

(No Model.)

2 Sheets—Sheet 1.

W. T. BARKER.  
REGISTER.

No. 431,178.

Patented July 1, 1890.

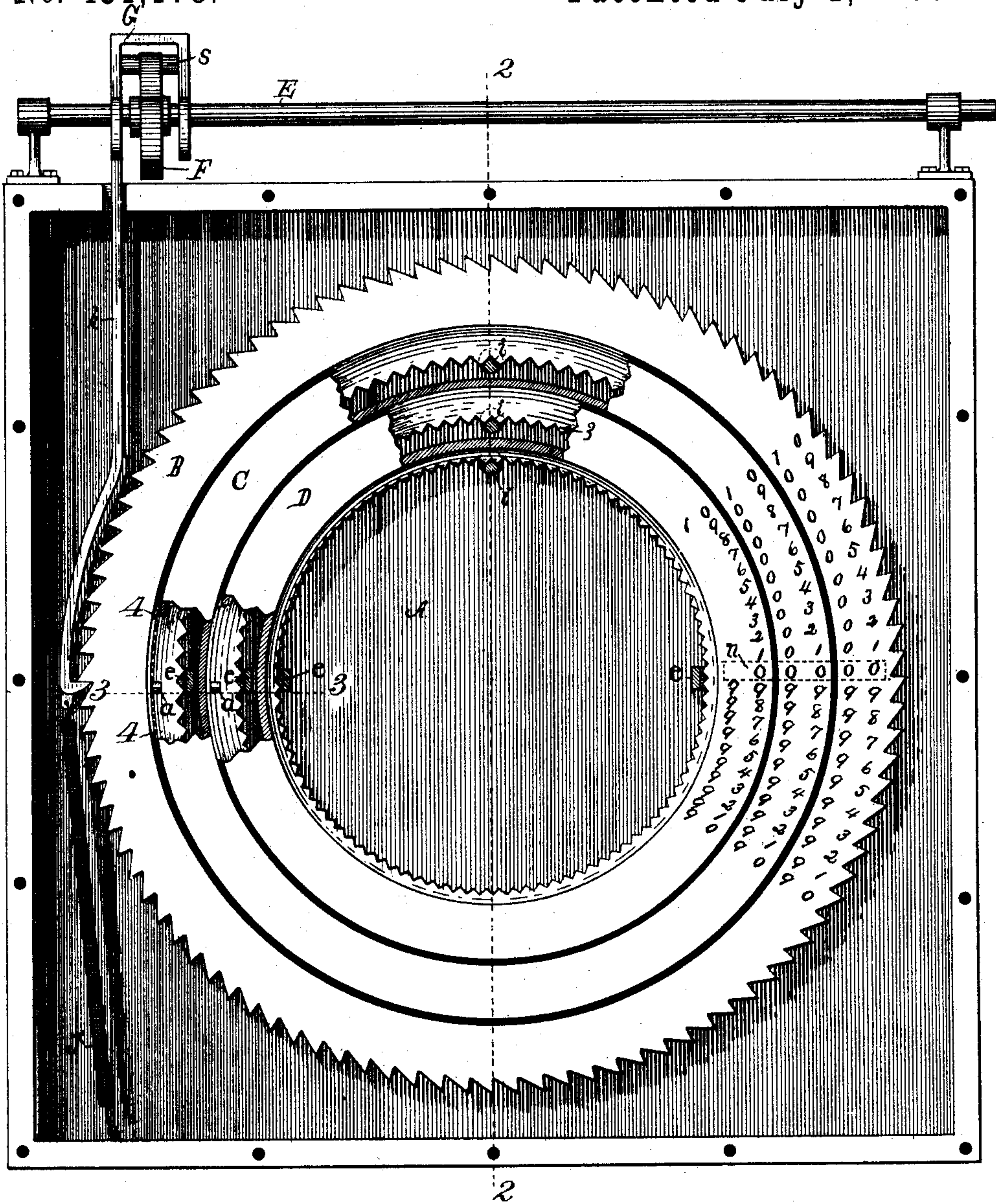


Fig. 1

Witnesses:

Walter S. Wood

L. L. Benson

Inventor.

