May 8, 1923. 1,454,285

G. C. HOSCH

FABRIC MEASURING AND COST COMPUTING MACHINE

Filed May 3, 1920 2 Sheets-Sheet 1

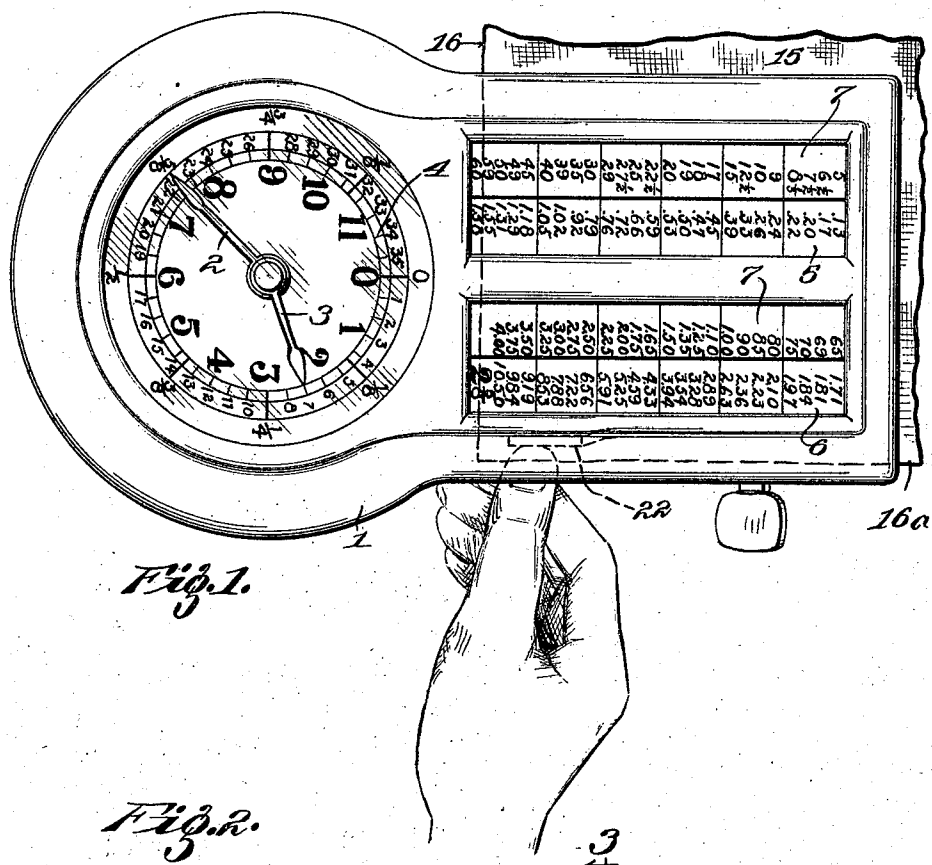


Fig. 1.

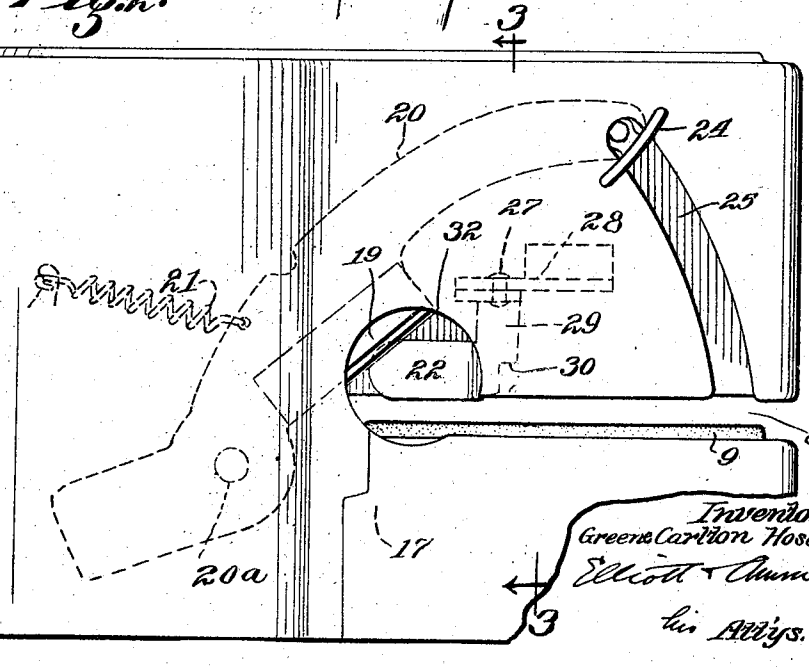


Fig. 2.

