

(Model.)

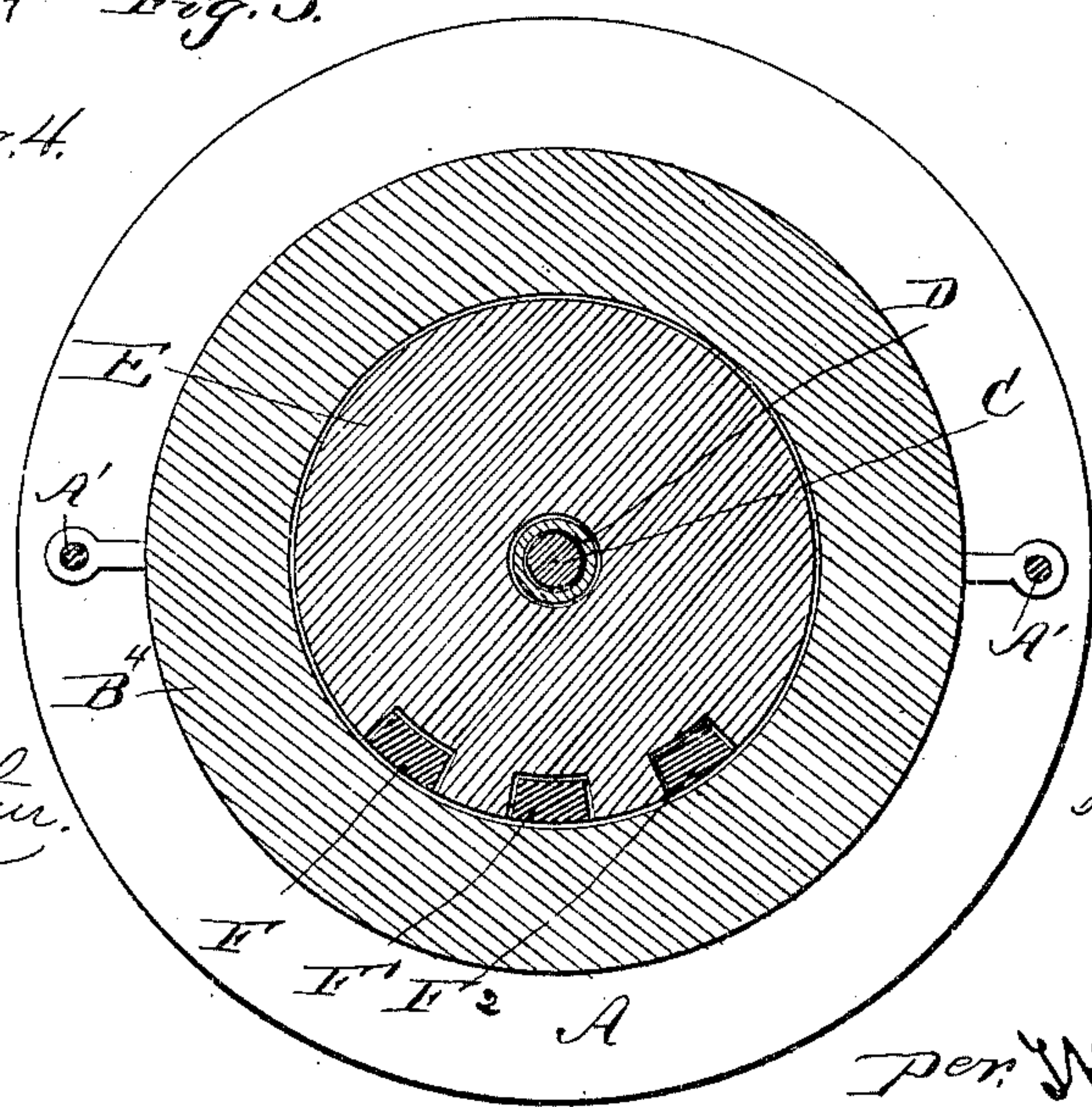
