No. 778,546. PATENTED DEC. 27, 1904.

J. O. MORRIS.

PRIZE AWARDING ADVERTISING APPARATUS.

APPLICATION FILED DEC. 9, 1903.

3 SHEETS—SHEET 1.

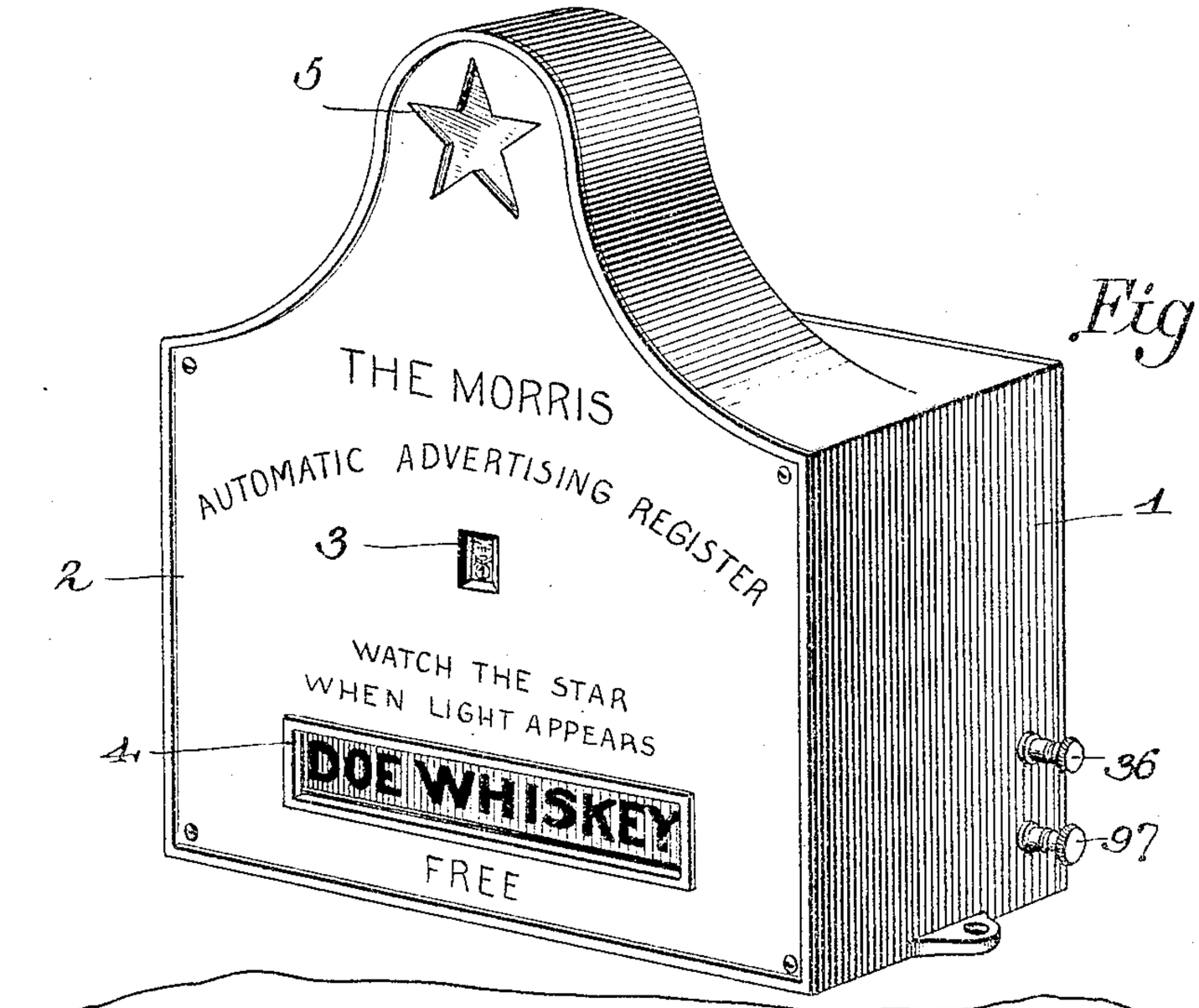

Fig. 1.