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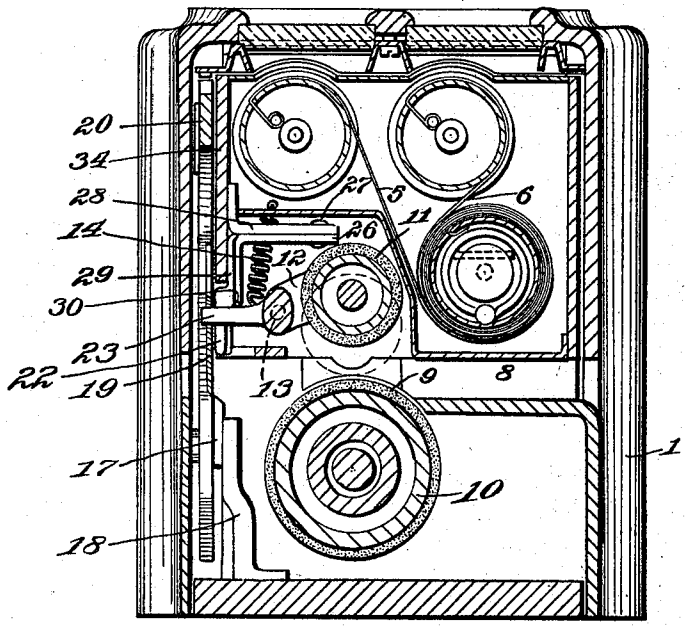


Fig. 3.

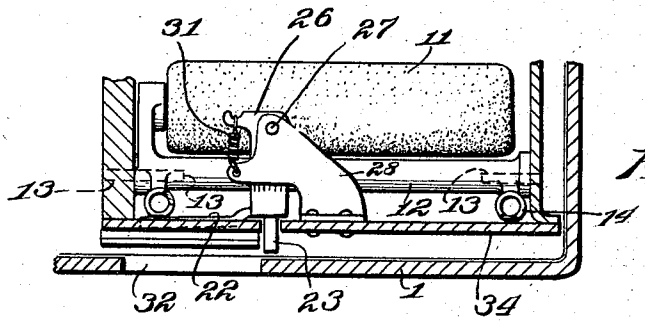
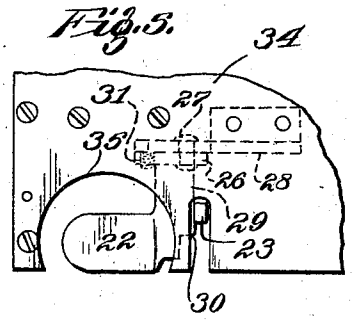


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

GREENE CARLTON HOSCH, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE MEASUREGRAPH COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF DELAWARE.

FABRIC MEASURING AND COST COMPUTING MACHINE.

Application filed May 3, 1920. Serial No. 378,350.

To all whom it may concern:

Be it known that I, GREENE CARLTON HOSCH, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented new and useful Improvements in Fabric Measuring and Cost Computing Machines, of which the following is a specification.

This invention relates to a fabric measuring or cost computing machine. These machines usually comprise a casing having a horizontal gap in which the measuring roller and presser roller co-operate. The measuring roller drives indicating mechanism that indicates the length of the fabric measured. Before commencing the measuring operation the forward end of the fabric should be substantially aligned with the marking means or knife that may be employed for notching the edge of the fabric at the point where a measured piece is to be cut off. If the forward edge of the fabric is not properly aligned with the marking means, a considerable inaccuracy may result in the measurement taken. While such an inaccuracy of measurement is always important, it is particularly important where a short length of fabric is to be measured, such as an eighth, or quarter of a yard. Before introducing the fabric into such a machine the presser roller is usually latched in an elevated position. By a sidewise movement of the fabric, the operator then introduces it into the gap. After the fabric is in position the presser roller is released to permit it to come down upon the fabric to press it against the measuring roller. As these machines have been constructed in the past, it is not absolutely necessary for the operator to introduce the fabric to the full depth of the gap, as a result of which, frequently only a partial insertion of the fabric is made before the presser roller is allowed to descend; the fabric must then be worked backward and forward and pulled in an inclined direction toward the inner end of the gap so as to bring its longitudinal edge to the inner end of the gap before beginning the measurement. This causes a waste of time and frequently results in an inaccurate measurement of the fabric.

