

July 9, 1929.

M. B. MEYERS

1,720,085

INDICATOR

Filed July 11, 1928

Fig. 1

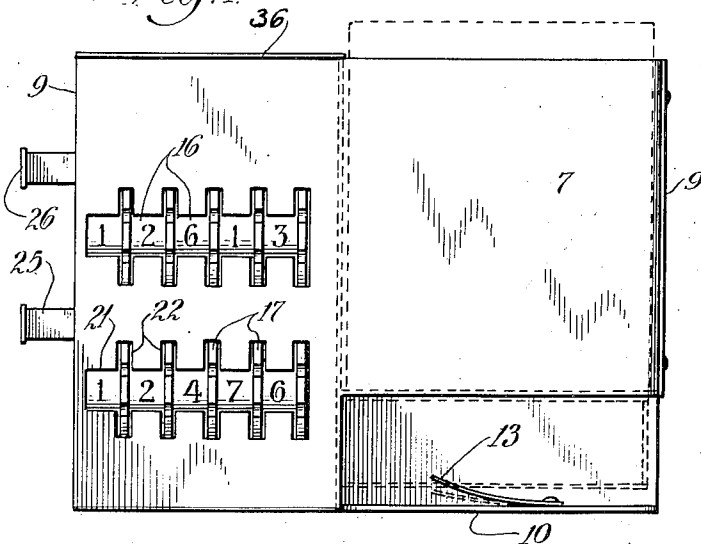


Fig. 2

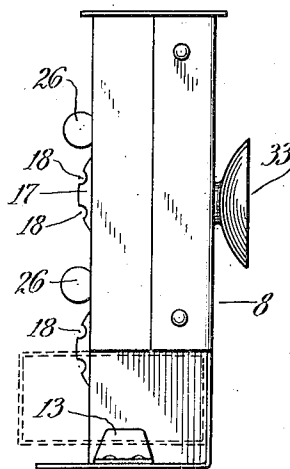


Fig. 3

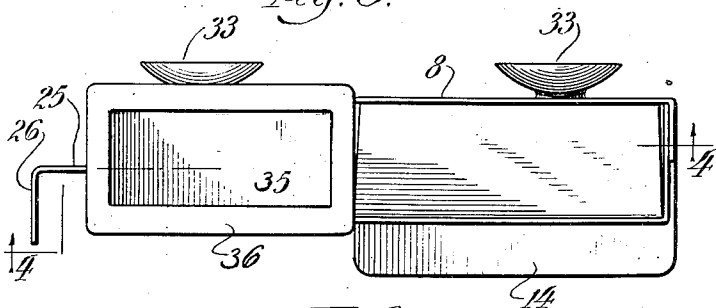


Fig. 5

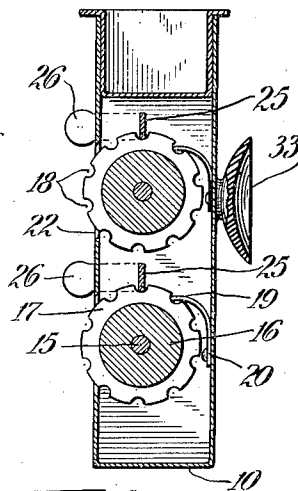


Fig. 4

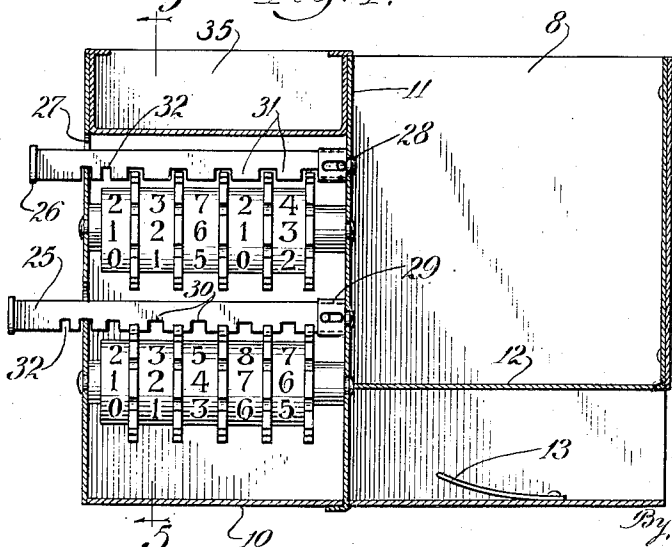
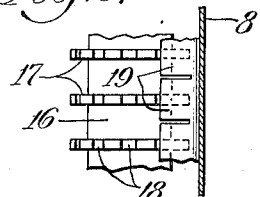