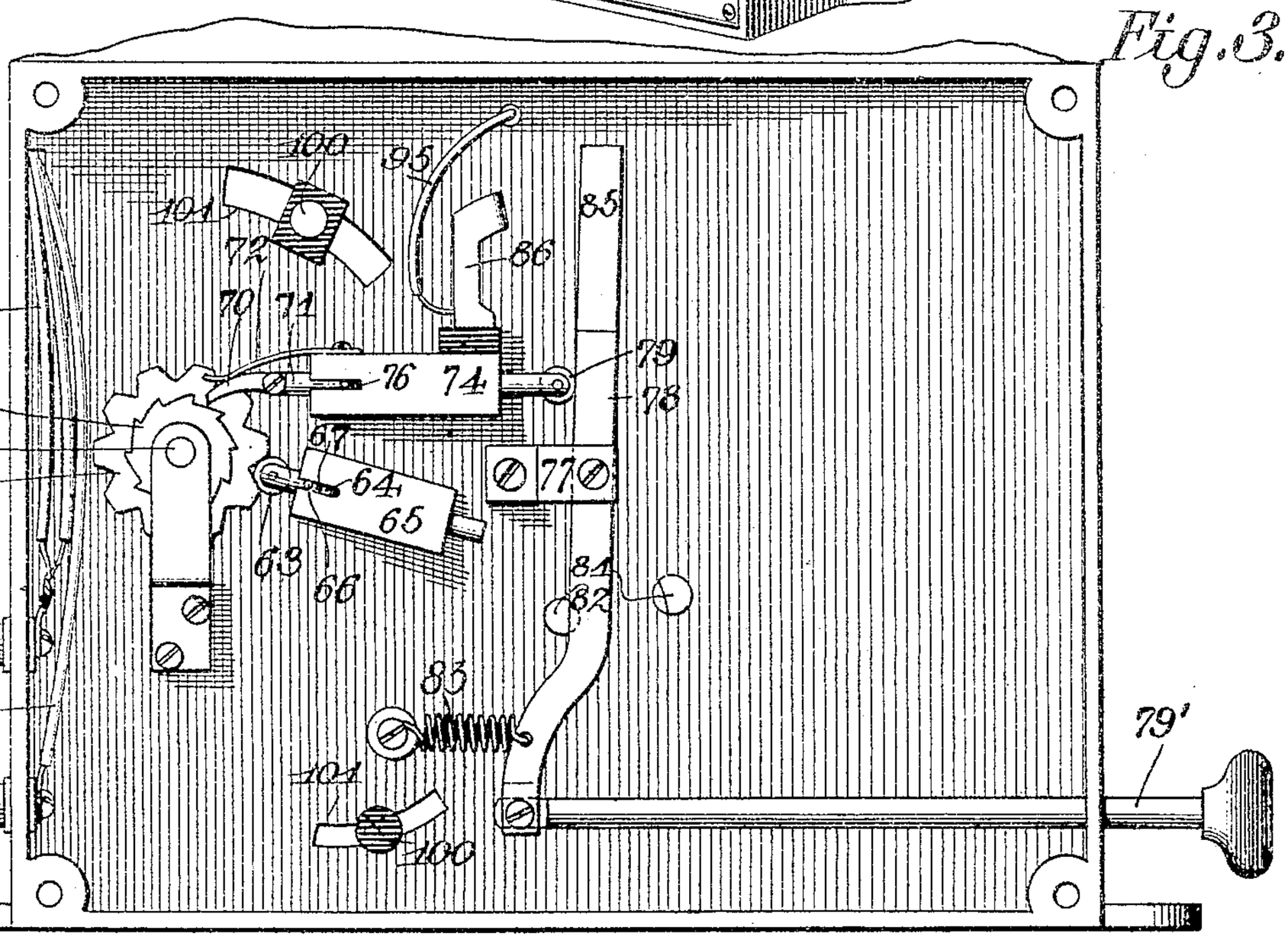

Fig. 3.

Witnesses
E. F. Stewart
Jno. C. Carter

John O. Morris, Inventor.
by Church & Co
Attorneys

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3 SHEETS—SHEET 2.

