

(No Model.)

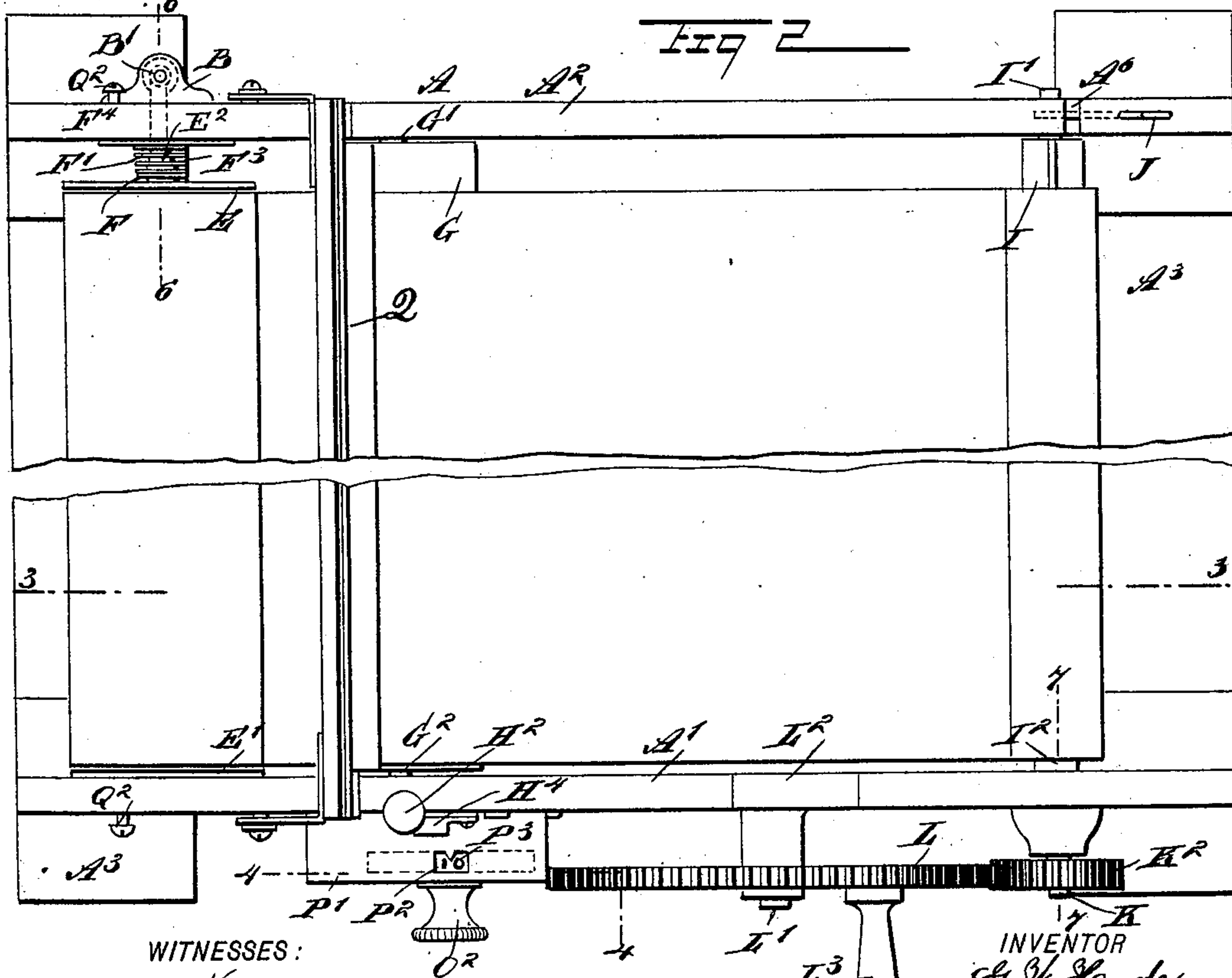
