July 24, 1923.

1,462,871

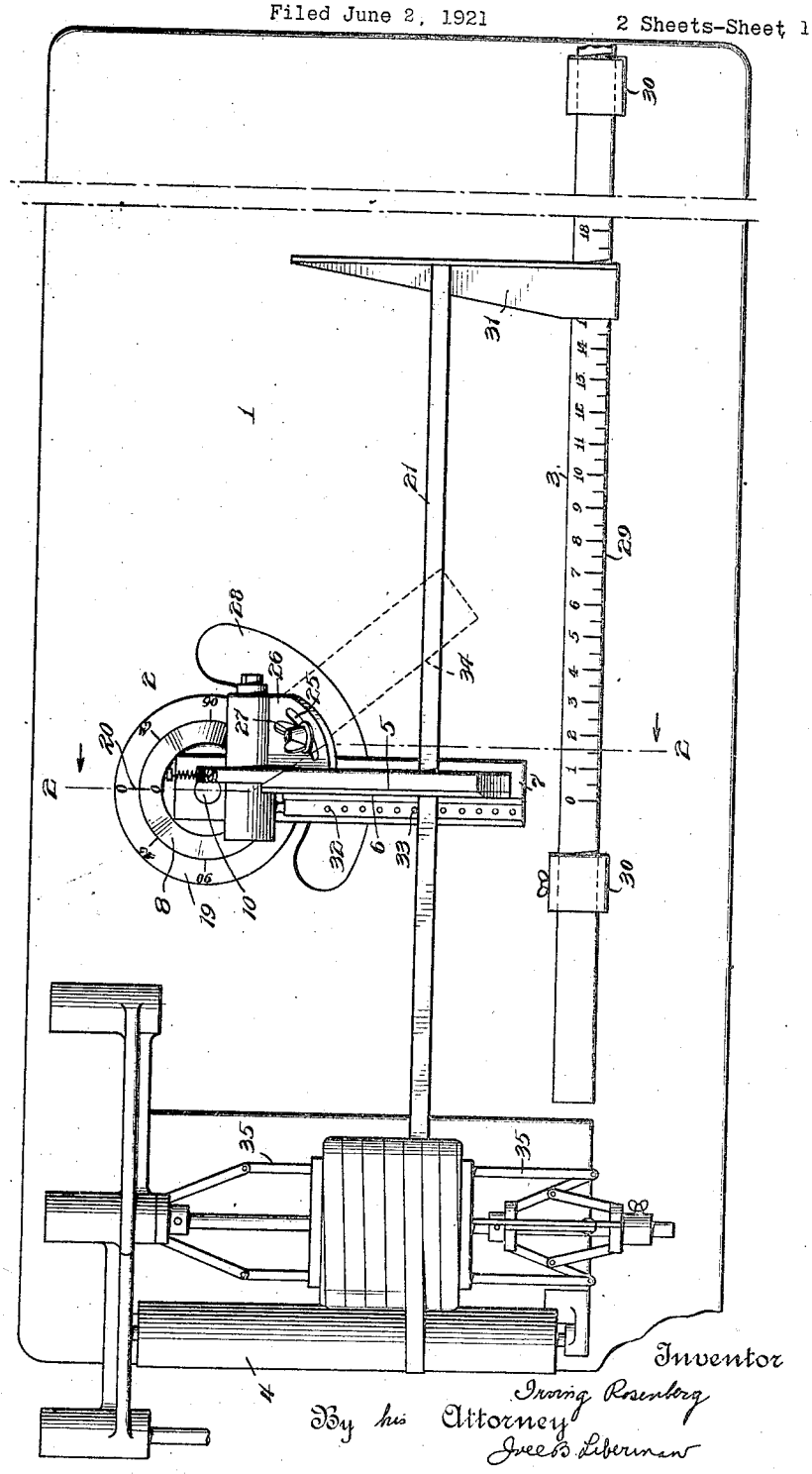
I. ROSENBERG

MEASURING AND CUTTING DEVICE

Filed June 2, 1921

2 Sheets-Sheet 1

Fig.1.



