

No. 670,744.

Patented Mar. 26, 1901.

L. B. THOMAS.  
INDEXING MACHINE.

(Application filed Aug. 22, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 3.

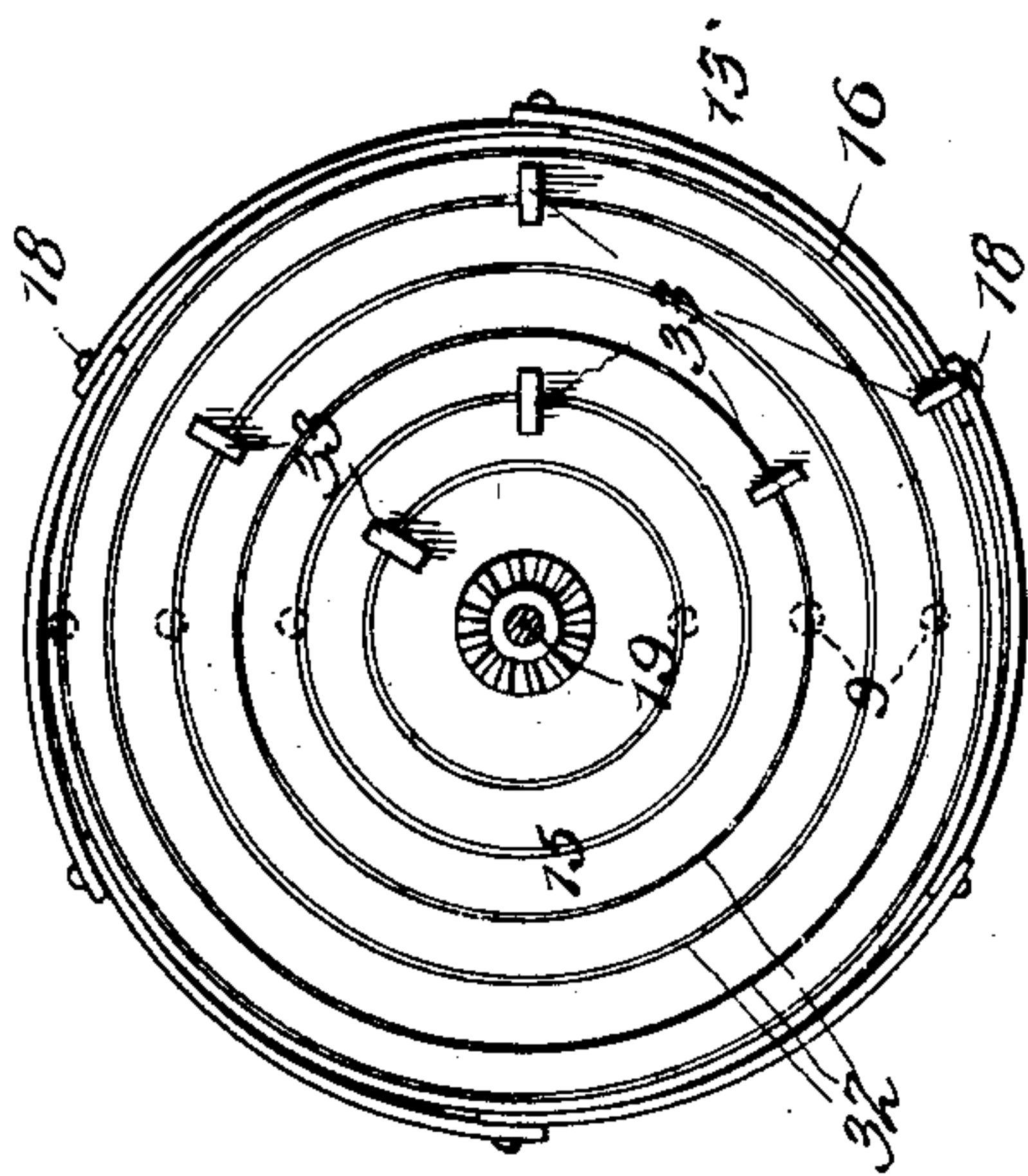


Fig. 4.