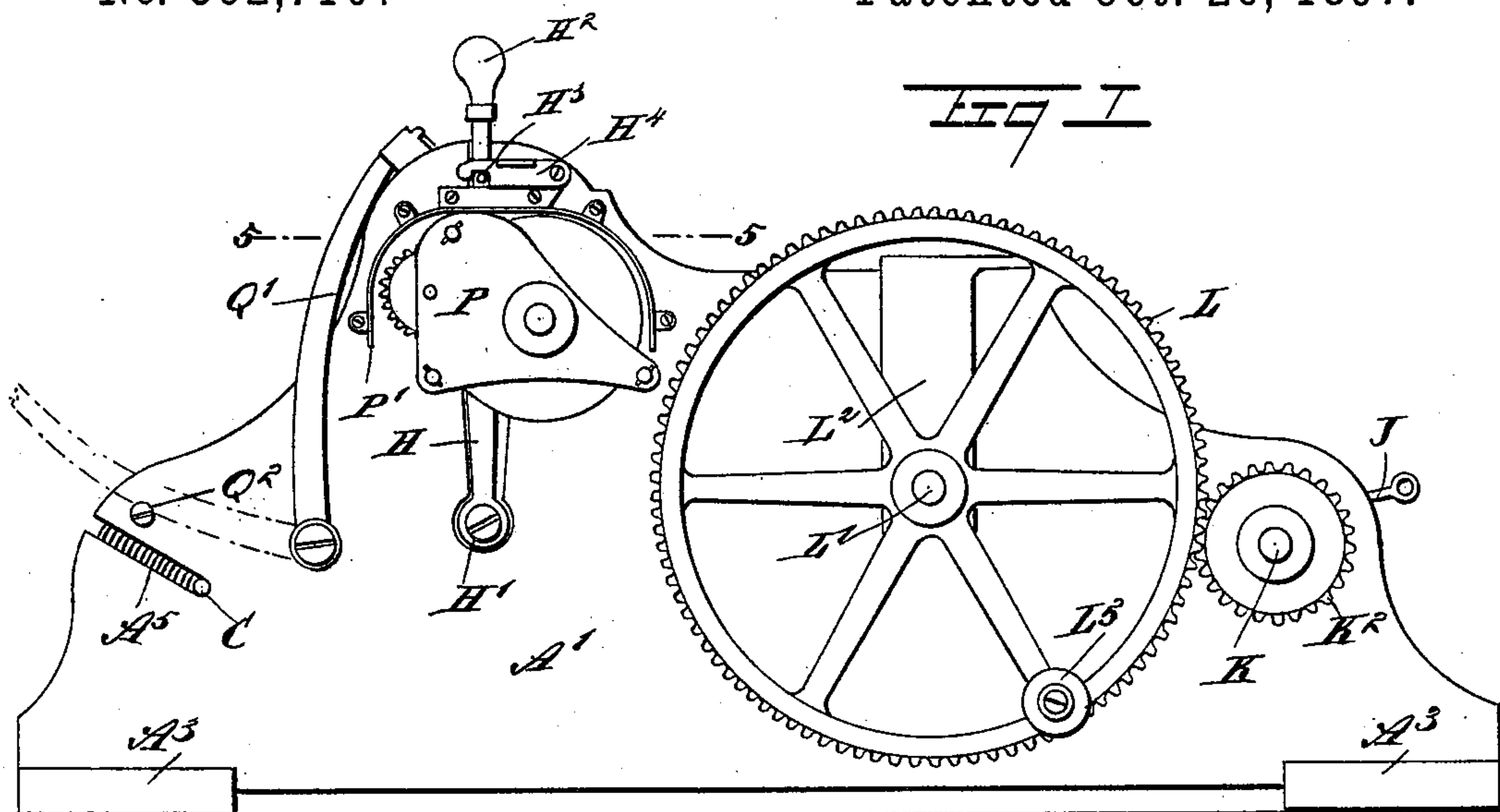
2 Sheets—Sheet 1.

