

(No Model.)

2 Sheets—Sheet 1.

C. H. YOUNG.

CLOTH MEASURING MACHINE.

No. 386,050.

Patented July 10, 1888.

Fig. I

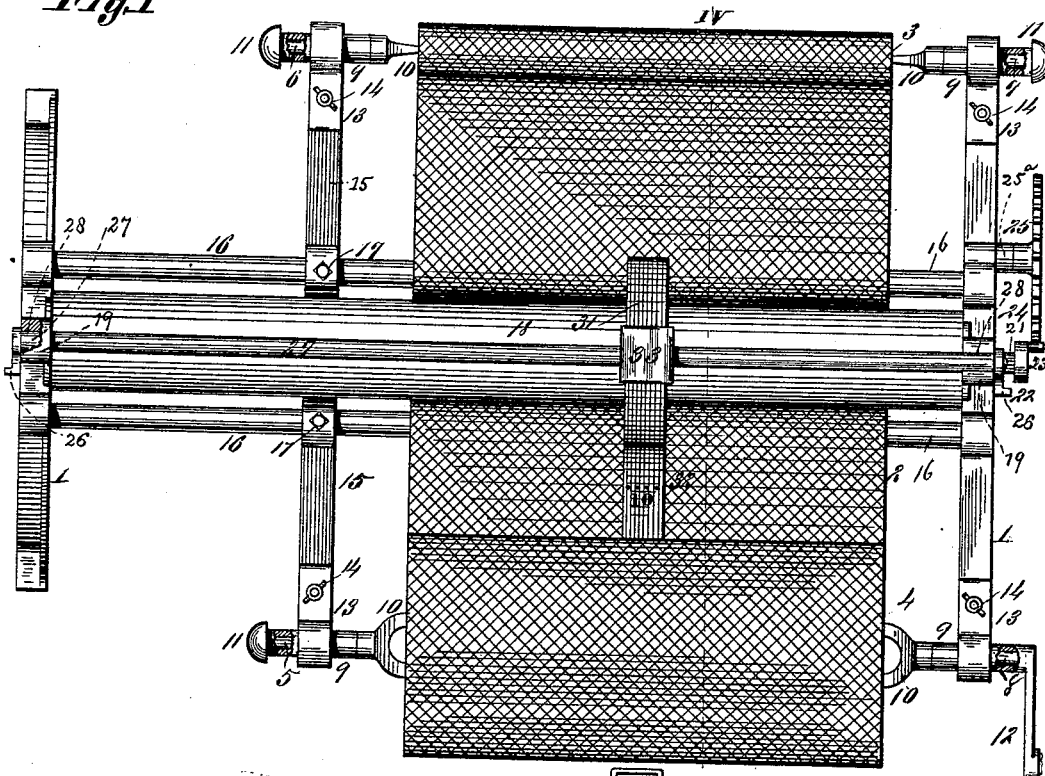
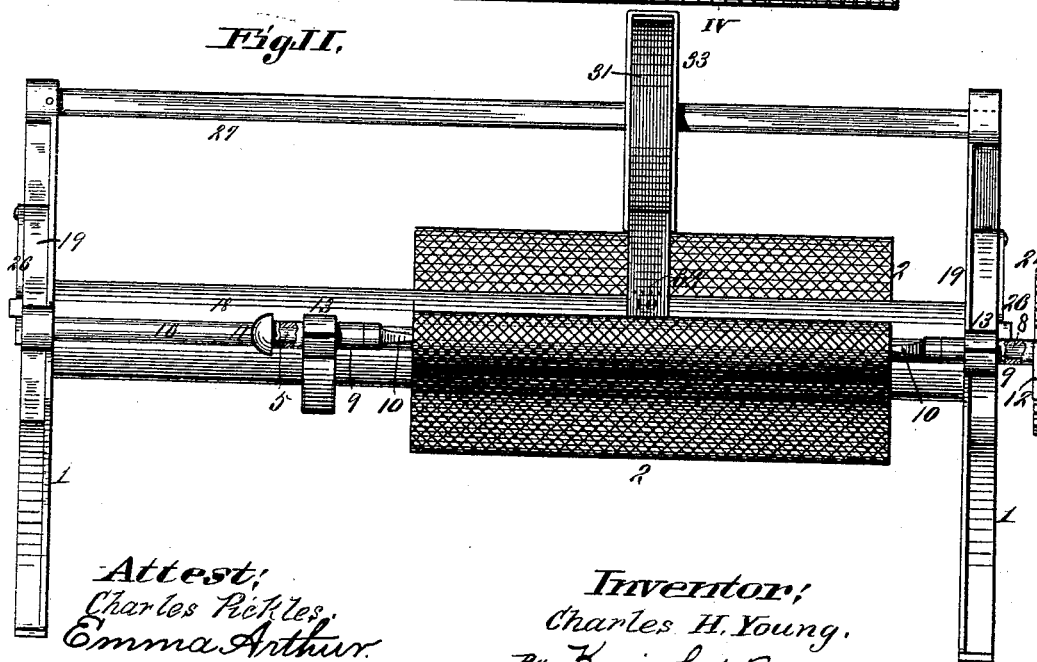


