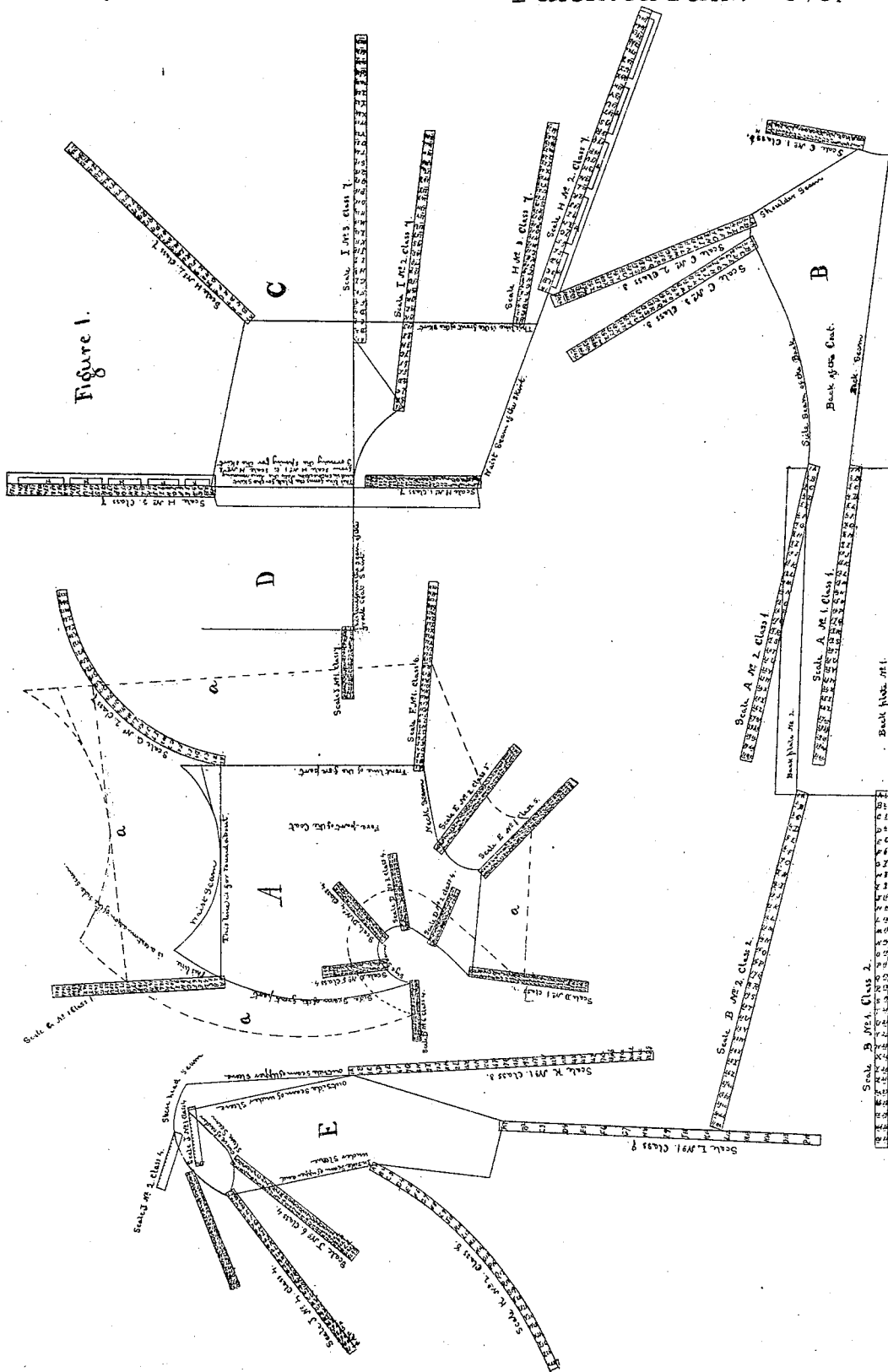


*C. Lucas*  
*Tailoring*

*N<sup>o</sup> 5635.*

*Patented Jun. 13. 1848.*

Figure 1.