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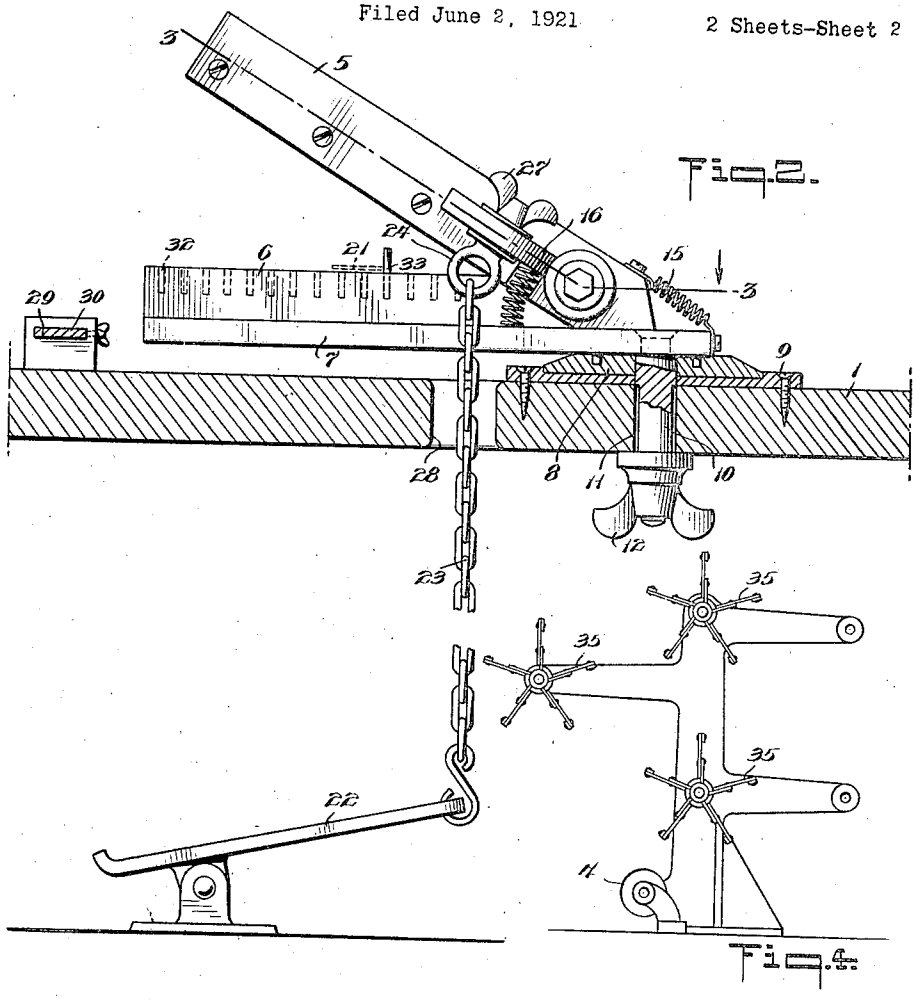


Fig. 2.

Fig. 4.

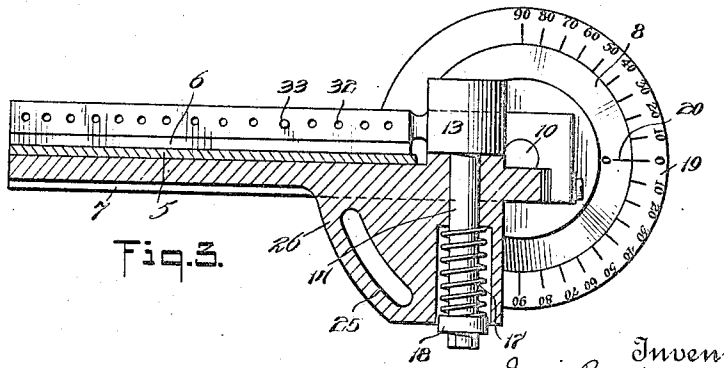


Fig. 3.

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UNITED STATES PATENT OFFICE.

IRVING ROSENBERG, OF EAST ORANGE, NEW JERSEY.

MEASURING AND CUTTING DEVICE.

Application filed June 2, 1921. Serial No. 474,558.

To all whom it may concern:

Be it known that I, IRVING ROSENBERG, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Measuring and Cutting Devices, of which the following is a specification.

This invention relates generally to measuring devices for ribbon, lace or the like and has for its main feature and object a device whereby strips of flexible material may be cut off into measured lengths and in which the cutting operation may be effected at any desired angle with respect to the fabric lengths.

In the accompanying drawings the invention is shown in a concrete and preferred form in which—

Fig. 1 is a plan view of a device embodying the invention.

Fig. 2 is a vertical sectional view on line 2—2 of Fig. 1.

Fig. 3 is a sectional view on irregular line 3—3 of Fig. 2.

Fig. 4 is a view in side elevation of a plurality of reels from which material may be simultaneously drawn for measuring and cutting.

1 indicates a supporting table, carrying the parts comprising the device consisting in general of a cutting device 2, measuring device 3, and a guide roller 4.