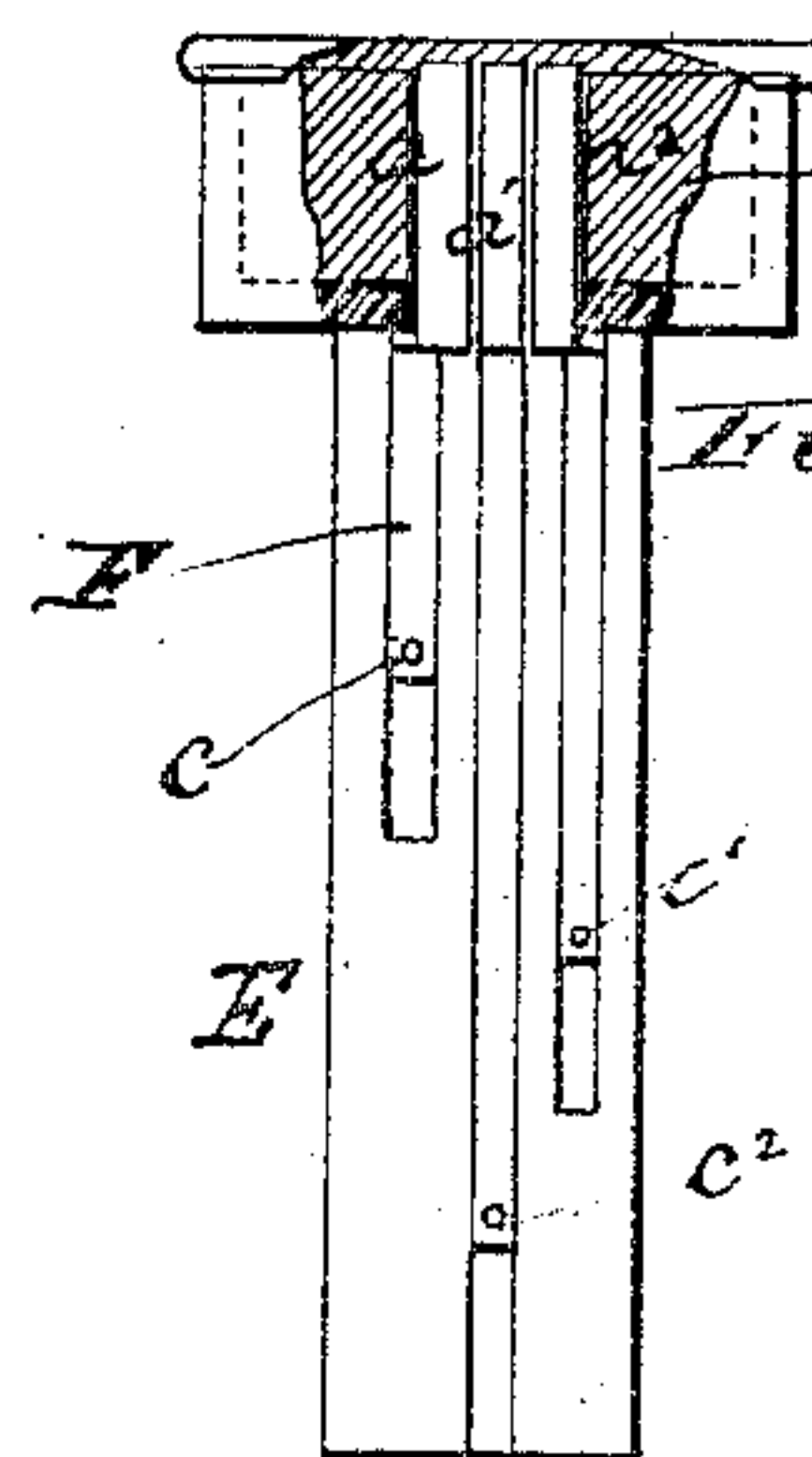