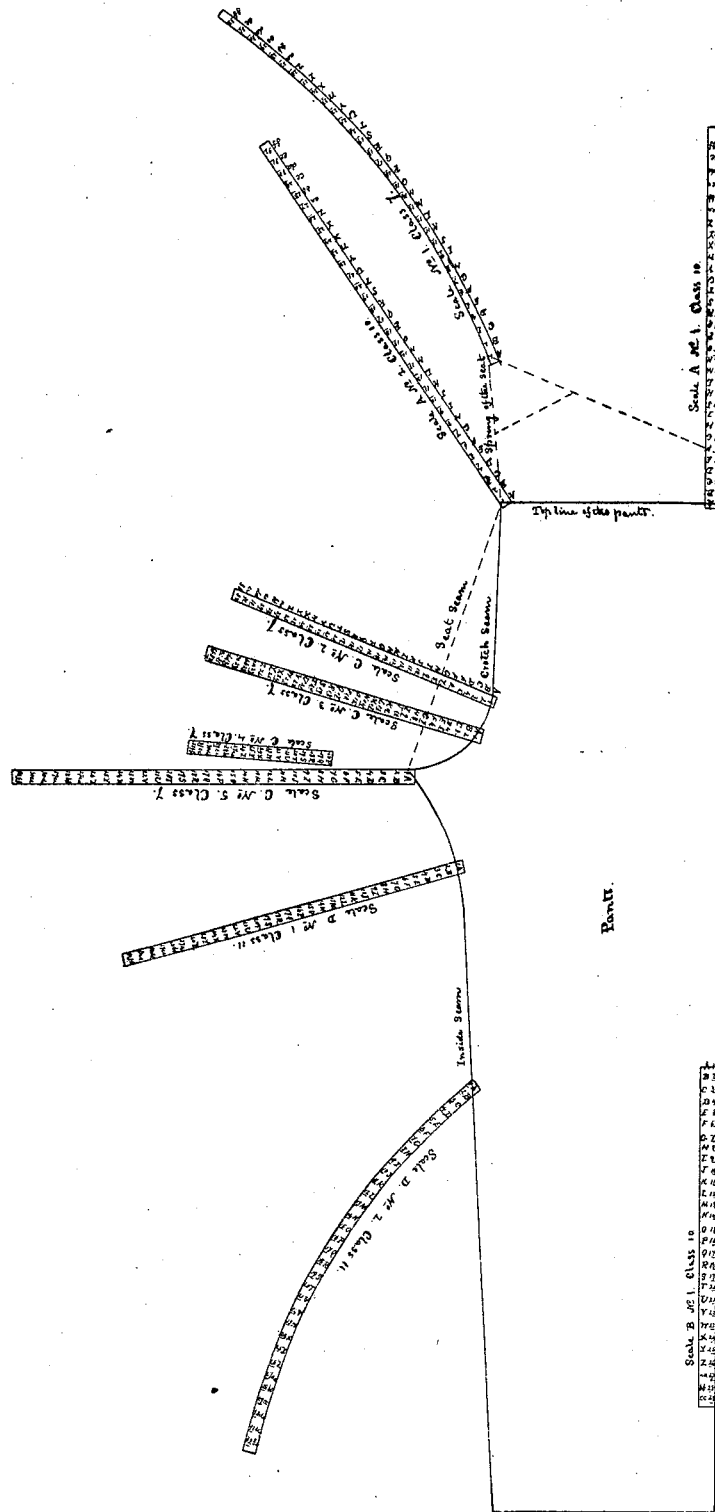


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Figure 3.

