Sept. 23, 1924. 1,509,242

S. KUNO

COVER LIFTER

Filed Oct. 12, 1923

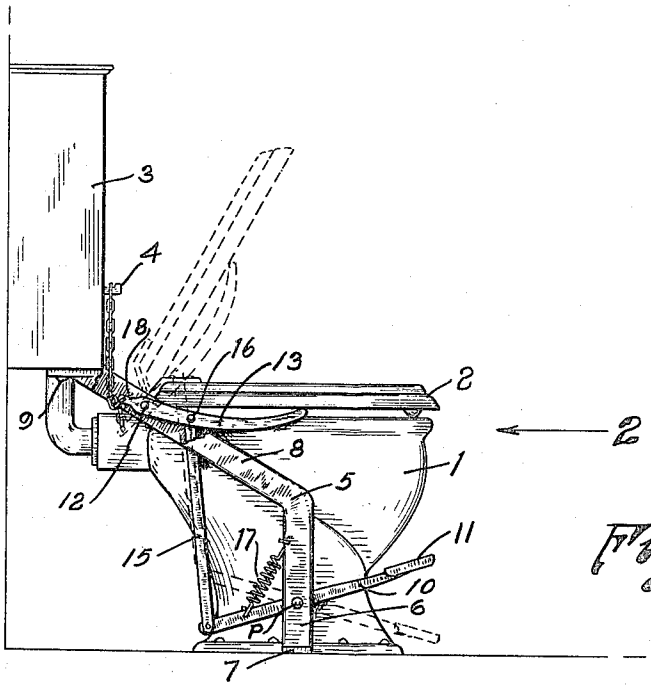



Fig. 1.

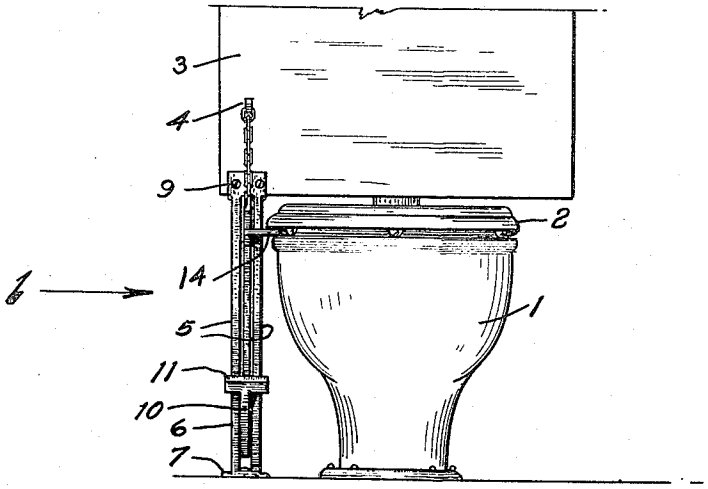



Fig. 2.

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Patented Sept. 23, 1924. 1,509,242

# UNITED STATES PATENT OFFICE.

SHICHIGORO KUNO, OF DENVER, COLORADO.

## COVER LIFTER.

Application filed October 12, 1923. Serial No. 668,094.

*To all whom it may concern:*

Be it known that I, SHICHIGORO KUNO, a subject of the Emperor of Japan, residing at Denver, city and county of Denver, and State of Colorado, have invented certain new and useful Improvements in Cover Lifters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in attachments for raising and lowering seats of closets or the like.

It is the object of this invention to provide a simple and effective mechanism, by means of which the seat of a closet may be raised and lowered by pressure applied by the foot, and with this object in view, the invention consists in the novel construction and arrangement of parts hereinafter more particularly described.

My invention can be best described by reference to the accompanying drawing in which the preferred embodiment thereof is shown, and in which:

Fig. 1 shows a side elevation of a closet fixture with my cover lifting attachment in place thereon, said view being taken in the direction indicated by the arrow 1 in Fig. 2; and

Fig. 2 is a front elevation of the closet fixture, looking in the direction of arrow 2 in Fig. 1.

The same reference characters will be employed to designate the same parts throughout the several views.

Numeral 1 designates the bowl portion of the closet fixture and 2 the cover thereof. The cover is hinged to the bowl in the usual manner so that it may be raised into the position shown by dotted lines in Fig. 1. The closet has the usual water tank 3 with a flushing lever 4. In the drawing I have shown a low tank, but my invention can be used with closets having an elevated tank.

