## Scientific

# Dressmaking and Millinery 

COMPILED AND ILLUSTRATED

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## TABLE OF CONTENTS.

FIRST PART-DRESSMAKING.
Page.
Discourse ..... |-2|
Gowns shown in Cuts ..... 2-21
Description of Gowns. ..... 107-108
Economy in Fashion Books ..... 22
Designing and Picture Work ..... 23-31
Scientific Picture Copying Skirts. ..... 32-41
Scientific Dress Cutting Bodices. ..... 42-65
Scientific Coat Cutting ..... 66-88
Scientific Skirt Cutting. ..... 89-106
Scientific Construction. ..... 112-137
Scientific Tailoring ..... 138-155
Mending ..... 156
Measuring Pictures for Bodices, see page 31 in Millinery, and Prac- tical Work, see page 32, Millinery Work.
Shirt Waists ..... 157-170
Plaited Skirts ..... 171-193
Circular Skirts ..... 186-187
Shades and Colors ..... 191-192
Shades and Colors; also in conjunction with Millinery ..... 196-197
Plussing ..... 198
SECOND PART-MILLINERY.
Discourse on Millinery ..... 1-4
Scientific Table of Circles for Cutting Hats. See table No.22, page 20 ..... 4-5
Hats ..... 5
Hat Work in General ..... 5-22
Scientific Draughting ..... 22-28
Shapes and Patterns ..... 28-31
The Art of Measuring Pictures for Millinery ..... 31
Lessons on Practical Work; also in conjunction with Dressmaking ..... 32-41
Description of Hats as shown in cuts ..... 41-48

## SCIENTIFIC DRESSMAKING.

## DISCOURSE.

 HE object of this book is to perfect the art of dressmaking and to simplify it, and to work on a scientific basis and help dressmakers and cutters to get satisfactory results with a great saving of time and labor. It is a well-known fact that many of the departments have not paid the owners. I am going to mark some points as to scientific management of work rooms, economy in sundries, and the art of copying fashion plates and block pattern cutting.

I have given careful thought and time to the finding out of quick, easy and profitable ways of working. Perfect dress cutting is the first step to success in the costuming business. If you are not an artist at this work, you may master the fashion books, and become an artist, and you will then find the work a pleasure.

Dress cutting must be thoroughly understood by the head dressmaker and scientific pattern cutting in order to copy the fashion plates and carry out new designs of one's own origin, which are always desired on account of the excellence of the style. Each individual designer creates. To do this with speed and accurateness the scientific dress cutting system must be used.

## TIME SAVING IN DRAPING.

First block off your style by your scientific methods of copying. You can get a reproduction of the plate and give to your bodice hand a perfect copy of the picture which she otherwise would spend hours and hours trying to get by means of the old-fashioned way of draping; and often after all the time spent in this way she calls the attention of the head dressmaker to inspect her work, and the supervisor is disappointed with her efforts and all the work is to be done over again. I want every dressmaker to give a perfect fitting pattern of lining and drapery to her bodice and skirt maker.


When the different parts ef the pattern are ready to be put into place the artist who manages his or her department or business on the perfect pattern plan will find a smoother and pleasant business life. I have seen bodice hands working a day at the draping and then fail, and some of the hands' salaries were $\$ 8.00, \$ 12.00$ and $\$ 18.00$ per week. And I have known departments to be delinquent $\$ 300.00$ in four months, and as much as $\$ 700.00$; and one large department $\$ 300.00$ in less than two months.

## MANAGEMENT.

Economy is one of the fine arts in this business. Every dollar saved is a dollar earned, and when bills are itemized and the findings are so expensive and so numerous some people complain. This can be understood when economy is omitted; and I find to have as few complaints as possible is preferable in business and to the health of the artist in charge.

To keep a girl for sewing on hooks and eyes and a girl for putting on featherbone, and an artist for pinning on trimming, a sleeve hand an ' I hand for turning up the bottom of skirts, also for putting skirts on $t$, w...ds. The work that girls do the most of is the work they become perfect at, and can do in a much shorter time and with better results. To change the hands from one branch to another is a good plan and thus they become perfect in all branches. I know from experience that no girl earns more than the salary she is paid and sometimes not that, so business people must take these things into consideration and look well into the management as suce css depends on the same. Some girls do not understand the business pari id are of the opinion that money is easily made, and never think of the losses. For my part I am of the opinion that the employer should give the different hands to understand this and ask them to take an interest and help to build up the business as the hands have a great power in this way. I am perfectly sure that any girl will work in a happier and more healthf ' ate when she feels that all the different parts, great and small, go to make up a successful whole and that they all must help to this end.

## KEEP CLIPPINGS.

I would advise that boxes be kept in which clippings of canvas and all the different goods can be kept as sometimes one requires a smail piece

of canvas and the time lost going for it or measuring it off the web is as much as it is worth. With a little care all this time and money can be saved, and thus made. Four or five boxes will be all that are required, and you will find them very profitable as sometimes one is in need of a certain shade of cloth or lining, as the case may be, and a clipping will enable you to finish right, what is wrong. The same may be said of silk spools. Sometimes looking for a certain shade of silk thread has meant a loss of time, and delayed the order from going out at a certain time.

No costumer ever charged too much for the making. I have known a costume to take six days longer than was allowed for the making, and this time was the time of the highest paid talent in the business. If a lady calls and inquires prices, and the prices given her are low, she may decide that a low grade of style and work will be the result, and her goods spoiled as well, for no costumer can make a gown properly unless she has well paid help. I think a proper charge for making and for style has a principle in it, and you can look your people in the face and feel well-bred and honest about it, and she will respect you in return. But so many dressmakers have been trying to make money on findings; this is a mistake. I add, charge properly for your work and style. Some costumers are true artists at the business and can give a lasting style to all the gowns which they turn out. Any woman must know the style is worth something. One so often hears ladies say the gowns from such and such a place have such a good style about them, and one feels dressed and comfortable in her gown when it is from such and such a place.

## SCIENTIFIC SKIRT CUTTING.

I am going to refer to the many styles of forms,--first, the beautiful form with the fine curves; second, the medium; third, the undersized; fourth, the large, oversized, and fifth, the figure with the high, full front, sunken hips and drooping back. Ladies with those forms are in most cases middleaged. Those figures must be understood by the cutter as each woman has a different carriage and no three or four patterns are going to meet the requirement of those figures. You must cut a pattern for the person who is

to wear the skirt, and you will by cutting a pattern to fit each woman, gain each woman's confidence, and please and be successful.

I shall give a full course of lessons on how to make and baste up the different skirts and bodices for all kinds of forms.

I shall call your attention to a few of the every-day complaints. Ladies are constantly complaining of tightness in the bust, and shortness in the underarm, tightness in the arm's eye, and narrowness in the chest and shoulders, and that the arms cannot be freely raised. These are the complaints that I am constantly being told about and ladies asking for a dressmaker who can cut a pattern to fit and telling how tired they are of being fitted, and saying that they are afraid to have their best dresses made in the home town. I am always sorry when I hear this for I have had the pleasure of seeing some very fine young ladies carry on dressmaking in cities and towns. To be sure a great many of these have had to take up dressmaking on account of reduced circumstances. Young ladies must take into consideration that if they are to succeed they must please the people for whom they are doing costuming. Mrs. Someone, whoever she may be, does not like to speak unkindly, but when she sees her goods cut and partly made up and knows it is spoiled, what do you expect, or what should you expect?

I am convinced that no woman on a salary or in business, is more appreciated than a first-class modiste. And I am also quite sure that the smartest and prettiest of women likes to feel that she can do a little in this line; if not with the needle, with her artistic cut or suggestion. All classes of women feel the right to say something about the style and effect. So it is just as I have said-all women like to feel that they are just a little bit of a costumer,-so to speak.

Tailoring is very different work from dressmaking and the ladies are appreciating fine tailored gowns more and more each year and the art is a necessity to women. Ladies in private homes can do most exquisite work if it is cut for them or if they have a perfect-fitting pattern cut from proper measurements. I am going to tell you why some garments are so uncomfortable. All garments must be comfortable if they are to be satisfactory. You know how uncomfortable some of your garments are or have been. This is because they are not in proportion with your form.

17


## ABOUT THE FASHION PLATES.

When you are looking at a picture and apparently there are no seams, the artist means that you are to put seams where they are necessary. The smooth surface on pictures sometimes means that the seam is stitched up and pressed open in the most old-fashioned way, for I have seen the gowns which appear monthly in the best fashion books made up, in New York, and I have so often found that they had seams pressed open, while in the picture we cannot see the seams. You know we must have seams or else tucks, or plaits, to cover seams, as the case may be.

Costumes made to order must be made from scientific measuring, and the tape line must be the positive, sure working of modern dressmaking, for the fitting and the pinning in of the seams takes away the fine lines the garment should have. The gown fitted too tight is never as comfortable or as pretty as the gown cut to fit.

Too much cannot be said to dressmakers and private people about using the tape line. All worry would be a thing of the past if this rule was abided by more thoroughly.

This will bring it to your mind how often Mrs. Somebody has told you that her bodice was too tight in the bust and her skirt in the hips, also her coat in the hips and bust. Your bodice, coat and skirt hands will remember how they were careful to get the garment up to measures and are surprised. You will find that the bust and hips of every garment must be larger than the natural form simply because the people of to-day will not wear what we used to call the uncomfortable fitting garment; they want pretty things with that easy and restful look.

## BROADCLOTH.

Broadcloth and serges are the most difficult to handle although they are shrunk on the same plan and pressed the same. After broadcloth has been shrunk and allowed to dry, it should be carefully pressed without wetting any more, and also the serges without wetting. In fact I have made some samples just to prove it, and I find the less water on broadcloth after it has been shrunk the better, and serge the same. Be sure and have the smooth side going down. Serges should have the twill going to the left. Always

cut your broadcloth skirt first and coat last as you will find many large pieces which you can get parts of coat out, whereas, if you cut the coat first, your clippings would be useless.

## VELVET.

When sewing up seams of velvet, or stitching velvet, keep a piece of paper between foot of machine and velvet, so as to prevent the goods from changing position where basted. Velvet is a difficult thing to stitch on account of the foot of the machine causing the upper goods to slide and the under to become loose. You will be able to sew this goods as easily as any other by putting a piece of paper under the foot. The same treatment may be used with corduroy and plush of all kinds, or materials of thin effect; satin or silk such as brocades, and all kinds of materials with raised designs in weave. Basting is a most important feature in dressmaking. Be careful to get your marks to coincide. Some goods are marked with the tracing-wheel, some with thread and some are notched. A half or a whole inch is allowed for seams, or as much as desired; this means that the same amount must be left at each seam and the two edges kept carefully together with notches coinciding, and baste by taking a back stitch occasionally. This will enable you to use speed in basting and get perfect results.

To bring up the pile on velvet which has been worn. Turn the plush side down and be sure no water gets on it, then make the wrong side wet with cold or warm water and pin with fine pins the plush side up and let it remain in some place where nothing will touch it until dry, and you will get good results. This can be done more than once in some places that are badly crushed. This is a great saving of time. All kinds of plush and satin material you can treat in this manner and you will brighten and freshen them as well as raise the sunken pile.

## CRAPE AND CHIFFON.

You know you have been steaming crape and chiffon goods which have been crushed or have had to pay high prices to bring back to a fresh unwrinkled state. Take a sheet, fold the sheet up after you wring it out of water. Then lay your crape or chiffon on the damp cloth and let the dampness rise out of the cloth into your crape or chiffon that has

lost all of what we call "make up," or in other words, finish, and your crape will return to its proper appearance. You can do this with all kinds of thin veiling and you will save time and labor. Of course lay them smooth on the damp sheet, and they must be allowed to stay until the sheet dries or until you are satisfied with the appearance.

## VOILES.

Voiles and eolines, also grenadines and loosely woven materials of wool and silk mixture may be made up with similar treatment, as all of these goods are of the same nature and the same lesson will answer for each one.

## PRESSING.

To press or shrink eolines, wring the cloth out of water as dry as possible, and press, keeping the eoline between. Water has a tendency to take the gloss off in places. Therefore, if water is used, sponge with a cloth wrung out of water, and iron all over. Voile has no gloss and water may be used.

Voiles are better for being shrunk before cutting as you will find that you can press the garment off in half the time. Private ladies may not understand the meaning of "press off." It means pressing a great deal at the last when the garment is finished.

Those materials must be plussed in bust, hip and length. If Bust is 30 , finish 34; Hip 42, finish 46; Length 41, finish 42, and so on, as the goods must be allowed to lay on the body easy. When a lady fastens up the bodice she expects the hooks at bust line to just meet without the slightest effort on her part. If her waist measure is 24 the waist band should be 25 .

## GOODS.

Heavy goods can be made up the measure in length. If a lady measures 42 skirt length, for tweed make it 42 , but if she measures 42 around the hips, finish her skirt 46 , and you will find the skirt a perfect fit for standing or sitting position.

Heavy coats must be made 3 inches larger than the natural bust size to give a comfortable fit, and hip of coat must be 4 inches larger. There is no

use of putting on the garment if it does not measure right, and if you have not plussed the garment. People will have comfort nowadays, as well as art.

## VELVET LESSON.

First get the up and down. It is proper to have the velvet shade dark although some ladies prefer it to shade light. This can be a matter of choice.

Most people are greatly in love with originality. Sometimes changing the goods, preferring the light to the dark side, etc., makes a new style of gown. The same may be said of brocaded velvets. The design can be up or down, just as may look prettiest to the eye.

## TO PAN VELVET.

Heat an iron, put your goods on a soft ironing sheet and iron the velvet with the smooth side going down. Be sure and not let your iron stand for an instant in any one spot; if you have, for a moment, to leave the room or speak with a person, be sure and lift it up. Keep the iron constantly on the downward move, not up and down as common ironing is done, and you will have prettier panned velvet than what is panned at the factory, I think.

## HOW TO MAKE UP TAFFETA SILK, JAPANESE SILK, AND ALL KINDS OF NOVELTY GOODS OF A SILK NATURE.

Taffeta silk skirts must be 4 to 5 inches larger in the hips than the natural size of the woman who is to wear it. This will convince you that when you take measures you must take them just the natural size of the person, in order to get the lines of the body, and then plus them 4 or 5 inches and you will find when you put on your skirt it will be the perfection of comfort and fit when sitting or standing. So many ladies complain about the fit when they are sitting down. This and many other discomforts are past, and all kinds of material I have been talking of must be made 3 inches larger than the natural length. If a lady measures 42 skirt length, the soft silk which I have been talking of must be from 3 to 4 inches longer

than the actual measure of length, for the goods is subject to vibrations the air may cause, and must be made longer for this reason.

## PREPARING CANVAS FOR TAILORING COAT.

Cut canvas from pattern and have the same curves in canvas as cloth, sew up darts and shoulder seams, put canvas in as shown in Diagram No. 5 , ready for coat, and pad as shown. If the woman is full in bust, put a piece of padding cloth or a thick piece of woolen material, as shown in Diagram No. 3 and stitch with machine as shown. Put in bust mold a piece of canvas or hair-cloth, cut on circle and put a piece of wadding over it and stitch in circle the shape of canvas. This can all be done by hand but it makes more work and does not give any better results, as a coat must be cut to the shape and not depend on molding canvas into a bust form; when a proper bust form is cut the shape will be there and remain there. To get a pretty bust form, the dart must be large, which will give a round and good appearance. The padding is put in to keep the shoulders and arm's eye and bust form smooth, and to retain the shapely appearance which all tailored garments should have as long as the owner wishes to wear them. This is one of the reasons tailored garments are admired. A tailored garment should be cut with great care and consideration, as fine lines and curves are required and all through the bust and shoulders a smooth, rounding appearance prevails. Look carefully at Diagrams Nos. 1, 2, 3, 4, 5 and 6. In canvas, notice the seams are all sewed up in jacket, and the collar of cloth is sewed on, or better known as the under part of collar, the same is done with canvas and in this way a smooth seam and a very flat and neat collar can be had without the use of the very heavy iron. Read lesson on Canvas Work with care.

## LESSON IN TAILORING.

${ }^{\text {4 }}$ Shrinking is the first thing to consider. All goods cannot be shrunk alike. To be sure all goods of one solid shade, such as black or brown and gray can be sponged with a wet cloth dipped into water and rubbed over the goods; putting plenty of water on a wet sponge is better as one can rub the sponge softly over the goods using lots of water. You must not sprinkle

the goods by putting the hand in water as you do your linen. This way removes the necessity of a large sprinkling sheet.

After goods has been folded up for eight hours, unfold and fold up the opposite way smoothing the goods with your hand to keep out wrinkles.

## GOODS WITH A VARIETY OF COLORS.

First, find out if the colors are fast. If so, you can put a wet cloth on and fold up and let stand for a day or over night. If colors are not fast, wring out a cloth as dry as possible, and take a hot iron and iron dry. In this way you can shrink the poorest colors and make the goods appear much more expensive. Sometimes these goods shrink a great deal. When the goods is shrunk with the greater amount of water take an iron and press before cutting. Do not use any water when pressing the goods after it has been shrunk. You will find woolen goods scorches very easily, so put a thin piece of cotton between iron and cloth.

All goods are improved by the pressing after being shrunk. In this way you will bring back the pretty finish to all kinds of goods.

## LESSONS ON PLAITING.

First, you must allow three times whatever length of plaiting you want; for example, if you want 1 yard of plaiting you must get 3 yards of material; this will give you any style of plaiting you may desire. The most accurate way to make plaiting is to mark the plaits with thread, as you will observe in Diagram. If the goods is to be plaited before being hemmed you may put notches instead of thread marks; the notches are a great saving of time and labor.

## OLIVE OIL BATHS FOR TIRED NERVES.

The body is most thankful and will show the marks of kindness just as readily as it will show neglect.

Rub the oil on freely, letting the finger nails touch the skin, as they are the finest kind of an instrument for bringing the blood to the surface. You will see

the dust and perspiration which has collected, show most plainly. Then rub off the oil, and oil a second time. All your limbs having been oiled, you will feel strong and bright. Remember to let the finger nails rub the skin thoroughly, and as swiftly as possible. When you are putting on the last coat of oil, you may use the flat palm of the hand. Your flesh will absorb the oil, and feed the system. Any man or woman may prove this by trying it, and after a hard day's work is done, such a bath would work wonders. Take it and go to bed and you will find that your body will give a glad result and you will look younger and be stronger of nerve and calmer of heart. Weak people are most of the time unhappy unless they are reconciled to going without the health others are enjoying. I feel sure that a contented mind is a heart tonic, so try and be contented.

One way of working towards contentment is to just go to work and make the wrong thing right, if possible, but do not regret that it was not right, for in so doing you will prevent yourself from looking at the reasonable side of things. I believe that sadness and grief are to make us better and bring us nearer to perfection. We all know that "After a sad day cometh a glad day." Well, I wonder if the glad day is a glad day, or if it is that we have so much improved in nature for having lived the sad day, that we think things are pleasant.

I have seen people with all the comforts of life so unhappy and wretched in every way, so I am inclined to think it is not the things which make life, but the contentment which we make in ourselves,

## ECONOMY IN FASHION BOOKS.

Persons purchasing a high-class fashion book, knowing that the patterns of the gowns are not on sale in the usual way, to get the value out of the book must be able to cut a pattern of whatever garment they prefer and at once. While you are waiting for the pattern to come from a long distance another number of the Fashion book has come out, so you no doubt will be able to see the advantage of my work on the art of copying pictures. Those who have my book can copy any picture they desire. If you have not my Scientific Methods for copying and cutting the foundations I am going to make it as clear to you as possible how you can get your high-class patterns, when you want them. First buy a 10 -cent pattern, which will be for your bust size only, as they are sold according to bust measure. Unfold your pattern, take the hot iron and press the creases out of the foundation, the other part you will not need, and place it on the ordinary paper such as you see tailors use for cutting patterns. Place the foundation on this and measure it in the bust, and see if it is near your size. Be sure to measure length of underarm, length of back and front, as by so doing you will come pretty near to a good pattern. Notch the points that are your size, cut the pattern out in the pattern paper, lift the soft paper and turn to the page of Scientific Picture Copying and you will find clear advice. It does not pay to make up good material in cheap designs. When you can make your own gown you can have it when you want it, which is a great advantage, and by putting the price of making in the quality of goods and trimmings, your gown will be high classed. One of the misfortunes of the home-made gown. Ladies are afraid to make up expensive goods on account of the common style some patterns have, hence they buy cheap goods and trimmings. Is it any wonder your home-made gown looks cheap? It is not because it was made in your home or by you. Things in the dressmaking world will be vastly different in the near future. For one reason when scientific information is put in the hands of consumers they will then be able to utilize the beautiful goods and trimmings which the manufacturers have put within their reach.


DESIGNING AND PICTURE WORK.
Designing and Picturing Simplified to Child's Work.

## Diagram No. I

Is the front of a flat draught for children and is in two parts-Nos. 1 and 2. To copy the picture or to form an original design of your own, this flat draught will show coincided lines; and dark lines with the marks through same is where the lines have been drawn to represent a picture in pattern form or your own ideas. To copy a picture simply use your Scientific Method and mark into the perforation at whatever size you are cutting. See the pattern placed on goods. This will answer for all, as copying pictures for grown persons is quite simple, and also designing for children. The scientific method will enable you to cut a perfect foundation and the table of sizes telling how to make up these different goods will answer your wants. Should you decide to open up a factory, or better still, a model house, you must first make sure you get the very best fashion books, as your styles will be a leading point, and you can be your own cutter and designer. This means fifty dollars saved per week. I strongly recommend model houses as through these you will be able to use a better quality of goods and every costume you send out will be a recommendation. A commercial traveler can take out samples for four or five such high-class houses, and thus promote high-class goods. The fundamental of all such business is the cutting and pressing, and when you do not do your own designing copy your designs from the highest class fashion books that money can buy. This will enable you to place your goods before the public properly, and if you open an order business you will avoid embarrassment by looking over the following designs, showing the designs coincided and the designs drawn on the flat draught.


## Diagram No. 2

Is the neck and upper part of front. The dots shown are the shoulder seam which having been coincided thus make a yoke without a seam on the shoulder. The A is the underarm point.

## Diagram No. 3

Is the yoke with a seam on the shoulder and one under the arm. This will be easily understood by looking over No. I.

## Diagram No. 4

Is a sleeve showing a line drawn through. One line has been used to avoid misleading the client with a number of lines. You will understand that you can sketch as many designs as you wish to copy on this flat draught. Place paper under this and trace in your lines, and when you have finished tracing in every line you have made lift your flat draught and cut your lines. If you wish you may cut your original instead unless you want to make further use of same. You will plainly see the merits of this simple work. You can make a good salary by going from house to house teaching pattern cutting if you so desire, and you will receive appreciation. People of means have a true respect for business people who understand their work, and this work is truly for the young ladies and girls who have to earn money or learn to be economical and thus set a good example.

## Diagram No. 5

Has the shoulder seam coincided and a sailor collar sketched on same. This can be done for all sizes.


## Diagram No. 6

Is a back of the child's pattern as it will appear. When in one piece the dotted marks are to show the width of seam. This is shown on No. 3 also.

Diagrams Nos. 7 and 8
Show the back cut in two. I shall show the different sizes placed on paper for picture copying.

Diagram No. 9
Is a flat draught of Picture No. 9 in coats.

## Diagram No. 10

Is sleeve of No. 9. See Tailoring.

## Diagram No. 11

Is pattern with design sketched through the bust and skirt. This is simply a demonstration of making lines through a pattern and is to be used by teachers as a lesson.

Diagram No. 12
Child's pattern of coat with sketch of the back and front having been coincided at the dotted lines, thus making the pattern a one-pieced one. When cutting cloth place the back on folded goods thus having only the seam in the shoulder.

## Diagram No. 13

Child's Dress has been sketched from a designer's point of view. See Lesson No. 14 on Copying Pictures.

## Diagram No. 14

Is a picture copying lesson from a high-class French journal. See Picture 14 in the group of five children's garments shown in cut. The pattern is marked in alphabetical manner so as to simplify. See Kimona Sleeve in dress books for sleeves.

Diagram No. 15
Is a flat draught of the waists. See waists and this will be marked with 15. The picture has been sketched on the flat draught, the


underarm seam being coincided back and front. You may readily understand the simplicity of copying pictures for any size by first draughting a proper pattern to the measurements required. For all this work see the table of measurements on the art of plussing the goods as this is an all-important factor. The sleeve is copied also. Any picture sleeve can be copied by cutting a proper pattern and then sketching your design as shown in picture on your flat draught. Place a paper under and trace in your lines, cutting on the lines after marking or notching the junctions which are to coincide. When the garment is under construction look at the A and B on flat draught and mark your goods likewise coinciding same. Perfect results will be assured.

## Diagram No. 16

Is the foundation pattern of No. 16 in the picture made up of checked bodice, and striped skirt. The pattern has been coincided to sketch peplum with the pointed design in the bodice. The foundation is simply a plain closefitting lining with square-cut collar effect in back. The first lesson in designing makes all this plain. See child's sailor collar No. 5 and No. 17. These collars are all cut on the same plan only differing in size or depth as desired.

## Diagram No. 17

Is a full size 36 bust and has a design with broad effect in front as well as the plain sailor effect. This is clear and simple and will answer for all shapes and collars in flat effects. No. 17 shows shoulder seam coincided to cut the collar. See latter part of description on design No. 16.

## Diagram No. 18

Is a designing lesson. This has been shown to convince the client that a pattern of many parts may be used. We will take for an example, if you desire, a novel sketch through the garment of so many parts. To have the design curved in any particular way or form simply coincide the plain pattern as shown on Diagram and mark as desired. If copying picture look at your picture and sketch as shown on same. Look at the scientific instruction on plussing goods before you cut your pattern, as your perfect fitting pattern will mean perfect results from your picture copy.


Diacram No. 19
Is five-pieced pattern coincided to copy picture No. 19.

## Diagram No. 20

Is the flat draught of the bodice of picture No. 20 coincided to sketch the design as shown in the bodice part of the picture. I am making as a rule one design on each Diagram to prevent confusing a beginner. See No. 34. For the flat draught see Picture No. 34. See goods and canvas for No. 15. The picture is a long coat. See pattern on goods. This being a later lesson it will not be necessary to say much as this will be understood at sight. See child's work Nos. 10, 11, 12, 13. These four lessons are understood at sight. Also the sleeves I have shown are simply to let the client see the simplicity of cutting fancy sleeves as set forth in high-class journals. I never use lining as I think it a mistake unless the person prefers it. See patterns placed on goods.

## Diagram No. 24

Is a flat draught, coincided at arm's eye to cut sleeve as shown in mantle lessons Nos. 29 and 30. Also in dress lesson which is numbered 25. This is the first degree of flat draughting. Diagrams 46,47 and 48 show the patterns marked and separated.



SCIENTIFIC PICTURE COPYING.
Diagram No. 12
SKIRTS.
Is a flat draught of a novelty Princess Skirt. First, let me explain the art of picture copying. The first step is to get the measurements of the person who is to wear the garment. I am taking for example, Waist 24 inches, Hip 39 plus 4 , which brings the skirt to 42 when finished. Notice carefully the dart at hip section, at waist line and twelve inches down from the waist. It is one of the most important features in fancy and all kinds of skirt cutting to have the hip line right. To look at this I have found that to quarter the waist and hip measures and plus the front quarter $13 / 4$ inches or $11 / 2$ inches, you may use whichever you choose. This waist 24 notice that from A to B is $73 / 4$ inches and from $C$ to $D$ is $41 / 4$ inches, thus making 12 half the waist. The hips are to be 42 when finished, so that the quarter of this amount is $101 / 2$. from J to K is $121 / 4$-the $101 / 2$ has been plussed $13 / 4$. It has been found after much careful studying that any hip line may be found no matter what size by simply quartering it and plussing the front quarter. I find this most satisfactory and simple. $E$ to $F$ is $5, F$ to G is $81 / 2, \mathrm{H}$ to $I$ is $41 / 2$, from B to C is $31 / 2$. Notice the length of skirt is 40 inches, from M to N is 32. All the measurements have been abided by and the lines drawn to correspond with the picture. If I wished to keep this Block, I could put paper under this and trace in all my lines and marks and then lift my original and simply cut out the different parts.


## Diagram No. 13

Shows this having been do and placed on the goods ready for cutting. The goods is broadcloth and has been placed with all the different parts on the goods-with the waist line up. Notice none has been reversed. No. I has seams of $11 / 2$ inches, No. 2 the same, No. 3 has 2 -inch seams, the bottom hem as desired. No. 16 is the goods cut from No. 3 and No. 14 is the goods cut from No. 1. No. 15 is the goods cut from No. 2. Notice the notches and thread marks. See Scientific Tailoring No. 25. For 13 and 17 of this page and 29 .

## Diagram No. 17

Is the goods basted up. Notice the pins-pin it on before basting. The hem has been turned up and pinned before basting, the turning up of the hems is not the work it was before so many useful and simple hemmers were brought out. I have put a box plait or panel in the back. From A to B is $111 / 2$ inches, from C to D is 20 inches. The C and D on the box plait are to
coincide with the C and D on the skirt, which you will notice in the Diagram. A box plait or panel will always hang perfect when put on as described, and is a simple matter, to attempt to pin this on without your marks on each side of plaits and marks on each side of the skirt, you will fail.


Diagram No. 29
Is a flat pattern cut to actual measurements, Waist 27 , Hip 42 plus 4 for goods, lengh of back 42 , length of front 45 . This additional length in front is caused by an abnormal abdomen and the same class of instructions will do for a maternity skirt. This draught is showing the flat pattern and the lines and curves of the picture that is to be copied, when your flat draught is made correctly, to whatever measurements you are working from. When this has been done, you may make a choice of whatever style of skirt you prefer, from
any fashion book, and simply make corresponding lines and curves as you see on picture, and after all this has been done and your X's made as shown on draught, for these X 's are to become the notches when your flat pattern has been cut into the different parts. Sections Nos. 13, 14, 15 cover all the points of this section, except that this is for an abnormal abdomen, and a different picture has been copied. Should you desire to keep this flat draught, put paper under it and take your tracing-wheel and trace into all the lines and curves, then X and you may cut into all the lines and curves following the tracing marks. Notch where the X's are, and you will have a true pattern of your picture and it will fit perfectly. Be sure and read my scientific scale of plussing the garment according to whatever kind of goods you are making up; simply look in the index for the information wanted. To make this draught place the scientific method for cutting all such skirts as are shown in Diagram No. 29, or two-piece skirts may be provided with a panel back, from E to $81 / 4$ and from $81 / 4$ to $131 / 2$ and then to bottom edge. Notice the panel or box plait which is shown in the Diagram, the same figures appear on the plait; thus the figures are to coincide and be sewed up in the most ordinary way. The placing of panels or box plaits heretofore has been quite a proposition to the novice. Previous lessons have made the features of this lesson plain, except the raise in front. However, Lessons 12 and 13 show all the points except the points in front A to B, which is 3 inches. Notice B

to C which is $81 / 2$, and D to E which is 5 , and the dart 4. Notice the line B is 3 inches up from the original waist line; notice it slants down to E. All skirts for abnormal abdomens, cut on these lines are simply perfection. The figures on this flat draught from point to point are sufficient for any further information that may be wanted.


## Diagram No. 30

Is simply an exemplary lesson on the art of copying pictures, as I think plenty has been said on the art of cutting to whatever measurements may be wanted. The picture copy accompanying the flat draught and the box plait which is shown partly sewed on. Diagram No. 30 is also a flat draught which may be cut into as many pieces as desired. However, this one is in three pieces and the picture that is copied from this draught is made by placing the Scientific Method on the paper and marking into size required. I feel it is not necessary to say much on this lesson, as the previous work makes this a thing to be understood at sight. Notice that the dart has been taken out at two points, first and second. First gore at waist line is 4 inches and 3 at waist line is 4. I am showing a lot of example sections in fashion book copying. I know these fashions will change, but by the art of copying when understood, all books old and new can be copied with equal assurance and perfect results. Every woman wants her gown made from the latest fashion book. The cutter must know how to do this work quickly and scientifically, and the private person with fine quality of goods should have a high-class style.


Diagrams Nos. 31 and 32
The flat draught of Picture 31. See Diagrams Nos. 33 and 34. It is not necessary to make the lesson long, as so much has been written already. The chief purpose of this lesson is to show that a number of different styles of skirts may be draughted on this flat pattern. No. 31 is copied from a French Plate and No. 32 is copied from New York Styles. This has been done to convey to your mind the true advantage of cutting a pattern to measurements. Most people use first class fashion books, which are always preferable. This will convince you it is not necessary to cut a new skirt pattern for each style you make. Any private person who wishes, may supervise her own gowns and do artistic work herself and be sure she is getting just what she really prefers, and I am quite positive of no misfits, or waste of time. The same applies to a cutter, many dressmakers make a number of dresses for the same person each season. This perfect-fitting flat pattern will enable the dressmaker to carry out any class or designs which she may prefer, of her own origin or from any other source. This is so simple. The heavy pencil
lines are made on the flat pattern and paper placed and a tracing-wheel run all along the penciled lines, then when this has been done lift up the flat pattern and you will find a true copy of your pattern on the paper. Then cut out all the parts and notch as shown on flat pattern. Look carefully at the picture which you are going to copy and make your lines and curves. Of course if a mistake is made in a line you can easily replace it by using the rever on the line, and thus make the proper line. I would advise when a new beginner is copying these fashion plates and copying a number of patterns that colored pencils should be used. To be sure it is a simple matter to place a number of thicknesses of paper under the original flat pattern and simply have four or five flat patterns and then simply copy the picture and then cut out as shown in Lessons Nos. 12, 13 and 14. You will find that you can have as many beautiful patterns as you want and it will not take more than from twenty minutes to an hour to copy any of the pictures, thus enabling you to have such fine designs, and if you prefer designing your own, you can carry on your own ideas quite as satisfactorily.




See Diagram. The measurements required for cutting by the scientific method are as shown on Diagram. The different lines shown on the Diagram will clearly show the parts to be measured. The Hip measurement is taken 12 inches below the waist line, the Bust measurement at the arms' pits. Notice the X at the shoulder, the measure must be taken from the X at bust line to the X at shoulder; this is to locate the exact distance from this to the shoulder to locate the height dart measure from waist line to the centre of bust on line C at No. 6, and in the back from the X at neck to the X at bust line.

Scientific Dress Cutting Methods have been prepared to meet the speed and accuracy required to carry on Scientific Pattern cutting and copy the models set forth in fashion journals. On simple lines special attention has been given to preparing clients for cutting patterns for the broad shoulder, round shoulder and abnormal forms, and is perfection for cutting patterns to model measurements. I have placed a table of figures at the hip line, which is from ten to twelve inches below the waist line. The shoulder is provided with additional widths for the round shoulder form, and for the abnormally full bust, which hitherto have been obstacles in the way of success. It is also provided with a unique measure in the dart. The dart is taken from the waist or, from the centre of point at breast, and from this point to the neck directly below the ear, and this measurement is taken from the bust line to the base of the neck in the back. The front will be easily found on each person. See Diagram with measurements taken. This method allows all patterns to measure two inches larger than the measures taken, and waist one inch extra, and
is especially prepared to cut pattern in proportion to whatever kind of goods is being used. The sleeve requires the taking of six measurements. The method provides for these. The collar is in six different parts, thus providing for all manner of collars. This has been done to enable the novice to work with a clearer understanding. The table of measurements which is provided at waist line for the necessary additional cloth for the hips is a great advantage as it overcomes the necessity of measuring off the distance required. The bust is provided for a 52 -inch size for cutting the darts and for forming the arm's eye a curve is prepared with a pointed end. This is known as a dart and arm's eye curve for cutting.

For cutting the lapels a table of measurements has been placed on the lapel pattern provided with measurements for cutting all lengths below the waist. This method is truly an improvement on all others in use at present. The bodice and coat methods are in conjunction with each other as the various parts are used to cut both garments, and thus, have been provided with two sleeves, two backs, and two fronts.

Measurement for Garments. - Length of front width of chest, length of front from dart point to shoulder, height of dart from waist line and underarm, arm's eye, waist length of back, and length from bust line to neck at the back of neck.

Sleeve Measurements.-Inside arm around elbow, around centre arm, around arm and between hand and elbow, around the hand and arm's eye.

Skirt Measurements.-Skirt front, right hip, left hip, back and hips. When taking the measurements of a form with an abnormal abdomen measure the front across from hip to centre and do likewise when a form is abnormal in back part of hips. There are a great many forms very flat in the stomach and very full in back through the hip line.


## SCIENTIFIC DRESS CUTTING.

Diagram No. 1
Front of Bodice or close-fitting lining. Bust measure 36, Waist 24, Underarm $81 / 2$. The draught has been made so as to show the two styles of darts. When one dart is used, continue it to the shoulder by first putting the small X on a line with the desired point on shoulder and then draught line from dart to shoulder as shown on Diagram.

To make this draught first place method on paper and mark into the size as shown on Diagram. After this has been done, make outline by using outer edge of method-commencing at point A and thence to B , and from $B$ to $C$ and $C$ to $D$. Four inches from neck the one-seamed dart reaches the shoulder, thus leaving a 2 -inch space to arm's eye. When the one-inch dart is used it is 4 inches this being the amount of space for the two darts. In the event of the two darts being used with a 12 -inch taper, the first dart would be $11 / 2$ and the second $21 / 2$. The underarm dart will be easily located by measuring the space between G and the large dart and making an X in the center and then making an $X 3 / 4$ of an inch on each side of the centre. Then measure from G to M and then whatever it measures, make an X from F to underarm dart and then take the outer edge of underarm part of method and draught the line to waist line as shown on Diagram. To make the skirt part of Bodice the first lines to draught are the darts; they are straight lines down always unless the garment is being cut for a person who has a large stomach, and then they must taper to the X made on Diagram more or less just as required. Then after the darts have been draughted
the underarm is the next line to draught below waist line. You will notice the number 12 is straight down from centre of underarm, make an X and then $1 / 2$ inch on each side and then draught from point waist line; at point C mark out 3 inches and then straight down from that 12 inches to H make an X or mark and then draught line from G to H , from H to hip line $61 / 2$ inches; from large dart to hip line on front underarm line is $51 / 2$ inches.


## Diagram No. 2

This is the centre back of Bodice lining or Bodice back with curved lines. Bust 36 , Waist 24 , Shoulder $51 / 2$, Underarm $81 / 2$. To make this draught place method on paper and mark into perforations as shown on Diagram. The size of bust being 36 mark into 36 at waist line on a line with $81 / 2$ at point $A$ and at $B$ and at $C$ and $D$ to $E$ and at $F$ line at waist line at $81 / 2$. Then draught down 6 inches and then $21 / 2$ to the left and then to point $A$. From $A$ to $F$ is $11 / 2$ inches.

## Diagram No. 3

This is the second part of back of lining or goods. The Bust is 36 and the Waist 24, Underarm $81 / 2$. To make this draught place method on paper and proceed to mark into perforations at 36 size and then to the waist line A and D. After this has been done make outline with edge of method then draught down from $D$ to $E 6$ inches and then 5 inches to the left and then draught to waist line A. After draughting line from $\mathrm{C}, \mathrm{D}$, and E take out $1 / 2$ inch at waist line as shown on Diagram.


## Diagram No. 4

This is a Bodice sleeve with plain close-fitting effect. Also a draught has been made showing how to add on fullness on upper part of sleeve. The length is 17 inside arm and 8 at hand and 11 at elbow and 14 at arm's eye. To make this draught place method on paper and mark into the corresponding figures on method as shown on Diagram. The lines A and B are the 17 and the line C is also 17. This will allow you to add on all the extra in width but not in length and the same on back of upper. M to N are the same distances as M to O . The extra on the top is 2 inches. Of course this can be enlarged more or less as desired. Make outline with the method and read carefully the reading matter on the sleeve method.

## Diagram No. 5

A draught of 10 -piece Princess with inverted plait in the back, also a line showing how to make a Habit Back. The one dart in the front extends to the shoulder and the seam in the back continues to the shoulder and meets the front dart line. Size as follows-Bust 36 , Waist 24 , Underarm $81 / 2$. Hips 42, plus 4, and Length 40. To make draught place the scientific method on paper and mark into all the perforations corresponding with those on Diagram. After this has all been done make outer line with outer edge of the method. The one dart is 4 inches and is located on the centre of bust line and after the dart has been made then make the marks as shown on Diagram and next make the line leading to shoulder. In this case the seam is 4 inches from the neck. This can be more or less just as desired. I think the line is more graceful as far from the neck as possible. The space

between $N$ and G is $71 / 2$. Locate the centre and make a dot and then make a dot $3 / 4$ of an inch on each side of the half, then measure the distance between from the dot nearest $G$ and make a dot the same distance from $F$ and then draught lines down to waist line with outer edge of method then directly down from centre make a dot and mark $1 / 2$ inch on each side of the centre and then draught line to point 12 with the method or dart rule. From G to H is 42 , and from H to I is 14 , and from J to K is 12 , and from L to M is $81 / 2$. The hip section is simply to coincide with bottom figures after the underarm has been completed at waist and hip line; out from $G$ at waist line mark 3 inches and then make dot 12 inches down and then draught from $G$ to dot.

Remarks.-All the garments are plussed at hip and bust line.

## Diagram No. 6

This is the centre back of Diagram No. 5. To make this draught place the method on paper and mark into perforations as shown on Diagram and then make it with outer edge of method, first draught line from A to B and then make the line C which is 4 inches from B . C to D is $11 / 2 . ~ D$ at waist line and E to F is 15 inches, F to G is $42, \mathrm{G}$ to H is $18, \mathrm{~A}$ to $\mathrm{E} 11 / 2$. If the Habit Back is preferred simply draught a line from E to G . The hip line is 4 inches.


