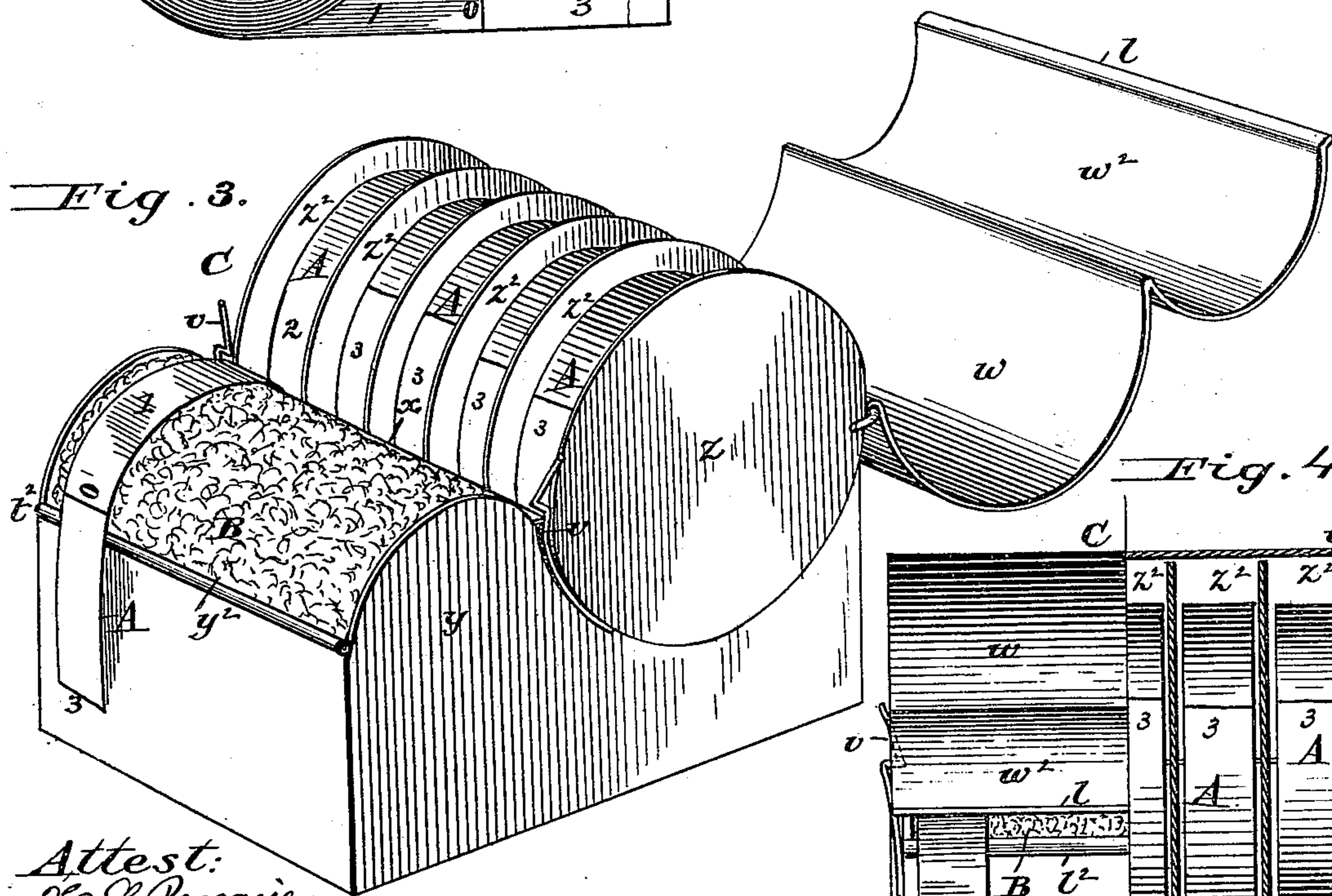
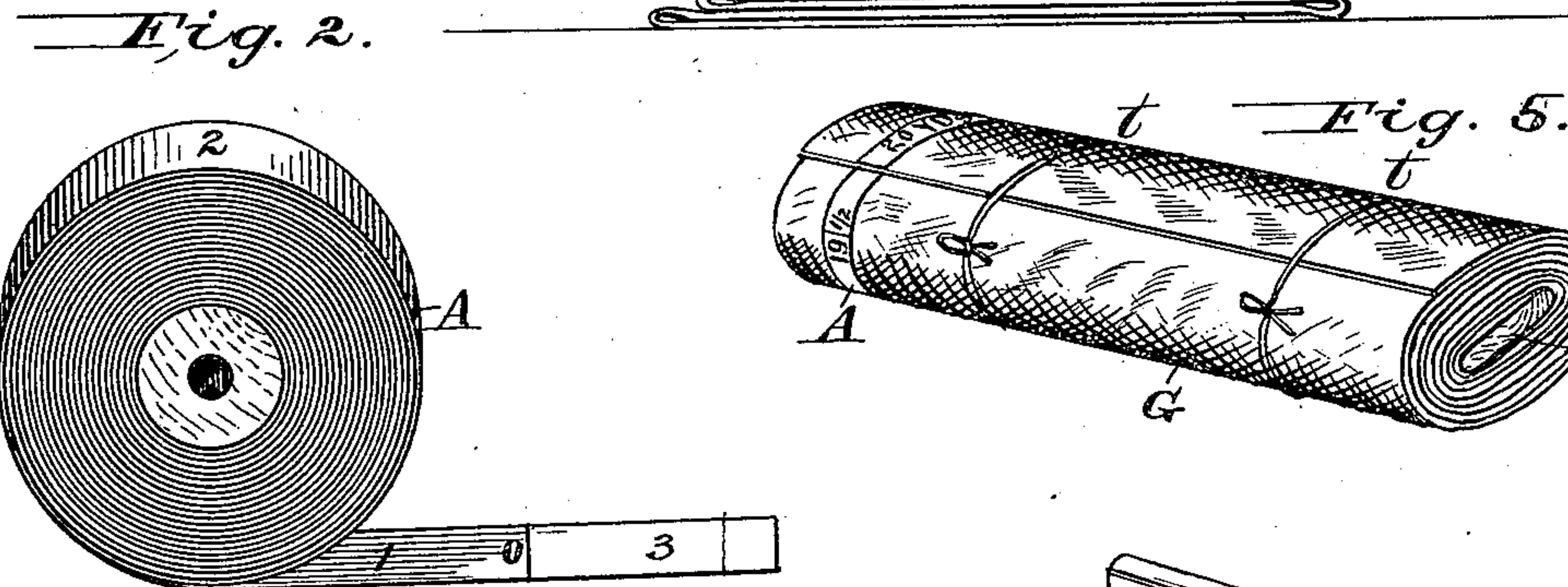