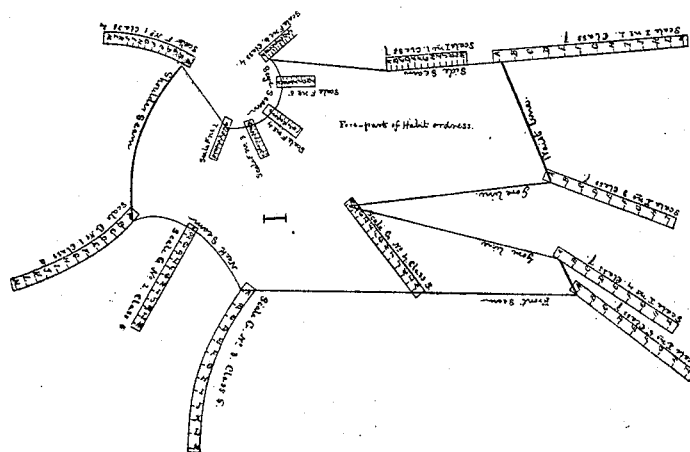
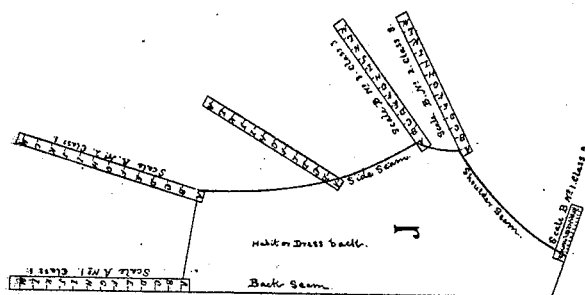
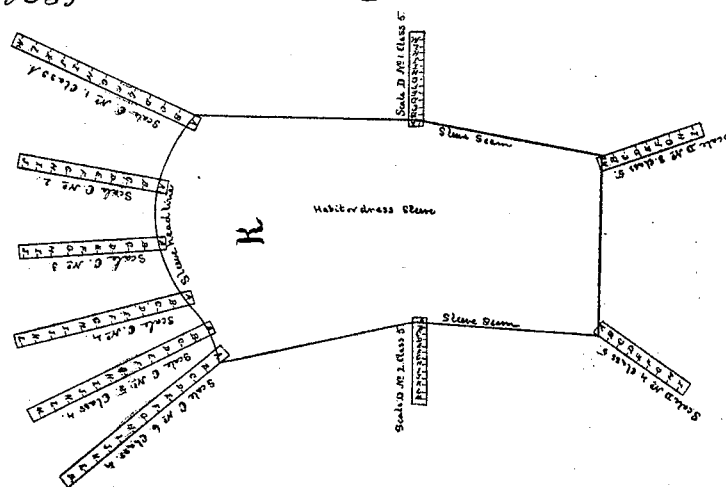


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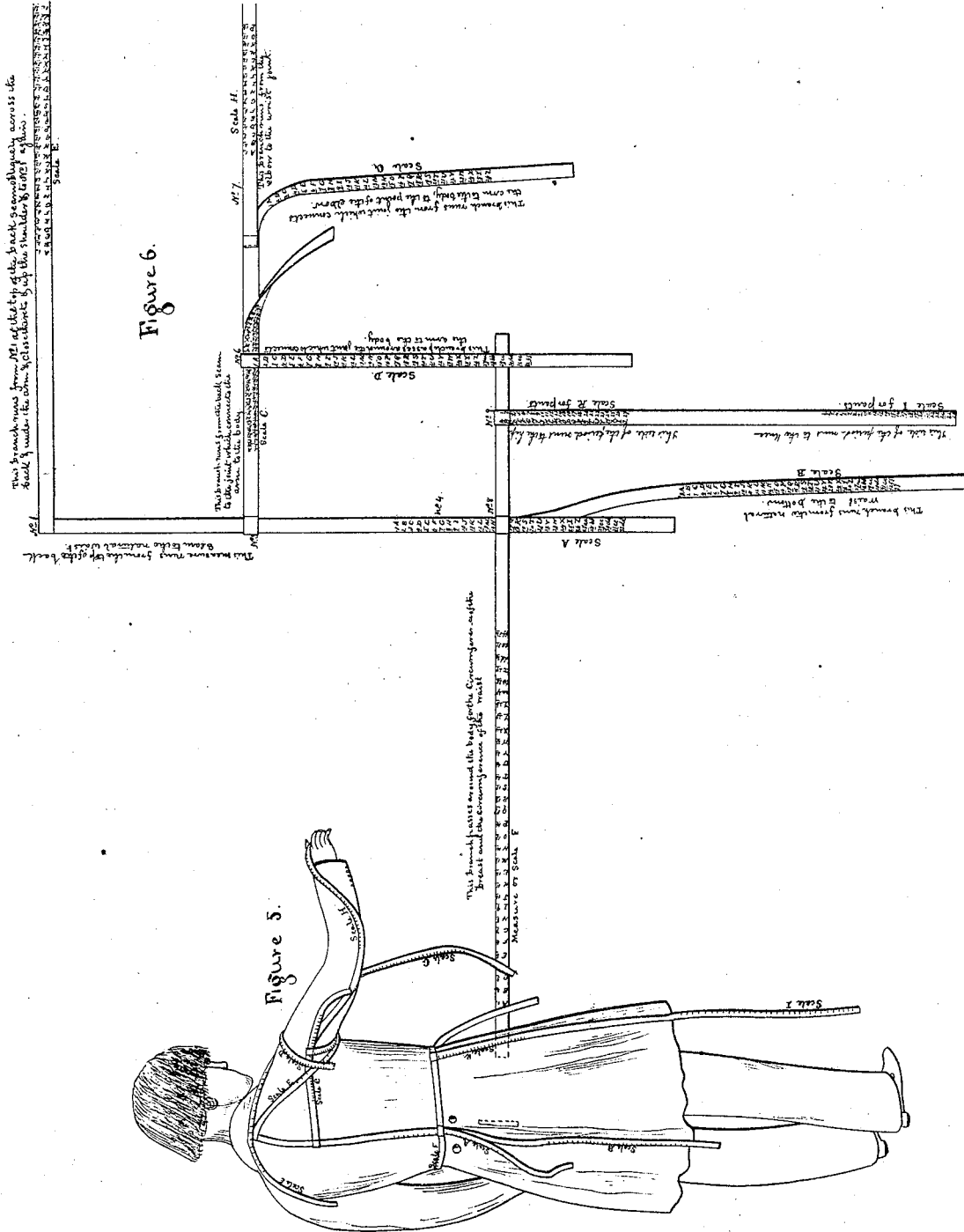
Figure 4.



