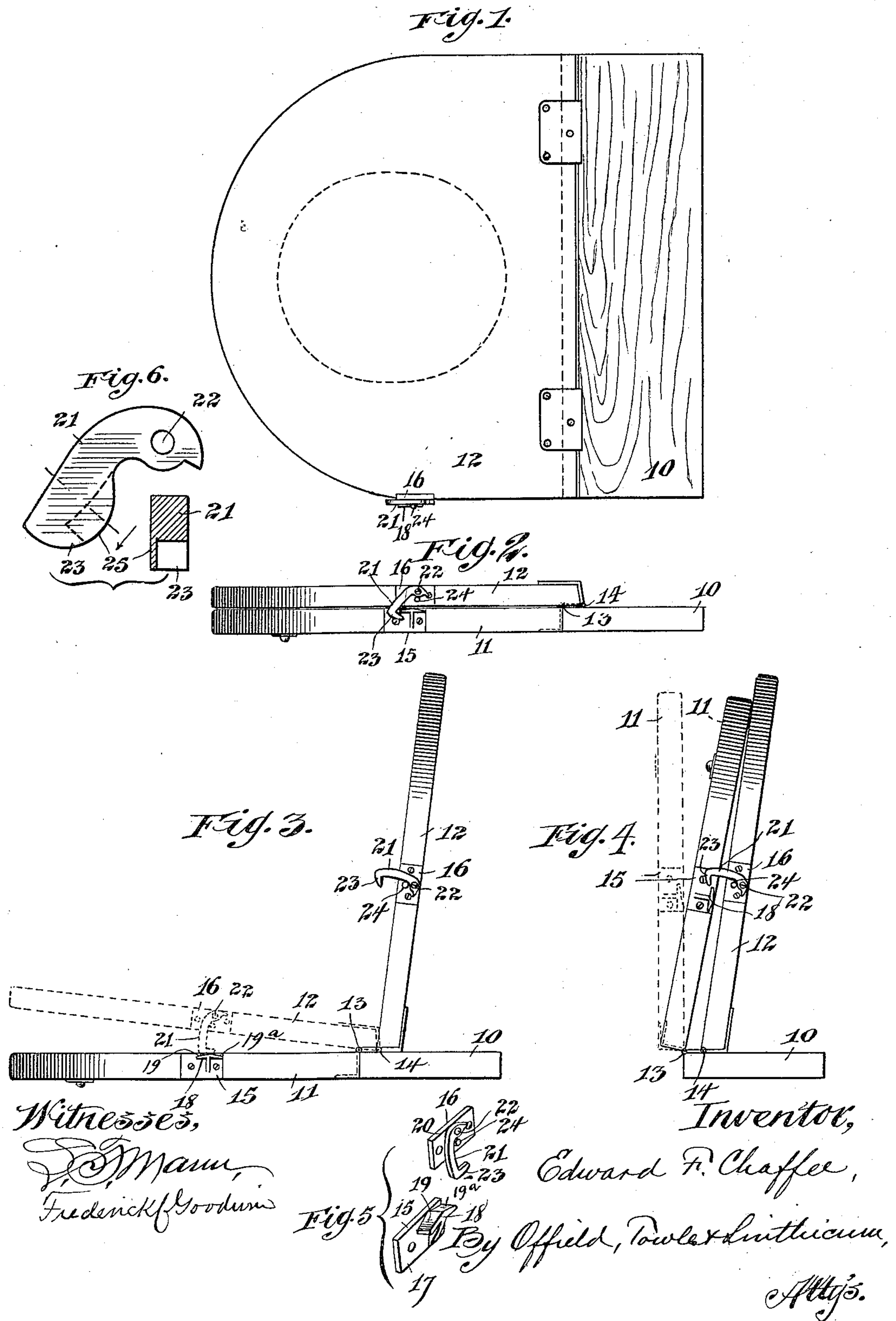


No. 617,875.

Patented Jan. 17, 1899.

E. F. CHAFFEE.
WATER CLOSET SEAT.
(Application filed May 23, 1898.)

(No Model.)



UNITED STATES PATENT OFFICE.

EDWARD F. CHAFFEE, OF ALBANY, NEW YORK.

WATER-CLOSET SEAT.

SPECIFICATION forming part of Letters Patent No. 617,875, dated January 17, 1899.