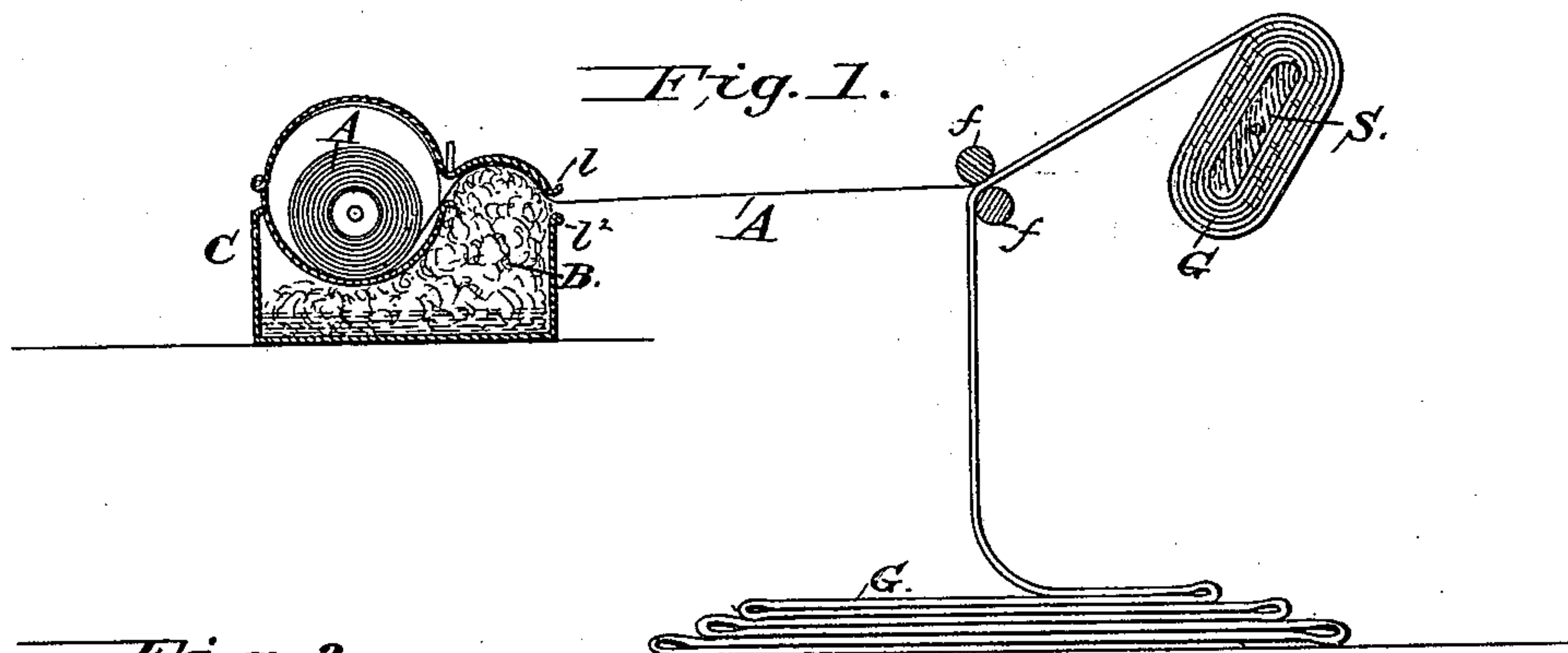