Fig. II.



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Charles H. Young.
By Knight Bros
Attys.

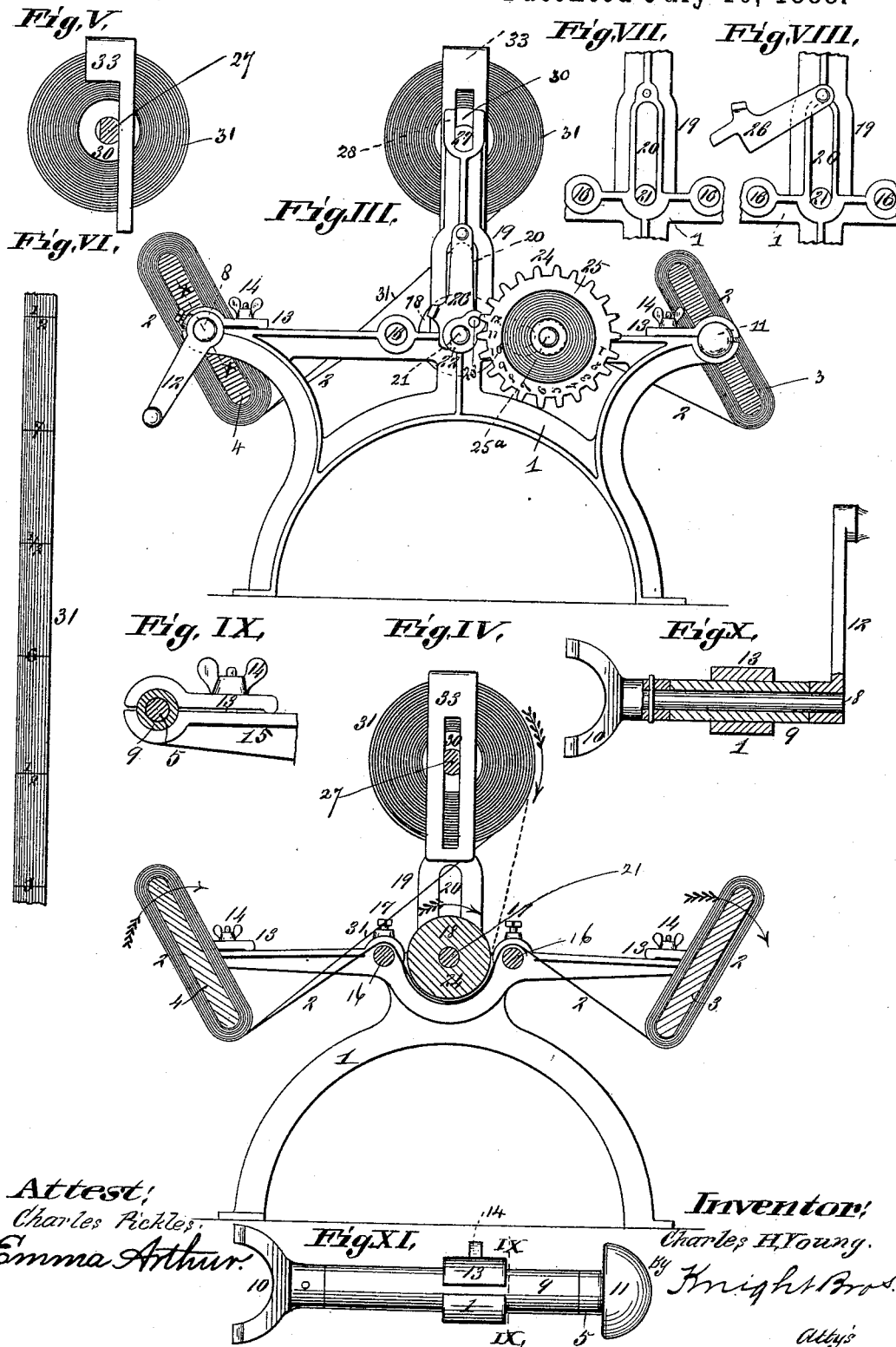
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UNITED STATES PATENT OFFICE.

