

(No Model.)

2 Sheets—Sheet 1.

W. E. CARPENTER.
CLOTH MEASURING MACHINE.

No. 597,836.

Patented Jan. 25, 1898.

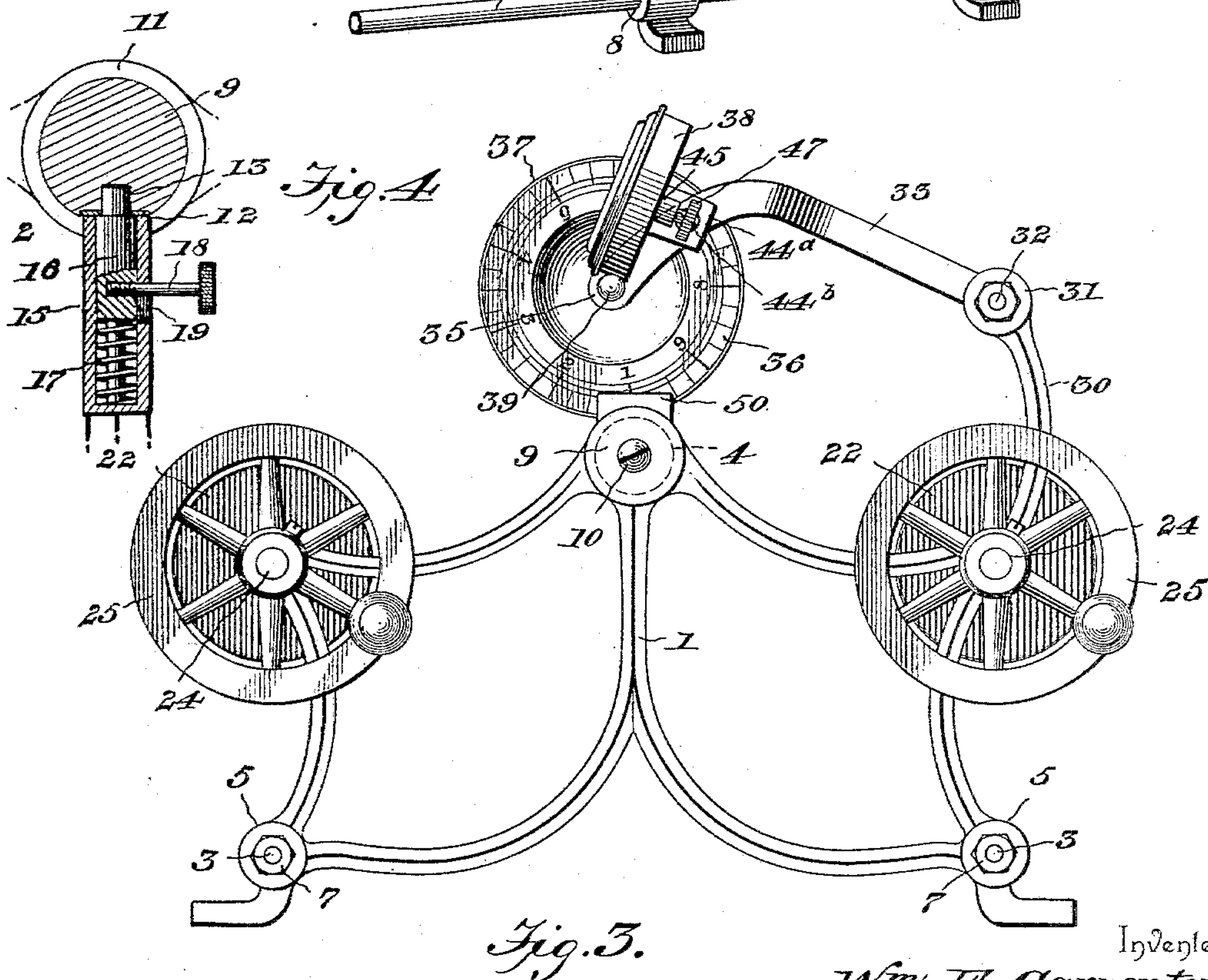
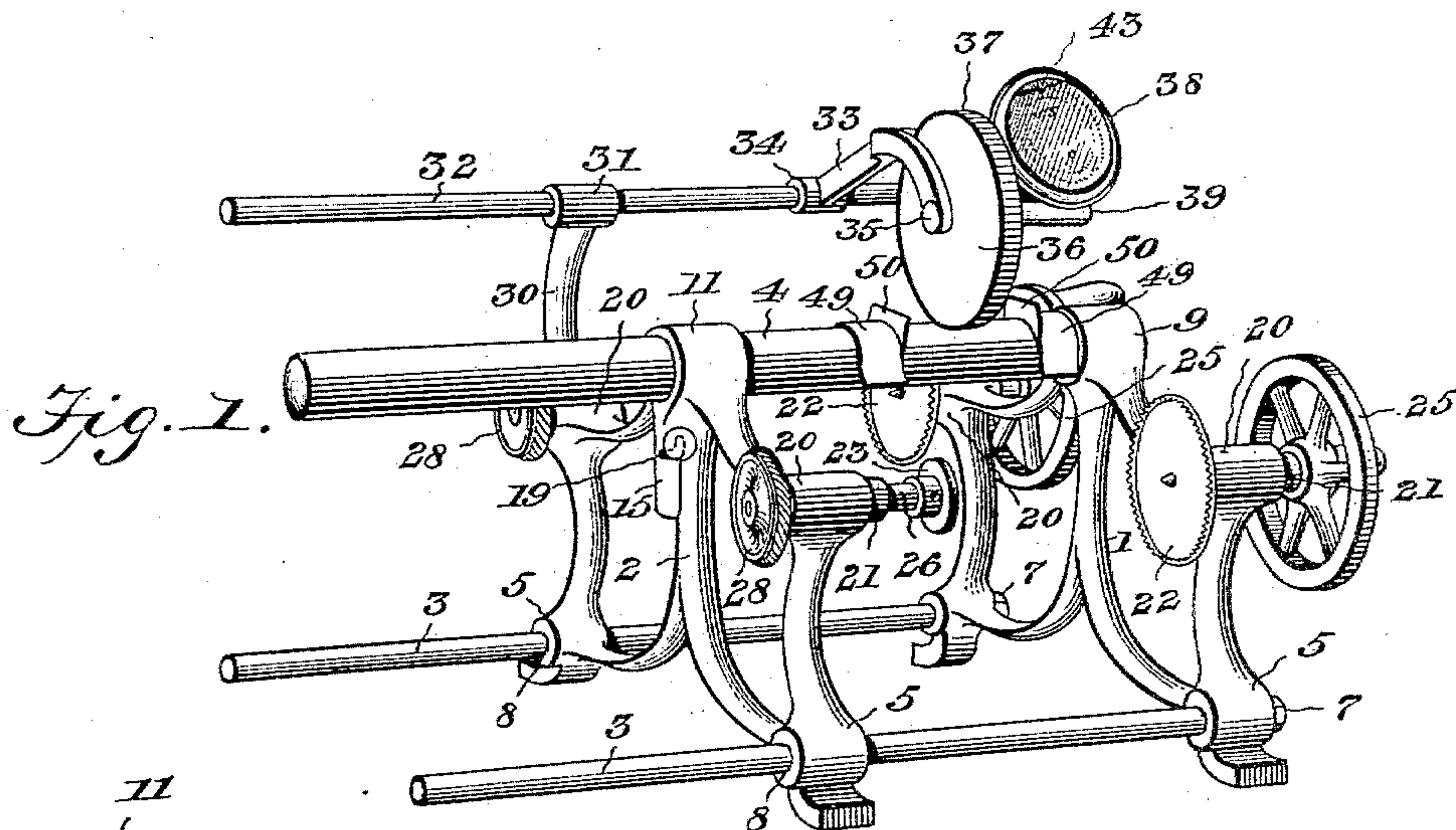