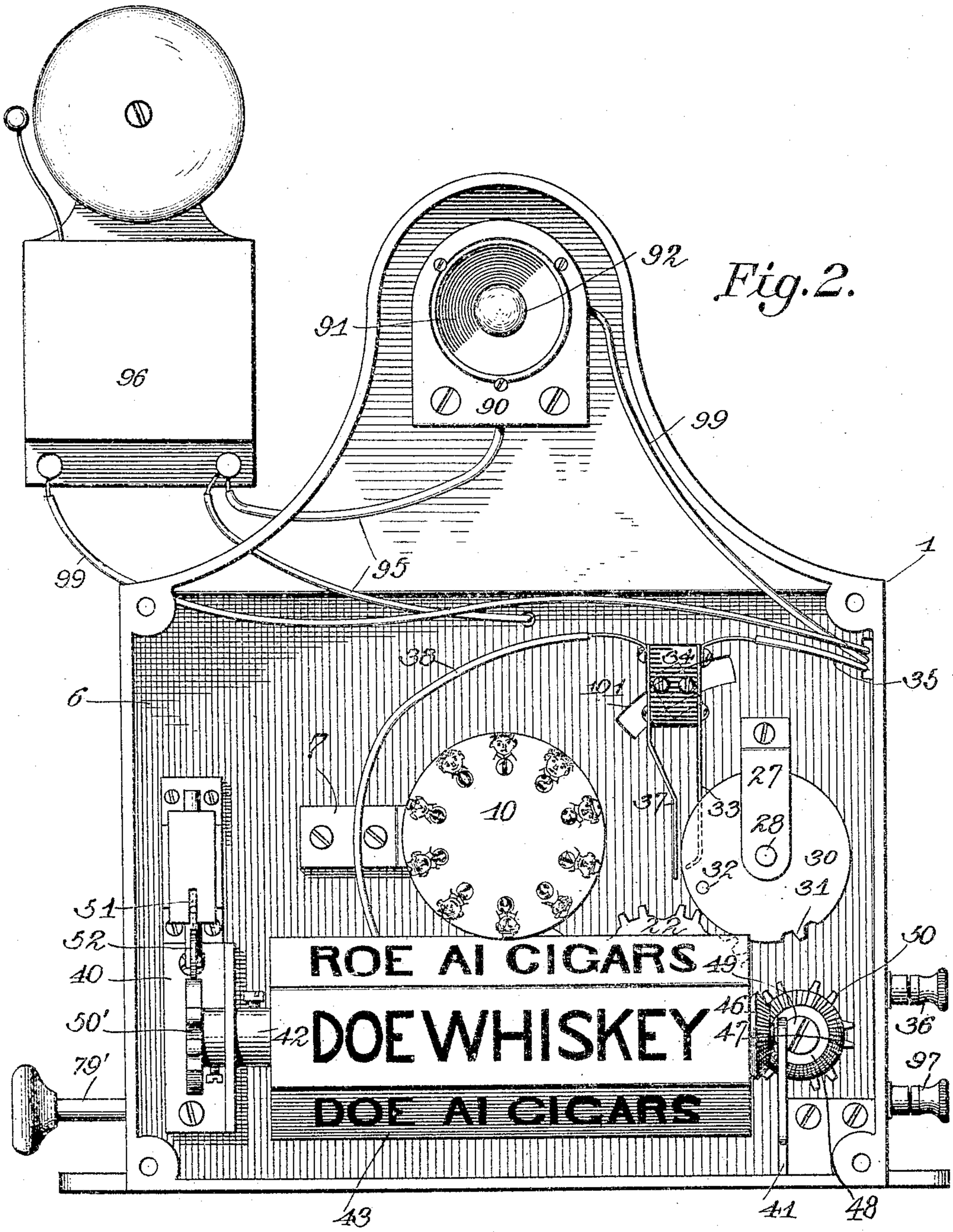

Fig. 2.

Witnesses,
E. F. Stewart
Jno. E. Parker

John O. Morris, Inventor.
by Crosby & Co
Attorneys

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3 SHEETS—SHEET 3.

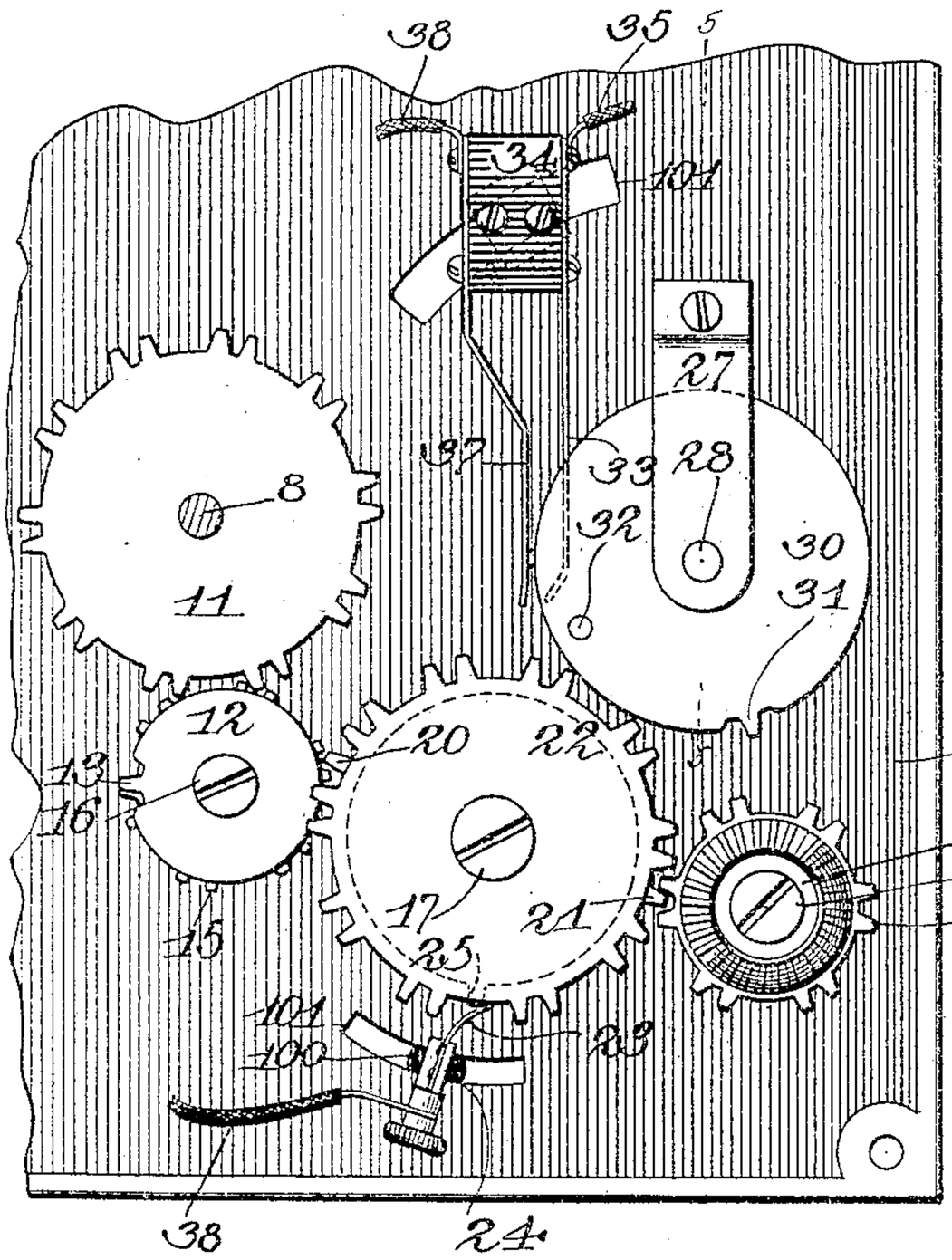

Fig. 5.