The measuring device comprises a pair of cutting knives 5 and 6, the latter being stationary and the former movable with respect to the former. The stationary member is supported on a bracket 7 that in turn is mounted to swivel in any suitable manner, such as by being supported on a rotatable member 8 that turns in a guide 9 stationary on the frame work. Said bracket 7 is further provided with a swivel member 10 in the form of a bolt projecting through an opening 11 in the supporting table, said bolt being threaded at its lower end to receive clamping nut 12. Mounted on bracket 7 is a bearing 13 in which is supported spindle 14 that carries movable knife member 5. Normally this movable knife member is held in an elevated position as shown in Fig. 2 by means of springs 15 and 16, and the two knife members are held in close but yielding engagement by means of spring 17 surrounding spindle 14 and pressing the movable knife member toward the stationary knife member. The tension of spring 17 can be adjusted by means of nut 18. A dial is preferably arranged on member 8 and guide 9, and, as here shown, this dial takes the form of a series of graduations 19 on guide 9 and a pointer on member 8. These graduations indicate different angles and it will be understood that by turning member 8 in guide 9 that two cutting members may be made to occupy different angular relations with respect to a line passing longitudinally through the material 21 to be cut. This angular adjustment is obtained by loosening nut 12 and turning member 8 in guide 9 and then securing bolt 12 in position again. Actuation of the cutting mechanism to effect severing of material is in this case obtained by means of foot pedal 22 connected by a flexible connection 23 to a ring member 24 adjustably mounted in the curved slot 25 of extension 26 of the movable cutting member, said ring being provided with a stem on which fits the nut 27. The adjustment of the ring member is provided for the purpose of compensating for adjustments of member 8 in guide 9, and for this purpose also slot 28, through which flexible connection 23 passes, is of such length and shape, preferably curved, as to admit of said flexible connection passing therethrough in any of its adjusted positions.

Extending parallel to the length of material to be severed is the measuring device 3 consisting of a longitudinally adjustable scale member 29, slidably mounted in supports 30, and which scale member in turn has a sliding guide member 31 mounted thereon.

If it is desired to sever a strip of material at right angles to the length of the material 21, member 8 is positioned as shown in Figs. 2 and 4, that is to say, pointer 20 is brought into line with the zero mark on scale 19. It will be observed that a line drawn between pointer 20 and the zero mark scale 19 passes through the cutting plane of the knives, and that to effect proper measuring of a length of material, the zero mark of scale 29 is brought into the plane of a line passing through the zero marks of 20 and 19. The operator will now pass a length of material around guide roller 4 and placing the end thereof upon guide 31, will draw said guide the required distance along scale 29, thus measuring the length of material

to be severed and will then depress pedal 22 thereby severing the measured strip of material. To assist in keeping the material parallel to scale 29, regardless of irregularity in the unwinding action of the material from the reel, bracket 7 is provided with a series of perforations 32, into any one of which a pin 33 may be inserted, said pin acting as a guide in the manner shown. Of course, the operator may also allow material 21 to slip through his left hand which may be used to hold the material against said pin 33, the right hand of the operator being occupied in holding the end of the material to guide 31 and in sliding said guide on scale 29.

If it is desired to cut the material on the bias, the cutting mechanism may be angularly adjusted to any suitable position desired, such as indicated in dotted lines in Fig. 1 and scale 29 will then be adjusted in its supports by sliding it to a position where its zero mark will be opposite to a point of intersection of the cutting means with the material, such as the one indicated at 34 in Fig. 1, thereby insuring the cutting of measured lengths on the bias.

One of the advantages of the device resides in the fact that a series of reels, such as 35, one of which is shown in Fig. 1, and several of which are shown in Fig. 4, may be simultaneously used to support spools of material to be severed, in which event the material from all the spools is led over guide roller 4 in superposed relation so that several thicknesses of material may be measured and cut at the same time.

The particular construction of reels employed is not covered in this application but is the subject matter of an independent application filed simultaneously herewith.

It should be noted that the pressure necessary to operate the machine is applied by the foot leaving the hands entirely free.

I claim:

1. A combined measuring and cutting device comprising: cutting means, a measuring scale, and a guide, movable with respect to said measuring scale, for passing a length of material through the plane of the cutting means.

2. A combined measuring and cutting device comprising a pair of cutting members mounted to swivel to positions of different angularity with respect to flexible material to be severed, an adjustable scale member, and an adjustable guide, movable with respect to said scale member, to measure off the length of material to be severed by the cutting members.

3. A cutting mechanism comprising: a pair of knife members, a bracket for supporting said knife members, a support on which said bracket is mounted to swivel, a pivotal connection on which one of said knives is mounted, means for normally holding the pivotally supported knife in an open position, and means for depressing said pivotally supported knife into engagement with its companion, including an adjustable member on the pivotally supported knife, an actuating member beneath the support, and a flexible connection passing through said support between the adjustable member aforesaid and the actuating member, said support having an elongated slot through which said flexible connection passes.

4. A combined measuring and cutting device comprising: cutting means adjustably mounted to assume various angular positions in one plane for severing material at various predetermined angles, and adjustable means for predetermining the position of the material to be cut relative to the cutting means.

5. A combined measuring and cutting device comprising: cutting means adjustably mounted to assume various angular positions in one plane for severing material at various predetermined angles, and an adjustable measuring scale whose zero may be brought adjacent the cutting means.

6. A combined measuring and cutting device comprising: cutting means adjustably mounted to assume various angular positions in one plane for severing material at various predetermined angles, an adjustable measuring scale whose zero may be brought adjacent the cutting means, and a guide slidably mounted on the measuring scale.

Signed at New York city, in the county of New York and State of New York this first day of June, 1921.

IRVING ROSENBERG.