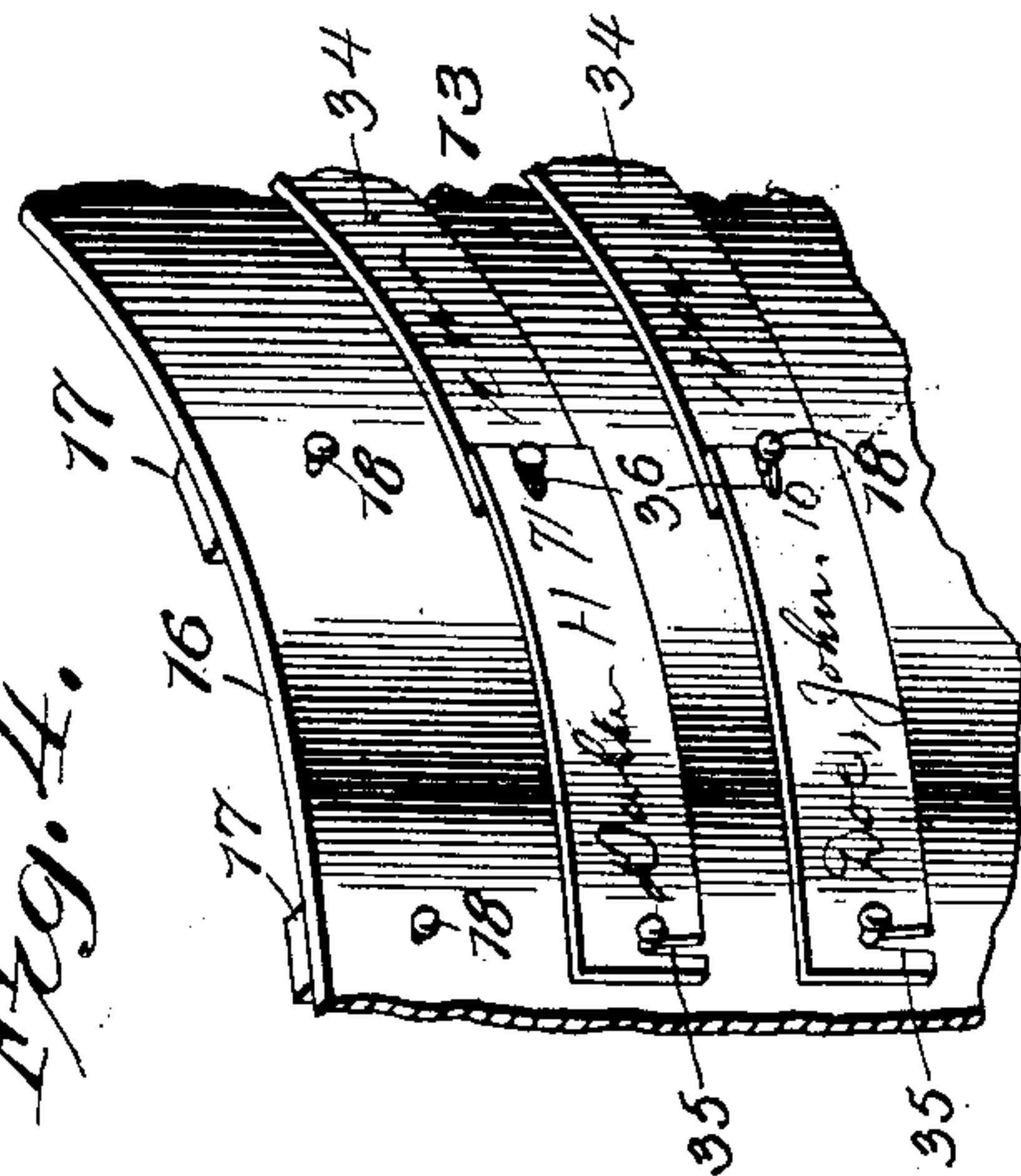
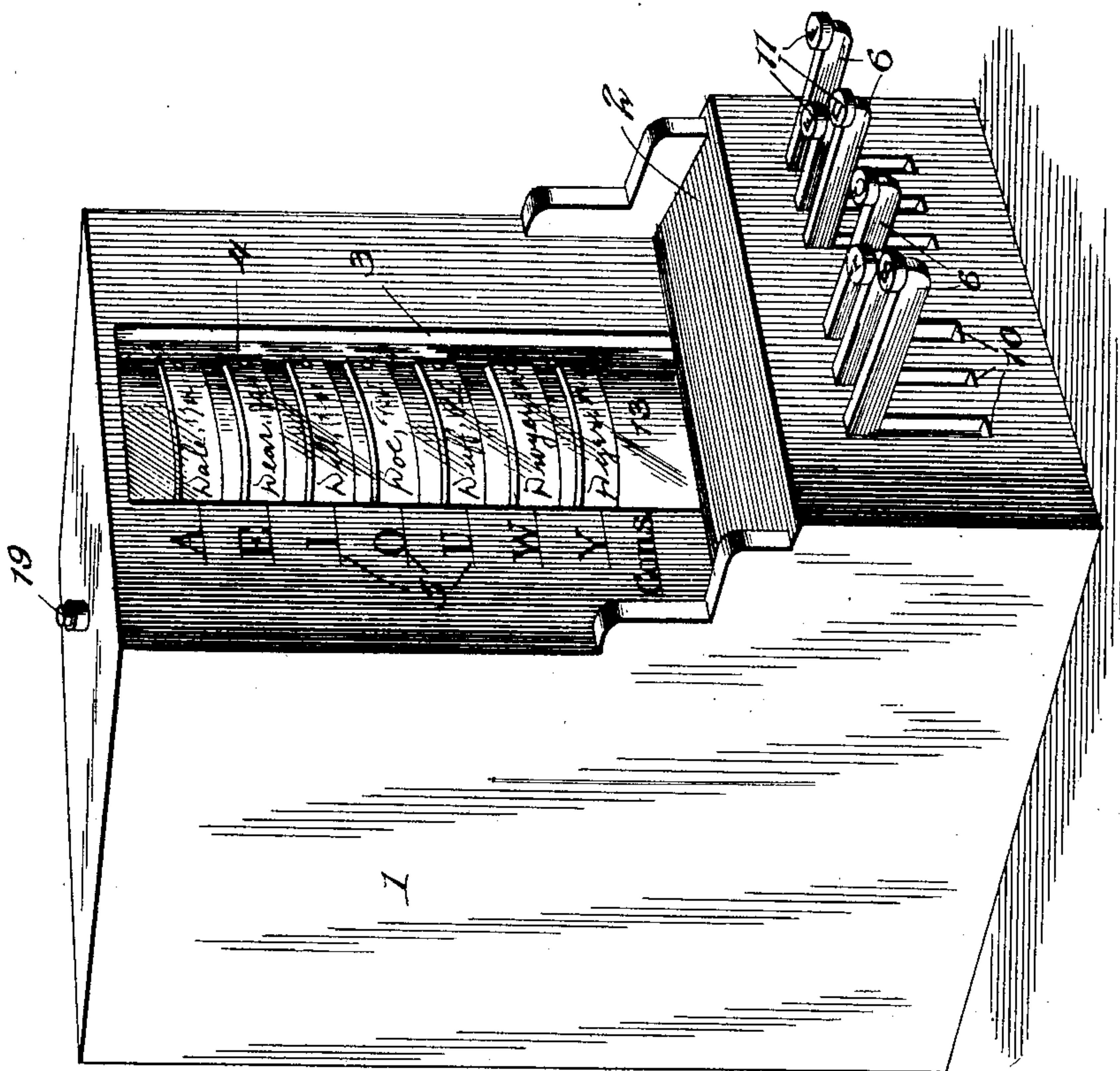