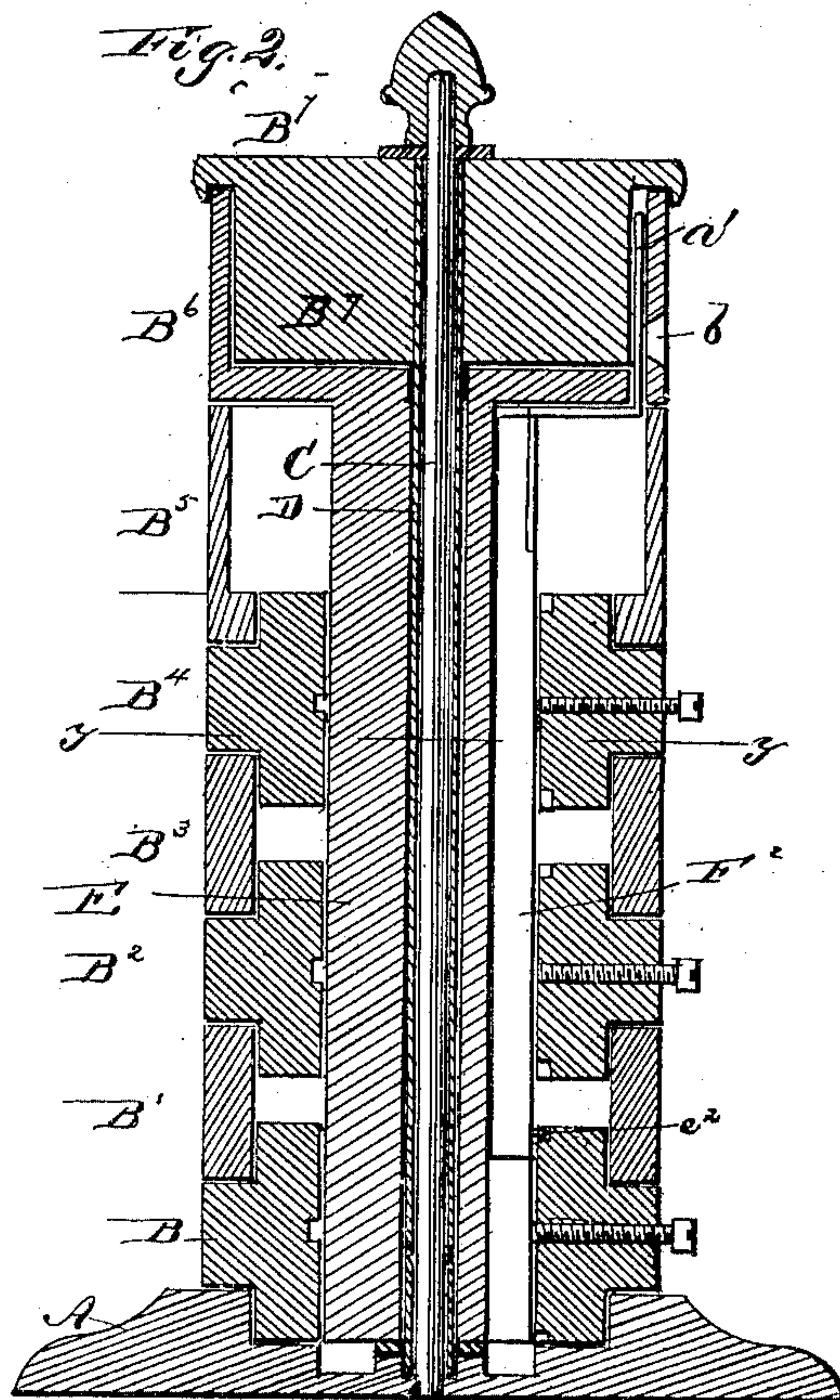
