neck member 13^a, transverse bust and waist members 18^c and 21^c, and other transverse members 24^c, 25^c and 26^c.

The vertical members 5, 6, 7, 8, 9, 10, 11 and 12 are extensible, comprising longitudinally overlapping, relatively slidable tapes, guided and locked by clamp lever connections 30. Thus member 5 has longitudinally overlapping tapes 31 and 32, which may be slid on each other to vary the distance between the transverse members 18 and 24, and other longitudinally overlapping tapes 33 and 34 enabling the distance between the transverse members 18 and 21 to be varied. Similar overlapping tapes for similar adjustments are found in the other vertical members, the tapes being clamped together at any desired adjustment by similar clamps 30. Wherever a tape end might be in danger of pulling through the clamp connection it is provided with a suitable stop or projection 35, all such stops being shown black for purpose of ready identification.

The neck members 13, 13^a, the arm mem-

bers 27, 27^a, and shoulder members 15, 15^a, 15^b, 15^c, comprise longitudinally overlapping tapes, so that these members can be lengthened and shortened to secure any desired adjustment, these tapes being clamped to lock the adjustment by means of similar clamps 30. The several transverse members 18, 18^a, 18^b, 18^c, 21, 21^a, 21^b, 21^c, 24, 24^a, 24^b, 24^c, 25, 25^a, 25^b, 25^c, 26, 26^a, 26^b, 26^c, 28, are also longitudinally adjustable, comprising longitudinally overlapping tapes capable of sliding on each other to lengthen and shorten these members, that is to say, to vary the transverse dimensions of the sections 1, 2, 3, 4, or the distances between the vertical members 5 and 6, 7 and 8, 9 and 10, 11 and 12. These adjustments may be locked by similar clamps 30^a.

Thus it will be seen that the transverse members may be adjusted up and down by longitudinally adjusting the vertical members, also the vertical members may be laterally shifted at different points by longitudinally adjusting the transverse members.

Wherever necessary pivot joints are provided. The pivots may be afforded by tubular rivets represented for convenience merely by a circle and designated 14 at some of their occurrences.

The sections are connected together by suitable separable fastenings indicated at 16. These connect the vertical members 6 and 7, 8 and 9, 10 and 11, also the shoulder members 15 and 15^c, 15^a and 15^b. The form of these connections may be varied. As shown in Fig. 6 the preferred form comprises a plate 17 having a stud 19 struck up and bent from it and a plate 20 having an opening 22. A plate 20^a is secured to the plate 20 and has a spring tongue extension 23 which projects into the opening 22 and acts as a yielding retainer.

Intermediate extensible vertical members 5 and 6, 7 and 8, 9 and 10, 11 and 12, of the several sections, are continuous vertical tapes 41, which are anchored or secured to the upper parts of the sections. The transverse members 18, 21, 24, 25, 26, 28, 18^a, 21^a, 24^a, 25^a, 26^a, 18^b, 21^b, 24^b, 25^b, 26^b, 18^c, 21^c, 24^c, 25^c, 26^c, are adjustable up and down on these continuous tapes 41 and may be locked thereto at any desired adjustment by the clamps 30^a. These continuous tapes 41 afford convenient guides for facilitating the up and down adjustment of the transverse members. They also serve to hold the sections 1, 2, 3, 4 against skewing or turning at the pivot joints when removed from the person, because the transverse members are then clamped firmly to these continuous tapes.

The preferred construction of the clamps 30^a is shown in Figs. 4 and 5. It comprises a body part having a bottom wall 60 and side walls 61, and a cam lever 62 pivotally

supported by said side walls. A follower plate 63 with upstanding side members 64 is received between the side walls 61. The lever 62 is preferably of sheet metal, having down-turned cam-shaped ears 65 which are received inside the side members 64. A pivot pin 66 passes through the side walls 61, side members 64 and ears 65, and has clearance in the side members of the follower plate by virtue of slots 67 therein. The ears 65 act upon the follower and clamp the tapes between the latter and the bottom wall 60. The tape 41 is received between the side walls 61. The tapes of the transverse member, for example 18, pass in overlapping relation through guide passages 68 in the side walls 61. Thus passages for crossing tapes are provided at right angles to each other. The clamps 30 may be of identical construction, or one of the passages, as 68, may be omitted as unnecessary. It will be perceived that the clamping connections afford guides for the side edges of the longitudinally overlapping tapes, so that these parts cannot skew on each other, but are confined to relative longitudinal movement.