## Diagram No. 7

This is the second part of the back to Diagram 5. The making of this draught is almost a repetition of No. 6. A to B being the first line to draught, then from B to C , and then to D up to C make a dot at 2 inches distance from arm's eye on shoulder line then draught down to E and make a dot $1 / 2$ inch from the line $E$ as shown on Diagram. Then draught to F length 42, from F to G 14 inches. The hip is 5 inches across; to make the line between A and G first mark out 3 inches from A point, then make dot and draught down; this gives the proper slant for the bottom.

## Diagram No. 8



This is a one-pieced Sleeve, commonly known as the Leg of Mutton sleeve. Mark carefully into all the perforations which indicate the figures on Diagram and make outline with the sleeve method. First cut out the plain sleeve and then coincide the upper and lower parts together as shown on Diagram and on the front seam mark out 2 inches and the back space will be 9 inches. This space will differ according to size of arm. The larger the sleeve the larger the space at the back will be made, and a
small sleeve is controlled in just the same way. You will readily understand the fullness of the one-pieced sleeve will be in proportion to the size of the arm that is to wear it. Of course the height may be added at the top as you desire or according to what is fashionable. This diagram has a 3 -inch raise at the top which is ample, for the present fashion size at elbow is 14 , at hand 8 , inside 18 , arm's eye 16 . The small notches in the upper part are to be plaited. Never baste in a sleeve unless both are prepared and are exactly mates.


## Diagram No. 9

This is the centre back of a Bodice with seam extending to shoulder. This draught can easily be made by placing the method on paper and marking into perforations as shown on Diagram. The Bust 36, Waist 24, Underarm $81 / 2$. First mark into perforations at waist line point and from A to $B$ and $C$ to $D$ and $D$ to $E$ and then make outline with edge of method; from $B$ to $C$ is $31 / 2$ inches, from $C$ to $D 11 / 2, D$ to $E 15$, E to A is $11 / 2$, from E to F is 12 inches with a half inch extended as shown on Diagram and from F to G 4 inches, G to A is 12 .

Remarks.-After the lining has been tracing-wheeled do not fail to notch the waist line and all coinciding junctions. As in some linings the tracing-wheel marks disappear in a short time and in Taffeta silk the wheel marks are lost to sight almost immediately. When cutting cloth if a chalk mark is used and threadmarked, notch the coinciding junctions just the same, as you must know reliable marks are infallible guides; and to work with an assurance that, that which is being done is perfect will give a restful state of mind to the worker. It is my opinion that more people in this business are tired because of the lack of a reliable principle to work on than from the actual work.


Diagram No. 10
This is the second part of Back. Bust 36, Waist 24, and Underarm $81 / 2$. I am going to give a description of the draughting of a shoulder; as you will notice the seams are from waist to shoulder. In order to put this into the two parts when draughting. Now we are going to take for example a $51 / 2$-inch shoulder, first we draught the centre back and we mark into the perforations at 36 on shoulder line and at neck line, we have kept off $31 / 2$ inches for the centre back as you will notice on the back Diagram No. 9 . This No. 10 we will mark all round in 36 at C line and at D line, and draught the line C to D the full $51 / 2$ and then from C mark $11 / 2$ inches and then draught down to E and take an $1 / 2$ inch out at waist line as shown in Diagram and at point A mark out 3 inches and then straight down from the 3 -inch mark at G then draught line from A to G with outer edge of method and from G to F 5 inches.

## Diagram No. 11

This is the first lesson on how to cut all kinds of loose rippling effects in a most simple manner, and shall call your attention to the loose garments you have seen which have no plaits or gathers at neck or shoulders and are provided with ample fullness such as ripples. First cut a plain Bodice pattern to waist line. The Diagram is showing a 36 Bust and $81 / 2$ Underarm. To make this draught place the method on paper and mark into perforations as shown on Diagram. Then cut the pattern into 8 parts making 5 of the front and 3 of the back; you will notice by the Diagram these 5 pieces in front are coincided at the neck and shoulders and underarm so to prevent these parts from being enlarged, and separation at waist line may be seen on Diagram. If the garment is to be a long loose wrapper, measure from waist

line of pattern on the cloth down as far as required say 42 inches in skirt length. This skirt will be full skirt length and is very simple to make.

Diagram No. 12
This is the back of Diagram No. 11 showing the pattern split. To make this draught first make a plain back by marking the perforations, as shown on Diagram. After this has been completed cut the back into 3 parts and number them making the shoulder coincide spreading the pattern as shown on Diagram. To make loose garments in a short time that is truly the perfect way in which to work; as loose garments must have gathers or plaits this is preferable in every way as good results are gotten with a great saving of labor and time.


## Diagram No. 13

This is an 18 -pieced Princess. Waist $251 / 2$. Bust 36 . Underarm $81 / 2$, Hip 40; with plaited skirt.
$A$ fen remarks.-I have preferred to use 12 inches down from waist line for hip line, as this is where the largest part of the hip centres; 6 inches from waist line does not give the largest part of the thigh and the fact of cutting a pattern to fit the fullest part of hips and to fit the waist, I find this will provide a perfect line and size for the 6 -inch line, and I am quite positive the 6 -inch measure is void unless the 12 measure is used also. I have been selling guaranteed patterns for years and know from experience which is best. All the lessons are from waist line up and with the letter A. This will give one thought instead of a mixed number to remember.

To make this draught, place the method on paper and mark into perforations as shown on Diagram; from A to B 15 inches, from B to C $43 / 4$ inches, from $C$ to $D$ is 6 , from $D$ to $E$ is $41 / 4$, from $E$ to $F 6$, from $F$ to $\mathrm{G} 91 / 2$. This is caused by the F and G lines being at the extreme underarm which is always an inch higher than the direct line under the arm, and in marking into the perforations to make outer line it is necessary to draught it in this manner. From C to H is 42 , the waist line A between first dart is $11 / 2$ and the space between first dart is $11 / 2$. Back dart is $21 / 2$ inches from underarm point. $G$ is $81 / 2$. This is divided into 4 parts: commencing from G $11 / 2$ make X at dot make X and $3 / 4$ of an inch, then make an $\mathrm{X} \quad 11 / 2$ inches make an X $3 / 4$ of an inch apart, and then an $X$ at $11 / 2$ and an $X$ at $1 / 2$, then an $X$ at $11 / 2$. This has finished dividing the $81 / 2$ inches into 4 equal parts, two darts $3 / 4$ inch and $1 / 2$ inch dart, then proceed to make the three at arm's eye; first at line F mark off $21 / 2$, then 2 inches $21 / 4$, the shoulder is divided into 3 parts 2 inches in each, hips 12 inches down from waist line centre to front dart is 2 inches, and the second and third is $31 / 2$, and fourth is $31 / 2$ and fifth is 3 and sixth $31 / 4$. The bottom edge section from front centre 12 , second 12 , third 12 , fourth 12 , fifth 12 and sixth 12 ; length from waist down is 42 . The hip line is plussed 6 inches as you will observe when measuring pattern. The bust is plussed also. For instance if the waist is 24 , mark at 36 at neck and shoulder, at the bust you notice the pattern is marked 38. At hip line on each side leave 4 inches for plaits.

## Diagram No. 14

This is centre back for 18 -pieced Princess. Bust 36 , Waist $25 \frac{1}{2}$, Underarm 81/2. Hip 46. To make draught place method on paper and mark into perforations as shown on Diagram and mark out lines with edge of method. From A to B is 15 inches, B to C is $2, \mathrm{C}$ to $\mathrm{D} 11 / 2$. From D to E is 16 and $E$ to $F$ is $42, F$ to $G$ is 20 at hip line 4 from $M$ to N. From $A$ to $E$ waist line $11 / 2,12$ inches down from waist line leave 4 inches for plait.

## Diagram No. 15

This is part of back for 18 -pieced Princess. Bust 36 , Underarm $81 / 2$, Waist $251 / 2$, Hip 46. To make draught place method on paper and mark into perforations as shown on Diagram. From A to B is $91 / 2$, from B to C is $41 / 4$, from C to D $41 / 2$ inches. Divide into 2 parts $21 / 4$ inches in each. From D to $\mathrm{E}, 15$ inches; E to F 42. F to G this is in two parts 15 inches in each section. $A$ and $E$ at waist line is 2 equal parts with an 1 -inch dart taken out of the centre at X ; this leaves $11 / 2$ inch in each at hip line, 3 inches each.



Diagram No. 16
This shows a long loose House Dress or Maternity Gown with 14 pieces. This draught is easily made. Read Lesson No. 11 as the first lesson on the art of cutting loose garments on the simplified plan of cutting the pattern into several pieces and spreading it so as to make the circular effect. By this you will understand that any picture you may see with plenty of fullness from the shoulder, but having no plaits, they are cut with the circular effect. I shall give a full description of how to make a draught of long gown. Bust 36, Waist 26 , Underarm $81 / 2$, length from waist down 42 . To make this draught place the method on paper and mark into perforations as shown on Diagram; in size 36 at neck and shoulder and underarm, and at waist line $81 / 2$ then mark outline with outer edge of method first from A to waist line to $B$ at neck then from $B$ to $C$ and then from $C$ to $D 6$ inches. Place star $E$ on arm's eye and draught to $D$ front point and then to point $F$ and to $G$ which is $91 / 2$ inches then proceed to draught waist line then split pattern and number as shown on Diagram No. 11. Cut the pattern into 7 pieces and then proceed to cut the cloth. First measure the length required and then commence by placing Part I on goods keeping the neck and shoulder and arm's eye together and allowing the pattern to spread at waist line-first section $11 / 2$, second $11 / 2$.
third I , fourth $11 / 2$, fifth $11 / 2$, sixth 2 , seventh 2 . You will notice how great the space has increased, 42 inches down first gore is 8 , second 9 , third 10 , fourth 11 , fifth 11 , sixth 9 and eighth 9 , all these parts have been placed together on Diagram so as to allow you to understand that this garment may be cut on a complete circular style or in 4 pieces. When this pattern is placed together as shown on Diagram. To be sure a much handsomer garment can be made from the 14 -piece, although when a woman wants a simple house gown the 4 pieces or the complete circular effect is splendid as she can make a maternity gown in a very short time and have no plaits or gathers to look after.

## Diagram No. 17

This is the 18 -pieced plaited Princess. For making this draught look at Diagram No. 13 for front as this Diagram is shown for the purpose of giving a clearer insight into the pattern as how each gore should look when finished. To make a draught of a garment with 18 seams it has a great many lines crossing each other and for this reason I am showing this Diagram with each gore in order to get this garment in single file; as it is shown here you will have to trace-wheel off one of the gores from the draught as the lines cross each other. When cutting the cloth it will not be necessary to cut all the seams going to the bottom as you will notice by Diagram how easily it will be to coincide some of these pieces and save the work of cutting and basting.

## Diagram No. 18

This is the back section of Diagram 14 and 15 showing the plaited Princess in single gore. This will help the student to understand more readily.



Diagram No. 19
This is a draught of an 18 -pieced Princess without plaits. Diagram No. 13 is the instructions for making this draught omitting the plaits and making the gores 10 inches at bottom instead of 12 . Hip measure is the same. This is a most beautiful Princess with all the seams trimmed, the lines are graceful and can be trimmed in so many ways. To make a lovely tailored Princess gown I would suggest sewing up the seam and then putting a stitching on each seam and have the bust and shoulders padded properly. We sell patterns of all the designs in this book and will cut out the goods and baste them up and express it to any part of the country. We attend to all mail orders at once.

## Diagram No. 20

This is the back section of No. 19 and the instructions given for the cutting of back of plaited Princess, Diagrams Nos. 14 and 15, the plaiting omitted only in centre of back.

## Diagram No. 21

This is the 18 -pieced Princess when placed on goods. If this gown is to be made of wide material it is not necessary to have a seam at each gore. The outline which is shown on Diagram is the distance the seam should be from the stitching. As has been said before when wide materials are used three or four gores may be coincided and in this way work and time saved. We cut and baste up all seams should it be required. When a gown is wanted in great haste, if cut and basted it can be made up in your home, whereas a high-class garment cut in a hurry by a novice has been the means of spoiling the goods. I have said a great deal about the care of cutting and basting and when a novice is in a hurry she cannot exercise care.



## Diagram No. 22

This is a plain Morning Wrapper for a person with a high stomach. The raise is 2 inches, this means that from her waist line to floor in the front is 2 inches longer than the back. These styles of figure range as far as a raise of 5 inches in the front. With such abnormal size great care must be exercised in cutting garments for them. You will notice the Diagram is 44 inches in front and 42 back. To make this Diagram place the method on paper and mark into the perforations as shown on Diagram 22. After this has been done mark outline with outer edge of method, first from waist line A to B 17, D to E $51 / 2, \mathrm{~F}$ to G 10 , to H 42, to I 23, I to waist line at dart 43 , from G to K 12 and from K to waist line 44. Space of dart is $51 / 2$ tapering at bottom to 1 inch. The underarm space between dart and point $G$ line is 9 inches the X is in the exact half and mark one inch each side of the X gives a dart of 2 inches under the arm and tapers to nothing at 8 inches below the waist line. In basting up the dart you will find that one side is longer than the other 2 inches notch from waist line and the notch 15 inches up from the bottom edge. The notches at bottom edge coincide and the seam at waist section and the extra length which is on the front must be eased into the space between the bottom notch and the waist line mark. The dart can be extended to shoulder by following the dotted mark to shoulder. Bust measure 44, Waist measure 29, Hip 48, plus 4 inches, garment finished 52. 12 inches below waist.


## Diagram No. 23

This is the back section of Diagram 22, a House Wrapper. To make draught first place the scientific method on paper and then mark into perforations as shown on Diagram. After this has been done take outer edge of method and make outer line, from A to $\mathrm{B}, \mathrm{C}$ to $\mathrm{D}, \mathrm{D}$ to E is $11 / 2$, E to F 18 . The neck and shoulder is marked into 40 as this is the size of bust, but as all the patterns are plussed at bust and hips the bust is marked into 44, at the waist line this draught is marked into 48 in order to provide the 1 -inch dart which is extended 4 inches below waist line. From F to G is 42 , from G to H 12. from H to A 42 , hip line is 12 inches from waist line, from M to N is 9 inches. If the seam is desired to reach shoulder in back section follow dots to shoulder and draught centre line.


## Diagram No. 24

This is a long slip lining with circular flounce. This draught can be used for a long Princess underskirt. Bust 36, Waist 26, Underarm 81/2, Hips 46. To make draught place the method on paper and mark into the perforations as shown on Diagram, then outline with method, underarm dart 2 inches, front dart $41 / 2$. The line $S$ under the arm is in two parts 6 inches in
each, the waist line $G$ underarm mark 3 inches out from $G$ and make an $X$ and draught from G to X then 5 inches to the left and then draught the front dart which is $41 / 2$, taper this off to 2 and when this is done measure 5 inches to the right then draught hip line from waist line to S ; from G to H 20 , from H to I 8 , from G to K is 6 . The circular flounce is draughted with circular flounce method. In the Skirt Book full descriptions are given of flounce cutting.


Diagram No. 25
This is the back of No. 24. To make draught place method on paper and mark into method as shown on Diagram. The waist line section F and A is 4 inches, the back from $F$ section is $11 / 2$ and from A 2, this leaves $1 / 2$ inch to curve in. From F to G is 20 and from G to H is 4 and from I to J is $8 ; 12$ inches from waist line and back section is 4 and underarm section 5 .


Diagram No. 26
Circular flounce for long Slip. See Skirt Book for instructions.


## Diagram No. 27

This is a Nightgown or Wrapper draught which is unique in design with great simplicity of construction, and a most comfortable garment and can be trimmed most beautifully. The sleeves are cut into the back and front, the gore which extends up the side and under the arm prevents the possibility of tearing under the arm and helps the garment to wear better and longer.


Diagram No. 28
Child's Nightgown or Wrapper. Can be made in half the time the other styles are made. The pattern is guaranteed to be the perfection of comfort and duration. It is cut on the same lines as No. 27.


Diagram No. 29
This is a tight-fitting Underwaist, size 36 Bust, 24 Waist. This is a very simple draught and the lessons preceding this will be sufficient experience to enable the student to make the draught, directly they know what size of bust or have the measures required.

Be quite sure to cut your underwear large enough or be sure to shrink the goods first. For my own I prefer to make them 4 sizes larger than the measures. For instance if my bust was 36 I would make my underwaist 40 , and if my underarm was $81 / 2$ I would make it good $91 / 2$. To allow for shrinking cotton, makes a lot of work and by plussing the garment you can save all this time and labor.

Diagram No. 30
This is the back part of Underwaist.


## Diagram No. 31

This is a child's Norfolk or Buster Brown effect. To cut a pattern for a child, take the measures as you would for a grown person, but do not fail to cut the pattern 3 sizes larger than the measures you have taken. For instance, if your child measures 21 around bust, cut the pattern into size 24 . as children's garments must have a loose but smooth appearance. When a garment is properly cut the construction is a simple matter. Most ladies enjoy making their children's garments.

## Diagram No. 32

This is the back of Diagram No. 31, the outline of the strap going down the front and back. To get a perfect pattern of the strap place a piece of paper under the pattern you have draughted and take the tracing-wheel and trace along the line you have made and when this has been done lift up the pattern and your strap will be there for you to cut along the tracing marks. and then cut the goods for strap and be sure and place the strap on the goods so as to have the twill go in the same way in the strap as in the front or back whichever you are going to do. To be sure if you want the strap on the bias or the cross of goods that is a different thing.

No. 33 is the flat pattern of 32 .


Diagram No. 33
This is the sleeve for Diagram No. 31 and as I have said these children's patterns are at the latter part of the Bodice cutting.

The cutting for the children's garments will be a simple matter as the method is so clearly arranged.


35


Diagram No. 34
Is in 5 parts, and the instructions for cutting No. 32 will answer for all this.

## Diagram No. 35

Shows the Collars cut from Collar Method. No. 20 shows plain collar. It is not necessary to say much on this, as the Collar Method makes this clear. No. 21 shows a collar cut with the points in the centre. The points are $41 / 2$ inches from front and 3 inches from back. A to $C$ is 2 inches, $C$ to Point is $41 / 2$ to $D$ in Back 3, B to $D$ is 3 inches, $A$ to $B$ is 7 .


SCIENTIFIC COAT CUTTING.
Diagram No. I
Double-breasted Box Coat with shawl collar. Measurement 40 Bust, Waist measure 26 , length of underarm 9 , length from waist line down 26 , or as long as desired. To make this draught mark into 40 at bust point, neck and shoulder and repeat your marks at 40 at arm's eye and 9 underarm; 44 represents 44 bust. This will give you an inch and a half extra at waist, 4 inches to the dot at underarm. Take out the one inch at waist line allowing this to diminish at point figure 3 , at arm's eye and diminish at point 8 inches down from waist line; having thus completed mark down 40 inches from waist line to foot at bottom edge, then from F to G 28 inches, then to waist line A 40 inches, the double breast at waist line is 2 inches out from line at neck to waist line. The rever 4 inches from neck point. Break line C to B. You will notice on this Diagram at neck I have shown a step collar and revers so you will readily understand the difference between these collars. I have carefully designed a Shawl Collar method which is a great time saver. On looking at my scientific coat method you will be quite sure to notice its merits.

## Diagram No. 2

Is the back of the Box Coat, which is easily draughted by marking into perforations at size 40 and 9 at waist line A to bottom edge 40 inches in

length and 41 in width. The width of back at waist line is $41 / 2$ inches, shoulder 6 inches.

Remarles.-Read carefully the description of cutting from actual measurements as so many different forms must be dealt with, the round shoulder, the shoulder and back which are in some cases very fat and extra cloth must be provided to meet the requirements. See Index.

## Diagram No. 3

Sleeve with two pieces, arm size 16, inside length 18 , elbow 14 , hand 12; mark into perforations at 18 length, 14 elbow, hand at 12 , arm's eye at 16 on method. This sleeve is a plain coat sleeve with a slight fullness at shoulder. In making the Diagram the lines leading from hand to shoulder are spoken of as $B$ and $A$ and the inches between are 18. The cuff lines are from $D$ to $D$ 4 inches and from C to C is 8 inches. The small marks at top of sleeve are notches which are the marks for plaits. This can be plaited into the size of arms'eye and the first notch on front of shoulder is AI $1 / 2$ from seam and $11 / 2$ from seam at back. The seam of the sleeve must be $1 / 2$ inch up from $E$ line as shown on Diagram of Box Coat.

## Diagram No. 4

Ladies' Vest. Bust 38, Waist 24, Underarm $81 / 2$. To make this draught first place the scientific method on paper and mark into perforations at 38 at neck $B$ and shoulder $C$ to $D$ and 38 at arm's pit and 38 at $E$ and from E to F at underarm 9 . The $41 / 2$-inch dart is located directly at bust point and the underarm dart is located by getting the exact number of inches between darts and point F at 9 and then mark a dot at the exact centre of the half

and then mark off three-quarters of an inch at each side of half the A at waist line, and centre front line to G is $1 / 2$ inch. The step collar has 2 inches of drop from neck which gives a graceful long collar. I advise cutting collar the natural size. I to C is 2 inches, J to K is 4 inches. The low collar method which I have prepared can be readily understood. The collar method is so designed to give the cutter a clear understanding of perfect-fitting collars. Read carefully all the remarks and instructions.

## Diagram No. 5

Back of Ladies' Vest. First mark into all the perforations as shown on Diagram No. 5. Then taking edge of method and draught line from $A$ to $B$ and then from $B$ to $C$ and $C$ to $D$ and $D$ to $E$ and $E$ to $F$ and $F$ to $G, 3$ waist line at the 9 to $A$ is 4 inches.

Diagram No. 6
Shows a dartless Box Coat for 40 Bust, and 36 length from waist line down, double-breasted with step collar with low effect. First mark into the 40 as shown on Diagram and 9 at underarm point. From A to B is 15 . from $B$ to $K$ is $31 / 2$, from $K$ to $J$ is 17 , from $A$ to $J$ is 2 , from $L$ to J 36, from I to H 20, from H to G is 36 , from G to 9 at waist line is 2 .

Remarles-Collar methods and rever methods are so arranged that they can be understood at sight after reading description.

Diagram No. 7
Back of Box Coat with seam down back and extra fullness at waist line of 3 inches and bottom edge from H to G is 10 inches. H to A is $36, \mathrm{~A}$ to F is $10, \mathrm{~A}$ to B is 9 , and F to E is 3 .


Diagram No. 8
Is a ten-seamed double-breasted Long Coat, 38 Bust, Hip measure 40, and Waist measure 25 , and 40 inches skirt length from waist down to bottom. To make draught mark in the size 38 as shown on Diagram, then mark out line from A to B 15 inches, $B$ to H 3 inches, from H to waist line of doublebreasted line is 18 inches, from I to A is 2 inches, from A to dart line is 3 inches. The dart is 5 , from dart line to G is $71 / 2$. Put a mark or X in centre of the half and then mark off one inch at each side as shown in Diagram. This will leave a space at each side of centre of $23 / 4$ as shown on Diagram. The dart which continues to shoulder from neck is 4 inches, leaving a space of 2 inches at arm's eye. The shoulder is 6 inches, the collar and lapels are readily understood on method; 12 inches down from waist measure is the hip line which I have preferred as the 6 inches distance does not reach the fullest part of the thighs. From N to M is 12 inches and is straight down from underarm dart. Put a dot or X in centre and then mark $3 / 4$ inch on each side and then take method and mark out line as shown on Diagram. For draughting the skirt length after the hips have been draughted for both front and back, take tape line and measure down from waist line to 40 at each junction. The width of the doublebreasted line and to darts are straight down as shown on Diagram, 2 and 3 inches. Space of dart at bottom is 5 inches; width of third gore is $51 / 2$, width of fourth gore at bottom edge is 8 inches.

## Diagram No. 9

Shows the half of back Coat, 40 Bust and 25 Waist measure. To
make this draught first place method on paper and mark into perforations as shown on Diagram, point $A$ waist line and to $B$, then to $C$ and $D$. The space between $D$ and $C$ is 6 inches and a line is drawn 2 inches from $C$ down. The waist line E which is 15 inches, E to A is $21 / 2$ inches and A to G is 40 . at hip line 12 from point $A$ at waist line and 4 inches wide at hip and 9 at bottom edge.

Diagram No. 10
Is centre of back of long Coat with Habit Back, Bust 40, Waist 25. First place method on paper and mark into perforations as shown on Diagram. A to B is 15 inches, B to C is 6 inches. You will notice a space of 2 inches has been taken off thus leaving 4 , as the other 2 has been left on back. First part No. 9 from D to E is 16 inches, from E to A $11 / 2$, A to F 40 and 7 inches in width, hip line, 12 inches from waist. M to N is $41 / 2$ inches.


Diagram No. 11
A long Jacket with Prince Albert back. Waist measure 24, Bust measure 36. The front of this Diagram resembles No. 8 in the draughting. All
but the collar which is a low rever, thus you will readily understand from collar method. First place the method on paper and mark into perforations as shown on Diagram. For marking the collar, see collar method and rever on Jacket method. Having lesson on No. 8, you will understand the front of No. 11 as it the same, all but a very slight difference in size. The back of this Jacket is No. 12, and No. 13 resembles Nos. 9 and 10 in bust and shoulders, the skirt part being different. The teacher need not give instructions only on collar of front and skirt of back. When a pupil has mastered Diagrams Nos. 8, 9, 10, this lesson can be readily understood.


## Diagrams Nos. 12 and 13

Place method on paper and mark into perforations as shown on Biagram. Waist line from A to B is 4 inches and one inch dart is taken out of the centre. This is done to prevent plait drawing on hip curve. Plaits must hang gracefully. The slightest pressure will disarrange plaits. So many jackets with Prince Albert backs are poor looking on this account. You must give the proper amount of goods for plaits and be sure to have them hang loosely in centre. What I mean by saying loosely in centre, be quite sure that when the Jacket is buttoned up all the way down the front, it does not affect the plaits in any way. If it does, it is because the Jacket has not the proper hip size, so let it out over the hips and this will allow the plaits to fall in a smooth and graceful manner.
Diagram No. 14
Double-breasted Jacket with Collar and revers. The fullness which falls from shoulders in ripples and makes a most graceful garment, which
can be used for a loose rainy-day coat or a full loose outing coat as the fullness can be easily arranged to fall just as desired. Bust 36, Waist 26, Underarm $81 / 2$. This garment is the first lesson on the loose wraps which I am going to make as simple as possible. First place the scientific method on your paper and mark as shown on Diagram into 36 Bust and $81 / 2$ Underarm and into the revers of the method 4 inches from B to H and A to N 2 inches out on revers. Rule on method, and then make your outline by placing neck part of method at neck dots and shoulder of method at dots on shoulder section and around arm's eye and underarm. From A at waist line to B at neck 15. From B to C and to D 6 inches. Place star E on arm's eye and draught to D point and then to point F and from point F to G which is $91 / 2$. Then proceed to draught waist line then split pattern and number as on Diagrams I, 2, 3, 4, 5.


Diagram No. 15
Back of Jacket of Diagram No. 14. Bust 36, Waist 26, Underarm $81 / 2$. Place the method on paper and mark into perforations as shown on Diagram. This Diagram shows a plain bust part of Jacket which is first carefully draug 'od and then cut into 8 parts, 5 for the front and 3 for the back. This is a very simple and perfect draught and can be cut in 2 minutes after the pattern has been cut into the 8 parts. Number them as shown on Diagram keeping the shoulder and neck lines and arm's eye together and spread them as shown and this will give a most perfect rippled coat. You will readily understand this simple and graceful garment and this art of splitting your patterns will give fullness as much as desired, as the pattern
can be spread as much as 3 inches in each placed. In this manner of spreading the pattern a loose and graceful morning wrapper can be made and have plenty of fullness in the skirt and without the trouble of making plaits or gathers; and I think wrappers should not have plaits or gathers at neck or shoulders if the goods are thick.


This shows a long loose Jacket with 14 pieces cut on the same principle as Diagrams 14 and 15 , cutting a pattern to waist line and then cut it into 7 parts keeping the shoulder and arm's eye together. This jacket is shown with the 7 sections cut and basted up omitting the shoulder seam. To make a loose wrap and have no seam coincide but the shoulder and arm's eye, first cut your 14 sections and then place them on goods and your garment will have a full circular effect. Of course all kinds of goods will not be wide enough so you must sew the goods in the same manner as for a circular
skirt. The making of this garment is very simple and any woman can make pretiy morning wrappers or a maternity house gown in very short time. A wrapper with the 14 seams and trimmed on each seam makes a handsome teagown. A full description of how to cut goods and how to place pattern on goods will be very helpful. I am going to use stripes for example, as these goods are easy to remember and by thus remembering how the stripes are cut you will readily understand that the pattern must be placed in the same way on goods which have not the stripes so as to prevent an awkward line or a bias effect where straight lines are required. You must cut the goods in 14 parts; thus you can have straight lines with a slight slant effect.


## Diagram No. 17

This is a short step Collar for a 36 Bust. See Scientific Method, mark into perforations size 36 and 2 inches in height (preparing the canvas for collar cut the canvas on the bias). First cut a piece of canvas the exact size of pattern and then cut a second piece a half inch smaller than pattern all the way around; this will prevent the edge from being thick as thin flat edges are one of the marks of beauty in tailoring.

## Diagram No. 18

This is a low step Collar for a 38 Bust and $21 / 2$ inches high. The low step collars are very much admired as they have a more graceful appearance and ladies with full busts should not use the short step collar as it adds size to the appearance. Read Lesson No. 17.

Diagram No. 19
This is a Shawl Collar cut for a 40 Bust. See Shawl Collar method and Lesson No. 17. The method for cutting shawl collars has been carefully planned and is a most necessary device and fills a long-felt want and is understood at sight on account of its simplicity.

Diagram No. 20
This is an 8 -pieced Storm Collar. This Diagram is 24 at the top and
neck 16. To cut this collar place the method on paper and mark into perforations the size required. The measures required for a storm collar are three, the height, and around neck, and around the head from the point of the nose to the centre of the back of the head. A storm collar when turned up should meet and completely cover the mouth and nose. All large collars are made for the purpose of keeping the neck and face warm so the nose must be completely covered. The wearer can tip the ends if desired.


Remarks 21.-A storm collar must be made of good canvas as it must be self-supporting and remain firm until worn out. After the canvas has been seamed up, put a piece of hair-cloth on the inside and baste it on firmly to the canvas. When the collar has been stitched, the canvas and hair-cloth will make ample stiffness, but in the case of fur where stitching outside cannot be done you must stitch the inside before putting on the fur. I do not advise featherbone in storm collars.

The 4 -pieced Collar is constructed the same as the 8 -pieced Collar, the only difference being the dividing of the pattern in 2 instead of 4 .


Diagram No. 23
Sailor Collar. For 36 Bust and depth of 7 inches from $A$ to $B$, from B to C 9, from C to D 12, from D to E 10, from E to F 11, from F to $A$ 3 inches.

Place method on paper and mark into perforations and outline with edge of method. Any perforations desired can be used. For instance one
might want a collar for a 36 bust much larger in all but the neck. This can be easily done by marking into the 36 at neck and all other corresponding perforations as many sizes larger as desired.


Diagram No. 24
This is a loose Jacket for a large figure. Waist 34, Bust 48, Hip 60 , and 3 inches longer in front than back. You will readily understand the style of this figure is one of those with high and full abdomen. Women with this style of figure must be treated with great consideration as the garment if not properly cut and the necessary goods provided for the full front, it will drag the goods from the back to the front and thus make the garment useless as the appearance across the front will be most objectionable.

The lesson on this garment is quite simple. Bust 48, Waist 34, Underarm $81 / 2$. Hip 60 , length from waist line to bottom edge of front is 43 and 40 in the back. First place the method on paper and mark into the 48 size as shown on Diagram. From A to B at neck 16 , from B to C 6 , and from $C$ to $D$ is 6; $D$ to $E$ and $E$ to $F$ are the arm's cye curve, $F$ to $G$ is $91 / 2$, and G to H is 40 , and H to I 15 , and from I to the notch or cross mark is 19 inches and up from Q to the cross mark on M line is 19 inches. When cutting cloth put the bottom edges Q and I together, and the corresponding notches at No. 19 together, then proceed to shoulder point on M and N line, make a mark down from shoulder to N at 10 inches
and on the opposite line of P make a notch O 10 inches down from shoulder, you will note that the 3 inches which were left on front must be carefully eased in along the lines $10, \mathrm{~N}$ and P , and O . Thus 3 inches of length can be eased in and the seam sewn up and the front will hang gracefully and the full front will not be noticeable as the Jacket will hang straight with a box effect in front; and for cutting a jacket for such a form with a dart use the same instructions. From Q to R is 12 , from R to $\mathrm{A} 21 / 2$ inches for a doublebreast to point X . From B at neck mark 3 inches out to X . All the lapels for all kinds of jackets shown in pictures are construction work. On account of this I find it is not necessary to add length to the lesson and give the pupil extra work.

## Diagram No. 25

This shows the back of Diagram 24. Bust 48, Shoulder $71 / 2$; the Front Shoulder is 6 , the additional width of shoulder in this case is to provide width: and as a rule such figures as 48 bust measure have very fat shoulders and across the back; and you will notice the goods must be suppressed into the length of front shoulder. This extra amount has great force and the back of the Jacket will hang properly and have a comfortable appearance. The usual amount left on the back is $1 / 2$ inch; you will understand the $11 / 2$ inches is quite an increase of goods in the back section. Place method on paper and mark into perforations as shown in Diagram. A to B $91 / 2, \mathrm{~B}$ to $\mathrm{C} 71 / 2$, D to E 2, to F 17, F to G 40, G to H 15, H to A 40, A to F 9.


## Diagram No. 26

This is a long 18 -seamed Jacket. Waist $251 / 2$, Hips 44, Bust 36 , Underarm $81 / 2$. I have preferred to use 12 inches down from waist line for hip line, as this is where the largest part of hip centres; 6 inches from waist line does not give the fullest part of the hips.

Pupils will be advanced in the art of Jacket Cutting. when this lesson is being taught and will no doubt have a clear understanding of the methods and in this way will readily understand this lesson. All the lessons are commenced from the waist line up and with the letter "A." This will give one thought instead of a mixed number to remember.

First place method on paper and mark into perforations as shown on Diagram from A to B 15 , from B to C $43 / 4$, from $C$ to $D$ is 6 , from $D$ to $E$ is $41 / 4$. from E to $\mathrm{F} 63 / 4$, from F to $\mathrm{G} 91 / 2$. This is caused by the F and G lines being at the extreme underarm, which is always I inch higher than the direct line under the arm; and in marking into the perforations to make outer line, it is necessary to diagram it in this manner:-From G to H is 42 , the waist line A , between A and the first dart is $11 / 2$ and space between darts $11 / 2$. Back dart $21 / 2$ inches, from large dart to underarm $G$ is $81 / 2$ inches. This is divided into 4 parts, commencing from G $11 / 2$ inches. Make an X , and $3 / 4$ of an inch make an X , and then make an $\mathrm{X} \quad 11 / 2$ inches, and then make an $X 3 / 4$ of an inch apart, and then an $X$ at $11 / 2$ inches, and then an $X$ at $1 / 2$ inch, then an $X$ at $11 / 2$ inches. This has divided the $81 / 2$ inches into four equal parts. Two darts $3 / 4$ and a half-inch dart. Then proceed to make three sections at arm's eye. First at line F mark off $21 / 2$ inches, then 2 inches, $21 / 4$. The shoulder is divided into 3 parts, 2 inches in each. The collar and revers are a part which have been made so simple and clear, they are understood at the mere reading of the matter.

On the Rever and Collar Method.-Hips 12 inches down from waist line, first line from centre to first dart is 2 inches and the second is 2 inches and the third is $21 / 2$ inches, fourth is $21 / 2$ inches, fifth is 3 inches, and the sixth $21 / 4$ inches. At bottom edge first from front centre 4 inches, second 5 inches, third 5 inches, fourth 5 inches, fifth and sixth 6 inches. Length from waist down is 42 inches. The hip line is plussed 6 inches, as you will observe when measuring pattern.

The Bust is plussed also, for instance if the bust is 36 inches make it 36 inches at shoulder and neck, but at the bust you will notice the pattera is 38 inches. Some goods will require 40 bust.


Diagram No. 27
Is the centre back of Diagram No. 26. Bust 36 inches, Hips 46, Shoulder $61 / 2$, and Underarms $81 / 2$ inches. First place method on paper and mark into perforations as shown on Diagram and make outer line with edge of method. From A to B is 15 inches and from B to C is 2 inches, from C to D $11 / 2$, and from D to E 15 inches, and E to F 42 inches. F to G 10 inches. The hip is 4 inches from M to N , from A to E at waist line is $11 / 2$ inches, this completes the centre back.

## Diagram No. 28

Is the second part of back of No. 26. Bust 36 inches, Waist $251 / 2$ inches. Underarm $81 / 2$ inches and Hip 46 inches. Place method on the paper and mark into perforations as shown on Diagram. From A to B is $91 / 2$, from B to C is $41 / 4$, from C to D is $41 / 2$ inches. Divided into two parts, $21 / 4$ inches each, from D to E is 15 inches, E to F 42 inches, F to G 14 inches. This is in two parts, 7 inches each. Section $A$ and $E$ at waist line, these are in two equal parts, with a 1 -inch dart taken out of the exact centre, thus leaving $11 / 2$ inches for the two gores. The back of this jacket is in 3 pieces; 12 inches down from waist line, these are in 3 inches each. The R line crosses over on section S and over R . In making the draught this saves time; so to get the two separate gores to place on the goods. I would advise putting an extra piece of paper under and trace one gore at the line which crosses.

Diagram No. 29
Is a Newmarket Jacket; 38 -inch Bust, 25 -inch Waist, and 9-inch Underarm. The scientific method for cutting all kinds of circular skirts is used for cutting the Newmarket Skirt for Jacket. This I need not describe, as the chief feature of this Diagram is that it is to demonstrate how to draught for round shoulders. You will notice the draught is like preceding draughts, only in shoulder and underarm, the extreme underarm, F to G is one inch longer than form which joins it, and out of the centre of the shoulder 2 inches can be taken as in Diagram No. 32. This dart may extend down 8 inches from shoulder on dart line. Always advise a round-shouldered person to have the front padded and omit the dart. But some people will not have padding and you must remember that wash jackets cannot be padded, back or front. The back section of this Jacket will be of interest, as it provides perfectly for the disfigurement.


Diagram No. 30
Is a Jacket back for round shoulders. This draught is made in the same manner as previous draughts. A person with round shoulders, the width of back is much wider than the ordinary. Across the back from X to X is $81 / 2$ inches. This means the actual width of back is 17 inches. This will call for an 8 -inch shoulder, while the proper width of shoulder is 6 inches. In this case take 2 inches out of the centre of shoulder and slant it off in the dart forms, so as not to interfere with the width of back. The length of backs in these cases are longer than usual, the two seams corresponding with X . No. 1 is much shorter than No. 2, No. 1 being 9 and No. 2 being 10. By easing the longest into the short side, you provide for the full back and the length as well and when the Jacket is left unfastened in front, it will remain in proper position in the back.


Diagram No. 31
First part of Back form which is: Size 38 Bust, 25 Waist, 43 Hip and Underarm 9 inches. No matter what the bust measures, always mark into the next size. As you will notice on Diagram, the shoulders are marked into perforations 38 and at the bust point B is 40 and at the arm's eye. Section on front and back, from A to B is 10 inches, from B to $C$ is $41 / 4$. from C to D is $61 / 2$ inches. The line at the shoulder is $11 / 2$ inch, from shoulder to E is 15 inches. Straight out from E make a 4 -inch line and make a 1 -inch dart in the centre. This dart is to prevent the goods from extending too far on waist line curves; if it was allowed to it would drag the plaits out of shape. In the skirt section from E to F is 40 inches and from F to G is 8 inches, 6 inches wide at hip line and from A to E is 3 inches.

Remarks.-All the patterns are plussed at hip line from 4 to 6 inches. A tight-fitting taffeta or satin must be 6 inches larger than the person who is to wear it. This art must be abided by or you will have to let out the seams and in this way deprive the garment of its original grace of line and curve, for no garment is quite as perfect a fit after it has been let out or taken in, and those who are desirous of starting a costumer's business, may rest assured, if they take the measures carefully and be quite sure not to flourish in taking measures, but just take the measures true to the shape. You will understand what I mean when I point out some of the reasons why no flourishes are wanted. In measure-taking many ladies who are short in the front will ask to be given a lengthened appearance and the same may be said of the back and underarm, and this same request will come from people who
are long in front and back and underarm. They will ask to be given a slightly shorter appearance, just as the other person asks for length. Take the measures properly and when you know the natural length you can then flourish and know exactly what you are about. I would also advise that under all such orders, you will write the words, "Extra length is required, and so forth." A busy cutter cannot remember these small details from time to time, and I would advise the cutter to have the workers read Scientific Dressmaking and this will help them to see how much or how little knowledge of the art they have acquired. Ladies in private homes are in too much of a hurry some times. Be a little more composed and painstaking in the beginning and you may hurry as you please after you have the garment properly put together. I shall proceed to prepare a diagram of centre back. This style of back may be -ut with any style of front.

## Diacram No. 32

Centre back of Diagram No. 31 ; the lessons will be very brief, as Lesson No. 31 will be sufficient only at shoulder. First place the method on the paper and mark into the perforations in size 38 , and at the back section. From $A$ to $B$ is 15 inches and from $B$ to $C$ is $41 / 2$, from $C$ to $D$ is $21 / 2$, from $D$ to $E$ is 15 . Make a straight line from $\mathrm{E}, 4$ inches. This 4 inches is used for a facing on the upper part of the back, vent of coat and the 4 inches on the under part are left quite flat so as to form what is known as a fly or lap. This must be full size, as it is very unbecoming to have the long space constantly showing the skirt of costume when this part of the garment is constantly vibrating on account of the movement of the person wearing it.

