No. 798,223. PATENTED AUG. 29, 1905.

F. D. SOLE.

TAPE MEASURE.

APPLICATION FILED SEPT. 23, 1904.

2 SHEETS—SHEET 1.

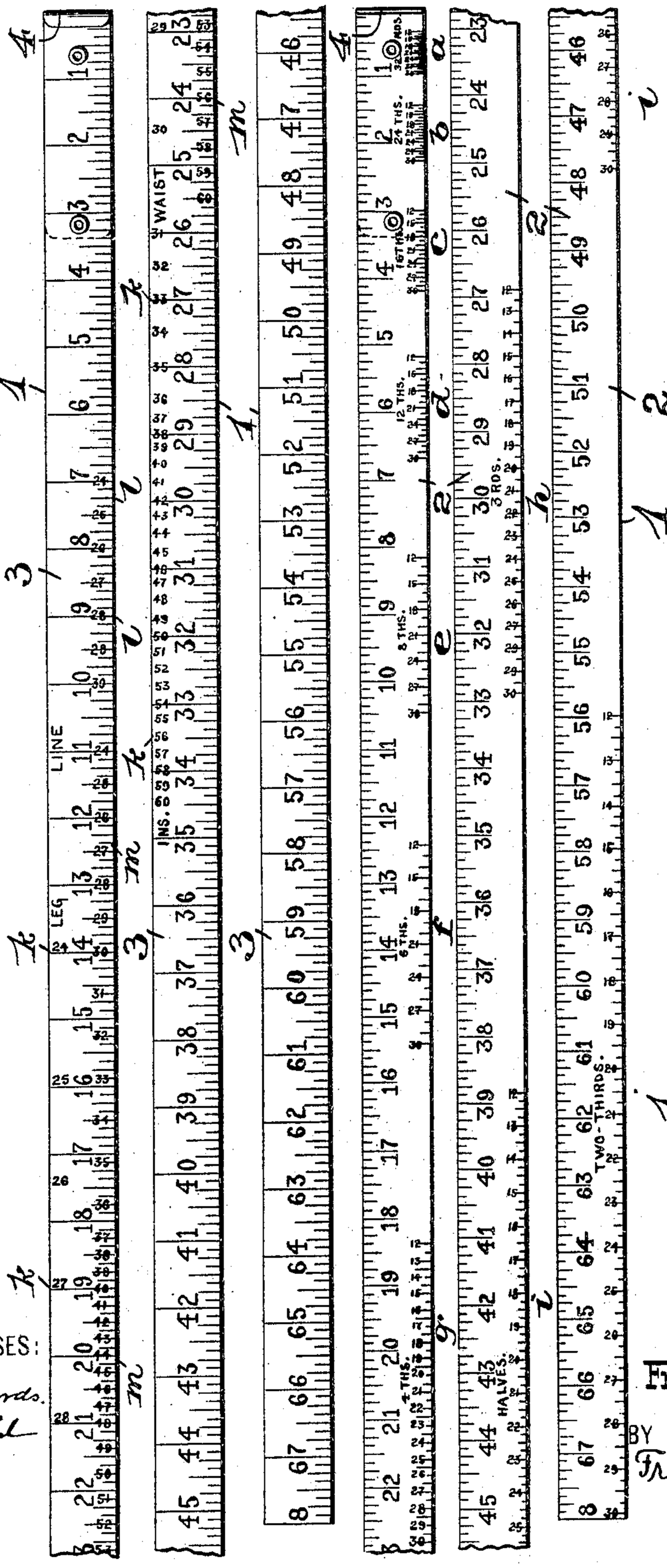

FIG. 1.

