No. 832,963. PATENTED OCT. 9, 1906.

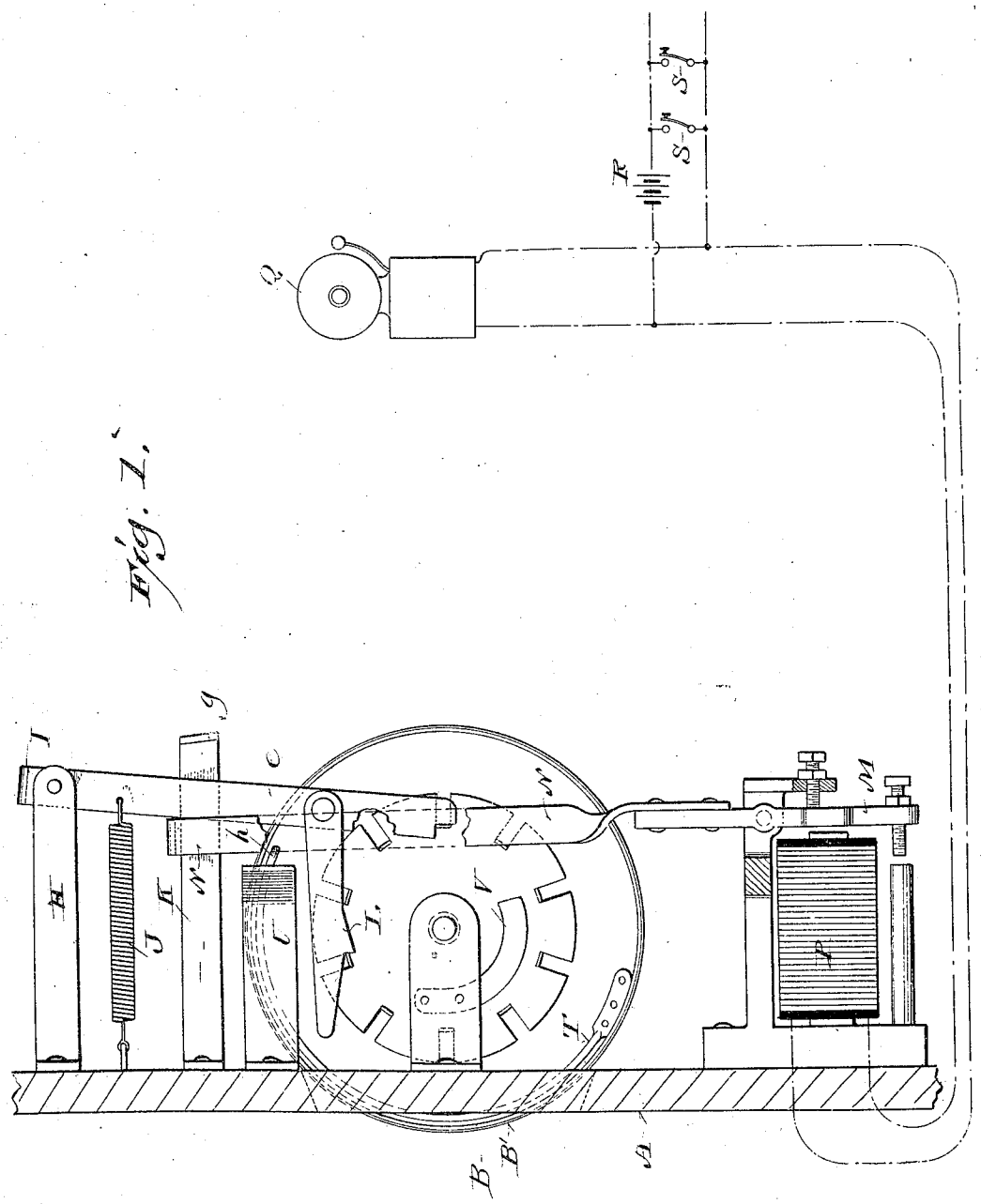
H. D. FLEGEL.

INDICATOR.

APPLICATION FILED APR. 20, 1905.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
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2 SHEETS—SHEET 2.

Fig. 3.