Diagram No. 33
Is the front of Jacket or Opera Cloak, which is most perfect. The garments cut from these unique patterns are as follows: All kinds of jackets, for instance a most perfect maternity mantel, or automobile coat, and makes a most handsome gown and a lovely maternity gown. Ladies may send measures and the pattern will be cut and mailed on the shortest notice or send goods and have the goods cut and basted up. The measures required are bust, waist, neck, arms and around arm's eye and length of front from around hips, from neck to waist line and back from
neck to waist line and underarm and length of inside arm, elbow and hand, and the length of skirt from waist line down to the floor. Then say how many inches you want it from the floor. See Diagrams Nos. 46 and 47 for cutting this in cases when you want to cut the pattern yourself in coats and costume work.


Diagram No. 34
Is the back half of Diagram No. 33.


## Diagram No. 35

Misses' Jacket, rainy-day, loose back and rippling effect; 34 -inch Bust, 7 -inch Underarm, length of Skirt, 30 inches from waist line down. This is a very simple draught. First place method on paper and mark into perforations, outline with side edge of method. From F to G is 8 inches. After the outside line has been made then mark out 1 inch and proceed to draught line $\mathrm{F}, \mathrm{G}$ and H . The distance between G and H is 30 inches, the doublebreasted lap is 2 inches at waist line and 3 at neck section.


Diagram No. 36
Is the back section of Diagram No. 35. Place method on paper and mark into perforations as shown on Diagram and outline with the method and draught straight lines, down 30 inches from waist line. After the outline has been completed add at waist line under the arm 2 inches and draught a second line 30 inches below waist line and at the centre of back at waist line mark out 4 inches and 8 at bottom edge and then draught line from neck to waist line at the 4 and hem down to the 8 at bottom.


Diagram No. 37
Is a closefitting Coat Sleeve, 12 inches at elbow and 9 at hand. 15 inches at arm's eye and 17 inches inside arm. The underside of this sleeve is $1 / 2$ inch longer than the upper. This is to prevent the sleeve from turning out to the top of the arm. To make this draught place the method on paper
and mark into perforations representing the figures on Diagram and use the outer edge of method to make outer lines. To make arm's eye line use the upper part of the method which indicates the top of sleeve and the under part if properly pointed out on method a slight fullness will be located at elbow point. This will be slight and can be eased in so as to pass notice. The upper of inside seam which is $1 / 2$ inch shorter than the under must be stretched and the notches carefully put together.


## Diagram No. 38

Is a Circular Cape. The perfection of a Circular Cape is in the quality of fit at shoulder and neck. When the neck and shoulders are properly cut the balance of the garment is simply a round circle. To draught a cape for the largest woman or smallest child just cut a plain front marking in the size as shown on Diagram and then coincide the front shoulder with the back as shown on Diagram and measure whatever length you may want. You may cut a long cape to cover all the costume or as short as the waist line. The cape on Diagram is 48 inches from neck down and it will not be necessary to cut the goods longer to cover the shoulder as so much bias cloth will come at this particular point and will stretch very much.

All fancy cloaks with loose effect now in use are cut from a cape foundation.

Remarks.-Before this cape is turned up at the bottom all the stretch
must 'se taken out of the bias part. This can only be done by the use of a damp cloth and a hot iron. Place the damp cloth on the cape and the hot iron in the other hand and pull the bias cloth and iron it while it is in the stretched position and you will find the stretch will all come out to remain out. If you use the hot iron without the damp cloth, you would find that the goods would go back into its former position and your labor would be wasted.


Diagram No. 39
Is a simplified draught and can be made in a very short time. First mark in perforations at the size on a Diagram. The lessons on plain sleeve cutting which have been shown on earlier pages of this coat cutting will enable you to readily understand the sleeve known as the leg of mution sleeve or the one-piece sleeve. First cut out a plain coat sleeve and then coincide the upper and lower parts together as shown on Diagram, on the front seam mark out 2 inches and on the back the space will be 9 inches. This space will differ according to size of arm. The larger the sleeve the larger the space at the back will be, and as a small sleeve is controlled in just the same way, you will readily understand the fullness of the one-pieced sleeve will be in proportion with the size of the arm that is to wear it. Of course the height at top may be added as you please, according to what is fashionable. This Diagram has a 3 -inch raise at the top which is ample for the present fashion. It is 14 inches around elbow, 10 at hand, inside arm 18 and arm's eye 16. Never baste in a sleeve until both sleeves have been properly prepared and are alike in every detail.


## Diagram No. 40

Is a Coat Sleeve with a plain top and showing how to draught the extra fullness on at the top; 3 inches is added at the back and $21 / 2$ in the front, $21 / 2$ extra height at arm's eye. The cross marks are for nicks or the thread marks for plaiting the sleeve in at the arm's eye.


## Diagram No. 41

Is a patented Jacket, 1905, with adjustable arm's eye. No instructions are given for the cutting of this garment, as the patterns are sold on special appointment or the goods cut and basted up; the patterns cut from this Diagram are marked patented and the name of the patentee must be on each pattern. Teachers may cut and sell this pattern on permit.

Persons buying a Jacket with this adjustable arm's eye, let me know if the pattern has not the signature of I. Innes on the same.

This Jacket is a most profitable garment, as the arm's eye can be made from 17 to 26 inches. This gives a perfect large loose Opera Wrap effect. Fur-lined jackets should not be made without this improvement. Send measurements and pattern will be sent by return mail, or send the goods with measurements and have the garment cut and basted up, or partly made.


## Diagram No. 42

Is a Jacket or Wrap pattern and is understood at sight. Send measurements and the pattern will be sent by return mail or send goods and have the cloth cut and basted up.

## SCIENTIFIC SKIRT CUTTING.

Scientific Skirt Cutting Method is provided with a table of measurements, for the purpose of providing the necessary inches which are required for the hip size, as all forms have a greater length over the hips. The average is from 1 to $2,31 / 2$ and 4 , and in some cases 5 inches difference in length over the hips, so you will readily understand that the length must be added at the waist line. The bottom of a skirt must have a straight line around, for instance a skirt made of a material, which has a border around the bottom, or tucks. The tucks must go smoothly around and if a plaited skirt has the length required added on at the bottom, you will readily understand how the facing will show underneath the plaits. A plaited skirt must have a perfectly straight line around the bottom, and the hip sizes of all kinds of skirts must be plussed at hip line. Skirt made of tweed will require 3 inches of plus, voiles 4 inches, taffeta silk and all kinds of thin silks, 5 inches, and all kinds of thin goods must be plussed the same. All the patterns cut by the scientific method are plussed, as you will understand by looking over the scale of measurements.

Scientific skirt method is in three separate parts with no attachments to get out of order. The main body is provided with a table of measurements tho provide for the raise at hip line. All extra length is added at top. The small gore No. 2 is for cutting all kinds of skirts with a great number of gores and is understood at sight. No. 3 is the scientific table for cutting all kinds of circular skirts and yokes. This method is designed to be worked in harmony with copying pictures. Hitherto, this has been a laborious task. By first cutting the pattern to the measurements of the person who is to wear the garment, the picture can be sketched on the pattern and then cut the pattern into the various parts as shown in the fashion copying lessons. The table of measurements which are located 10,11 and 12 inches below the waist line is a perfect guide to cutting the goods the exact width required. See table of measurements for all kinds of goods before cutting your pattern, as all qualities of thickness of goods must be made in proportion to their fitness.


Diagram No. 1
Is the front gore of a Seven-Gored Skirt. Waist measure 24, Hip 42 plus 4 inches, length of front 40 , length over hips 43 . To make this draught, place the Scientific Dress Cutting Method on paper, mark into perforations at 40 , at bottom edge and $81 / 2$ inches back from the front and at the top waist line, mark into perforations 2 inches, from front center and $1 / 2$ inch less on back edge of front. This is to give the front gore a controlling force. The back of the front gore is $1 / 2$ inch shorter than the center of the front. The side gore which will be basted on to this will measure 40 inches. Remember the centre of front is 40 and $1 / 2$ inch has been taken off for the purpose of making the front centre hang firm and straight. The back edge of front having had $1 / 2$ inch taken off, must be stretched the $1 / 2$ inch to meet the 40 inch gore which is to meet at X . From A to B is four inches, from C to D is $391 / 2$. After these lines have been made, make a straight line from waist line to bottom edge with the medium star and then use the tapering scale to make the close-fitting effect. Place the scale at waist line and draught curve line with the scale at bottom edge.

## Diagram No. 2

Is the first side gore of a Seven-Gored Skirt with 3 inches of a raise on the hip line. To draught place method on paper and mark into perforations at the bottom, length 40 inches and width 15 inches and waist line $31 / 2$ inches. The front side of the gore is 40 inches in length, the back edge of this gore
must be 3 inches longer than the front edge, as it reaches the hip line, so when the method is placed on paper and the perforations are being marked, mark width from G to H $31 / 2$ inches. The line of C and I are straight across. The distance between I and H is 3 inches. This will cause the back edge of this gore to be 43 inches. Place the first star at waist line and draught line I and J, then place the curve scale at waist line and draught close-fitting effect. The line G and F. Place star on curve scale line and draught curve line. The bottom line is draughted next. The width of this gore 12 inches below the waist line is $71 / 4$.

## Diagram No. 3

Is second side gore of Seven-Gored Skirt. To make this draught, place method on paper and mark into perforations, remembering that the last gore was 43 inches, so simply mark into 43 inches at bottom edge. Length and width 16 inches, width of gore at waist line $41 / 2$ inches, width at hip line 8 inches, place star at waist line and draught straight lines down from L to K and N to M , and then take curve scale and draught close-fitting line and flares.


## Diagram No. 4

Is centre back of Seven-Gored Skirt. To make the draught, place method on paper and first mark length 43 inches, width at bottom edge 20 . at waist line mark into perforations indicating waist line and also at the extreme end of method, then draught line $C$ and $B$, then draught line $A$ and B , then place curve scale on waist line and draught close-fitting line. The center back line is straight. Between B and C on Diagram, two dots are shown, thus dividing the back into two parts. The line which passes through the back is simply to continue the 3 -inch raise. The cross marks at the bottom
edge are to coincide with the marks at waist line, thus when folded makes a plait. The line D and C at C is raised I inch on account of when the pattern is folded to form plait the back line drops, and thus the inch at the waist line is made use of and what drops beneath the upper surface of plait is cut off and the top at waist line is pared off on a line with the first line at waist.


Diagram No. 5
Is the front gore of Nine-Gored Skirt. Waist measure 24 inches, Hip 40 , plus 4 inches making 44 when finished. Centre of front 41, length over hips 43 , and back same. The 2 inches extra length over hip is added on at the top and not at the bottom, as in other styles of cutting. The fact has been explained in first lesson. To make draught, place method on paper and mark into perforations at the waist line 2 and bottom edge 5 inches, length 41. Centre of front you will notice by Diagram that $1 / 2$ inch has been taken off front gore at seam, this is to give the front a firm control over its own centre. It will be $1 / 2$ inch shorter than the seam which comes next to it for basting. It can be easily stretched the half inch. Having thus made the lengths, draught a straight line placing third star at waist line and draught into bottom, then take curved rule and place on star No. I at waist line and draught a line into curve and add on as much flare as desired. In Diagram $11 / 2$ inches has been preferred.

## Diagram No. 6

Is the first side gore of a Nine-Gored Skirt. To make this draught, place method on paper and mark into $21 / 2$ at waist line and draught line to bottom and mark into 41 , this is a seam to be basted to front goie; on the outer edge of this gore, you will notice a 1 -inch raise, thus mark into perforations at waist line, section one, I inch higher as you will notice on Diagram. The line drawn between B and C has an inch raise at back edge of gore, then draught line A and B, mark into 41 and 12 inches towards back, and D to $C$ which has been raised $I$ inch, thus the lines $D$ and $C$ are 42 inches. Remember the extra length has been added on at waist line, at hip line $23 / 4$ inches. Twelve inches below waist line is the fullest part of thighs and when the skirt is cut to fit the fullest part and is properly tapered into the waist line which is the smallest part. The 6 -inch guide which has been used for so many years will be made proper use of. To my thinking it has been a mistake to cut a skirt from the 6 -inch below the waist line as it is not the largest part and I feel quite confident that all cutters and head skirt cutters will realize this and agree with me as they have had experience of getting a skirt prepared for fitting and had it up to the measurements at the 6 -inch line and when they tried it on found that the skirt was not large enough in the 12 -inch section. This will convince you that the largest part of thighs must be fitted and the line of taper to waist line will make the 6 -inch line perfect.

## Diagram No. 7

Is the third gore of a Nine-Gored Skirt with a two-inch raise over hip. To make this draught, place method on paper and mark into $23 / 4$ at waist line. You will observe that the raise at hip line is two inches. Mark into the table of figures the raise required which will be one inch on the front side and two on the seam nearest back. Take method and draught line A and B , then while the method is on the paper mark into point D 41 inches, 12 inches from A and then draught line C to D highest point of waist line.

## Diagram No. 8

Is the fourth gore of a Nine-Gored Skirt, 41 inches long in front and 42 over hips. On the third gore we have added the 2 inches which gives us
a gore 42 inches and the back gore is 42 inches; making this draught place the method on paper and mark into 42 inches at bottom edge and 12 inches at section $D$ at 42 length, and at waist line $31 / 2$. Take edge of system and draught line $A$ and $B$ and from $B$ to $C$ and $C$ to $D$. For the close-fitting lines use the taper scale. For instructions for back gore read Diagram No. 4.

## Diagram No. 9

Is the front gore of an Eleven-Gored Skirt with a 3 -inch raise on the hips. Waist 24. Hip 42 plussed 4 inches, Length 40 in front and 43 over hips and back. To make this draught place method on paper and mark into perforations at width of front gore edge, waist line, and mark at bottom 40 inches length and 5 inches of width. At waist line drop $1 / 2$ inch, this is to give the front a controlling power as it is necessary. The front gore of a skirt must hang smooth and straight.


Diagram No. 10
Is the first side gore of an Eleven-Gored Skirt. Place method on paper and mark into perforations into the table of sizes at waist line 2 inches and $1 / 2$-inch raise on side gore towards the back. Every gore has a front and a back. At the side nearest the front is the front side and the side going towards the back is known as the back of the gore as there are to be 3 inches added to the length over hips. It is necessary to keep adding more onto each gore until the 3 inches are on, as you will notice the backs are the highest and the full 3 inches has been added on at the back of the side gore. We are starting with a $1 / 2$-inch raise; at back of first side gore mark into 40 inches at bottom edge and $101 / 2$ inches in width. Draught line down
front side then draught line down back edge from highest point using the No. 2 stars on method to make the draught. After this has been done use the tapering scale as shown on Diagram, always placing the first star at waist line. Add as much flare as may be required, as shown on taper rule. The bottom edge of the tapering scale being provided with a proper tape measure so that the flare can be added in the shortest possible time and with accurateness. For persons measuring 20, 21, 22, 23, 24 and 25 give width at bottom measure of 5 sections off 12 inches, thus giving $31 / 2$ yards around the bottom edge. For waist measures $26,27,28,29$, measure 5 sections off in 15 -inch spaces and for $30,32,34,36,38,40,42,46$, measure off five sections of 18 inches or 18 to 19 inches in width.

## Diagram No. 11

Is the second side gore, width at waist band $23 / 4$ and 10 inches at the bottom edge, length 40 inches. To make this draught, place the Scientific Method on paper and mark into perforations at the waist line. You will notice on Diagram that the front edge has a 1 -inch raise on front edge of gore and 2 inches on the back line. When you have marked into the line known as the original waist line and then marking into the perforations which will give the proper raise to the hips, then draught a line down edge of method and mark at 40 length and $101 / 2$ width, and then into the 40 length, or back edge of gore, placing the second centre star on waist line and draught line to bottom on both sides of gore, then take tapering rule and draught curve for close-fitting effect, placing first star at waist line, adding flare at lower part of skirt as desired.

## Diagram No. 12

Is the third side gore of an Eleven-Gored Skirt, length 40. Raise 3 inches at hip line. To make draught, place method on paper and mark into perforations, front edge 2 inches of a raise and 3 at back edge. This table of figures has been carefully arranged and can be understood at a glance. The draughting of this gore is practically a reproduction of a 2-gore, only in the raising of the hip line and this is done in the same manner only the increase of height on the back edge of the gore 3 inches and 2 inches on the front to correspond with the 2 inches which has been added to back
edge of side gore No. 2. The draughting of the side and bottom simply repeat what you have done in draughting the previous gores.


## Diagram No. 13

Is the fourth gore of an Eleven-Gored Skirt. You will readily understand that the 3 inches which has been raised on the last gore has the length required on hip, as this has been done, we have reached the proper length and the draughting of both gores and the back gore may be draughted by simply making the $23 / 4$ at waist band and mark length 43 at bottom edge and $101 / 2$ width, placing the second star at waist line and draughting line to bottom length 43 , making curves with curved rule as previously described.

## Diagram No. 14

Is the back gore of an Eleven-Gored Skirt. The back gores are all cut on the same lines the only difference being the size. Remember all skirts cut from the Scientific Skirt Method have the extra length which the height over hips requires added on at the waist line, to keep the waist band from dropping down below the belt when a blouse is worn. All the skirts that are not cut with the method, however great or small it may be, if not added on at waist line will drop down if a skirt supporter of some kind is not used to keep the skirt band under the belt. This is a great advantage and makes this skirt pattern very superior to all others cut on different plans.

Diagram No. 15
Is the front gore of a Seven-Gored Skirt for a form with a very high abdomen, the Front being 44 and the Back 40, Waist 34. Hips 49. To make this draught place method on paper and mark into perforations at waist band. Mark into original waist band and then 5 inches above the original waist line and draught down.

Mark into 41 at bottom and 10 inches in width and 3 inches in width at waist and then drop 1 inch as shown on Diagram. Then place the tapering scale and draught the close-fitting as shown on Diagram, placing the top of the close-fitting scale on waist line of pattern and draught curve and flare.

## Diagram No. 16

Is the first side gore of a Seven-Gored Skirt, with 3-inch raise on the front line of gore and 2 on the back line of gore. To make this draught place the method on paper and mark into the original waist line, then 3 inches up and $53 / 4$ inches in width, then draught from A to B 40 inches and $171 / 2$ in width, then draught from C to D 40 inches, then place the tapering scale at the waist line and draught curve and add flare according to desire. At the waist line at the back of gore drop I inch as shown on the Diagram. You will notice that No. 15 Diagram is 41 inches and that 16 Diagram is marked into 40 from original waist line. The gores are to be basted together and 10 inches which have been measured off from the bottom edge of both gores are to coincide and the extra 1 must be eased inio line, this gives the front gore the power over itself and the side gore cannot drag it out of a straight hanging position. The Nos. 17, 18 and 19 will be understood from former work.


19

## WAIST MEASURES OF ALL SIZES, FROM 20 TO 40.

This table of measurements is for the purpose of giving the exact number of inches from the centre of front to centre of hip which is the greater length from waist to floor. For instance, the front may measure 42 and 45 over hip to floor. In cutting gored skirts the gore should come directly on the hip line as at this junction the curve is greatest and in this way it will enable the costumer to meet the most extreme curves with beautiful lines. For instance, if you should have to cut a pattern for a 24 waist and a 46 hip measurement you would in this case have a very deep curve on the hip line. As you may readily understand for 20 table over hip would be $63 / 4$ inches from centre front. This line will give the desired effect which is to meet the requirements of all kinds of forms and styles. The most simplified and quickest way is to take your waist measure. Say it measures 24, the quarter of 24 is 6 inches plus the quarter $11 / 3$, thus bringing the hip line $71 / 3$ inches from centre front. In all cases measure and plus the quarter of waist measure and the same may be done with perfect assurance for hips. When doing a mail order one must be extremely careful as to placing the lines in harmony with the size of person. This garment is for 42 hip measure. To locate the exact hip line from front quarter the measurements and plus the quarter $13 / 4$ inches and you will find this a correct line. Of course, you must remember now if you are dealing with a person with an abnormal abdomen it would not follow her case, but having a scale for these forms I need not mention them at this junction. This will enable the cutter or dressmaker to put the line properly on the hip centre, for all kinds of garments where a seam should come on the hip. Look over index for further advice. The above may be done where the form is abnormally large in the back.

Scale of Measurements for Locating Exact Line from Front.

$$
20 \text { Waist, } 63 / 4 \text {. Hip, } 36+3=39 \text {. From centre front, } 111 / 2
$$

22 Waist, 71/4. Hip, $38+3=41$. From centre front, 12
24 Waist, $73 / 4$. Hip, $41+3=44$. From centre front, $123 / 4$
26 Waist, $81 / 4$. Hip, $43+3=46$. From centre front, $131 / 4$
28 Waist, $83 / 4$. Hip, $46+3=39$. From centre front, 14
30 Waist, $91 / 4$. Hip, $49+3=52$. From centre front, $143 / 4$
32 Waist, $93 / 4$. Hip, $52+3=55$. From centre front, $151 / 2$
34 Waist, $101 / 4$. Hip, $55+3=58$. From centre front, $161 / 4$
36 Waist, $103 / 4$. Hip, $57+3=60$. From centre front, $163 / 4$
38 Waist, $111 / 4$. Hip, $61+3=64$. From centre front, $173 / 4$
40 Waist, $113 / 4$. Hip, $63+3=66$. From centre front, $181 / 4$
See to the measurement throughout to meet the requirements of all sizes at waist and hip.

## FIVE-GORED SKIRT.

## New Scientific Scale for Five-Gored Skirt.

Scientific Scale of Measurement indicating the proper width of the gores at waist line and hip-line gores at hip line 12 inches below the waist line. The fourth row of figures is the distance of the hip at waist from centre of front, and the row of figures on the hip measure is to locate the hip from centre of front, thus giving an exact distance from centre front of waist band 12 inches below centre of front. They locate the hip line, thus giving the client the direct line by which to place the hip line according to every size. See table of these measurements on separate leaf.

| WIDTH OF GORE AT | Ist | 2ND | 3RD |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 20 | 2 | 51/2 | 21/2 | 63/4 | From centre front to hip at wais belt |
| Hip $36+3=39$ | 4 | 11 | 4 | $111 / 2$ | Front centre front 12 in. below waist on hip line: |
| Waist 22 | 2 | 6 | 3 | $71 / 4$ | From cente front to hip |
| Hip $38+3=41$ | 4 | $111 / 2$ | 51/2 | 12 | From centre fron 12 in berow wast on hie line |
| Waist 24 | 21/2 | 61/2 | 3 | $73 /$ | From centre front to hip at waist belt. |
| Hip $41+3=44$ | 5 | 12 | 5 | $123 /$ | Fromen catte font 12 in, below waist on hip line: |
| Waist 26 | 3 | 61/2 | $31 / 2$ | 81 | From centerefront to hip |
| Hip $43+3=46$ | 51/2 | 12 | 51/2 | $131 /$ | Prome centre front 12 in. |
| Waist 28 | 3 | 7 | $51 / 2$ | 83 | Trom centre front to hip |
| Hip $46+3=49$ | 51/2 | 4 | 6 | 14 | Forow centre front 12 ine felow waist on hip line: |
| Waist 30 | $31 / 2$ | 8 | $31 / 2$ | 91 | From centre front to hip at wais belt. |
| Hip $49+3=52$ | 5 | 151/2 | 51/2 | $143 /$ | Frome centre fronn 12 in, below waist on hip linc. |
| Waist 32 | 4 | 81/2 | $31 / 2$ | $93 /$ | Promm cente front to hip at wait bel. |
| Hip $52+3=55$ | 6 | 16 | $51 / 2$ | $151 / 2$ | Prom cente front 12 in. below waist on hiop hine. |
| Waist 34 | 4 | 9 | 4 | 101/4 | Fromm centre front to hip at waist belt |
| Hip $55+3=58$ | 6 | 16 | 7 | 161/4 | From centre font 12 in. below waist on hip hine. |
| Waist 36 | 4 | 10 | 4 | 103/4 | From centre front to hip at wast telt |
| Hip $57+3=60$ | 5 | 19 | 5 | 163 |  |
| Waist 38 | 41/2 | 101/2 | 4 | $111 /$ | From centere front to hip at wait lelt |
| Hip $61+3=64$ | 6 | 20 | 6 | 173/4 | From centre front 12in, |
| Waist 40 | 41/2 | 11 | 41/2 | $113 /$ | Fromo centre front to hiip St waist belt |
| Hip $63+3=66$ | $61 / 2$ | 22 | $61 / 2$ | 181/4 | Frome centre front 12 in , below waist on hip line. |

## SEVEN-GORED SKIRT.

## New Scientific Scale for Seven-Gored Skirt.

Scientific Scale of Measurement indicating the proper width of the gores at waist line and hip-line gores at hip line 12 inches below the waist line. The fourth row of figures is the distance of the hip at waist from centre of front, and the row of figures on the hip measure is to locate the hip from centre of front, thus giving an exact distance from centre front of waist band 12 inches below centre of front. They locate the hip line, thus giving the client the direct line by which to place the hip line according to every size. See table of these measurements on separate leaf.

| WIDTH OF GORE AT | Ist | 2ND | 3RD | 4TH |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 20 | 2 | $31 / 4$ | $31 / 4$ | 11/2 | 63/4 $\begin{aligned} & \text { Fromm centre front to hip } \\ & \text { at wait belt }\end{aligned}$ |
| Hip $36+3=39$ | 3 | 7 | 7 | $21 / 2$ | $111 / 2$ From centre front 12 ine |
| Waist 22 | 2 | $33 / 4$ | 33/4 | 11/2 | 71/4 $\begin{aligned} & \text { Fromm centre front to hip } \\ & \text { at wais brlt }\end{aligned}$ |
| Hip $38+3=41$ | 3 | $71 / 2$ | $71 / 2$ | 21/2 | 12 From centre fromt 11 in |
| Waist 24 | 21/2 | $41 / 4$ | 41/4 | $21 / 2$ | 73/4 $\begin{gathered}\text { Fromm centre frount to hip } \\ \text { at wair belt }\end{gathered}$ |
| Hip $41+3=44$ | $31 / 2$ | 8 | 8 | 3 | $123 / 4$ Frome cente front 12 im |
| Waist 26 | $21 / 2$ | 51/2 | $41 / 2$ | 3 | 81/4 $\begin{gathered}\text { Promm cente front to hip } \\ \text { at wait bert }\end{gathered}$ |
| Hip $43+3=46$ | $31 / 2$ | 8 | 8 | 33/4 | $131 / 4$ From centre frout 12in |
| Waist 28 | 3 | 5 | 4 | 2 | $83 / 4{ }_{\text {at }}^{\substack{\text { Fromm ceutre front to hivm } \\ \text { at }}}$ |
| Hip $46+3=49$ | 4 | $81 / 2$ | $81 / 2$ | 4 | $14 \begin{gathered}\text { Frome centre frons } 12 \mathrm{in} \\ \text { below waist on hio hine. }\end{gathered}$ |
| Waist 30 | 3 | 5 | 5 | 2 | 91/4 $\begin{gathered}\text { From centre front to hin } \\ \text { at waist belt }\end{gathered}$ |
| Hip $49+3=52$ | 4 | 9 | 9 | 4 | $91 / 4$ From centre front 12 ind |
| Waist 32 | $31 / 2$ | $51 / 4$ | $51 / 4$ | 2 | 93/4 $\begin{aligned} & \text { From centre front to hip } \\ & \text { at waist belt }\end{aligned}$ |
| Hip $52+3=55$ | 4 | 97/8 | 97/8 | 4 | $151 / 2$ From centre front 12 l in |
| Waist 34 | $31 / 2$ | $53 / 4$ | 53/4 | 2 | $101 / 4 \begin{gathered}\text { From centre front to hip } \\ \text { at waist belt. }\end{gathered}$ |
| Hip $55+3=58$ | 41/2 | 101/4 | 101/4 | 4 | $161 / 4$ From centre front 19 in |
| Waist 36 | $31 / 2$ | $61 / 4$ | $61 / 4$ | 2 | $103 / 4 \begin{gathered}\text { From centre front } \\ \text { at waist bett. } \\ \text { ar }\end{gathered}$ |
| Hip $57+3=60$ | $41 / 2$ | 103/4 | 103/4 | 4 | $163 / 4$ Frome centre foont 12 i.i. |
| Waist 38 | 4 | 61/4 | 61/4 | 21/2 | $111 / 4$ From centre front to hive |
| Hip $61+4=65$ | 41/2 | 101/2 | 101/2 | 5 | 173/4 From centre front 17.1 in , |
| Waist 40 | 4 | $61 / 2$ | 61/2 | 3 | $113 / 4 \begin{aligned} & \text { From centre front to hien } \\ & \text { at waist lath. }\end{aligned}$ |
| Hip $63+3=66$ | 6 | 11 | 11 | 51/2 | 181/4 From centre front 12 ine |

## NINE-GORED SKIRT.

## New Scientific Scale for Nine-Gored Skirt.

Scientific Scale of Measurement indicating the proper width of the gores at waist line and hip-line gores at hip line 12 inches below the waist line. The fourth row of figures is the distance of the hip at waist from centre of front, and the row of figures on the hip measure is to locate the hip from centre of front, thus giving an exact distance from centre front of waist band 12 inches below centre of front. They locate the hip line, thus giving the client the direct line by which to place the hip line according to every size. See table of these measurements on separate leaf.

| WIDTH OF | st | 2ND | 3RD | 4TH | 5TH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 20 | 11/2 | 2 | 21/2 | 21/2 | 11/2 | 63/4 From |
| Hip $36+3=39$ | 2 | 4 | 41/2 | 41/2 | 2 | $111 / 2$ Frome conte frot 12 in |
| Waist 22 | 11/ | 2 | 21/2 | 21/2 | $21 / 2$ |  |
| Hip $38+3=41$ |  | 4 | 5 | 51/2 | 3 | 12 Fromu cuite fort 12 in. |
| Waist 24 |  | 2 | 21/4 | 21/4 | $21 / 2$ | $73 / 4{ }^{\text {Fromect }}$ at |
| Hip $41+3=44$ | 31/2 | 4 | 51/2 | 51/2 | 31/2 |  |
| Waist 26 | $21 / 2$ | $21 / 2$ | $23 / 4$ | 23/4 | 21/2 | $81 / 4$ From certe front to hip |
| Hip $43+3=46$ | 3 | 41/2 | 6 | 6 | $31 / 2$ | 131/4 Frome crite fin |
| Waist 28 | 21/2 | 3 | 3 | 3 | $21 / 2$ |  |
| Hip $46+3=49$ | 31/2 | $51 / 2$ | 6 | 6 | 31/2 | 14 From emter |
| Waist 30 |  | 3 | 3 | 3 | 3 | rom |
| Hip $49+3=52$ | 4 | 5 | 51/2 | 51/2 | 4 | $143 / 4$ Frome crute frot 12 in. |
| Waist 32 | 31/2 | 3 | 3 | 31/2 | 3 | 3/4 Prom cente |
| Hip $52+3=55$ | $4$ | 6 | 6 | 7 | 4 | $151 / 2$ Frome centre fron 12 in |
| Waist 34 | $31 / 2$ | 3 | 3 | 4 | 3 | 101/4 ${ }_{\text {Promis }}^{\text {rat }}$ |
| Hip $55+3=58$ | $41 / 2$ | 61/2 | 7 | 7 | 4 | $161 / 4$ Frome cente from 1 in |
| Waist 36 | 4 | 3 | 3 | 4 | 3 | $103 / 4$ From centit |
| Hip $57+3=60$ | 5 | $61 / 2$ | 7 | 7 | 5 | $163 / 4$ From centre for 12 in |
| Waist 38 | 4 | 4 | 4 | 41/2 | 3 | 111/4 From centre frot to hiv |
| Hip $61+3=64$ | 5 | 8 | $83 / 4$ | 83/4 | 51/2 |  |
| Waist 40 | 5 | $31 / 2$ | 41/4 | 43/4 | $31 / 2$ | 113/4 From centre front to biv |
| Hip $63+3=66$ | 51/2 | 7 | 71/2 | 71/2 | 51/2 |  |

## ELEVEN-GORED SKIRT.

## New Scientific Scale for Eleven-Gored Skirt.

Scientific Scale of Measurement indicating the proper width of the gores at waist line and hip-line gores at hip line 12 inches below the waist line. The fourth row of figures is the distance of the hip at waist from centre of front, and the row of figures on the hip measure is to locate the hip from centre of front, thus giving an exact distance from centre front of waist band 12 inches below centre of front. They locate the hip line, thus giving the client the direct line by which to place the hip line according to every size. See table of these measurements on separate leaf.


## THIRTEEN-GORED SKIRT.

## New Scientific Scale for Thirteen-Gored Skirt.

Scientific Scale of Measurement indicating the proper width of the gores at waist line and hip-line gores at hip line 12 inches below the waist line. The fourth row of figures is the distance of the hip at waist from centre of front, and the row of figures on the hip measure is to locate the hip from centre of front, thus giving an exact distance from centre front of waist band 12 inches below centre of front. They locate the hip line, thus giving the client the direct line by which to place the hip line according to every size. See table of these measurements on separate leaf.


## FIFTEEN-GORED SKIRT.

New Scientific Scale for Fifteen-Gored Skirt.
Scientific Scale of Measurement indicating the proper width of the gores at waist line and hip-line gores at hip line 12 inches below the waist line. The fourth row of figures is the distance of the hip at waist from centre of front, and the row of figures on the hip measure is to locate the hip from centre of front, thus giving an exact distance from centre front of waist band 12 inches below centre of front. They locate the hip line, thus giving the client the direct line by which to place the hip line according to every size. See table of these measurements on separate leaf.


## SEVENTEEN-GORED SKIRT.

## INew Scientific Scale for Seventeen-Gored Skirt.

Scientific Scale of Measurement indicating the proper width of the gores at waist line and hip-line gores at hip line 12 inches below the waist line. The fourth row of figures is the distance of the hip at waist from centre of front, and the row of figures on the hip measure is to locate the hip from centre of front, thus giving an exact distance from centre front of waist band 12 inches below centre of front. They locate the hip line, thus giving the client the direct line by which to place the hip line according to every size. See table of these measurements on separate leaf.

| WIDTH OF GORE AT | Ist | 2ND | 3RD | 4TH | 5TH | 6TH | 7TH | 8TH | 9TH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 24 <br> Hip $41+3=44$ | $\begin{aligned} & 1 \\ & 13 / 4 \end{aligned}$ | $\begin{aligned} & 11 / 2 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 11 / 4 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 1 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 1 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 1 \\ & 13 / 4 \end{aligned}$ |  |
| Waist 26 <br> Hip $43+3=46$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 21 / 4 \end{aligned}$ | ${ }_{3}^{13 / 4}$ | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $3^{11 / 4}$ | $\begin{aligned} & 11 / 4 \\ & 23 / 4 \end{aligned}$ | ${ }^{11 / 4}$ | $\begin{aligned} & \hline 1 \\ & 2 \end{aligned}$ |  |
| Waist 28 <br> Hip $46+3=49$ | $\begin{aligned} & 13 / 4 \\ & 21 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 3 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 3^{3} \end{aligned}$ | $\begin{aligned} & 11 / 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & 11 / 4 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 11 / 4 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 11 / 4 \\ & 21 / 2 \end{aligned}$ |  |
| $\begin{aligned} & \text { Waist } 30 \\ & \text { Hip } 49+3=52 \end{aligned}$ | $\begin{aligned} & 11 / 4 \\ & 21 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 3 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 2 \\ & 31 / 2 \end{aligned}$ | $3^{11 / 2}$ | $3^{11 / 2}$ | $3^{11 / 2}$ | $\begin{aligned} & 11 / 2 \\ & 23 / 4 \end{aligned}$ |  |
| Waist 32 <br> Hip $52+3=55$ | $\begin{aligned} & 11 / 4 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 11 / 2 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 11 / 2 \\ & 31 / 2 \end{aligned}$ |  |
| Waist 34 <br> Hip $55+3=58$ | $\begin{aligned} & 11 / 2 \\ & 21 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 11 / 2 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 11 / 2 \\ & 31 / 4 \end{aligned}$ |  |
| Waist 36 <br> Hip $57+3=60$ | $\begin{aligned} & 13 / 4 \\ & 21 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 31 / 4 \\ & \hline \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \\ & \hline \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 37 / 8 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 37 / 8 \end{aligned}$ |  |
| Waist 38 <br> Hip $61+3=64$ | $\begin{aligned} & 13 / 4 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 2 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 2 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 2 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 4 \end{aligned}$ | $\begin{aligned} & 11 / 4 \\ & 21 / 4 \end{aligned}$ |  |
| Waist 40 Hip $63+3=66$ | $\begin{aligned} & 21 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 2 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 2 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 33 / 4 \end{aligned}$ |  |

## NINETEEN-GORED SKIRT.

## New Scientific Scale for Nineteen-Gored Skirt.

Scientific Scale of Measurement indicating the proper width of the gores at waist line and hip-line gores at hip line 12 inches below the waist line. The fourth row of figures is the distance of the hip at waist from centre of front, and the row of figures on the hip measure is to locate the hip from centre of front, thus giving an exact distance from centre front of waist band 12 inches below centre of front. They locate the hip line, thus giving the client the direct line by which to place the hip line according to every size. See table of these measurements on separate leaf.

| WIDTH OF GORE AT | Ist | 2ND | 3RD | 4TH | 5TH | 6TH | 7TH | 8TH | 9TH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 24 | 3/4 | 13/4 | $13 / 4$ | $13 / 4$ | $13 / 4$ | 11/4 | 1 | 1 | 1 | , | From centre front to hip at wait tret. |
| Hip $41+3=44$ | $11 / 2$ | 21/4 | 3 | 3 | 3 | 21/2 | 21/2 | 21/2 | $13 / 4$ | 123/4 |  |
| Waist 26 | 1 | $11 / 2$ | $13 / 4$ | 2 | 2 | $13 / 4$ | $11 / 2$ | $11 / 2$ | $11 / 2$ | 81 | From centre front to hip |
| Hip $43+3=46$ | $11 / 2$ | 23/4 | 3 | 3 | 3 | 21/2 | 21/2 | 21/2 | 21/4 | 131/4 | Freme Frow waite front 12 in, below hip line: |
| Waist 28 | 11/2 | $13 / 4$ | 2 | 2 | 2 | $13 / 4$ | $11 / 2$ | I | , | 8 | ${ }_{\text {From centre front to hip }}^{\text {at maist trete }}$ |
| Hip $46+3=49$ | $21 / 4$ | 21/2 | 3 | 3 | 3 | 3 | 3 | 21/4 | 21/4 | 14 | From centre front 12 in. below wail on hip line. |
| Waist 30 | 11/2 | $13 / 4$ | 2 | 2 | 2 | $11 / 2$ | 11/2 | 11/4 | $11 / 4$ | 91 |  |
| Hip $49+3=52$ | 2 | 21/4 | $31 / 2$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | $23 / 4$ | 21/2 | 21/2 | 143/4 | From centre front 12 in below waist on hip lite |
| Waist 32 | $13 / 4$ | 2 | 2 | 2 | 2 | $13 / 4$ | $11 / 2$ | $11 / 2$ | 11/2 | 93 |  |
| Hip $52+3=55$ | 2 | 3 | 31/2 | $31 / 2$ | 31/2 | $31 / 2$ | 3 | 21/2 | 21/2 | 151/2 | Froms centre front 12 in. below waist on hip line. |
| Waist 34 | $11 / 2$ | 2 | 21/4 | 21/4 | 21/4 | 2 | $13 / 4$ | 11/2 | 11/2 | $101 /$ | From centre front to hip at maist belt |
| Hip $55+3=58$ | $11 / 2$ | 2 | 2 | $31 / 2$ | $31 / 2$ | $31 / 2$ | 3 | 21/2 | 21/2 | 161/4 |  |
| Waist 36 | $13 / 4$ | 21/4 | 21/4 | 21/4 | 21/4 | 2 | 2 | $13 / 4$ | 11/2 | $103 /$ | From centre front to hip ar wairt belt. |
| Hip $57+3=60$ | 2 | $33 / 4$ | 31/2 | $31 / 2$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | 23/4 | 163/4 | From centre front 12 in. |
| Waist 38 | 11/2 | 2 | 21/2 | 21/2 | 21/2 | 21/4 | 21/4 | 2 | $11 / 2$ | $111 /$ | From centre front to hip at waist |
| Hip $61+3=64$ | 21/4 | 33/4 | 33/4 | 33/4 | $33 / 4$ | $33 / 4$ | $33 / 4$ | 33/4 | $31 / 4$ | $173 / 4$ | From centre front 12 in, |
| Waist 40 | $13 / 4$ | 21/4 | 21/2 | 21/2 | 21/2 | 2 | 2 | 2 | 2 | $113 /$ | From centre front to hip at waist telt. |
| Hip $63+3=66$ | 23/4 | $31 / 2$ | 4 | 4 | 4 | 4 | 4 | 4 | 23/4 | 181/4 |  |

## DESCRIPTIONS OF GOWNS SET FORTH IN PICTURE WORK.

No. 1-Black velvet trimmed with black braid.
No. 2-Black crape with hand-work trimming.
No. 3-White plush Evening Wrap with rose-colored trimmings.
No. 4-Blue linen.
No. 5-Blue satin trimmed with tucks and black buttons.
No. 6-Heavy brocade velvet of fawn shade with heavy lace collar of same shade.

No. 7-Long Evening Wrap of bright scarlet with large buttons and oriental trimmings. Makes a very rich wrap.

No. 8-Evening Wrap. Heavy brocade velvet with near-satin buttons and ornamented bands on shoulders.

No. 9-Cream satin with heavy lace trimming and very dark cream buttons.

No. 10-Bodice of cream brocade velvet with fawn trimming and red cord.

No. 11-Navy blue taffeta with black trimming. Miniature scarlet edging at neck with black lace collar on shoulders.