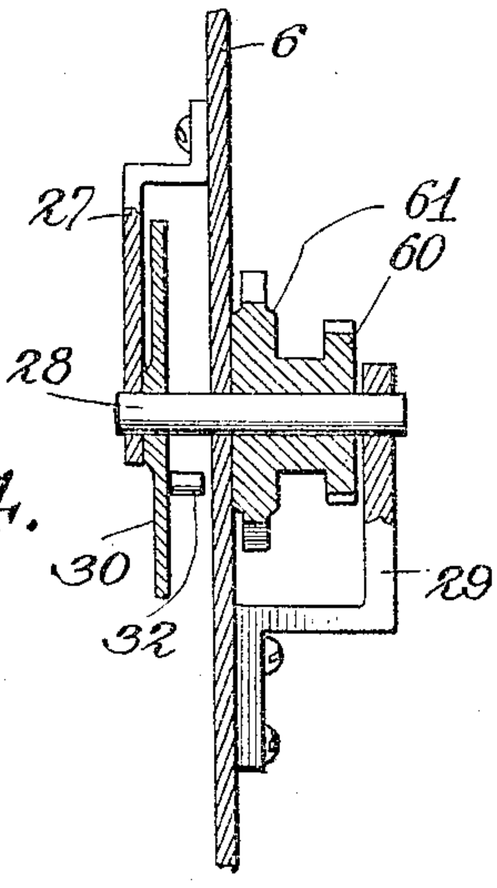

Fig. 4.

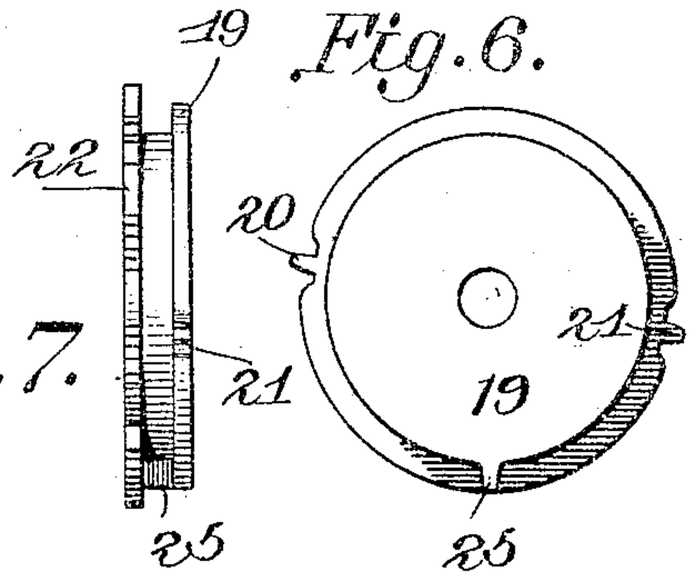

Fig. 6.

Fig. 7.

