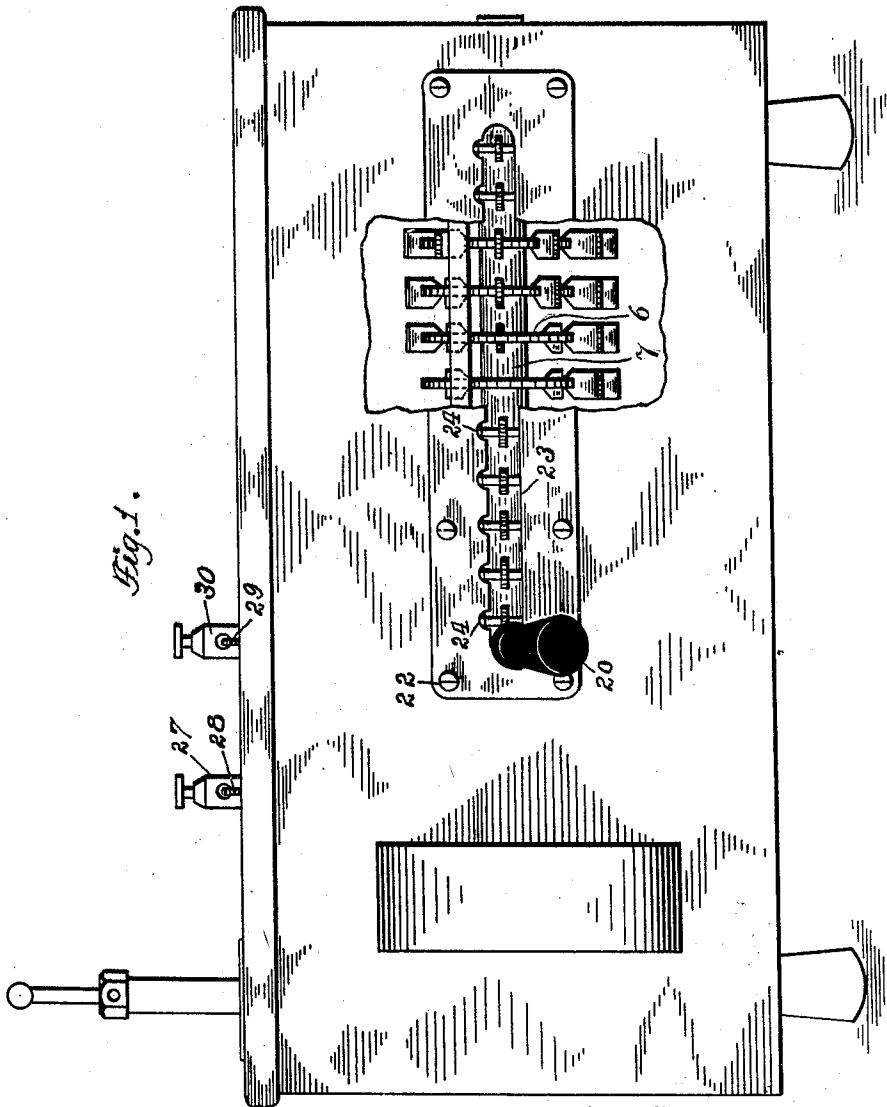


W. W. VAN HORN.  
SIGNAL MECHANISM.  
APPLICATION FILED MAR. 25, 1908.

936,835.

Patented Oct. 12, 1909.  
3 SHEETS—SHEET 1.



