METHOD OF PRODUCING A SLEEVE PATTERN

Fig. 7

Fig. 8

Elbow Line

Elbow Line

Fig. 9

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ABSTRACT OF THE DISCLOSURE

The invention concerns the method or process for making sleeve patterns or blocks for cutting and fitting sleeves for garments, and it involves a novel concept in sleeve design for all types of garments in all sizes based upon the well known principle of using a standard pattern or block for such purposes.

The conventional sleeve pattern has a curvilinear end portion by which the sleeve is formed to join the armhole of the garment, a substantial part of such end portion being occurring on arms below the shoulder which overlies the upper arm muscles near the shoulder. The standard or conventional sleeve pattern also has certain indiscernible thereon by which the elbow line is determined. These patterns are provided in several sizes to accommodate the individual requirements, and all have the same geometrical outline and guide markings.

The invention involves the use of the standard sleeve pattern as a base for its concept which consists in increasing the lateral marginal edges of the pattern, measured from the elbow line to the curvilinear end thereof, and at the same time, and by the same process, extending the width of the arm portion beyond that of the standard pattern whereby greater width is afforded over the shoulder and length at the armpit without changing the linear dimension of the contoured end of the standard pattern.

As will become apparent certain body measurements have been established by which the advantages provided by the invention are manifested, and by which a novel sleeve pattern can be provided.

Objects and purposes

This invention relates to garment construction and it has particular reference to an improved method for correctly and scientifically measuring and making the sleeves of garments worn by both sexes of all ages, including coats, jackets, shirts, blouses, dresses, uniforms, house coats, and the like, whereby to prevent the tension and pull of conventionally designed sleeves which cause discomfort to the wearer and often present an unattractive appearance.

Standard sleeve blocks, as used in the garment industry, do not normally provide, however, the necessary “ease” in sleeve construction to prevent “pull” which ordinarily occurs when the wearer raises his arms, or to alleviate the bind occurring on arms below the shoulder where the sleeve is sewn into the garment. The invention is designed to augment the advantages provided by the existing sleeve blocks and to improve the techniques in the production of the sleeve portions where they are sewn into the garment which eliminates binding and tension whereby greater comfort and appearance can be substantially enhanced.

The invention is primarily concerned with an improved method of insuring uniform measurements with respect to arm lengths and sleeve circumference at the elbow, and at other areas, such as in the cap portion of the sleeve about the shoulder, to provide the necessary fullness for freedom of movement without binding and detracting from the appearance of the garment.

A prime object of the invention resides in the provision of a method of producing sleeve patterns or blocks whereby to cut the sleeves for all armholes for all sexes, young and old, including men’s coats and shirts, to augment and improve the conventional standard pattern measurements presently in commercial use so that more accurate measurements are achieved thus affording a comfortable sleeve, avoiding the tension and pull usually attendant upon sleeves formed by the use of standard sleeve blocks.

A further object of the invention is that of providing scientific means for locating the various strategic points on the body and arms where proper measurements must be taken in order to provide the most desirable fitting of the sleeve and its relation to the garment so as to minimize or eliminate tension or pull when the arms are raised, or extended, and without the addition of bulk due to the excessive use of material.

Yet another object of the invention is that of providing a sleeve structure which, when sewn into the body portion of the garment, presents a neat appearance and insures to the wearer freedom of arm movements without the usual pull and tension which is experienced in all garments of conventional construction where the standard sleeve blocks are used.

While the foregoing objects are paramount, other and lesser objects will become apparent as the description proceeds when considered in connection with the appended drawings wherein:

FIGURE 1 is a diagrammatic illustration of the right side of the body, as viewed from the front, showing the locations of the points on the right arm at which measurements of the sleeve are taken in accordance with the invention.

FIGURE 2 is a diagrammatic rear view of the body and right arm, as depicted in FIGURE 1, also indicating the points of measurement of the sleeve.

FIGURE 3 is a diagrammatic illustration of the right side of the body, showing the right arm extended, and indicating the points at which measurements are taken from the armhole seamline on the body along the under-side of the arm from the body to the elbow and then to the wrist.