(No Model.)

C. E. HAMMOND.
Cloth Measuring.

No. 230,937.

Patented Aug. 10, 1880.



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UNITED STATES PATENT OFFICE.

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CLOTH-MEASURING.

SPECIFICATION forming part of Letters Patent No. 230,937, dated August 10, 1880.

Application filed May 7, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. HAMMOND, a citizen of the United States and a resident of New York city, New York, have invented a new and useful Improvement in Measuring Cloth, of which the following is a specification.

This invention relates to methods of measuring cloth and devices for this purpose, the term "cloth" being used to express all those wider descriptions of textile fabrics which enter the market in rolls or bolts, and are sold by the yard or other unit of linear measure.

The method still commonly used is to measure the cloth by means of a measuring-machine or upon tenter-hooks, and simultaneously or subsequently to roll the same, the total length being marked upon a tag attached by cord to the end of the package, or by means of a label or the like upon the end of the cloth. Besides the expensiveness of measuring-machines and their liability to get out of order, and thus occasion delay and inconvenience, and the labor and uncertainty of measuring upon tenter-hooks, said ordinary method is defective, and occasions unnecessary labor and delays in that the marking is always manual and liable to the errors incident to all such work, while the original mark, if upon a label or the cloth, is severed with the first yard sold from the package, and if upon a tag requires correction after each sale, and if the label or tag becomes detached and lost the package must be remeasured by hand, and all sales of less than a whole piece involve such manual measurement.

Previous to my present invention three other methods of measuring the said class of goods have been proposed, to wit: first, by means of a loose measuring-strip rolled up in the package; second, by means of graduations and transverse cutting-lines marked on the cloth throughout its length during the progress of manual measurement; third, by means of a peculiarly-graduated measuring-strip attached at its ends to the face of the goods and rolled up therewith.