Continuous body encircling tapes 42, 43 are guided on the sections in juxtaposition to the bust and waist members 18, 21, 18^a, 21^a, 18^b, 21^b, 18^c, 21^c, and afford means for drawing the various members into proper positions against the body. Suitable means for guiding these tapes 42, 43 is represented by keepers 44 mounted on the vertical members 5, 6, 11, 12 immediately adjacent the transverse bust and waist members. They may have heads or suitable stops 42^a, 43^a at one end, which abut against the keepers on the vertical member 5. After passing around the body their ends may be passed under the keepers or made fast in any other way.

A similar neck encircling tape 50 may be associated with the neck members 13, 13^a. It is shown slidable in keepers 44^a, with a stop end 50^a which abuts against the keeper at the back end of the collar member 13^a. This collar tape 50 assists the body encircling tapes, 42, 43 in holding the harness in position on the person. At front and back the neck tape 50 may be provided with graduations numbered in accordance with collar sizes. Thus, the neck members 13, 13^a may be adjusted in accordance with a neck measurement previously taken. The tapes 42, 43 and 50 are removable by sliding them out of their keepers.

It will be understood, of course, that the tapes 41, 42, 43, 50 need not necessarily be in one piece. They are not extensible members, and it is important that the tapes 41 have no pivot joints.

The center line of the vertical members 6, 7 represents the bust seam, the members 8, 13

9 establish the position of the under-arm seam, and the members 10, 11 the back seam. The member 12 establishes the center back seam, if there is to be one, and the member 5 represents the front edge of the garment. The shoulder members 15, 15^a, 15^b, 15^c establish the shoulder seam.

shifting the members 10, 11 to the right or left. All of these gages are proportionately graduated, that is to say, their graduations are in such proportion that the several fixed adjustments will bear predetermined relations to the bust measurement. The graduations of all the gages have identical size designations.

In use the sections of the harness are connected together by the fastenings 16 and placed on the person, the various members then being adjusted to produce a skeleton pattern or mold of the figure. All of the adjustments may be made by the aid of the eye alone, but preferably certain of the transverse adjustments are ascertained by a controlling measurement. These adjustments may be termed fixed adjustments. They are adjustments which should bear a predetermined relation to the bust measurement of the person in order to insure beauty of lines. Thus, the bust and back seam members 6, 7 and 10, 11 should have certain ideal or arbitrary positions or curves determined by the bust measurement, and adjustments to meet the peculiarities of the figure should be made without disturbing these positions. To this end gages bearing proportionate graduations with similar size designations are associated with certain of the transverse members. Thus, a gage strip 45 is associated with the shoulder members 15, 15^a, being secured at 46 adjacent the outer end of the shoulder member 15, and bearing numbered graduations corresponding to different bust measurements, so that the length of the shoulder members 15, 15^a may be set accordingly, by loosening their clamps 30 and lengthening or shortening them, as the case may be, after which the clamps are set again. It will be obvious that the shoulder members 15^b, 15^c will be adjusted just like the members 15, 15^a. Portions of the body encircling tapes 42, 43 constitute gages 47, 48 by virtue of graduations and size designations thereon. These gages enable the transverse distances between the vertical members 5, 6 to be fixed at the bust and waist-lines in accordance with the bust measurement. In other words they determine the lateral adjustment of the members 6, 7, which establish the bust seam, at these two points, thereby fixing the curve of this seam. The clamps 30^a of the bust and waist members 18 and 21 of section 1 are loosened, as also the clamps 30 of the bust and waist members 18^a and 21^a of the section 2, and the vertical members 6, 7 are shifted to right or left at the bust and waist lines to the proper positions indicated by the graduations on the gages 47, 48. Then these clamps are set. In like manner the transverse distance between the vertical members 11, 12 of section 4, at the waist-line, is fixed by a gage strip 49 secured at one end as at 70. In this way the point where the back seam crosses the waist-line is determined by