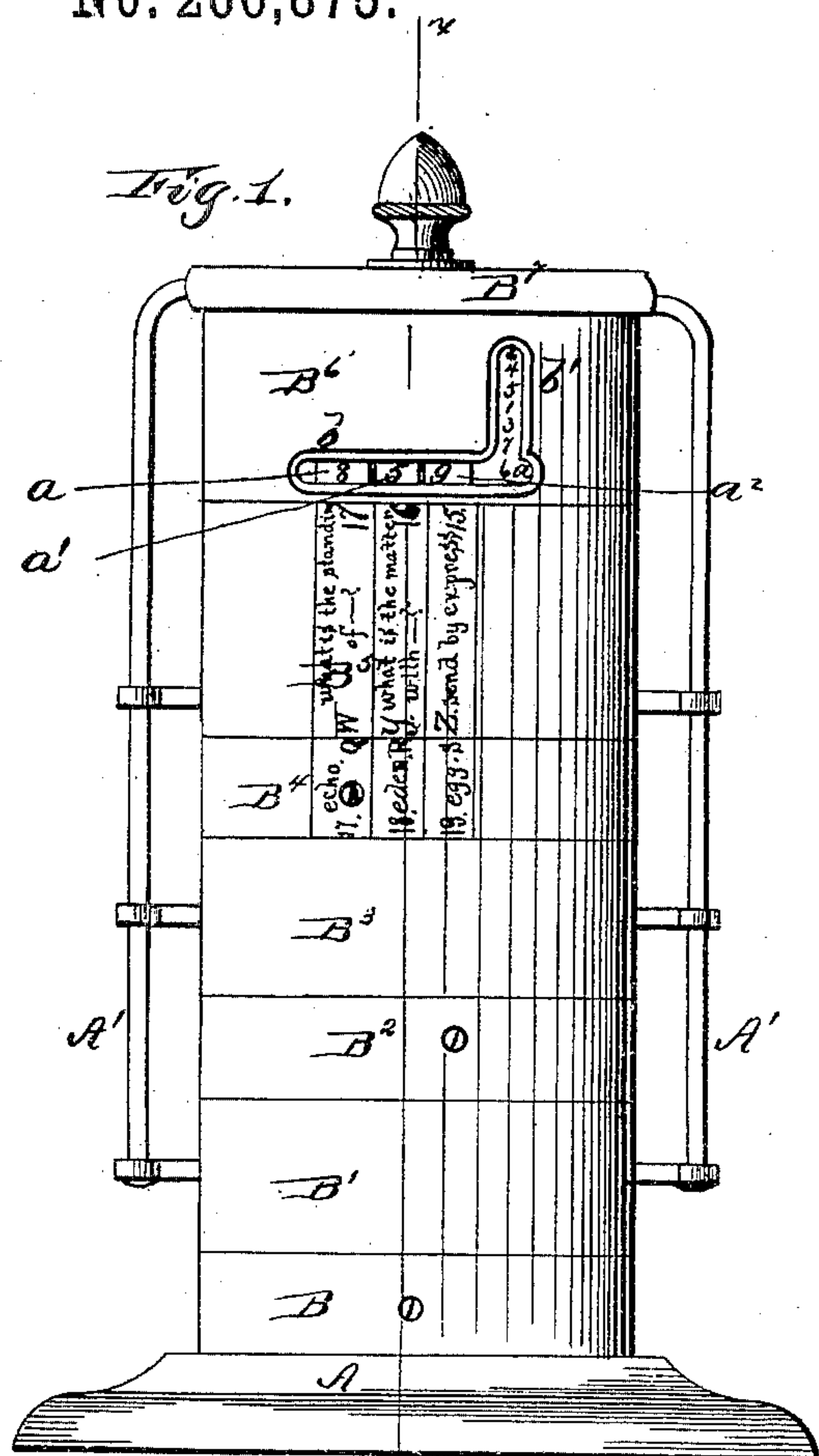
2 Sheets—Sheet 1.