W. T. Barker

By Lucius C. West

Att'y

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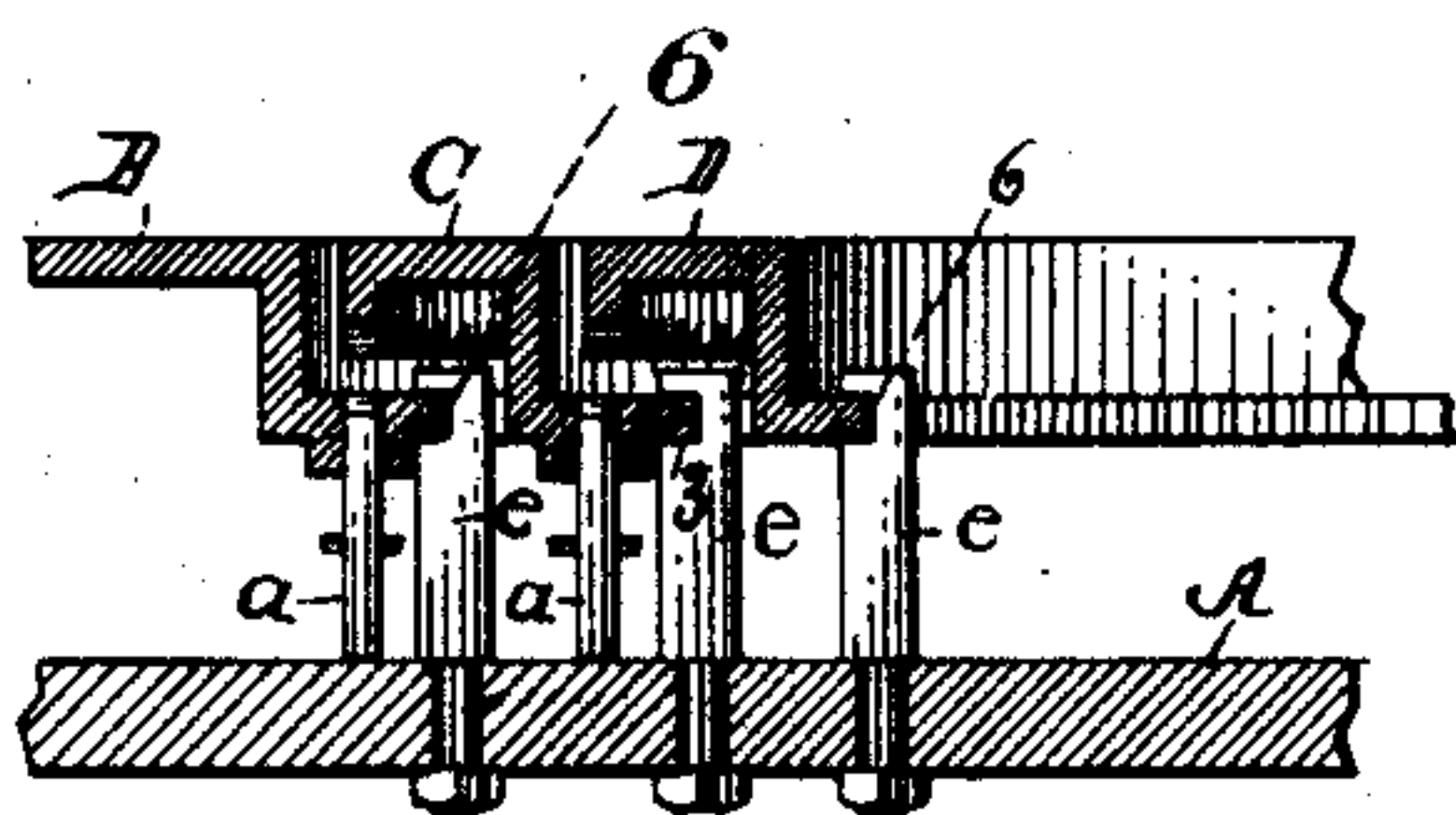