Fig. 6



Inventor:
Max B. Meyers,
By *Wm. H. Wm. H. Wm. H.*
Attorneys.

UNITED STATES PATENT OFFICE.

MAX B. MEYERS, OF CHICAGO, ILLINOIS.

INDICATOR.

Application filed July 11, 1928. Serial No. 291,894.

This invention relates to an indicator in which is comprised a series of independently rotatable wheels carrying on their peripheries digits any selected combination of which may be exposed to view through an aperture in the casing wherein the wheels are mounted. More particularly, the invention relates to the arrangement of the wheels within the casing which is provided for their reception, and to the means for locking the wheels against accidental or casual movement from a given position of adjustment. A device of this character may be used to advantage in connection with the oiling and greasing operations of an automobile, and it may be designed for convenient attachment within the body of an automobile whereby to apprise constantly the operator thereof respecting mileages at which lubrication operations should be performed.

A suggestive embodiment of this invention is set forth in the accompanying drawing in the following manner:

Figure 1 is a front elevation of the device in its entirety;

Fig. 2 is an end elevation thereof;

Fig. 3 is a plan view thereof;

Fig. 4 is a longitudinal section taken on line 4-4 of Fig. 3;

Fig. 5 is a transverse section taken on line 5-5 of Fig. 4; and

Fig. 6, which is a detail in section, shows the spring detent which acts upon the wheels.

The present indicator is contained within a casing which may be formed of sheet metal to provide a front wall 7, a back wall 8 and end walls 9. The casing is provided also with a bottom wall 10 from which upstands a vertical partition 11 dividing the casing into two compartments. One of these compartments, shown to the right in Figs. 1, 3 and 4, is provided also with a false bottom 12 below which the front wall 7 and proximate end wall 9 is cut away. In this manner, I provide a space open on two sides, wherein may be received any desired object such, for example, as a box of matches. By the provision of a leaf spring 13 the matches may be pressed upwardly against the false bottom so as to be prevented from loose movement. The casing bottom 10 below the false bottom may be laterally extended at 14 to provide a lip which supports a match box or other object which extends outwardly beyond the confines of the casing.

The structure thus far described provides, in addition to the space for the match box, two compartments which are open at the top. One of these compartments may conveniently receive a package of cigarettes, and the other is adapted to support an ash tray 35 having outwardly extended flanges 36 which overlie the upper edges of the casing. In this manner, the tray is supported removably in place, and upon occasion may be lifted out for the emptying of its contents.

In the lower portion of the compartment wherein is disposed the tray, the present indicating devices are located. As shown, these comprise two sets of wheels having similar mountings, detents, and locks, so that a description of but one will suffice. It will be understood in this connection that one, two, or more sets of indicating wheels, all alike, may be incorporated into the present structure, this being a matter of selection in accordance with the preference of the designer.

Extending between one end wall 9 and the partition 11 is a pin 15 whereon is rotatably mounted a series of wheels 16 each provided with a disk 17 which is connected thereto upon one face. The disks which are of greater diameter than the wheels are notched at 18 for a double purpose—to facilitate turning movement thereof by the fingers, and to receive engagement from a spring tongue 19 which extends from a plate 20 having a mounting upon one of the casing walls. This plate is provided with a plurality of such tongues, one for each disk, whereby each tongue will coact, independently of the others, with its associated disk. These tongues are so disposed relative to the disks as to permit the latter to rotate in one direction only, and then only by the application of a rotary force which is sufficient to overcome the tension of the tongues.