G. W. HYDE.

MACHINE FOR MEASURING CLOTH, PAPER, &c.

No. 592,710.

Patented Oct. 26, 1897.



WITNESSES:

H. Walker

Thos. G. Hoster

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G. W. Hyde

BY

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(No Model.)

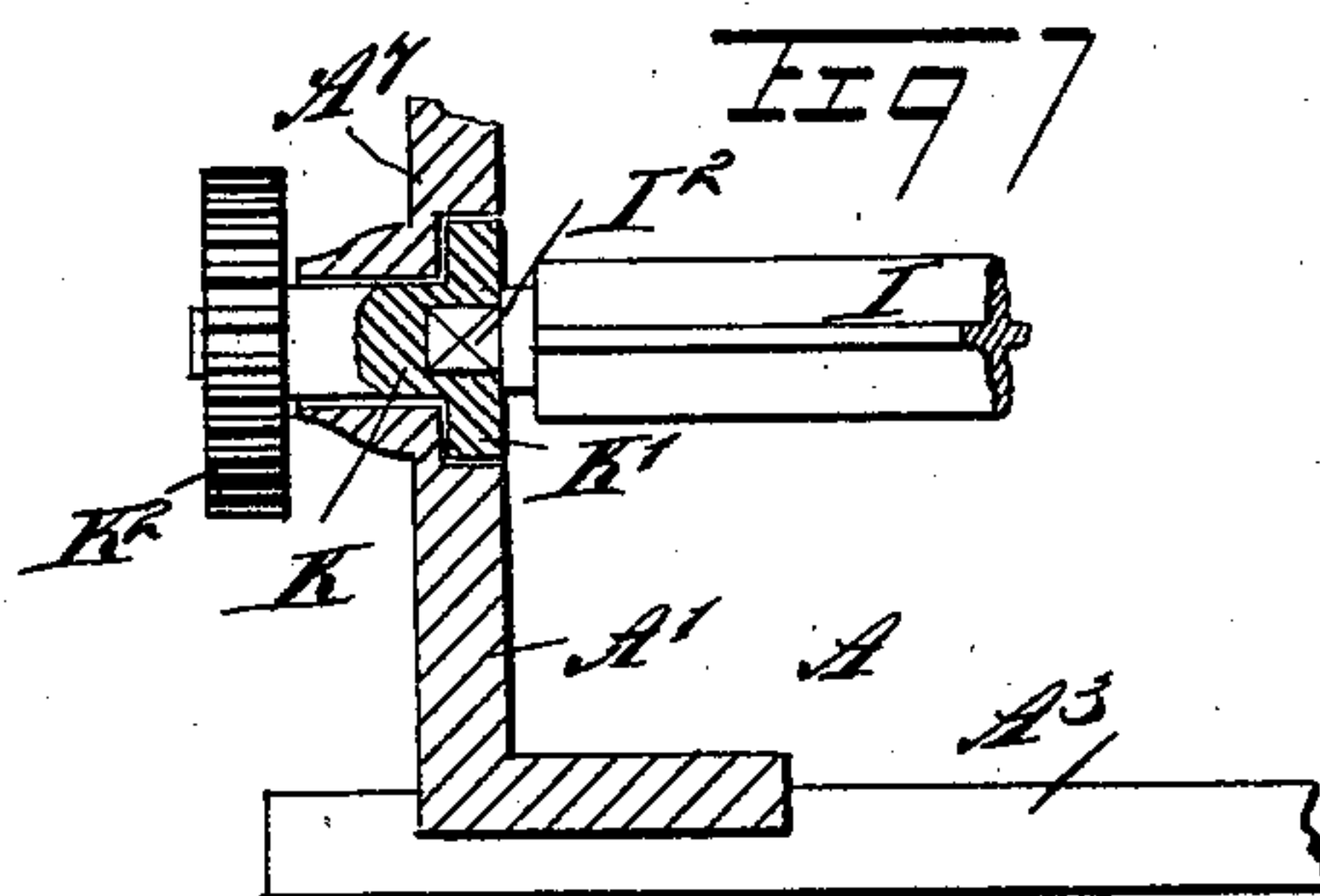