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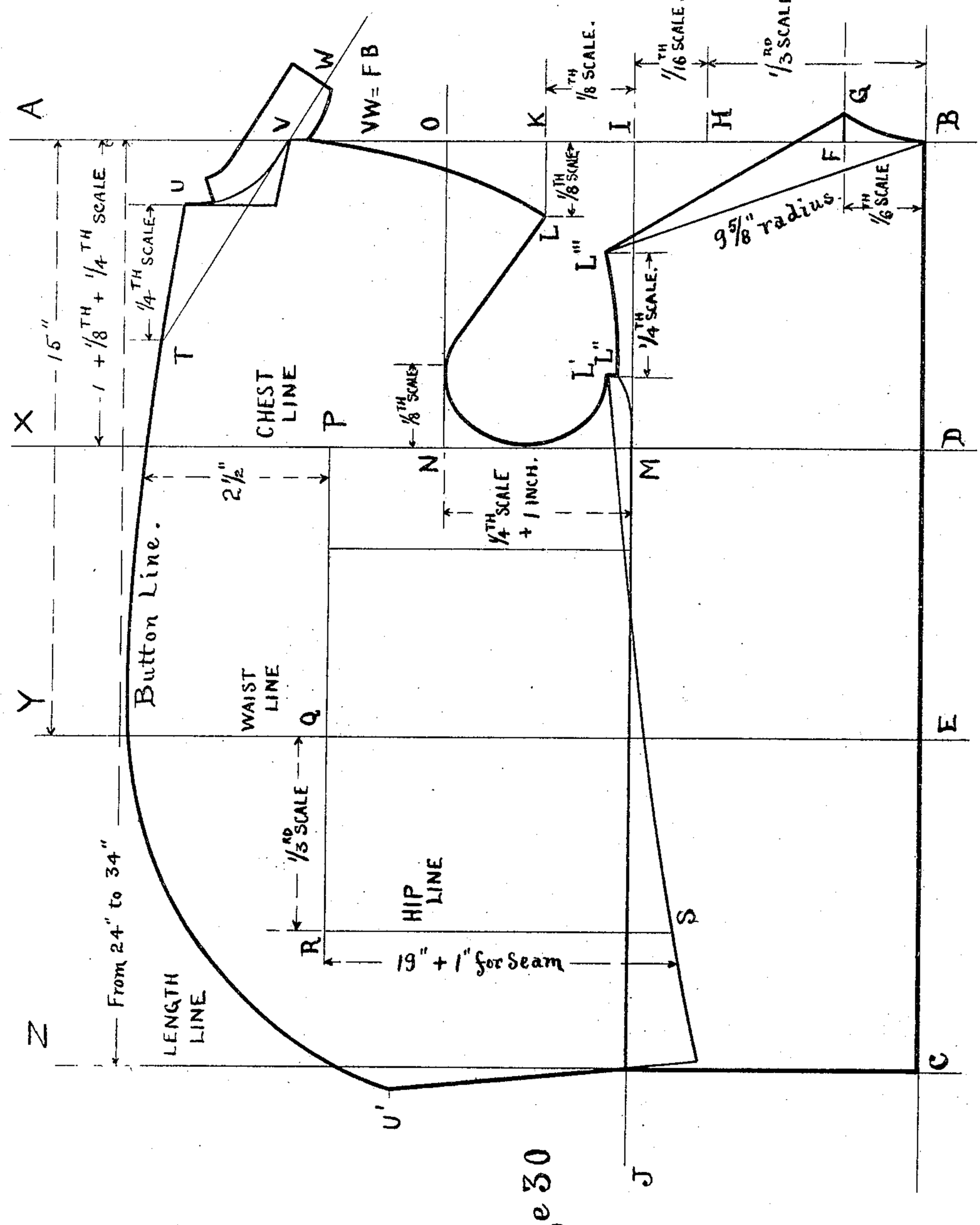

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TAPE-MEASURE.

No. 798,223. Specification of Letters Patent. Patented Aug. 29, 1905.

Application filed September 23, 1904. Serial No. 225,553.

To all whom it may concern:

Be it known that I, FRANK D. SOLE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Tape-Measures; 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, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

This invention has reference to improvements in that class of tape-measures which are used by tailors and dressmakers for laying out the designs of the various parts of garments upon paper or upon the cloth to provide a pattern or for laying out the lines to which a garment is to be cut directly upon the cloth.

