O. RUHLIN.

CLOTH MEASURING MACHINE.

APPLICATION FILED NOV. 26, 1909.

959,074. **Patented May 24, 1910.**

2 SHEETS—SHEET 1.

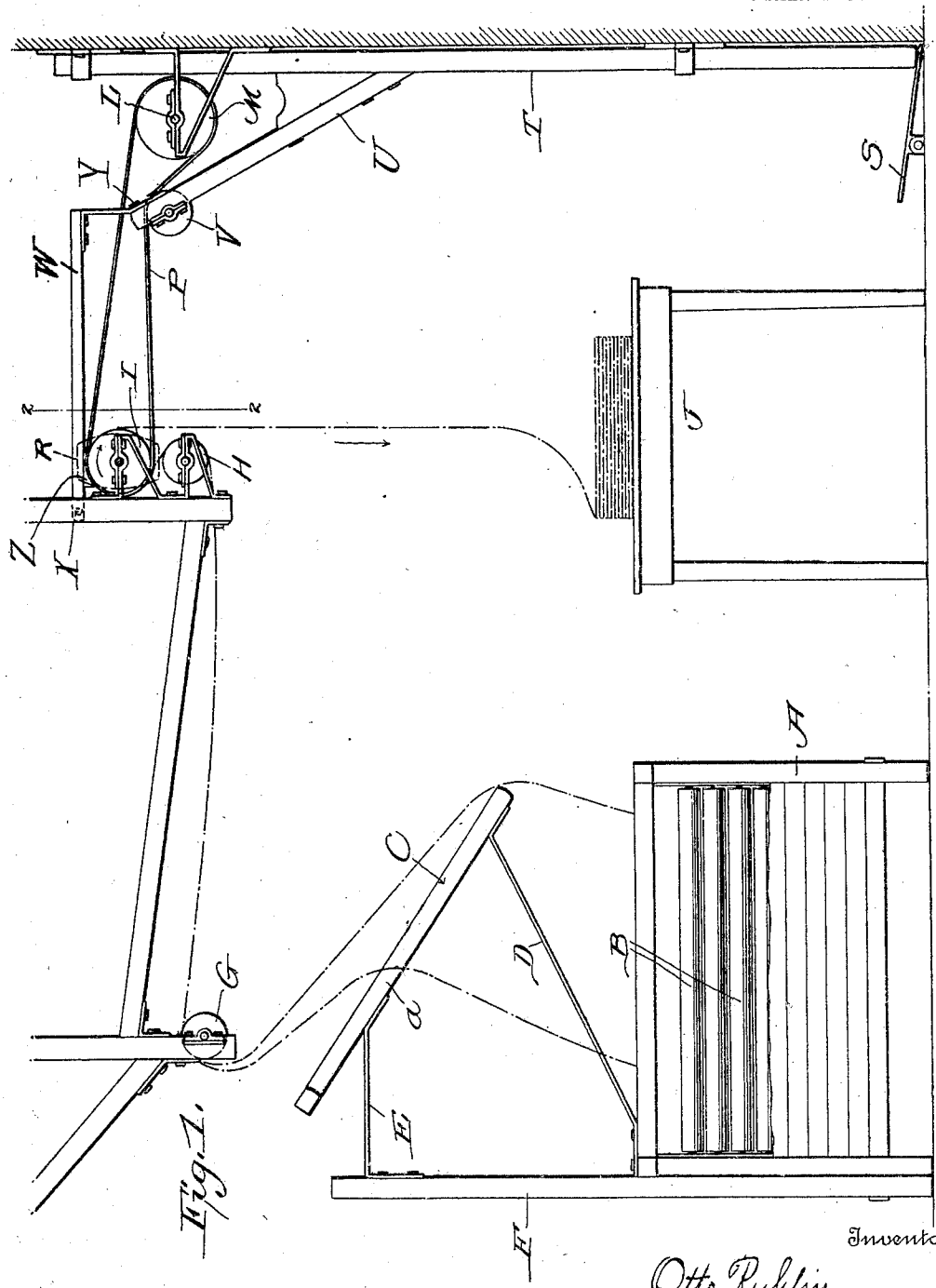

Fig. 1.