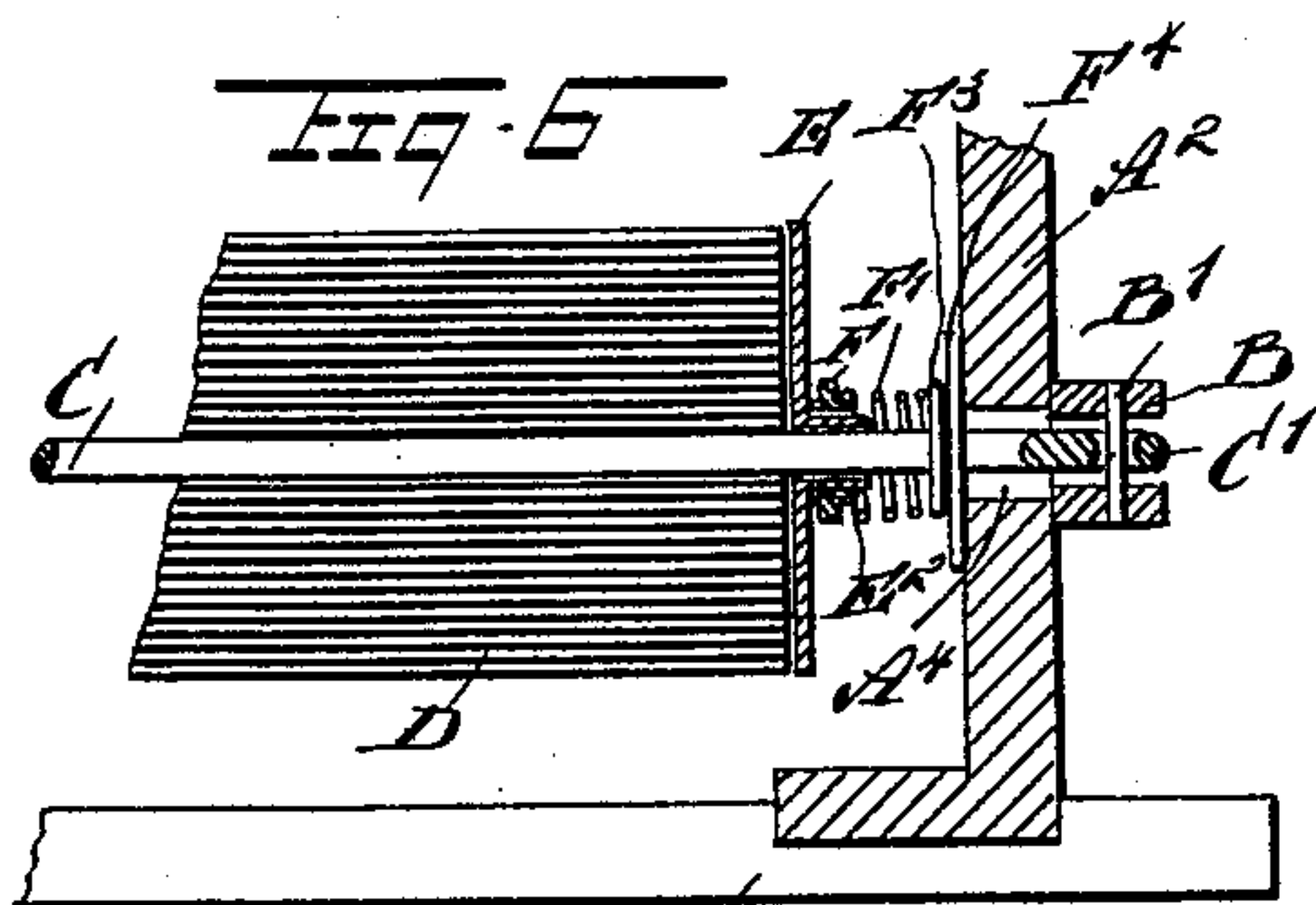
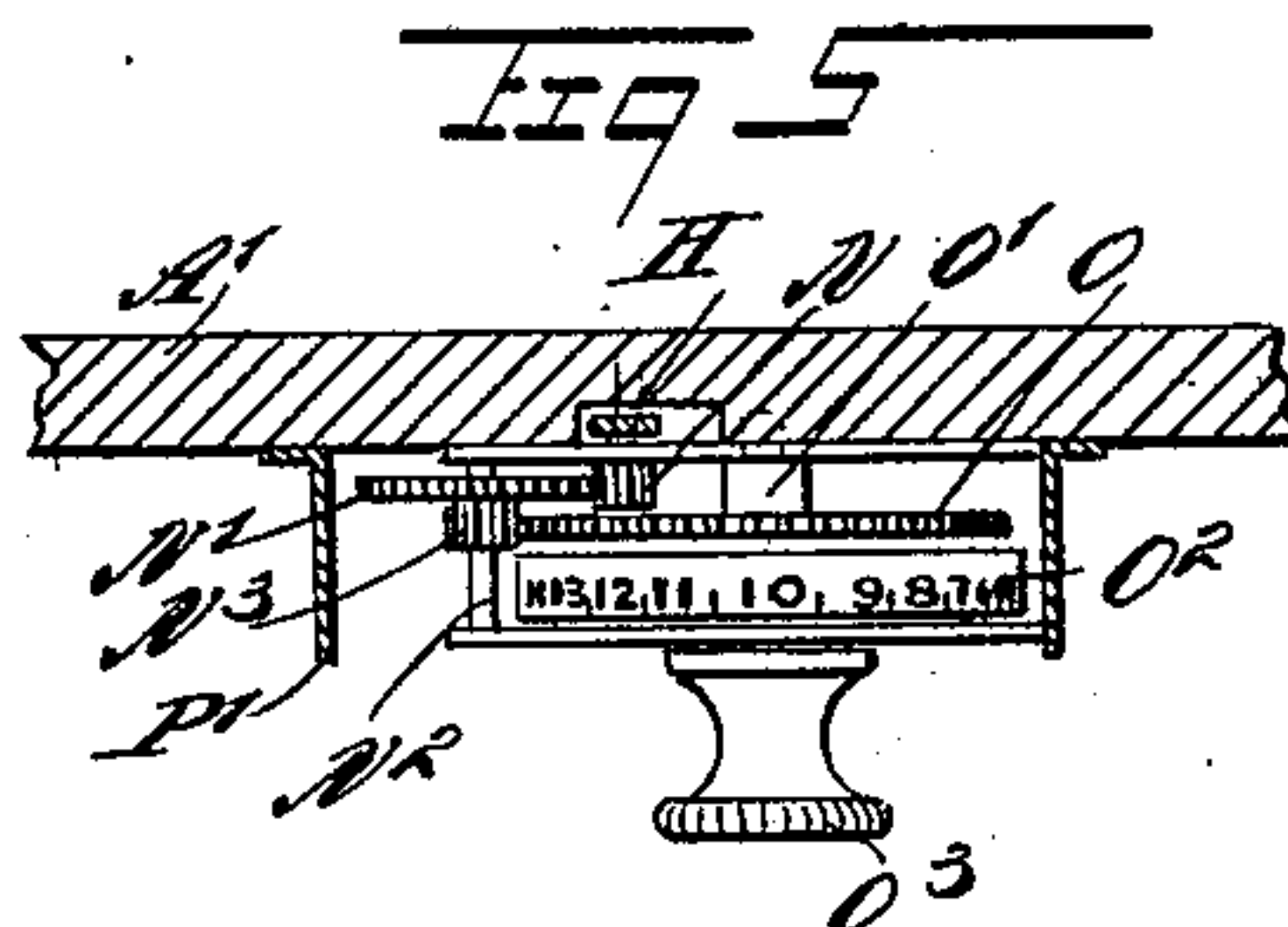
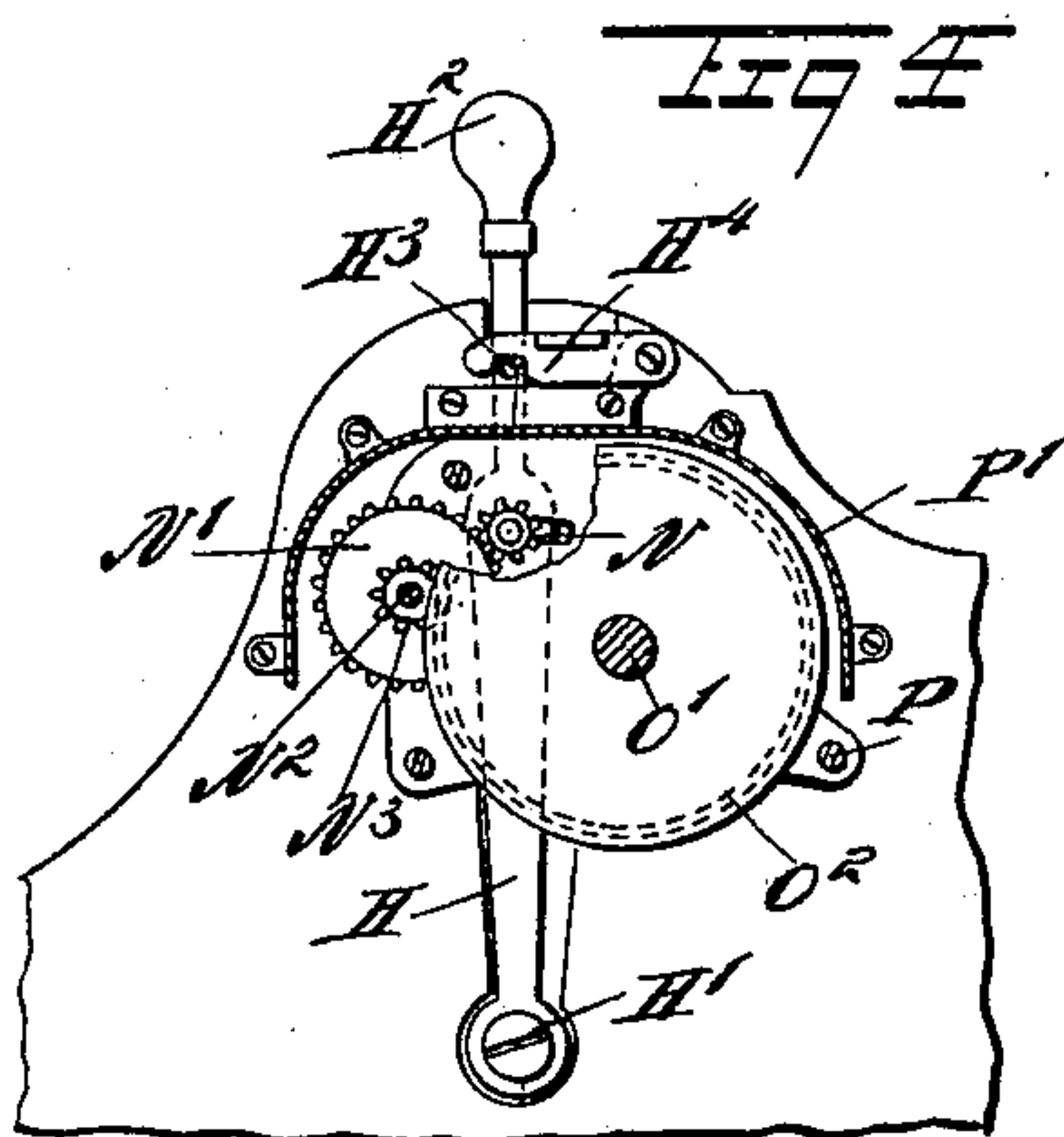
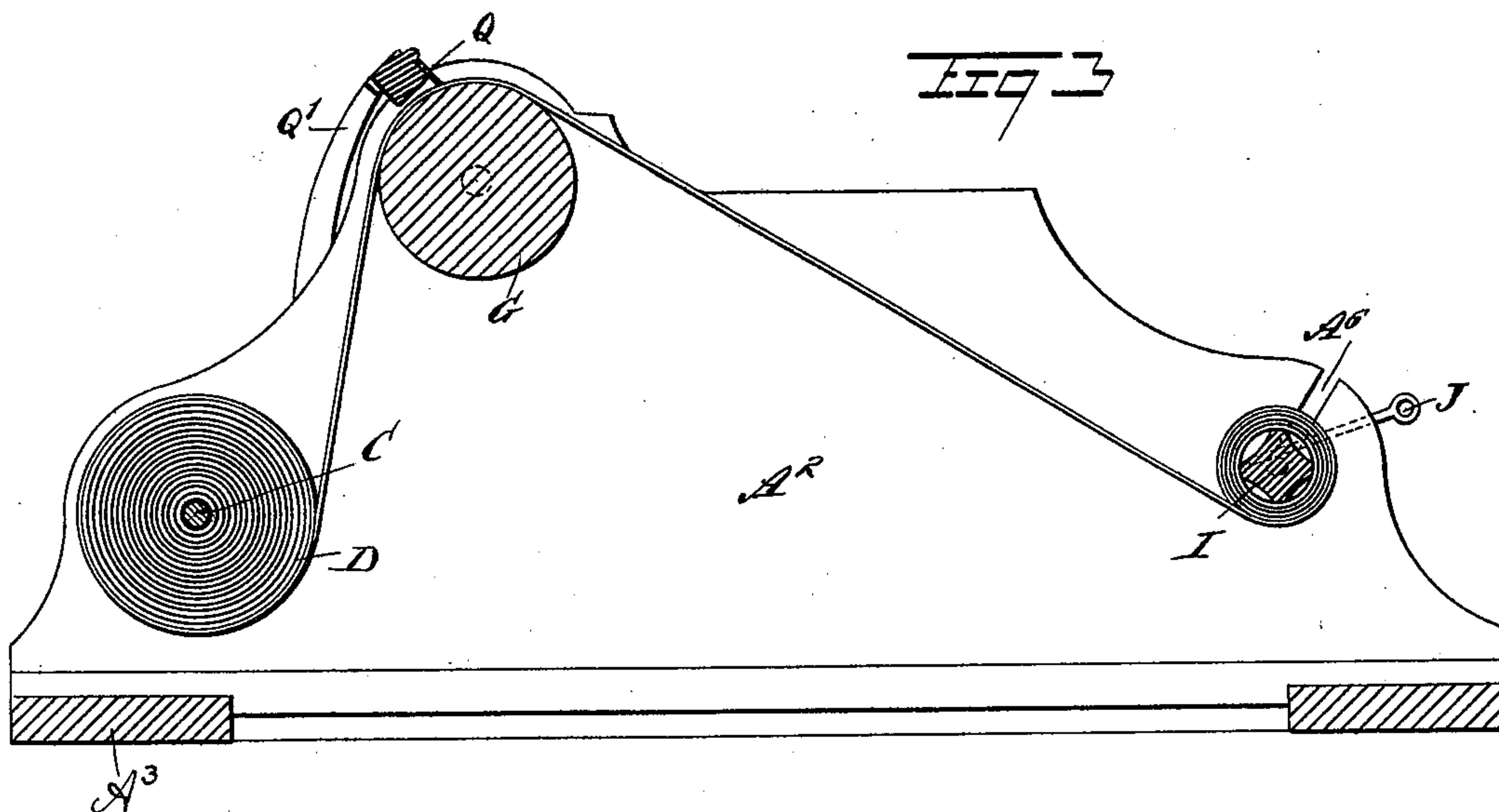
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WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE W. HYDE, OF RICHFIELD SPRINGS, NEW YORK.