CHARLES H. YOUNG, OF LEADVILLE, COLORADO, ASSIGNOR OF ONE-HALF
TO RODERICK F. McLEOD AND BYRON H. TOWNSEND, BOTH OF SAME
PLACE.

CLOTH-MEASURING MACHINE.

SPECIFICATION forming part of Letters Patent No. 386,050, dated July 10, 1888.

Application filed August 18, 1887. Serial No. 247,395. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. YOUNG, of Leadville, in the county of Lake and State of Colorado, have invented a certain new and useful Improvement in Cloth-Measurers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure I is a top view of my improved device. Fig. II is a side view. Fig. III is an end view. Fig. IV is a vertical section taken on line IV IV, Fig. I. Fig. V is an end view of the measuring-spool, part of the guide being omitted. Fig. VI is an enlarged detail view of a portion of the measuring-tape. Fig. VII is an enlarged detail view of that part of the frame which supports the friction-roller, the catch being omitted. Fig. VIII is a similar view, showing in addition the catch for holding the friction-roller in place. Fig. IX is an enlarged detail section taken on line IX IX, Fig. XI. Fig. X is an enlarged detail section taken on line X X, Fig. III. Fig. XI is an enlarged view of one of the adjustable shafts by which the roll of cloth is supported.

My invention relates to an improved device for measuring cloth or other fabrics, intended more particularly for inventorying; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, 1 represents the frame by which the different parts of my device are supported.

2 represents a portion of cloth or other fabric shown in position in the machine.

3 represents the spool or board on which the cloth is wound as it is manufactured. 4 represents a similar board on which the cloth may be wound as it is being measured.

5, 6, 7, and 8 are shafts which are supported at one end of the machine by the main frame 1 and at the other end by an adjustable bar, 15. This bar slides on rods 16, supported by the frame 1. The bar can be secured in any desired position by means of set-screws 17.

9 are sleeves (supported by the frame 1 and bar 15) in which the shafts 5, 6, 7, and 8 work.

The inner ends of these shafts have prongs 10, which may be forced into the ends of the boards 3 and 4. The shafts 5, 6, and 7 have heads 11 on their outer ends, (to assist in forcing the prongs 10 into the boards;) but the outer end of shaft 8 is provided with a crank, 12.

13 are clamps on the frame 1 and the bar 15. These clamps fit over the sleeves 9 and are tightened by means of thumb-screws 14 to hold the sleeves from end movement. By means of these clamps and the adjustable bar 15 the shafts 5, 6, 7, and 8 can be adjusted to fit whatever length the boards 3 and 4 may be.

18 is a friction-roller underneath which the fabric 2 passes from one board to the other. The roller is supported by standards 19 on the frame 1. The standards have slots 20, in which the shaft or journals 21 of the roller fit and work.

22 is a crank having a pin, 23, attached thereto. This crank is attached to one end of the shaft or to a journal of the roller 18, and is moved as the roller turns. The roller is rotated by the friction of the fabric passing under it. The pin 23 (as the crank moves) comes in contact with a series of cogs, 24, on a disk, 25, on a stud, 25^a, secured to the frame, and turns the disk one cog for every revolution of the roller 18. The outside of the disk is graduated or marked off into yards, so that it will designate the number of yards wound from one board onto the other.

26 are catches pivoted to the standards 19 over the slots, which prevent the roller 18 from rising as the fabric is drawn under it, the fabric passing over the rods 16 on each side of the roller. (See Figs. I and IV.)

27 is a rod or shaft fitting in slots 28 in the standards 19.

30 is a spool placed on the rod 27, on which is wound a measuring-tape, 31, preferably made of paper, but which may be made of other material. This tape may be marked off into sections of ten yards each, and there may be a number of spools placed on the rod, each having sections of different length. At the end of each section I prefer to perforate the tape, as shown at 32, so that it may be readily torn off.