Fig. 1.



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# UNITED STATES PATENT OFFICE.

LUTHER B. THOMAS, OF RINGGOLD, LOUISIANA.

## INDEXING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 670,744, dated March 26, 1901.

Application filed August 22, 1900. Serial No. 27,723. (No model.)

*To all whom it may concern:*

Be it known that I, LUTHER B. THOMAS, a citizen of the United States, residing at Ringgold, in the parish of Bienville and State of Louisiana, have invented a new and useful Indexing-Machine, of which the following is a specification.

This invention relates to indexing-machines; and the object of the same is to provide a device for conveniently carrying and exposing index-strips especially adapted for use in indexing ledgers, journals, sales-books, and the like, and to be situated at such a point relatively to a counter, table, or book-rest as to be readily operated to display the letter-index desired, the parts being simple and effective in their construction and operation, strong and durable, easily operated, and comparatively inexpensive in the cost of manufacture.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of an indexing-machine embodying the features of the invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a bottom plan view of the index-drum. Fig. 4 is a detail perspective view of a portion of the said drum. Fig. 5 is a detail perspective view of the motor-releasing device. Fig. 6 is a detail perspective view of one of the key-levers.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates an inclosing casing having a lower front extension, forming a ledge, as at 2, and immediately above the latter the front of the casing has a vertical opening 3, formed therein, covered by a sight glass or panel 4, which exposes the interior of the said casing for a purpose which will be presently explained. In vertical alinement along one side of the opening 3 and having indicator or lead lines 5 are the vowels "A," "E," "I," "O," "U," "W," and "Y," and below the same the consonants can be placed, the vowels only being shown in close relation to enable the machine to be illustrated on a larger scale, and

