No. 895,547. PATENTED AUG. 11, 1908.

C. B. FERRO & A. K. HATTEBERG.

AUTOMATIC RECORDING AND MEASURING MACHINE FOR CLOTH, LACES, &c.

APPLICATION FILED JUNE 25, 1907.

2 SHEETS—SHEET 1.

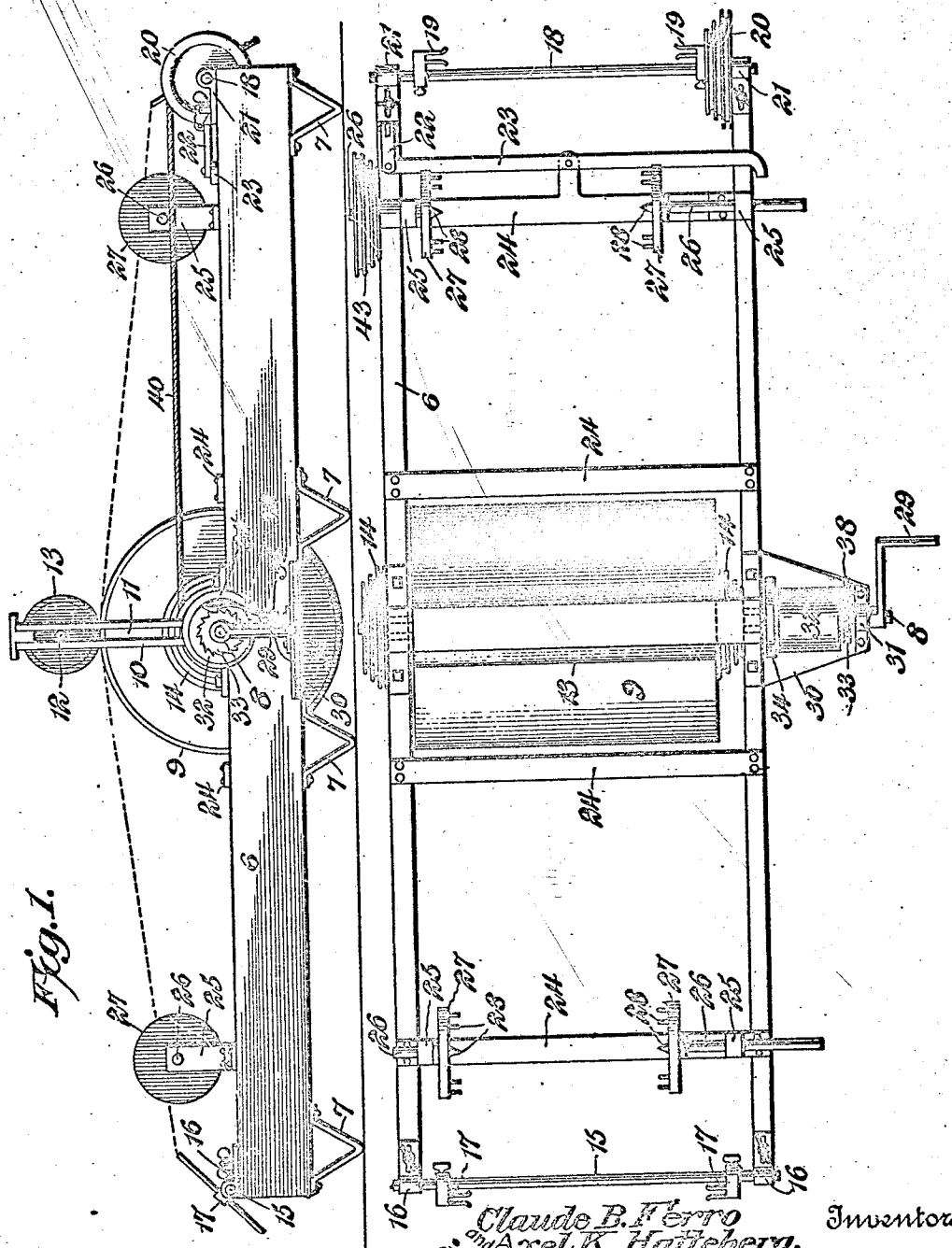


Fig. 1.

Fig. 2.

Witnesses
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Fig. 3.