Inventor

Walter Williams Van Horn

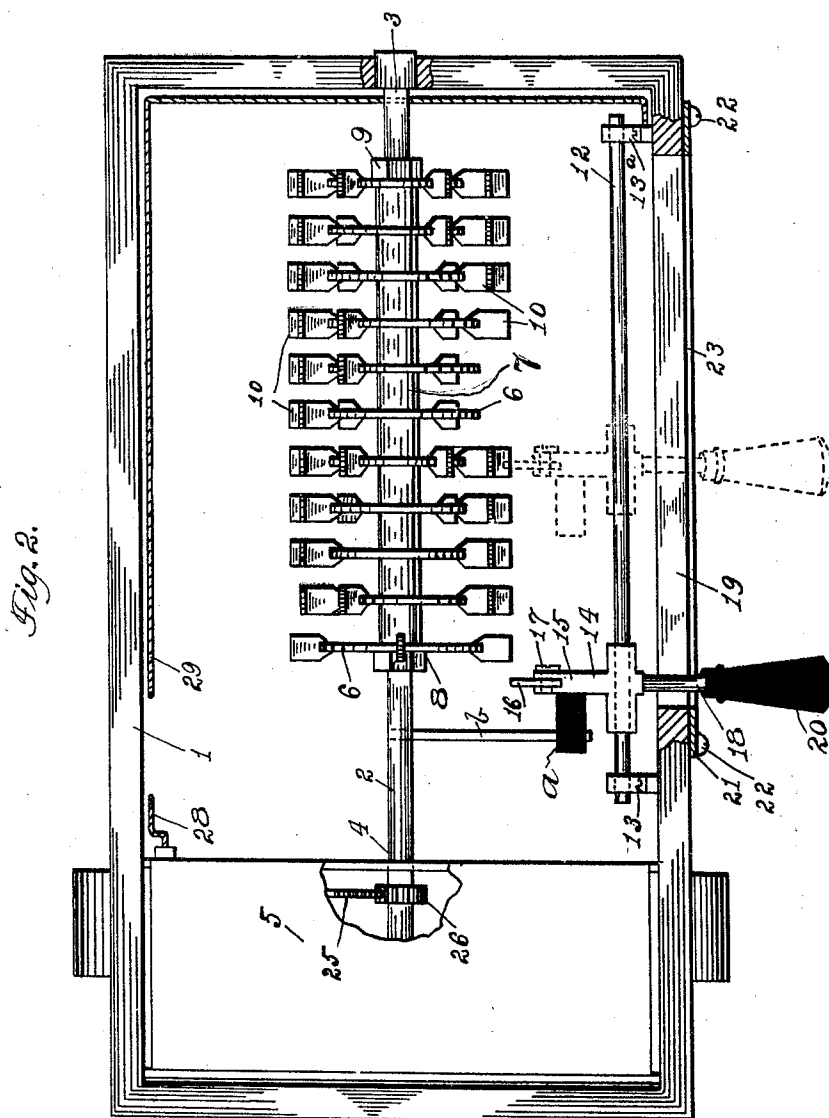
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3 SHEETS—SHEET 2.



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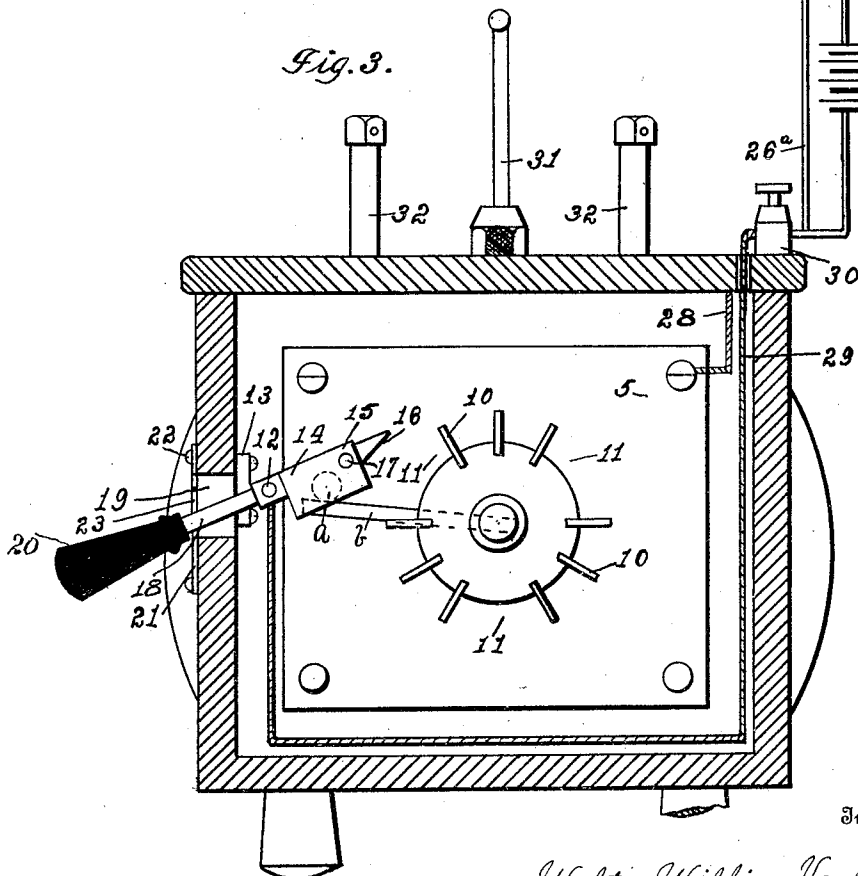
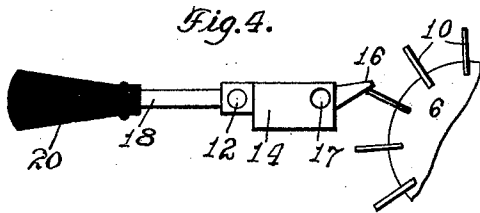
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# UNITED STATES PATENT OFFICE.

WALTER WILLIAMS VAN HORN, OF SHELBY, OHIO.

## SIGNAL MECHANISM.

936,835.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed March 25, 1908. Serial No. 423,182.

*To all whom it may concern:*

Be it known that I, WALTER WILLIAMS VAN HORN, citizen of the United States, residing at Shelby, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Signal Mechanism, of which the following is a specification.

My invention relates to a signal mechanism which rings electric bells placed in different locations and its primary object is to provide a means of ringing the electric bell or bells a pre-determined number of times to call a certain person whose call corresponds to the number of times the bell rings.