Fig. 3.

Inventor
Wm. H. Carpenter.

Witnesses

E. A. Munn
Edwin Cruse.

By his Attorneys,

C. A. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

W. E. CARPENTER.
CLOTH MEASURING MACHINE.

No. 597,836.

Patented Jan. 25, 1898.

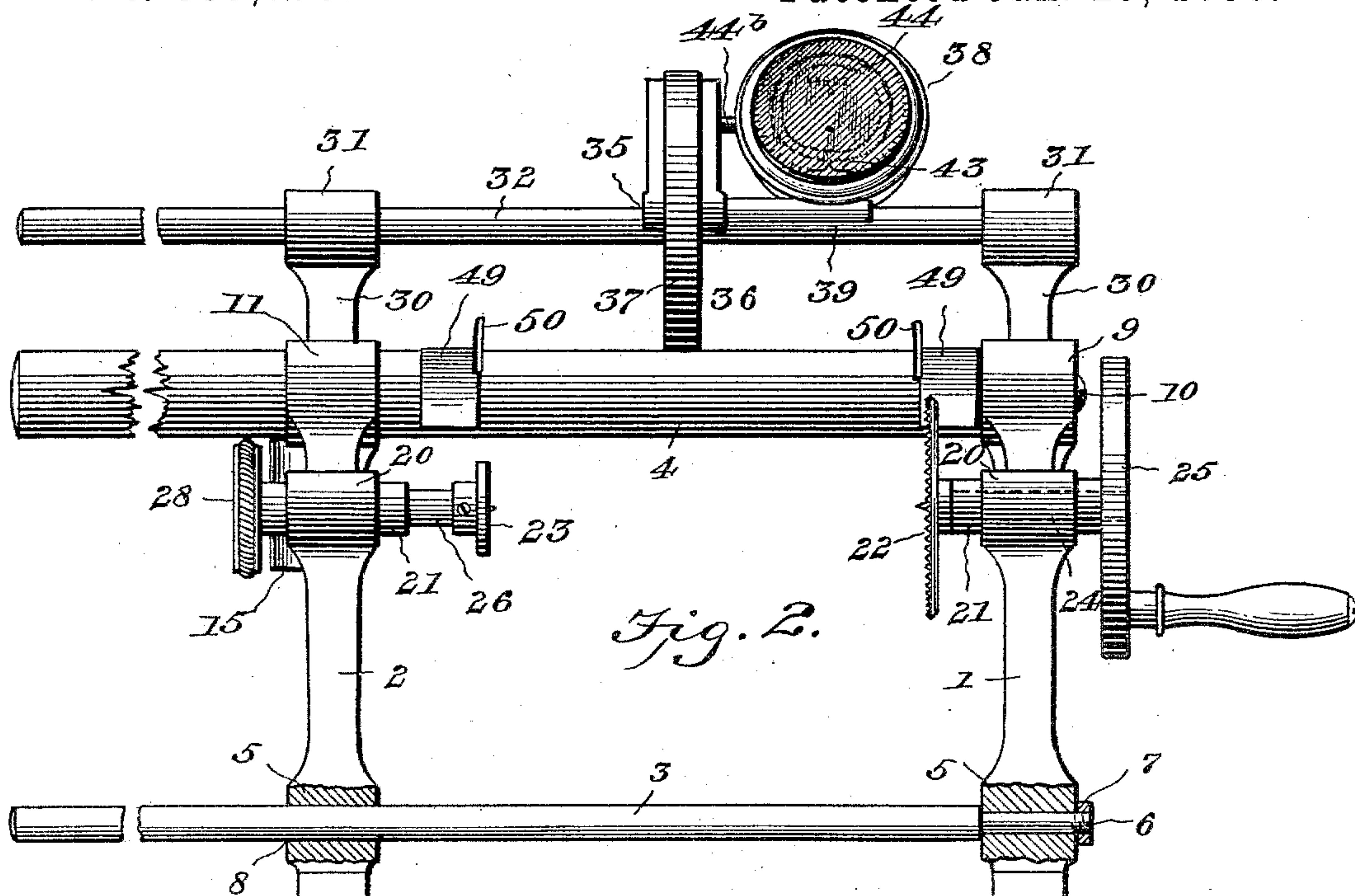


Fig. 2.