The general object of the present invention is to produce a machine of this kind which is so constructed that the operator of the machine will naturally effect a complete insertion of the fabric in the gap before releasing the presser roller.

Further objects of the invention will appear hereinafter.

The invention consists in the novel features, and in the general combination of parts to be particularly described hereinafter, all of which contribute to produce a simple and efficient fabric measuring and cost computing machine. A preferred embodiment of my invention will be particularly described in the following specification, while the broad scope of my invention will be pointed out in the appended claims.

In the drawing,

Figure 1 is a plan of the machine embodying this invention and illustrating its mode of operation;

Figure 2 is a side elevation of the machine partially broken away;

Figure 3 is a vertical section through the machine taken about on the line 3—3 of Figure 2;

Figure 4 is a horizontal section taken about in the plane of the presser roller; and

Figure 5 is a side elevation showing a portion of an inner frame plate and further illustrating the actuating part which controls the presser roller.

The machine comprises a casing 1 which carries indicating mechanism including hands 2 and 3 rotating on a dial 4 which indicates yards and yard fractions. The indicating mechanism may also include charts 5 and 6 (see Figs. 1 and 3), which co-operate with fixed scales 7 to indicate the charges to be made for the amount of fabric measured. The casing is formed with a horizontal gap 8 through which the fabric to be measured passes; in doing so the fabric lies against the upper face 9 of a measuring roller 10 (see Fig. 3) which lies in the gap, and co-operating with the measuring roller there is provided a presser roller 11 which is mounted upon a movable frame such as a rocking frame 12, the ends of which are mounted on pivots 13 (see Fig. 4). This presser roller frame or rocking frame 12 carries the presser roller 11 and is provided with springs 14 which tend to pull the press-

er roller toward the measuring roller. I provide means for controlling the presser roller which is located near the inner end of the gap 8 and adjacent the inner end of the measuring roller 10, substantially in alignment with the marking means or knife, by means of which the fabric 15 is marked at its edge 16 to indicate the point where the measured piece is to be cut.

Before proceeding to a description of the details of the presser roller, I shall describe the marking means. This means preferably comprises a fixed blade 17 (see Fig. 3), which is secured on a suitable bracket 18; co-operating with this blade there is provided a movable blade 19 which may be carried on a knife lever 20, (see Fig. 2). This lever 20 is normally held in an elevated position by a spring 21, in which position the edge of the movable blade 19 forms an angle with the fixed blade 17. I provide means for controlling the presser roller, having an actuating part 22 which is disposed in the angle between the blades 17 and 19 and substantially in the same plane with them, but on the inner side this controlling means may control the presser roller in any desired manner; in the present instance however, it merely operates as a release device to permit the presser roller to descend upon the measuring roller and I utilize the lever 20 to effect the movement of the presser roller away from the measuring roller. For this purpose the presser roller frame 12 may be provided with means, such as an arm 23 which projects into the path of the knife lever 20. When the knife lever 20 rotates on the pivot 20^a by means of a thumb plate 24 (see Fig. 2) which runs in an arcuate slot 25 in the casing, it engages the arm 23 and rocks the presser roller frame in a direction to lift the presser roller 11 away from the measuring roller (see Fig. 3). I provide means which operates to hold the presser roller away from the measuring roller when it has been lifted in this way. This means is preferably in the form of a latching device (see Figs. 3 and 4) including a latch 26 attached at a pivot 27 to a bracket 28 so that the latch will swing in a horizontal direction. This latch has a downward extension 29 which is provided near its lower end with a notch or shoulder 30. The latch 26 and the bracket 28 are connected by a spring 31 (see Fig. 4) which pulls the latch against the side of the arm 23. Now, when the arm 23 is forced down by the lever 20, the spring 31 eventually will pull the latch over so that the shoulder 30 will engage over the arm 23 (see Fig. 3), and hold the presser roller elevated. The side of the casing 1 is provided with a large opening 32 through which the thumb plate or actuating part 22 is accessible from the exterior. From an inspection of Figure 2, it will be evident that this actuating part is formed on the latch, and lies in the angle between the blades 17 and 19 and also near the inner end of the gap 8. When the fabric 15 is to be introduced into the machine the presser roller is latched in its elevated position (see Fig. 3) and the fabric 15 is then introduced or inserted into the gap 8 by a sidewise movement of the fabric; that is to say, the fabric is moved laterally until the edge 16 lies adjacent to the inner end of the gap 8. In doing this, the operator seizes with his right hand the forward edge 16^a of the fabric near the corner where its edge intersects the longitudinal edge. The forward edge 16^a at this time, lies substantially in the plane of the marking means or blade 19 and the thumb of the operator's right hand will then be directly opposite to the actuating part or thumb plate 22. Now, by a slight inward movement of the thumb, the thumb plate 22 will be actuated (see Fig. 1) and this will cause the release of the presser roller and permit it to descend upon the measuring roller. The measuring operation then proceeds.