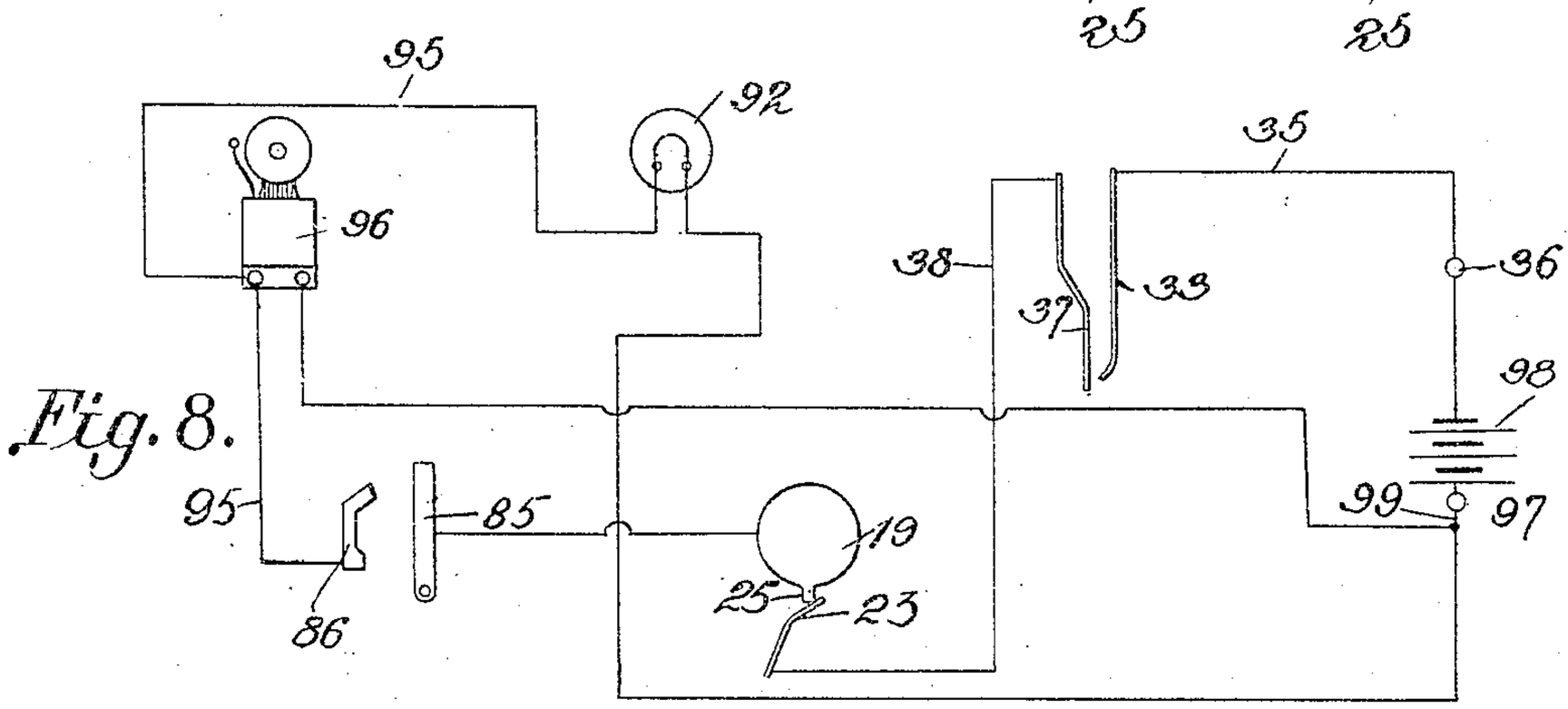

Fig. 8.

Witnesses
E. K. Stewart
Jno. E. Parker

John O. Morris, Inventor.
by C. A. Snow & Co.
Attorneys

No. 778,546. Patented December 27, 1904.

UNITED STATES PATENT OFFICE.

JOHN ODEN MORRIS, OF RICHMOND, VIRGINIA, ASSIGNOR OF THREE-FOURTHS TO JOHN A. TRAYLOR AND JOHN C. HAGAN, OF RICHMOND, VIRGINIA.

PRIZE-AWARDING ADVERTISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 778,546, dated December 27, 1904.

Application filed December 9, 1903. Serial No. 184,467.

To all whom it may concern:

Be it known that I, JOHN ODEN MORRIS, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented a new and useful Prize-Awarding Advertising Apparatus, of which the following is a specification.

This invention relates to certain improvements in that general class of devices known as "profit-sharing sale-counters," which are used for the purpose of stimulating trade by offering a portion of the profits in the shape of goods, rebate, discount, and the like to the purchaser.

The principal object of the invention is to provide a device of this character in which at the end of a predetermined period, as at every fiftieth or one-hundredth sale, the purchaser's attention will be attracted to the device by the operation of an alarm, either visual or audible, or both, the operation of the alarm notifying the purchaser that he is entitled to some predetermined prize or the like.

A further object of the invention is to provide a device which when used in connection with cash-registers or like recording or registering mechanism will attract the attention of the purchaser, so that the clerk will be compelled to accurately register the amount of the sale, the purchaser's attention being attracted by the prospect of obtaining the prize or award.

A still further object of the invention is to provide a device of this character that will be coöperative in its nature, so that a dealer handling different brands of goods may use the device in such manner as advertising each separate brand and the award paid being in the nature of a portion of the goods so advertised, provision being made for changing the advertisement exposed after each award is made.

With these and other objects in view, as will hereinafter more fully appear, the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of a prize-awarding advertising apparatus constructed in accordance with the invention. Fig. 2 is an elevation of the same with the face-plate removed. Fig. 3 is an elevation looking from the rear with the back plate removed. Fig. 4 is a view of a portion of the mechanism shown in Fig. 2. Fig. 5 is a transverse sectional elevation of the mechanism on the line 5 5 of Fig. 4. Fig. 6 is an elevation of one of the transfer-wheels. Fig. 7 is a side elevation of the same, showing also an additional gear-wheel. Fig. 8 is a diagram illustrating the wiring connections.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In the drawings, 1 indicates a suitable case, formed of any material and having a face-plate 2, in which is formed an orifice or display-opening 3, through which numerals, letters, symbols, or other distinguishing devices in the nature of portraits, names, or the like may be displayed. The face-plate is provided with a second opening 4, through which may be displayed advertisements of the goods. In the face-plate there is also formed an opening 5 of some distinguishing or attractive shape, that in the present instance being in the form of a star. This opening may be covered or not, and at a point to the rear of the opening is arranged a small electric light which constitutes a portion of the signal or alarm mechanism, and when the lamp-current is turned on the lamp will glow and instantly attract the attention of the purchaser. The face-plate may bear any advertising or other matter and may be decorated in any suitable manner.