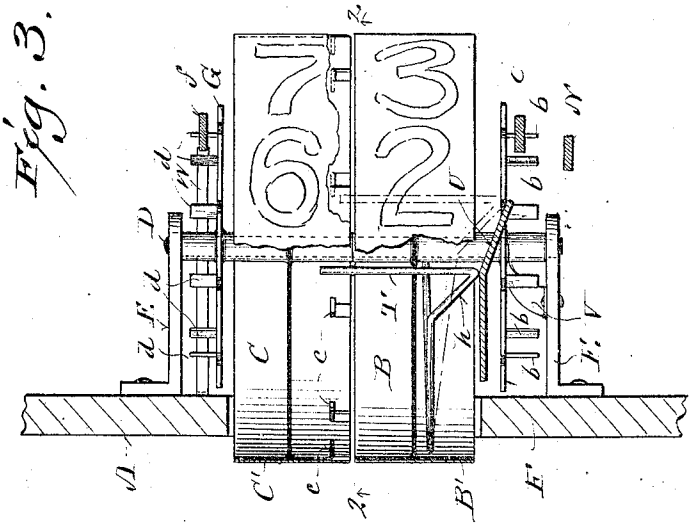
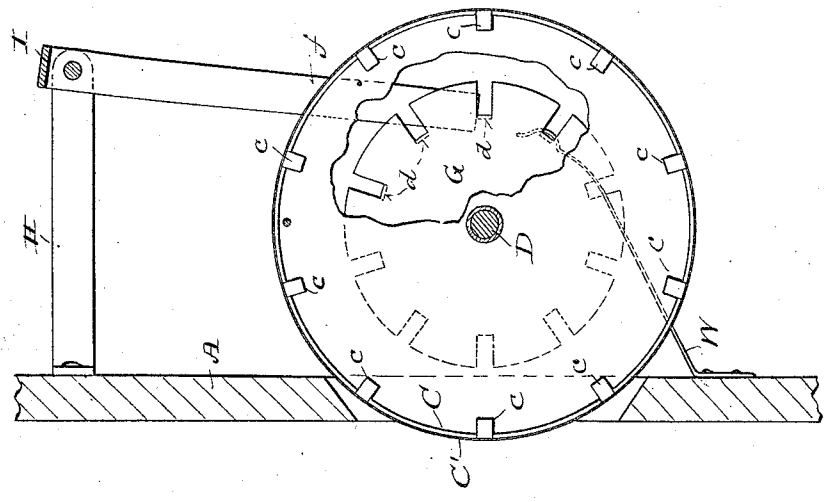


Fig. 2.



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UNITED STATES PATENT OFFICE.

HARRISON D. FLEGEL, OF RACINE, WISCONSIN, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO DANIEL L. HAYWARD, OF CHICAGO HEIGHTS, ILLINOIS.

INDICATOR.

No. 832,963. Specification of Letters Patent. Patented Oct. 9, 1906.

Application filed April 20, 1905. Serial No. 256,652.

To all whom it may concern:

Be it known that I, HARRISON D. FLEGEL, a citizen of the United States, and a resident of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Indicators; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in certain peculiarities of construction and combination of parts hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed, the main object of said invention being to provide simple economical means for indicating the turns of waiting patrons in barber-shops and other places where checks are employed to designate the order in which patrons are to be served.

Figure 1 of the drawings represents a side elevation of indicator mechanism in accordance with my invention, partly in section, a portion of a casing for same being also shown in section and an electric-signal circuit illustrated in diagram; Fig. 2, a sectional view of a portion of the mechanism on the plane indicated by line 2 2 in Fig. 3, a part of the indicator-wheel in this view being broken away; and Fig. 3, a plan view of said mechanism, partly in horizontal section, the front of the casing being also shown in like section.

Referring by letter to the drawings, A indicates the front of a casing by which the indicator mechanism herein specified is inclosed, this casing-front being provided with an opening through which to expose number-wheels B C of said mechanism. The wheel B is the units-wheel, having its periphery encircled by a band B′, on which the characters of the Arabic notation from "0" to "9," inclusive, in ascending order are displayed at regular intervals, and the wheel C is the tens-wheel, having its periphery encircled by a band C′, on which characters of the notation aforesaid from "1" to "9," inclusive, are displayed at regular intervals in ascending order, the space for the character "0" being left blank. The number-wheels are separately sleeved on a stationary arbor D, supported by brackets E within the casing, and the rim of each wheel is braced by a central partition connecting it with the hub or sleeve on the arbor. Fast on the hub-sleeve of the units-wheel B is a disk F, having lateral lugs *b* coincident with the numbers on the periphery of said wheel. Extending inward from the rim of the tens-wheel C are radial lugs *c*, that coincide with the numbers and blank space on the periphery of said wheel. Fast on the hub-sleeve of the tens-wheel C is a disk G, having lateral lugs *d* coincident with the numbers and blank space on said wheel.

The several wheels and disks above specified are preferably of sheet metal, the lugs *c* being struck in from the periphery of the wheel C and the lugs *b d* struck out from the disks F G, respectively. The bands B′ C′ may be omitted and the number characters painted or otherwise placed upon the peripheries of the aforesaid wheels.

In pivotal connection with brackets H in the casing aforesaid is a rocker in the form of an angular yoke I, having a vertically-disposed branch *e* thereof connected to a spiral spring J, attached to the casing. This yoke branch is normally in the path of some one of the lugs *b* of the disk F to prevent overrunning of the units-wheel, and the other vertically-disposed branch *f* of said yoke is normally in the path of some one of the lugs *d* of the disk G to prevent overrunning of the tens-wheel. Back play of the yoke against resistance of the spring is limited by a bracket K in the casing having an inturned end *g* opposed to the branch *e* of said yoke. In pivotal connection with the yoke branch *e* is a gravity-pawl L, that operates, in conjunction with the lugs *b* of the disk F, to move the units-wheel step by step, whereby the number characters on the periphery of said wheel are displayed one at a time through the opening in the casing.