My invention comprises another method of measuring and indicating the length of such goods—to wit, by applying an adhesive tape-measure continuously to the back of the goods at the rolling operation. The goods are thus

measured with mechanical accuracy in the mills where they are produced by the aid of any ordinary rolling-machine at its ordinary speed, and are measured and rolled at one continuous operation without further handling than is involved in the ordinary rolling operation alone. Every part of the goods is, moreover, provided with a securely-attached indicator of its length, which does not interfere with unrolling and rerolling the goods in showing them, and can itself be examined without opening the package, while the defacement of the goods incident to attaching anything to its face or marking thereon is avoided.

My invention consists in the aforesaid method, and in simple and efficient means which I have devised for carrying the same into effect, as hereinafter set forth.

Figure 1 of the accompanying drawings is a diagram illustrating my method of measuring cloth. Fig. 2 is a perspective view of an adhesive tape-measure prepared according to my invention. Fig. 3 is a perspective view of my device for feeding and moistening the said adhesive tape-measure opened, and Fig. 4 is a front view of the same closed and partly in section. Fig. 5 is a perspective view of a bolt of the measured goods.

Like letters of reference indicate corresponding parts in the several figures.

In carrying out this invention a supply of adhesive tape-measures, A, a dampening-sponge, B, and a case or holder, C, are provided for use in connection with the ordinary power-driven rolling-machine by which pieces of cloth and similar goods are put up for the market.

The adhesive tape-measures A consist of narrow strips of tough thin paper, each having on one side, 1, consecutively numbered graduations to indicate yards and fractions of yards or other appropriate linear measurements, and provided on the other side, 2, with a continuous coating of mucilage or a like adhesive solution, which is allowed to dry thereon, and adapted to be readily dissolved or moistened, as upon adhesive stamps, while each measure has at its starting end an uncoated extension, 3, in advance of 0, to facilitate applying the same. These measures may be printed or marked in the same manner as ordinary tape-measures,

care being taken to give them mechanical accuracy, and they are finally put up for use in the form of tape-rolls, as illustrated by Fig. 2, with the starting end 3 followed by 0 at the periphery of the roll.

The sponge B should be large and soft, and saturated with water or with thin mucilage or cement.

The case C is constructed of sheet metal, with a transverse cylindrical portion, z , and a portion, y , in front and beneath said cylindrical portion, containing, respectively, compartments z^2 y^2 , to receive one or more tape-measures, A, and the sponge B. In the illustration the cylindrical portion is provided with parallel partitions, being adapted to receive several tape-measures behind a single large sponge.

The compartments z^2 y^2 are separated by a water-tight semi-cylindrical bottom, x , with which the former is provided, the compartment y^2 being adapted to contain a supply of the liquid with which the sponge is saturated, and the front edge of said bottom x is made higher than the front wall of the portion y , so as to preclude overflow into the tape-measure compartments. To the rear edge of the bottom x a cover, w w^2 , is hinged, and at the front edge of said bottom a pair of spring-catches, v v , are attached thereto, as shown, the portions w w^2 of said cover being conformed, respectively, to the top of the portion z of the case, and to that of the portion y , including the sponge, while the crease between forms a seat for the shoulders of the catches v .

When the case C is opened, as shown in Fig. 3, its compartments are readily filled or replenished in a moment, the starting end 3 of one of the tape-measures A being drawn out, as shown in the figure, so as to be readily grasped. The case is then closed, as shown in Fig. 4, and the superposed portion of the measure is pressed between the wet surface of the sponge B and the smooth under surface of its cover w^2 by the elasticity of either part, that of the sponge being sufficient, and the moistening of the coated surface is thus insured, while at the same time the requisite tension is given to the tape-measure to regulate its escape.

The front edge of the cover w^2 and the upper edge of the said front wall of the portion y of the case form smooth separated lips l l^2 , between which the moistened adhesive tape-measure escapes freely.

The case may be held with the lips l l^2 upward to increase the action of the sponge, and it may be attached to the person of the operator by a belt, or supported on the frame of the rolling-machine, or on a separate support, as preferred.

G represents the goods or cloth as brought loosely to the rolling-machine S, wound up by the latter, and secured by tapes t t at the end of the rolling operation.