FIGURE 4 is another diagrammatic front view illustration of the body and right arm, the latter being bent at the elbow, showing the points of measurements from the tip of the shoulder, around the elbow and to the wrist.

FIGURE 5 is still another diagrammatic front view of the body and right arm, the latter being bent at the elbow, showing the points of measurement about the shoulder.

FIGURE 6 shows a diagrammatic front view of the body and right arm, which is bent at the elbow, showing the points of measurement around the arm above the elbow, the elbow, below the elbow, and wrist.

FIGURE 7 diagrammatically illustrates a series of superimposed standard sleeve blocks as conventionally used each having the usual contoured end portion.

FIGURE 8 is a diagrammatic illustration of a sleeve pattern embodying the invention, showing the conventional pattern by the broken line.

FIGURE 9 diagrammatically illustrates, in solid lines, a men’s shirt sleeve pattern made in accordance with the invention, and, showing, in broken lines, a standard sleeve pattern or block superposed thereon, the spaced transverse lines near the top indicating the points of measurement shown in FIGURE 5, and

FIGURE 10 diagrammatically illustrates a conventional sleeve block for two piece coat sleeve blocks, the broken lines indicating the outline of the conventional sleeve and length line, and the solid line indicating the sleeve pattern embodying the invention.
One of the primary problems encountered in sleeve construction is that of providing inadequate measurements in the standard sleeve block or pattern wherein the inseam is generally too short and insufficient length is provided for the outside or cap portion of the sleeve from the top of the shoulder, or shoulder point to the wrist, or the point at which the cuff is sewn into the sleeve.

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A typical example is illustrated in FIGURE 7 in which is shown a plurality of standard sleeve blocks 10 in superposed arrangement, each conforming in outline to the other, the broken transverse line 11 indicating the point where the seam occurs in the completed sleeve at the bottom of the armhole in the garment into which the sleeve is sewn, the arcuate contour 12 at the top of each of the blocks 10 is indicative of the cap of the sleeve, or the point at which the sleeve is sewn into the upper portion of the armhole. The location of the elbow is indicated by the convergence of the lines 13 shown at the left in FIGURE 7.

FIGURE 8 graphically illustrates, in broken lines, a standard block or pattern 10 superposed upon a pattern or block 14, shown in solid lines, embodying the invention and in which the arcuate contour 15 of the upper sleeve about the shoulder is substantially higher than the extreme upper arc 12, shown in broken lines, which represents the point at which the standard sleeve is sewn into the garment. As will become apparent, the sleeve cap, when located in accordance with the invention, will occur well above the location indicated by the upper extremity of the element 12 of the standard block 10.

In determining the proper dimensions of the upper portion of the sleeve, as contemplated by the invention, reference is had to FIGURES 1 and 2 in which is diagrammatically shown, by a series of dots or indicia 16, 17, 18, 19, and 20, located at the base of the neck 21 and at the top of the shoulder 22 or the arm 23 where it joins the body 24, and then down over the upper arm, the indicia 18 being spaced at about three to five inches from the point 17, for men's garments, such as shirts, coats, and the like, and about one and one-half to two inches from the point 17 for women's, misses' and small children's garments. The indicia 18, 19, and 20 are spaced about one inch apart, or about two, three and four inches, respectively, from the point 17 at the tip of the shoulder.

Such measurements provide for an increase of up to five inches in the cap for men's and boy's sleeves, represented by the arcuate portion 15 in the sleeve pattern 14 shown in FIGURE 9, and three-quarters to one inch for women's, misses' and children's sleeves, as indicated in FIGURE 8. This increase in dimension from the tip of the shoulders provides for the width of the sleeve necessary to afford freedom of movement and the elimination of binding and tension usually experienced in the wearing of sleeves of conventional design and measurements.