MACHINE FOR MEASURING CLOTH, PAPER, &c.

SPECIFICATION forming part of Letters Patent No. 592,710, dated October 26, 1897.

Application filed April 2, 1897. Serial No. 630,360. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HYDE, of Richfield Springs, in the county of Otsego and State of New York, have invented a new and Improved Measuring-Machine, of which the following is a full, clear, and exact description.

The invention relates to machines for measuring wall-paper, wall-paper borders, cloths, &c.; and its object is to provide a new and improved measuring-machine which is simple and durable in construction and arranged to permit of conveniently unwinding a desired length of material from the original roll to accurately measure the length and to wind up the measured length into a roll for the customer.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a plan view of the same. Fig. 3 is a sectional side elevation of the same on the line 3 3 of Fig. 2. Fig. 4 is a sectional side elevation of the measuring device on the line 4 4 of Fig. 2. Fig. 5 is a sectional plan view of the same on the line 5 5 of Fig. 1. Fig. 6 is a cross-section of the pivotal end of the roller-carrying rod, the section being on the line 6 6 of Fig. 2; and Fig. 7 is a transverse section of the driving device for the removable spindle on which the material is wound up, the section being on the line 7 7 of Fig. 2.

The improved measuring-machine is mounted on a frame A, having the sides A' and A² connected with each other by suitable cross-bars A³, as plainly shown in the drawings. On the upper face of the side A² is secured a bracket B, carrying a vertically-disposed pivot-pin B', engaged by the eye C' of the rod C, mounted to swing to carry the original roll D of wall-paper, wall-paper borders, cloth, or like material. The rod C extends through an elongated slot A⁴ in the side A², and its free end is adapted to pass into a slot A⁵, formed in the side A' and

slightly inclined, as illustrated in Fig. 1, so as to hold the rod C in proper position when the roll of material D is unwound. The ends of the roll D are engaged by disks E and E', held loosely on the rod C, the hub E² of the disk E carrying a washer F, pressed on by a spring F', coiled on the rod C and resting with its outer end against a washer F³, abutting against the plate F⁴, normally closing the inner end of the slot A⁴, as plainly shown in Fig. 6. By this arrangement the spring F' presses against the washer F and the latter against the disk E, so as to hold the roll D to one side on the rod C to prevent lateral movement of the roll during the unwinding operation.

Now by the arrangement described the rod C can be swung with its free end out of the slot A⁵, so as to permit of conveniently placing a roll D upon the said rod and then returning the free end back to the slot A⁵ to start unwinding the material of the roll. The unwound material is passed upward over a measuring-roller G and then forward and downward to be wound upon a spindle I, rotated in the manner hereinafter more fully described, so that the material is drawn over the roller G to rotate the same and the material is unwound from the roll D, turning loosely on the rod C. The measuring-roller G has its rear end G' journaled loosely in a suitable bearing in the side A², and the forward end G² of the said roller is journaled in a vertically-disposed lever H, pivoted at its lower end at H' to the outer face of the side A'. (See Figs. 1, 4, and 5.) The lever H is provided at its upper end with a suitable handle H², adapted to be taken hold of by the operator to swing the lever sidewise for bringing the roller in and out of gear with the measuring device, as hereinafter more fully explained. Normally the lever H is locked in place by a suitable catch H⁴ engaging a pin H³ on the said lever, as shown in Fig. 4.

The spindle I, on which the material is wound up, is preferably polygonal in cross-section, and its rear end I' rests in the bottom of an inclined slot A⁶, formed in the side A², the said end being locked in place in the side by a pin J, removably held in the side A². The forward end I² of the beam I is made

polygonal in cross-section to fit a correspondingly-shaped socket in the head K' of a shaft K , journaled in suitable bearings A^7 , formed on the side A' . (See Fig. 7.)