it will be understood that the casing may be made any height desired to compensate for or accommodate as many letters as may be used in the machine. They may also be placed close together or far apart, and the position of the vowels will designate the location of names having the second letter similar thereto and commencing with different consonants. This arrangement will form a convenient guide for the eye of the operator and facilitate finding the name desired. It will also be understood that as many keys will be used as there are names on the index-carrying device and comprise levers 6, intermediately fulcrumed on a transversely-extending pivot-rod 7, common to all the levers used. The rear ends of the levers 6 have free movement in a vertically-slotted seat-block 8, secured within the lower part of the casing, and each lever has a distinct slot to work in, so that it will be held steady in its movement and be prevented from having a lateral movement, and thereby overcome any tendency to an irregular movement due to wear or torsional strain. Projecting upwardly from the rear ends of the levers are pins or stop extensions 9 for a purpose which will be presently explained, and the front extremities of the levers are free to move in vertical slots 10 in the front of the extension of the casing. The said front extremities of the levers are normally located considerably in advance of the front of the casing extension and are provided with key-heads or buttons 11, supplied with a letter indication corresponding to that letter which the lever controls in each instance on the index device, and to maintain the several levers in uniform elevated position they each have a bow-spring 12 secured to the under edge thereof, which bears at the opposite extremity on the inner upper portion of the base of the casing.

Within the casing is a vertically-disposed rotatable drum 13, comprising upper and lower heads 14 and 15 of circular form and having a metallic covering 16 secured thereto, which is reinforced at intervals by vertical bracing-strips 17, applied to the inner side thereof and also giving a stable support to headed studs 18, arranged in vertical alinement in regular spaced relation on the drum.



The drum is fixed to a vertically-disposed rotatable spindle 19, having bearing at its upper end in the top of the casing and having its lower extremity extending through the seat-block 8, a rear recess 20 being formed in the lower part of the latter to give freedom of movement to a horizontal bevel-gear 21 on the lower end of said spindle and in mesh with a vertical bevel-gear 22 on the front terminal of a power-transmitting shaft 23, forming part of the complement of a spring-motor 24 of any preferred and suitable construction and adapted to be wound from the back of the casing, as shown, the said shaft having a stop-pin 25 thereon to be engaged by an upstanding stop tooth or projection 26 on the central part of a rear horizontal cross-bar of a motor-controller 27. In addition to the cross-bar just referred to the controller comprises side bars 28, which are fulcrumed at their rear ends and extend forwardly into the extension of the casing and formed with upwardly-projecting arms 29, supporting a horizontal rod 30, having a transverse position under and in continual contact with the under edges of the levers 6, spring attachments 31 at opposite sides holding the front portion of the controller in normal elevated position.

The lower side of the bottom head 15 of the drum is formed with a series of concentric circular shallow grooves 32 to regularly divide the said lower side and corresponding in number to the key-levers, and depending from the said head are a plurality of flat lugs or projections 33, which are radially arranged at different distances from the center of the drum and are centrally disposed with relation to the grooves, there being one lug or projection to each groove. The grooves serve solely to properly locate the lugs or projections 33. The number of lugs or projections will correspond precisely to the number of letters carried on the drum, and by depressing any one of the levers 6 its rear end will be thrown up and bring the pin or stop thereof in line with the corresponding lug and at the same time lower the front end of the controller and release the tooth 26 thereof from the pinion 25 on the shaft 23, thereby permitting the motor to actuate the drum, and the latter will continue to turn until the pin or stop on the rear end of the depressed lever comes into contact with the lug 33 corresponding thereto, when the movement of the drum will be immediately checked and the name sought can easily be found by inspecting the line of vowels 5 and selecting the vowel known to be the second letter of the name desired and following the line therefrom to the desired name indexed on the cylinder and which will have been brought into coincidence with the said selected vowel and which will have also indicating matter in connection therewith to show the page of the ledger, journal, sales, or other book. As soon

as the depressed lever is released the parts will be restored to the position shown by Fig. 2 and further operation of the motor will be prevented by the tooth 26 striking into the teeth of the pinion 25. Immediately after a depression of one of the levers any other lever may be similarly operated with a like result.