No. 12-French Gown of navy blue chiffon velvet.
No. 13-Raw silk with heavy lace trimming.
No. 14-Brown velvet with white net yoke.
No. 15-Brocade Kimona of green.
No. 16-Red silk Kimona, black trimming.
No. 17-Heavy-faced cloth of dark blue.
No. 18-Heavy Motoring Jacket or Sea Coat, dark grey.
No. 19-Traveling Coat of blue serge.
No. 20-Blue silk Shirt Waist with red piping.
No. 21-Black Waist with tucks.
No. 22-French House Gown, lemon shade and white lace collar with black belt.

No. 23-Corn-colored with fawn velvet, cream lace at neck.
No. 24-Princess Gown of cashmere made with plaited flounce.
No. 25-Linen Waist with black bands and tucks.
No. 26-Black velvet, white braid trimming or hand work.
No. 27-Cream broadcloth and heavy lace with pink yoke. Blue chiffon velvet skirt trimmed with heavy lace. Leghorn hat with pink tips.

No. 28-Wedding Gown of Duchess satin and heavy lace.
No. 29-Light brown velvet, trimmed with dark fawn silk cord.
No. 30-Black satin piped silk.
No. 31-Picture work for children.
No. 32-Shirt Waist Suit of tweed.
No. 33-Shirt Waist Suit of tweed.
No. 34-Heavy Jacket of tweed.
No. 35-Plain Skirt with large buttons at side.
No. 36-Brown silk taffeta Skirt.

No. 37-Voile Skirt, black.
No. 38 -Brown taffeta with white lace trimmings. Dark brown hat with white osprey.

No. 39 -Lovely Visiting Gown of chiffon, copper color with corncolored lining and dark crimson velvet with needle work of copper-colored silk in the form of cross marks an inch apart in the velvet. The velvet is stitched to the chiffon at these points an inch apart.

No. 40-Golden brown broadcloth with fawn buttons, suitable for traveling dress.

No. 41-Heavy silk cashmere with plaited lace for trimming.
No. 42-Smart Coat and Skirt of tweed.
No. 43-Navy blue plush trimmed with black lace plaiting in sleeves and neck.

No. 44-Heavy brown satin trimmed with heavy trimming.
No. 45-Dark rose-colored Coat and Skirt, lovely for carriage wear and paying calls.

No. 46-Black satin with heavy handwork trimming, or heavy trimming as desired. This design may be carried out by putting heavy polka-dots of silk handwork.

No. 47-Smart Gown of black broadcloth with heavy brocaded sash and collar of velvet.

No. 48-Cream serge Skirt with plaited sides.
No. 49-Child's copy work is shown in groups. Group of two young girls' waists.

No. 50 -Group of navy blue silk Waists.
No. 51-Group of Children's white Dresses.

## GOWNS SHOWN IN PICTURE WORK AND DESIGNING.

No. 52-Navy blue broadcloth trimmed with braid to form check. See Design No. 16, page 28.

No. 19-Purple trimmed with lighter shade and deep band of dark violet at foot. See Design, page 31 .

No. 53-Gown of corn-colored satin and same shade of heavy lace or hand work.

No. 20-White satin princess with black chiffon tunic and black velvet bands. See Design, page 131.

No. 54-Plush Mantel lined with fur and is made from the Pattern No. 42 in Scientific Cutting. See same as to the arm's eye.

No. 17-Velvet Mantel, fur lined.
No. 14 -See Children's Work, Group 14, page 27.
No. 14-Finished garment, page 108.
No. 12-Mantel, low cut arm's eye, page 107.
No. 17-Broadcloth lined with fur, page 120.
No. 18-Heavy face cloth, page 121.
No. 34-Fancy Coat, page 113.
No. 29-Costume, broadcloth, page 117.
No. 15-Black satin and velvet, page 28.


No. 29-Gown made of tweed, page 33.
No. 30-Skirt of stripes, page 35.
No. 31-Stripes, tweed, page 36.
No. 32-Skirt, serge, page 36.
No. 33 -Satin Skirt, black and white, page 37.
No. 43-Gown of stripes, velvet, page 38.
No. 38 -Eighteen-Pieced Princess, page 58.

Special terms and credit will be given to those purchasing this book who wish to teach Scientific Dressmaking and Millinery. Write for terms.

## ONE-PIECED SLEEVE.

## In Conjunction with No. 12 in Scientific Construction and

 No. 14 in Shirt Waist Work.The measurements of the arm of this sleeve from shoulder to elbow is 14 inches, elbow to hand 9 inches, around the hand 10 inches, around the elbow 13 inches, and arm's eye 22 inches. To make this draught first measure off a piece of paper 22 inches wide and 27 inches long, and fold straight down the centre. This will be 11 inches in width. First notice the distance from O to B is 4 inches. Notice that 4 inches have been measured from the 27 -inch length on fold of paper and the other at the 11 -inch junction. Then measure from O to O . This is $81 / 2$ inches. The 4 -inch drop under the arm gives the increased size 22 inches to the arm's eye on the fold of the paper. You will notice the line slanting out from the fold at the 11 -inch point comes into a sharp curve, which gives quite a curved effect to the top of the sleeve. If fullness is not wanted simply draught the lines on the dotted marks, which will give you the flat smooth effect. The four V 's which are shown by the dark lines are the indication marks where the $21 / 2$ inches are to be plaited in on the pattern. When this has been done the pattern will have a curved shape and the four A's are to coincide. The line A that has the V 's will be $21 / 2$ inches shorter than the line A that has the straight line. When basting up the seams put the A's together and the 27 -inch line will be easily basted in. This gives a shapely inside arm, as the inside arm is $21 / 2$ inches shorter than the outer part of sleeve. The seam of this sleeve coincides with the under-arm seam of whatever garment it is worn in.

## THE AMOUNT TO PLUS COTTON GOODS NOT SHRUNK BEFORE BEING MADE.

Commencing with wash goods, such as lawn, linen, etc., plus bust 5 inches, hips 5 inches, length 3 inches, neck 1 inch; Prints: plus bust 5 inches, hips 5 inches, length 3 inches, neck 1 inch; Galitea : plus bust 5 inches, hips 5 inches, length 3 inches, neck 1 inch; Canvas Cloth: plus bust 5 inches, hips 5 inches, length 3 inches, neck 1 inch.

These garments look prettier before they are washed or shrunk. Thus I suggest making them up and allowing for shrinkage. The system of plusing has not been changed for these classes of goods, as you will notice the reason for is that all such classes of goods are generally made on soft semi-fiting lines. therefore more goods has been allowed.

$111$

## SCIENTIFIC CONSTRUCTION.

## Diagram No. 1

Is the pattern placed on the goods. Great care is necessary at all times in placing the pattern on the goods, as the different designs must be considered. Striped goods, properly cut, are lovely in many ways as they help to give length if length is required. I strongly recommend placing the pattern on the goods all the same way as shown in Diagram. To be sure, some goods will not bear the pattern reversed, such as broadcloth, velvet and some floral designs, on account of what is known as the up and down. I am showing some of these.

No. 1 is a Jacket of stripes. It is not necessary to say much about the stripe as the Diagram makes it plain, and as much has been said as to care in cutting, etc.

## Diagram No. 2

Is a 10 -pieced Jacket. The purpose of this lesson is purely the placing of the pattern on the goods. The stripes have been preferred as this will set forth the necessity of placing the pattern on the goods in this manner, to get the best results, even when it is a plain surface. This means such as serge You will notice in the Diagrams, the stripes made up the seam are always going straight from waist line as much as possible. The stripes may take a bias effect at some junctions, as we reasonably know the shoulder curve and arm's eye curve and bust and waist would naturally produce slanting and curving effects in any material, but striped material would be more noticeable. All of these patterns placed on the goods answers for dresses as well.

## Diagram No. 3

Is a plain pattern of five different parts. The purpose of this lesson is to point out the simple and accurate manner of matching the designs in the goods. If the goods are of flower design, notice the waist lines are marked distinctly for cutting all kinds of goods with any particular design woven in the goods. You may make your choice which you will place at the waist line. You certainly must make a choice as to what you prefer to have at the waist line-a small design is preferable. Notice I have at each waist line


a notch and at each corresponding notch which are to be sewn together, so that the design will coincide. The different parts of the pattern are all placed so as to be facing the part to which it is to be basted. The different parts are numbered. By placing your pattern on the goods in this manner you will have your design matched to perfection. Place each part so as to have the design parallel with the seam to which it is to be joined. Look at the X which is marked on the goods in hope of making the explanation a little clearer. This will serve a good work when cutting all kinds of floral designs and for plush the pattern is all placed one way. This is strongly recommended in all goods.

## Diagram No. 4

Is a 10 -pieced Garment on floral goods. Look carefully at the waist line junctions and read Lesson No. 3 and you will understand the art of placing the waist line notches which are to join each other, to have the same design or the same distance from the floral or whatever the design may be. Read carefully the art of plussing the goods before you cut your pattern as the thickness of the goods, or in other words, the weight, better known as heavy goods, has much to do with the plussing. Always remember accurateness in the beginning means time saving and success. Notice the manner in which the pattern is placed on the goods. When cutters understand the art of plussing the garment according to whatever class of goods they are making up they will soon notice the greatness of the advantage, and some goods must have larger seams allowed. To leave the proper seam is much better than leaving on too much or too little.

## Diagram No. 5

Is the back of a Jacket placed on striped goods. This Diagram will answer for dresses as well as it is purely a demonstration. I prefer to use stripes on account of the client being able to understand the necessity of placing the pattern on the goods in the same way. If it were a plain surface it is very necessary the pattern should be placed to produce the best results. By demonstrating this on stripes it will be really understood. I am advising that the pattern be placed on the cloth all the one way.



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## Diagram No. 6

Is an 18 -pieced pattern placed on goods with a check. This may be demonstrated in coats or dresses. This check is not a small one. But the art of placing the notches at waist line is the all-important thing in matching checks. We will point out how simple it is to match every design. We will take, for example, if the checks were black and white I would decide which I wanted at the waist line and place my waist notch at the black check line all through the pattern; this means the checks would be matched all through the garment. Look carefully at the Diagram. When tracing a very profitable thing to do is to cut half the garment out of soft checked paper. The checks may easily be made with a common lead pencil. I assure you you would be paid with good convincing results. Any woman or girl can teach herself the work by using the soft paper and making the garments as shown in the fashion book. I have found that cutting the pattern and then placing it on soft paper and basting it up teaches the art of a light touch with all the other advantages which are sure to follow from such work. When you make a paper garment just make one-half of the design. When working on paper go about it the same way as you would if working on goods. Allow your seams for this work. See Diagrams for goods cut and ready for basting or thread marking. Any person can teach themselves how to do good dressmaking and tailoring by following the instructions. Look carefully at the picture and Diagrams. A glance is worse than not to look at all. So many are careless on these fine points.


## Diagram No. 7

This is being used to show the pattern reversed on goods of check. The flat pattern is placed on goods of check design and shows how the waist line must be placed on a check when it has been found necessary to reverse the pattern on the goods to economize.

## Diagram No. 8

Is a flat sleeve pattern placed on striped goods. Look at Diagram. It is not necessary to give a long description of this pattern. It is enough to say allow seams and place the pattern on goods as shown in Diagram. When cutting goods with plain surface place the pattern on the goods in the same way as on striped goods. You are guided in the case of plain goods by the straight or selvage edge. By these you place your pattern quite the same in both cases. Always look at the diagram before cutting the goods.


## Diagram No. 9

Is the pattern placed on the goods, and the dark lines are the edges of pattern; the dots are the one-inch seam to be left on; the pointed marks are the notches which are to coincide, and the alphabetical letters are to coincide. The goods has been shrunk and pressed and is in a first-class state. The next stage of this is the thread marking which is to be done in the dark lines. This description will answer for No. 10 which is a child's coat placed on the goods with a one-inch seam. See Tailoring No. 9 Finished Garment.


## Diagram No. 12

Is a scientific draught of a one-pieced Sleeve. The jacket shown is a loose heavy mantle for general use. This sleeve may be used for any garment, for instance a bodice, a blouse, a shirt waist, tea-gown, etc., and is a perfection sleeve for evening wraps of all kinds, as the arm's eye can be made large, graceful and comfortable. This sleeve is cut to fit into a garment which has a long arm's eye effect as shown in Picture No, 12. This low arm's eye effect may be as far below the waist or the armpit as desired. You will understand that whatever length is cut out of the garment the same must be paid back on the sleeve. For flat draught see Shirt Waist Work, No. 14.

## Diagram No. 14

Is a tight-fitting coat, flat draught No. 13. The lesson is a picture copying lesson and the plain draught has been made and the designs which are shown on the picture are sketched on the flat draught. Notice on No. 1 that one inch has been taken out at the waist line to give the same effect as

shown on the picture. Also notice on No. 2 that one inch has been added to this number in just the same way as the inch has been taken from No. I. This is one of the most useful points in scientific copying work. If a dressmaker has a plain draught ready for her client five minutes after she gets her French Fashion Book or whatever other she may prefer, she can copy her designs and have a perfect pattern to actual measurements. Thus a dressmaker gets the true value out of her books. Some of the books I use are $\$ 4.50$ for each one, but I get so much out of them that I count the cost nothing. Good books always pay for themselves. I have marked the buttons on the design. I feel quite sure the coat hand will save some time by this. I am going to show a number of collars. There are some very high class artists working on women's garments and well they may be termed high class. The beauty, grace and expression that they are able to portray in the pictures and on the

wearer is to me a delight. I do hope to make plain this art of reproducing and I feel quite sure a better state of affairs will exist before long. I am going to show a number of beautiful pictures from high-class books and a number of gowns made up on Scientific lines.

## Diagrams Nos. 15 and 16

Is the flat draught of the back of a long, loose Jacket with kimona effect. See Diagrams Nos. 23 and 24 in dresses. Also 46, 47, 48 in designing work. The sleeves in these garments are superior to the ordinary. They are on scientific lines. The art of designing and copying pictures is of great value to

the client who sees a picture in a fashion book and cannot wait until the pattern comes from headquarters. The Fashion Journal Company thoroughly understand the full value of their book. It is necessary to be able to reproduce the styles in perfection of cut and it is simple when done on scientific lines. I have placed four first-class mantles of the finest designs I can locate and am teaching the art of copying them. The scientific cutting lessons have made the flat draughts a simple and perfect work. This being a lesson of an advanced number it will not be necessary to take the pupil through a lot of work they already know. Any person being able to make the box plait jacket draught of the long, loose house gown draught, can also do this. I shall show the alphabetical terms of matching seams. You will readily understand I have copied two pictures on this flat draught. The garment is in three parts-front, back and a small oblong gore for under the arm's eye which will be marked in alphabetical form. The small gore is set in by first placing the notches at the under-

arm and the notch on the small gore together and basting to E and B . This lesson is to copy Nos. 17 and 18 as shown in cut.

20


Diagram No. 19
Is a flat draught of a Sleeve. No. 20 is the sleeve coincided to make a one-pieced sleeve. No. 2 is the under part. Notice No. I has a design on the centre which curves with the shape of the sleeve and extends to the collar as shown in Diagram. In many fancy coats or jackets of novel design the sleeves are trimmed and the trimming shows very clearly in the pictures and can be copied to perfection by first draughting the flat pattern to whatever: measurements taken. This flat pattern is cut to measure 17 inches in length, inside arm's eye 15 , around elbow 13 and hand 9 . This has been pointed out to show the fact that pictures are easily and accurately copied. This flat pattern cut to measurements if it be a Princess dress or a tight fitting waist, or a loose garment whichever may be shown in the fashion book. If the book is showing a close-fitting garment decorated with artistic designs draught a closefitting pattern and coincide the different parts and sketch your picture on the part of the flat pattern, just as it is shown on the part of the garment in the pic-
ture form. See Diagram No. 14. This will be plainly shown on a tight coat body.

A word to every self-supporting person who may read this. You can, without a doubt, prepare yourselves to fill positions of value to costuming houses and factories who are in need of just such a cutter and designer as I am writing of. All first-class businesses of this kind buy the finest of fashion books. Do not think for a moment if you can reproduce a true pattern as shown in the fashion books that you will be out of employment long. You will not. In my lessons on Fashion Book work I can convince you of the benefit it would be to you. You would do well teaching, as many ladies have not the time to attend the scientific schools, much as they would like to, on account of not being able to spare the time going and coming from the school. A lady who has to support herself could make a good salary teaching in private homes and thus be her own mistress and be filling a long-felt want.


Diagram No. 21
Is a flat draught of a close-fitting Jacket placed on the goods. Two different pictures have been sketched on this pattern. The cuts are Nos. 22 and 23. It is not necessary to give a long description as much has been said.

## Diagram No. 24

In two cuts No. 34 and 18. Is a Sleeve with a design sketched on it. The cross marks are for the notches when the cloth is cut. This sleeve when it has been cut will be a four-pieced sleeve. The cuff is in one piece. This is marked B. The B's on the upper and lower parts coincide and thus the plain cuff can be cut the true shape of drawn sleeve. I have cut the centre line in the upper part of the sleeve and notched it so as to make it plain. Look at the different lessons on sleeve construction and you will see the art. See cuts Nos. 14 and 23.

## Diagram No. 25

Is a plain draught of a loose Jacket with a large collar and novel design in front and back as shown on No. 34, the finished garment, and is placed on jacket in tailoring work. This flat draught is in seven parts and numbered and marked alphabetically. The notches are to coincide and all of the letters

and if they are taking a construction course they do not require the measurements of size. See Tailoring.


## Diagram No. 26

Is the flat draught. A scientifically cut garment which can be used for all kinds. Garments in some cases for evening use are 28 inches around the arm's eye and for bodice and blouse it can be made the natural size. Clients who have had the Lesson No. 27 on Kimona garments, will readily understand this draught as it is identically the same work with the addition under the arm. To make this draught cut the arm's eye down as far as desired or as far down as it may appear in the picture. The line A is the underarm line, from O to B is 4 inches, from O to A is 9 inches, from


M to N is 6 inches, the line from B to B is 22 inches, and from N at the neck to the line B is 5 inches. On the bodice of draughts Nos. 33 and 34, for the sleeve which corresponds with sleeve in Diagram No. 34, the dark lines on the sleeve are to be plaits in the patterns. I shall show a diagram with the plaits in the pattern. No. 3 is the underarm as it will appear when ready to be placed on the goods. No. 2 is the under part of sleeve before the plaits are in.


Diagram No. 27
Is the flat draught of the picture. No. 28 shows this made up. This draught is made for 34 -inch bust. The garment when finished will measure 36 inches in the bust as all the garments made on scientific instructions are plussed in accordance to the goods they are being made of. All goods require 4 inches in the bust section. See scale of plussing and read it when you are about to make up your goods, and you will be advised just what is proper to allow.

To make the draught measure off 40 inches of paper and fold in half. Then take your scientific cutting method and mark into the perforations at neck in size No. 34 and straight up from A to C. From the C line to the shoulder line at neck must be the same width as it measures in the back part of method. In size No. 34 or whatever size you are to cut, from A to B is 14 inches, from B to I is 9 inches, from I to H is 8 inches, from H to C is 5 inches. From C at centre of back to D at waist line is 14 inches between the centre back line and you will notice that 2 inches have been taken out. This is done to reduce the fullness in the back. From D to E is 7 inches, from E to F is 8 inches, from F to G is 14 inches, straight across from G is 12 , from H to C at the shoulder C is 5 inches, from C to F is 5 inches. Notice the second part. This part is 14 inches long and 5 inches wide. A to B is length of front, from neck to waist, I to H is length of underarm. Straight across from H to F is the top of sleeve which forms the arm's eye. The C
line in the centre of these is the shoulder line which controls the distance straight down from that point where we find the arm's eye size. This junction is a very important one as the arm's eye size is largely responsible for the comfort or discomfort of these garments which are having such a power on the fashion. The part marked 2 is the underarm and is 14 inches long and 5 inches wide.

I shall take you back to the arm's eye. Size is 15 inches, measuring from C at neck to H line is 5 inches and the second part is 5 inches. This gives a 15 -inch arm's eye. F to G is the length of sleeve to elbow. The F and G line is the back part of the arm. The H to K lines are the inside of arm which comes in a line with the thumb. H to K is 14 inches and this is the inside of arm; $21 / 2$ inches in chest is to be deducted between the H and K lines. This will be made clearer in Diagram No. 29. The waist line B in front may be continued to the full skirt length and from D in centre of back down. Thus copy any picture having the kimona effect down the skirt. The pictures shown are all on kimona lines for dresses and two of these extend down through the full skirt length.


## Diagram No. 28

Is showing No. 27 in the second stage of construction with two and onehalf inches deducted from the inside arm on the upper and under part of seam, also with the lines sketched of the different parts of the kimona drawn on the
flat pattern. Looking at the picture and flat pattern one can readily understand the simplicity of the art of copying the pictures after the flat pattern has been draughted to whatever measurements given. Thus it is simple to reproduce any picture in paper and then in goods with perfect results. The lines all being made on No. 28 simply place a piece of paper under and trace in to all the lines and then lift the flat pattern and cut out the different parts and place them on the cloth and cut them out, allowing for seams.


Diagram No. 29
Is the simple blouse foundation made and ready for the different parts to be sewed on. This is No. 27 made up. The picture is also No. 29. Diagram No. 30

Is the bodice part basted and showing the different parts under construction. You will notice in the picture, which is No. 29, there are a number of different designs. The foundation is a simple slip and the different parts are prepared and sewed on the slip, which makes it very simple work. I intend to go very thoroughly into the copying work. The fashion books are simply lovely and lovely gowns are things to be had with positively no hesitation as the goods and trimming are always to be had and the lovely fashion book with so many colored plates. When not colored a clear and thoroughly reliable description of what colors are to be used is given in all the books. If you are not able to procure the colors mentioned, be sure the gowns will look pretty with some other color and perhaps prettier.


## Diagram No. 31

Is the flat pattern shown with the different parts penciled on as seen in the picture and then placed on the goods as shown. Look at the notches of the different parts. I have numbered them and each place where you see a 2 tack a 2 to match, etc.

Diagram No. 31 will be a simple copying and construction lesson, as in Lesson No. 27 I have given a thorough explanation. When draughting of flat patterns is understood the scientific copying or designing is simple. I shall give a few words of advice to all who are anxious to become designers. The first thing to learn is drawing. A designer is an inventor in a broad sense of the word. The designer or inventor plainly sees a picture of what they want in the mind's eye. Thus if you have these gifts and can make a proper flat draught to proper measurements measure some person and draught out a flat pattern; then place your artistic ideas on the flat draught and make the pencil mark clear. Place paper under draught and trace in your pencil marks just as you did in cases when you were copying a pattern from paper or fashion book. Be quite sure to put notches in certain places so as to get the different parts in their proper place when constructed. Always remember the goods may stretch,-if so, be sure and ease it in so that it will come into its proper place, notch to notch or mark to mark as the case may be. See Seientific Tailoring Nos. 32 and 33.
Diagram No. 32
Is the goods cut out and ready for basting and I will carefully baste and
show the different parts placed to coincide with the marks on the bodice of the waist.
Diagram No. 33
Is the goods made up in a bodice.


34

Diagram No. 34
Is a flat pattern draughted to measurements and the lines of the design as shown in the picture have been sketched on the flat pattern and are quite ready for tracing out.

Lesson No. 27 uas all the necessary instructions for draughting the flat pattern. I shall show this flat foundation in five stages of construction and when the flat draught is thoroughly understood this is a simple work. I am showing a number of kimona effects which are simple and perfect in cut and comfort in which No. 27 has embodied all the particular points of this lesson as they do not differ in the sleeve and underarm. When a client has mastered No. 27 the others will be partly understood at sight. No. 35 is No, 34 finished.
Diagram No. 35
Is the garment made up as shown in picture and the fullness which is shown in the front is basted in tuck form. The fullness can be made much

more effective by so doing. To notch and tuck look at the belt of No. 36 where the tucks have been confined in the belt. See Diagram of inside of garment, No. 36 with arm raised.
Diagram No. 37
Is 34 in third showing the foundation ready for the trimming.
Diagram No. 38
Shows this partly done. See cut on page No. I.
Diagrams Nos. 39 and 40
Are simply to show the shapely appearance of the scientifically-cut kimona sleeve.


## Diagram No. 41

Is a flat draught showing two different styles sketched on the flat draught. See the dark lines No. 21 and No. 22 and the bodice basted up; they are numbered 21 and 22. I have pointed out that a number of styles can be cut from the one flat draught and all give perfect results. The numbers will help a client to understand. These garments will be shown in Diagram of inside and outside effects.
Diagram No. 42
These bodices are the waist parts of the high skirt waist effect or in plainer words the Empire skirt which usually comes two inches above the waist line. All these bodices must be properly basted into a waist band. If not sewed by machine simply baste and then put the bodice on your draping
stand. Place the skirt on; then pin the two together and baste and stitch. Look carefully over the Diagrams and then the notches at bottom for the tucks or fullness. These tucks are merely basted and when the belt is put on the basting threads are taken out and the fullness thus falls in a pretty, full effect. See Nos. 29 and 30.

## Diagrams Nos, 43 and 44

Are the flat draught of bodice with five parts and the sleeve set on from the shoulder. The first of this lesson is an ordinary bodice pattern. According to measurements given it is not necessary to refer to any of the pattern except the parts of sleeves which are 2,3 and 4 parts; 2 is the front the sleeve is attached to. You will notice the bodice pattern has been cut in the most ordinary lines. First place the five parts as numbered so as to coincide at arm's eye and the four parts marked as on Diagram No. 44. Some marks on the sleeve has been added. The three parts 2,3 and 4 must meet at arm's eye. This kimona sleeve effect can fit very closely or have a decidedly loose effect. Notice two are straight across and are in direct line. This is all important as it is the No. 3 which forms the wider arm from the underarm circle which is shown by a dark line 2 inches from the O . As the Diagram plainly shows a straight line from O to O it is not necessary to refer to Nos. 2 and 4. From circle to Points O from shoulder to B is $71 / 2$ inches, C to $D$ is 10 inches. This means your piece of paper was cut $241 / 2$ inches long and $71 / 2$ inches in width and pinned at Points O and F and the line from B to E has been made $21 / 2$ inches shorter than the lines $\mathrm{A}, \mathrm{C}$ and D . The client is simply to mark the elbow point $21 / 2$ inches, it being taken off the $B$ and E lines as shown and pinned up so as to form an elbow. The elbow is 15 inches around and the hands 11 inches. These may be made up as loose or close fitting as desired by simply measuring the flat space between D and E and C and F when placing this pattern on the goods. The goods is a solid onepieced pattern as the sleeve and No. 2 are all in one, as you will notice. Part 4 is the back. From A to B is $63 / 4$ inches and from C to F is $63 / 4$ inches, thus leaving $83 / 4$ for the upper part of front. Look carefully at the notches or marks. The sleeve may be to the elbow if desired or to the hand. Part No. 3 is the underarm of bodice and extends up under the arm's eye as shown by the O on the long sleeves. The waist lines are put together and No. 3 is basted up from waist to bust line and then down the sleeve line to the O and when the long sleeves meet each other are seamed up. You will understand putting paper under and tracing off your design. This pattern will give you the true copy of the picture. When cutting the cloth do not cut the darts, allow them to be plaited or gathered in. Put in whatever lining is desired.

## Diagrams Nos. 45 and 46

Is draught for a stout figure. The pattern is in five parts. See Diagrams 45 and 46. No. 45 is the foundation of draught. This draught was made for measures 46 inches Bust, 31 inches Waist, 50 inches Hips and the Shoulders are very much rounded. The abnormal abdomen makes it 3 inches higher in the front than the back, the shoulders a 3 -inch slant. To cut garments for forms of this measurement it is absolutely necessary to provide 3 inches in the front for the abdomen and it must be added at the waist line section and the shoulders likewise. I shall point out the advantages. These instructions will answer for all such forms varying in size. The same then will answer for all kinds of Princess dresses, loose tea-gowns and box-jackets, semi-fitting garments, Princess linings and Princess skirts with high waist effect. It is perfection for the tight-fitting jacket. It is not necessary to give any instructions for the cutting of the plain pattern as this lesson is one which should be taught to pupils who understand the plain bodice draughts. Therefore I shall give the abnormal abdomen and round shoulders. I think such forms should always get the highest class cutting done as it is only such who can meet the requirements. I shall now demonstrate with a measurement of $143 / 4$ inches from the waist down in the front, this being No. 1 and No. 2 from A to 151/2 inches on B line, and from C to D $141 / 2$ inches. The waist line A and C are to coincide, and the $D$ and $141 / 2$ inches are to coincide. You will readily understand the A line must be eased into the C line which will coincide with good results. By taking a needle and gathering the goods this will be a simple matter whatever kind of goods the garment may be made of. I shall say $11 / 4$ is not much and likely it can be easily eased into the $141 / 2$ without the gathering thread. We have raised No. I and No. 2 and find 17 . Now take E $121 / 2, \mathrm{C}$ and $121 / 2$; coincide the 17 and $121 / 2$ and at the waist coincide the E and C and ease the $11 / 2$-inch into the 17 . When this is done we have given the first, second and third parts $21 / 2$ inches of a raise and the other half of an inch ease on the No. 3 line and 4 line. If you were making a loose wrapper to provide for this abnormal front we will quote for instance, the back measurement 40 and the front 43 . If you were to make a garment with the seam in the front and sides, in such a case cut the tea-gown or wrapper back 40 and the front 43 . This will bring you to the E and C lines. Then coincide the E and C lines and ease the 3 inches extra. Put the mark at the bottom of the front and back together and baste up. Then measure 12 inches down from C and you will find the 3 inches. Take your needle and gather with very fine stitches, and your 3 inches will go nicely into the 12 inches. When machined and pressed you will be simply charmed
with the results and your garment will hang as graceful as if the form were one of model measuring. We will now turn to the round shoulders. This is simple. Notice the front is 6 inches and the back $71 / 2$. One half must be gathered into the form and when sewed and pressed you will not notice

it. The other half is eased in at the back of the collar. As we all know the abnormally fat woman's back must be provided for in this manner also, otherwise the garment will be a ridiculous looking failure. I shall give you another mode of providing for abnormal shoulders or round shoulders. First cut the shoulder $71 / 2$ inches and look at the drawings on Scientific Cutting and see how simple. The latter advice is intended to be used for linings and goods of a plain ground or goods with a mixed design. For forms with very full busts you will find it necessary to draught the front shoulder, for instance, an inch larger or longer and then take the one-inch out at the seam as shown in Diagram. You will notice the inch taken out of the front in a slanting dart-like line; this is to prevent a looseness at arm's eye. With this added the arm's eye of the garment will fit lovely and smooth; without this you would have had to resort to the small dart at that point.

## REMARKS ON THE STOUT-WOMAN MEASUREMENTS.

No. I
When taking her measurements, place the tape exactly on the hip bone and measure across to the other hip; in this way you will allow exact size of abdomen and then your hip line can be placed in an exact line. Many
of the stout figures are sunken in the back, where the abdomen is abnormal. Almost all these cases are caused by an improper carriage, neglecting to hold the shoulders back. Many women who have to nurse and carry babies often forget all about self and neglect the pretty well-formed shoulders which they were once blessed with, until they are gone. I think there are few disfigurements more trying to the costumer than the sunken down back. It is almost impossible to make a woman look well from the back with a sunken appearance. Of course the bustle or pad can be resorted to, but it is much better to practice holding the form properly, which will cause the bust to raise and the back to straighten, and apart from this it is one of the sure forms of resting. Nothing is better than a perfectly straight attitude for resting and stretch as much as possible.


Is a shirred or corded Princess dress; No. 48 is the finishen garment. To cut this first take the measurements. These dresses or waists are usually made of very fine goods. For example I will give a 36 bust and 12 inches round the elbow, arm's eye 15 inches, underarm 9 inches, waist 24 . The sleeves can be made to the hand if desired. It is a simple matter to add the skirt. The hip measure is 40 . The goods which are to be added to these measurements taken will hold good for all sizes. The bust is 36 , add 18 inches, 12 inches around elbow, add 10 inches, making in all 76 inches of goods in length and 22 inches of goods in width. The 22 inches in length will allow for $51 / 4$-inch tucks. It requires a $1 / 2$ inch of goods to make a $1 / 4$-inch tuck,
thus giving $21 / 2$ inches for tucks. After the goods have been measured off, fold the 76 in half then divide the 44 which has been allowed for bust measure. Marking 12 inches from centre of back and 12 inches from centre of front you will have your elbow goods left with an additional 5 inches for fullness at elbow. Now we will say the sleeve of the shoulder is 6 inches, measure 6 inches down the line at junction 12 then at 4 making 10 from top. This is not allowing $21 / 2$ inches for tucks. By adding $21 / 2$ inches for tucks $121 / 2$ inches are added. If cords are wanted up to the underarm we will go back to the 10 from this to inch point; cut it down to the entire end of goods putting a notch at 9 inches from the 10 . Place the 1 diamond under the arm at points as marked on diamond at the 10 -inch. See Diagram and

waist made up in part and flat draught. When the waist line is accurate it will assure good results with simplicity. Likewise the hip measure and dart as shown on Diagrams of the skirt and waist can be easily joined. For shirring at the hip use whatever amount you desire of shirs or cords. When the cords are used they are drawn through the tucks and this appears like cord shirring. When joining the skirt to waist, the skirt being much wider, gather the skirt into the width of the goods in the waist and sew them together. Form a tuck of the seams and then put in your cord and draw it into the size you want and you will not be able to see the seam. Whatever the bust measures allow 18 inches extra over the amount. For the sleeve from 5 inches to double whatever the elbow measurements are and for the hip likewise. If for the neck or waist line the shirring will be too heavy in appearance on account of the thickness of the goods. Cut out as much as desired in dart form and stitch up and shir or cord as desired. This will give you the same quantity of shade and thickness which is preferable to all. The dart will never show when shirred or corded. No. 49 Finished Waist.

## SCIENTIFIC TAILORING CONSTRUCTION.

Diagram No. I
Is the pattern of the various extra pieces of material which are shown on the Diagram No. 2. On Diagram No. 3, these pieces of canvas or haircloth or padding cloth are Nos. 5, 6, 7, 8, 9. See them applied in No. 3 Diagram as they have all been placed where they belong. No seams are allowed.


Diagram No. 2
Is placed to coincide on the canvas. The dots are the seams to be allowed. These are numbered thus, Nos. 1, 2, 3, 4. Carefully coincide the notches as shown on Diagram and to coincide same place them together alphabetically as shown on Diagram. See Diagram No. 4 showing these basted and seam pressed open.
Diagram No. 3
Is a clear picture of the canvas prepared for the coat. The padding cloth can be had at the dry goods store. If hair-cloth is used you must bind the edges with a bias piece of lining or tape. No. 5 will be kept in an oval shape, while being padded. This will mean the left hand must be kept under and thus keeping it in an oval shape as the deep curve of the dart.
Diagram No. 4
Is the canvas prepared for the different pieces of inside padding, which will be sewed on the canvas, this being shown with what may be trimmed.

The wrong side of the coat will meet the right side of this as all the seams are to come next to the body. No. 4 to be perfectly finished, and use whatever amount of cotton batting required, use 3 c wadding, as the expensive sheet wadding has too much fluffy effect; to be sure, in case when the person does not require to be given a highly-developed appearance use the padding cloth or thick felt, as it is sometimes called; and for stout forms I would advise very good quality of cloth, no padding or canvas only through the collar and revers, as every thickness adds to size.


## Diagram No. 5

Shows this canvas rightside out and is to be tried on the person, and trim the collar as desired. Sometimes the size of collar makes a great difference in effect. This can all be done before the cloth has been placed on, and in this way save labor and time. It is to be properly pressed and in perfect condition before the goods is placed on same, notice the C with the three V shaped, these are where the buttonholes are to be worked, the straight strip of lining marked (E) has been sewed on the inside, and at

the $V$ shape, the canvas has been cut out to enable a pretty and better buttonhole to be made, and a strip of lining has been sewed all around the lapels and collar to provide a flat edge, to be made with little labor. I shall say that this canvas part of coat is a very important part.

Coincide the seams of canvas and goods at junction A and B and all others will be in harmony with seams.

The lapels have been shown in Diagram simply to keep No. 3 and No. 5 as clear to the eye as possible. This canvas has been padded and pressed.

## Diagram No. 6

Shows the canvas rightside out and also the stitches of padding shows through on right side, on the revers. This cannot be put on until the final decision of how large the revers are wanted. The stitches in the revers and collar are simply to show how this will appear on the canvas. These stitches are not put in until the canvas has been put in the coat. At No. 4 I am showing this in this case.


Diagram No. 7
This is the cloth when the seams are sewed up and pressed and ready for canvas. Notice the two cross marks at C and D . The D is on the underarm point and arm's eye, this point C is to be brought down to coincide at the D , thus stretching the D line on the C line one inch. This is done for the purpose of forcing the front down and when this is done you will not have to tighten the outer edge. This is shown on No. 8 just how far up the stitching is to commence and where it ends, and gives a pretty hanging front. This is done to give you an idea of the style of coat it demonstrates. On the Bust was 42, Waist 26. You understand the curves were great, the whole tendency of the front was to hang down and was perfection. This scientific point occupies five minutes or less time. To confine outer edge of coat an inch, the ordinary way requires an hour or more, and is not so satisfactory. Notice the A and B at neck and the A and B on canvas. these are sewed on and pressed open. This scientific tailoring does not require the large iron unless the goods is heavy Milton cloth, or similar goods; as the canvas and goods are pressed separate, when one has the coat in a perfect condition to press, all the pressing can be done on the wrong side. In the old-fashioned tailoring the gloss was pressed on the coat and then they took the gloss off by what is called a slight steam effect with a hot iron, placing a wet cloth on the garment and then laying the hot iron on the cloth for what might be long enough to cause a slight steam effect.

Diagram No. 8
Shows the canvas in the goods and the stitches which are shown are what is known as thread padding. I am using this to show that all the interior
is spoken of as padding, under the tailoring rule, the padding of the collars and lapels. This is all done with the needle and thread, and to be sure can be done with the machine. When it is done by hand you will have to hold the lapel of the coat at point C in a curved position, this gives it a tighter appearance when done by hand so that when the garment is worn the natural tendency of the lapel will be to lie flat on the bust. I will ask you to look at Diagram No. 20 (I. Innes) to see the pattern placed on the goodsthe goods made up is shown in Diagram No. 9 finished garment of the pattern placed on the cloth, and will be thoroughly explained in further lessons (see goods). I shall call your attention to the facing of the revers, see Diagram No. 10.


Diagram No. 10
Is the rever facing. This will be readily understood from the instructions given in lessons in the second part, which will be given on the fronts. See Diagram on Revers and Pockets. The A point on the front is to coincide at point A on C line. Place the facing on the right side of coat and baste with great care and machine stitch and then remove the basting thread and press the seams open neatly down to point C ; notice the dark line in Diagram No. 8. This has a strip of lining or tape extending around the entire lapels and collar following the stitching. This is done to keep the break line from stretching. As this will be on a bias effect, the tape is to be put in before the facing is put on.

## Diagram No. 11

Is Sleeve made up. See construction lessons on Sleeve.

## Diagram No. 12

Is the Coat with facing on, see point A at this point, all around the collar and lapels allow the facing to slightly extend. Do not by any means allow the seams which you have stitched to appear on the direct edge of the coat. By pressing your seams you can allow the facing to slightly extend; thus the seam will be an eighth of an inch from outer edge. Thus when you machine stitch your outer edge you will have a positively thin flat edge, which is all important in tailoring, and if you do not wish to stitch the edge when you press it, you will have the perfection of flat edge lapels, and from the A down do likewise. I have preferred to show the coat in a partly finished condition, before showing it basted or in a flat condition. I shall show the goods in flat form.

## Diagram No. 13

Is the lining cut from the same pattern as the coat and basted and completed. The sleeves have been padded as shown on Diagram with cotton wool. It is a simple work and gives a beautiful shoulder effect. This lining

will fit into the garment at the arm's eye junction. Fasten to the coat at the shoulder; coincide the seam at back of neck, and under arm. This will be a very simple work for the novice and the lining of a coat will occupy a
space of half an hour as there will only be to hem around the bottom edge, down the front, and sleeves.

Diagram No. 14
Is the Coat wrongside out, showing how the seams will appear when sewed up and pressed ready for canvas. I have seen fit to show the inside of a coat. When a coat is being made that is not to be lined the seams are overcast with a loop or blanket stitch which makes a pretty finish. I prefer this to the binding on the seams, as the garment is clumsy to handle and the novice attempting to sew this on with the machine would destroy the garment; and to attempt to put it on by hand, I would not recommend. The loop stitch shown on Diagram makes a pretty and smooth stitch and presses easily. The skirt is done likewise, the extreme edge has been overcast. This is to be turned up and when the hem is stitched will give a perfectly flat effect. To be sure when canvas and lining are used you do not overcast seams in the coat.

Diagram No. 15
Is the right side with fancy designs and stitched and pressed. This is made of striped goods for example, and you will readily understand how beautifully it can be pressed on the wrong side with an ordinary iron before the canvas is put in, if canvas is to be used.


Diagrams Nos. 16, 17, 18, 19, 20
Are the cloth under construction; for the finished garments see No. 9 . No. 3 will make this plain as you will notice the point A sewing up and
the lining sewing on edge; look at picture No. 9 the dotted line is the thread mark. Notice how carefully the notches are placed together and the $B$ on the shoulder are to coincide.


## Diagram No. 17

Is the right side machine stitched. Notice the stitch marks coincide at the front junction and at the inner side B at shoulder.


## Diagram No. 18

Is the right side of the Sleeve and has been basted and stitched and thoroughly pressed on the wrong side. When basting up the inside seam
coincide the A and B points and machine stitch and open the seam, and put a piece of canvas 2 inches wide around the A junction and then turn up as desired, and stitch and press; then take a needle and thread and gather B in front to the line between dots. Now the sleeve is properly ready for the coat; when sewed into the coat press open the seam as shown on Diagram No. 14.
Diagram No. 19
Simply shows the inside seam pressed open.