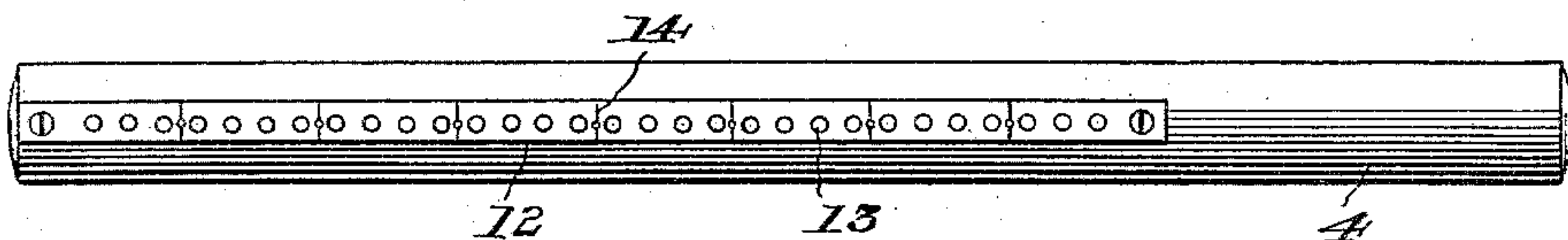


Fig. 5.

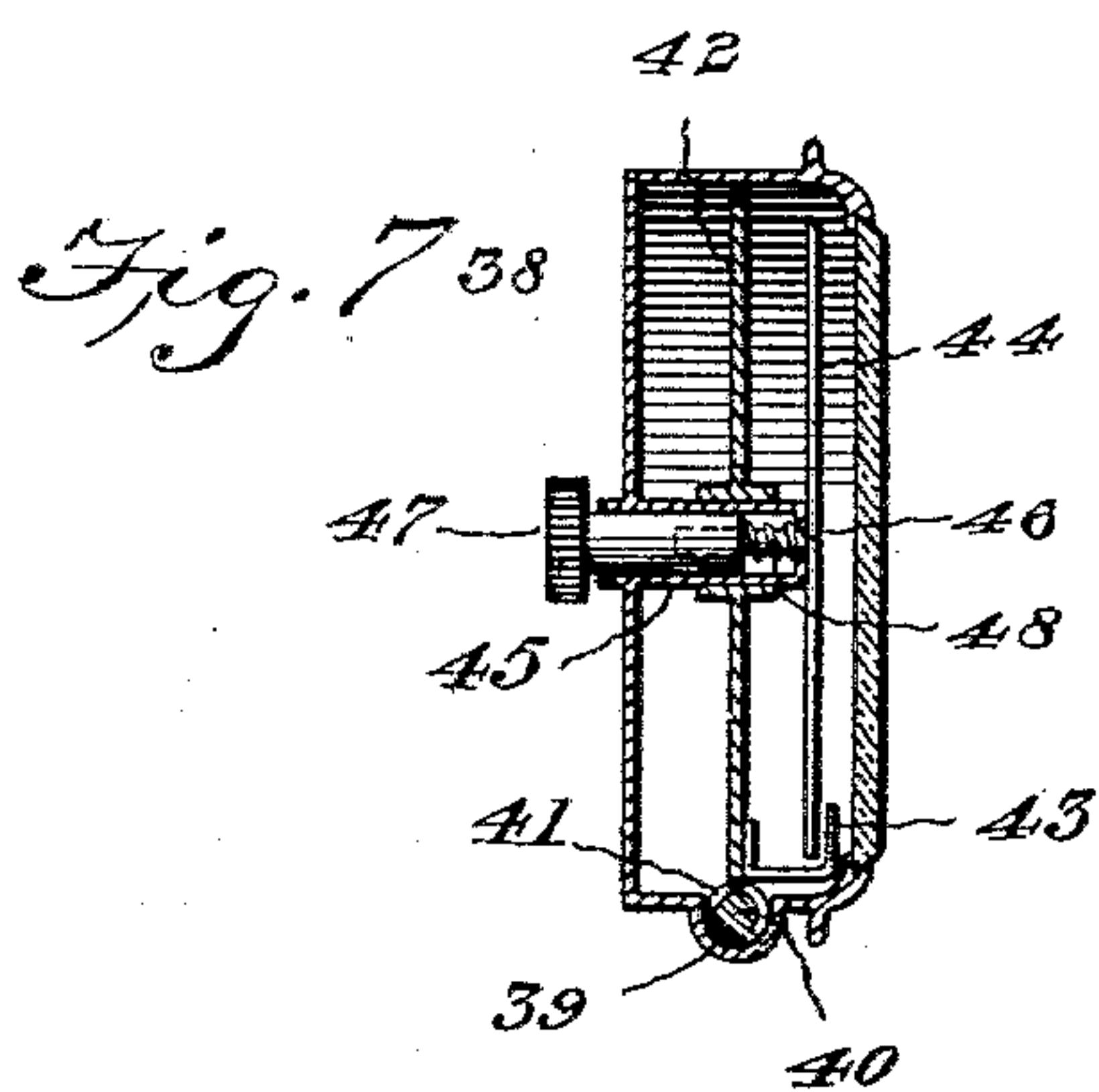


Fig. 7.