Witnesses

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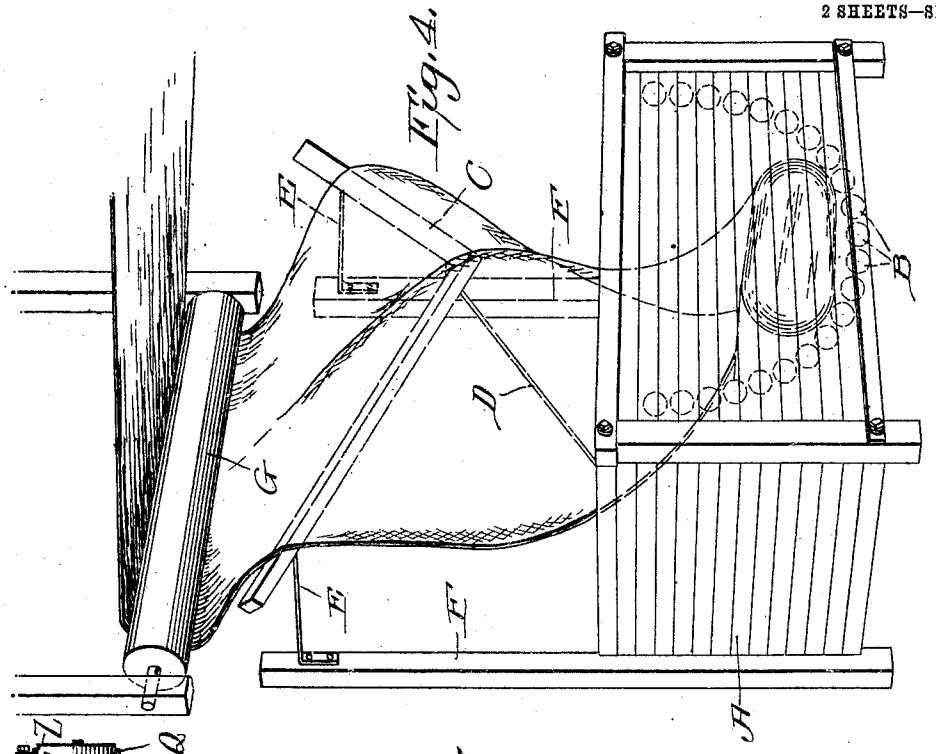

Fig. 4.

Fig. 2.