My present invention has for its principal object to provide a tape-measure which bears in addition to an ordinary scale, preferably representing inches and feet, other notations in the form of scales or otherwise indicating various measurements or sizes of patterns to which a garment is to be cut by the tailor.

A further object of this invention is to provide a tape-measure of the character hereinafter set forth which may be used by the tailor for taking the measurements in measuring a person for a suit and can then be used in properly laying out the pattern to which the cloth is to be cut according to the size of suit desired for any styles of coats, vests, trousers, and the like or for other patterns used by dressmakers.

Other objects of this invention not at this time more particularly mentioned will be clearly evident from the following detailed description of the same.

With the various objects of this invention in view the same consists, primarily, in the novel tape-measure hereinafter set forth; and, furthermore, this invention consists in the various details of the construction of tape-measure hereinafter more fully described and then finally embodied in the clauses of the claim which are appended to the said specification and form an essential part of the same.

The invention is clearly illustrated in the accompanying drawings, in which—

Figures 1 and 2 are the two face views of a tape-measure embodying the principles of this invention, the various scale-indications thereon all being reduced to one-half of the full-sized measure. Fig. 3 is a representation of one form of pattern, in this instance that of a sack-coat laid out according to the scale indications or notations upon the faces of the tape-measure.

In the manufacture of boys' and men's suits all sizes of the parts of a suit are made according to conventional patterns figured from the actual chest measurement of a person, and consequently in practice the sizes of suits are known to the trade as of such chest measurements—as, for instance, a "24 suit" means that all its measurements are based upon a twenty-four-inch chest measurement. Thus the tailor having the chest measurement of a person he can therefrom figure and lay out the various lines of the required pattern, and with the use of my novel form of tape-measure as a help the pattern can be quickly and rapidly laid out without requiring any undue thinking and tedious figuring on the part of the tailor.

Referring now to Figs. 1 and 2 of the drawings, the reference character 1 indicates the tape-measure embodying the principles of my present invention, and the reference-numerals 2 and 3 indicate, respectively, the obverse and reverse sides or faces of the same. Both the said faces 2 and 3 are preferably marked or provided with the usual scale-indications in inches; but in addition to these indications the obverse face 2 is provided with other scale notations or indications *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i*, and *j*, and the reverse face 3 is provided with suitable scale-notations *k*, *l*, and *m*, substantially as shown in Figs. 1 and 2 of the drawings. These various scale notations or indications are laid out in various divisions representing proportions of inches which are to be used in the laying or marking out of certain parts of patterns for different sizes of suits, and the said scale-indications have respectively arranged above them such indications as "32nds," "24ths," "16ths," "12ths," "8ths," "6ths," "4ths," "3rds," "1/2es," and "2/3rds," the same being such terms and indications familiar to tailors and others employed in laying out patterns to which suits are to be cut. The various scale-indications upon the tape-measure are arranged to be read from the right-hand end to the left-hand end of the tape; but this is immaterial, and said notations may be so arranged that they can be read and used from the opposite end of the tape. In using the scale-indications *a*, *b*, *c*,

d, *e*, *f*, *g*, *h*, *i*, and *j* the marginal edge 4 of the tape is used as the beginning of the "32nds" scale-notation, and so on in using each succeeding scale-notation the last line of the preceding scale-notation is always used as the zero or starting line or point of such scale.

Referring now to the reverse side or face 3 of the tape-measure, it will be seen that in addition to the usual scale in inches I have placed upon said face a scale-notation *k*, having various numbers in successive order from "24" to "60," inclusive. Upon the said face of the tape-measure there may also be arranged such words as "Waist," "Line," "Leg," and the abbreviated word "Ins.," indicating that the said scale *k* is to be used with the measurements taken by the tailor from or upon the inner side of the leg of the person. In addition to the above scale-notation *k* this face or side 3 of the tape-measure is also provided with a series of other notations *m* to be used with the waist measurements in laying out a coat-pattern such as is shown in Fig. 3 of the drawings, these notations reading, respectively, from "24" to "60," inclusive. Another scale-notation *l* from "24" to "30," inclusive, may also be placed upon the face 3 of the tape-measure to be used in laying out patterns designed for knee-pants, the marginal edge 4 of the tape-measure in each instance being employed as the beginning or zero-point of these scale-notations *k*, *l*, and *m*.