Figure 5 shows a portion of a frame plate 34 which is located directly behind the forward wall of the casing. This frame plate has a substantially circular recess or slot 35 corresponding to the substantially circular slot 32 in the forward wall of the casing.

In the operation of the machine the presser roller 11 is held in its elevated position as indicated in Figure 3, and the operator then introduces the longitudinal edge 16 of the fabric 15 into the gap 8 and by a lateral movement of the fabric brings the edge 16 to a position near the inner end of the gap and near the inner end of the measuring roller. The forward edge 16^a of the fabric is then brought into substantial alignment with the plane of the blade 19. In order to accomplish this insertion of the fabric, one hand of the operator should seize the fabric near the corner formed by the intersection of the two edges 16 and 16^a (see Fig. 1), and when the two edges 16, 16^a are properly aligned, the thumb of the operator will lie very near to the outer face of the thumb plate 22 (see Fig. 1). When the fabric has been positioned in this way, the operator presses on the thumb plate and the presser roller then descends upon the measuring roller; then the operator, with his hand in the same position exerts a pull upon the fabric so as to pull it through the gap, thereby producing the measuring movement in the fabric, the length of which is indicated by the hands or pointers 2 and 3, the value of the fabric measured being indicated on the charts 5 and 6.

It is understood that the embodiment of the invention described herein is only one of the many embodiments my invention may

take, and I do not wish to be limited in the practice of my invention nor in my claims, to the particular embodiment set forth.

What I claim is:

1. In a fabric measuring machine, the combination of a measuring roller, a presser roller to co-operate therewith and mounted to move toward or from the measuring roller, marking means for indicating the point where the fabric is to be cut off, holding means co-operating with the presser roller to hold the same away from the measuring roller to permit the insertion of the fabric to be measured between the rollers and having an actuating part for controlling the presser roller located substantially in alignment with the inner end of the measuring roller and in a vertical plane adjacent to the marking means.

2. In a machine of the kind described, the combination of a casing having a gap therein through which the fabric to be measured passes, a measuring roller mounted with its face disposed at said gap, a presser roller mounted to co-operate with the measuring roller and mounted to move toward or from the measuring roller, marking means including a fixed member and a movable member, means actuated by the movable member for raising the presser roller, a latch co-operating therewith to latch the presser roller away from the measuring roller, affording means for releasing the presser roller, and having an actuating part located adjacent the inner end of the gap and substantially in the plane of the marking means.

3. In a machine of the kind described, the combination of a casing having a gap therein through which the fabric to be measured passes, a measuring roller mounted with its face disposed at said gap, a presser roller mounted to co-operate with the measuring roller, a presser roller frame carrying the same and mounted so as to enable the presser roller to be moved from or against the measuring roller, marking means including a marking lever, said presser roller frame having an arm engaged by the marking lever to raise the presser roller, a latch co-operating with said arm to hold the presser roller raised and away from the measuring roller and having an actuating lever lying between the the arm and the marking means and located substantially in alignment with the inner end of the measuring roller.

In testimony whereof, I have hereunto set my hand.

GREENE CARLTON HOSCH.