FIGURES 1 through 6 illustrate the inventive concept of achieving the proper measurements to provide a sleeve structure which can be both comfortable to the wearer and attractive in appearance. It is desirable, in carrying out the invention, to locate and mark the points on the body and arms between which measurements are taken. Such points include the indicia 17 through 20, as shown in FIGURES 1, 2, 4, 5 and 6, and the underarm measurements shown in FIGURE 3. These include the indicia or dot 16, which occurs on the body 24 at the base of the neck 21, the dot or marking 17 at the tip of the shoulder 22, and the equi-distantly spaced markers or indicia 18, 19 and 20 spaced from the tip 17 of the shoulder and down over the upper portion of the arm 23.

The dimension of the cap portion of the sleeve, which encompasses the upper portion of the arm 23 just below the tip 17 of the shoulder, is determined by a series of measurements about the upper arm at equi-distant spacings indicated by the series of dots 25, 26 and 27 spaced downwardly over the shoulder on the front and rear of the body 24, as shown in FIGURES 1 and 2, the broken lines indicating the manner in which the measurements are taken above the armhole and which have their counterparts in the solid lines 28, 29 and 30 shown on the patterns 14 in FIGURES 8, 9 and 10. The tip 17 of the shoulder 22 has its counterpart in the pattern 14 at the upper extremity thereof, as in FIGURE 9.

In order to determine the dimension and proper location of the armhole for the sleeve it is necessary to utilize the indicia 25, 26 and 27, together with markers 31 located, on the front and back of the body 24 at the point where the arm 23 joins the latter, as shown in FIGURES 1 to 6, inclusive. A marker 32 is located on the body 24 approximately one and one-half inches below the marker 31, under the arm pit 23 at the front of the body 24, and about one inch below the marker 31 on the back of the body 24. The marker 31 has its counterpart at the line 31' of the pattern 14. These measurements outline the armhole for the sleeve, the marker 32 defining the medial line between the front and rear areas of the body 24.

The outside length of the sleeve is determined by a measurement between the indicia 17 at the tip of the shoulder 22 and a marker 33 at the tip of the elbow 34 while the inside length is determined by the measurement from the point 32, beneath the arm pit, to a marker 33 inside the elbow 34 opposite to the marker 33. The circumference of the sleeve is measured at approximately four inches above the elbow 34 about the upper arm at points 36 and 37 inside and outside of the arm 23, as shown by the broken line 38 in FIGURE 6, the dimension about the elbow 34 being taken along the broken line 39 between the indicia 33 and 35, as shown in FIGURE 6.

The inside length of the sleeve is measured from the bottom of the armhole, or the point designated 32 beneath the armpit, to the dot 33 at the elbow 34 and thence to the marker 41 on the inside of the wrist by the broken line 43 in FIGURE 3. The outside length of the sleeve is determined by a measurement from the marker 17 at the tip of the shoulder 22 about the tip of the elbow 34, indicated by the marker 33, and the indicia 44 at the wrist 42, as shown by the broken line 45 in FIGURE 4. Measurements about the forearm, to provide proper fit and comfort for the sleeve, are made between the markers 46 and 47 on each side of the forearm and shown connected by a broken line 48 in FIGURE 6. Wrist measurements are taken at the markers 41 and 44 and the broken line 49, as shown in FIGURE 6.

The detailed description of the method of locating the various sleeve measurements, as depicted in FIGURES 1 to 6, inclusive, is intended to afford an explanation as to how the conventional sleeve pattern 10 is improved to more accurately define a well-fitting and comfortable sleeve, and to illustrate the practical reasons for increasing the dimensions thereof.

In carrying out the steps of the method embodying the invention, a conventional sleeve block or pattern, as shown in FIGURE 7 as typical, is used as a base by which the measurements are established to locate the shoulder cap of the sleeve and the underarm portion joined to the garment.

As indicated in FIGURES 8 and 9, the lateral marginal edges of the improved pattern 14 are extended beyond those of the standard block 10 the distance between the transverse solid line 31' and the broken line 11, approximating one and one-half to two and one-half inches, and
the arcuate portion 17 of the curvilinear end portion of the pattern is extended approximately one-half to one inch, or the distance between the solid line 17 and the broken line 12, as indicated in FIGURE 8, measuring from the elbow line 51 along an imaginary mediate line dissecting the arcuate portion 17, and extending the lateral marginal edges of the pattern shown in FIGURE 9 the distance between the transverse solid line 31 and the broken line 11 from one and one-half to three inches, and the arcuate portion 17 of the curvilinear end portion of the pattern is extended from three to five inches, or the distance between the solid line 17 and the broken line 12. Both lateral edges of the pattern 14 are measured from the elbow line 51 to their termini at the solid line 31. This is accomplished without altering the circumferential dimension of the armhole of the garment into which the sleeve is sewn.