33 is a slotted inverted-U-shaped guide placed over the spool and measuring-tape, which prevents the tape from shifting on the spool or the spool moving laterally on the rod.

5 The operation is as follows: The board 3, with cloth rolled on it, is placed between the prongs 10 of the shafts 6 and 7 on one side of the measuring device. The fabric is then passed over one of the rods 16, under the friction-roller 18, and then over the other rod 16.
10 The board 4 is placed between the prongs 10 of the shafts 5 and 8 on the other side of the measuring device. The end of the fabric and the end of the measuring-tape are placed even
15 with each other, and are both bound on the board 4 by turning the crank 12. After all of the cloth has been wound on the board 4 the measuring-tape is torn off, one of the clamps 13 loosened, the shaft shifted or moved out-
20 ward, and the board and cloth removed together, the tape indicating the amount of cloth wound onto the spool or board. While the fabric and the measuring-tape are being wound up together the friction of the fabric will cause
25 the roller 18 to revolve, together with the crank 22, whose pin 23, by coming in contact with the cogs 24 of the registering-disk 25, causes it to rotate, and thus designate the number of yards which have passed beneath the roller,
30 and thus verify the measurement of the tape. The measuring-tape may pass over the roller 18 or under it, as shown in dotted lines in Fig. IV.

I claim as my invention—

35 1. In a cloth-measurer, the combination of a supporting-frame, 1, the rods 16, secured to the frame, the bar 15, adjustable on the rods, the shafts 5 and 6, mounted on the bar, the shafts 7 and 8, mounted on one end of the
40 frame, the spools or boards supported on the shafts, a friction-roller, 18, journaled on the frame between the rods, having a crank, 22, on one end, provided with a pin, 23, a stud, 25^a, on the frame, and a graduated disk, 25,
45 mounted on the stud, having cogs 24, engaged by the pin, substantially as described.

2. In a cloth-measurer, the combination of a supporting-frame, 1, the rods 16, secured to the frame, the bar 15, adjustable on the rods,
50 the shafts 5 and 6, mounted on the bar, the shafts 7 and 8, mounted on one end of the

frame, the spools or boards supported on the shafts, the standards 19, supported on the frame, having slots 20 and catches 26, and the friction-roller 18, between the rods, having
55 journals 21, occupying the slots, substantially as described.

3. In a cloth-measurer, the combination of the supporting-frame 1, the rods 16, secured to the frame, the bar 15, adjustable on the
60 rods, the shafts 5 and 6, mounted on the bar, the shafts 7 and 8, mounted on one end of the frame, the spools or boards supported on the shafts, the standards 19, supported on the frame, having slots 20 and catches 26, the friction-roller 18 between the rods, having jour-
65 nals 21, occupying the slots, a crank, 22, on one of the journals, provided with a pin, 23, a stud, 25^a, on the frame, and a graduated disk, 25, mounted on the stud, having cogs 24, engaged by the pin, substantially as described.

4. In a cloth-measurer, the combination, with a supporting-frame, of the bar, the shafts mounted on the frame and on the bar, the boards or spools supported on the shafts,
75 standards on the frame, having slots, the shaft or rod occupying the slots, and the tape spool and guide mounted on the shaft or rod, substantially as described.

5. In a cloth-measurer, the combination, with
80 a supporting-frame, of the shafts 5 6 7 8, spools or boards 3 4, standards 19, shaft or rod 27, spool 30, having graduated partly separated tape 31, and the guide 33, by which the spool and tape are held in place, substantially as de-
85 scribed.

6. In a cloth-measurer, the combination of the frame 1, shafts 5, 6, 7, and 8, boards 3 4, handle 12, rods 16, bar 15, clamps 13, friction-roller 18, crank 22, pin 23, disk 25, spool 30,
90 and guide 33, substantially as described.

7. In a cloth-measurer, the combination of the frame 1, boards 3 4, shafts 5, 6, 7, and 8, handle 12, clamps 13, adjustable bar 15, friction-roller 18, crank 22, pin 23, disk 25, spool
95 30, measuring-tape 31, and guide 33, substantially as described, and for the purpose set forth.

CHARLES H. YOUNG.

In presence of—

JAS. E. KNIGHT,
EDW. S. KNIGHT.