R. T. ONEY.

CIPHER CODE AND APPARATUS.

No. 266,875.

Patented Oct. 31, 1882.



Witnesses,
H. C. Jones Arthur.
W. R. Keyworth.

Inventor
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Per: W. Alexander
Attorney.

(Model.)

2 Sheets—Sheet 2.

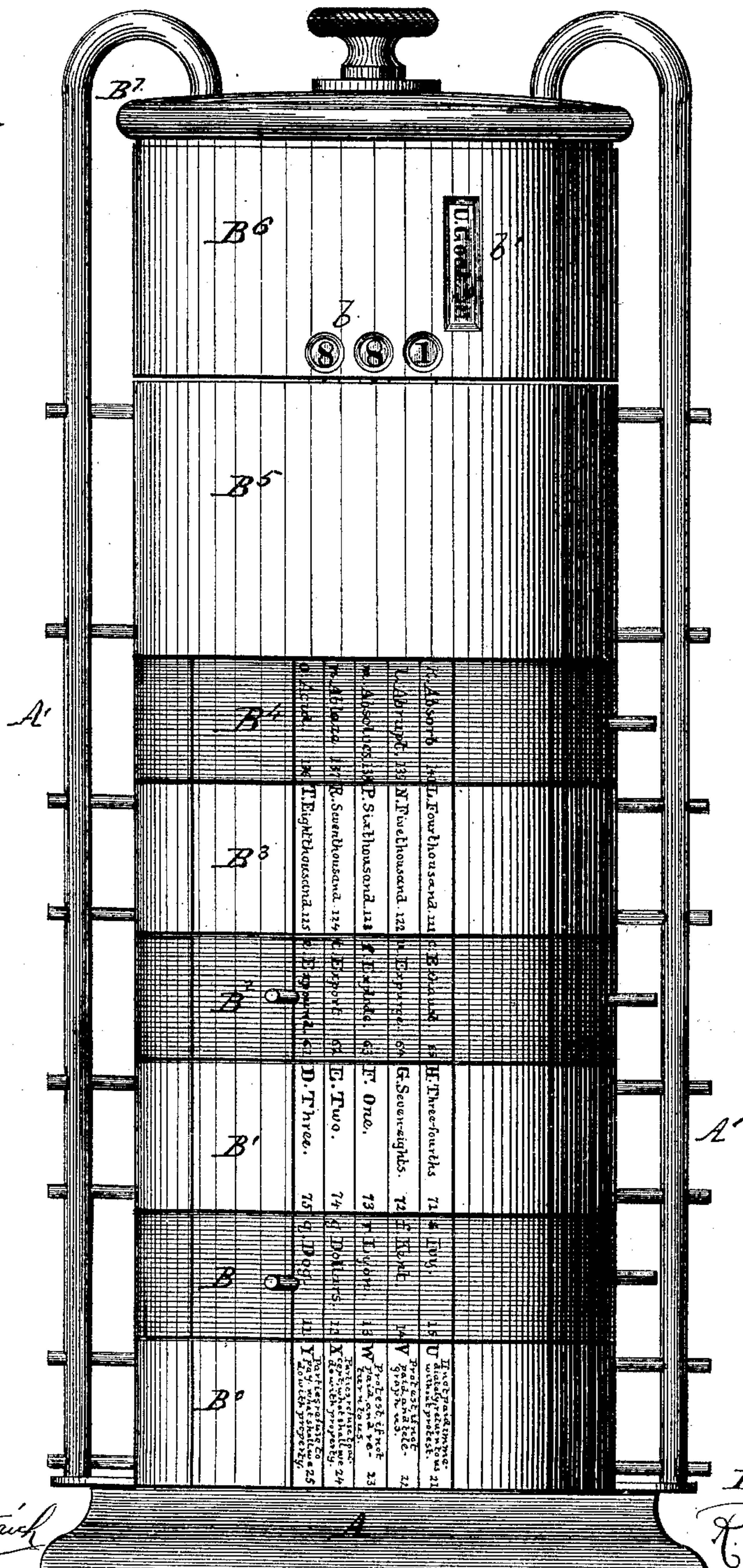
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Fig. 5



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UNITED STATES PATENT OFFICE.

ROBERT T. ONEY, OF HUNTINGTON, WEST VIRGINIA.

CIPHER CODE AND APPARATUS.

SPECIFICATION forming part of Letters Patent No. 266,875, dated October 31, 1882.

Application filed May 13, 1882. (Model.)

To all whom it may concern:

Be it known that I, ROBERT T. ONEY, of Huntington, in the county of Cabell and State of West Virginia, have invented certain new and useful Improvements in Cipher Codes and Apparatus for Same; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, and in which—

Figure 1 is a side elevation of my apparatus. Fig. 2 is a central vertical section on the line $x x$, Fig. 1. Fig. 3 is a cross-section on the line $y y$, Fig. 2. Fig. 4 is a side elevation, partly in section, of the core. Fig. 5 is a front elevation of a modification of my improved apparatus, illustrating one practical mode of using the code of signs or signals.

My invention has relation to the transmission of a code of signals whereby thought can be transmitted secretly and intelligibly, and at the same time economically, and also for personal identification between individuals.

This invention has especial relation to the transmission of ideas by signs, signals, colors, or other marks—such as names—between individuals or corporations or societies.

The nature of my invention consists in a new and improved system, combined with an apparatus whereby a sentence composed of arbitrary words, numerals, or other signs can be reduced to one word, number, mark, or other intelligible sign, and transmitted from one person or body of persons to another, as will be fully understood from the following description, when taken in connection with the annexed drawings.

In carrying out my invention I shall now proceed to describe one practical mode of carrying it into effect. I shall first do this by describing my improved machine.

The letter A designates the base of the machine. $A' A'$ are rods which are attached to the head B^7 . The rods $A' A'$ are connected to $B' B^3 B^5$, so that these parts will rotate with the head B^7 .

The column consists of the parts $B B' B^2 B^3 B^4 B^5$ and a cylindrical collar, B^6 , inside of which latter is a cylindrical head, B^7 , having

a bead or flange of greater diameter than the collar B^6 .