The manner of using the tape-measure and its various scale-notations for laying out the patterns to which a suit is to be cut is briefly as follows: A tailor having made the usual chest measurement upon the body of the person—say for sake of illustration that the chest measurement is thirty inches, or, in other words, that a 30-size suit is required—referring now to Fig. 3 of the drawings, in which a pattern for a sack-coat is shown, the same, as is usual, representing one-half of the coat in its width, (because both portions of a coat are alike,) two lines A B and B C of any suitable lengths are drawn at right angles to each other upon a piece of paper, or, if desired, upon the cloth. Three lines D X, E Y, and C Z, are then erected upon the line B C at right angles to said line, and consequently parallel to the line A B, the line D X being termed the "chest-line," the line E Y the "waist-line," and the line C Z the "length-line." The distance B E on the line B C, giving the point E at which the waist-line E Y is to be erected, is found from the waist scale-notation *m* upon face 3 of the tape-measure by laying off on said line B C from B a distance measured from the edge 4 to the number "30" upon said scale-notation *m*. The distance B D, locating the point D, at which the line D X is to be erected, is found by laying off on said line B C from B a distance equal to one-fourth of the actual chest measurement, or in this instance seven and one-half inches actual scale measurement, the point C in the line B C upon which the length-line (indicating the length of the coat) is drawn at variance, being anywhere from twenty inches for boys' coats and from twenty-four to thirty-four inches or more for men's coats from the point B, according to the kind and the length of coat desired. Upon the main line A B from the point B the point F is next found, the distance between the points F and B being equal to a measurement upon the "1/6th" notation or *f* scale from the last division in the *e* scale to the division "15" in the *f* scale. At he point F a line F G at right angles to the line A B is drawn, and the point G is laid off on said line a distance three-fourths of an inch, actual measurement, from the point F. Then upon line A B the point I is next found by laying off a distance from the point B to point H with the "1/3rd" notation or *h* scale plus "1/16th" notation or *c* scale, using said scale-notations in the manner above mentioned and bearing in mind at the same time that the number on the scale used is always one-half of that of the original chest measurement or size of coat desired. The line I J is then drawn parallel to the base-line B C, and from M, the point of intersection of the line I J with the line D X, a distance M N is laid off with the "1/4th" notation or *g* scale, as above, plus one inch, and the line O N drawn parallel to the line I J. In a similar manner the distance I K on line A B and the points L, L′, L″, and L‴ and P, Q, R, S, T, U, V, and W are also readily found with the tape-measure according to well-established rules for finding these points and according to which the tape-measure embodying the principles of the present invention has been constructed. In a like manner the buttonhole-line U U′ and other conventional lines of the pattern can be found, as will be clearly understood. In using the tape-measure for laying out the pants and trousers patterns the notations found upon the reverse face 3 of the tape-measure are used in a similar manner.

Since my present invention is not for a novel form of pattern, nor is it for a method of finding and laying out the various lines of patterns, it is not deemed necessary to go into further details as to the manner of laying out all the lines with the tape-measure embodying the principles of my invention, the above having been given only as one illustration for finding the various points and lines of a pattern.

From the foregoing description of my invention it will be seen that I have devised a simple and easily-readable tape-measure for the use of cutters, tailors, dressmakers, and others in laying out patterns to which the cloth or material is to be cut for producing garments of the various kinds and styles.