It is often desirable to raise the closet cover and this should preferably be accomplished by means which can be operated by foot pressure. The mechanism which I have invented for this purpose consists of a bracket 5 which consists of two parallel spaced members each having a vertical portion 6, the lower end 7 of which is secured to the floor. An inclined portion 8 connects the upper ends of the vertical portions to the bottom of the tank 3 and is secured thereto by means of screws 9. Where an elevated tank is employed, the brackets are made longer and have their upper ends fastened to the wall. I have shown and described the bracket as composed of two parallel spaced members and this is the preferred construction, but a single member may be employed if desired. Pivotally connected to the bracket at point P is a lever 10, the outer end of which is provided with a pedal 11. Near the upper end of the inclined portion of the bracket at the point indicated by numeral 12, I pivot a second lever 13. This lever projects forwardly and terminates in an inturned portion 14 which engages the under surface of the cover. If care is taken to have the pivot 12 in line with the pivot of the cover, the portion 13 can be fastened to the cover, but otherwise it will have to be so connected thereto that it will have a sliding or lost motion connection therewith. A connecting link 15 is pivotally connected to the rear end of the lever 11 and to a point 16 on lever 13 forwardly of the pivot 12. A tension spring 17 joins the lever 10 to the vertical part of the bracket and serves to assist in the raising of the cover and to cushion the cover as it closes. The lever 13 has a portion 18 that extends to the rear of the pivot 12. To the end 18 I secure one end of a chain 19, the other end of which is connected to the flush lever 4. This chain is of such length that when the cover is raised, the lever 4 will be moved downwardly a sufficient distance to start the flushing operation.

The operation of my device is as follows:—The parts being assembled, as described, and in the position shown in Fig. 1, let us assume that sufficient pressure is exerted on the pedal 11 to move the same downwardly. This will move the rear end and the link 15 upwardly, which, in turn, will raise the lever 13 and cover 2. When the cover reaches the dotted line position, the chain 19 will be pulled downwardly by the action of the rear end 18 of the lever 13 and the flushing action will commence. As the pressure is removed from the pedal 11, the cover will return to full line position and as it approaches closed position, the spring 17 will

be put under tension and let the cover close gently.

From the above, it will be apparent that I have produced an attachment of simple and substantial construction that can be readily applied to existing toilet fixtures and by means of which a gentle pressure of the foot on the pedal 11 will open the cover.

Having now described my invention, what I claim as new is:

1. In an attachment for water closet seats having covers, the combination with a bracket having one end adapted to be connected to a floor and the other adapted to be secured to a stationary member, a lever pivoted intermediate its ends to said bracket near the lower end thereof, a second lever pivotally connected to said bracket near the upper end thereof, said lever having one end turned at an angle thereto and adapted to engage the lower side of the cover, a link connecting the lower lever with the upper lever in such a manner that when the lower lever moves in a clockwise direction, the upper lever will move in a counter-clockwise direction, and a chain connected to the rear end of the upper lever said chain being adapted to be connected to a flush lever.

2. In combination a closet bowl, a cover hingedly connected thereto, a water reservoir, a flush lever, a bracket having a base, a lever pivoted to the bracket near the base thereof, said lever having a pedal at its front end, a second lever pivotally connected to the bracket above said first named lever, a link connecting a point to the rear of the pivot of the first named lever with a point on the second lever to the front of its pivot, said second lever having its front end bent to one side and adapted to engage the under surface of the cover, the second lever having a portion extending to the rear of its pivot point, and a chain connecting the end of said portion to the flush lever.

3. In combination a closet bowl, a cover hingedly connected thereto, a water reservoir, a flush lever, a bracket having a base, a lever pivoted to the bracket near the base thereof, said lever having a pedal at its front end, a second lever pivotally connected to the bracket above said first named lever, a link connecting a point to the rear of the pivot of the first named lever with a point on the second lever to the front of its pivot, said second lever having its front end bent to one side and adapted to engage the under surface of the cover, the second lever having a portion extending to the rear of its pivot point a chain connecting the end of said portion to the flush lever, and a spring connecting the rear portion of the first lever to the bracket in such a manner that the spring will be under tension when the front end of the lever is in its uppermost position.

In testimony whereof I affix my signature.

SHICHIGORO KUNO.