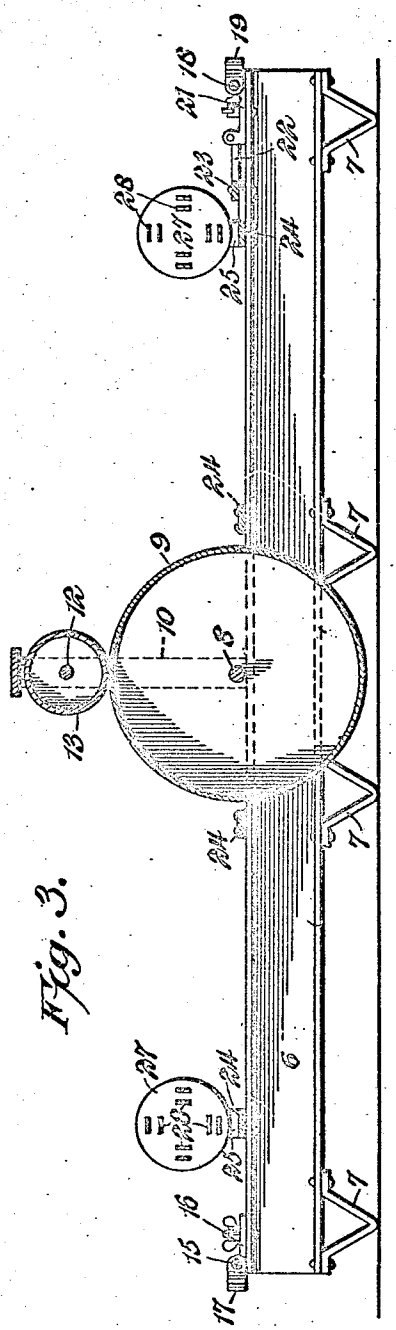


Fig. 5.

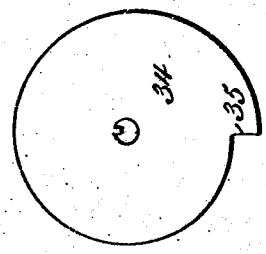
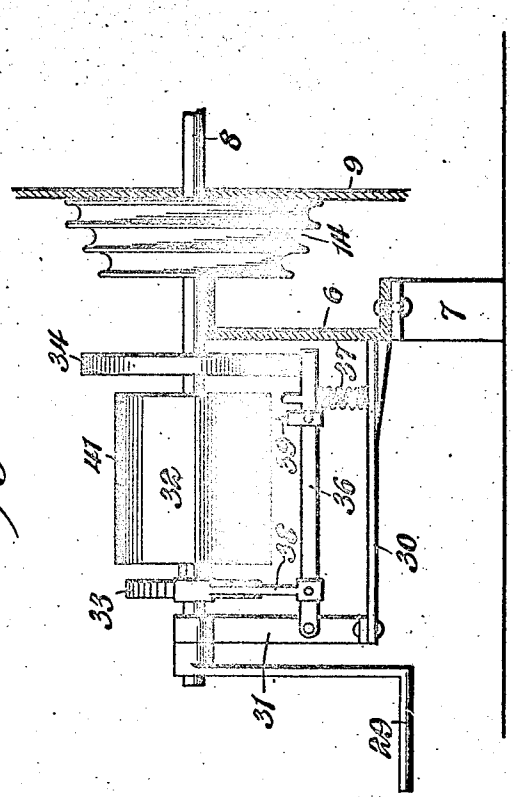


Fig. 4.



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UNITED STATES PATENT OFFICE.

CLAUDE B. FERRO AND AXEL K. HATTEBERG, OF NORTH BEND, OREGON.

AUTOMATIC RECORDING AND MEASURING MACHINE FOR CLOTH, LACES, &c.

No. 895,547. Specification of Letters Patent. Patented Aug. 11, 1908.

Application filed June 25, 1907. Serial No. 380,758.

To all whom it may concern:

Be it known that we, CLAUDE B. FERRO and AXEL K. HATTEBERG, citizens of the United States, residing at North Bend, in the county of Coos and State of Oregon, have invented a new and useful Automatic Recording and Measuring Machine for Cloth, Laces, &c., of which the following is a specification.

This invention relates to means for measuring cloth in bolts, spools of ribbon, cards of lace, and the like, and the primary object is to provide novel means of a simple nature that will accurately measure quantities of such material with speed, and to provide effective recording mechanism that will clearly show the amounts measured.

An embodiment of the invention that is at present considered the preferable one is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of the machine. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional view. Fig. 4 is a detail cross sectional view on an enlarged scale through the registering mechanism. Fig. 5 is a face view of the cam employed.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a suitable frame 6 is provided, mounted on legs 7 and having a shaft 8 journaled substantially midway of its length. On this shaft is mounted a measuring drum 9 having a predetermined diameter, preferably one yard. Standards 10 are located on the frame, and have guideways 11 in which are mounted the gudgeons 12 of a presser roller 13 that rests upon the upper surface of the drum, as clearly shown in Figs. 1 and 3. The shaft 8 is provided with sets of pulleys 14 located at the ends of the drum.

A shaft 15 is detachably journaled in adjustable bearings 16 at one end of the frame, and carries oppositely disposed adjustable and detachable clips 17. A corresponding shaft 18 is in like manner journaled at the opposite end of the frame, and has corresponding clips 19. This latter shaft is provided with a series of pulleys 20, which can be belted to the opposite set of pulleys 14 on the shaft 8. One of the bearings 21 of the shaft 18 is slidable, and has a link connection 22 with a lever 23 disposed across the frame. Cross bars 24 connect the side bars of the frame between the shafts 15 and 18 and carry boxes 25 in which are journaled spindles 26 provided at their inner ends with heads 27. These heads have sets of spurs 28.