Within the casing is arranged a base-plate 6, that carries most of the movable parts of the device, together with circuit-closing devices, arranged partly on one side and partly

on the opposite side of said plate. The base-plate has a bearing-opening that is provided with a bracket 7, having a similar bearing-opening for the reception of a shaft or arbor 8. On one end of the shaft is secured a disk 10, carrying numerals, symbols, portraits, or other distinguishing devices to be displayed through the opening 3. The distinguishing-marks on the disk may be in the form of numbers arranged in consecutive order, so that the proprietor of the machine can instantly tell the number of times the alarm mechanism has been actuated, or it may bear portraits or names of the owners or manufacturers of the kinds of goods displayed through the lower and larger opening 4. To the opposite end of the shaft 8 is secured a transfer-gear 11, with which engages a disk 12, having a single tooth 13, which intermeshes with the teeth of the gear 11 once during each rotation of said disk, this mechanism being constructed somewhat after the manner of a Geneva stop-movement and the gear being automatically locked immediately after each partial rotative movement imparted by the tooth 13.

The disk 12 is secured to a toothed wheel 15 of a construction similar to the wheel 11, but of smaller diameter, and the disk and wheel 15 are mounted on a stud 16, carried by the base-plate.

The base-plate is further provided with a stud 17, on which is mounted a disk 19, having two teeth 20 and 21, arranged at diametrically opposite points and serving to successively engage with the teeth of the wheel 15 and at each engagement impart partial rotative movement thereto. The disk 19 carries also a toothed wheel 22 of a construction similar to the gear 11, and the disk and wheel are slightly spaced to form an annular groove into which extends a contact-spring 23, carried by a block 24, that is insulated from the base-plate and forms one terminal of the alarm-actuating circuit. The contact-spring is at all times out of engagement with the disk and gear; but once during each revolution of the disk and gear a pin or lug 25 carried thereby will come into contact with the spring 23 and close the circuit at this point, the circuit being partly completed by the gear, disk, and frame. At one side of the base-plate is a bracket 27, forming a bearing for a shaft 28, which extends entirely through the base-plate and is supported at its opposite end by a bracket 29, secured to said plate. At the front face of the base-plate the shaft 28 carries a disk 30, having a single tooth 31 for engagement with the teeth of the wheel 22 and adapted to come into engagement therewith at each complete rotation. This constitutes a train of gearing of which the shaft 28 is the prime mover, and the gears are so constructed and arranged as to interlock and prevent excessive movement should the impulse be imparted with an unnecessary degree of force. The disk 30 carries an insulated pin or plug 32, which at the end of each complete revolution comes into engagement with a spring-contact 33, carried by an insulated block 34 and forming one terminal of an electric circuit, this contact being connected by a wire 35, leading to a binding-post 36 on the exterior of the casing. When the contact 34 is forced outward, it engages a second contact 37, also carried by the insulated block and connected to the contact 23 by means of a wire 38.

The front portion of the base-plate is further provided with a pair of brackets 40 and 41, forming bearings for the support of a horizontally-disposed shaft 42, on which is mounted a drum 43, which may be cylindrical or polygonal. On the periphery of the drum are secured cards or plates bearing advertisements to be displayed through the opening 4, and these are so arranged that when the drum is turned the advertisements will be displayed consecutively through said opening. At one end of the drum-carrying shaft is a miter-gear 46, engaging the miter-gear 47, secured to one end of a sleeve 48. The sleeve is mounted on a stud 49 and at its opposite end is provided with a toothed wheel 50, which is engaged by the teeth 20 21, the latter serving to impart a rotative movement to the drum through the medium of the gear and the movement being to an extent proportionate to the width of the advertising-cards. It will be observed that the two teeth 20 and 21 are so arranged with respect to each other that while one is engaging the drum the other will have engaged and slightly turned the toothed wheel 15. At that end of the drum-carrying shaft opposite the gear-wheel is a toothed locking-wheel 50, that is rigidly secured to the shaft and is engaged by a locking device in the form of a spring-pressed bar 51, which carries a small antifriction-roller 52 for direct engagement between the teeth. The parts are so proportioned that the rotative movement imparted to the drum will readily force the spring-pressed rod backward against the stress of the spring; but between intervals of operation the roller will prevent accidental turning movement of the drum.

On the rear end of the shaft 28 is secured a ratchet 60. This shaft further carries a toothed stop-wheel 61, having teeth corresponding to the number of teeth of the ratchet-wheel. The spaces between the teeth of the stop-wheel are V-shaped and are adapted to receive a small antifriction-roller 63, arranged at the end of a pin 64, guided in an opening formed in a block 65. From this pin projects a second pin or lug fitted within a slot 66 of the block to prevent rotative movement of said pin and always maintain the antifriction-roller in proper position with relation to the stop-wheel. The roller-carrying pin is pro-

tected in the direction of the stop-wheel by means of a spring 67, which will yield under comparatively slight pressure in order to permit the ready turning of the wheel and shaft. This mechanism is of the same construction as that which controls the stopping of the advertising-drum.