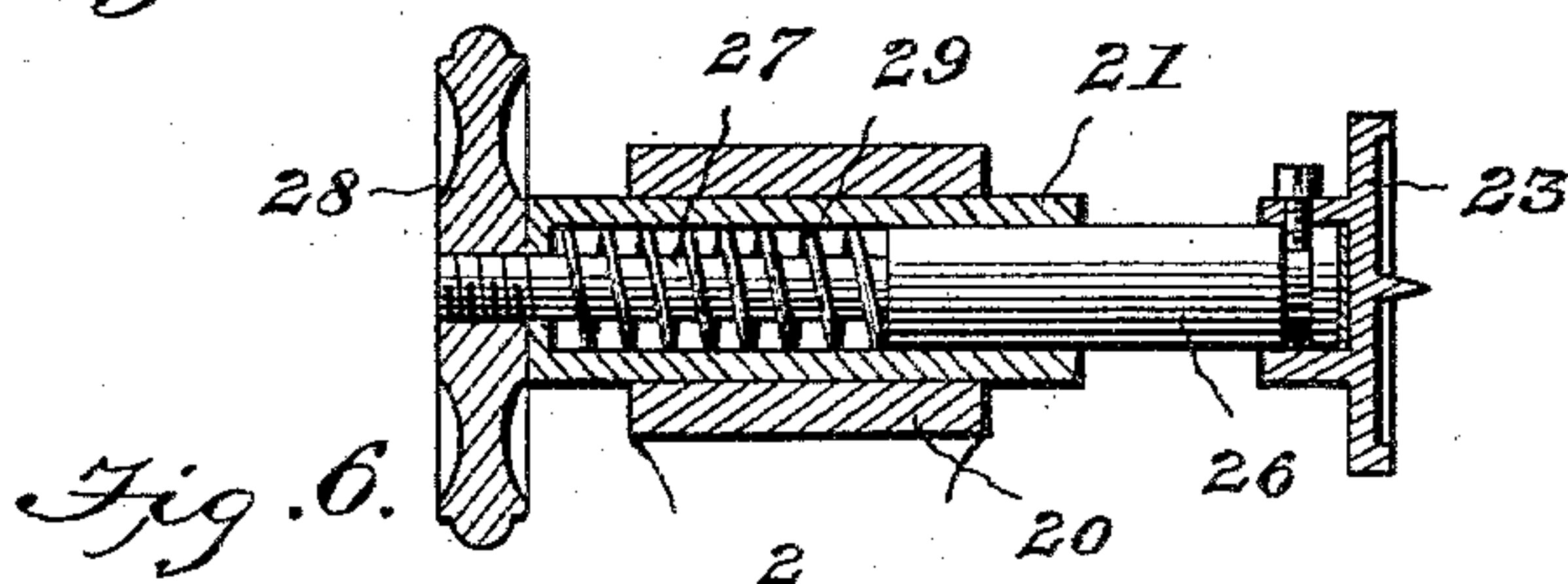


Fig. 6.