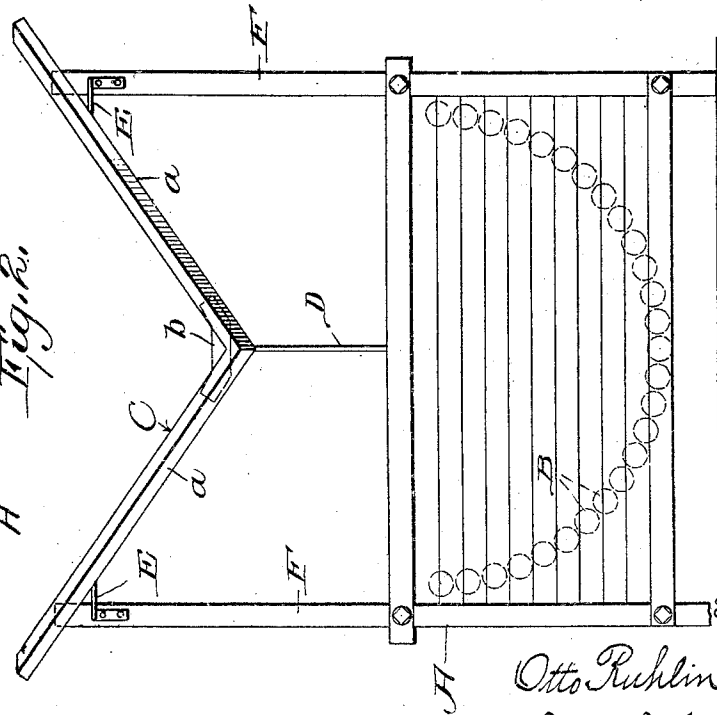

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

OTTO RUHLIN, OF NORTH ANDOVER, MASSACHUSETTS.

CLOTH-MEASURING MACHINE.

959,074. Specification of Letters Patent. Patented May 24, 1910.

Application filed November 26, 1909. Serial No. 529,926.

To all whom it may concern:

Be it known that I, OTTO RUHLIN, citizen of the United States, residing at North Andover, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Cloth-Measuring Machines, of which the following is a specification.

My invention pertains to cloth-measuring machines.

One object of the invention is to provide a machine for opening or unfolding folded cloth and measuring the cloth and passing the same before the eye of an inspector so that it can be conveniently and thoroughly scrutinized or examined.

Another object of the invention is the provision in combination with means for holding a bolt of cloth that is folded longitudinally upon itself, and means for drawing the cloth off the bolt, of means for unfolding the cloth incidental to its passage so that the cloth can be readily and thoroughly examined throughout its width.

Another object is the provision of means through the medium of which the party inspecting the cloth may start the feed of the same and as readily bring about a cessation of the feed when necessity demands.

Other advantageous characteristics of the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a side elevation, partly broken away, of the machine constituting the best practical embodiment of my invention that I have as yet devised. Fig. 2 is a detail transverse section taken in the plane indicated by the line 2—2 of Fig. 1, looking in the direction of the arrow, and showing a portion of the cloth broken away to disclose the sand or friction roller through the medium of which motion is transmitted to the cloth. Fig. 3 is a view taken at a right angle to Fig. 1 and showing the box in which the bolt of folded cloth is placed, and the unfolder disposed above the said box. Fig. 4 is a perspective view illustrative of the manner in which the cloth that is folded longitudinally upon itself is unfolded.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is the holder for the bolt of cloth which is peculiar in that it is provided with a bottom made up of a plurality of closely arranged rollers B, mounted in such manner that they are adapted to freely turn. The bolt of cloth that is folded longitudinally upon itself is placed in the holder and on the rollers B, and the office of the rollers is to keep the piece of cloth from rotating as the cloth is being unwound, and also to prevent frictional wear of or injury to the cloth.

Above the holder A is disposed the unfolder C which is of general V-shape, as illustrated *i. e.* has an apex and sides that diverge therefrom. In the present embodiment of my invention, the said unfolder is formed by two bars *a* which describe an obtuse angle, and are fixedly connected together at their meeting ends. Between the forward portions of the said bars a brace *b* is interposed, and to said brace *b* is connected a support D that is also fixedly connected to the holder A. It will also be noted by comparison of Figs. 1, 3 and 4, that the unfolder C is provided with upper supports E extended between and fixed to the upper portions of the bars *a* and uprights F fixed to and rising from the holder A. From this it follows that the unfolder C is maintained above the holder A in such manner as to enable the said unfolder to efficiently serve the purpose for which it is designed.

From the bolt in the holder A, the folded cloth passes over the unfolder C by which the cloth is unfolded to its full width, and from the said unfolder C the unfolded cloth passes to and in rear of and over a suitably supported roller G, after which the cloth is carried forward and under a suitably supported roller H. From the latter roller the cloth passes rearwardly and back of and over a roller I, the surface of which is adapted to take hold of and transmit motion to the cloth. From the roller I the cloth is preferably permitted to drop upon a table J, and during the downward passage of the cloth to the table J, the inspector may obviously examine the cloth with his hands and eyes in a thorough manner. As the cloth drops it may obviously be laid in folds on the table J by the inspector. The roller I may have its surface provided with a friction-creating material, indicated by K in Fig. 2, and the said friction-creating material may be sand or any other means suited to the purpose stated.