Diagram No. 20
Is the back of the goods thread marked; the letter B is to be coincided at the shoulder point of the front, No. 17. No. 20 is second part.

## Diagram No. 21

Patterns placed on the goods No. 10 for child's coat. The instruction given is all that is necessary for coats, with the exception of the fact that children's garments must be made much larger than the child's measure ments. Say if a child measures 32 around the bust, finish the garment 36 . Diagram No. 22

See 11 placed on the goods for child's dresses.
Diagram No. 23
Is Diagram 34 placed on the goods. This is the pattern cut from picture 34. See picture. The construction given is sufficient. This pattern is marked alphabetically and will be coincided to match and thread marked. See page 124.
Diagram No. 24
Is the inside of a Seven-Gored Skirt showing the bottom and scams overcast and the seams pressed open, and hem is to be turned up, from A to B point. The line $C$ is the length. I do not approve of binding the seams as nine times out of ten the binding is put on too tight and spoils the hang of the skirt.


Is child's plain slip with one-inch seams placed on the goods which is the plain foundation of a wrapper cut to measurements. With such a pattern you can copy any picture, by simply marking the line through the pattern as in the picture. This will convince you that by cutting one plain foundation you can draw as many different styles as desired, and from the most high-class books, or a design you may sketch off your own original. By placing a paper under the pattern and tracing in the line you have made on your flat pattern cut out the draught of these designs which are the true copies of the pictures, and cut each part out. Some of these high-class patterns cost $\$ 2, \$ 3$ and $\$ 5$ apiece, and besides you cannot get them the day you buy your book or up to the measurement of the person wanting to wear the garment in less than three weeks, and a new book comes out every four weeks. By this you will readily understand the advantage and economy of cutting your own patierns, and have it proper and when you want it. We can teach any lady how to copy pictures in two hours' time.



Diagram No. 25
Is the goods of picture No. 12 in skirt under construction Nos. 14, 15. 16, 17; these numbers are the goods cut and marked. The box plait No. 17. is marked A and B. A is the top. Notice the mark at A and B point. also notice the lines $A$ and $B$ have been turned back on figure marked No. 2, box plait, and notice the indication mark in the Nos. 15 and 16 parts, and also notice the box plait has been coincided and partly basted on. This manner of putting on box plaits makes it impossible to place the plait out of place, as it is put on just as you would baste a gore, putting your marks together. If a box plait is a quarter of an inch higher on one side than the other it will look ridiculous, and when one is making a skirt alone, it is a pleasure to know a positively correct form to place your box plait in the back.

Diagram No. 26
I will call your attention to the Skirt made up and costumes Nos. 24. 25, 26, 27, Costume No. 28, also No. 6; and there has been given great consideration in the Scientific Cutting lessons.

It is a plaited Princess.

## Diagram No. 27

Is a lesson demonstrating the necessity of coinciding the marks or notches and to show that these marks may be put in any part desired, and if the marks
on right and left side are properly coincided the garment will be properly balanced.

Diagram No. 28
Is showing the garment full length with marks coinciding; in the skirt part this may be used as a long Jacket or Princess Dress instructions.


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## Diagram No. 29

Is showing long garment inside out with seams overcast and the hooks and eyes partly sewed on. They are on alternately. To mark the left side simply coincide the right and thread a needle, put a stitch opposite and be quite sure to sew the hooks on very strong, as it is very annoying to find them coming off in short wearing. These instructions can be used for dressmaking or jackets, etc.

Diagram No. 30
Is a lining complete, and ready for the outer part to be put on or used as Princess Slip. The sleeves have been put in and overcast with the loop stitch. This garment is shown inside out. I believe in finishing the outer part of garment and sewing on all the trimming and then slipping it over the lining, and thus giving a pretty and smooth appearance to the inside, which otherwise would be thickly marked with the stitches which the trimming was sewed on with. Costume No. 26 has a lining in on these lines, and the inside is pretty and the outer part sets perfectly lovely as you will observe. The garments made without lining sets pretty as they look so soft. The lining put in in this manner has that effect.


## Diagram No. 31

Pocket Work.-The front of Coat with facing for Pockets ready to machine stitch. No. 1 is the opening cut ready for turning the facing back. In No. 2 this has been done. No. 3 shows the inside of the pocket opening as it will appear when ready for the pocket lap to be inserted. No. 4 is the lap ready for inserting. In No. 5 this has been done. No. 6 is the sleeve partly basted.

Diagram No. 31 is also the right side of the coat showing the pocket facings. These are to be 2 inches longer than the pockets, say for entrance of the hand. If it was 6 inches your facing would be 8 inches long. This is put identically on the thread mark place for pocket to be cut. First baste this on and stitch through the centre as shown, stitch this about a quarter of an inch apart. When this has been done take scissors and cut straight across within quarter of an inch to end of stitching and then take scissors and cut cloth in a $V$ shape or slant effect so that when the two ends are cut you will, as it were, have a sharp pointed effect at the end of pocket. See Diagram on this, and when this has been done press open the seam and turn back. making a neat cord or band as dessred.

Diagram No. 31 will be shown in six parts-first part as follows: Nos. 1, 2, 3, 4, 5, 6. Notice the D to C and the arrow shape at point D . This is to be turned back to prevent raveling at the erd of pocket. This is the place for the pocket tacking. This has been done on part second at D and C points. The line has been cut straight across to D line, A and B lines which are the same, are pressed open. No. 2 shows this space filled as the A and B lines have been made in a fold shown as one sees in gentlemen's vest pockets. Notice the line B is raised to fill up the C space which a seam being taken out would leave. The E line will be spoken of in part third, the end of part second has been tacked at the D point. Part
third shows the inside view. F and E are the ends of part one turned back. Notice the centre line D and C and at part A. See these small corners

turned back. No. 4 is the pocket laps, with the laps inserted at the F and E points. Part 5 is the finished lap.


32

## Diagram No. 32

Is the inside of a coat showing the stay lining for the pockets basted on. This is the first stage of pocket making; notice the lining extends from the front to the underarm; the X is where the pockets are to be.

Remarks on Sleeves.-Notice the elbow mark No. 5 with the lap inserted. Notice the A and B points are to be coincided and the fullness at elbow basted in. Lines on the underarm are $1 / 2$ inch longer than the lines on upper part. This is to be stretched when basting and can be easily done.


33

## Diagram No. 33

Shows the pocket laps sewed on: they are inserted into the pocket which you have cut. These laps are shown basted.


34
Diagram No. 34
Fancy Coat.-This is in three parts: No. 1, front showing large collar partly basted on the front; No 2, back basted; No. 3, facing thread marked and partly basted. The thread marking is to be done carefully at all times. See flat pattern placed on goods No. 34, also finished garment marked 43 in second part.


35
Diagram No. 35
The Pockets in the garment, and ready for final press. This garment
is shown in Nos. 31 and 33 in a limp condition before being padded and inside out to show the pockets.


Diagram No. 36
Shows a Shawl Collar as seen in picture No. 9. This may be seen in canvas work No. 3. The shawl collar effect can be gotten by simply joining the collar at the centre of the neck. In cases of persons changing their mind and preferring a shawl collar when a step collar had been cut, notice the Diagrams where the step collars are coincided in front at point B; notice the X. This is the facing and has been partly turned over as spoken of in Lesson No. 12. See Diagram.


## Diagram No. 37

This will show you plainly how to cut the facing for a shawl collar: also notice the dark line from the D point to form a shawl effect, as on No. 9 . Simply cut this off at the line extending to the end of line which will differ in length as desired.

Diagram No. 38
Notice this has been done; cut the facing with the collar placed in this manner.

## Diagram No. 39

Shows these parts coincided. You need not cut the rever point off your paper pattern, you may simply turn it back in a slant as shown. The lapels are all cut from the front of your coat pattern.
Diagram No. 40
Is the facing as it will be required for such lapels, as shown on Diagram No. 12. This is machine stitched and ready for putting on the coat.


## Diagram No. 41

Shows a Collar ready to be joined together, the back part may be cut without a seam in the centre of back just as they are done in men's coats.


Diagram No. 42
This is in two parts: No. 1 is the goods ready for pressing; No. 2, the canvas padded and ready for pressing. Look at canvas Nos, 5 and 6-they have been pressed.

Diagram No. 43
Is sleeve not pressed. This is merely to show how it looks before pressing.


43


44


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## Diagram No. 44

Shows a coat with braided effect. You can braid a coat to perfection free from canvas. Put in your sleeve properly pressed and be sure to press the coat before putting in the sleeve. You will not have to press off this coat. The meaning of this term as used by tailors means a great deal of pressing when the garment is finished. Bear in mind that scientific tailoring requires each part to be properly pressed as it is constructed. And when your garment is finished you will only have the edges to press slightly as the sewing in of the lining may give your coat a handled appearance.

## Diagram No. 45

Shows the canvas in the coat from the inside effect and shawl collar.


See scientific work.

## MENDING.

## Diagram No. 47

Is in three parts: No. 1, skirt; No. 2, patch complete; No. 3, seams pressed open, wrong side. To mend torn parts of garments that have been burned in a place or places, first get the exact twill of goods and the shade going the same way as in garment and then baste the patch on the wrong side. Be sure and have a perfect match in lines or stripes or designs as the case may be, then turn to the right side and turn in the raveled edge in the old-fashioned way and proceed to mend. By being careful to put your needle in at the twill of goods with a very slight hold on the garment, that is, taking a very dainty stitch, you will put in a stitch at every twill and when finished you will have a strong and perfect piece of work. Take out basting thread and press open the seam which will appear like an ordinary seam on the wrong side. This has been done where holes have been burned into costumes with hot iron when under construction and it would be impossible to see a trace on the right side of garment when finished. See Diagram.


46


47

Diagram No. 46
Is the finished Garment.

## SHIRT WAISTS

My method for cutting Shirt Waists will, on being put into practice, convince any cutter of its merits, and the simplicity of its construction will appeal to the most inexperienced novice.

A clear outline of the plain shirt waist, or lining for a plaited shirt waist, is shown on the method, and also a clear outline of shirt waist plaits. The sleeve is unique and has a great advantage over the ordinary shirt waist sleeve. The seam is located down the back of underarm very near the elbow line, thus preventing the seam from twisting up on the top of the arm in the section of the hand and elbow, as every woman knows this is a great annoyance.

When the pattern is cut according to measurements and the corresponding notches have been carefully put together, you need not fret yourself about the fit. A word regarding measurements: we shall take as an example the following measures which are to be carefully followed. All measures are to be plussed according to goods to give picturesque appearance. If the bust measures 36, make your blouse when finished to measure 38 if of heavy goods, but if of thin soft material the measurements of the garment should be 40. I am speaking of the garment when finished. If the neck measures $131 / 2$ make the neck band when finished 14 , if the hand band is 8 make it 10 when finished, length of back $151 / 2$, no change; underarm 9 , no change; length of front 16, no change. Inside arm length 18, waist 24.

I am not advising the peplum as it is extra work and necessitates cutting off the blouse at the underarm, and I know a blouse will often shrink and it is very unpleasant to contend with this sort of trouble, so I have arranged to make a better garment, and have smooth effect on the hip line with a saving of work and time. The kimona waist, or as it may be called, the dressy waist, is a very simple thing to make. Look at the device for cutting goods and you will find your kimona waist picture can be copied very easily. With this same device you can cut any style of garment with the kimona sleeve. I am showing Diagrams which will enable my clients to understand the perfections and simplicity of scientific shirt waist making.

Scientific Shirt Waist Method is a masterpiece of work of its kind. The shoulders are provided with the additional length for making tucks and gathers
and cutting plain foundations. Most shirt waists wanted have plaits or tucks and to add the proper amount for tucks or plaits has hitherto been left to the novice to work out The seam of the sleeve comes at back instead of front as shown in other patterns, and coincides with the opening at cuff. The underarm seam of this shirt waist is not sewed past the waist line and no peplums are used, thus saving time and labor. The cuffs and collar are provided with measurements for any size. Regarding sleeve the sleeve pattern is cut with both sides the same length. Plait in the three inches on the paper and when basting up the seam you will then find the back part three inches longer. Reduce this by gathering thread as shown on Diagram No, 6. I feel I am giving the people a superior method whereby they can cut the pattern as desired and will not have to spend more than an hour to understand the scientific work of shirt waist cutting.

## DESCRIPTION LESSON.

No. 1
First Lesson on Shirt Waist Cutting. See No. 2 on goods. Bust 36, Waist 24, Underarm 9. First place the Method on your paper and mark in your perforations on outline, following the neck, 36 in all. The perforations on outline marks in 9 at underarm, and at 15 front measure down from 36 at neck and until the length is reached. The point 15 and the length of back 15 measure down from 36 at neck on method and follow in the line as shown on method, and when the dots are made, use edge of method to make outline down back and use the shoulder edge to make shoulder line, draughting from dot to dot. To make the arm's eye use the arm's eye curve. When tucks are wanted, simply mark into the perforations on Diagram as it is plainly shown how the shoulder is made longer according to the amount of tucks you may desire, so be sure you first decide the number of tucks you want; an inch tuck requires 2 inches of cloth, $1 / 2$ an inch requires I inch, $1 / 4$ of an inch requires $1 / 2$ an inch. To make what is known as pin tucks, $1 / 4$ of an inch is wanted, and to make what is known as miniature tucks, $1 / 8$ of an inch is required. Divide your tucks and then simply add up the number of tucks and mark out on the shoulder line of method the number of inches wanted. For shirring give 4 to 5 inches extra. This you will readily understand, will
give a good full shirred shoulder. When your pattern is cut then cut your cloth and carefully notch at all junctions, then carefully put notches together, first the shoulder and then machine stitch your seam and press open with care. Then take tape line and tracer, if tracer can be used, and trace your tucks the width you want, but if a tracer cannot be used then just put thread marks at the distance. This you must do with care as it is the main feature of your tucked waist. If this is done carefully you will have a garment well worth your labor. Always work from a picture and good fashion book. If you design the garment yourself, make a proper drawing of what you want. It will save a lot of trouble, and do not change your mind when you have once decided what you want.

## PLAIN FOUNDATION PLACED ON GOODS.

Diagram No. 2
Is the flat draught of Scientific Shirt Waist and instructions as to how to make it. The flat draught is marked alphabetically. When basting up the garment you will find the corresponding letters sure to coincide. I feel that any novice can understand this, the waist line A on the front and the A on the back. This is the underarm line, and the stitching must not go below the waist line. The dark line in A is the waist line and the inside tape is stitched on this line to point E, and then tied in front. See Diagram marked No. 12 as this draught has been used for a shirred waist.

The shoulder has 4 lines which are numbered 1,2,3 and 4. The 1 is the tuck at the shoulder, the space marked 2 is the space between


2


3
the two tucks, No. 3 is second tuck and 4 is the center of the back. When a seam is in the centre of back the machine stitching must not go below the point 15. See No. 4 for Gibson tuck effect.
Diagram No. 3
Is the goods of the Shirt Waist Sleeve. The instructions on cutting this sleeve are in the cutting lessons, and you will notice this sleeve can be cut to fit any class of arm's eye. The A line at the back is 3 inches longer than the A line at the front. The 3 inches extra length in the back are to be eased into the front line, thus making a shapely curved sleeve. Notice the pattern has been pinned in plait to form the shortness in the seam. When cutting the goods lay the pattern on with pins, as they are shown. The goods will have a curve, and thus one side will be 3 inches longer. This seam comes exactly under the arm; thus you will understand how necessary it is that part of the seam should be 3 inches shorter. The sleeve is a perfect sleeve in appearance and comfort. The dark line at the hand is the opening for the cuff. See No. 14 for flat draught.
Diagram No. 4
Is a Cibson Shirt Waist pattern placed on goods. See goods.
For Gibson Waist No. 21 see pattern on goods No. 14: the mannish tailored shirt waist, see pattern placed on goods; the No. 16 shirt waist


4
placed on goods; under waist No. 19, see pattern placed on goods. Picture copying No. 21 is the bust of night gown No. 1. The flat draught is marked No. I also, and is marked for construction. For example the A is to coincide and the D, etc.


Diagram No. 5
Is the goods outlined and ready for basting.
Diagram No. 6
Is the finished garment. No. 6 in second part and No. 12 in first part is ready to coincide. The shoulder seam has been basted and the sleeve is ready to be coincided at the points A and the gathering thread has been put in ready for reducing the length into the shorter seam, which is the inside.

## Diagram No. 7

Shows the shoulder seam basted and the tucks in, with the tuck stitched 6 inches from the shoulder seam in the back and 4 in the froat. I prefer to allow the tucks to fall into position which they will do, and save the time and work, as the attitude of the tucks are altered so entirely by the shape of the shoulder and size of waist, and gives a novice so much worry and unnecessary work. When the tucks are properly placed at the shoulder the novice need have no further work on this point, as the tucks will control the line which is graceful and positive.

## Diagram No. 8

Is the lower part of the sleeve, with the opening at the back, faced for the cuff. In a new and simple manner the facing is basted on and one half has been lapped over. The entire facing is done in like manner. No. 3 is the first part simply cut up the distance required.


## Diagram No. 9

Shows the cuff on with the one side of the cuff being left open for the purpose of showing the fly under back. This has been machine stitched all around twice, down the end of the cuffs being left open shows the band turned back, and the low cut arm's eye as shown in No. 16 and No. 9 made up.

Diagram No. 10
Shows the cuff closed and the facing turned in a slanting manner, which gives a neat and smart look and is stitched. No. 10 is a shirt waist with one plait and a flat box plait in front and two tucks in sleeve and showing how artistic this waist is finished at bottom. Also showing the seams stitched to the waist line only, and the goods slashed up to the waist line and ready for the belt. Look carefully at the slant of this one large plait, it comes very slanting. See No. 16 for inside finish.

## Diagram No. 11

Shows the shirt waist fimished and will show the shapely sleeve from a front and back view and the sides showing the tape which ties at the waist line. See No. 16 for inside finish.

## Diagram No. 12

Is a shirt waist shirred-a finished garment. The pattern is cut identically like the shirt waist pattern cut in No. 4. Any person who can cut the shirt waist pattern, allowing for extra goods for plaits, can from this knowledge make a dozen different styles of waists. To cut a long kimona, simply use the same instructions and allow the goods for extra length. See the Scientific Scale for putting on bands. See 12 in first part marked for the shirring.
Diagram No. 13
Is a waist cut on kimona lines with an arm's eye cut down within 2 inches of the waist line. These waists are a novelty, and extremely comfortable and sensible and pretty and can be trimmed in most original designs. The sleeve is partly basted in and will be readily understood. Look carefully at the Diagranı and see how simple it is. Any person understanding how to cut this can make it perfectly.


Diagram No. 14
Is a plain shirt waist, with the low cut underarm. This waist has no plaits and is known as the mannish or plain tailored waist. Measurements: Bust

36, Waist 24, Underarm 9, length of Front 13, length of Back 13. Shoulder 6. Arm's eye 15. To make this draught use the scientific system, and mark into the perforations at the 36 and at the 6 shoulder and the 9 underarm. The arm's eye and sleeve are the chief points to be described in this lesson. The front shoulder A to C is 3 inches, from A to the figure 5 is 11 inches, from 5 to 9 is 5 inches. The dark line is the natural size of arm's eye, from B to 5 is 4 inches. Thus you understand the arm's eye has been cut down 4 inches to the 5 point, from the 5 the line B is slanted to C, enlarging the arm's eye to 22 inches. The back of this garment will be readily understood from what has been said in the instructions on the front. Notice the line B has been

clipped in from dark line, thus showing the original draught, and helping the reader to see more plainly the great difference between the original arm's eye and the one te use. The 4 inches which has been cut out of the underarm. must be payed back on the under part of the sleeve - see the Diagram of sleeve. Diagram No. 14 is a flat draught of shirt waist sleeve, with the additional 4 inches which has been cut out of the shirt waist No. 14 under the arm, and which has been left under part of the sleeve at the points B and 5 straight across the under part of the sleeve at the points A . Straight across the line at B has been curved, from B to the hand is 20 , and the line A from the top to the hand is 24 . Thus you find the 4 inches added to the seam. The elbow is 14 inches, the hand 12. This can be plaited or gathered as desired. Diagram No. 15

Is the neck, waist and cuff bands. This neck is 14 inches, the X E X the centre, the X at each end is 7 inches. Each time when preparing a neck
band mark the centre and whatever size the neck is, mark it the size at half as shown above to locate the proper place on the waist for the underarm seam. For instance, 24 waist mark off 24 , leaving an inch at each end for turnings. Fold it in half, which is 12 , and quarter. Plus the $1 / 4$ of an inch, and $13 / 4$ from the centre to the $X$ on the belt is $41 / 4$, this leaves $73 / 4$ point to be put to the underarm seam, and in all cases to locate the underarm line quarter the belt and plus one quarter, and $13 / 4$. Your garment will be properly balanced and the trouble of placing the gathers or plaits is overcome. The cuff is simply folded in half and a mark put at this point for the purpose of putting the cuffs both on even and saving unnecessary ripping, that would otherwise have to be done.


Diagram No. 16
Is a shirt waist showing the inside finish and the seam open at waist line. This construction and design is registered in Canadian R. D. to see original finished. The pattern will be marked No, II.

Diagram No. 17
To make this draught place shirt waist method on paper and mark in perforations No. 36 in front, neck and shoulder, and down 15 inches in front. and 5 inches back to the figure 15 and in back marked 2 inches, straight down 15 inches and 3 inches, mark the 15 and on the shoulder mark 6. Measure 5 inches each side, making 10 . Then mark $21 / 2$ to A on sleeve down to the


No. 2
X and mark 3 inches out to G , and slant up to A. In the back at arm's eye do likewise, and mark out 2 inches from A point. Shape the sleeve at the back from 10, mark down 16 inches, and across 11 inches to 13 . The three $V$ 's will convey that the inside arm has been shortened three inches and will have a shapely and comfortable appearance under the arm marked A and E .


17
See line cut in the back and front and down the shoulder to hand. See garment made up, No. 17, also pattern placed on goods and marked 14. Also see goods partly made up and marked.

Diagram No. 18
Shows No. 17 basted and shows the inside and some parts thread marked.

## Diagram No. 19

Shows the Garment partly basted.

## Diagram No. 20

Shows a shirt waist with the belt basted on and a design on the bust and sleeve. This has been shown for the purpose of showing the waists without the peplum. Notice none of these waists have a peplum. They are a waste of time to make.

## Diagram No. 21

Shows goods tucked and ready to be placed to provide the fullness the slender form needs. The line $A$ is 4 inches from $B$. This space has been left to provide for a plait in front if box plait is required. These tucks are 4 inches apart and from C to D is 8 inches. These tucks have been stitched a half inch in width from top to bottom. The tucks in the Diagram No. 22 have been placed to give the full bust appearance, which clearly conveys the idea

as it shows the line of where the flat pattern is placed. See pattern marked R. D. which will be No. 11. This will make clear to your miad the attitude of the tucks when worn.


## Diagram No. 22

Is the flat draught of picture for ladies' Drawers. To make this draught first measure off forty inches of paper. The pattern is in two parts as shown in picture, and opens on the right side. The pattern is exclusive, and will be marked R. D. No. 12, June 24, 1907. It is a simple matter to make ladies' or children's drawers from this pattern. See Cut.


168

Diagram No. 23
Figure No. I. To make this pattern use the instructions in Shirt Waists. See pattern No. 17 placed on the goods. The neck, shoulders and sleeves are the same as this pattern, being shown with no plaits or lines in sleeves, which makes it look different from No. 17. I shall give the dimensions: Length of front from $A$ to $L$ is 15 inches; from $M$ to $B$ is 15 inches; from B to C is 10 at the waist line. At C marked $\mathrm{O}, 2$ inches is added on; at B at waist line marked $\mathrm{O}, 3$ inches is on. Notice the slanting line from M to waist line. Line from C to D is 9 inches; from D to K at elbow is 15 inches; from $K$ to $E$ is 10 inches; from $E$ to $F$ is 7 inches, and from $F$ to $G$ is 18 inches. Elbow at K is 11 inches and G to H is 9 inches. At point O 3 inches has been added, H to A is 15 inches.

Figure No. 2. A to elbow $K$ is 10 inches; elbow to $B$ is 15 inches; $B$ to C is 9 inches; C to F is 3 inches, and from F to X is 9 inches. Inside arm is 18 inches. This waist is 4 inches below the waist line, and is not to be machine stitched below the waist line. Figures Nos. 3 and 4 are simply this garment with short sleeves. The shapely sleeve is perfection and this is the only perfect kimona sleeve up to present date.

Shirt Waist No. 23. No. 17 Shirt Waist covers this, the only difference being the fact of this being shown without plaits in sleeve and below the waist.


Diagram No. 24
Is shown in waists. See No. 33 in dress book work. The flat draught is perfect for shirt waists. This is shown basted, overcast and inside out. Notice the attitude of the sleeve. When this is down, the appearance is the draped effect under the arm.


## Diagram No. 25

Shows Collars for shirt waists. These are made plain on the Method and is a flat drawing of collars Nos, 1, 2 and 3. Three being the revers, one and two are the collar, commonly spoken of as a roll collar. Shirt collar No. 2 laps over No. I when worn. These collars are cut according to Scientific Methods and are understood at sight.

## PLAITED SKIRTS.

These skirts are to be made on scientific plans, if private women are to make them and make them well, and if the dressmaker is to get paid for her work she must make her plaited skirts on new and scientific plans. See Diagrams of Plaited Skirts.

First find out how wide you want the skirt at bottom; some will have to be narrow on account of heavy goods, and some wide as thin goods must have deeper plaits, to look well. These new plaited skirts are basted up in the way you would baste an ordinary skirt, and are as easily made.

Every woman is higher on the hips than in the front, some are as much as 4 inches. The extra length required must not be left on at bottom edge, you will readily understand how unreasonable the old way is. The feet are on the same surface, no matter how full or high the hips may be or how flat. so you will note the necessity of allowing the length on at waist band. The scientific system of dress cutting has provided for all kinds of plaited skirt cutting, some skirt materials have a heavy border at bottom edge. With my new plan, box-plaited, side-plaited or gored skirts are child's play compared with the former methods of skirt making.

Diagram No. 1


Is the goods as it will appear when marked for plaits. The notches or thread marks are $41 / 2$ inches apart. The top and lower edge can always be notched as it saves time, and through the hip line thread mark or mark with chalk: if it can be marked with the tracing-wheel do so in the hip line. On some goods the tracing-wheel does not make much impression, such as taffeta silks. You will notice in Diagram No. 2 that $11 / 2$ inches has been cut out of the plaits from the top to 10 down. This is to prevent the skirt from being thick at the hips and waist band. A number of plaited skirts are to be shown. The
skirt for the large figure with the high abdomen much good information is to be found in this Diagram.


## Diagram No. 2

Plaits basted in tuck form. The notches shown on Diagram No. I have been basted in the tuck manner. Diagram No. 2 shows this done and the plaits properly prepared for lapping as shown in Diagrams Nos, 3, 4 and 5. These plaits have been pressed very smooth and are straight up from notches at top and bottom. See Diagram No. I. Notice the pins on No. I. This is in line with the notches.


## Diagram No. 3

Measurements 40 Waist. Hip 63 plus 4 inches, making the finished garment 67. A to B is 40 inches, A to E is 4 inches. These 4 inche is the added length for the abnormally high front. Take the present lesson for instance, the back is 40 inches, the front is 44 , the 4 inches is addec)
at top. The line from E to $C$ will show the slant down to the 40 line, thus when the band is on and the skirt on the person it will be a perfect hanging skirt and the abnormal abdomen will not be noticeable as the skirt will always hang straight. The box plait in front 4 . The following 10 plaits are $23 / 4$ inches in width at hip line and the last 8 are $27 / 8$ inches at hip line, thus giving extra fullness at hem. The line of hip at waist $113 / 4$ back from front. The hip line plait at 9 must come straight up to the $113 / 4$ inches at waist band. This will give you a straight line which may be called the controlling line, as this line will enable any novice to put her plaited skirt on the band properly; the line at waist controls the plaits at hip line. You will readily understand the hip measurements being 67 when finished, and the centre of hip line being $181 / 2$ from front. The one quarter has been plussed $13 / 4$. This leaves 15 inches from the 9 to the centre of back. The waist measure is quartered and the front quarter is plussed $13 / 4$; thus the centre of hip line at waist is $113 / 4$. leaving $81 / 4$ to the back at waist band. This instruction will enable you to put up any size of skirt properly, and have a beautifully hanging garment, and if gathers are in vogue use the same instructions for hips and waist band, as gathers can be put in with as poor effect as plaits. If they are not properly placed on the form they will drag to the front or back as the case may be. Look carefully over the Table of Measurements for all kinds of skirts.

## Diagram No. 4

Is the inside showing the plaits at waist band with $11 / 2$ to be cut out. Four have been cut. The dark lines show the plaits cut. This is done to prevent the thickness at waist band and allow the plaits to lay smoother and the stitching to look prettier. The seams are finished inside with the loop stitch as shown in Diagram at point 3 of inside finish or can be overcast in the old-fashioned way. Do not bind seams as it will make too much thickness on the hips. The art of plaited-skirt making must be governed by the hip line. Who knows what an amount of time is involved in making an alteration in a skirt of this kind. First. decide how wide you want it at the bottom. Then measure off the straight lengths for the longest parts and then allow for hem. Study carefully all the lessons on plaited-
skirt work as they will enable you to master a great many other important branches of the work on account of the accurateness required. Plaited-skirt work will be convincing and the client that carefully follows these instructions will never have to unpick her work. She will have the pleasure of having the garment perfect. Notice that the inch and a half has been cut out on the

side that is to form the edge of plait that has the stitching on, which is shown by dotted lines at Point $2(\ldots$.$) ). The inside where the goods is cut off$ is shown by straight lines $(\ldots .)^{)}$). This is cut off leaving plenty of cloth to allow the machine stitching to be done. The edge of the dotted and straight lines are to lap over on the XXXX at Point I as shown on the second plait at Point 3. This number of plaits may be used for any size of hip as it only means that the larger the hip measurement the larger the distance between the plaits. Some people prefer larger plaits. This simply means further apart. When a plaited skirt is being made of heavy goods the artist working on this will reasonably know the plaits cannot $b_{r}$ c lapped much, in fact for heavy goods you will do well to mark your plats at $41 / 2$ inches on the goods as shown on Diagram No. I or decide how much width vou want at the bottom and then measure off your length and you can fold up your lengths and weigh them and know how heavy your skir is going to be. If you are carrying out an order for a woman that wants he clothing to be as light as possible you can by so doing speak intelligently or the matter. I think it is a great mistake to omit thoroughly deciding what you want before cutting the goods and avoid changing the style from firct choice.

## SCIENTIFIC SIDE-PLAITED SKIRT.

## Diagram No. 5

See No. 6.
Plaited Skirts. Waist 24 inches, Hips 42 inches. The fundamental lines in plaited skirts are the lines direct on the hips. All plaited skirts should have a plait coming straight down the hip line. To obtain further information see Scientific Measurement Table which gives the correct number of inches from centre of front to hip line and the correct line at waist band for the line of plait on hip to meet. All skirts must be plussed at hip section. For example I shall give the amount required for broadcloth 3 to 4 inches larger than the measurements taken 12 inches below waist line. The plait for hip line in this case will be $131 / 4$ from the centre of front, and the plait at waist line will be $73 / 4$ from centre of front. You will understand the amount of hip measurements has been quartered and one quarter has been plussed $13 / 4$ inches, and the waist measurement has been quartered and the front quarter has been plussed $13 / 4$. This will give you the direct line on hips and the line at waist band for all sizes of hips and waists, and will overcome the work and trouble which is sure to be found with the ordinary way of constructing a skirt of this style. Look carefully over Diagrams of plaited skirt construction and you will readily understand how carefully the Diagrams for forms with a decided difference in hip length have been met. We will take for example a 2 -inch longer on hip than front. Also for the form with a much shorter back, say 4 inches, than front. Look carefully at these Diagrams; also at the box-plaited skirts as they have been given a great amount of careful attention and have been mathematically worked out so that any school girl will readily understand, and can make her plaited skirt by carefully abiding by these instructions. Before the garment is put on the form be quite sure to have it up to measurements and it will fit.

The box plait in front is 4 inches wide, the 32 plaits are $11 / 4$ inches apart at the hip line. The ninth plait from front is the hip line plait; this is counting the edge of box plait as one plait, as you will notice. See Diagrams Nos. 3 and 4. Next I will place the ninth plait at the proper line of hip centre at waist line. The waist band half is 12 and the first 3 plaits are 1 inch apart at band. The fourth is 3/4, the remaining 5 are 1/2
inch apart. The first 5 plaits to the back are $1 / 2$ inch apart and the last 2 are 78 apart. Look carefully at table of measurements, and by noting the mathematical order of this skirt you can make any number of plaits, by simply understanding the scientific working of the waist and hip sizes. The last 3 plaits toward the back have a greater lap of goods. This is done to give more fullness, as more is required in the back.


Diagram No. 6
Is the goods of 24 Side-Plaited Skirt made of stripes. Notice a stripe is going straight down on each plait. The hip size has been pinned up to measure. The plaits are $13 / 4$ inches apart and an inch at waist band. As I have said these plaits may be set for a larger or smaller form. This Diagram is shown principally on account of the stripes.

## Diagram No. 7

Is the wrong side showing where the goods has been cut out from waist line to hip line. From A to B is 10 and $11 / 4$ has been cut out, thus making the skirt thin and smoother through the hip line. You will notice there is very little inside finishing to a skirt made on these lines and if made of wash goods you will find them perfect as well. The dark line from front to hip line is showing the 2 -inch raise on hips. The band is to be put on at this line.

Diagram No. 8
Is a plaited skirt made from the lessons on side-plaited skirt making.


9


10

## Diagram No. 9

Is a Side-Plaited Skirt made from the same class of pattern as Diagram No. 11. This is shown by way of conveying to your mind that a pattern cut for a box-plaited skirt can be largely used for side plaits, as it simply means turning the plaits all one way. Of course this box-plaited pattern is cut up to whatever measurements required. Read Lesson No. II and look at this Diagram is all the studying a client will require after reading this lesson. The dark lines on Diagram are the chalk or tracing or thread marks as the case may be in reality, as all the different rules of marking are made use of according to the goods being made up.

Diacram No. 10
Is the wrong side and the reader will readily understand the plaits are not deep; they are $11 / 2$ at bottom and $23 / 4$ apart. By this you will understand this is an example in plait making. Plaited skirts should be pressed with great care. Notice carefully what a simple thing it is to press a skirt made on these lines. You will have read Lessons 2 and 6 which show the goods pressed. If the plaits are to go to the back simply press them by placing a thin damp cloth neatly on the side that is to be the underside and press. This is sure to prove satisfactory in all kinds of goods and makes it much easier to place plaits at waist line. Then when the skirt has been put up to measurements at waist and hip line, it is a much easier and simpler matter to give the skirt a press on the inside, the plaits having been pressed on the underside keeps them in good shape, and makes this a work of little time. Read Lesson No. 11 .


## Diagram No. 11

## 11

Is the goods cut and marked for plaited skirt, as in Diagram No. 9, before being basted up to measurements. In reading Lesson No. 9 you will understand this. The line A to B is 10 inches. This is basted in the usual way a seam is basted, $B$ to $D$ at the hem and $D$ to $E$ and $F$ to $G$. When $A$ and $G$ are coincided and $B$ and $F$ and $D$ and $E$, this forms the straight plait from waist to hem. One inch has been cut out between $A$ and $G$ down 6 inches and the same at all the remaining plaits as they appear on Diagram. When the seams are basted up the line G, F, E will be known as the underside, to press as stated in Lesson No. 9. In basting this garment up, the marks at the hip line and at hem will very readily coincide and form plaits and also at waist line. Read every line of the reading matter on plaited skirts as it is such a help in so many other branches of the work. See No. 15 for inside finish.


12

## Diacram No. 12

Must be plaited up on the same lines as No. 11, as it is the same cut and shows that this skirt may be made in side plaits or box plaits as desired, and Diagrams Nos. 10 and 13 are made from the same cut. Diagram No. 12 is the goods cut and ready for basting up. Diagram No. 11 instructions for the construction of box-plaited skirts. Nos. 9, 11, 13 and 16 are all cut from the pattern which is shown placed on the goods in Diagram No. 18. This has been done to convince clients and readers that a box-plaited skirt can be used for many kinds. You will notice No. 8 is box plaited without spaces and No. 16 is box-plaited skirt with spaces, all made from the same cut. Thus you understand if you had properly cut box-plaited pattern, you could make four or five different skirts. I would like to convince people that to make your garments according to measurements is sure to give you perfect results and save you time and trouble, and besides no woman can fit herself, as fitting garments belongs to long experienced hands or naturally inclined dressmakers; so you will readily understand that it is very seldom a garment is a success that has to be fitted, unless it has been done by the artist who understands how.


13

## Diagram No. 13

This is a box-plaited skirt, as in the former lesson. The construction of the plaits has been made plain. I shall give instructions on putting the skirt on the band, and the hook on the back. The waist is 28 inches. To put a band on a skirt properly and place the plaits so as not to drag to the front or back, you must first locate the hip line. To do this, take whatever waist measure you are making and quarter it, say for instance, a 28 -waist measure, the quarter would be 7 inches. When this 28 waist belt has been
gotten ready with an inch turned in at the ends where the hooks and eyes are to be sewed, place these two ends together and your half will be 14 inches. Measure 7 iuches from centre of front; this is the quarter. Plus this $13 / 4$ inches. At this junction will be the correct hip line. In the hip section the same rule may be applied. For instance, if the hips are 40 the garment is plussed 4 inches; the quarter of this is 11 , one and a quarter will give you $121 / 4$ inches, from centre of front at hip 12 inches down from waist band. You must place the $81 / 2$ mark you have put on the band, straight up from the $121 / 4$ inch at hip line. This will enable you to put your plaits in the proper places in the band.


14

## Diagram No. 14

Is the inside finish. Notice that the last plaits at the back have been stitched and finished on the inside. The box plait on the inside has been provided with a piece of the goods 2 inches wide. This has been basted on the seam after the seam has been basted up and creased open with the fingers, but not stitched with the machine. The basting holds the seam together, and when the 2 -inch-wide strip of goods has been basted right onto the seams you may then stitch on each side of the basted seam, which will now be the centre seam. When the machine stitching has been done then take out the centre basting and you will have your box plait perfect, and then put your finish on the inside. The plait No. 2 shows the strip and seam ready for basting down. No. 3 plait is seam sewing up the
centre and stitched on both sides. This second seam does not require the 2 -inch strip of goods. I have described the two different styles of stitching this box-plaited skirt. The first will have a loose edge right up to the band and the second seam will have a flat seam right up to the band, for the hooks and eyes and placket in the back. I will ask you to look at Diagram No. 17. box plait No. 25, Scientific Tailoring. The gore in the back which takes the place of the placket and allows the back plaits to meet, is put on in the form of a gore. It is 8 inches wide at bottom and 4 at the band. It has been notched 10 inches from the bnttom and 10 up from the first notch and the skirt has two notches the same distance apart. These notches coincide and thus the back is perfect. Machine this up like every gore.


Diagram No. 16
This is a box-plaited skirt with alternate spaces. The cutting of this skirt is the same as No. 13. It is a demonstration of reversing the plaits and showing the advantage of allowing the extra for raise on hips at waist band. Thus you see the goods is of bordered or tucked material as the case may be. The lines show where the plait is to be stitched down. The box plait in the back has been set on in the same manner as the gore in L.essons Nos. 13 and 15, only this is on the top instead. Look at second part where the inside of skirt shows the finish and the line showing the skirt to be 2 inches longer over the hips. See Diagrams Nos. 14 and 15 for placket and see 17 in Scientific Tailoring for box plait set on in back.


## Diagram No. 17

Shows the advantage of being able to make plaited skirts of all kinds swithout cutting in a number of pieces and thus making a great deal of work. with inferior results, as every woman who has attempted to make herself a skirt of the box-plaited or side-plaited style knows how often the gores made it almost impossible, as the part of the gore going towards the back was very much on the bias. See No. 18 pattern on goods.


Diagram No. 18
18
Is the flat pattern for a 15 box plaited skirt. Each plait is $21 / 2$ inches wide at hip line, the Hip measure is 36 and the pattern at hip has been plussed to 40 . which gives a good 4 inches larger, as I have pointed out that the garment must be made this much larger or it will contract and wrinkle when you are in a sitting position. With the extra 4 inches you will find that you may be seated and while your gown will not appear loose, it will not appear contracted and uncomfortable. This pattern is shown on the goods and the goods has a border, which no doubt will help you to understand the necessity of adding whatever the hip extra is at the top, as we all know the front of
the skirt is seldom as long as the centre over the hips. In this case we have the hips 2 inches higher than the front. Notice the dark line and see that it has just reached the hip line and that the O line from hip centre to bottom of hem is 42 . Also notice that these plaits have been cut to measurements there, for the construction is as simple as a common gored skirt. We will take the front plait, A to B is 2 inches, C to D is $11 / 4$ and E is 1 inch and F is $1 / 2$, and G slants off to where nothing is taken off. From B to O in the front is 40 inches. The fifth plait is the hip line and the O at waist line at this junction is where the line is placed at the $71 / 4$ mark from centre of waist belt. The space between the plaits is 4 inches in the goods. The pattern No. 18 has been placed on the goods allowing very shallow plaits, as a demonstration showing that the plaits can be made extremely shallow. This will help you to understand that a plaited skirt may be made of heavy goods, and by making the plaits shallow you give the same outward appearance.


19


20

Diagrams Nos. 19 and 20
Are for the purpose of showing bordered goods made up.



## 21

Diagram No. 21
Is an Eleven-Gored Skirt, with three plaits at each gore. The instructions for making this skirt will stand good for the construction of all sizes and of all numbers of gores with plaits. I think it is folly to cut eleven gores and then baste up and plait at the gores. Skirts of this kind become fashionable and go out of fashion and return again. To my thinking plaits of all kinds are used more or less all the time, the only difference being larger or smaller. The Diagram showing these gores placed on the goods and Diagram No. 20 will make the art of construction plain, as so much has been written.