Fig. 3

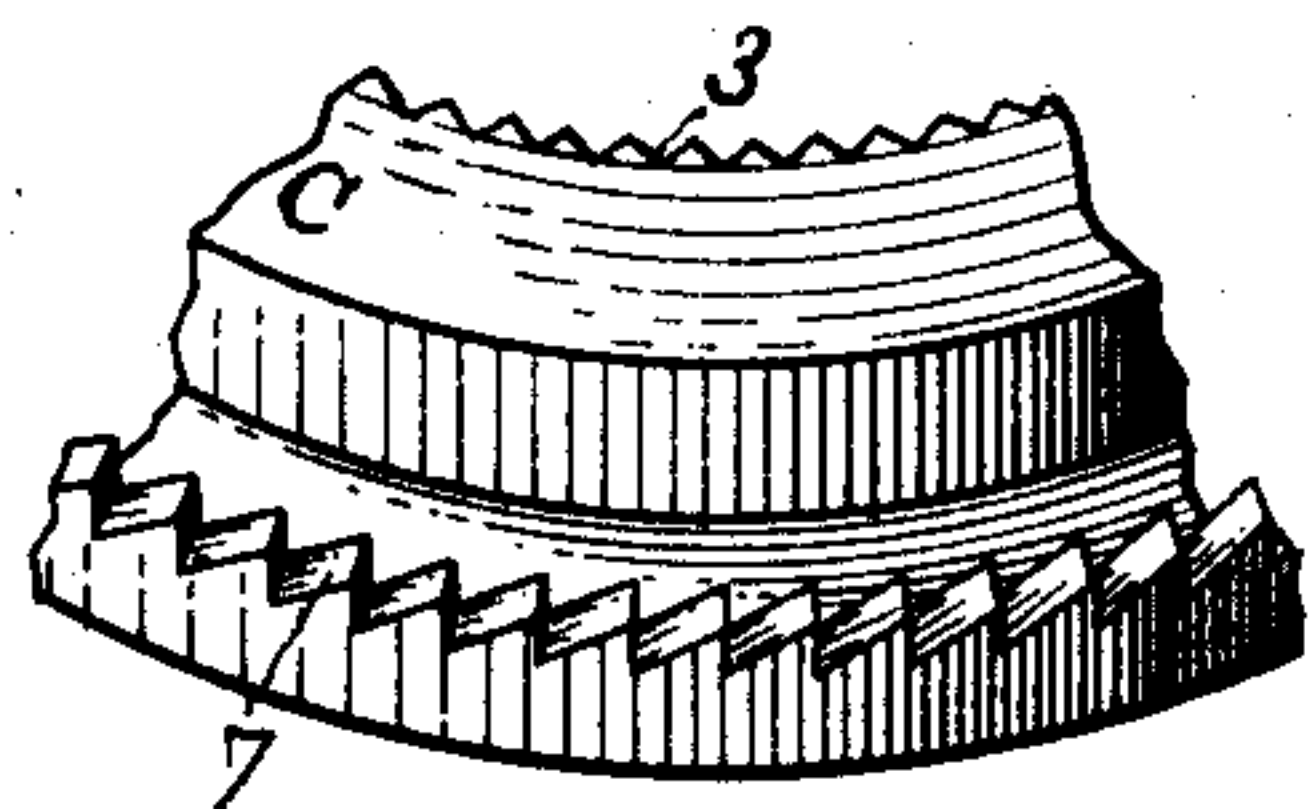


Fig. 5

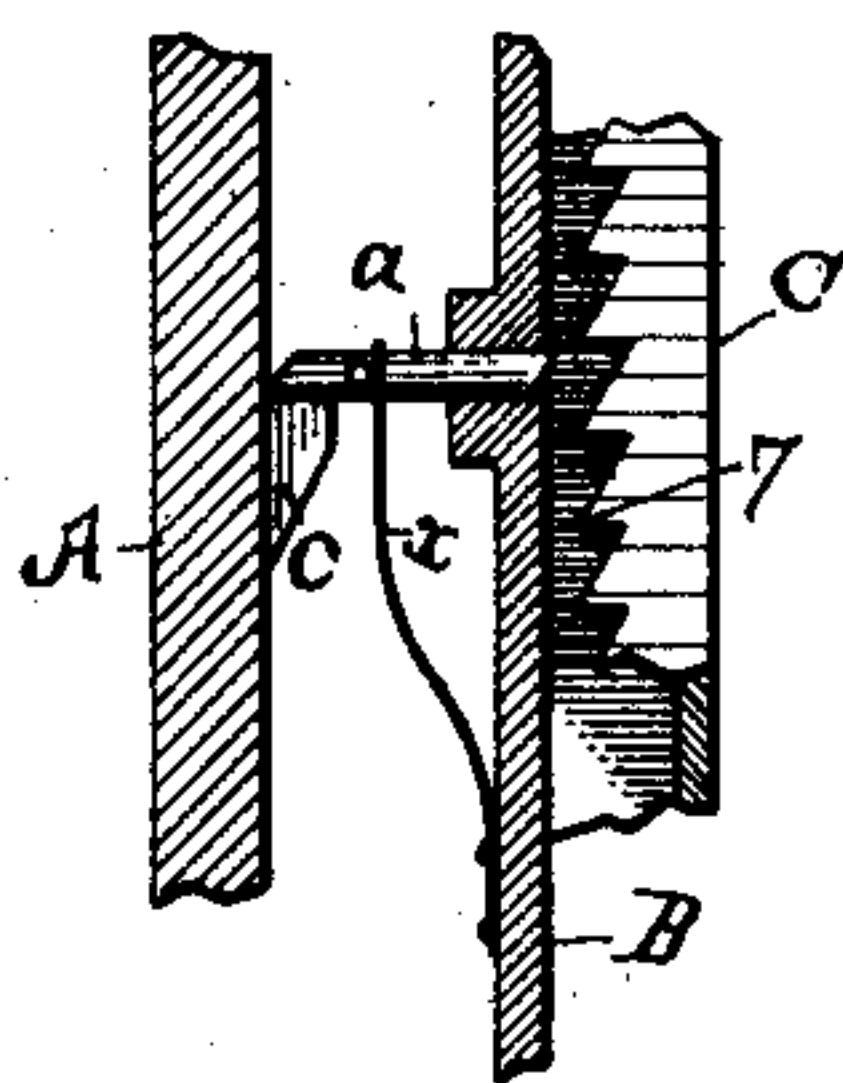


Fig. 4

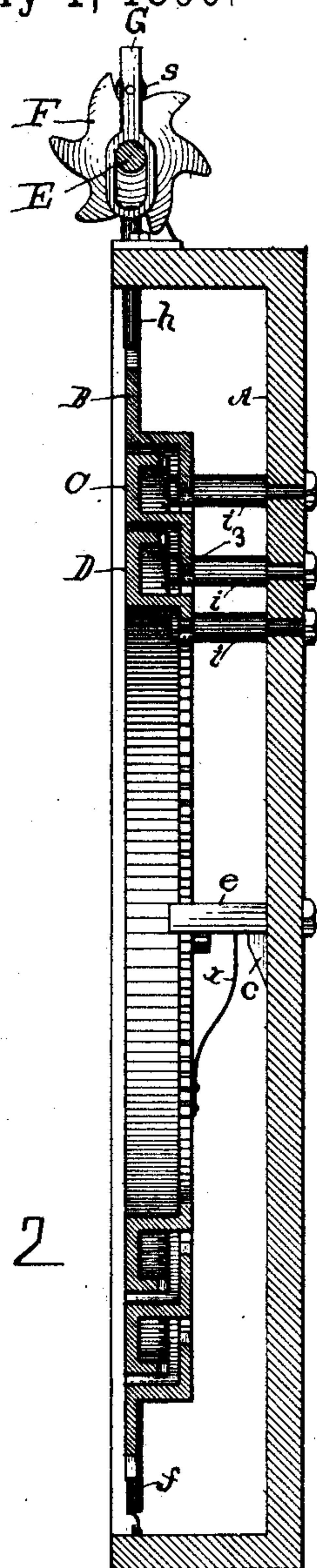


Fig. 2

Witnesses:

*Halter S. Wood*

*L. L. Benson*

Inventor.

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By *Lucius C. West*  
Att'y



# UNITED STATES PATENT OFFICE.

WELLS T. BARKER, OF NASHVILLE, MICHIGAN, ASSIGNOR TO THE BARKER  
AUTOMATIC SCALE COMPANY, OF SAME PLACE.

## REGISTER.

SPECIFICATION forming part of Letters Patent No. 431,178, dated July 1, 1890.

Application filed January 23, 1890. Serial No. 337,858. (No model.)

### *To all whom it may concern:*

Be it known that I, WELLS T. BARKER, a citizen of the United States, residing at Nashville, county of Barry, State of Michigan, have invented a new and useful Registering Device, of which the following is a specification.

This invention relates to that class of registering devices in which a series of rotating rings are employed one within the other and bearing numerical characters upon their outer faces; and it has for its object the below described and claimed peculiar construction and association of parts.

In the drawings forming a part of this specification, Figure 1 is a front elevation showing the front wall of the case removed and portions of the rings being broken away and certain lettered details in cross-section. Fig. 2 is a section on line 2 2 in Fig. 1, looking from a point at the right hand. Fig. 3 is a section on line 3 3 in Fig. 1. Fig. 4 is a section on line 4 4 in Fig. 1, looking from a point at the left; and Fig. 5 is a back view of a broken portion of one of the rings enlarged.