L is a shaft designed to be constantly rotated by means that I have deemed it unnecessary to illustrate. The said shaft L is provided with a pulley M that is connected by a band P with a pulley Q on the shaft of the roller I, this in order to rotate the roller I in the direction indicated by arrow and enable the same to feed the cloth to the table as before described.

R is a measuring device that is actuated by rotation of the roller I, and is designed to register the length of cloth that passes the said roller I in the manner described. The said measuring device may be of any construction suitable to the purpose, and inasmuch as the said construction forms no part of my present invention I have regarded it as unnecessary to illustrate and describe the same in detail.

S is a pedal lever mounted by preference at a point adjacent the table J.

T is a suitably guided and vertically movable bar having one of its ends bearing on the lever S. U is a bracket carried by said bar T and carrying in turn a pulley V for bearing against the lower stretch of the band P, and W is an arm pivoted at X to the support and connected at Y to the bracket U and carrying a brake shoe Z positioned above the pulley Q and the band P thereon. When the bar T is raised through the medium of the pedal lever S, the brake shoe will be raised from the band P and at the same time through the medium of the pulley V the band P will be rendered sufficiently taut to transmit motion from the pulley M to the pulley Q for the purpose of rotating the roller I and drawing the cloth out of the holder A and over the unfolder C and passing the cloth to the table J for the convenient inspection thereof in the manner described. On the other hand when the pedal lever S is relieved of pressure, the bar T and the parts connected therewith will gravitate, and consequently the pulley V will render the band P slack while the brake shoe Z, by bearing down on the band, will stop the said band and the roller I and will also stop the feed or movement of the cloth. Thus in the event of a portion of cloth that is suspicious in appearance being presented to the eye of the inspector, he is enabled to conveniently stop the feed of the cloth and scrutinize the said portion of cloth as leisurely and carefully as he desires.

While I have shown and described one form of my invention, it is to be understood that I am not limited to the details or the form or relative arrangement of parts disclosed, but that extensive modifications may be made therein, without departing from the spirit thereof.

Having described my invention, what I claim and desire to secure by Letters-Patent is:

1. In a machine of the class described, the combination of a roller having friction-creating means on its perimeter, a pulley fixed to said roller, a drive-shaft having fixed thereon a pulley, a band connecting the two pulleys, a vertically movable bar carrying a bracket on which is a pulley for engaging the lower stretch of the band, a pedal lever having one arm disposed below the said vertically movable bar, and a pivoted arm carrying a brake shoe that is disposed above the first-named pulley and the band thereon; the said arm being connected and movable with the said bracket to relieve the pressure of the band against the pulley when the pulley on the bracket is pressed upward against the lower stretch of the band, and to press the band against the first-named pulley when the pulley on the bracket is moved downward.

2. In a machine of the class described, the combination of a holder having a bottom formed by a plurality of rollers and adapted to support a bolt of cloth that is folded longitudinally upon itself, an unfolder overhanging the holder, a guide roller disposed above the rear portion of the unfolder, a guide roller located forward of the first-named roller, a roller located above the second roller and having friction-creating means on its perimeter, means for receiving cloth from the third-named roller, a measuring device actuated by rotation of said third named roller, a band pulley fixed to the third-named roller, a drive-shaft provided with a band pulley, a band connecting said pulleys, a vertically movable bar carrying a bracket, a pulley on said bracket for engaging the lower stretch of the band, a pivoted arm connected with the bracket and provided with a brake shoe, and a pedal lever having one arm disposed under the vertically movable bar.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OTTO RUHLIN.

Witnesses:
CHARLES P. FEARING,
JAMES L. FRYE.