The ratchet-wheel 60 is engaged by a small pawl 70, pivoted on a pawl-carrying bar 71 and pressed into engagement with the teeth of the ratchet-wheel by means of a spring 72. The pawl-carrying bar 71 is adapted to a suitable guiding-opening in a block 74, and said bar is normally projected in a direction away from the ratchet-wheel by means of a helical spring 76. Secured to the rear of the base-plate is a bracket 77, forming a fulcrum for an operating-bar 78, the upper end of which engages the pawl-carrying bar 71, and the latter carries a small antifriction-roller 79 to permit the ready operation of the lever on the bar. It will be noted that the relative arrangement of the teeth of the two wheels, the pawl, and the antifriction-roller of the stop-bar is such that at the end of an operative movement of the pawl the antifriction-roller of the stop-bar will have arrived at about the end of one of the teeth and will thence be forced inward into one of the V-shaped spaces between two teeth and will partly rotate both the locking-wheel and the ratchet-wheel and shaft. This will cause the tooth previously engaged by the ratchet-wheel to move a slight distance beyond the end of the pawl, and when the latter is again returned to its initial position it will slide over the next tooth and will always be in readiness for movement.

At the lower end of the operating-lever 78 is connected a rod 79′, which may be operated in any manner. The limits of movement of the lever 78 are governed by a pair of stop-pins 81 82, the lever being normally held in engagement with the pin 82 by means of a spring 83. At the upper end of the lever 78 is a metallic contact-strip 85, which moves into engagement with a contact 86 each time the lever is operated, and the engagement of these contacts serves to partly close the alarm-circuits.

To the front of the base-plate is secured a bracket 90, carrying a reflector 91 directly in the rear of the display opening or panel 5 in the front plate of the casing, and within the reflector is placed a small pea-lamp 92, that is connected by a wire 95 to the contact 86. The wire 95 is further connected to one of the binding-posts of an alarm-bell 96, which may be disposed within the casing or at any suitable distance therefrom.

On the exterior of the casing are two binding-posts 36 and 97, which may be connected to any suitable source of electrical energy, a conventional battery 98 being shown in the present instance. From the binding-post 36 leads a wire 35 to contact 33, and from contact 37 a wire 38 extends to the contact 23. From the binding-post 96 leads a wire 99, that is connected to one of the binding-posts of the bell and also to the lamp, and the wire 95 leads from the opposite binding-post of the bell and the lamp to the contact 86. The contact 85, which is carried by lever 78, is electrically connected to the base-plate of the machine, and the contact 25 on disk 19 is also electrically connected, through the disk, to the base-plate.

In operating the device the lever 78 is manipulated in any desired manner, and each time the lever is moved the disk 30 receives, through the shaft 28 and ratchet-wheel mechanism, a movement equal to the distance of a single ratchet-tooth. This movement is continued until the tooth 31 has engaged and turned the teeth of gear 22 to an extent sufficient to bring the contact 25, carried by the disk 20 and gear 22, into engagement with contact 23. It will be noted that at each movement of the lever 78 the contact 85 will be brought into engagement with the contact 86; but this will not be effective so far as circuit closing is concerned until the contact 25 has electrically engaged contact 23 and the two contacts 33 37 have also been brought into engagement. The contacts 33 and 37 are engaged each time the disk 30 makes a complete revolution—that is to say, every tenth operation of the lever 78. When all of the contacts are in electrical engagement at the same time, the circuit is closed through both the lamp and the bell, and the lamp glows and attracts attention to the opening 5 in the front plate, while the bell-alarm will also attract attention and notify the purchaser or other person that a prize is to be awarded. The position of the parts is such that the alarm will continue to sound so long as the lever 78 remains in position to maintain the contacts 85 and 86 in engagement with each other. When the lever is released, the circuit is broken at 85 86 and the alarm ceases to be operative. On the next movement one of the teeth 20 or 21 will engage with the gear of the advertising-drum and the other tooth will engage the gear 15, thus imparting movement to both the drum and the disk 10 and display a new advertisement and at the same time move the disk 10 forward in a single step in order to display a numeral, letter, symbol, portrait, or other distinguishing mark.

In order to provide for adjustment of the time of operating the alarm, the block 24, which carries the contact-spring 23, and the block 34, carrying contact-springs 33 and 37, are held by suitable bolts 100, extending through arcuate slots 101, formed in the base plate, the slots being arranged on curved lines struck from the center of rotation of the ad

jacent toothed wheels. This permits of adjustment of the position of the spring-contacts and of variation in the time of operating the alarm, and this may be quickly changed, so that a person familiar with the operation of the machine will not have any advantage over another person.

The construction is such that each rotation of the disk 19 will cause two operations of the advertising-drum and a single operation of the alarm mechanism, so that if the advertising-drum bear an even number of advertisements certain of the advertisements will not be used at any time to indicate a prize; but if the drum bear an uneven number of advertisements there will be an additional element of chance as well as in operation of the prize-awarding device; but the construction may be modified by the provision of an additional tooth or lug 25 at at point diametrically opposite the position in which said lug 25 is illustrated in Fig. 6, so as to insure an operation of the alarm at each movement of the advertising-drum.

Having thus described the invention, what is claimed is—

1. In mechanism of the class described, an advertisement-carrier, an alarm-actuating means including a source of electrical energy, normally separated contacts arranged in circuit therewith, a circuit-closing means, means for operating said circuit-closer and advertisement-carrier, and means for adjusting the position of the parts to vary the point at which the circuit is closed.

2. In mechanism of the class described, an advertisement-carrier, an electrically-actuated alarm, a source of electrical energy, a circuit including the alarm and a source of electrical energy, a pair of normally separated contacts connected in the circuit, an operating means, a plurality of toothed wheels receiving motion therefrom and transmitting the same at intervals to the advertisement-carrier, and circuit-closers carried by a number of the wheels for engaging the contacts and effecting a closing of the alarm-circuit at more than a single point.