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N<sup>o</sup> 5635



# UNITED STATES PATENT OFFICE.

CHARLES LUCAS, OF CHARLOTTESVILLE, VIRGINIA.

## DRAFTING AND MEASURING GARMENTS.

Specification of Letters Patent No. 5,635, dated June 13, 1848.

*To all whom it may concern:*

Be it known that I, CHARLES LUCAS, of Charlottesville in the county of Albemarle and State of Virginia, have invented a new and useful Improvement in the art of measuring and drafting garments; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, making  
10 part of this specification.

The sheet of drawings is divided into four principal divisions, or groups of diagrams and appended thereto, is a figure illustrating the application of the measure.

15 Figure 1 is the group of coat diagrams in which A is the breast or front of a coat, B the back, C the skirt of a dress and D the skirt of a frock coat and E the sleeve. Fig. 2 is the group of vest diagrams of which F is the front and G the back. Fig. 3 is a diagram for pantaloons the black lines representing the front and the dotted lines the back thereof. Fig. 4 is a group of diagrams for ladies' habits—or dresses of which I is the front and J the back of the bodice. K  
25 is the sleeve. Fig. 5 is a view of the measure applied to a person for the purpose of obtaining the necessary dimensions preparatory to cutting a coat. Fig. 6 is the measure.  
30

The nature of my invention consists in a method of making and using a series of diagrams or patterns, corresponding in size and shape with the several elementary parts  
35 of which garments are composed—in the manner of forming scales upon the said diagrams, graduating the same, and applying to said graduation a system of notation by means of which said diagrams may be adapted to the drafting of garments of all sizes  
40 within the limits of the graduated scales aforesaid—and in applying a graduated flexible adjustable measure for the purpose of obtaining the necessary data to determine the size and proportions of the several parts  
45 of garments by means of the diagrams aforesaid, the several scales of the measure having a determinate relation to the corresponding scales on the diagrams.

50 I deem it unnecessary to describe particularly the mode of constructing all the diagrams of the different parts of a suit of clothes. I will, however, give by way of example a description of the mode of constructing one diagram which will illustrate the general principle so clearly and fully  
55 that any person skilled in the business of

tailoring would by studying it carefully be able without difficulty to apply it so as to construct all the rest. I have selected the  
60 front or breast of a coat as the subject of illustration. I commence by drafting upon cloth or other suitable material a pattern A, Fig. 1 represented by the black lines, of a garment of the smallest size, of symmetrical  
65 proportions and fashionable form; outside of the pattern A thus laid down and preserving the same relative form and position I draft a second plan *a, a, a, a*, of larger size represented by the dotted lines, I then connect the two patterns by lines drawn from  
70 the principal points of the small to the corresponding points of the larger, allowing the lines to extend indefinitely beyond the largest, but preserving the same direction  
75 without as they do between the patterns. These lines, between the patterns, I divide into any given number of equal parts, in the present instance I have divided them into eighteen, and extended the graduation be-  
80 yond the larger pattern up to thirty one; to each of these divisions I affix a distinct sign or symbol beginning upon the outline of the pattern A with A', for the symbol of the first division of the scales, B<sup>2</sup>, for the sym-  
85 bol of the second division, and so proceeding to and beyond the outline of the larger pattern marking the divisions in alphabetical and numerical order as I progress. These  
90 lines thus divided and marked at their points of division, I denominate scales, to each of these scales I affix a symbol by which it is distinguished from the other scales of the same diagram. Such of the scales in the  
95 same diagram as correspond to the same scale of the measure I associate together into a group or class and each class thus formed I designate by a number.