5 On the outer end of the shaft K is secured a pinion K^2 in mesh with a gear-wheel L , journaled on a stud L' , attached to a bracket L^2 , fastened to the side A' . A handle L^3 is attached to the gear-wheel L , so that the operator can turn the said gear-wheel to rotate the pinions K^2 and the shaft K , which by its square socket rotates the spindle I to wind up the paper thereon.

The measuring device previously mentioned and connected with the measuring-roller G is constructed as follows: On the outer end of the spindle G^2 of the roller G is held a pinion N in mesh with a gear-wheel N' , secured on a shaft N^2 , carrying a pinion N^3 in mesh with a gear-wheel O , secured on a shaft O' , journaled, like the shaft N^2 , in a suitable frame P , attached to the side A' of the main frame. On the shaft O' is secured an indicating-wheel O^2 , formed on its periphery with a graduation in yards and subdivisions thereof, the graduation being proportionate to the peripheral surface of the measuring-roller G , so that the length of the material passing over the said roller corresponds to the graduation on the indicating-wheel O^2 , it being understood that the gearing above referred to and consisting of the pinions N N^3 and gear-wheels N' O is made accordingly. On the outer end of the shaft O' is secured a knob or handle O^3 , under the control of the operator, to set the indicating-wheel back to zero whenever the lever H has been shifted to the right and the pinion N is out of mesh with the gear-wheel N' .

40 A hood p' is arranged over the measuring device and is formed on its top with an opening P^2 , through which appears the top numeral of the graduation on the wheel O^2 , a pointer P^3 being provided for accurately indicating on the said graduation. (See Fig. 2.)

Now when it is desired to run off a length of paper from the roll D it is first necessary to set the measuring device back to zero, and for this purpose the catch H^4 is thrown up out of engagement with the pin H^3 to permit the operator to swing the lever H to the right, so as to move the pinion N out of mesh with the gear-wheel N' . When this has been done, the operator turns the knob O^3 from the right to the left until the graduation "0" is reached, the graduation being read through the opening P^2 at the pointer P^3 . The lever H is then thrown back to its forward position and locked in place by the catch H^4 , as shown in Fig. 4.

55 The paper is now run from the roll D over the measuring-roller G and once or twice around the spindle I . The operator then turns the handle L^3 to rotate the said spindle to wind up the paper thereon.

65 Now by the operator looking at the grad-

uation of the wheel O^2 he can keep on winding until the length of the paper desired by the customer is indicated at the pointer P^3 —that is, this length of paper is now wound upon the spindle I . The operator now removes the pin J from the side A^2 to unlock the spindle, which can now be moved out of the recess A^6 and out of the socket in the head K' with the length of paper on the spindle. A transversely-extending knife Q , secured on a pivoted frame Q' , is now swung upon the paper at the roller G , as indicated in Fig. 3, and the operator by exerting a transverse pull with the roll of paper on the spindle I readily tears the paper along the edge of the knife Q . The length of paper in the form of a roll is now slipped off the beam I . Now before starting off a second length of paper for the next customer the measuring device is set back to zero, as above explained.

The side arms of the frame Q' are pivoted on the sides A' and A^2 , and the said side arms normally rest on pins Q^2 , secured to the said side arms. (See dotted lines, Fig. 1.)

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A measuring-machine, comprising a supporting-frame, a rod for carrying the roll of material, said rod having one end pivoted and its other end resting in a slot of the frame, a winding-up spindle detachably mounted in the frame at the end of the frame opposite the said rod, a measuring-roller in the frame between the said rod and spindle, a swinging lever in which one of the journals of the roller is mounted, a pinion on the journal of the roller mounted in the lever, a measuring device having a gear-wheel adapted to mesh with the said pinion, a catch for locking the lever in position, and a cutter movable into and out of contact with the measuring-roller, substantially as described.

2. A measuring-machine, comprising a supporting-frame, a swinging rod for carrying the roll of material, a winding-up spindle detachably mounted in the frame, a measuring-roller mounted in the frame between the said rod and spindle, a lever pivoted at one end and in which one of the journals of the measuring-roller is mounted, a pinion on the said journal of the measuring-wheel, a shaft carrying a gear-wheel and pinion, the gear-wheel meshing with the pinion of the measuring-wheel, an indicating-wheel, a gear-wheel on the shaft of the indicating-wheel and meshing with the pinion of the said shaft, a handle for setting the indicating-wheel to zero, and means for locking the pivoted lever in position, substantially as described.

GEORGE W. HYDE.

Witnesses:

THEODORE FRINK,
H. H. TULLER.