Shows the pattern on goods. This eleven-gored plaited effect is much better made up on the side-plaited effect. Put 3 side plaits and a large space, for instance 4 or 5 inches, and to use the table of figures for the eleven-gored or any other number of gores and have as many spaces as there are gores in the skirt. For instance, if you were making a five-gored skirt with plaits on each gore you would have a very wide space; also if you were making an eighteen-gored skirt with plaits at each seam, you would have very small spaces. In constructing any of the plaited skirts, look at your scale of measures and the lessons on side plaits and you will thoroughly understand. Nos. 11 and 12 are the goods cut.

## Diagram No. 22

Is a Costume mage of striped goods. Notice how harmonious the stripes are in the skirt, there are no direct bias sides on any of the gores.


Diagram No. 24
Shows how the pattern should be placed on the goods. It is not necessary to say much on this section as the cuts are sufficient.
Diagram No. 25
Is a Costume made of checked goods. It also shows the pattern placed on the goods; notice that the lower edge of pattern has been placed on a certain stripe, for instance, if it was a black stripe, and when the gores have been reversed as you will notice, the lower edge has been placed on the same class of stripe. In a case for cutting goods such as broadcloth or velvet, this could not be done, as all the gores must be placed on with the smooth side going down.
Diagram No. 26
Shows a Costume made up. See Scientific Tailoring No. 26. This gown is made of stripes and is box plaited. The skirt will convince you of the perfection of Scientific Box Plaiting Skirt Scale. The stripe in the coat will not go in a perfectly straight line, as this would be impossible, on account of the hips, waist and bust, also neck and the arms'eyes all being of a different size. Thus you will never be able to make the stripes all on the straight or even a slanting line, the bias effect is sure to appear at some junctions. Look well at the stripe in bodice and skirt, as this will be of service to you when cutting
and making up stripes. The earlier lesson on plaited skirts and this Diagram are sufficient advice.
Diagrams Nos. 27 and 28
Are registered in Canada and clients will be taught how to construct same by the teachers.

## CIRCULAR SKIRTS.

## Diagram No. 1

My Scientific Skirt Cutting Method is so simplified and perfected that it results in a perfect-fitting skirt pattern. It can be cut in four or five minutes or less time by any cutter. All women know how necessary it is that a circular skirt should hang with folds at side and back. If not cut properly the back will be deprived of the fullness which truly means the skirt is not wearable. I have carefully thought out a method by which all sizes of skirts can be properly cut. See Diagram of Method.

Look carefully over the method then read the first section. It will require a very short time, two hours at most, to teach any person scientific circular skirt cutting. Whatever size you want to cut, just mark into the perforations at waist band, and for plait in back, if plait is required. Then take tape line and mark it the length from waist band to bottom straight down

from dot at waist line, putting the bottom into five spaces. The Diagram of our lesson is 24 inches around waist band, the front space is 10 inches, the next two are 14 inches in width and the two back ones are 16 and inverted plait is $91 / 2$. This skirt when cut is $791 / 2$ inches wide, when these spaces have been measured off take bottom edge of method and draught bottom of skirt. Diagram No. 2

Shows how to cut a Circular Skirt for a woman with an abnormal abdomen; the lesson shows a raise of 4 inches in front. Back 40 and front 44, all the different lengths may be cut on the same principle. Whatever number
of inches you want to raise in front, simply mark up from waist band 1, 2, 3 or 4 as the case may be and then draught your waist line, gracefully slanting down to the original waist line at back. This done you can plainly see that it will be impossible for your skirt to hang improperly. So many stout figures are considered difficult to make garments for simply because the art of putting extra width and length has heretofore involved so much time and effort that the cutters were often forced to omit the art and resort to leaving extremely large seams and then depend on fitting, which in the end was double the labor. My method saves labor and brain work, too.

## Diagram No. 3

Speaking of figures with very deep curves, this means large hips and small waists. I have seen in some cases where the waist is small there would be a 3 -inch standout from the waist to the hip and then straight down. You may understand me more readily if I call your attention by asking you to place your hand on the woman's waist line at the hip centre and you will find that your hand in many cases will be able to lie on the space between the hip and waist. In these cases you will find when taking measurements the hip will be from 3 to 4 inches longer than the front. In these cases raise the waist line i to 2 inches over hip centre. It is not necessary to raise the full amount because the side being so on the bias, stretches, and gives the length required. Cases such as I have been speaking of are the extreme, all normal sizes are simply cut by marking into perforations on method.
Diagram No. 4
To make a Circular Skirt with a seam on the hip line. These skirts are often preferred on account of joints in goods going across; these lines are not preferred but objected to in cases when narrow goods is being used, such as 22 -inch widths, etc. Wide goods is better for the proper circular skirt. Coming back to the seam on hip line, look at the information on waist centre and hip centre, and you will readily understand the line. Simply fold the skirt and make a pencil line down from hip centre to waist centre and then straight down to bottom edge. If you decide the skirt is too wide or you do not want so much fullness, or in other words, ripples, simply fold your pattern in, slanting upwards. The material for this skirt must be cut in the usual way, by laying the front on the fold of goods, and when cutting the two sides it does not let the cloth have the bias appearance at the back. This can be greatly avoided by putting the pattern so as to bring the stripe to have a slant on the side that joins the front. If you have the straight line going to meet front you will simply have a positive bias effect, which will be a great trouble to you and a poor style, unless copying a picture and then you must put the stripes as shown. See index and instructions on how to make un these skirts.

## Diagram 23

Diagram of Divided Skirt Centre. The outer skirt is cut in the ordinary way or as desired. The centre line is the foundation. To cut this measure the form as it is set forth on Diagram. The F, G and E line and length A to $F$ is 4 inches, $F$ to $G$ is 18 inches, from $G$ to $E$ is 18 inches, $E$ to $D$ is 4 inches, B to C is 22 inches, and D to C is 36 .

The goods for a plaited skirt is 3 yards, divided in spaces of 12 inches. At the waist 4 inches have been cut out, at the back 2 inches, forming a V . To make this plaited skirt baste the straight line up in tuck form from top to bottom. See Lessons Nos. 1, 2, 3, 6 and 7 for further information.


188

## ELEVEN-PLAITED SKIRT.

New Scientific Scale for Eleven-Plaited Skirt.
New Scientific Scale giving exact figures at which to mark plaits at top, hip and lower edge when draughting for Eleven-Plaited Skirt. Top row of figures shows width of plait at waist, second at hips, third lower edge.

| WIDTH OF PLAIT AT | 1st | 2ND | 3RD | 4TH | 5TH | 6TH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 24 | $11 / 4$ | $21 / 4$ | $21 / 4$ | $21 / 4$ | 2 | 2 |
| Hip $42+4=46$ | $21 / 4$ | $41 / 4$ | $41 / 4$ | $41 / 4$ | 4 | 4 |
| Lower Edge 46 | $21 / 4$ | $41 / 4$ | $41 / 4$ | $41 / 4$ | 4 | 4 |
| Waist 26 | $11 / 4$ | 21/2 | 21/2 | $21 / 4$ | $21 / 4$ | 21/4 |
| Hip $44+4=48$ | 21/4 | $41 / 2$ | $41 / 2$ | 41/3 | $41 / 4$ | $41 / 4$ |
| Lower Edge 48 | $21 / 4$ | $41 / 2$ | $41 / 2$ | $41 / 4$ | $41 / 4$ | $41 / 4$ |
| Waist 28 | $11 / 2$ | 21/2 | 21/2 | $21 / 2$ | 21/2 | 21/2 |
| Hip $46+4=50$ | 21/4 | $43 / 4$ | $41 / 2$ | $41 / 2$ | $41 / 2$ | $41 / 2$ |
| Lower Edge 50 | 21/4 | $43 / 4$ | $41 / 2$ | $41 / 2$ | $41 / 2$ | 41/2 |
| Waist 30 | 11/2 | $23 / 4$ | $23 / 4$ | $23 / 4$ | $23 / 4$ | $23 / 4$ |
| Hip $50+4=54$ | 21/2 | 5 | 5 | 5 | $43 / 4$ | $43 / 4$ |
| Lower Edge 54 | $21 / 2$ | 5 | 5 | 5 | $43 / 4$ | $43 / 4$ |
| Waist 32 | $11 / 2$ | 3 | 3 | 3 | $23 / 4$ | $23 / 4$ |
| Hip $54+4=58$ | 23/4 | 51/4 | 51/4 | $51 / 4$ | $51 / 4$ | 51/4 |
| Lower Edge 58 | $23 / 4$ | $51 / 4$ | $51 / 4$ | $51 / 4$ | $51 / 4$ | 51/4 |
|  |  |  |  | 3 | 3 | 3 |
| Hip $56+4=60$ | $23 / 4$ | 51/2 | 51/2 | 51/2 | $51 / 2$ | 51/4 |
| Lower Edge 60 | $23 / 4$ | 51/2 | 51/2 | 51/2 | $51 / 2$ | 51/4 |
| Waist 36 | $13 / 4$ | 31/4 | $31 / 4$ | $31 / 4$ | $31 / 4$ |  |
| Hip $58+4=62$ | $23 / 4$ | 53/4 | 53/4 | $53 / 4$ | $51 / 2$ | 51/2 |
| Lower Edge 62 | $23 / 4$ | 53/4 | 53/4 | $53 / 4$ | 51/2 | 51/2 |
| Waist 38 | $13 / 4$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | $31 / 4$ |
| Hip $62+4=66$ | 3 | 6 | 6 | 6 | 6 | 6 |
| Lower Edge 66 | 3 | 6 | 6 | 6 | 6 | 6 |
| Waist 40 | 2 | $33 / 4$ | $33 / 4$ | $31 / 2$ | $31 / 2$ | 31/2 |
| Hip $64+4=68$ | 3 | 61/4 | 61/4 | $61 / 4$ | 61/4 | 6 |
| Lower Edge 68 | 3 | $61 / 4$ | 61/4 | $61 / 4$ | $61 / 4$ | 6 |

## THIRTEEN-PLAITED SKIRT.

New Scientific Scale for Thirteen-Plaited Skirt.
New Scientific Scale giving exact figures at which to mark plaits at top. hip and lower edge when draughting for Thirteen-Plaited Skirt. Top row of figures shows width of plait at waist, second at hips, third lower edge.

| WIDTH OF PLAIT A | Ist | 2nd | 3RD | 4TH | 5tM | 6 6TH | 7t |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| W |  | 2 |  |  |  |  |  |
| Hip $42+4=46$ | 13/4 | $33 / 4$ | $31 / 2$ | 31/2 | 31/2 | 31/ | $31 / 4$ |
| Lower Edge 46 | $13 / 4$ | $31 / 4$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | $31 / 2$ |
| Waist 26 |  | 2 | 2 | 2 | 2 | 2 |  |
| Hip $44+4=48$ | $13 / 4$ | $33 / 4$ | $33 / 4$ | $33 / 4$ | $33 / 4$ | $33 / 4$ | $31 / 2$ |
| Lower Edge 48 | $13 / 4$ | $33 / 4$ | $33 / 4$ | $33 / 4$ | 3314 | $33 / 4$ | $31 / 2$ |
|  |  |  |  | 2 | 2 | 2 |  |
| Hip $46+4=50$ | 2 | 4 | 4 | $33 / 4$ | $33 / 4$ | $33 / 4$ | 33/4 |
| Lower Edge 50 | 2 | 4 | 4 | $33 / 4$ | $33 / 4$ | $33 / 4$ | 33/4 |
| Waist 30 |  | 21/4 |  | 21/4 | 21/ |  |  |
| Hip $50+4=54$ | 21/4 | $41 / 4$ | 41/4 | 41/4 | 4 | 4 |  |
| Lower Edge 54 | $21 / 4$ | 41/4 | 41/4 | 41/4 | 4 | 4 | 4 |
| Wais |  | , | 1 | 212 | 21/2 |  |  |
| Hip $54+4=58$ | 21/4 | $41 / 2$ | 41/2 | $41 / 2$ | $41 / 2$ | $41 / 2$ | 1/2 |
| Lower Edge 58 | $21 / 4$ | $41 / 2$ | 41/2 | $41 / 2$ | $41 / 2$ | $41 / 2$ | 41/4 |
| Waist 34 |  | 23 | $23 / 4$ | 212 | 21/2 | 寿 |  |
| Hip $56+4=60$ | 11/4 | $43 / 4$ | 43/4 | 43/4 | $41 / 2$ | $41 / 2$ | 41/2 |
| Lower Edge 60 | 21/4 | $43 / 4$ | 43/4 | $43 / 4$ | $41 / 2$ | $41 / 2$ | $41 / 2$ |
| Waist |  | 23 | 23/4 | 23/4 | 23 | 23 |  |
| Hip $58+4=0$ | 21/2 | $43 / 4$ | 43/4 | $43 / 4$ | $43 / 4$ | 43/4 | 43 |
| Lower Edge 62 | $21 / 2$ | $43 / 4$ | $43 / 4$ | $43 / 4$ | $43 / 4$ | $43 / 4$ | 43 |
| Waist 38 |  | 3 | 3 | 3 |  | $23 / 4$ |  |
| Hip $62+4=66$ | 23/4 | 51/4 | 5 | 5 | 5 | 5 | 5 |
| Lower Edge 66 | $23 / 4$ | 51/4 | 5 | 5 | 5 | 5 | 5 |
| Waist 40 | $13 / 4$ | $31 / 4$ | 3 | 3 | 3 | 3 | 3 |
| Hip $64+4=68$ | $23 / 4$ | 51/4 | 51/4 | 51/4 | 51/4 | 51/4 | 5 |
| Lower Edge 68 | 23/4 | 51/4 | 51/4 | 51/4 | $51 / 4$ | 51/4 | 5 |

## FIFTEEN-BOX-PLAITED SKIRT.

## New Scientific Scale for Fifteen-Box-Plaited Skirt.

New Scientific Scale giving exact figures at which to mark plaits at top, hip and lower edge when draughting for Fifteen-Pleated Skirt. Top row of figures shows width of plait at waist, second at hips, third lower edge.

| WIDTH OF PLAIT AT | st | 2ND | 3RD | 4TH | 5TH | 6TH | 7 TH | 8t |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 24 | 11/4 | 13/4 | 13/4 | 11/2 | 11/2 | 11/2 | $1 / 2$ |  |
| Hip $42+4=46$ | $13 / 4$ | 31/4 | 3 | 3 |  |  |  |  |
| Lower Edge 46 | $13 / 4$ | $31 / 4$ | 3 | 3 | 3 | 3 | 3 |  |
| Waist 26 | 13/8 | 17/8 | 15/8 | 18 | 15/8 | 15/8 | 15/8 | 15/8 |
| Hip $44+4=48$ | 17/8 | $33 / 8$ | $31 / 8$ | 31/8 | 31/8 | 31/8 | 31/8 | 31/8 |
| Lower Edge 48 | 17/8 | 31/8 | $31 / 8$ | 31/8 | 31/8 | 31/8 | 31/8 | 31/8 |
| Waist 28 | 11/2 | 2 | $13 / 4$ | 13/4 | $13 / 4$ | 13/4 | 13/4 |  |
| Hip $46+4=50$ | 2 | $31 / 2$ | $31 / 4$ | 31/4 | $31 / 4$ | $31 / 4$ | $31 / 4$ | 31/4 |
| Lower Edge 50 | 2 | $31 / 2$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | 31/4 | 31/4 | $31 / 4$ |
| Waist 32 | $13 / 4$ | 21/4 | 2 | 2 | 2 | 2 | 2 |  |
| Hip $54+4=58$ | 21/2 | 4 | 33/4 | $33 / 4$ | $33 / 4$ | $33 / 4$ | $33 / 4$ | $33 / 4$ |
| Lower Edge 58 | $21 / 2$ | 4 | $33 / 4$ | 33/4 | $33 / 4$ | $33 / 4$ | $33 / 4$ | $33 / 4$ |
| Waist 34 | 17/8 | 23/8 | 21/8 | 21/8 | 21/8 | 21/8 | 8 |  |
| Hip $56+4=60$ | 23/8 | 41/8 | 37/8 | 37/8 | 37/8 | 37/8 | 37/8 | 31/8 |
| Lower Edge 60 | 25/8 | 41/8 | 37/8 | 37/8 | 37/8 | 37/8 | 37/8 | 37 |
| Waist 36 | 2 | 21/2 | 21/4 | 21/4 | 21/4 | 21/4 | $21 / 4$ | $21 / 4$ |
| Hip $58+4=62$ | 23/4 | 41/4 | 4 | 4 | 4 | 4 | 4 |  |
| Lower Edge 62 | 23/4 | 41/4 | 4 | 4 | 4 | 4 | 4 |  |
|  | 21/8 | 25/8 | $23 / 8$ | $23 / 8$ | $23 / 8$ | $23 / 8$ | $23 / 8$ | $23 / 8$ |
| $\text { Hips } 62+4=66$ | 3 | $41 / 2$ | 41/4 | 41/4 | 41/4 | 41/4 | 41/4 | $41 /$ |
| Lower Edge 66 | 3 | $41 / 2$ | 41/4 | 41/4 | 41/4 | 41/4 | 41/4 | 41/4 |
| Waist 40 | 21/4 | 23/4 | 21/2 | 21/2 | 21/2 | 21/2 | $21 / 2$ | 21/2 |
| Hips $64+4=68$ | 31/8 | 45/8 | 45/8 | 45/8 | $43 / 8$ | $43 / 8$ | $43 / 8$ | $43 / 8$ |
| Lower Edge 68 | $31 / 8$ | 45/8 | 43/8 | 43 | $43 / 8$ | $43 / 8$ | $43 / 8$ | 43 |

BOX-PLAITED SKIRT WITH A BOX-PLAIT AND A SPACE.

## With Nine Box-Plaits and Eight Spaces.

This gives a very dainty Plaited Skirt.
New Scientific Scale giving exact figures at which to mark plaits at top, hip and lower edge when draughting for Box-Plaited Skirt with a box-plait and a space. Top row of figures shows width of plait at waist, second at hips, third lower edge.

| WIDTH of PLAIT | 1st | 2ND | 3RD | 4TH | 5TH | 6TH | 7 TH | 8TH | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 24 <br> Hip $42+4=46$ <br> Lower Edge 46 | $\begin{aligned} & 1 \\ & 11 / 2 \\ & 11 / 2 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 23 / 4 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 23 / 4 \\ & 23 / 4 \end{aligned}$ | $\begin{aligned} & 1 / 4 \\ & 23 / 4 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 1 / 4,4 \\ & 21 / 4 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 23 / 4 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 23 / 4 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 21 / 2 \\ & 21 / 2 \end{aligned}$ | $\begin{aligned} & 1 / 4 \\ & 11 / 2 \\ & 1 / 2 \end{aligned}$ |
| $\begin{aligned} & \text { Waist } 26 \\ & \text { Hip } 44+4=48 \\ & \text { Lower Edge } 48 \end{aligned}$ | $\begin{aligned} & 1 \\ & 11 / 2 \\ & 11 / 2 \end{aligned}$ | $\begin{aligned} & 17 / 8 \\ & 278 \\ & 27 \% 8 \end{aligned}$ | $\begin{aligned} & 17 / 8 \\ & 27 / 8 \\ & 27 / 8 \end{aligned}$ | $\begin{aligned} & 278 \\ & 27 / 8 \\ & 27 / 8 \end{aligned}$ | $\begin{aligned} & 13 / 8,8 \\ & 278 \\ & 27 / 8 \end{aligned}$ | $\begin{aligned} & 278 \\ & 27 / 8 \end{aligned}$ | $\begin{aligned} & 13 / 8 \\ & 278 \\ & 27 / 8 \end{aligned}$ | $\begin{aligned} & 13 / 8 \\ & 27 / 8 \\ & 25 / 8 \end{aligned}$ | $\begin{aligned} & 13 / 8 \\ & 278 \\ & 25 / 8 \end{aligned}$ |
| Waist 28 <br> Hip $46+4=50$ <br> Lower Edge 50 | $\begin{aligned} & 11 / 4 \\ & 11 / 2 \\ & 11 / 2 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 23 / 4 \\ & 23 / 4 \end{aligned}$ | $11 / 2$ $23 / 4$ $23 / 4$ |
| $\begin{aligned} & \text { Waist } 30 \\ & \text { Hip } 50+4=54 \\ & \text { Lower Edge } 54 \end{aligned}$ | $\begin{aligned} & 11 / 4 \\ & 11 / 2 \\ & 11 / 2 \end{aligned}$ | $\begin{aligned} & 2 \\ & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & \hline 2 \\ & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $3$ |
| $\begin{aligned} & \text { Waist } 32 \\ & \text { Hip } 54+4=58 \\ & \text { Lower Edge } 58 \end{aligned}$ | $\begin{aligned} & 11 / 4 \\ & 13 / 4 \\ & 13 / 4 \end{aligned}$ | $\begin{aligned} & 31 / 2 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 21 / 8 \\ & 311 / 2 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 17 / 8 \\ & 311 / 2 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 31 / 2 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 17 / 8 \\ & 31 / 2 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ |
| $\begin{aligned} & \text { Waist } 34 \\ & \text { Hip } 56+4=60 \\ & \text { Lower Edge } 60 \end{aligned}$ | $\begin{aligned} & 11 / 2 \\ & 11 / 2 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 13 / 4 \\ & 31 / 4 \\ & 31 / 4 \end{aligned}$ |
| Waist 36 <br> Hip $58+4=62$ <br> Lower Edge 62 | $\begin{aligned} & 13 / 4 \\ & 13 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 \\ & 3 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 31 / 2 \\ & 31 / 2 \end{aligned}$ | $\begin{aligned} & 2 \\ & 31 / 2 \\ & 31 / 2 \end{aligned}$ | 21 $31 / 2$ $31 / 2$ |
| Waist 38 <br> Hip $62+4=66$ <br> Lower Edge 66 | $2^{13 / 4}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 2 \\ & 33 / 4 \\ & 33 / 4 \end{aligned}$ | $\begin{aligned} & 33 / 4 \\ & 33 / 4 \end{aligned}$ |
| Waist 40 <br> Hip $64+4=68$ <br> Lower Edge 68 | $\begin{aligned} & 11 / 2 \\ & 2 \\ & 2 \end{aligned}$ | $\begin{aligned} & 21 / 2 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 2 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 21 / 4 \\ & 4 \\ & 4 \end{aligned}$ | $21 / 4$ |

## NINETEEN-PLAITED SKIRT. <br> New Scientific Scale for Nineteen-Plaited Skirt,

New Scientific Scale giving exact figures at which to mark plaits at top, hip and lower edge when draughting for Nineteen-Plaited Skirt. Top row of figures shows width of plait at waist, second at hips, third lower edge.

| idth of platt at | Ist | 2ND | 3RD | 4TH | 5TH | 6тн | 7TH | 8TH | 9th | 10тH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Waist 24 | $3 / 4$ | 11/4 | 11/4 | 11/4 | 11/4 | 11/4 | 11/4 | 11/4 | $11 / 4$ | 1/4 |
| Hip $42+4=46$ | $11 / 4$ | 21/2 | $21 / 2$ | $21 / 2$ | $21 / 2$ | $21 / 2$ | $21 / 2$ | $21 / 4$ | $21 / 4$ | 1/4 |
| Lower Edge 46 | $11 / 4$ | 21/2 | $21 / 2$ | 21/2 | $21 / 2$ | $21 / 2$ | $21 / 2$ | 21/4 | $21 / 4$ | $21 / 4$ |
| Waist 26 | $3 / 4$ | 13/8 | $13 / 8$ | $13 / 8$ | $13 / 8$ | 13/8 | 13/8 | 13/8 | 13/8 |  |
| Hip $44+4=48$ | $11 / 4$ | 21/2 | $21 / 2$ | $23 / 4$ | $21 / 2$ | $21 / 2$ | $21 / 2$ | $21 / 2$ | 21/2 | $21 / 2$ |
| Lower Edge 48 | $11 / 4$ | $21 / 2$ | 21/2 | $23 / 4$ | 2334 | $21 / 2$ | $21 / 2$ | 21/2 | $21 / 2$ | $21 / 2$ |
| Waist 28 | 3/4 | 11/2 | 11/2 | $11 / 2$ | 11/2 | 11/2 | 11/2 | 11/2 | 11/2 |  |
| Hip $46+4=50$ | $11 / 4$ | $21 / 2$ | $21 / 2$ | $23 / 4$ | 23/4 | $23 / 4$ | 23/4 | 23/4 | 23/4 | 1/2 |
| Lower Edge 50 | 11/4 | 21/2 | 21/2 | 21/2 | 21/2 | $21 / 2$ | $21 / 2$ | $21 / 2$ | $21 / 2$ | /2 |
| Waist 30 | 1 | $13 / 4$ | $13 / 4$ | $11 / 2$ | $11 / 2$ | 11/2 | 11/2 | 11/2 |  |  |
| Hip $50+4=54$ | $11 / 2$ | 3 | 3 | 3 | $23 / 4$ | $23 / 4$ | $23 / 4$ | $23 / 4$ | 23/4 | 1/2 |
| Lower Edge 54 | $11 / 2$ | 3 | 3 | 3 | $23 / 4$ | $23 / 4$ | $23 / 4$ | $23 / 4$ | $23 / 4$ | $23 / 4$ |
| Waist 32 | 1 | $13 / 4$ | $13 / 4$ | $13 / 4$ | $13 / 4$ |  |  | 11/2 | 11/2 |  |
| Hip $54+4=58$ | $11 / 2$ | $31 / 4$ | $31 / 4$ | 3 | 3 | 3 | 3. | $1 / 2$ | 1/2 |  |
| Lower Edge 58 | $11 / 2$ | $31 / 4$ | $31 / 4$ | 3 | 3 | 3 | 3 | 3 |  |  |
| Waist 34 | $11 / 4$ | $13 / 4$ | $13 / 4$ | $13 / 4$ | 13/4 | $13 / 4$ |  |  |  |  |
| Hip $56+4=60$ | $11 / 2$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $3^{1 / 4}$ | $3 / 4$ |  |
| Lower Edge 60 | $11 / 2$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | 3 |  | 3 |
| Waist 36 | 11/4 | 2 | 2 | 2 |  | $13 / 4$ | 13/4 | $13 / 4$ | $13 / 4$ |  |
| Hip $58+4=62$ | $13 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ |  | $31 / 4$ | $31 / 4$ |
| Lower Edge 62 | $13 / 4$ | $31 / 4$ | 31/4 | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ | $31 / 4$ |
| Waist 38 | 11/4 | 2 | 2 | 2 |  |  |  |  |  |  |
| Hip $62+4=66$ | $13 / 4$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | $31 / 2$ | 31/2 | $\begin{aligned} & 2 \\ & 31 / 2 \end{aligned}$ | 21/2 | 21/2 | $13 / 4$ $31 / 4$ |
| Lower Edge 66 | 13/4 | 31/2 | 31/2 | $31 / 2$ | $31 / 2$ | $31 / 2$ | 31/2 | 31/2 | $31 / 2$ | 31/4 |
| Waist 40 |  |  |  | 21/4 |  | 2 | 2 |  |  |  |
| Hip $64+4=68$ | $13 / 4$ | $33 / 4$ | $33 / 4$ | $33 / 4$ | $31 / 2$ | $31 / 2$ | 31/2 | 31/2 | $31 / 2$ | $31 / 2$ |
| Lower Edge 68 | $13 / 4$ | $33 / 4$ | 33/4 | 33/4 | 31, | $31 / 2$ | 31/2 | $31 / 2$ | $31 / 2$ | 31/2 |

## NEW SCIENTIFIC CIRCULAR SKIRT MEASUREMENT.

The Circle at the Waist Band is to be Marked off Into Sections.
The figures on this page are the width of the spaces at lower edge. The waist curve is to be divided into five parts as shown on Diagram. See Diagram No. I on page 186; also reading matter.

| WAIST | 1 ST | 2 ND | 3 RD | 4 TH | 5 TH | PLAIT |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 24 | 14 | 14 | 14 | 16 | 16 | $91 / 2$ |
| 26 | 14 | 14 | 14 | 16 | 16 | $91 / 2$ |
| 28 | 14 | 14 | 14 | 16 | 16 | $91 / 2$ |
| 30 | 14 | 15 | 15 | 16 | 16 | $991 / 2$ |
| 32 | 14 | 15 | 16 | 16 | 16 | $91 / 2$ |
| 34 | 14 | 15 | 17 | 17 | 17 | $91 / 2$ |
| 36 | 15 | 15 | 17 | 17 | 17 | $91 / 2$ |
| 38 | 15 | 15 | 17 | 17 | 17 | 10 |
| 40 | 15 | 16 | 17 | 17 | 17 | 10 |
| 20 |  |  |  |  |  |  |



## THE DIFFERENT SHADES OR COLORS WHICH ARE USED TO TRIM.

No. 1. Blue gowns of light or dark shades, trimmed with blue braid to match or black braid or blue velvet. Trim sleeves and bodice with cream or white lace or small lines of rose color or black or blue. A dainty touch of gold is pretty on bodice.

No. 2. Black net gown with colored lining, green with touches of white and burnt orange makes a pretty and nicely shaded gown for dress occasions. Blue forget-me-not trimmed with white, a touch of black or brown.

No. 3. Brown trimmed with pink, brown, dark cream and black or gold soutache braid is lovely.

No. 4 Black, trim with rose, ivory, pink and fawn on bodice.
No. 5. Blue and ivory, best with soft touches of brown and blue. The skirt may have a trimming of a wood brown and the jacket the same. This makes a lovely visiting tailored short coat and skirt. The hair should be brown, about the shade of braid.

No. 6. Blue trimmed with white and a lighter shade of blue.
No. 7. Blue, turquois, trimmed with a darker shade of blue and white.
No. 8. Blue, light, coat with black and white, the white being in miniature lines on the black, such as polka dots worked on by hand.

No. 9. Black gown trimmed with golden brown and blue.
No. 10. Brown trimmed with pink, old gold, fawn and black with a touch of red.

No. 11. Blue and pale green, white lace and dainty touches of gold and a contrasting touch of velvet at the corsage, makes an exquisite ball robe.

No. 12. Brown costume is lovely trimmed with scarlet and fawn.
No. 13. Mauve trimmed with black or all white. Mauve trimmed with dark shades of mauve or white or violet.

No. 14. Pink materials: White and burnt orange or yellow or black or all pink and gold.

A darker shade of pink and white or fawn are lovely.
No. 15. Pink, light and dark shades and white are lovely for dinner gowns or ball robes.

No. 16. Purple for trimming purple materials. Ivory and fawn are lovely.

No. 17. Purple, black and white if to be used for second mourning.
No. 18. Purple trimmed with dark shades of heliotrope or dark shades of mauve or white are very fine shades to combine.

No. 19. Plum-colored materials, black and green and white and a darker shade of plum color.

No. 20. Plum trimmed with black and dark cream color is pretty, plum trimmed with white and mauve with miniature touches of black.

No. 21. Castor color trimmed with darker shades and with white. Lace at neck and dainty touches of wine color, almost red.

No. 22. Fawn materials trimmed as follows: With white and green and pink, for evening and reception gowns.

No. 23. Fawn trimmed with a lighter shade of fawn and slight touches of blue. Fawn trimmed with rose color and white and lighter shades of fawn.

No. 24. Fawn, light shades trimmed with white lace and cream lace at the neck touched with pink or blue.

No. 25. Novelty goods with mixtures of colors. For trimmings choose the shades which are in the goods, white or pink or yellow or black or blue as the case may be. Two contrasting colors are very pretty and in many cases give a tone of distinction to the garment and helps to bring out the paler shades.

No. 26. Wine-colored materials, trimmed with miniature lines of black or same shade with white and fawn trimmings near the face, with soft lines of black and dark cream and pale blue.

No. 27. Wine color, green, ivory, fawn and gold are pretty for trimmings. White or ivory collar with orange or blue or black. If the goods are a novelty with different colors, then choose the trimmings from the shades in the goods.

No. 28. Red materials are to be trimmed with shades to match of white, black, ivory or corn color, or fawn or black and brown. The various colors which have been mentioned are to be used on the different shades of red, or all these different colors mentioned can be daintily worked in, giving a strictly Parisian effect, cream near the face with touches of black.

No. 29. Rose color, trimmed with lines of black, gold or brown.
No. 30. Grey: Plain greys trimmed with white and corn color and black, dark greys trimmed with white lace and rich rose color. Grey and white mixtures, use trinmings with blue and pink effects.

## PLUSSING.

Scientific Table of the Measurements for Construction of the Various Kinds of Goods of Heavy and Light Quality to be Plussed.

| $\begin{aligned} & \text { Buss, } \\ & \text { Ivchis } \end{aligned}$ | Wast. Isches | Hip, Inchis. | $\frac{\text { Levath. }}{\text { Leches. }}$ | $\begin{aligned} & \text { NECK } \\ & \text { BANDS, } \\ & \text { INCHES } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Tweed .......................... 3 | 1 | 3 | * | 1/2 |
| Broadcloth ...................... 3 | 1 | 3 | * | 1/2 |
| Serge ........................ 3 | 1 | 3 | * | 1/2 |
| Cannel's Hair .................... ${ }^{3}$ | 1 | 3 | * | 1/2 |
| Venetian ..................... 3 | 1 | 3 | * | 1/2 |
| Heavy Corduroy ................. ${ }^{3}$ | 1 | 3 | * | 1/2 |
| All goods of light weave ........... 3 | 1 | 3 | 1 | 1/2 |
| Voiles ........................ 4 | 1 | 4 | 1 | 1/2 |
| Grenadines .................... 4 | 1 | 4 | 1 | 1/2 |
| Cashmere ....................... 4 | 1 | 4 | 1 | 1/2 |
| Crepon ....................... 4 | 1 | 4 | 1 | 1/2 |
| Crape Cloth ................... 4 | 1 | 4 | 1 | 1/2 |
| All materials of similar weave ....... 4 | 1 | 4 | 1 | 1/2 |
| Velvet ........................ $31 / 2$ | $11 / 2$ | 4 | 1 | 1/2 |
| Light quality of Corduroy .......... 31/2 | $11 / 2$ | 4 | 1 | 1/2 |
| Plushes of all kinds ............... 31/2 | $11 / 2$ | 4 | 1 | 1/2 |
| Satins of all kinds ................ 4 | $11 / 2$ | 4 | 21/2 | 1/2 |
| Brocades ....................... 4 | $11 / 2$ | 4 | $21 / 2$ | 1/2 |
| Taffeta Silks of all kinds ........... 5 | $11 / 2$ | 6 | $21 / 2$ | 1/2 |
| All goods of similar nature treat likewise. |  |  |  |  |
| Gauzes and Chiffons .............. 5 | 2 | 5 | 3 | 1 |
| Organdies ...................... 5 | 2 | 5 | 3 | 1 |
| Novelty of like nature . ............ 5 | 2 | 5 | 3 | 1 |
| Nets ......................... 5 | 2 | 5 | 3 | 1 |
| Muslin ......................... 5 | 2 | 5 | 3 | 1 |
| All kinds of Cotton Goods of light weave 5 | 2 | 5 | 3 | I |
| Heavy woven Cottons, use the Velvet Table of Measurements.$*$ Natural length. |  |  |  |  |

## DISCOURSE ON MILLINERY.

## CONSTRUCTION OF HATS.

The construction of hats must be simplified, preventing the decrease in high-class hand-made millinery. Scientific millinery is a boon to all. The young lady or widow who finds she has to make her own way in the world has been handicapped when she made a choice in the millinery world. First, it involved so much time and expense and to learn the secrets of the business was an impossibility as all this had to be learned or rather found out by experience. We all know that the milliner or the dressmaker who thoroughly understands the secrets of the business can make good money any place. Two of the predominating points are to first give the purchaser satisfaction, and second, collect your money. If a lady has a large account in the bank it is not right for you to wait for your money and make your life miserable.

One of the fine points in business is to pay cash and collect cash on deliveries. In starting a business be sure and commence with cash, because you know the old saying that the human being is composed of three parts-soul. body and clothes. This is more than a jest.

The art of millinery is becoming more exceeding, thus construction must be promoted as you may easily judge for yourself. By looking over the fashions of to-day and those of years ago, the fashion journals have left nothing undone to show the public the latest styles in detail. The book published on millinery and dressmaking is without doubt the true evidence of the strenuous lives these men must live to keep up with all different classes of goods which the clever and foresighted manufacturer may produce. When you buy a fashion book, buy a first-class one; they are the cheapest in the end and your millinery will have a first-class style about it. Write to me for the addresses of same. It is necessary to use the best fashion journals. The woman's page in most all the leading papers has an article on dress and your purchasers look for the reality from you. Give them the best styles.

## COTTON BATTING.

One of the very best articles that can be used in the construction of hats and bonnets of all kinds is cotton wool, or, as commonly known, sheet batting. It is sold at 3 cents a sheet. I shall describe its use first in the construction of buckram shapes. We all know the buckram shape covered with silk or satin has a hard visage or poor look. When you have your buckram shape made cover it over with a layer of cotton batting, putting an extra piece on where the wire is. To keep this batting in place just give it a slight basting to the hat. You will be more than repaid for your work, your silk or satin hat will look ten degrees better and your goods will look like a better quality and retain its original appearance. The silk hat made on this new and scientific basis will sell more readily. All the bows or rosettes used as trimming may be lined with cotton batting and the large or small velvet hat may be made on the same basis and look perfectly lovely over the buckram shape. In the oval crown one so often sees resembling melon roundness, the round effect can be made to perfection with the aid of the cotton batting. The cotton batting is best in making velvet bows as the muslin gets limp when out in the damp, or, instead of wire, put up the centre of the velvet bow a strip of buckram an inch wide the length of the bow. See Diagram of those hats for further information.

## CONSTRUCTION OF WIRE SHAPES.

In the construction of wire shapes the picture is first copied in detail in pattern form and the paper pattern pinned together and put on the head in the same manner as in the picture, to convince yourself you have duplicated the picture. To make the wire shape first get the wire and millinery pinchers, then measure around the edge and cut off whatever length of wire this may be and take the pinchers and twist the two ends together, thus making a circle. Then measure three inches further up from the edge, cut off the amount of wire the size of measure, join together and keep repeating the 3 inch distance until the top is reached. Then measure down the pattern and cut off the wire length. No matter how much the hat measures around, allow 3 inches of space between each wire; for instance, if the brim measures 24 inches and the depth of brim is 10 inches, you will require 8 pieces of wire 11 inches long. The extra inch is for twisting over the first and last circle.

## TO REMOVE CREASES.

If gauze, crape and nets, chiffons and all laces, silks or satins or any material has become creased from being worn and has lost the new crisp appearance, or in other words is creased or wrinkled, pressing will not bring this out. Some goods will not bear the hot iron.

In work rooms there is what is known as the shrinking sheet. When cloth is to be shrunk a large piece of cotton, say 5 or 6 yards, is used. In private homes a sheet can be used and save the trouble of getting the cotton. Wring the sheet or cotton out of hot water and fold it to be as thick as you can afford, say 4 thicknesses. This will give quite a heavy degree of dampness which is necessary as the dampness rising out of the cloth will make any of these materials quite damp.

First, place the wet sheet smoothly on the table and then put the goods, whichever of the above mentioned, smoothly on the sheet. To keep the goods smooth on the damp sheet just pin the ends of the lace or silk, as the case may be, to the sheet and leave until the dampness out of the sheet has made the goods damp. You will notice the wrinkles quite gone. A good plan is to just leave the damp sheet and whatever goods you are treating on the sheet until all are dry, then take off and you will find your goods like new, as far as the crispness and wrinkles are concerned. You cannot treat crape satisfactorily by any other method. The steaming process is often an impossibility as one may not have any conveniences for steaming. The treatment described is better as you can put a great number of yards on this damp sheet at once, or pieces, as the case may be. Read the cleaning instructions.

Crease in Goods.-When material of any kind has been folded so as to form what is known as the double width goods, all these have a crease in the centre. Some are delicate shades and have a high glossy finish. To press this with a hot iron would not take the creases out perfectly, so do not waste time trying. The proper way is to take a tiny bit of sponge, or better, a small clipping of cloth and dip it into cold or hot water and daintily touch the crease in centre on the wrong side and allow to dry perfectly. Then press with a hot iron but use no more water, and the crease will be entirely gone. Do this with any particular goods of fine quality.

## LESSONS ON CLEANING.

No. 1
First Lessons on cleaning silk, all kinds of trimming, lace, goods of any kind and feathers of all kinds. Dissolve or melt soap and gasoline and rub on the soiled parts. Then put the garment into the tub and wash in the usual way. This will clean velvet of any kind to perfection; also old lace. No matter what you may desire cleaned make no hesitation. Rub with the hand. Goods may be rubbed on the common washboard or in a washing machine.

Dissolve soap in gasoline. For a gallon of gasoline use a piece of soap 2 inches square. Rub the gasoline and soap on the badly soiled parts. Whatever the article may be you want cleaned be sure and use soap, and have lots of gasoline on hand; you may use any kind of soap excepting a black or dark soap. First, pour enough gasoline in your pan to wet the goods and rub soap on just as you would if you were washing any kind of garment, using plenty, or do as stated above to preserve the hands. If you will have the article cleaned to perfection it must be rinsed two or three times. Furs may be cleaned with very much success. White furs and white feathers have been quite impossible for those outside of the regular cleaning business. Crape of all kinds is different to clean and also difficult, but with the soap and gasoline anything can be cleaned. The gasoline without the soap is of little or no value. Good white soap of any make will answer the purpose. I mention this to prevent your hesitating. Be quite positive and have no fire or lamp lit when you are cleaning and let the garment dry perfectly before pressing. If an odor of gasoline should be in the garment just perfume it slightly with spruce for instance, or any other perfume.