Fast in the casing is an electromagnet, and connected to the armature M of same is an arm N, having a free end thereof inwardly bent to oppose the forward edge of the branch *e* of the pivotal yoke, and attraction of said armature, due to energization of the electromagnet P, will result in backward movement of said yoke against resistance of the spring J to clear the lugs of the disks F G and cause engagement of the pawl L with another lug of said disk F, this disk and the units-wheel being moved one step when said electromagnet is deënergized to permit contraction of said spring.

An electric bell Q or other suitable audible electric signal is put in circuit with the electromagnet and the electric battery R for same, one or more electric push-buttons S being included in the same circuit. In a barber-shop or other place where there are several workmen or attendants one of a series of the push-buttons will be arranged convenient to each of said workmen or attendants, and the closing of the same will result in an energization of the aforesaid electromagnet and audible signal to effect the operation above specified. In practice the electromagnet, signal, and battery will be preferably within the casing for the mechanism herein set forth.

Soldered or otherwise fastened at one end within the units-wheel B is a suitably-bent spring-wire catch T, the other end of which is guided in an aperture provided in the partition of said wheel. A cam-plate U is arranged in the casing in the path of a bend *h* of the spring-catch, and at about the completion of each revolution of the units-wheel said catch is moved inward to be brought into opposition to one of the lugs *c* of the tens-wheel, the time being such that as said units-wheel completes a revolution to expose its figure "0" said tens-wheel will be moved one step of its revolution.

Spring-detents V W are arranged to exert friction on the disks F G, and thereby prevent back-lash of the number-wheels.

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

1. In an indicator the combination of a stationary arbor, a units-wheel and a tens-wheel each having a sleeve-hub loose on the arbor, a disk rigid with each wheel-hub and provided with lateral lugs coincident with arbitrary divisions of the companion wheel, inner radial lugs with which the rim of the tens-wheel is provided coincident with its arbitrary divisions, a spring-controlled rocker, a pawl in pivotal connection with the rocker and operative in conjunction with the lugs of the disk companion to the units-wheel, a spring-catch in connection with said units-wheel, a cam arranged to move the catch in opposition to a radial lug of the tens-wheel at a predetermined time in the revolution of said units-wheel, an electromagnet, and a rocker-actuating arm extending from the armature of the magnet.

2. In an indicator, the combination of a stationary arbor, a units-wheel and a tens-wheel each having a sleeve-hub loose on the arbor, a disk rigid with each wheel-hub and provided with lateral lugs coincident with arbitrary divisons of the companion wheel, inner radial lugs with which the rim of the tens-wheel is provided coincident with its arbitrary divisions, a spring-controlled rocker in the form of a yoke having branches thereof normally opposed to lugs of the disks to prevent overrunning of the companion wheels, a pawl in connection with one branch of the rocker and operative in conjunction with the lugs of the disk companion to the units-wheel, a spring-catch in connection with said units-wheel, a cam arranged to move the catch in opposition to a radial lug of the tens-wheel at a predetermined time in the revolution of said units-wheel, means for actuating said rocker against spring resistance, and means for preventing back-lash of said wheels.

3. In an indicator, the combination of a stationary arbor, a units-wheel and a tens-wheel each having a sleeve-hub loose on the arbor, a disk rigid with each wheel-hub and having lateral lugs struck out therefrom coincident with arbitrary divisions of the companion wheel, radial lugs struck in from the rim of the tens-wheel to coincide with its arbitrary divisions, a spring-controlled rocker, a pawl in connection with the rocker and operative in conjunction with the lugs of the units-wheel, means for automatic connection and release of both wheels at predetermined times in the revolution of said units-wheel, and means for actuating the rocker against spring resistance.

4. In an indicator, the combination of a stationary arbor, a units-wheel and a tens-wheel each having a sleeve-hub loose on the arbor, a disk rigid with each wheel-hub and having lateral lugs struck out therefrom coincident with arbitrary divisions of the companion wheel, radial lugs struck in from the rim of the tens-wheel to coincide with its arbitrary divisions, a spring-controlled rocker, a pawl in connection with the rocker and operative in conjunction with the lugs of the units-wheel, means for automatic connection and release of both wheels at predetermined times in the revolution of said units-wheel, an audible signal, and means for actuating the rocker against spring resistance and for simultaneous operation of the signal.

In testimony that I claim the foregoing I have hereunto set my hand, at Racine, in the county of Racine and State of Wisconsin, in the presence of two witnesses.

HARRISON D. FLEGEL.

Witnesses:
C. R. CARPENTER,
A. A. ANDERSON.