It is obvious that a variety of methods could be adopted in applying the index matter to the drum; but the preferred arrangement is that shown in the drawings, and consists of a series of strips 34, of paper or analogous material, each having a vertical slot 35 near one end and a longitudinal slot 36 extending inwardly from the opposite end, and the longitudinally-slotted end of each strip is made to overlap the vertically-slotted end of the succeeding strip in horizontal alinement around the drum, as shown by Fig. 4, to thereby prevent the said strips from being thrown off the studs 18, with which said strips engage, and also provide for ready removal of any one of the strips of the horizontal series without detaching the others of the same series. By this means also changes in the index-names can be very easily made, and it is also preferred in the particular arrangement set forth to have intervening spaces between the horizontal rows of the strips to avoid confusion in finding the name desired. The strips 34, having names thereon beginning with the same consonant, will be arranged in vertically-alined series, so that the second letter (a vowel) will correspond precisely to and coincide with the consecutively-arranged vowels on the one vertical side edge of the opening in the front of the vertical portion of the casing, as clearly indicated by Figs. 1 and 4. The initial letters of the names on the strips around the drum in a horizontal direction may vary in accordance with any preferred arrangement; but the said names will all have for the second letter the vowel of that line, as indicated on the vertical side edge of the opening through which the drum is exposed. The drum will be caused to rotate in such direction that the initial letters corresponding to the several key-levers will be exposed through the opening in the casing when the said key-levers are individually depressed in proper alined relation to the vowels 5, and the position of the names on the cylinder, considered circumferentially, will be regulated in accordance with the lugs on the bottom of the cylinder, or said lugs will be disposed in such manner on the bottom of the drum that when the key-levers are depressed the initial letters which they represent will be shown by the drum when the latter comes to a stop before the opening in the casing.

A spring-motor has been shown for rotating the drum for the purpose of a practical demonstration solely, as it is intended to use any other type of motor applicable for the purpose, and the machine is generally subject to a wide range of modification in the form,



size, proportions, and minor details, which may be changed without departing from the principle of the invention.

Having thus described the invention, what is claimed as new is—

1. In an indexing-machine, the combination of a casing with a sight-opening therein, a rotatable drum carrying the index-names, and a plurality of key-levers having means to engage the lower portion of the drum and stop the same to expose the names having the initial letters corresponding to the letter carried on the key-lever depressed.

2. In an indexing-machine, the combination of a casing with a sight-opening therein, a drum carrying index-names and having depending projecting devices at predetermined intervals thereon, a motor for rotating the drum, a controller for the motor, and a plurality of key-levers each having an upwardly-extending stop to engage its corresponding projecting device on the drum to stop the movement of the latter to expose the names having the initial letters corresponding to the letter carried on the key-lever depressed, the controller releasing the motor simultaneously with the depression of the operated key-lever.

3. In an indexing-machine, the combination of a casing with a sight-opening therein, a drum having index-names thereon, a motor for rotating the drum, a controller for the motor, and a plurality of key-levers, each by their depression releasing the motor through the controller to operate the drum and to stop the latter to expose the names having the initial letters corresponding to the letter carried on the key-lever depressed.

4. In an indexing-machine, the combination with a casing, a rotatable drum mounted therein and exposable therethrough and carrying index-names, and a plurality of key-levers operating by the depression of any one of the same to permit the drum to be rotated

and subsequently stop the movement of the latter to expose the names on the drum corresponding in initial to the letter on the depressed key-lever.

5. In an indexing-machine, the combination of a casing provided with a sight-opening with the vowels arranged in alinement along one edge thereof and readable horizontally, a movable index-carrying device having the index-names arranged thereon to dispose the same in line with the vowels similar to those of the second letters thereof, and means for actuating the drum to expose the desired names.

6. In an indexing-machine, the combination of a rotatable index-name-carrying drum having a plurality of vertically and horizontally alined headed studs, and overlapping flexible index-strips each having a vertical slot in one end portion and a longitudinally-extending slot in the other end portion, the longitudinally-slotted end portions of a part of the strips extending over the vertically-slotted end portions of adjacent strips.

7. In an indexing-machine, the combination of a rotatable index-name-carrying drum having radial lugs at different distances from the center of the head, means for automatically rotating the drum, and a plurality of key-levers by their depression permitting the drum to be actuated and stopped at predetermined intervals, each of the levers having an upwardly-projecting stop to engage the lug corresponding thereto for the purpose set forth.

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

LUTHER B. THOMAS.

Witnesses:

L. T. ROACH,  
J. L. THOMAS.