Application filed May 23, 1898. Serial No. 681,441. (No model.)

To all whom it may concern:

Be it known that I, EDWARD F. CHAFFEE, of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Water-Closet Seats, of which the following is a specification.

This invention relates to water-closet seats, and more particularly to that class devised more especially for use in railway-cars and other public conveyances and places in which provision is made whereby the raising of the cover normally also raises the seat, so that the bowl or hopper is normally presented for use as a urinal, the seat being protected from being wet or soiled by its raised position, while provision is also made whereby the seat is disconnected from the cover when raised to permit it to be independently lowered for use as a seat.

My present invention has for its object to provide a simple and effective mechanism, positive in its action and dispensing with the use of springs or counterbalance-weights, whereby these results may be attained with certainty, said mechanism being simple and inexpensive in construction, not liable to get out of order or fail to act, and serving to re-engage the seat and cover in the act of lowering the same before the vertical or substantially vertical position has been passed, so as to prevent the falling of the seat, and consequent injury to the seat or bowl.

To these ends my invention consists in certain novel features, which I will hereinafter describe and then particularly point out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a structure embodying my invention; Fig. 2, a side elevation of the same, both cover and seat being in a lowered or closed position; Fig. 3, a similar view showing the seat in a lowered position, the cover being shown in full lines in a raised position and in dotted lines in a partially-raised position; Fig. 4, a similar view showing both cover and seat in a raised position in full lines, the seat being shown in a partially-lowered position in dotted lines; Fig. 5, a perspective view of the two members of the automatic catch detached; and Fig. 6, a detail view, in elevation and in section, of a modified form of latch.

In said drawings, 10 indicates a suitable fixed horizontal ledge or strip which may form a part of the casing of the closet and which is located over the rear portion of the bowl or hopper when in place. To this strip are hinged the seat 11 and cover 12, both being preferably hinged in the same horizontal plane, as shown, the seat being hinged at 13 to the front edge of said strip, at the top thereof, and the cover being hinged to the top of said strip some little distance to the rear of said edge, as shown at 14. The seat is hinged at its upper edge and the cover at its lower edge, so that when the two are lowered they lie in separate parallel planes, the latter above the former and in contact with it, while the two swing in different arcs from separate centers or axes.

The automatic catch connecting the two members is preferably located at one side of the seat and cover, although it may obviously be located in slots or mortises in these parts, and comprises two members, one (indicated as a whole by the reference-numeral 15) mounted on the seat and the other (indicated as a whole by the reference-numeral 16) mounted on the cover. The former member 15 comprises a base-plate 17, by means of which it may be secured to the seat by screws or otherwise, and a flange or projection 18, extending laterally outward in the general plane of the seat and having its upper front portion beveled or inclined downward and forward, (the terms being employed with reference to the normal or lowered position of the seat,) as indicated at 19. The latter member 16 comprises a base-plate 20, by means of which it may be attached to the cover by screws or otherwise, a latch 21, pivoted thereon at 22 and having at its free end a projection or shoulder 23, and a stop-pin or projection 24. The latch 21 extends downward or forward from its pivot, which latter is parallel with the axes of the hinges of the cover and seat, and its projection or shoulder 23 is adapted to engage the front edge of the flange 18 of the other member, while the stop 24 serves to limit the downward movement, due to gravity, of the latch 21.

The structure thus organized operates in the following manner: When the seat and cover are both in the normal lowered position,

(shown in Figs. 1 and 2,) the latch 21 is engaged with the front edge of the flange 18, as indicated in Fig. 2. Upon lifting the cover this engagement continues, the seat being thereby raised along with the cover, the free end of the latch, however, resting on the edge of the flange 18 and moving constantly toward the pivotal axis of the cover, owing to the separation of said hinges. After the seat has substantially passed a vertical position the latch comes into contact with the stop-pin 24, which arrests the movement of the latch on its pivot. The flange 18 and latch then begin to separate, and when the seat and cover have reached the fully-raised position (shown in Fig. 4) the end of the projection 23 of the latch and the edge of the flange 18 are clear of each other and the seat may be lowered independently of the cover. In lowering both the seat and cover, however, the latch will again engage the flange before the seat has passed the vertical, and it will therefore be impossible for the seat to fall and do damage in case the two parts are being lowered by moving the cover alone, as is natural and convenient. When the seat has been independently lowered or has been left in a lowered position by disengaging the latch by hand, as may obviously be done, and the cover is lowered to close the closet, the end of the latch will strike or impinge upon the bevel or incline 19 of the flange 18 and said latch will swing forward clear of the edge of the flange and then drop back to engage the same.