The front wall 7 of the casing is apertured at 21 adjacent the several wheels and disks so as to expose the forward portions of their peripheries. Inasmuch as the disks are the larger, the aperture is slotted at 22 on opposite edges to accommodate the disks. Upon each wheel is carried, marked, or impressed a series of digits, from 0 to 9 by preference, any one of which may be moved into register with the aperture 21, such a position being determined when the tongue 19 enters one of the disk notches 18. By the means described, the several wheels, through

the medium of the manipulating disks, may be moved into any selected rotative positions so as to set up for exposure a desired combination of digits.

5 In order to safeguard against accidental or casual disturbance of any number combination so set up, I provide for the entire series of wheels a single lock which is positive in its action. As shown, this comprises
 10 a bar 25 having an operating end 26 disposed exteriorly of the casing, the bar being extended through a slot 27 in the end wall 9 in proximity to the several disks. The inner end of the bar is pivotally and slidingly
 15 held, as by a pin and slot connection 28, within a mounting 29 which may be carried on the partition 11. A series of notches or slots 30 corresponding in number and spacing to the disks is also provided in one edge
 20 of the bar, the material between these slots forming wards 31 which are adapted to engage within notches 18 when the bar is shifted endwise to one of its two positions. In such a condition of the parts the disks
 25 are locked positively against rotation. In its other shifted position the slots 30 are aligned with the notches so as to permit the disks to turn freely when a proper rotary force is applied thereto. The locking bar
 30 itself may be locked by gravity in either of these two positions and for this purpose I provide two slots 32 spaced apart about half the distance between two disks, and adapted, one at a time, to engage with the lower edge
 35 of the slot 27 in the casing end wall. This latter slot, it should be noted, is of sufficient vertical dimension to permit lifting of the outer bar end to a point where both slots 32 will clear the locking edge of the slot 27
 40 whenever it is desired to shift the bar to locking or unlocking position relative to the several disks and wheels.

The casing containing the indicating mechanism just described may be mounted
 45 in any convenient place where the exposed number combination is readable. As suggestive of one means of fastening for the casing, I have shown applied to its rear wall one or more vacuum cups 33, preferably of rubber, adapted to support the casing
 50 against a smooth surface in a well known manner. By the use of some such

appliance, the device may, if desired, be carried upon a glass window or shield.

From the preceding description, it will be 55 manifest that the present invention is advantageous because of the simplicity of its construction and operation, the fewness of its parts, and the positive character of the lock which operates upon the numbered 60 wheels. I desire, in accordance with the terms of the claims following, to be protected in this invention whether or not the embodiment thereof be as illustrated and described, or modified therefrom without sacrifice 65 of the features which impart novelty thereto.

I claim:

1. In an indicator, the combination of a series of independently rotatable wheels 70 having a coaxial mounting, a notched disk associated with each wheel and connected thereto, and a locking bar provided with a series of notches, said bar being shiftable longitudinally to present either its notches 75 or its intervening wards in engagement within the disk notches whereby to unlock or lock the same in unison.

2. In an indicator, the combination of a series of independently rotatable notched 80 wheels having a coaxial mounting, and a locking bar shiftable longitudinally extending within a notch of each wheel whereby to lock the entire series in unison, the bar being itself notched in accordance with 85 the wheel series whereby to present a notch opposite each wheel when the bar is shifted longitudinally to an unlocking position.

3. In an indicator, the combination of a series of independently rotatable notched 90 wheels having a coaxial mounting, a locking bar having a sliding and pivotal mounting and provided with notches, one opposite each wheel, adapted to lock or unlock the same in unison when shifted in the 95 proper direction, and means with which the locking bar engages by gravity for preventing longitudinal movement thereof after being shifted into either locking or unlocking 100 position.

In testimony whereof I have hereunto set my hand and affixed my seal this 29 day of June, 1928.

MAX B. MEYERS.