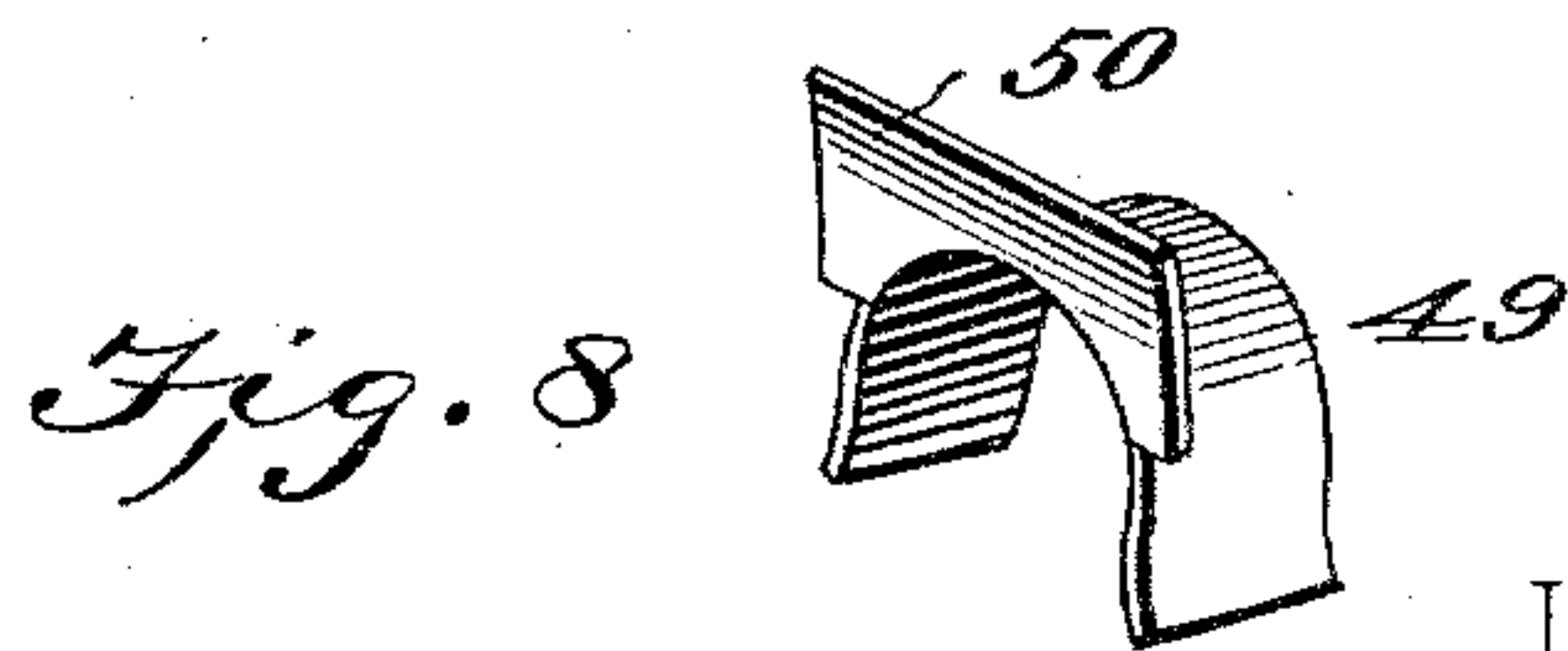


Fig. 8.

Inventor

Wm. E. Carpenter,

Witnesses

E. H. Morrow
Edwin Cruse

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM E. CARPENTER, OF CALUMET, MICHIGAN.

CLOTH-MEASURING MACHINE.

SPECIFICATION forming part of Letters Patent No. 597,836, dated January 25, 1898.

Application filed June 8, 1897. Serial No. 639,895. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. CARPENTER, a citizen of the United States, residing at Calumet, in the county of Houghton and State of Michigan, have invented a new and useful Cloth-Measuring Machine, of which the following is a specification.

This invention relates to machines for measuring cloth and other fabrics, the object being to improve the construction of devices of this character in order that they may be quickly and easily adjusted for the purpose of measuring goods of different widths, whereby they will be especially adapted for taking an inventory of stock, as they may be used to measure either cloth, laces, or ribbons.

With this and other objects in view the invention consists of the several details of construction and combination of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a measuring-machine made in accordance with my invention. Fig. 2 is a front elevation. Fig. 3 is an end view. Fig. 4 is a vertical section through a portion of one of the end castings to show the devices to lock the frame in its adjusted position. Fig. 5 is a bottom plan view of the upper connecting-rod of the frame. Fig. 6 is a horizontal section through the spring-actuated clamp. Fig. 7 is a vertical transverse section through the indicator. Fig. 8 is a perspective view of one of the clip-guides detached.

Similar reference-numerals indicate similar parts in the several figures.