A further object is to provide means whereby the call is automatically repeated until the person responds to the call or the operator moves the lever to off position at which time the signal mechanism will be automatically stopped and the signal cease.

It further consists in the combination and arrangement of parts hereinafter described. I attain these and other objects by the mechanism illustrated in the accompanying drawings in which—

Figure 1 is a front elevation of the device with a portion of the case broken away showing the contact disks. Fig. 2 is a plan view of Fig. 1. Fig. 3 is an end view in section and shows the device connected to a bell. Fig. 4 is a detached view of the contact lever and a section of one of the contact disks and shows the position of the said parts when the device is in operation.

In the drawings reference numeral 1 represents the case or frame of the device having a shaft 2 mounted therein. The end 3 of said shaft is journaled in a bearing secured in the case and the opposite end 4 of the shaft is preferably connected to a type of motor shown by reference numeral 5 the purpose of which will be hereinafter specified.

A plurality of disks 6 are mounted on the shaft 2 and spaced apart by the sleeves 7 and are rigidly clamped to the shaft by means of the shoulder 8 and the threaded nut 9. The disks 6 have contacts 10 grouped around their peripheries, the space or interval 11 between each group on the same disk being equal. (See Fig. 3.) Each group on a disk must contain an equal number of contacts the purpose of which will be hereinafter described.

A bar 12 is secured to the inner wall of the case by means of the brackets 13 and is

adapted to support and guide a contact lever 14 which is slidably mounted thereon. The end 15 of the lever 14 which projects inward toward the contact disks is bifurcated and adapted to receive the circuit closer 16 which is yieldingly secured therein by a pin 17 and is adapted to make an electrical connection with the contact disks when desired. The opposite end 18 of the lever 14 projects through an aperture 19 provided in the case and is fitted with an insulated handle 20. An insulated member *a* is provided on the lever 14 and is adapted to engage with an arm or stud *b* secured to the shaft 2 and provides a means of stopping the motor by preventing the rotation of the shaft 2.

A plate 21 is secured to the exterior of the case by the screws 22 and is provided with an elongated aperture 23; the upper edge of which is provided with notches 24 which are placed opposite the disks 10 and may be provided with a number corresponding to the number of contacts in a group on the disk opposite which it is placed. These notches form a means of retaining the circuit closer in engagement with the desired disk as hereinafter described.

The operation of my device is as follows: Motion is transmitted from the spring motor (or other motor) 5 to the shaft 2 by means of the gear 25 which meshes with a pinion 26 secured on the shaft 2. When it is desired to send a pre-determined signal, the lever 14 is pressed downward out of the range of the disk members and moved laterally along the bar or guide 12 to the notch opposite the disk carrying the required signal members and released when the lever will drop by gravity into the notch corresponding to the pre-determined signal as the end 15 is of greater weight than the end 18 and the handle 20. The circuit closer 16 will then be in position to contact with the disk members and cause the pre-determined signal to be given on the bell. When the lever is moved laterally, the arm *b* is released from the arm *a* and the shaft 2 immediately begins to rotate making and breaking the circuit and allowing and causing the bell 25<sup>a</sup> to ring each time a disk member contacts with the circuit closer.

Attention is called to the fact that when the operator moves the contact lever laterally to the notch corresponding with the call given to a certain person that the bells in the different location will ring the pre-de-

terminated signal until the person answers the call. The pre-determined signal will be given continually with an interval of time between them unless moved to off position by the operator or the lever moved to give a different call or signal.

The electrical connections are as follows: Current is conducted from a battery by the wire 26<sup>a</sup> to the binding post 27 and to the motor 5 by the wire 28. The current flows through the motor and the shaft 2 to the disks 10 and when a contact is made with the circuit closer the current flows out through the arm 14 to the bar 12 and bracket 13<sup>a</sup> and through the wire 29 to the binding post 30. The bell 25<sup>a</sup> is included in the wiring between the binding post 27 and the battery as shown in Fig. 3.

The disks will continue to rotate and repeat the signals until the lever 14 is returned to the position shown by full lines in Fig. 2 when the arm *b* will engage with the insulated lug *a* and the motor will be stopped as hereinbefore described.

A removable pin 31 is adapted to be inserted in suitable apertures in the winding

posts 32 and provides a means for winding the motor.

Having fully described my invention, what I claim and desire to secure by Letters Patent is:

A signal device comprising a casing with a shaft mounted therein, means to rotate said shaft, means to prevent its rotation, a series of disks provided with contacts and mounted on said shaft, a bar, a lever slidably mounted on said bar, a contact closer pivotally secured to said lever, said contacts being mounted on the disks in series comprising different groups with any one of the series of contacts being adapted to contact with the contact closer continually if desired, means to electrically connect said contacts and closer, a signal device, and means to electrically connect said signal device to the contacts and contact closer.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER WILLIAMS VAN HORN.

Witnesses:

PEARL ACKERMAN,  
JOHN H. COSS.