## SCIENTIFIC TABLE OF CIRCLES FOR CUTTING HATS.

In the Scientific Table of Circles for Cutting Hats, notice the line has been held to centre curves by means of a small tack being placed in the end of the tape line, thus making it possible to form the circles as shown in Diagram. This is truly a simple means by which you can copy pictures or designs you have made sketches of from your own ideas. You must first draught a circle according to the size of hat to be copied. See the different hats which are copied from the circle, and see lessons on large hats; also the hats spoken of as being cut by the 18 -inch sweep of tape line. This will be in Diagram 22 which is the table of 18 -inch suit for cutting hats and the tape is held on the table in the same manner as the circular, the difference in the 18 -inch sweep is simply making a half circle. Look at the different hats cut by this and read the lessons, and you will readily understand that you can make all the patterns

as set forth in the finest books. Any young lady would do well to buy some high fashion book and teach millinery in private homes. Send to me and I will give you the addresses of some, or come and see the French books of this office.

## HATS.

## Diagram No. 1

Is a hat 45 inches and drawn with a $73 / 4$-inch sweep. The slight turn up at the sides is 2 inches; the centre circle B, 24 inches; the crown D, 28 inches. From D to C , from C to B , and from B to A is 20. Draught an 18 -inch sweep for the line D to C and your pin must be moved to 12 for making the line B to A. This done, mark 18 inches each side from E, and

each side of F measure 10 and then the centre. P in the paper together and try on; look in your mirror and see that you have the desired effect, then cut your goods and buckram. Read Lesson No. 4 also.

## Diagram No. 2

Is 50 inches around circle A . The space between A and B is 12 , between C and D is 5 . It is turned up at the side. Lesson No. 1 will cover the crown of Diagram No. 2 completely. I am going to show a set of Diagrams which, when you have come to understand, the cutting of Diagrams Nos. 2, 3, 4 and 5 will be very simple. You will understand how to cut any class of hat of medium size. Look at Diagrams Nos. 10, $11,12,13$, $14,15,16,17,18,19,20$ and 21 . This family of hats comes in fashion and goes out again and the change is very little, mostly in the size, as a small hat looks quite different from a larger size hat. Miniatured down one would not recognize it as being akin to the large picture hat. Study these small hats as they will, when draughted, convince you of the simplicity of hat cutting as taught in the Scientific Millinery. Read Lesson No. 6 on Wire Shapes.


## Diagram No. 3

In giving a description of Scientific Millinery, read Lesson No, 3 carefully and look at Diagram No. 1. This hat is 66 inches around the brim, 23 inches from A to B and is 9 inches wide in the brim and 23 inches around inside circle at Point A . The outer crown on which the drape and flowers are arranged is 32 inches, the spaces between the flowers are 4 inches, the drape from the front to the back is 17 inches. The size of the roses are $13 / 4$ inches across. You will observe the roses are small. The first row has 5 roses, second row 7 , third row 9 . The drape takes 2 yards of silk or mull. To make draught of this hat, place the draughting paper on your table and put an artist's tack in the perforation at brass end of tape and place your pencil at 15 inches on the tape. Hold the pencil in the right hand keeping it firm on the tape and swing the tape and pencil in a perfect
circle; then measure 9 inches in, put pencil at $51 / 2$ and make a circle. Cut this circle out and measure 23 inches and make a notch or dot at the 23 and

measure 66 inches at outer circle for brim. All the paper over the 66 and 23 cut off. Look at Diagram of this hat. Diagram No. 3 will give you a clear understanding of how this hat is cut. The crown is an oval one and when made in buckram, the V-shape as shown in Diagram must be cut out to form the overtop of crown for straw and wire. Look at the index for instructions of the velvet or silk cut from paper pattern. When a client has come to thoroughly understand this lesson, she may make all shapes of smaller size, although they may be turned up at the side or front. Many shapes are cut from the same scientific circle, although they appear quite different on account of the turn-up as spoken of. The oblong shape is cut in the same manner, the only difference being the width of brim in front might be 5 , and 5 in the back and 9 at the sides. You will readily understand when you make your coinciding lines with 5 and 9 you will get your oblong shape. All the oblong shapes are drawn in the ordinary way, then reduced to as small a size as desired. All the oblong shapes which are turned up back and front, are cut from the descriptions given in this lesson. Read from A to B and you will complete your paper pattern; then turn it up back and front. Look at Diagrams Nos. 4 and 5.

## Diagram No. 4

Is a hat for outing or ordinary wear and is cut from $73 / 4$ sweep of tape line, making Circle A. The brim is 45 inches, the centre B 20, the crown 24 , top of crown 24, E $21 / 2$ inches and F $11 / 2$ inches. The flat Diagrams are shown in such a condition as to enable the client to understand the draught thoroughly. If the hat is to be made of velvet it must have a buckram founda-
tion. First cut the buckram from the flat pattern and allow $1 / 2$-inch seams and when cutting the velvet allow seams of $1 / 2$ inch all around edge and $11 / 2$ inches at centre B. When cutting the velvet be sure and notch at the 4 quarters as shown on Diagram, as you will require to cut the velvet or silk, as the case may be, on the double with the notches. Put together and when the velvet is basted you will be sure to have a perfectly successful finish. When laying the pattern on the goods with this circle, you will notice that at the junctions where the notches are, the goods will be on the straight for 2 inches.


Then you will notice by the curve of the pattern it is bound to come on a bias, so be sure to put your notches at the straight point. It would be a great error to put a straight and bias together on a hat, as the velvet or whatever goods the hat is made of must be drawn very tight. Therefore, a bias and straight together would be a complete failure as the bias would always be looser than the straight, so note the necessity of being careful. When you have the goods basted up, stitch with the sewing machine keeping a piece of paper under the goods. The paper must be next the machine to prevent the goods from being pushed with the foot of the machine, so that the upper would be tighter than the under. When the stitching has been done, carefully open the seam and slip your buckram brim in. As you will notice the line H has not been sewed up; this enables your buckram shape to slip in quite easily. Sewing this brim by machine gives a firmer appearance to the edge and is a great saving of time. The sewing of goods at the edge has long been a work for old experienced hands, but in this manner any woman or girl can make herself a beautiful hat, large or small as desired.

Diagram No. 5
Is drawn with $71 / 2$ sweep. The instructions in Lesson No. 4 may be used for the construction of No. 5. The crown marked A is 3 inches high,
side B, 3 inches turn-up, and side C, 7 inches. Pin the paper pattern together and try on the head. Look in your mirror and see for yourself that you have gotten the desired effect. Should you think of making the shape larger or smaller, simply use your knowledge and add or trim off as much as you wish. You will understand the art of copying pictures with a comparatively small amount of study, and if you are artistically inclined you will find that with the advice in this book you can develop the ideas which may arise in your mind from time to time, with great satisfaction and saving of time. When you are convinced that the shape you are making is in harmony with your ideas, you will feel no hesitation in cutting the goods. Designing hats is a most interesting work of art. There are great demands for milliners and designers, and the day has gone when a smart girl or woman will be three or four years trying to learn millinery, and in this three or four years probably never be given a single lesson on designing or high-class copying. Read Lesson No. 3 carefully.


7


8

## Diagram No. 6

Shows the wire shape made up and the flat Diagrams Nos. I and 2 are the paper patterns. Your dimension from the line A to B is 40 , the line $C$ to $D$ is 23. $P$ in the line $A$ to $B$ and $C$ to $D$ and measure the desired distance you want the wires apart. The lines A and C are 8 inches apart. The reason for not giving the distance the wires are to be apart is to give you to understand that these wires may be put at whatever distance desired. Sometimes the wires are reduced in number so as to make the hat light, as you will notice in the wire Diagram the line A and the line C are used and one in the centre which is quite enough. For a hat of lace I would suggest all the lines shown in Diagram marked with dots. The straight lines shown on the wire shape marked E are all to be made the same length. The circle No, 2 is 32 inches around, meaning the crown is 8 inches from X to X .

You will understand the wires $E$ must be cut 24 inches long, joined together by twisting a piece of wire around the wires. Then press them all down tight with the pinchers. Then for the crown effect 4 inches from the centre of each wire a decided bend to form the sides, thus you will have your 8 -inch sides. Next, put on the first, second and third wires, locking the wires together with the same quality of wire as used in centre. It is quite proper to use a lighter quality for this purpose as it is much easier and helps to keep the hat light on these 24 -inch wires and also the 32 circle wires. Be sure when cutting them off to allow 2 inches or a trifle less for joining together, and the 24 -inch wires must not have less than I inch to turn up over the bottom wire. Look at the Diagrams of wire shapes and straws.

## Diagram No. 7

To make a wire shape from any paper pattern, simply measure the pattern in the manner described in Lessons Nos. 6 and 8. In the group of shapes is a wire crown. Most all straw covered hats have a crown covered and set on. It must be much larger than what is known as the inside circle, which must set quite close to the head.

## Diagram No. 8

Read Lesson No. 8. First, to put the straw on the wire shape take paper pattern of the hat and cut muslin which is necessary to cover the wire before the straw is sewed on. The muslin must be tacked on so as to hold to the wire. This would mean letting the thread through the muslin and allowing it to circle the wire. Put the seam of the muslin to the joins of the wire. It is not necessary to cut but one layer of muslin. Understand, the straw is sewed on the brim of the hat, outside and inside. Sew the straw on the crown starting at the centre. The curves are small so it is best to wet the straw for 6 or 8 inches, thus enabling you to make a neat and quick centre curve. If you did not wet the straw at this point it would break and you would waste good time and fail to get the pretty smooth circle. Of course the larger part of the crown gives a greater circle so the water is not necessary. You will notice the wet straw is very pliable, so in any case do not wet more than 6 or 8 inches because when dry it will be very crisp and hard. This is an

objection although the wetting is proper at this particular junction-centre of crown.

Diagram No. 8 in part second is a small hat made of a good quality of soft straw and has no wire or buckram. Hats of this kind can be used for a great many occasions, and are made very rich in quality.

Number I is the hat complete made of rose-colored straw with soft silk flowers.

Number 2 is the straw sewed on the paper pattern.
Number 3 is the paper pattern. It has been fitted to the head and is the correct size for the person who is to wear it. The straw is to be sewed on the paper pattern, thus assuring a correct shape. After the straw has been sewed on the paper take the paper out by pulling it off with your fingers or use paper the color of the straw. If you do not wish to go to this trouble line the hat and leave the paper in as it will make very little difference which you do. You may prefer the paper in as it gives a little support to the straw.

If making a large hat to be covered with straw, it can be made on the same principle as Parts 2 and 3. If it is to be a large, soft, picture hat when finished sew a good silk wire around the brim and base of the crown, marked A and B. If a wire shape is preferred measure over the pattern and make a wire shape. First see Wire Shapes.


## Diagram No. 9

Is the brim of a velvet hat with a double wire around brim, the under wire A being 2 inches from outer edge. In the facing, line A, a distance of 2 inches from edge has been marked with a white thread and a tuck has been carefully basted just large enough to allow the wire to pass through. When this has been basted all around the facing stitch this tuck with the machine and turn in the edge of B basting and stitching all around just far enough from the edge to allow the wire to pass through the tube as the A and B line may now be termed. Then take the buckram brim and put the notches which represent the 4 quarters of the hat to coincide with the 4 quarters of the velvet together, and pin to the buckram. When pinning the velvet to the buckram as shown in line G to F be quite sure and draw the velvet tight but with the twill of the goods; or, in other words, do not draw in a bias line of the goods. You will find in all velvet facings, or silk, at the 4 quarter junctions there is a perfectly straight line of the goods; therefore, attend to the 4 quarters first and the spaces between will be readily understood and easily managed, with a perfectly correct result. It is impossible for a novice to make a picture hat of velvet unless this method of construction is used, the work being done by the sewing machine. The only hand work on this hat is the sewing of the outer edges together, E and D. The crown is softly draped.

## Diagram No. 10

Diagrams Nos. 3 and 10 show the crown padded with cotton batting, thus giving the oval appearance. The velvet covering being dampened with a sponge on the wrong side will make it stretch more and the cotton wool on the hard buckram will give a softer and richer appearance. The cheapest of velvet or velveteen will have an almost first class appearance by so doing and this is a great consideration apart from making the crown a simple piece of work. $\mathrm{A}, \mathrm{B}, \mathrm{C}$ and D are the 4 quarters. You will notice A and B are drawn tight across the crown and likewise C and D . The lines in these 4 junctions are on the straight one way, and on the crossways to C and D . Now you can see the advantage of having the velvet dampened on the wrong side, for when you pull the corners E, F, G and H you will find the goods very elastic and it will conform to your crown. In all your millinery work, great or small, locate the 4 quarters and you will get harmonious proportions which are so necessary in all work on practice line. The covering of velvet shapes is a fine example of practice work. A layer of cotton batting all over the brim will more than repay any milliner for the time it takes.

## Diagram No. 11

Is a buckram shape covered with velvet or other goods. Read Lesson No. 3. Lesson No. 10 has been largely devoted to the necessity of being careful to notch the 4 quarters of the goods and the 4 quarters of the buckram can be easily marked with a pencil or chalk. Notice the brim of the hat has the wire sewed on the buckram. The hat measures 40 inches around and 8 inches in depth from $C$ to $D$. $A$ is the outside of the hat and $B$ the inside, or, commonly called, the facing. The outer surface A is 40 inches and 8 inches in depth, the facing B is 39 inches. These notches are put together accurately and the inch difference will scarcely be noticed in the basting or sewing. The 40 and 39 lines will be sewed up by the machine, and the C and D lines machined up 2 inches on the facing as you may notice the marks when this has been sewed up. Open the seam nicely and place it on your buckram. Be quite sure to put the outside on smoothly and do not put it on the bias but with the grain of the goods, or in other words, the twill. Should vou attempt to do this by pulling on the bias of the goods you will
destroy your hat. The straight lines which are on Diagram B are on the bias of the goods and the slanting lines are the proper lines to draw the goods tight with. Tighten the goods on facing B, which coincides at A point, and sew in the hat lining at the centre line D before you put the crown on, as you can line a hat much better before the large crown is on.

The hat is shown in four parts. Notice the crown L A with the dark marks. This is showing the cotton padding ready for velvet.

Scientific Method of Hat Cutting. There are five different hats: first, the small hats; second, the medium hats; third, the large hats; fourth, the bonnets and fifth, the children's hats.

## Diagram No. 12

The small hats will differ in shape and style one from the other, but the difference in cutting, as slight as it may be, will often mean the adding of width at the sides, the turning up at the sides or back, or the using of different bandeaux, which have been arranged to raise or lower the effect. Some styles of bandeaux will locate the hat very much to the back or front or side, just as one may desire. This bandeaux gives an entirely different appearance to the hat. Look carefully over the scientifically cut bandeaux and see the simplicity and perfection of same.

The medium hat is simply an enlargement of the small hat or may be called the hat between the small and large. Often this hat will have exactly the same lines as the small hat when it is made. One must bear in mind it is a hat between these two styles. For instance, when you have cut the small hat and decide to make a medium style, just enlarge on the lines which you used for cutting the small hat.

Diagram No. 13
The bonnets and children's hats are akin to one another.

## Diagram No. 14

The large hat, or picture hat, as it is commonly known, has what may be called the flat, broad brim, or the broad drooping brim so much in vogue now. No. 14 is a descriptive lesson on draughting what is known as the oval crown, also the bee-hive or pyramid. This crown is 11 inches high and 44
inches in circumference. To draught this crown, first take the tape line and put a brass tack into the brass perforation at the end and place your pencil 11 inches out on tape line. The tape and pencil being held in the right hand the circle can easily be made as the brass tack holds the tape firmly to the

draughting table. The tack is put in so as to penetrate the table, thus allowing the right hand with the pencil to move quickly and accurately. From A to B is 11 inches; the V at $\mathrm{D}, 7$ inches; the V at $\mathrm{C}, 7$ inches, and the V at E and $\mathrm{F}, 41 / 2$. You will understand these V 's are cut out and sewed up, thus giving the high and narrow piece at point A. The outer edge is 44 inches in circumference when finished. It may be known as the B line. Before cutting out your buckram or making a wire shape pin this pattern looking at the V's; they will remind you of darts in a bodice. This may help you to understand more clearly what I mean by the $V$ 's. Put the paper pattern on your head and convince yourself that you have copied your fashion book correctly. If you are designing one of similar form, but want to put some touch of your own individuality in the shape, as you doubtless know the slightest addition to a hat makes it appear quite different, by putting the pattern on your head you can have a more masterful knowledge of your finished hat, which is a great satisfaction. I consider it the correct thing in do, and thus make sure the shape is truly becoming to you or whoever is to wear the hat, and when you understand scientific hat cutting you will copy any picture
in 3 minutes, and I would strongiy recommend this method to milliners conducting a large ordered trade, as it will save a lot of time and money. If the paper shape is not becoming you may be sure the buckram or wire one will not be. See Diagram No. 15 for Brim.


Diagram No. 15
Is a large dress hat copied from La Mode Artistique. I believe the French fashions the best. The editor goes into details so thoroughly that one gets much fine information along the line of colors, and I would advise these high-class books. They may appear expensive at first but are not in the end. The colorings are so beautifully placed and they are the authorities of fashion for the world. Ladies opening millinery schools or business should buy their goods as set forth by the latest and best French fashion books. Care and consideration should be the main thought in starting out in business, as there are so many little and fine points to be gone into. When this has been properly done you will be sure to succeed.

To make a draught of this model, place your draughting paper on the table and put a brass tack through the perforation. Place the pencil at 15 and hold tape and pencil in right hand; then make circle $111 / 2$ inches in from the edge and cut the centre, which will form the inner crown. A and B line is the centre of the back. Simply take $51 / 2$ inches out of each side of this line at outer edge, F line, and $11 / 2$ inches each side of B line centre crown. This will give the drooping appearance which is being used so much. The
main crown, which is the outer crown, is 32 inches around and 8 inches high. To draught crown place the tack in the tape line and with the pencil in right hand draught circle; then, with your scissors, cut the circle at the four quarters within $31 / 2$ inches of the centre of circle and interlap these four quarters until your outer circle measures 32 . When this is done, of course pin the paper where you lap it; then place outer crown on the main circle and pin it on. Turn up your paper at outer edge and up in front as shown in picture. Put it on your head and look into your mirror to make quite sure the hat is becoming to your face. Sometimes a great many shapes may be tried before you get what will truly please your fancy. Be quite sure you get what you want before you waste any time making wire or buckram shapes, for, as I have said, if the paper shape or pattern is not becoming you may be quite sure the other will not be. It is great pleasure making a hat which one really admires. In placing the trimming simply look at the picture and do as there shown. If the hat is to be made of buckram, simply unpin your pattern, cut out the buckram and your velvet or silk as the case may be. I have given careful instructions in the making of wire and buckram shapes which applies to all, thus it is not necessary to repeat them in this lesson.


16

## Diagram No. 16

All hats as shown in Picture No. 16 are draughted with a 15 -inch sweep of tape line. Any picture measuring $31 / 8$ inches from A to B is shown in picture, but in reality the hat must measure 25 inches. These instructions will cover all large hats. Measure the picture and use the 15 -inch sweep. In measuring a picture or any part of the ornament for every quarter of an inch count 2 inches and you will find proper results.

## Lesson No. 17

Instructions on the art of measuring the picture. Place the tape line on the picture, exactly on the nose bridge between the eyes, and measure back. Should the picture show strictly a profile you could measure only a quarter or a half as the case may be. Simply count four quarters and sometimes it is necessary to measure from the centre of the ear back to find out exactly how far it reaches back from the ear. If a hat turns up in the front or side, measure the part turned up, and if a picture shows a drooping effect place the tape on the shoulder of the picture and you will find out just how near the actual brim is to the shoulder. To locate how wide the hat is across the front, measure at the top of the forehead. Each quarter of an inch on the picture counts 2 in reality.

## Lesson No. 18

Measuring trimming is quite necessary, as one must get harmony of proportion, and very often save money, for ornaments and trimming are very costly. To buy too much would be a waste and not enough a waste of time and perhaps a great delay. If you are getting ready your order or going out to buy the trimming, measure your picture in detail first. For instance, an ostrich feather, willow plume or osprey, are expensive. Do not buy them too small or too large and out of proportion with your hat.

Lesson No. $1^{\circ}$
Measuring of Trimming. This is an all-important feature; for instance plaiting requires 3 times as much material of whatever the length. If you want one yard of plaiting you must have 3 yards of ribbon. Of course, it is possible to skimp the plaiting and use less. You may imagine for yourself the results. If you want 2 yards of flounce you will need 4 yards and when you are making frills or flounces be quite sure to quarter your goods or ribbon and put a mark of some kind, thread is the best, and quarter your 2 yards, having 18 inches in each. Thus you will readily understand that whatever your foundation measures, divide it into 4 equal parts. Do not neglect this at any time as your frill or flounce will be fuller in some places than in others. This kind of work will never be accepted; do your work properly as you go and with care and you will have a happy result. I feel too much cannot
be said along this line of care, as your 4 yards would just give each yard to be gathered into the 18 inches. Accordion plaiting is on the same lines as the plaiting first mentioned. See lesson on same.

Lesson No. 20
Bows and Rosettes. Measure the picture bow or rosette as I have pointed out the necessity of doing each part with equal care to prevent what we call the ripping out of your work which gets on a woman's or a girl's nerves. As the most recent of novices thinks ripping uncalled for, so it is, but to prevent this trouble use your tape line. Scientific millinery has simplified and made it possible for any woman or girl to truly duplicate any picture in a few minutes to the slightest detail, without a waste of time or material. Making rosettes depends entirely on the size as to how much lace or ribbon you will need. First measure your picture rosette. You will then know how much material to gather or plait as the case may be. You must allow for the gathered rosette twice as much; that is, if you gather up a yard of ribbon draw it up to 18 inches. For instance, 5 yards of ribbon would make $21 / 2$ frilled, ready for sewing on your little flat circle, which is used for a foundation. To make bows measure the picture bow and count the loops and know just how much ribbon it will take. Measure off the ribbon required and use the tracing wheel to mark the centre of loops.

No. 26 shows a smart hat, its only trimming being a band and a bow. Each loop requires 12 inches of ribbon. If the ribbon is very wide it is not necessary to make as many loops. With very wide ribbon, say 10 inches, it would do with two loops on each side, as you will observe the ribbon being wide two plaits are used, thus giving a full, soft effect. No person can make a bow firm and smart in its appearance by sewing the loops together. At point A first loop your 12 inches making a 6 -inch loop as the loop is doubled; then, lap the two loops at point A and pin them. Take a small piece of ribbon or goods the same shade and tie the ribbon right in the centre point A very tight. The tighter you tie this little knot the firmer the loop will appear. As you know a bow must be firm at the centre or the loops will not have a firm, smart look. When you have tied the little piece good and tight, then take 6 inches of the ribbon and place it right on the tightly tied knot. Put this on softly as is
shown in Diagram. Any class of bow can be made without using a needle, with better results, and also saving time.

## Diagram No. 21

A draught made with a 13 -inch sweep of the tape line. B is the centre of front, line $F$ the centre of back, and $C$ to $D$ is 9 inches, from $E$ to $F 83 / 4$, and from G to H 13. This is half of the hat. The Crown-Read Lesson 14 on this same class of work. Lesson 21 shows how to place the pattern on the buckram or goods. This draught teaches the cutting of Fedora crowns which are quilted by machine. These Fedora crowns are soft, sometimes made of tweed, or silk or velvet, with the machine stitching nicely done. They are smart and keep in style for an outing or rainy-day hat.


Lesson No. 22
Is draught of Diagram No. 22, showing the method by which all medium hats are draughted, also bonnets and children's hats. I want every woman and girl to have a knowledge of hat making. In these days of fashion journals, one cannot say enough of the beauty of color and design. No woman need

be without beautiful hats for all occasions. The manufacturer of flowers, ornaments, fancy straws, and all other novelties used in the art of hat construc-
tion, made the prices within the reach of all, I am thankful to say. Lessons 14 and 15 will help you to understand this more readily. Place your tape at end No. I, as you will notice the figures start at I. A line has been drawn 10 inches from point $G$, another 18 inches, and another at $211 / 2$. In draughting these lines keep your tape in the same position at point I as at junction G with a brass tack which is put through the brass perforation at first inch on tape line. This holds the tape firm and allows freedom of action, as the tape line, with pencil held firmly in the right hand. The pencil is placed at 10 at H and drawn first from right to left. The pencil is moved 8 inches and the second line is draughted from right to left. Then move the pencil down to 21 and draught from right to left. From I to J is 21 inches and from F to E 45 inches. The second line from G is the line to be used for turning up the brim as shown in picture. See Diagram No. 3. To make draught of the crown is most simple. The crown is 6 inches high. This must be draughted with a 9 -inch sweep of tape line, thus making a perfect circle. Cut the circle out, quarter it, cut it 6 inches up in the 4 quarters and lap the quarters at the 4 quarter junctions, which you have suppressed into a circle of 34 inches. There are 23 inches suppressed in. This will mean that at 3 of the quarters 6 inches have been lapped and at 1 quarter 5 inches. To make a wire shape from this pattern, simply measure the pattern, first, the lower edge of circle which is 34 inches, then measure up 4 inches 28 which will measure 28 circle. Then measure off 5 strips of 19 inches, afterwards placing the 5 strips together and twisting the smaller wire around at the $91 / 2$-inch junction, which is the centre of crown. Measure off a strip of wire 21 inches in length and join it in a circle. Now place it on the five 19 -inch strips of wire and make a band in the wire 3 inches out on each of the 5 strips of wire and place the 21inch circle on the bent junction, using the small wire to twist around the small circle and the long strip 19 inches. Fasten the 28 -inch circle to the 5 strips, the 34 -inch circle to the 5 strips and also fasten the wire strip at the end. By lapping the end over the 34 -inch circle, you will thus understand the half inch which has been left on each of the 5 strips. The crown will measure 9 inches from centre of the 21 -inch circle, down to the 34 -inch circle.

Lesson No. 23
Is a cutting lesson in three parts cut from 18-inch sweep of tape as shown in No. 22.


SCIENTIFIC DRAUGHTING.
Diagram No. 24
A to B is 36 inches, E to F 9 inches, D to A $61 / 2$ inches, and C to D 27 inches. This shape is in three parts, I, 2, 3. The outside brim is 24 inches. This pattern is made with the 18 -inch sweep of tape line and the hat is known as a double brim. Notice the picture No. 24.

Diagram No. 25
This is a side brim. A to B is 36 inches, C to D 18 inches, D to $\mathrm{A} 81 / 2$ inches, and E to F 9 inches. The crown is 18 inches and is neatly sewed into the C and D point lines on number 25 and is trimmed with ostrich feathers. See Construction Lesson.


22

## Diagram No. 26

This is a draught of a bonnet or poke. From A to B is 42 inches, from C to D $71 / 2$ inches, from C to C $101 / 2$ inches, from G to H 11 inches, from E to F 23 inches and from A to E at the point is 9. G-A has a turn-up of $21 / 2$ inches. To make the pattern use the 18 -inch sweep. For making the goods, whatever kind see Construction Lesson.


Diagram No. 27
Draught for medium hat. Can be made in straw or any kind of goods. To make the shape use the 18 -inch shape. It is turned up in the back and front or as desired. From E to B is 26 inches, from E to F $111 / 2$ inches and from E to the straight line on the picture is 9 inches. The dart is $31 / 2$ from $D$ to $B ; 91 / 2$ inches from $C$ to $D ; 24$ inches at point $F$, and $111 / 2$ and $11 / 2$ inches are to be cut out. The crown is 24 inches and is to be sewed in at the C and D lines. See Construction Lesson.

## Diagram No. 28

Is a bonnet draught made with the 18 inches of tape line. From A to B is 28 inches; C to D $91 / 2$ inches; G to $\mathrm{H} 81 / 2$ inches; E to F 20 inches, and the F line is 5 inches. The dotted line 22 continues to 28 on the $21 / 2$ inch douted line. Crown is 20 inches and sewed in at the E and F lines.

## Diagram No. 29

This is a lesson on draughting crowns of all kinds. There is not a crown shown that you cannot reproduce after you understand the draught. It is made by first draughting a circle with a 9 -inch sweep of tape line. The crown is to be 6 inches in height and 6 inches across the crown from $H$ to $F$. The points $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}$ have marks for 5 inches to be lapped and diminished at the points E, F, G, H. Notice the circle quartered when you cut the paper up the dark line to F and in the other quarters is the same distance. Open up the paper and you will have a perfect crown of which you can take the dimensions and make a wire or buckram from this. If you want a high sloping crown simply cut further up the F lines and when a crown is wanted of great height simply cut a larger sweep from the same, say 11 or 12 inches; this will give a very high crown. (See Construction Lesson.)


Diagram No. 30
Is a large Picture Hat. It is cut from a 15 -inch sweep and will make a perfect shape. The brim is 10 inches from E to F. First measure the depth of brim desired and then cut off the circle at 20 . From A to B is 9 inches
and from C to D 16 inches. This has been taken out to give the hat a drooping appearance. The dotted lines to E are 33 inches. This can be turned up if desired. To tighten the circle E at whatever point you desire take the dimensions for shape from the buckram. Simply open the paper pattern, place it flat on the buckram and chalk the marks on the buckram. (See Construction Lesson.)

## Diagram No. 31

This is a smaller size than No. 30. From A to E is 30 inches, from E to F 4 inches, from A to D 13 inches. The A part turns at brim and is simply to show how to measure the brim. From each letter to inner edge is 7. See Diagram of 31 made up.


## Diagram No. 32

This is the Diagram of a small Hat turned up at both sides and the back, cut with the 18 -inch sweep. From E to F is 9 inches; from A to B 54 inches; from H to G is $5 \frac{1}{2}$ inches; from K to A is 11 inches; from K to L is 7 inches, and from C to D is 15 inches. (See Construction Lesson.)


Diagram No. 33
Is made with the 18 -inch sweep of tape line. From A to B is 39 inches;
from G to F, 8 inches; from C to D, 17 inches; the G line is 27 inches, and from $G$ to $E$ is 6 inches. Two inches have been taken off at this point and paid back at the F point. This has been done to prevent the curve effect on the A and B lines. This may be done with good results on all hats cut on the 18 -inch shape and this method of cutting hats covers a great number of shapes. (See Construction Lesson.)

Diagram No. 34
Is shown in three parts. The finished hat is numbered 34. This is a hat with the drape, 34 is the drape which is draped on the plain foundation, Number 35 as shown in Construction Work. Notice the finished hat, 34. It has a drape around it and is termed fourth part. The drape is cut with an 18 -inch sweep. From A to B is 62 inches; from B to F and from A to E is $31 / 2$ inches; from C to D is 8 inches, and the crown is 24 inches. From centre C to the mark on edge is 16 inches when this drape has been made perfectly and placed on shape 34.


## Diagram No. 35

Shows this done. Is similar to No. 24. I shall not say other than refer you to No. 24. On page 27 is the flat draught of No. 35 which appears on this page and is the foundation for drape 34.

## Diagram No. 30

This is a larger size of No. 28 used as a demonstration of the resemblance of small hats for children to grown person's hats. Any person who is able to copy grown person's hats can cut children's hats without a word of advice.


Nine times out of ten they differ in size only but some experience shows that the passerby thinks otherwise. (See Construction Lesson.)

Diagram No. 37
Is an advanced lesson of No. 29 with the line drawn. So much has been said in No. 29 that it is not necessary to say more in No. 37. The Diagram is enough.


## Diagram No. 38

Is the pattern of draped hat which can be made of straw or cloth. Lesson No. 8 will answer for this. The draped hat like Diagram sells from $\$ 7.00$ and up wholesale. They make neat small hats.

Diagram No. 39
Is the wire shape when preferred.

## Diagram No. 40

Is the hat draped with loops at side.

## SHAPES AND PATTERNS.

No. 22 is the same as the pattern part of No. 23. 1 is the brim; 2 the crown, and 3 the band at crown. This pattern is cut with a 13 -inch sweep of tape; 22 is the crown and 23 is the brim.

No. 24 is the paper pattern cut from a 12 -inch sweep of tape; then narrow the brim as desired.

No. 25 is a wire shape made from the paper patterns Nos. 22 and 23.
No. 26 is a paper pattern cut from a sweep of tape 13 inches.
No. 27 is a wire shape made from measurements taken from the paper patterns.

No. 28 is a paper pattern in three parts-crown, band and brim cut from a 13 -inch sweep and are shown made up in Nos. 31 and 33.

No. 29 is a wire shape made from the pattern No. 28 and is in two parts -crown and brim. Any woman can make a wire shape herself, and have the finest style and art. The wire will cost probably 5 or 10 cents.

No. 30 is the wire shape made from the paper patterns. I have often mentioned the necessity of making the hat in proportion to the head and face. If these proportions are right nine times out of ten the hat will be becoming. The dotted lines are where the measurements are to be taken. You can use as many circles and straight pieces of wire as you wish. It is not wise to use too many as they will make the hat heavy and it will not be any better in quality.

No. 31 is the same brim as No. 33 and is cut on the 18 -inch scale. No. 32 is the crown of No. 33 being a paper pattern made and fitted and from

this pattern both wire and buckram shapes have been made perfectly. It is necessary to notice in No. 32 the marks on the crown; these are for the wire measurements.

No. 32 is the crown of No. 33 and is made from an 11-inch sweep of a tape line.

No. 33 is the perfect pattern cut in paper or buckram as desired.
No. 34 is a wire shape made from pattern No. 31.
No. 35 is a wire shape complete from pattern No. 33.
No. 36 is a buckram shape made from a paper pattern the same size and cut from an 11 -inch sweep of tape line. The pattern is first fitted to the head and the brim is made becoming and to please the eye. No time is lost in making this shape and it costs a very few cents.

No. 37 is a paper pattern of novel shape cut from the 18 -inch scale and is ready to be made to perfection for a wire or buckram shape.

No. 38 is a buckram shape covered with velvet. The velvet around the buckram has been cut from the perfect pattern and constructed on uniform lines. It is very simple to make.

No. 39 is a perfect paper pattern ready to be used for wire, buckram, velvet, or any goods desired. Cut from 12 -inch sweep of tape line.

No. 40 is a buckram shape made from perfect pattern. Cut from 18 inch scale.

No. 41 is a pattern of outing hat ready to be made of any goods used in millinery. Cut from 11 -inch sweep of tape line.

No. 42 is a pattern in buckram cut from a perfect pattern on the 18 inch scale.

No. 43 is a velvet hat made from perfect pattern on a buckram shape which is cut from 11 - or 13 -inch sweep of tape line.

No. 44 is a novel shape in paper ready for use, and is cut from the 18 inch scale.

No. 45 is a pattern ready for a plush or buckram shape to be covered with plush, and is to be cut from scale 18.

No. 46 is a pattern prepared on the 18 -inch scale. All crowns with flat tops are cut on the 18 -inch scale.

No. 47 is a pattern cut from the 13 -inch sweep using the 18 -inch sweep for the crown.

No. 48 is a complete hat made of taffeta and cut from a perfect pattern. The pattern was cut from the 13 -inch scale. I am giving a large number of shapes to practice on and mention the scale to make it simple and help the client.

The copying of a picture is a simple matter, so any woman who might be thinking of starting in the millinery business can buy her goods by the yard, have French fashion books and carry on a modern and profitable hat business on the very highest lines of art in cutting and coloring with very little capital.


## THE ART OF MEASURING PICTURES FOR MILLINERY.

To reach a reliable knowledge of size of ornaments and trimmings which may appear on the picture model, for each quarter of an inch allow one and three-quarters; this will cover all ribbons and feathers. Any person understanding the scientific copying of hats as set forth in the picture will be able to observe that proportions are the leading charms to the eye. The size of the hat will control all other articles coincided with same. In copying the draught reproduce all your patterns identical as they are shown in the latest fashion.

## DESIGNS FOR BODICES, JACKETS OR SKIRTS.

The size of the person you are copying for will control this part to perfection, so it is not necessary to measure your picture, only in the purchasing of ornaments, as these should be bought in proportion to the pattern you are cutting. All your lines will be in harmony with the size of the pattern, thus you will understand the simplicity of cutting the pattern like the picture. For measuring ornaments for dresses use the information above stated.


## LESSONS ON PRACTICAL WORK.

No. I is the material made in a French fold. To make this fold perfectly and simply first cut the goods on the bias whatever width your fold is to be when finished. You must cut your cloth twice that amount and allow a little extra for whatever width of seam wanted. This is generally determined by the class of goods you are using. Velvets and silks have a half-inch seam and often a quarter-inch seam. These folds are machine stitched first and turned in tube effect.

This Diagram is in four parts showing the effects. No. I is the right side showing a deep line to represent the shape of the French fold after it has been basted as shown in No. 2. The bastings are put in from the centre of the dark lines on No. 1. This is the machine seam. The bastings do not show on No. 1 line but they show plainly on No. 2. No. 3 shows the fold as it will appear when a plain flat fold is wanted. These plain folds are very often called milliner's folds. No. 4 is the fold showing a seam on the wrong side. When made on these lines it will be found that one can make a choice which can be used for the right side. This method of making folds will be further shown in Lessons Nos. 5, 11 and 12.

If you are making velvet or silk folds and they become handled looking. hold them over steam. They will then appear perfectly freshened.

No. 5 shows the fold cut out and basted. The lines are the folds of the goods. The basting shows the seam and the two outer edges coinciding. The slanting line A is to be basted and the line from A at the fold on the pin line
is to be stitched up by machine to point B. When this has been done take a small instrument of any kind or a small lead pencil, turn the right side out and you will have a fold that can be put into many uses. You will now thoroughly understand the seam coming under in this manner of making folds, and see how it prevents ravelling or rough edges on the wrong side and makes the fold perfectly even.


No. 6. Here the needle is put through the two parts at the same time. In this case it is necessary to take the stitches closer together.

7


8


No. 7 is a flat bias fold. The two edges, Nos. 1 and 2, are put together with a thread, first No. I and then No. 2, alternately, until finished. Nos. I and 2 may be machine stitched with only the edge being turned in once and stitched; thus the fold is in a flat condition as it would be when cut first. If the fold were to be two inches wide when finished your flat bias piece would be four inches and an extra half for turning added. In case of preferring the stitching as shown in the dotted marks first turn in the edges and baste; then machine stitch, take the needle and cross stitch them together.

No. 8 is a bias fold, which is a simple piece of work. Notice No. 1 is lapping No. 2 by a half inch. This means a double amount of goods for whatever width of fold you want. The main point in this work is to touch the fold lightly when working on it. So many persons handle the goods carelessly and pull it out of shape. When this fold is finished it can be blind stitched or put on with French knots as shown in No. 9.

No. 9 is a fold with French knots made the same as the lace knots. First, take a stitch in the goods like a little bar; then bring your needle through and use No. 2 thread twisting it around the needle. Keep your thumb on
the needle, twisting as many times around the needle as you prefer. In No. 9 it is 14 times around the needle. When this is done take the right hand and pull the needle straight through, keeping the left thumb on your point 3 ; then insert the needle and prepare to make another knot in similar manner as No. 10.


No. 10 is the wrong side of No. 9.
No. II shows the inside of the fold with the seam marked No. I. The X points to the two dark lines in the centre of No. 12 which is being shown as a trimming in circle effect. This is marked No. 3. The line marked No. 2 is 13 showing the seam when machine stitched and turned right side out.

No. 15 is a ruffle with a tuck stitched through the centre and a cord drawn through the tuck. This can be done in goods of all kinds. We will take for example ribbon or bias goods. In the case of ribbon, wherever the cord is wanted baste a tuck and then machine stitch it. Thread a bodkin with the cord and insert it through the tuck tightening it to make as much fullness as desired for a gather. If a number of cords are preferred put more tucks, any width.


No. 12 shows one of the uses these folds can be put to with perfect result.
No. 14 is a shaped fold hemmed on both sides to be used in any preferable form of hat construction. The hem is made by using a fine needle with thread same shade as goods and inserting the needle into but one strand of the goods at a time at point No. 1. At point No. 2 you may take a deeper stitch as No. 2 is a bias edge and is not turned in but simply left as a raw edge.


## 16

No. 16 is the rolled hem; No. 1 the top of fold; and No. 2 is to come down to No. 3 to be stitched with the hem. Stitch as shown in silk and the needle is to be inserted at the straight bar up to the dot coming back to the little bar and then up to the other dot. The long slanting thread is under the hem between the goods and Part 2.


## 17

No. 17 is what is called a positively blind hem, as it does not show on either side. The thread used for this hem is to be the exact shade of goods and extremely fine. No more than one strand of goods is to be taken at one time in the needle which is to pass slantingly between the hem of the goods. Notice with care the dots on the Diagram and also the point of the needle as it is brought back opposite the entrance and slanted from No. 2 to the X.


18
No. 18 is a hem held by the faggot stitch.


19
No. 19 is goods with binding seam. To do this first cut the goods and baste a bias piece as wide as desired; then stitch on the machine and hem. I feel that quite enough has been said about hemming for every person to understand.


No. 20 is a broad band cut the shape of rim of hat to be worn.
It is 3 inches wide and stitched to allow a cord or wire to pass through the tube effect. The edges are marked with an X . The A and B lines are to join when finished. The stitching has been done just the size of wire to pass through this band as shown in three parts: I, the wrong side with the wire in and basted and the goods notched to allow it to be perfectly smooth on the right side. 2, the wrong side stitched by machine. 3, the right side as it will appear when stitched. The black line is to show that it is a velvet band. The machine stitching will not show as it will sink down into the pile and thus appear as a cord.

No. 21 is a simple and useful thick wire or cord with a silk finish. This class of wire is used for finishing the brims of hats and circling any part of the hat which may require a velvet corded wire. To cover this wire first cut a piece of velvet on the bias as long as required. At no time will you need the velvet more than half an inch wide. However, the velvet is just to meet and be hemmed with what is known as the loop stitch. It is the same as overcasting but the edges are sewed tightly together and the stitch passing through the velvet will often catch the filling around the wire. This is not to be objected to as it will keep the velvet firm and make the piping firmer. This velvet-

covered wire is often used to edge a brim or is used back from the brim both on the upper and under sides as desired. It can be used in many different ways in millinery and is good for straw hats when a rich cord effect is wanted.