The production of a flat bolt is represented. That of a round or cylindrical roll is analogous,

the only difference being that the rolling-stick S is withdrawn from a round roll and replaced in the machine. The goods require no preliminary treatment, but are handled in the ordinary way, excepting measurement. One end of the loose goods is attached in the usual manner to the bolt-board or rolling-stick S in the rolling-machine, so that the exposed or outer surface is the back of the goods, whether the latter be single or double.

The starting end of an adhesive tape-measure, A, having been drawn over the wet sponge B, and thereby moistened, is at the same time attached by its adhesive coating to the said outer surface of the goods, near one edge of the latter, with the starting-point 0 of its scale at the end of the goods, under which the extended starting end 3 may be tucked. If the goods are of single width, the tape-measure will be attached near the selvage, which is at the left hand in the machine, as indicated in the drawings, the same being the right-hand edge of the opened goods; and if they are of double width the tape-measure will be attached near the fold-edge, these being the customary measuring-points.

At a short distance from the rolling-stick or the goods thereon a pair of guide-fingers, f f , locate the tape-measure on the goods and press the two together sufficiently to make the former adhere. These fingers may be attachments to the frame of the rolling-machine, or they may be improvised by the fingers of the operator.

In this manner cloth and like goods can be measured and rolled at one rapid continuous operation, and at the same time provided with a securely-attached indicator, which serves to measure and indicate the linear measurement of every yard of the goods and the remnant in the bolt or package at any time, and which can be inspected without opening the goods, as seen in Fig. 5.

The following is what I claim as new and of my own invention, and desire to protect by Letters Patent, namely:

1. The within-described improvement in the art of measuring cloth and indicating its length, consisting in rendering a suitable tape-measure adhesive throughout its length and applying the same to the outer surface of the cloth, which is its back, in the process of rolling and by a continuous operation.

2. The within-described adhesive tape-measure A, having one side coated with mucilage or its equivalent and its other side provided with successively-numbered graduations, and having an uncoated starting end in advance of zero, the same being put up in the form of a roll with said starting end at the periphery of the roll, and adapted to be applied to cloth, so as to be attached thereto throughout its length for measuring the cloth and indicating its length, by simply moistening said coated side and bringing the same in contact with the back of the cloth at the rolling operation, as herein set forth.

3. The within-described device for applying adhesive tape-measures to cloth for the purpose of measuring the same and indicating its length, consisting of the case or holder C, having a transverse cylindrical portion, *z*, forming compartments for tape-measures in rolls, and a portion, *y*, forming a compartment to contain a sponge or sponges and a liquid for saturating the latter, said portion *z* having a watertight semi-cylindrical bottom, *x*, which separates the compartments, and the whole provided with a cover, *w w'*, terminating in one of a pair of separated lips, *l l'*, for delivering said tape-measures continuously in a moistened state and under suitable tension, as specified.

4. In a device for applying adhesive tape-measures to cloth for the purpose of measuring the same and indicating its length, a transverse series of tape-measure compartments, separated by parallel partitions, in combination with a sponge-compartment extending in front of the several tape-measure compartments, as herein specified.

5. In a device for applying adhesive tape-measures to cloth for the purpose of measuring the same and indicating its length, the combination of one or more tape-measure compartments, a sponge-compartment in front

thereof, and a cover, hinged at the rear edge of the former and extended over the sponge, as herein specified.

6. In a device for applying adhesive tape-measures to cloth for the purpose of measuring the same and indicating its length, the combination of one or more tape-measure compartments, a sponge-compartment in front thereof, a cover hinged at the rear edge of the former and extended over the sponge, and a pair of spring-catches arranged at the front edge of the tape-measure compartments, as herein specified.

7. In a device for applying adhesive tape-measures to cloth for the purpose of measuring the same and indicating its length, the combination of a sponge-compartment, an elastic sponge projecting from said compartment, and a cover extending over said sponge so as to hold the coated side of an adhesive tape-measure in contact therewith to moisten said coated side and give the tape-measure the requisite tension, as herein set forth.

CHARLES E. HAMMOND.

Witnesses:

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GEO. H. CORTELYON.