Having thus described my invention, what I claim is—

1. The herein-described tailor's measure in

the form of a tape-measure of a flexible and foldable material, the said tape-measure having a main scale provided with scale-marks representing inches, which are designated by consecutive numbers from 1 to 35 and over, the inch-divisions of said main scale being subdivided into other divisions each representing one-eighth of an inch, a second scale series represented by the numbers 24 to 30 inclusive, the number 24 being placed upon the seven-inch scale-mark of the main scale, and the number 30 being placed upon the ten-inch scale-mark of said main scale, with the intermediate numbers 25 to 29 inclusive being respectively placed upon the intermediate one-half-inch divisions between said numbers "7" and "10" of said main scale, a third scale series represented by the numbers 24 to 60 inclusive, the number 24 being placed upon the eleven-inch scale-division and the number 60 being placed upon the twenty-five-and-one-half-inch scale-division of the main scale, with the intermediate numbers 25 to 29 inclusive respectively placed upon the intermediate one-half-inch scale-divisions between the scale-numbers "11" and "14" of the main scale, and the numbers 31 to 36 inclusive of said third scale series being placed respectively upon the five-eighths, the one-fourth, the seven-eighths, the one-half, the one-eighth, and the three-fourths inch scale-divisions between the numbers "14" and "18" of the main scale, and the intermediate numbers 37 to 48 inclusive of said third scale series being placed respectively on the one-quarter-inch divisions between the numbers "18" and "21" inclusive of the main scale, and the intermediate numbers 49 to 59 inclusive of said third scale series being placed respectively upon the five-eighths, the three-fourths, the one-eighth, the one-half, the seven-eighths, the one-fourth, the five-eighths, the "24," the three-eighths, the three-fourths, and the one-eighth inch scale-divisions between the numbers "21" and "26" of the main scale, substantially in the manner shown.

2. The herein-described tailor's measure in the form of a tape-measure of a flexible and foldable material, the said tape-measure having a main scale provided with scale-marks representing inches, which are designated by consecutive numbers from 1 to 35 and over, the inch-divisions of said main scale being subdivided into other divisions each representing one-eighth of an inch, a second scale series represented by the numbers 24 to 30 inclusive, the number 24 being placed upon the seven-inch scale-mark of the main scale, and the number 30 being placed upon the ten-inch scale-mark of said main scale, with the intermediate numbers 25 to 29 inclusive being respectively placed upon the intermediate one-half-inch divisions between the said numbers "7" and "10" of said main scale, a third scale series represented by the numbers 24 to 60 inclusive, the number 24 being placed upon the eleven-inch scale-division and the number 60 being placed upon the twenty-five-and-one-half-inch scale-division of the main scale, with the intermediate numbers 25 to 29 inclusive respectively placed upon the intermediate one-half-inch scale-divisions between the scale-numbers "11" and "14" of the main scale, and the numbers 31 to 36 inclusive of said third scale series being placed respectively upon the five-eighths, the one-fourth, the seven-eighths, the one-half, the one-eighth, and the three-fourths inch scale-divisions between the numbers "14" and "18" of the main scale, and the intermediate numbers 37 to 48 inclusive of said third scale series being placed respectively on the one-quarter-inch divisions between the numbers "18" and "21" inclusive of the main scale, and the intermediate numbers 49 to 59 inclusive of said third scale series being placed respectively upon the five-eighths, the three-fourths, the one-eighth, the one-half, the seven-eighths, the one-fourth, the five-eighths, the "24," the three-eighths, the three-fourths, and the one-eighth-inch scale-divisions between the numbers "21" and "26" of the main scale, and a fourth scale series represented by the numbers 24 to 60 inclusive, the number 24 being placed upon the fourteen-inch scale-division of the main scale, and the number 60 being placed upon the thirty-four-and-one-half-inch scale-division of the main scale, with the intermediate numbers of said fourth scale series being arranged upon the intermediate scale-divisions between said numbers "14" and "$34\frac{1}{2}$" of said main scale, substantially as shown in Fig. 1 of the drawings.

3. A tailor's measure in the form of a tape-measure provided upon its face with scale-indications, for taking actual body measurements, and a series of other scale-notations *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i* and *j*, having numbers indicating size measurements, said scale-notations having, respectively, suitable indications 32nds, 24ths, 16ths, 12ths, 8ths, 6ths, 4ths, 3rds, 1/2es, and 2/3rds, located in close proximity thereto, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 21st day of September, 1904.

FRANK D. SOLE.

Witnesses:
FILOMENO BALLADINO,
FREDK. C. FRAENTZEL.