

A locking doorknob which cognizes finger print

Background of the invention

Field of the Invention

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The present invention relates to a locking doorknob which cognizes finger print and more particularly to a locking doorknob which cognizes finger print which is installed on the door in a house, an apartment, an office or of a car and a safe. When a person holds the present invention, doorknob, a door is to be open when his finger print
10 corresponds to the finger print input before, by a detecting sensor of a finger print.

The prior locking doorknob which cognizes the finger print which is input a certain user's finger print is to be unlocked, when a person touches the spot to recognize his finger print, if the finger print read through the detecting finger print corresponds to the finger print input before.

15 That prior locking doorknob which cognizes the finger print has been applied to various kinds of doors using the above-mentioned function, however, the prior locking doorknob has been used for auto-door and the price is also high. Furthermore, the prior invention has been installed separately from a door and a controller so it is not facilitative to be installed in a general place such as a house or an office.

20 In case of manual doors, there is cumbersomeness. Because the detecting finger print is formed separately from the doorknob, a person has to turn the doorknob in order to open the door after the identification is approved through the detecting sensor of finger print.

Discussion of Related Art

Thus, in order to solve the above-mentioned problem, the detecting sensor
finger print of the present invention is installed on the spot of the doorknob that a thumb
5 is placed naturally. So with a user's holding the doorknob, his finger print is cognized
and searched and if the finger print corresponds to the finger print input before, the
locking is to be dissolved and the doorknob is turned to open the door, which is that
recognition and opening the door are performed at the same time.

Summary of the Invention

The present invention relates to a locking doorknob which cognizes finger print,
that is installed on the door in a house, an apartment, an office or of a car and a safe.
When a person holds the present invention, doorknob, a door is to be open if his finger
15 print corresponds to the finger print input before, by a detecting sensor a finger print.

The prior locking doorknob which cognizes finger print has been applied to
various kinds of doors using the above-mentioned function, however, the prior locking
doorknob has been used for auto-door and the price is also high. Furthermore, the prior
invention has been installed separately from a door and a controller so it is not
20 facilitative to be installed in a general place such as a house or an office.

Because the detecting sensor of finger print is installed separately from the
doorknob, a person has to turn the doorknob in order to open the door after the
identification is approved through the detecting sensor of finger print.

Thus, in order to solve the above-mentioned problem, the detecting sensor of

finger print of the present invention is installed on the spot of the doorknob that a thumb is placed naturally. So when someone holds the doorknob, his finger print is cognized and searched and if the finger print corresponds to the finger print input before, the locking is to be dissolved and the doorknob is turned to open the door, which is that
5 Recognition and opening the door are performed at the same time.

Brief Description of the Attached Drawings

FIG. 1 is a deal perspective view according to an embodiment of the present
10 invention

FIG. 2 is a cross sectional view of the part A-A of the present invention

FIG. 3 is a cross sectional view of status which the detecting sensor of finger print fits into the detecting sensor of finger print case

FIG. 4 is a cross sectional view of the process which the detecting sensor of
15 finger print is fitting into the detecting sensor of finger print case

FIG. 5 is a perspective view of the situation using the present invention

FIG. 6 is a flowchart for the linked-operation of the present invention

FIG. 7 is a flowchart for the operation of a locking doorknob which cognizes
finger print

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Detailed Description of Preferred Embodiment

The following is the detailed description of the most desirable embodiment of the present invention.

As shown in FIG. 1, the door-lock operation shaft(3) which fits into the perforation(9) on the lower part of the door-lock case(1) operates locking apparatus(is not shown in FIGs) which is formed in the door-lock case(1). A passing flute(2) which is formed inside of the above door-lock operation shaft(3) for a length of wire(8) of the detecting sensor of finger print(5) to pass through is to penetrate at a right angle to the inside part of the detecting sensor of finger print case(4a) which is formed in the center of the detecting sensor of finger print case(4) inserted a detecting sensor of finger print(5).

The inside part of the detecting sensor of finger print case(4a) is conjoined with a cover(10) which is attached a knob(6) by screws(7).

The forward area of the inside part of the detecting sensor of finger print case(4a) is formed as an incline(4c) in order that a window recognizing finger print(5a) of the detecting sensor of finger print(5) may have an angle of inclination. An incline(4c) is to have the opening part(4d) in order that a window recognizing finger print(5a) may be exposed and a sill for support(4e) is formed on the lower part of the opening part(4d) to facilitate holding inside without a length of wire(8) being pressed so that invention looks good and convenient to use.