In diagram A, Fig. 1, there are four groups or classes of scales numbered 4, 5, 6, 100 and 7 respectively. Class 4 embraces scales D Nos. 1, 2, 3, 4, 5, and 6 and the symbol of size for this class is to be found on scale D of the measure. Class 5 is composed of scales E Nos. 1 and 2 and the symbol of size  
105 for this class is taken from scale E of the measure. Class 6 is composed of scale F, and the symbol of size for this class is taken from scale F of the measure when it is used to obtain the dimensions around the breast.  
110 Class 7 embraces scales G Nos. 1 and 2 and the symbol of size for this class is taken from scale F of the measure when it is used to obtain the circumference of the waist.

By joining with lines the several points on the different scales having a common symbol, a figure will be produced having the same relative form and proportions as the primary pattern A and which will be itself another pattern differing from the original in size only.

The measure as seen upon the person being measured for a coat in Fig. 5, is composed of strips of paper, tape, leather or other suitable material combined partly in a fixed and in part adjustable manner, there being a piece of sufficient length and in the proper place to take the measure of every part of the person of which it is deemed necessary to obtain the dimensions, or else a movable piece which by being adjusted will serve to take the dimensions of several adjacent parts. The different parts of the measure having scales graduated upon them equivalent to the corresponding classes of scales on the diagrams the symbols representing the several divisions of the scales being the same on the diagrams and on the measure. Scale A gives the length of the back. Scale B gives the length of the skirt. Scale C gives the measure from the middle of the back to the shoulder joint. D gives the circumference of the arm. E gives the measure from the neck joint (the upper surface of the superior dorsal vertebræ) obliquely across the back, under the arm, across the breast and over the shoulder to the point of starting. F gives the circumference around the breast, around the waist and around the hips. G gives the length from the shoulder to the elbow. H gives the length from the elbow to the wrist. I gives the measure from the thigh joint to the knee. K gives the circumference of the thigh. The measures for a coat are obtained as follows, upon the back of the person being measured and over the neck joint is placed that part of the measure marked \* the length of the back taken down the middle to the natural waist upon scale A is then noted, next, the circumference of the chest at the largest part is taken upon scale F, and also noted, if both the dimensions so taken are represented upon their respective scales by the same symbol, the length around the chest will be just twice the length of the back, and the form of such person is said to be symmetrical and the symbol thus found is called the index of measure and obviates the necessity for taking any farther dimensions, because it will indicate accurately upon the diagrams the proper form and size of every part of a coat or vest for such person. When the form of the person to be measured is not symmetrical the measure must be applied to every part of the body of which it is necessary to have the dimensions and such measures as are not proportionable viz, those whose symbols do not

correspond with the symbol for the length of the natural waist must be noted and in applying the measures to the diagram and cloth care must be taken to puncture the cloth through the scale in the several classes at the points represented by the proper symbol the index symbol being in this case the proper measure of such parts only as are symmetrical.

Having described the application of the measure to the human body so as to obtain its dimensions I will now give the indexes for its several scales which point out their corresponding classes of scales on the diagram. The dimensions indicated by scale A have their corresponding sizes and symbols on those scales of the several diagrams embraced in the classes numbered, 1. The dimensions given by B correspond to class 2, those dimensions given by C, D, E, F, G, H, I, O, and K respectively correspond to the classes on the diagrams numbered 3, 4, 5, 6, 7, 8, 9, 10, and 11, F<sup>b</sup> being the measure around the breast and F<sup>w</sup> around the waist.

The mode of applying a diagram so as to enable the operator to draft with accuracy the part of the garment to which it corresponds, preparatory to cutting, is as follows: The diagram is laid upon the cloth or other material to be cut, the symbols of size having been ascertained by the method above described, the corresponding symbols on the several classes of scales on the diagram are found, and a hole is punctured through those scales and the cloth at those points of division indicated by the symbols of measure aforesaid, the diagram is then removed and the punctures in the cloth joined by chalk lines, a perfect draft of the part required to be cut being thus completed. Instead of puncturing the scales at the points of division indicated by the symbols let open spaces be made like those represented at  $\sigma$  Fig. 1 through which the cloth can be marked at once, more accurately and with greater convenience.

I do not claim the use of perforated patterns or diagrams or of combined graduated flexible measures for the purpose of drafting and measuring for garments; but

What I do claim as my invention and desire to secure by Letters Patent is—

The employment of a sheet of patterns or diagrams, with their scales and system of graduation and notation, such as are herein described, in combination with a flexible adjustable measure corresponding thereto, the same being made and used in the manner and for the purposes herein described.

CHARLES LUCAS.

Witnesses:

JNO. H. TIMBERLAKE,  
THOS. J. WERTENBAKER.