No. 22 is a bias band for the brim of hats. This bias band is a perfect success when put on as described. First, I will point out the necessity of cutting the band properly. As you already understand the outer edge of the brim is the widest part of the brim. Notice this Diagram has stripes for the purpose of demonstrating the necessity of joining the A and B points properly. The A and B points are used in case of a seam; the C and D points, as you will notice, will take more goods but the joining will not be seen at all. The A and B points can not be seen much if properly matched and pressed open.

We shall now take the dimensions of Hat I . The brim measures 49 inches and it is to show 2 inches on the under and 2 inches on the upper side of brim. The hat is getting narrower as it nears the crownpoint. To overcome this we will cut it $21 / 2$ inches shorter than the brim. By so doing we would not have a 4 -inch-wide bias piece when finished so we must cut the band 5 inches wide and allow 1 inch for turning in at E and F . This gives $1 / 2$ inch at each junction point. The bias band is to be put on the brim when the hat is practically finished. If it is a velvet hat, cover the hat and wire the
brim, making the edge of the brim neat and smooth. Sew the bias band up in circle and hem it by machine or by hand. When this is done simply place the band on the brim and it will not need the slightest tacking as it will have the all stitched like effect on account of the dimensions given.


23
No. 23 is simply showing a wider bias band to be put on in the same manner as described in No. 22.

No. 24 is a perfect method of making all kinds of tucks or accordion plaiting of chiffon or any other thin goods which is difficult to handle. This is shown in five parts: No. 1 is the goods marked two inches apart. Notice the notch at the A and B points. When making plaiting of chiffon or any other goods pin the notches at A and B and put a pin in the centre at C . No. 2 has the tuck partly basted. All plaiting in this method is in tuck form. First, the right side of this plaiting is shown. Notice how small the bastings show on the right side, the smaller the better. The thread is longer on the wrong side. This is done to prevent the mark of the thread from showing on the goods when pressed. No. 5 has been pressed and no marks whatever show. Some long bastings have been shown on this right side for the purpose of showing the wrong way. The wrong side is spoken of as B D. After all these tucks have been basted in, press each one on the wrong side or, in other words, the under side. After the pressing has been done your tucks will look like accordion plaiting. You can then place them in the flat knife plaiting effect if desired.

Any child can do this plaiting when properly marked out for her; or, give her a piece of paper $21 / 2$ inches wide and she can notch it herself. Thread mark it if to be made of ribbon and cannot be notched.

GOODS MARKED FOR PLAITING.


No. 25 is a narrow knife plaiting of ribbon or any kind of goods and is to be a half-inch wide when finished. The beauty of plaiting lies in the regularity. The A point between the marks is a half inch; the B point an inch and the X is at the B point. In making the plaiting mark No. 2 must coincide with No. 1 and so forth until finished. You will notice the marks are half an inch and then an inch apart alternately.


26
No. 26 is the ribbon lined and marked with thread. The tape line is held in the left hand and coincides with the edge of ribbon or goods as the case may be.

No. 27. Line B is the edge of the goods marked for any purpose; for
instance in the sewing on of jewels or jets and the making of French knots or silk polka dots all decorations must be regular in distance.

No. 28. Is a lesson on Scientific Hemming, of importance as it is for the purpose of confining two separate pieces of cloth together. Take, for example, the upper and lower edges of hats, or fur, or any goods with the edge turned in, the edges of which are to meet and not have the slightest appearance of being sewed together. We will take Part I. The needle is put in at 1 , then at 2 , slanting under the one thickness of cloth and out at the 3 . From 3 straight down to 4,5 and 6 , from 6 to 7 and then from 7 to 8 , the

points from 7 to 8 being perpendicular. Then slant 9 from 8 to 9 between the right side and the edge of goods. The seam No. 2 shows these two edges confined together perfectly as in seam 1. This manner of work gives us an opportunity of joining to perfection by hand what we cannot get at with the machine and, besides probably every person wanting to make a hat will not have a sewing machine.

Part 3. A and B are a splendid example of hemming scientifically. Notice the thread. The needle is put back a hair's breadth. The finest silk or satin can be used and positively no trace of the thread seen.

No. 4 is another example to be used as an exercise. It has placed on it simply marks enough to keep it clear.


No. 29 is the loop stitch or, as better known, the backstitch. Notice the X . The needle is put in from opposite side and brought out at the X . Continue to decorate the ends of ribbon with this stitch and French knotsthey are very pretty.

No. 30 is the simple overcasting. The needle simply passes into the goods at the opposite side, out at O, entering at the opposite side and out at the X as shown in Diagram.

No. 31. A cross stitch of simple mode. Notice the straight lines and the X . Simply put the needle in at X and out at straight line.

No. 32 is simply a gathering stitch.
No. 33 is a backstitch which can be made great use of. Notice the 1, 2, 3. Up to 7 the stitch has been taken $1 / 2$ inch from the 1 . The needle is brought out at I , back to the X , then passed along on the wrong side, out at figure 2 and back to figure 1 being passed along on the wrong side and brought out at Figure 3, etc.

Number 34 is a cross stitch basting or can be used to decorate ribbon and is in this manner a great advantage. In the case of ribbon thread your needle, bring the point out at 0 , insert the needle at point X , bringing it out at No. 2 and continue in the same manner till finished.

## DESCRIPTION OF HATS AS SHOWN IN CUTS.

Picture No. 22
This is a large hat with mink band at crown. The brim is made of chestnut brown plush and the soft crown of deep salmon pink plush is covered with heavy black all-over lace. This hat is cut with a 13 -inch swe p of tape line. Before cutting the pattern look over the scientific scale of circles.

Picture No. 23
This is a large picture or novelty hat of black and white. The facing and crown are of white, while the brim turns up all the way around and is of black. The hat is trimmed with black ostrich or French feather. This shape can be made of any material or of straw and is copied by using a 15 -inch sweep of tape line. Always take into consideration the height of the woman who is to wear the hat and the proportions of her face, as this has a controlling effect upon the fancy of the eye. Much has been said of the


22


24


26


23


25


27
advantage of scientific millinery as these paper patterns can be tried on and the size that is becoming arrived at with no loss of time and labor.

Picture No. 24
This is a large hat, which can be made of any goods such as velvet, lace silk, straw, or braid. The only trimming shown in the picture is a large ostrich feather. To copy the picture use a 15 -inch sweep of tape line. This gives you a large circle. When your circle has been drawn measure 10 inches in from the edge of circle and cut the paper out thus forming circle known as the band at crown. We will take, for example, a band of 24 inches. After measuring in 10 inches fold your large circle and cut it in the centre, then lap it at crown and outer edge until the crown is 24 inches and the outer edge is 70 inches. These measurements are for a woman 5.6 feet in height. For a smaller woman reduce the pattern by pinning it in at the edge or simply cutting it from a 13 - or 14 -inch sweep. The cutting of the crowns of these hats are all made from an 11 -inch sweep from A to B as in picture No. 24.

Picture No. 25
Is of corn-colored straw with a large feather 10 inches in length and is turned up in front 8 inches starting toward the back from centre of front to point shown above shoulder 10 inches. It is cut with a 15 -inch sweep of tape line. Always bear in mind the size of woman who is to wear the hat. The picture hat for a large woman would be extreme for a small woman, therefore, you must reduce your patterns to suit the person. This has already been mentioned. When the proper size has been reached cut out your buckram, velvet, or silk and if a wire shape is wanted measure your paper pattern making it just as when tried on. First measure the different dimensions then cut your wire accordingly.

No. 26
This is a novelty shape cut on a 15 -inch sweep of tape line. It is made of white plush and is to be worn by a woman 5 feet 7 inches in height or can be reduced to suit smaller persons. The only trimming is a large soft creamcolored bow of four loops which are softly tied in centre. This hat is very pretty made of felt, straw, any kind of goods, silk, or lace.

No. 27
This is a large hat made of black velvet trimmed with wings. The shape can be made of straw, net, or lace in any shade becoming to wearer and is cut with a 16 -inch sweep.

No. 28
This is a large picture hat of black and ivory plush. The broad brim of black and inner facing of ivory are most becoming to the blonde; for the brunette reverse the effects. The crown is ivory with loops of black or the ivory loop lined with black. To copy this shape use a 14 -inch sweep as in previous instructions. In these it is mainly the art of reducing the size to suit the wearer; it is plain, therefore, and not necessary to say much on the subject. I feel sure anyone will thoroughly understand it.

No. 29
This is a black and white plush hat with heavy black and white tips. To copy this hat use a 14 -inch sweep. Before cutting the pattern look at the large circle shown in Diagram No. 30 in flat draughting.

No. 30
This is a velvet or plush hat of black and brown. The facing is of black plush, the crown and top being of chestnut brown and having an ornament of dull gold. To copy this hat use a 15 -inch sweep of tape line; to cut crown use an 11 -inch sweep.

No. 31
This is a large white corded silk hat with ivory-colored osprey. To copy this hat use a 10 -inch sweep of tape line. The trimming of this hat is simply the osprey placed on firmly.

## No. 32

This is a plain black hat with heavy straight tips or feather. To copy this hat use a 16 -inch sweep of tape line. It is turned up on one side from 4 to 5 inches and droops well over the head. This will mean a large circle with a great suppression. All these picture hats are to be tried on and the size becoming the wearer determined before any wire or goods is cut.


No. 33
This is a medium sized hat cut from the 18 -inch scale and is of brown velvet with brown pompons. A number of hats cut from this scale will be shown and look well when cut from this scale. After you understand the simple and scientific scale you will be able to use your tape line and copy any of the medium hats you see for women and girls as well as children's bonnets.

No. 34
Is a neat hat of straw with band of black at edge of brim and is trimmed with four tips of heavy fibre. It is copied by using the 18 -inch sweep.

No. 35
This is a smart traveling hat of velvet or straw with ornament of quills or wings with soft crown. To copy this hat use the 18 -inch scale. Fit the hat on the head before cutting goods as the size of hat must be governed by the size of person.

No. 36
This is a simply made poke or hat cut from the 18 -inch scale, and is dainty and soft. It is draped and veiled with heavy lace of pea green or fawn color. This fawn lace effect can always be had by the use of cold tea. Wash your lace first with cold water and then test a small quantity of the lace to make sure you are getting the desired shade. Then put all in the cold black tea.

No. 37
This is a small hat for general use; trimmed with either a large silk rose or a neat bow of black. The straw is of a soft, deep shade of green with a slight touch of corn-color running through it with a soft crown of same. Cut this from the 18 -inch scale.

No. 38
This is a draped hat made of cream-colored satin and heavy band with two loops in the centre front with two ospreys. The soft drape is cut in a large circle and plaited in the front. Heavy lace is draped upon the pattern when the hat has been finished. To copy this hat use the 18 -inch scale.


No. 39
This is a soft draped hat. First, cut a shape from the 18 -inch scale. Then cut two drapes the same shape as the foundations only two inches larger and use two large tips and two ospreys.

I am showing a number of shapes cut in paper pattern forms, wire shapes and buckram shapes made from the pattern. The paper patterns fitted on the head will save a great deal of time and labor, and then one can be positive that the size is comfortable and becoming before cutting into the goods and wasting time and patience.

No. 15
This is cut with a 15 -inch sweep and when finished measures 74 inches around. The crown is 9 inches high and 32 inches around, 11 inches has been taken out at the brim or, in other words the edge of circle in band at crown of head as in 23 or 24. It is made of velvet or straw with feather effect as trimming. The hat in the picture is of straw with a soft rose of somber pink and a 2 -inch-wide velvet band of same shade is placed on brim. See Scientific Cutting of Hats, No. 15.

No. 20
Is a large hat cut on the same lines as No. 15 except that it is more simply trimmed. It is more expensive if trimmed in feathers than in tips, but is beautiful in any color which will be becoming to the wearer. See Scientific Cutting of Hats, No. 16.

No. 21
Shows that the back of No. 10 can be made of straw or silk. All these picture hats are beautiful when made of good straw and nothing is more simple than sewing the straw on a large hat; it is mainly a matter of time. See Scientific Cutting of Hats, No. 14.

## INDEX.

## DRESSMAKING.

## SCIENTIFIC DRESSMAKING.

Page.
Baths, olive oil, for tired nerves ..... 19
Broadcloth ..... 9
Canvas, preparing for tailoring coat ..... 17
Clippings, to keep ..... 3
Colors, goods with a variety of ..... 19
Crape and Chiffon ..... 11
Cutting, Scientific Skirt ..... 5
Discourse ..... I
Draping, time saving in. ..... I
Fashion Books, economy in ..... 22
Fashion plates, about the ..... 5
Goods ..... 13
Management ..... 3
Plaiting, Lessons on ..... 19
Pressing ..... 13
Silk, how to make up taffeta, Japanese, etc ..... 15
Tailoring, Lesson on ..... 17
Velvet ..... 11
Velvet Lesson ..... 15
Velvet, to pan ..... 15
Voiles ..... 13
DESIGNING AND PICTURE WORK.
No. I Front flat draught for child ..... 23
No. 2 To copy picture or form an original design. ..... 23
No. 3 Yoke, with seam on shoulder ..... 24
No. 4 Sleeve, showing line drawn through for copying ..... 24
No. 5 has the shoulder seam coincided ..... 24
No. 6 Back of child's pattern as it will appear when in one piece ..... 26
Nos. 7 and 8 show back cut in two ..... 26
No. 9 is draught of picture No. 9. See Scientific Tailoring No. 9 ..... 26
No. 10 is sleeve of No. 9 Scientific Tailoring. ..... 26
No. 11 Pattern with design sketched through bust ..... 26
No. 12 Child's Pattern Coat, back and front coincided ..... 26
No. 13 Child's Dress has been sketched from a designer's point of view. See Lesson 14 on Picture Work ..... 26
Page.
No. 14 Picture copying ..... 26
No. 15 Flat draught ..... 26
No. 16 Foundation pattern of No. 16 sketched on flat draught ..... 29
No. 17 Full size Sailor Collar effect. See No. 16 ..... 29
No. 18 is a designing lesson, and is in conjunction with picture work in Skirts Nos. 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45 and 46. ..... 29
No. 19 Five-pieced pattern coincided to copy picture No. 19 ..... 30
No. 20 Flat draught of No. 20 coincided to sketch the design shown in picture ..... 30
No. 24 See 43, 44, 45 and 46 Scientific Construction, page 132 ..... 30
SCIENTIFIC PICTURE COPYING.
No. 12 Flat draught Skirt. ..... 32
No. 13 Pattern on goods. ..... 33
No. 14 See Scientific Tailoring No. 148 ..... 33
No. 15 See Scientific Tailoring No. 148. ..... 33
No. 16 See Scientific Tailoring No, 148 ..... 33
No. 17 See Scientific Tailoring No. 148. ..... 33
No. 29 Skirt for abnormal form. ..... 34
No. 30 Explanation Lesson ..... 36
Nos. 31 and 32 Flat draught of pictures Nos. 31 and 32 ..... 37
No. 33 is in conjunction with Nos. 31 and 32. ..... 38
No. 34 Flat draught; also finished garment ..... 39
*No. 35 Nine-Gored Skirt coincided to cut a plain band for the centre of skirt ..... 39
*No. 36 Nine-Gored Skirt coincided ..... 111
*No. 37 Deep band flounce. ..... 111
*No. 38 Pattern coincided to form seamless garment ..... 111
*No. 39 Pattern coincided to form seamless garment ..... 111
*No. 40 Peplum cut from No. 45 ..... 111
*No. 41 Cloth cut for peplum, 1 -inch seam. ..... 111
*No. 42 Peplum without dart, cut from No. 46 ..... 111
*No. 44 Peplums with darts, cut from No. 43 ..... 111
*No. 45 Pattern coincided to cut No. 40 ..... 111
*No. 46 Pattern coincided to cut a pattern to fit the hips without a seam ..... 111
SCIENTIFIC DRESS CUTTING.
No. I Bodice with one dart ..... 42
No. 2 Centre of back of Bodice ..... 43
No. 3 Underarm form of Bodice ..... 43
No. 4 Plain, close-fitting Sleeve ..... 44
No. 5 Ten-Pieced Princess Dress with plaits ..... 44

[^0]
## SCIENTIFIC DRESS CUTTING-CONTINUED.

Page.
No. 6 Back of Design No. 5 ..... 45
No. 7 Second part of Ten-Pieced Dress. ..... 46
No. 8 One-Pieced Sleeve ..... 46
No. 9 Back part of Bodice. ..... 47
No. 10 Second part of Bodice No. 9 ..... 48
No. 11 Loose rippling effect ..... 48
No. 12 Back of No. 11 ..... 49
No. 13 Eighteen-Pieced Princess. With remarks ..... 50
No. 14 Centre of Back No. 13 ..... 51
No. 15 Second part of No. 18, Eighteen-Pieced Princess ..... 51
No. 16 Maternity House Dress. ..... 52
No. 17 Eighteen-Pieced Princess Gown, full length. ..... 53
No. 18 Back of No. 17 ..... 53
No. 19 Eighteen-Pieced Princess, without plaits ..... 56
No. 20 Back part of No. 19 ..... 56
No. 21 Eighteen-Pieced Princess placed on the goods ..... 57
No. 22 House Wrapper for high abdomen ..... 59
No. 23 Half of No. 22 ..... 60
No. 24 Long Slip Lining, separate from garment ..... 60
No. 25 Back of No. 24. ..... 61
No. 26 Circular foundation. See Skirt Book. ..... 61
No. 27 Night Gown or Wrapper draught ..... 62
No. 28 Child's Night Gown or Wrapper ..... 63
No. 29 Under Waist ..... 63
No. 30 Back of Under Waist ..... 63
No. 31 Child's Norfolk Jacket ..... 64
No. 32 Back of No. 31 ..... 64
No. 33 Sleeve of Child's Garment No. 31 ..... 65
No. 34 is in five parts. Child's sleeve, back and front full length, and a short bodice to waist ..... 65
No. 35 Collars ..... 65
SCIENTIFIC COAT CUTTING.
No. 1 Box Coat front ..... 66
No. 2 Box Coat back ..... 66
No. 3 Plain Coat Sleeve. ..... 67
No. 4 Ladies' Vest front. ..... 67
No. 5 Back of Vest ..... 68
No. 6 Box Coat front. ..... 68
No. 7 Back of Box Coat ..... 68
No. 8 Ten-Pieced Double-Breasted Long Coat ..... 69
No. 9 Back part ..... 69
No. 10 Centre of back ..... 70
No. 11 Front of Long Coat ..... 70
Nos. 12 and 13 Back of Long Coat, with plaits in back ..... 71

## SCIENTIFIC COAT CUTTING-CONTINUED.

Page.
No. 14 Double-Breasted Jacket, with shawl collar ..... 71
No. 15 Back of No. 14 ..... 72
No. 16 Loose Jacket, with fourteen seams. ..... 73
No. 17 Short Step Collar ..... 74
No. 18 Low Step Collar. ..... 74
No. 19 Shawl Collar ..... 74
No. 20 Storm Collar, with eight pieces ..... 74
No. 21 Remarks on Collars ..... 75
No. 23 Sailor Collar ..... 75
No. 24 Jacket, loose, for abnormal forms ..... 76
No. 25 Back of No. 24 ..... 77
No. 26 Jacket with eighteen pieces ..... 78
No. 27 Centre back of No. 26 ..... 79
No. 28 Second part of back ..... 79
No. 29 Jacket, Newmarket ..... 80
No. 30 Jacket for round-shouldered forms. ..... 80
No. 31 Jacket ..... 81
No. 32 Centre back of No. 31 ..... 82
No. 33 Coat or Loose Jacket ..... 82
No. 34 Back half of No. 33 ..... 83
No. 34 Back half of No. 33 ..... 83
No. 35 Jacket for Misses. ..... 84
No. 36 Back of Misses' Jacket. ..... 84
No. 37 Coat Sleeve, close-fitting ..... 84
No. 38 Circular Cape ..... 85
No. 39 Sleeve, large or puffed ..... 86
No. 40 Coat Sleeve, with extra fullness ..... 87
No. 41 Patented Jacket, 1905, Canada. See garment made up, No. 56 ..... 87
No. 42 Jacket or Novelty Wrap ..... 88
SCIENTIFIC SKIRT CUTTING.
Synopsis ..... 89
No. 1 Front gore of Seven-Gored Skirt ..... 90
No. 2 First side gore. ..... 90
No. 3 Second side gore ..... 91
No. 4 Centre of back ..... 91
No. 5 Front of Nine-Gored Skirt. ..... 92
No. 6 First side gore. ..... 93
No. 7 Third side gore. ..... 93
No. 8 Fourth gore ..... 93
No. 9 Front of Eleven-Gored Skirt. ..... 94
No. 10 First side gore. ..... 94
No. 11 Second side gore. ..... 95
No. 12 Third side gore. ..... 95
No. 13 Fourth gore of Eleven-Gored Skirt ..... 96

## SCIENTIFIC SKIRT CUTTING-CONTINUED.

Page.
No. 14 Back gore of Eleven-Gored Skirt ..... 96
No. 15 Front gore of a Seven-Gored Skirt for a large form ..... 97
No. 16 First side gore. ..... 97
No. 17 Second side gore. ..... 97
No. 18 Back gore ..... 97
No. 19 Flat Diagram to cut Plaited Skirts with. See Plaited Skirt No. 23 ..... 97
No. 20 Centre of divided skirt gore. See Plaited Skirt cut No. 23 , page 188 ..... 97
No. 21 Table of Scales of Measurements for all sizes ..... 98
No. 22 Five-Gored Skirt scale ..... 99
No. 23 Seven-Gored Skirt scale ..... 100
No. 24 Nine-Gored Skirt scale. ..... 101
No. 25 Eleven-Gored Skirt scale ..... 102
No. 26 Thirteen-Gored Skirt scale ..... 103
No. 27 Fifteen-Gored Skirt scale ..... 104
No. 28 Seventeen-Gored Skirt scale ..... 105
No. 29 Nineteen-Gored Skirt scale. ..... 106
Description of Gowns set forth in picture work ..... 107 to 109
One-pieced Sleeve ..... 110
The amount to plus cotton goods not shrunk ..... 110
SCIENTIFIC CONSTRUCTION.
No. I Pattern placed on goods. ..... 112
No. 2 Coat piece on goods of striped material ..... 112
No. 3 Coat pattern placed on goods with floral design ..... 112
No. 4 is a Ten-Pieced Garment, floral goods ..... 114
No. 5 Back of Jacket placed on striped goods. ..... 114
No. 6 Eighteen-pieced pattern on check goods ..... 115
No. 7 This is being used to show the pattern reversed on goods of checks ..... 117
No. 8 Flat Sleeve placed on striped goods ..... 117
No. 9 Coat pattern placed on goods, 1 -inch seam ..... 117
No. 10 is flat Diagram of One-Pieced Sleeve ..... 118
No. 11 shows the arm raised. ..... 118
No. 12 The finished garment ..... 118
No. 13 Flat draught with picture No. 14 sketched on same ..... 119
No. 14 is a tight-fitting Coat, flat draught of No. 13 ..... 118
Nos. 15 and 16 Flat draught of Nos. 17 and 18 Coat. ..... 120
Nos. 17 and 18 Fur-Lined Coats. ..... 121
No. 19 Flat draught of Sleeve ..... 122
No. 20 Sleeve coincided to make up; No. 2 is underarm; No. 1 upper, and has a design on centre, full length ..... 122
No. 21 Flat draught of close-fitting Jacket. Two different designs sketched. On same page, see Nos. 22 and 23 Jackets ..... 123
No. 24 Sleeve design sketched on same ..... 124
Page.
No. 25 Plain draught of loose Jacket with large Collar. See Coat No. 34; also pattern placed on goods and marked alphabetically ..... 124
No. 26 is flat draught of a scientifically cut garment which can be used for all garments ..... 125
No. 27 Flat draught of picture No. 28 ..... 126
No. 28 is showing No. 27 in second stage of construction. ..... 127
No. 29 Blouse foundation made ready for the different parts of picture No. 29 ..... 128
No. 30 Bodice of No. 29 partly basted ..... 128
No. 31 Flat pattern shown with different parts sketched as in picture. See page 162 for finished garment ..... 129
No. 32 Goods cut and partly basted. See No. 32, page 162 ..... 129
No. 33 Goods made up. See page 162 ..... 130
No. 34 Flat draught Kimona of picture No. 38 ..... 130
No. 35 Finished garment ..... 130
No. 36 See Diagram No. 36, with arm raised; shows Kimona Sleeve ..... 130
No. 37 is No. 34 in third part. ..... 130
No. 38 This partly done. ..... 130
Nos. 39 and 40 are simply to show the shapely appearance of scientific- ally cut Kimona Sleeves ..... 131
No. 41 is flat draught showing two different styles sketched on same; No. 41 is marked No. 21 on Diagram; No. 42 is marked No. 22 ..... 131
No. 42 These Bodices are the waist of high waist effects for skirts. ..... 131
Nos. 43 and 44 are the flat draught for Bodices with five parts and sleeve set on from shoulder, forming a Kimona Sleeve. This is a highly important lesson ..... 133
Nos. 45 and 46 Draught for stout forms ..... 134
No. 47 Shirred or corded Princess. Remarks on stout-woman measure- ments in conjunction with Nos. 45 and 46 ..... 136
SCIENTIFIC TAILORING CONSTRUCTION.
No. I Pattern of extra pieces of canvas to be used in front of Coat. ..... 138
No. 2 Canvas marked for seams ..... 138
No. 3 Clear picture of the canvas prepared for the Coat ..... 138
No. 4 Canvas prepared for the different pieces of inside pattern, show- ing the seams pressed open ..... 138
No. 5 shows the canvas rightside out, shawl collar effect ..... 139
No. 6 Canvas rightside out and also the stitches of padding showing through on the right side. ..... 140
No. 7 Cloth when seams are sewn up and pressed ..... 141
No. 8 shows the canvas in goods and the stitches shown are thread padding ..... 141
No. 9 Finished garment ..... 142
No. 10 Revere facing ..... 142
No. 11 Sleeve ready to be basted in the Coat ..... 143

## SCIENTIFIC TAILORING CONSTRUCTION-CONTINUED.

Pace.
No. 12 Coat with facing on ..... 143
No. 13 "ang prepared for putting in the Coat ..... 143
No. 14 Coat wrongside out, showing how the seams will appear when pressed open ..... 144
No. 15 Right side, with fancy design ..... 144
Nos. 16, 17, 18, 19 and 20 are the cloth under construction for the fin- ished garment No. 9 ..... 144
No. 17 Right side, machine stitched. ..... 145
No. 18 Right side of Sleeve. ..... 145
No. 19 shows the seams of Sleeve pressed open ..... 146
No. 20 Goods thread marked ..... 146
No. 21 Pattern placed on goods No. 10. Child's Coat ..... 146
In second part. Explanation for copying pictures for children ..... 147
No. 22 See No. 11 Child's Dresses. ..... 146
No. 23 Pattern placed on the goods. See picture No. 34 on page 124. ..... 146
No. 24 Inside of Seven-Gored Skirt. ..... 146
No. 25 Skirt construction in five parts ..... 148
No. 26 Finished garment of striped material ..... 148
No. 27 Lesson demonstrating coinciding the notches and marks ..... 148
No. 28 shows the garment full length with notches coinciding ..... 149
No. 29 Long garment showing seams overcast ..... 149
No. 30 Lining complete and ready for the under part of garment, show- ing the overcasting ..... 149
No. 31 Pocket work in six parts ..... 150
No. 32 Inside of Coat showing the stay lining ..... 151
No. 33 shows the Pocket Laps sewed on ..... 152
No. 34 In three parts and is the Coat and thread marking of finished garment No. 34 ..... 152
No. 35 The Pockets in the garment and ready for final press ..... 152
No. 36 shows a Shawl Collar as seen in picture No. 9 ..... 153
No. 37 A Revere with the part off to form a Shawl Collar ..... 153
No. 38 shows this done ..... 153
No. 39 The coinciding of back part of Collar with front Reveres ..... 154
No. 40 Facing as it will appear for such lapels as shown in Coat No. 12 ..... 154
No. 41 Shawl Collar ready to be joined together ..... 154
No. 42 In two parts, Nos. I and 2, ready for pressing ..... 154
No. 43 Sleeve not pressed ..... 154
No. 44 shows a Coat ready to fit ..... 155
No. 45 Canvas in Coat from inside effect and Shawl Collar ..... 155
No. 46 Finished garment No. 44, braided ..... 156
No. 47 Art of Mending ..... 156
SHIRT WAIST WORK.
No. I Cutting Shirt Waist with tucks. ..... 158
No. 2 Flat draught foundation ..... 159
SHIRT WAIST WORK - CONTINUED.
Page.
No. 3 Flat Shirt Waist Sleeve ..... 160
No. 4 Gibson Shirt Waist. ..... 160
No. 5 Goods ready for basting. ..... 161
No. 7 Shoulder seam basted ..... 161
No. 8 Lower part of Sleeve ..... 162
No. 9 Cuff ..... 162
No. 10 Cuff facing turned in slanting manner ..... 162
No, II Shirt Waist finished. ..... 163
No. 12 Shirt Waist shirred ..... 163
No. 13 Shirt Waist with low cut arm's eye ..... 163
No. 14 Plain Shirt Waist with low cut arm's eye ..... 163
No. 15 Shirt Waist Collar and Cuff Band ..... 164
No. 16 Inside finish ..... 165
No. 17 In five parts. Part No, I finished garment ..... 166
Part No. 2 Flat draught ..... 166
Part No. 3 Pattern placed on goods, marked alphabetically ..... 166
Part No. 4 shows No. 17 basted and the inside and some parts thread-marked. See No. 18, page 162 ..... 162
Part No. 5 Front half of No. 17. See No. 17 on page 162. showing back view of finished garment ..... 162
No. 20 Finished Shirt Waist showing plaits basted in at waist band and designs basted on the garment ..... 167
No. 21 Part I Back of goods with plaits lapped and shown in three parts ..... 167
Part 2 is the front ..... 167
Part 3 is the back. These tucks or plaits have been lapped, thus making them appear narrow ..... 167
No. 22 Ladies' Drawers. See finished garment on same page ..... 168
No. 23 Novelty Shirt Waist-with kimona sleeve in conjunction with No. 17. Persons being able to cut No. 17 will find this very similar ..... 169
No. 24 Shirt Waist with low-cut arm's eye. See No. 33 on page 155; also No. 6 on page 165 ..... 170
No. 25 Collars, shirt waist. ..... 170
No. 26 Shirt Waist with Sailor Collar ..... 170
No. 27 Finished Shirt Waist showing the shirt-waist double collar ..... 170
No. 28 One-piece Sleeve, in conjunction with No. 12 Scientific Con- struction, page 118, and No. 14 Shirt Waist. ..... 163
PLAITED SKIRTS.
No. 1 Goods marked ..... 171
No. 2 Plaits basted in tuck form ..... 172
No. 3 For large form ..... 172
In second part ..... 174
In third part. This is shown in four parts with thirty-four plaits ..... 173
PLAITED SKIRTS-CONTINUED.
No. 4 Thirteen side plaits ..... 173Page.
No. 5 Lesson No. 10
Second part. ..... 175
No. 6 Goods cut and marked; 24 -side-plaited skirt of striped goods ..... 176
No. 7 Wrong side showing ..... 176
No. 8 Plaited Skirt ..... 176
No. 9 Side-Plaited Skirt ..... 177
No. 10 W rong side, example in Plait-Making ..... 177
No. 11 Goods cut and marked for Plaited Skirt ..... 178
No. 12 Same as No. 11, showing that it may be made in side or box plaits ..... 179
No. 13 Box-Plaited Skirt as shown in former lesson ..... 179
No. 14 Showing inside finish of Box Plaits ..... 180
No. 15 Inside, showing the seams overcast for Box Plaits. Showing 2 -inch raise in back ..... 181
No. 16 Right side of Box-Plaited Skirt, showing the box plaits stitched 12 inches below waist ..... 181
No. 17 Shows the goods as it will appear before marked for plaits. ..... 182
No. 18 Flat pattern of Fifteen-Box-Plaited Skirt placed on goods ..... 182
Nos. 19 and 20 are for the purpose of showing bordered goods ..... 183
No. 21 Eleven-gored pattern placed on goods to make plaits. ..... 184
No. 22 Riding Costume made of striped goods. See No. 22, page 188 ..... 184
No. 23 Centre of Divided Skirt. The outer part is shown marked for plaits ..... 188
No. 24 shows pattern placed on striped goods; also dress made up ..... 185
No. 25 Pattern placed on checked goods; also dress made up ..... 185
No. 26 Costume, stripes. See Scientific Fashion No. 26 ..... 185
CIRCULAR SKIRTS.
No. I Look carefully over the lesson. ..... 186
No. 2 Shows how to cut for large forms. ..... 186
No. 3 Figures with deep curves ..... 187
No. 4 Circular skirt with seam on hips ..... 187
Tables for Plaited Skirts ..... 189-193
Table of Measurements for Circular Skirts ..... 194
Shades and Colors ..... 196, 197
Plussing ..... 198
UNDER GARMENTS.
No. 28 Under Waist and Slip combined ..... 195
No. 29 Night Robe cut from flat pattern No. 36 on the same page ..... 195
No. 30 Night Robe cut from No. 36. ..... 195
No. 31 Under Waist cut from No. 34, and Drawers cut from No. 35 ..... 195
No. 32 Under Waist cut from No. 34 ..... 195
No. 33 Under Waist and Slip Skirt. ..... 195
UNDER GARMENTS-CONTINUED.
Page.
No. 34 UnderWaist coincided to cut a seamless Under Waist ..... 195
No. 35 Pattern of Drawers. ..... 195
No. 36 Flat pattern to cut Night Gowns from ..... 195
PATTERNS PLACED ON THE GOODS.
No. I An eighteen-pieced garment. The placing of the patterns on the goods is general knowledge for all garments ..... 113
No. 2 A Jacket ..... 113
No. 3 A novel design on cloth ..... 113
No. 4 An eighteen-pieced Garment placed on flowered goods. ..... 113
No. 5 Back of Jacket placed on striped goods ..... 115
No. 6 An eighteen-pieced Princess placed on goods ..... 115
No. 7 Checked material ..... 115
No. 8 Flat Sleeve pattern placed on striped goods ..... 116
No. 9 Flat pattern placed on broadcloth. Notice all are placed one way. Scientific Tailoring ..... 117
No. 10 Child's Coat placed ..... 147
No. 11 Child's House Slip placed on silk. The small dots are the seams ..... 147
No. 12 One-piece Sleeve. Low cut underarms. ..... 118
No. 13 Skirt placed on goods. See Skirt Work ..... 33
No. 14 Shirt Waist. Tailored Shirt Waist. See Shirt Waist Work ..... 166
No. 15 Pattern for inside canvas of Coats. See Tailoring Lesson ..... 166
No. 16 Shirt Waist on striped goods and see Shirt Waist Lessons ..... 159
No. 34 Under Waist placed on cotton ..... 129
No. 21 Ten-Gored Skirt placed on goods ..... 185
No. 18-B Seven-Plaited Skirt ..... 182
No. 24 A Skirt pattern on striped goods ..... 183
No. 25 Nine-Gored Skirt placed on checked goods ..... 184
No. 20 Fancy Waist placed on goods. See goods made up. ..... 129
No. 21 Gibson Shirt Waist on goods ..... 160
No. 34 Pattern of Coat No. 34 on goods ..... 125
No. 21 Princess ..... 58

## MILLINERY.

## HATS.

DISCOURSE- Page.
Construction of Hats ..... I
Cotton Batting Work for Hat construction ..... 2
Construction of wire shapes ..... 2
To Remove Creases ..... 3
Cleaning Feathers, etc. ..... 4
No. 1 Small Hat draughting $45^{\prime \prime}$ ..... 5
No. 2 Draughting $50^{\prime \prime}$ ..... 6
No. 3 Description of Scientific Millinery Brim 60' ..... 6
No. 4 Outing Hat construction ..... 7
No. 5 Construction ..... 8
No. 6 Wire shape ..... 9
No. 7 Wire shape ..... 10
No. 8 Straw on wire shape, see second part ..... 10
No. 9 Velvet Hat ..... 12
No. 10 Shape padded with cotton batting ..... 12
No. 11 Buckram shape covered with velvet ..... 13
No. 12 Discourse on shapes ..... 14
No. 13 Bonnets and Children's Hats ..... 14
No. 14 Picture or large Hat ..... 14
No. 15 Large Hat ..... 16
No. 16 Large Hat and measuring pictures ..... 17
No. 17 Art of measuring ..... 18
No. 18 Lesson in measuring trimming and faces ..... 18
No. 19 Measuring trimming ..... 18
No. 20 Bows and Rosettes, measuring ..... 19
No. 21 Cutting Lesson. Diagram medium sizes. ..... 20
No. 22 Cutting Bonnets and Children's Hats ..... 20
No. 23 Cutting lesson in three parts ..... 21
SCIENTIFIC DRAUGHTING.
No. 24 Scientific Hat Cutting. ..... 22
No. 25 Construction ..... 22
No. 26 is a draught of Poke or Bonnet ..... 23
No. 27 Medium Hat ..... 23
No. 28 Bonnet ..... 23
No. 29 Draughting crowns ..... 24
No. 30 Picture Hat ..... 24
No. 31 Picture Hat ..... 25
No. 32 Small Hat ..... 25
No. 33 Small Hats ..... 25
No. 34 Finished Hat ..... 26
No. 35 Small Hat ..... 26
No. 36 Large Hat ..... 26
No. 37 See Nos. 38 and 39 ..... 27

## SCIENTIFIC DRAUGHTING-CONTINUED.

Pace.
No. 38 Pattern of draped Hat made of straw or cloth ..... 28
No. 39 Wire shape ..... 28
No. 40 Hat draped, with loops at side ..... 28
SHAPES AND PATTERNS.
No. 22 Crown for No. 23 ..... 28
No. 23 Paper pattern of Brim ..... 28
No. 24 Paper pattern ..... 28
No. 25 Wire shape ..... 28
No. 26 Paper pattern ..... 28
No. 27 Wire shape ..... 28
No. 28 Paper pattern ..... 28
No. 29 Wire shape ..... 28
No. 30 Wire shape ..... 28
No. 31 Same Brim as No. 33 ..... 28
No. 32 is the Crown ..... 30
No. 33 Perfect paper pattern ..... 30
No. 34 Wire shape pattern ..... 30
No. 35 Wire shape ..... 30
No. 36 Buckram shape ..... 30
No. 37 Paper pattern ..... 30
No. 38 Buckram shape ..... 30
No. 39 Perfect pattern ..... 30
No. 40 Buckram shape ..... 30
No. 41 Pattern of Outing Hat ..... 30
No. 42 Pattern in Buckram ..... 30
No. 43 Velvet Hat ..... 30
No. 44 Novel shape ..... 30
No. 45 Paper pattern ..... 30
No. 46 Paper pattern ..... 30
No. 47 Paper pattern ..... 31
No. 48 Taffeta Hat ..... 31
LESSONS ON PRACTICAL WORK.
The Scientific Bandeaux will be taught personally, or write for information.
No. 1 French fold ..... 32
No. 2 Basted ..... 32
No, 3 Fold made up. ..... 32
No. 4 Fold on wrong side ..... 32
No. 5 Shows fold cut and basted ..... 33
No. 6 Hem ..... 33
No. 7 Flat fold ..... 33
No. 8 Bias fold ..... 33
No. 9 French knots ..... 33
No. 10 Wrong side ..... 34

## LESSONS ON PRACTICAL WORK-CONTINUED. <br> Page.

No. 11 Inside of fold ..... 34
No. 12 Fold ..... 35
No. 13 In conjunction with No. 14 ..... 34
No. 14 Shaped fold ..... 35
No. 15 Ruffle ..... 34
No. 16 Rolled hem ..... 35
No. 17 Blind hem ..... 35
No. 18 Hem faggot stitched ..... 35
No. 19 Goods binding ..... 35
No. 20 Shaped band ..... 36
No. 21 Thick wire or cord with silk finish ..... 36
No. 22 Bias band ..... 37
No. 23 Wide bias band shaped for brim of hats ..... 38
No. 24 Tucks ..... 38
No. 25 Knife Plaiting ..... 39
No. 26 Ribbon thread marked ..... 39
No. 27 Goods marked ..... 39
No. 28 Hemming ..... 40
No. 29 Loop or blind stitch. ..... 40
No. 30 Overcasting ..... 40
No. 31 Cross stitch ..... 40
No. 32 Gathering stitch ..... 40
No. 33 Back stitch ..... 40
No. 34 Cross stitch ..... 41
DESCRIPTION OF HATS AS SHOWN IN CUTS.
No. 22 Large Hat ..... 41
No. 23 Large black and white Hat ..... 41
No. 24 Large Hat ..... 43
No. 25 Corn-colored straw ..... 43
No. 15 Large Hat ..... 48
No. 20 Large Hat ..... 48
No. 21 Large Hat ..... 48
No. 26 Large Novelty Hat. ..... 43
No. 27 Large Hat ..... 44
No. 28 Large Hat ..... 44
No. 29 Large Hat ..... 44
No. 30 Large Hat ..... 44
No. 31 Medium Hat ..... 44
No. 32 Large Hat ..... 44
No. 33 Medium-sized Hat ..... 46
No. 34 Medium-sized Hat ..... 46
No. 35 Medium-sized Hat ..... 46
No. 36 Medium-sized Hat ..... 46
No. 37 Small Hat ..... 46
No. 38 Small-size draped ..... 46
No. 39 Small-size draped ..... 48


[^0]:    * No, 18 on page 30 is in conjunction with Nos. 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45 and 46. All these Diagrams are simply to show the art of coinciding the pattern of a close-fitting garment to copy pictures from.