In operation the bust measurement is taken by means of a tape measure. The sections of the harness are connected together, and placed on the person. The fixed adjustments by means of the gages 45, 47, 48 may be made either before or after the harness is placed on the individual, the body and neck encircling tapes 42, 43, 50 are passed around the body and hold the harness in place. The transverse members, 18, 21, 24, 25, 26, 18^a, 21^a, 24^a, 25^a, 26^a, 18^b, 21^b, 24^b, 25^b, 26^b, 18^c, 21^c, 24^c, 25^c, 26^c, are raised or lowered as may be necessary at the several points where they cross the continuous vertical tapes 41. All of the clamps may be instantly opened or closed by simply throwing the lever, which acts as a visual indicator showing whether the clamp is open or closed. Inasmuch as there are a considerable number of clamps all of which must remain closed in order to preserve the adjustments, this kind of holding means is of the greatest importance. After all the adjustments have been made and set, the harness is removed from the person and the sections 1, 2, 3, 4 are separated. They then constitute patterns from which the pieces of the garment may be cut, or paper or other patterns may be made from them.

When the clamp is opened its lever is held in the more or less upright position indicated by dotted lines in Fig. 5, there being sufficient friction for the purpose. In this way an upward or outward projecting lever constitutes a warning that the adjustment controlled thereby has not been set.

What we claim as new is:

1. A tailor's pattern harness comprising separate sections corresponding in skeleton to the pieces of the garment to be made and having means for connecting and disconnecting them, said sections being formed of tapes of comparatively stiff though flexible material, each section comprising extensible vertical members, formed of longitudinally overlapping tapes with guides to keep them from turning on each other and means for clamping them at any adjustment, and transverse members with clamping means connecting said vertical members at different heights and adjustable horizontally to vary the distances between the vertical members at the several heights, in combination with continuous vertical tapes intermediate said extensible vertical members in the several sections, being anchored at their upper ends to the upper parts of the sections, and

means for clamping the crossing portions of said transverse members at any vertical adjustment on said continuous tapes, whereby when the last-named clamping means are loosened the said transverse members may be readily shifted up and down on the said continuous tapes.

2. A tailor's pattern harness comprising separate sections corresponding in skeleton to the pieces of the garment to be made and having means for connecting and disconnecting them, said sections being formed of tapes of comparatively stiff though flexible material, each section comprising vertical members and extensible transverse members which are adjustable up and down and connect said vertical members at different heights, said transverse members being formed of overlapping tapes slidably connected with each other, and clamps for securing said members at any desired adjustment up and down or horizontally, in combination with continuous body encircling tapes guided on the sections in proximity to said transverse members and adapted to draw said members against the body by shortening the extensible transverse members when said clamps are loosened.

3. A tailor's pattern harness comprising separate sections corresponding in skeleton to the pieces of the garment to be made and having means for connecting and disconnecting them, said sections being formed of tapes of comparatively stiff though flexible material, each section comprising vertical members and transverse members which are adjustable up and down and adjustably connect said vertical members at different heights, with clamps for securing said members at any desired adjustment up and down or sidewise, in combination with continuous neck and body encircling tapes in juxtaposition to certain of said transverse members and adapted to hold the harness on and to conform it to the person, and keepers on said sections in which said encircling tapes are guided, said encircling tapes being in addition to the pattern-forming tapes and being removable from said keepers without disturbing the pattern.

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In presence of—
MAURICE HOTCHNER,
G. H. EMPSEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."