The frame of the machine consists of the supporting end castings 1 and 2, the lower connecting-rods 3, and the upper connecting-rod 4. The lower connecting-rods 3 are preferably of metal and reduced at one end to pass through bores in the bosses 5 on the lower corners of the end casting 1. The ends of the reduced portions are threaded, as indicated at 6, to receive the nuts 7, by means of which the rods are firmly secured to the casting 1. Similar bosses 5 are formed at the lower corners of the casting 2, the bores 8 of which are of sufficient size to receive the rods 3, so that the latter may slide freely therein.

9 indicates a boss formed on the upper side of the end casting 1 about midway of its

length, and this boss is bored out to receive the end of the rod 4, which latter is preferably of wood. The bore does not extend entirely through the boss, but an opening is formed in the outer end of the boss for the passage of a screw 10, which enters the rod 4 and securely fastens it to the end casting 1. A similar boss 11 is formed on the upper side of the end casting 2, and the bore in this boss is of sufficient size to permit the rod 4 to slide freely therein. It will thus be seen that the casting 2 may have a sliding movement on the connecting-rods 3 and 4 and be adjusted toward or away from the end casting 1, as circumstances may require.

12 indicates a strip of metal which is secured to the under side of the rod 4 and provided with a series of equidistant perforations 13. A scale 14 is also preferably formed on the strip to serve as a guide for adjusting the casting 2 relatively to the casting 1 in order that the machine may be accommodated to fabrics of different widths.

15 indicates a tube which is closed at its lower end and secured to the end casting 2 in such manner that its open upper end will be opposite the strip 12. A bolt 16 is seated in this tube and rests upon a coiled spring 17 in the bottom of the tube, the normal tendency of the spring being to force the bolt into engagement with the perforations in the strip 12. A pin 18 is connected to the bolt 16 and projects out through an L-shaped slot 19 in the tube 15, and this pin serves as a means for releasing the bolt from the perforations in the strip, and by turning the pin into the horizontal portion of the L-shaped slot the bolt will be held disengaged from the perforations.

20 indicates bosses on the upper corners of the end castings 1 and 2, and each of these bosses is bored out to receive a sleeve 21, which sleeves in turn serve as bearings for the shafts of the clamps 22 and 23. The shafts 24 of the clamps 22, which are seated in the sleeves in the end casting 1, are each provided with a crank-wheel or crank-handle, (indicated by 25.) The shafts 26 of the clamps 23 each has a reduced portion 27, which passes through the reduced bore at the outer end of the sleeve in which it is journaled and is provided at its outer end with a

small hand-wheel 28. A coiled spring 29 surrounds the reduced portion of the shaft 26 and tends normally to move the clamp 23 toward the clamp 22. In the drawings I have 5 illustrated clamps which are adapted for use with rolls of ribbon or any other fabric that may be wound on a circular support. It is, however, to be understood that any other kind of clamp may be substituted for those 10 illustrated in the drawings, such clamps to be of a form suitable for the article being measured, and the only essential feature of this part of the machine is that the clamp 23, of whatever form it may be, shall be spring- 15 actuated toward the clamp 22, this being arranged for the purpose of quickly inserting the package between the clamps or removing it therefrom.

From the rear end of each casting an arm 20 30 projects upwardly and is provided with a boss 31 at its upper end, in which is seated a rod 32, the connection between the rod and the boss on the end casting 2 being loose, while that between the rod and the boss on 25 the end casting 1 is rigid.

33 indicates an arm provided with a sleeve 34 at one end, which is slidably mounted on the rod 32, and the other end of the arm 33 is bifurcated to form spaced bearings 35, be- 30 tween which the measuring-disk 36 is journaled. This disk is preferably provided with a rubber tire (indicated by 37) to prevent slippage of the cloth or other fabric being measured, and the disk is adapted to engage 35 the cloth or other fabric immediately over the connecting-rod 4. The indicator 38 is provided with a tube 39 at its lower end, which receives the shaft 40, Fig. 7, of the disk 36, and this shaft has a worm 41, engaging a 40 gear 42, and the gear carries a pointer 43, which projects over the outer face of a dial 44. A bracket 44^a is secured to the rear face of the indicator, and a screw 44^b connects this bracket with one of the bearings 35 to hold 45 the indicator firmly in position. In practice the dial will preferably be provided with two sets of indicating-numerals reversely arranged, so that the material can be measured when it is moved in either direction through 50 the machine.