Referring to the lettered parts of the drawings, A is the case in which the rings B C D are arranged one within the other. There is a slot through the front wall of the case, as indicated at *n* by dotted lines in Fig. 1. The characters representing the numbers are presented at said slot, and said characters are placed upon the front face of the rings and entirely around the same, a portion of said characters being shown on the rings at the right in Fig. 1. With the rings in their normal position as here shown nothing is presented at the slot *n* except a row of ciphers. The figures on each ring are from 0 to 99—that is, the figures, which are of course arranged to read from left to right, begin with an 0 at the opening *n* on the inner ring and end one space below the slot with 99. The other rings are numbered in like manner, with the addition of an 0 at the left of 1 2 3 4 5 6 7 8 9 on each additional ring.

The operation will be explained below. The rings are provided with teeth around their inner edge, as at 3 in Fig. 5, and on the back at their outer edge, as at 7 in Figs. 4 and 5, except the outer ring B, has no teeth

on the back, but is provided with teeth around its outer edge, as in Fig. 1. The rings are hung upon pins *i*, as in Figs. 1 and 2, said pins being attached to the case A at the top. Guides *e e*, having a notch 6, Fig. 3, which catches over the inner edge of the rings, thus keeping the rings from getting out of their proper place, and thus preventing them from binding one against the other, are arranged at the sides and project from the back wall of the case A and outward between the rings. The ring B is provided on the back with a latch *a*, Figs. 3 and 4, which is passed through a hole in said ring to engage one of the notches 7 of the ring C against the resistance of the spring *x*. Said pin is thrown out by coming in contact with inclined lugs *c*, which lug is attached to the case A. This action takes place when the ring B has made one revolution, and as it continues to move the ring C is jogged one notch, and when this action has taken place the latch *a* will have passed the lug *c* and the spring *x* will have disengaged the latch *a* from the teeth 7 of the ring C, as in Fig. 4. At this time the outer ring will be in the position it now occupies in Fig. 1, and the ring C, which will have been jogged one notch, will register 1 at the opening *n*, and said 1, together with the two ciphers at the right on ring B, will register 100. In short, the outer ring B makes one revolution while the ring C is making one notch, or, in fact, makes one hundred revolutions to one revolution of the ring C. The rings C and D have a like construction of latch *a* and in a like relation to each other, as do the rings B and C, as shown in Fig. 4. Thus the ring C makes one revolution while the ring D is making one notch, or makes one hundred revolutions to one revolution of the ring D, and the characters are thus presented at the opening *n* to register any number from one up to one less than a million.

A less number of rings or a greater number bearing like characters and in like relation with each other may be employed.

While any suitable mechanism may be employed to rotate the rings one notch at a time, I have shown in Figs. 1 and 2 a simple construction which will illustrate the idea.



At E is a power-shaft upon the case A, and having near one end a toothed disk F. At *h* is a vertically-playing rod, which is provided with a hook at the lower end for engaging  
 5 with the teeth of the outer ring B. This hooked rod raises under the resistance of the spring *f*. The rod *h* is provided at the top with a yoke G, rigidly attached thereto, said yoke being provided with vertically-elongated  
 10 slots, through which the power-shaft E passes, and by this means the rod *h* is guided and kept in proper position.

In the upper end of the yoke G is a roller S, adapted to engage the periphery of the  
 15 toothed disk F. Thus each tooth acts as an eccentric-cam on the roller S and causes, in connection with the spring *f*, the rod *h* to play up and down alternately the distance of one tooth on the outer edge of the ring B.

20 It will be observed that the teeth at the inner edge of each ring B, C, and D fit over the respective pins *i i i*, as seen in Fig. 1, and said teeth lift over the pins the distance of one tooth at a time when each ring is moved  
 25 one notch at a time. The rings are thus locked at the point at which they indicate and will so remain until the operative power moves them, as before described.

This device will be found useful for various purposes, among them registering weight 30 in connection with scales and registering quantities of grain and the like.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

35 The combination of the case, the series of rings one within the other and bearing numerical characters, said rings having the inner teeth and the teeth on the back side of all except the outer ring, said outer ring hav- 40 ing teeth around its outer edge, pins attached to said case upon which said rings are hung, the guides attached to said case and catching over the inner edge of the rings at the sides, the spring-actuated latches, the in- 45 clined lugs with which they come in contact at each revolution of the rings, and suitable means for jogging the rings, substantially as set forth.

In testimony of the foregoing I have here- 50 unto subscribed my name in presence of two witnesses.

WELLS T. BARKER.

Witnesses:

THEOD. C. DOWNING,  
 J. H. SMITH.