3. In mechanism of the class described, an advertisement-carrier, an electrically-actuated alarm, a circuit including a source of electrical energy and a plurality of contacts, a train of gears movable at different speeds and each having circuit-closers for engaging and moving the contacts to circuit-closing position, said gears serving also to transmit movement at intervals to the advertisement-carrier, and an operating means connected to the train of gears.

4. In a device of the class specified, an advertisement-carrier, an electrically-actuated alarm, circuits including a source of electrical energy, and a plurality of spaced contacts, circuit-closers, a train of gears movable at different relative speeds and carrying said circuit-closers, said gears serving also to transmit movement at intervals to the advertising-carrier, adjustable means for varying the operative movement of the circuit-closers, and a means for imparting operative movement to the primary wheel of the train.

5. In a device of the class described, an advertisement-carrier, an electrically-actuated alarm, a source of electrical energy including a plurality of spaced contacts for independently closing the circuit at different points, circuit-closers for each set of contacts, means for operating said circuit-closers at different speeds, the contact-carrying means being so arranged as to permit a final circuit-closing movement of all of the contacts to thereby energize the alarm at intervals, and means for transmitting an operative movement to the advertisement-carrier after each final circuit-closing movement.

6. In mechanism of the class described, an advertisement-carrier, an electrically-actuated alarm, a source of electrical energy including a plurality of spaced contacts, a train of gears for transmitting operative movement to said advertisement-carrier, circuit-closing devices carried by said gears and adapted to engage the contacts, and means for adjusting the position of the contacts with relation to the circuit-closers.

7. In mechanism of the class described, an electrically-actuated alarm, a circuit open at more than one point, contacts including the said open circuit, a prime mover, and a train of gears connected thereto, a number of the gears carrying independent circuit-closing means for engaging said contacts.

8. In mechanism of the class described, an electrically-actuated alarm, a source of electrical energy, a normally open circuit connected thereto and having spaced contacts, a movable advertisement-carrier, a prime mover, a train of gearing extending between the prime mover and the advertisement-carrier to successively move different advertisements to displaying position, and means operable by the train of gearing for engaging the contacts and closing the circuit.

9. In mechanism of the class described, a movable carrier bearing a number of advertisements, a casing having an opening through which the advertisements are successively displayed, an operating means for moving the carrier, said operating means including a prime mover and a manually-operable means for moving the prime mover a plurality of times during the exposure of each advertisement, and for finally transmitting operative movement to the advertisement-carrier, and a prize-awarding mechanism operable by said prime mover.

10. In mechanism of the class described, a movable advertisement-carrier, a casing having an opening for displaying the advertisements, an electric lamp operating as a signal,

a circuit connecting the lamp to a source of electrical energy and including normally spaced contacts, a means for closing the circuit, and means for moving the advertisement-carrier after the circuit has been closed.

11. In mechanism of the class described, a movable advertisement-carrier, a casing having an opening through which the advertisements may be displayed, an alarm mechanism, a circuit connecting the same to a source of electrical energy, and a means for closing the circuit between intervals of movement of the advertisement-carrier.

12. In mechanism of the class described, a movable advertisement-carrier, an alarm mechanism, means for actuating the same between intervals of movement of the advertisement-carrier, and means for adjusting the time of operation of said alarm-actuating means.

13. In mechanism of the class described, a casing, a movable advertisement-carrier, an alarm mechanism, a circuit connecting the same to a source of electrical energy and including normally spaced contacts, a revoluble circuit-closer for effecting engagement of the contacts, and means for adjusting said contacts with relation to the circuit-closer.

14. In mechanism of the class described, a casing, a movable advertisement-carrier, an alarm, a circuit connecting the alarm to a source of electrical energy, a revoluble circuit-closer, a pair of spaced contacts connected in the circuit, a block carrying said contacts, and a base-plate having an arcuate slot struck from the center of rotation of the circuit-closer and in which said block is adjustable to alter the relation of the contacts to the circuit-closers.

15. In mechanism of the class described, a casing, a movable advertisement-carrier, an alarm, a circuit connecting the alarm to a source of electrical energy and including a plurality of spaced contacts, a prime mover, a lever connected thereto and carrying one of the contacts, said lever-carried contact engaging with a second contact at each operation, a train of gears to which the advertisement-carrier is connected, a ratchet-wheel for operating the first gear of the train, a pawl engaging the ratchet-wheel, a pawl-carrying bar operable by the lever, and auxiliary circuit-closers carried by a plurality of gears of the train for engaging the remaining contacts and thereby establishing an alarm-circuit.

16. In mechanism of the class described, an advertisement-carrier, an operating means therefor including gearing, a ratchet-wheel and a locking-wheel connected to the first gear of the train, a pawl engaging the ratchet-wheel, means for operating the pawl, and a spring-pressed plunger or bar having an anti-friction-roller serving to engage between the teeth of the locking-wheel to advance the latter and the ratchet-wheel to a point beyond the position to which the ratchet-wheel is moved at each operation of the pawl.

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

JOHN ODEN MORRIS.

Witnesses:
J. H. JOCHUM, Jr.,
JOHN A. TRAYLOR.