The shaft 8 at one end projects a considerable distance outside the frame, and has a handle crank 29 attached thereto. A bracket 30 serves to support the projecting end of the shaft, and loosely journaled on said shaft between the upright arm 31 of the bracket and the adjacent side bar of the frame is a rotatable platen 32. A ratchet wheel 33 is fixed to this platen. A cam 34 is fixed upon the shaft 8, and is located between the inner end of the platen and the adjacent end of the drum 9. This cam has a sharp drop shoulder 35, shown more particularly in Fig. 5. A swinging arm 36, pivoted upon the upright arm 31 of the bracket 30, has its free end operating against the periphery of the cam 34, said arm being urged upwardly by a suitable spring 37. The arm is provided with a dog 38 that operates against the teeth of the ratchet wheel 33. A marking device 39 is also carried by the arm 36, and is thus movable toward and from the platen.

In using the machine, a card of lace or other material is placed in the clip 17 with the shaft 15 disposed between said card and the lace or other material surrounding it. The material is then passed between the drum 9 and roller 13, as shown in Fig. 1, and its end is suitably attached to a card placed in the clips 19. A belt, as 40, connects certain of the pulleys 14 and 20, and consequently upon the operation of the crank 29 and shaft 8, not only will the drum 9 be revolved, but the card 19 will in like manner be rotated. The material is thus passed over the drum and upon each rotation thereof, the cam 34 will force the arm 36 downwardly. This will cause the dog 38 to engage one of the teeth of the ratchet wheel 33, and effect the partial rotation of the platen. Paper 41 or other material is placed upon this drum. When, however, the drop shoulder 35 of the cam passes over the arm 36, the spring 37 will react, and consequently the marking device 39 will be forced upwardly into engagement with the paper, making a mark thereon. At the same time, the dog 38 will ride over the teeth of the ratchet wheel, and no movement of the platen will take place during the marking operation. It will thus be evident for every yard of cloth or other material passed over the drum, a mark will be

made upon the paper. As the bulk of the material on the receiving card increases, its speed will of course be increased, but the roller 13 will prevent slipping of the material over the drum, the belt being such as to permit the necessary relative movement between said drum and card, while maintaining the necessary rotation of the card.

In case solid spools of ribbon and the like are to be measured, a full spool is placed between one of the sets of heads 27 and engaged by the spurs 28. An empty spool is in like manner placed between the heads of the other set, and one of the spindles of said latter set is provided with a set of pulleys 43 around which a belt can be passed, said belt passing about a corresponding set of pulleys 14 on the shaft 8.

It will thus be evident that a simple machine is provided, which will accurately measure goods of various characters mounted on different kinds of supports, and the measurements will be properly recorded. The adjustment of the clips 17 permits them to be engaged with cards of different lengths and the adjustment of the heads 27 in like manner permits them to be engaged with spools and the like of different lengths. The lever 23 and the adjustable bearing 21 permit the change of relation of the shaft 18 in order that the goods may be made to wind properly upon a card carried by said shaft.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is:—

1. In mechanism of the character described, the combination with a driving member, of a record sheet carrier mounted on the driving member, said carrier and member being relatively movable, and means for transmitting motion from the driving member to the record sheet carrier.

2. In mechanism of the character described, the combination with a driving member, of a record sheet carrier mounted on the driving member, said carrier and member being relatively movable, and means operated by the driving member for imparting intermittent movement to the record sheet carrier.

3. In mechanism of the character described, the combination with a driving shaft, of a record carrying drum rotatably mounted thereon, and means operated by the driving member for imparting intermittent movement to the drum.

4. In mechanism of the character described, the combination with a driving shaft, of a record carrier rotatably mounted thereon, a ratchet wheel for the carrier, a cam on the shaft, and a dog operating on the ratchet wheel and operated by the cam.

5. In mechanism of the character described, the combination with a rotary record carrier, of an actuating arm, a marking device carried by the arm and coöperating with the carrier, means also carried by the arm for rotating the carrier, and means for operating said arm.

6. In mechanism of the character described, the combination with a rotary record carrier having ratchet teeth, of an actuating arm, a marking device carried by the arm, a dog also carried by the arm and operating on the ratchet teeth, and means for operating said arm.

7. In mechanism of the character described, the combination with a rotary driving member, of a record carrying device rotatably mounted thereon, an actuating device operated by the driving member, a marker mounted on the device, and means for rotating the record carrying device, said means being connected to the actuating device.

8. In mechanism of the character described, the combination with a driving shaft, of a rotary drum loosely journaled thereon and having ratchet teeth, a swinging actuating arm, a cam for swinging the arm mounted on the shaft, a marking device carried by the arm and coöperating with the drum, and a dog pivoted on the arm and operating on the ratchet teeth.

9. In mechanism of the character described, the combination with a shaft, of a material engaging drum mounted on the shaft, a cam operating with the drum, a rotatable platen journaled on the shaft, a ratchet wheel connected to the platen, a swinging arm having a dog operating on the ratchet wheel, said arm being operated by the cam, and a marking device mounted on the arm and movable toward and away from the platen.

In testimony, that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

CLAUDE B. FERRO.
AXEL K. HATTEBERG.

Witnesses:
C. W. Platt,
P. B. Mauzey.