The added length of the sleeve, by reason of the extended cap portion 15 as measured from the elbow to the contoured end of the pattern, provides for adequate width over the shoulder at 18, 19 and 20, in FIGURES 1 to 6, but locating the seam by which the sleeve is attached to the garment in the same manner as exists in the conventional sleeve made in accordance with the standard sleeve block 10.

Referring again to FIGURES 8, 9 and 10, in each of the patterns or blocks 14 the transverse lines 50 and 51 indicate the elbow lines on the standard blocks 10 and the improved patterns 14, respectively. The sleeve plackets are indicated by the solid line 52 and the broken line 53, respectively, on the standard block 12 and the pattern 14.

One reason that men's conventional sleeves are so constructed is that length measurements are usually taken from the center of the back of the neck to the wrist, and such procedure is generally incompetent, resulting in an ill-fitting garment. The invention is designed to correct these deficiencies.

The invention, while described in substantial detail, is nevertheless capable of certain changes and modifications in means by which it may be practically applied without departing from the spirit and intent thereof or the scope of the appended claims.

What is claimed is:

1. The method of producing a pattern for cutting sleeves for garments, using as a base a standard sleeve pattern having a curvilinear end portion formed with an arcuate contour defining the cap portion of a sleeve at the juncture thereof to a garment, and having an elbow line indicated thereon, the steps comprising: extending the lateral marginal edges of the pattern in a range approximating one and one-half to two and one-half inches beyond the longitudinal dimensions of the marginal edges of said standard pattern, measuring from the indicated elbow line to the curvilinear end portion, and extending the vertex of the arcuate contour of the curvilinear end portion in a range approximating one-half to one inch on a mediate line longitudinally of said standard pattern while retaining the same linear dimension of the curvilinear margin of the end portion of said standard sleeve pattern.

2. In a method for producing a sleeve pattern for garments having armholes of a predetermined circumferential dimension, using for a base a standard industrial sleeve pattern, the said standard pattern having a curvilinear end portion contoured to define a cap for a sleeve at the juncture thereof to a garment, and having an elbow line indicated thereon, the steps comprising: increasing the longitudinal dimensions of the marginal edges of said standard pattern from said elbow line to said curvilinear end portion one and one-half to two and one-half inches, and extending the curvilinear end portion, measuring from said elbow line, one-half to one inch on a mediate line longitudinally of said pattern while retaining the same linear dimension of the curvilinear end portion of said standard sleeve pattern.

3. A process for producing a sleeve pattern for making sleeves for garments having armholes of a predetermined dimension, using a standard sleeve pattern as a base, the said standard pattern having a curvilinear end portion formed with an arcuate curve defining a cap for attachment to a garment, and having an elbow line indicated on the standard pattern, the steps comprising: increasing the longitudinal dimensions of the lateral marginal edges of the standard pattern in a range of one and one-half to two and one-half inches, measuring from said elbow line to said curvilinear end portion, and extending the end portion of said standard pattern one-half to one inch on a mediate line, measuring from the elbow line, while retaining the same linear dimension of the curvilinear end portion of the standard pattern.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

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It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, line 9, beginning with "One of the" strike out all to and including "into the sleeve.", in line 15, same column 3; column 6, lines 10 and 11, for "garments" read -- men's shirts --; line 12, before "sleeve" insert -- men's shirts --; line 19, for "two" read -- three --; line 21, strike out "said elbow line, one-half to one inch on a medial line" and insert instead -- said elbow line, two and one-half to five inches on a medial line --.

Signed and sealed this 18th day of March 1969.

(SEAL)

Attest:

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