The gear 42 is mounted on a sleeve 45, which sleeve is secured in the rear wall of the casing of the indicator. The dial 44 is carried by a pin 46, which extends through the sleeve 55 45 and is provided at its rear end with a small disk 47 to form a finger-hold to facilitate turning the dial.

48 indicates a coiled spring within the sleeve 45, the normal tendency of which is to force 60 the rear face of the dial 44 against the inner end of the sleeve 45 and cause sufficient friction between them to hold the dial stationary under ordinary circumstances. When it is desired to move the dial, the pin 46 will be 65 pushed inwardly against the force of the spring 48 and thereby move the dial 44 out of engagement with the sleeve, when it may be

easily turned. The object of this arrangement is to turn the dial to bring the zero-mark opposite the pointer 43 at the beginning 70 of the measurement of a piece of goods.

49 indicates clips adapted to fit tightly over the connecting-rod 4, but to be movable thereon, and these clips have upwardly-projecting 75 flanges 50, which serve as guides to engage the edges of the fabric being measured and keep it in line in passing from one side of the machine to the other.

From the foregoing description it will be obvious that the fabric may be drawn in 80 either direction through the machine and accurately measured and that the end frames can be quickly adjusted relatively to each other to suit materials of different widths, and as all of the operative parts of the machine, 85 with the exception of the measuring-disk and the indicator, are carried by the end castings of the frame by simply moving one of the end frames the entire machinery is adjusted, and the arm which carries the measuring-disk and 90 the indicator can be quickly adjusted on its supporting-rod, if necessary.

The machine is designed to be portable and to be supported upon any level surface, such as a floor, counter, or table, and the end cast- 95 ings will firmly support the connecting-rods and the operative parts of the machine at all times, irrespective of the positions of the end castings relatively to each other, and there will be no strain on the fixed joints of the 100 connecting-rods to the end casting.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the 105 advantages of this invention.

Having thus described the invention, what I claim is—

1. A machine for measuring cloth and other fabrics, comprising two end castings adapted 110 to be supported upon a level surface, connecting-rods rigidly secured to one of the said castings and loosely supported in the other end casting, the latter casting being movable as an entirety upon said rods, whereby the 115 end castings are adjustable relatively to each other, means to lock the movable casting to one of the rods, clamps mounted on the end castings, and a measuring-disk and indicator supported on the machine and adjustable lon- 120 gitudinally thereof between the end castings, substantially as described.

2. A machine for measuring cloth and other fabrics comprising two end castings adapted 125 to be supported on a level surface, connecting-rods rigidly secured to one of the said castings and loosely supported in the other end casting, the latter casting being movable as an entirety upon said rods, whereby the 130 end castings are adjustable relatively to each other, one of the said connecting-rods being provided with a series of equidistant perforations, a spring-actuated bolt supported in the movable end casting to engage said per-

forations, revoluble clamping-disks mounted on the end castings, and guiding-clips and measuring and indicating devices supported on the machine and adjustable longitudinally thereof between the end castings, substantially as described.

3. In a machine for measuring cloth and other fabrics, the combination of the end castings, the connecting-rods rigidly secured to one of said castings and slidably mounted in the other casting, whereby the latter may slide thereon, the upper connecting-rod being of wood, a metal strip secured to the lower face of the upper connecting-rod and provided with a series of equidistant perforations, a tube secured to the end of the casting having its lower end closed and its upper end open and opposite said strip, a spring-actuated bolt within the tube normally engaging one of the perforations, and a pin secured to said

bolt and projecting through an L-shaped slot in the tube, substantially as and for the purpose specified.

4. In an indicator for cloth-measuring machines, the combination of the casing, a sleeve supported in the rear wall thereof, a gear mounted to revolve on said sleeve and carrying a pointer, a spring-actuated pin supported in the sleeve, a dial carried by the pin and normally held in frictional engagement with the inner end of the sleeve, and means to rotate the gear, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. CARPENTER.

Witnesses:

W. H. FAUCETT,
JOHN B. CURTIS.