C designates a rod, which is rigidly fixed at its lower end to the base A, and which receives upon it a tube, D. This tube is rigidly secured to the head B^7 , which is loosely fitted into the collar B^6 , and which is allowed to be removed from the hollow cylinders, carrying the guide-rods with it. When the head B^7 and its tube are properly adjusted in their places I confine them thereto by means of a nut and washer, as shown in Fig. 2. The cylindrical collar B^6 , which is arranged between the flange of the head B^7 and the section B^5 , is free to rotate about its vertical axis, and it has concentrically formed on it a cylindrical shaft, E, which is stepped upon the base A, and which receives freely through it the tube D, about which it is allowed to rotate. The shaft E is grooved vertically, or in a direction parallel to its axis, and in these grooves are applied slides $F F' F^2$, bearing respectively on their upper ends angular plates, the vertical portions $a a' a^2$ of which pass through a slot which is made through the base of the collar B^6 , and are free to play up and down between this collar and the cylindrical head B^7 . The collar B^6 has a horizontal oblong opening, b , through it, which exposes to view certain characters marked on the vertical portions $a a' a^2$, as will be hereinafter explained, and also an opening, b' , which is designed to expose to view certain other characters which are indicated upon the periphery of the head B^7 .

It will be seen that I have combined with vertically-movable slides and the plates $a a' a^2$, which may form part of the slides $F F' F^2$, a cylindrical head, which rotates in a plane at right angles to said slides. I can thus bring into view any numerical combination, or any desired combination of characters other than the numbers indicated on the vertical slides, or together therewith, which of course may be arbitrary. The cylinders will be provided on their faces with numbers, words, sentences, or other characters.

The cylinder B^5 is cup-shaped, and is adapted to allow the angular portions $a a' a^2$ to be depressed and to have free vertical play. The lower end of this cylinder B^5 has an internal

flange and receives within it the cylindrical tenon of the section B⁴, which centers it and allows it free circular play with the guide-rods A'. The section B⁴ is provided with tenons on both ends, and is an intermediate section between the section B⁵ and the section B³. The section B⁴ has a helical groove in it, in which is received a pin, c, fixed on the slide F. The turn of the groove is exactly equal to the highest or lowest strokes which it is desired to give the said slide F, in a complete rotation of the section B⁴.

B³ designates a simple female cylinder, which is placed between the section B⁴ and the section B², which latter is provided with tenons on both ends, precisely like the section B⁴, and, in fact, is a duplicate of this section B⁴. The helical groove in the section B² is equal to one turn of this section, and is adapted to receive the pin c' on the slide F² and to give vertical movement to the latter. This section B² is applied to a female section, B', which is applied to the lowest one of the sections, (lettered B,) the lower end of which is recessed into the base A. The lowest section is screw-grooved like its corresponding superimposed fellows, B² B⁴, and in the helical groove of this section is received a stud or pin, c³, which is fixed to the lower part of the slide F'.

It is obvious that the same order of arrangement of the male and female parts of the column may be repeated according to the number of slides which it may be desired to employ, and of course the number of slides and their upper terminal plates used may be multiplied at pleasure.

Instead of the vertical rods A', which I have above described, for the purpose of holding the cylindrical sections B' B³ B⁵ while turning about their vertical axes, I may employ an inclosure suitably adapted to the purpose as an equivalent of the guide-rods A'. Such inclosure may be made of glass or any transparent material, provided that the characters can be read from the outside of the said casing.

The instrument which I have above explained may be made portable; or, if desired, it may be made on a small scale and used on a table in an office. The same principle is applicable to light-houses, where the signals, which I shall hereinafter explain, can be made intelligible to vessels at sea, either during the night or during the day.

The code which I have invented, and which depends upon the machine which I have above described, consists in applying to the fixed and movable sections of the machine characters differing from each other, which, when they are adjusted so that they will register according to a predetermined arrangement, will indicate at once the thought which is desired to be conveyed. On the circumference of the fixed part B⁵ may be indicated a sentence, a figure, or other character. I am now describing a single one, or a series, of the characters used in my system.

It will be obvious from what follows that I do not confine myself to the precise character or combination of characters herein shown, as I reserve the right to adopt any character, mark, or symbol which may be found most desirable in carrying out my invention.

On the circumference of the movable part B⁴ certain other characters are applied, which, when they are adjusted in apposition with the characters on the part B⁵, will indicate the thought which it is desired to express. On the circumference of the part B⁷, which is inside of the part B⁶, I apply in any suitable manner letters, characters, or marks, which can be exposed to view through the opening b', made through the part B⁶, as illustrated in Fig. 1. On each one of the plates which is exposed through the horizontal slot b are characters commencing with 0, and continuing in a vertical line with the numerals 1 2 3 4 5 6 7 8 9. These characters may be made visible by imprinting on the surface of or perforating the said plates, or by any other means whereby they can be clearly seen. These characters may be illuminated by a light of any suitable kind placed in the head or in any other convenient locality.