Furthermore, an extroverted sill(5b) is formed on the top of the detecting sensor of finger print(5) and an introverted sill(4b) is formed in the inside part of the detecting sensor of finger print case(4a) in order to prevent the detecting sensor of finger print(5) from slipping to the forward area when the detecting sensor of finger print(5) is put the inside part of the detecting sensor of finger print case(4a).

A sub-passing flute(2a) is formed at a side of the passing flute(2), which is formed in the door-lock operation shaft(3) to pass through is to penetrate at a right angle

to the inside part of the detecting sensor of finger print case(4a), in order that a jack(8a) of the length of wire(8) of the detecting sensor of finger print(5) may be put in and out.

Confidential information about the present invention is preserved by packing.

According to the above description, as shown in FIG. 6, the data input in the
5 memory before compares with the data input through the finger print data input device(the detecting sensor of finger print:5) and the Key data input device(key button:11). According to the result, a controller (20) which controls the locking apparatus(30) and the locking apparatus(30) which controls the door-lock operation shaft(3) are to be operated or not.

10 At this point, the follower describes data flowing, as shown FIG. 7. When a data is input by the detecting sensor of finger print(5) on the step 110, the data is interpreted whether it is compatible with the data input before in the memory or not. After that, if it is compatible with the data input before in the memory, the door is to be unlocked, or else, the proceeding returns to the first step, step 100.

15 On the other hand, in case of no data is input on the step 110, after the confirmation whether a password is input through the key button(11) or not on the step 130. if the password is input by the key button(11), the password input is interpreted whether it is compatible with the number input in the memory before or not on the step 140. Also, when the number is compatible with the number input in the memory before,
20 the door is to be unlocked on the step 150, or else, the proceeding returns to the step 100.

In a normal situation without any operation, the door-lock is to be locked all the time flowing step 110⇒ step 130⇒ step 160⇒ step 170⇒ step 100.

Thus, as shown in the FIG.4, when a person who has already input the finger print holds the doorknob(6) to open the door and put his the finger which is input in the

memory on the window recognizing finger print(5a) of the detecting sensor of finger print(5), a lamp which is formed in the door-lock case(1) turns on and the door is to be open.

In case of a certain time lapses, the whole process is to be reinstated in order to
5 restrain other's entrance.

As described in the above, the detecting sensor of finger print(5) is formed in the door-lock operation shaft(3) which is combined with the doorknob(6). Detecting finger print on the spot of the doorknob that a thumb is placed naturally makes result, such as a person holds and turns a normal doorknob to open the door.

10 Furthermore, Detecting finger print is operated not only by a thumb, but also by other fingers differing the direction of the detecting sensor of finger print(5), so that a left-handed person can input his finger print of left hand.

The present invention has a great merit for the doors of places or goods that are required the preservation of security, opening the door conveniently and preserving the
15 security at a time.

What is claimed is:

1. A locking doorknob which cognizes finger print wherein its improvement comprising,
5 A door-lock operation shaft(3) formed the detecting sensor of finger print case(4);

A detecting sensor of finger print case(4) including the detecting sensor of finger print(5);

And a detecting sensor of finger print(5) which is formed a length of
10 wire(8) inserted into the detecting sensor of finger print case(4) of the door-lock operation shaft(3) are included in the detecting sensor of finger print case(4) which is combined with its cover using screws.

2. A locking doorknob which cognizes finger print as claimed in claim 1, the
15 forward area of the inside part of the detecting sensor of finger print case(4a) is formed as an incline(4c) for a window recognizing finger print(5a) of the detecting sensor of finger print(5) to have an angle of inclination. An incline(4c) is open in order that a window recognizing finger print(5a) may be exposed and a sill for support(4e) is formed on the lower part of the opening part(4d) to facilitate holding inside without a
20 length of wire(8) being pressed.

3. A locking doorknob which cognizes finger print as claimed in claim 1, a sub-passing flute(2a) is formed at one side of the passing flute(2), which is formed in the door-lock operation shaft(3) to pass through is to penetrate at a right angle to the



inside part of the detecting sensor of finger print case(4a), in order that a jack(8a) of the length of wire(8) of the detecting sensor of finger print(5) may be put in and out.