It will be seen that the device is extremely simple in construction, and consequently inexpensive as to cost of manufacture, and not liable to get out of order, and therefore fail to operate. All springs and counterweights are dispensed with, and the disengagement of the two members of the catch is positive and may be assured by the direct employment to that end of the entire force which may be applied to the cover. In closing the parts by means of the cover, falling of the seat is prevented by reason of the reengagement of the two members of the catch before the seat assumes an angle such as to permit it to fall. The structure of the two members of the clutch is such, moreover, that the device may be applied to seats and covers already in place or manufactured, since no special mortising, slotting, or other special preparation of the parts is necessary, and the members of the catch may be applied directly to the edges of the seat and cover when constructed in the particular form shown. There are, moreover, no projecting parts above the level of the top of the seat or that of the cover to damage the clothing or injure the person. The latch 21 may be provided with a lateral guard-flange 25, as shown in detail in Fig. 6, to prevent the clothing from catching upon the hook 23 of the latch.

The flange 18 is preferably provided with a reverse bevel 19^a, so that the member 15 may be placed on either side of the seat, and thus

render this member of the device interchangeable. The same interchangeability of the other member 16 is effected by removing the latch 21 from its pivot and reversing its position thereon, so that the entire catch is practically reversible or interchangeable and may be applied to either side of the closet.

It will be noticed that the latch extends far enough rearward or downward beyond its pivot to prevent the latch from swinging far enough around to become reversed and inoperative by reason of this end of the latch coming into contact with the stop-pin.

It is obvious that various modifications in the details of construction may be made without departing from the principle of my invention, and I therefore do not wish to be understood as limiting myself strictly to the precise details hereinbefore described, and shown in the drawings.

I claim—

1. The combination, with a seat and a cover eccentrically pivoted, of a catch comprising two members, one mounted on the seat and having an engaging edge substantially parallel with the pivotal axis of the seat, and the other mounted on the cover and comprising a latch which normally tends to move toward the first member to engage the same, and a stop to limit said movement and thereby positively disengage said members by reason of the relative movement of the seat and cover due to the eccentricity of their pivots, substantially as described.

2. The combination, with a seat and a cover eccentrically pivoted, of a catch comprising two members, one mounted on the seat and having an engaging edge substantially parallel with the pivotal axis of the seat, and the other mounted on the cover and comprising a pivoted latch which normally tends to engage the first member, and a stop to limit the engaging movement of said latch and thereby disengage the same when the seat and cover are raised, substantially as described.

3. The combination, with the eccentrically-pivoted seat and cover, of a catch comprising two members, one mounted on the seat and having an engaging edge substantially parallel with the pivotal axis thereof and a bevel or incline adjacent to said edge, and the other member mounted on the cover and comprising a latch which normally tends to move toward the first member and is adapted to be guided by the bevel or incline thereof into engagement therewith, and a stop to limit the engaging movement of the latch and disengage the same when the seat and cover are raised, substantially as described.

4. The combination, with a hinged seat and a hinged lid or cover, the axes of the hinges being eccentric to each other, of a catch comprising two members, one carried by the seat, and the other by the cover and comprising a pivoted latch, the pivot whereof is eccentric to the engaging edge of the first member, and a stop to limit the movement of the latch to-

ward the first member, said stop being so located as to permit the engagement of the parts of the catch when the seat and cover are down and to prevent said engagement when they are raised, substantially as described.

5 5. In a device of the character described, the combination, with the eccentrically-hinged seat and cover, of a catch adapted to be secured to the edges thereof and comprising a
10 hinged latch having a hook or shoulder formed on the end thereof and the side wall of the latch being continuous along the hooked portion to provide a shield or guard for said latch, substantially as described.

6. In a device of the character described, the combination, with the eccentrically-hinged seat and cover, of a catch comprising two members adapted to be mounted respectively on the seat and cover, the one consisting of a base-plate and a flange having reversely-
15 arranged bevels and engaging edges, and the other consisting of a base-plate provided with a stop and a hooked latch reversibly pivoted on said base-plate, substantially as described.

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Witnesses:

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