I will now describe one practical mode of carrying my invention into effect. Suppose, for instance, that A draws a draft on B in favor of C for any amount, and A and B possess the machines which I have above described, or the equivalent thereof. A and B are made acquainted with a certain combination or key, by means of which they can individually communicate with each other.

To illustrate one practical mode of carrying my invention into effect, I will explain. The drawer and drawee are individual banks or other corporations, while the payee is the individual who is the representative of himself or some company. I will designate said parties, respectively, in the order above mentioned, by A B C. Now, for example, A and B each possess a machine such as I have described, which machines are duplicates and agree upon a common combination—say, for instance, the number "881, V," as shown through the horizontal opening b and the vertical opening b' through the case B⁶, inclosing the head B⁷ when the same are taken together. Now, suppose that C is a purchaser from A of a draft—say, (\$4,000,) four thousand dollars. Now, when C is furnished with the word "absorb," as indicated on the cylinder B⁴ of Fig. 5, immediately above the sentence indicated on the cylinder B³ on said figure, then all which is necessary for C to do when he presents his draft to B for payment is to give B the word supplied him (C) by A—viz., the word "absorb"—either verbally or by writing the same in connection with his indorsement on the said draft. Now, B will adjust his machine to the combination previously agreed upon between himself and A—viz., "881, V"—when the amount for which the draft is drawn—to wit, four thousand dollars—is shown in the sentence "four thousand" on the cylinder B³,

while the word which C has given is indicated in exact alignment therewith on the cylinder B⁴, and the machine of B will stand in every particular like the machine of A at the time he
 5 furnished C with his draft and the word "absorb." It naturally follows that C must be the identical person who transacted the business with A, and the latter is justified in making payment to him, C. It is obvious that in forming
 10 this combination with the number 881, either the word, letter, or number can be taken; or the three characters together may be used.

It will be seen that I do not connect any one of the ring-sections B B² B⁴ to the guide-rods A', but that I unite the sections B', B³, B⁵, and B⁷ together, so that they will all turn together. At the same time I allow and provide for the independent rotary movement of the intermediate sections, for the purpose explained. The
 15 parts B' B³ are rigid with the rods A', and part B⁵, together with the said parts, serve as supports for the intermediate cylinders.

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

1. The combination of the rotary head having intelligible characters on it, the inclosing shell thereof, having an opening through it, slides which are vertically movable and arranged opposite said opening, and cylinders,
 30 which have characters on them which are movable about the said vertical axis, all constructed and arranged to operate substantially in the manner and for the purposes specified.

2. The combination of a rotary cylinder, an inclosing shell therefor, provided with an angular opening, vertical slides, which are exposed through said opening, and characters on said cylinders, which are also exposed to view
 40 through the opening made through said cylinder, all constructed and arranged to operate substantially in the manner and for the purposes described.

3. The within-described means of operating a cipher code, consisting of a combination of
 45 different characters, which are arranged on movable slides and cylinders adjustable at right angles to each other, whereby any secret key can be arranged, all substantially in the manner described. 50

4. The combination of the internally-screw-grooved male rings or cylinders, the intermediate female rings or cylinders, the core or shaft E of the shell B⁶, the slides which are moved by said screw-grooved rings, the angular plates, which are rigid with said slides, the head or cap on the core or shaft E, and the shell surrounding said head, all constructed and arranged substantially in the manner and
 55 for the purpose described. 60

5. The combination of the rods A', or the equivalent thereof, the head B⁷, the shell B⁵, the ring B³, the intermediate rotary internally-screw-threaded rings, and the adjustable slides actuated by turning said head, the characters
 65 on the said slides and head being exposed to view substantially in the manner and for the purposes described.

6. As a new and improved article of manufacture, the combination of a column of rotary
 70 rings or hollow cylinders independently adjustable, an adjustable end or cap, and vertically-movable slides, which are adjustable by means of the said cap, and which are exposed to view through the shell or part surrounding
 75 the latter, substantially as and for the purposes specified.

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

RO. T. ONEY.

Witnesses:

T. H. ALEXANDER,
 WM. R. KEYWORTH.