

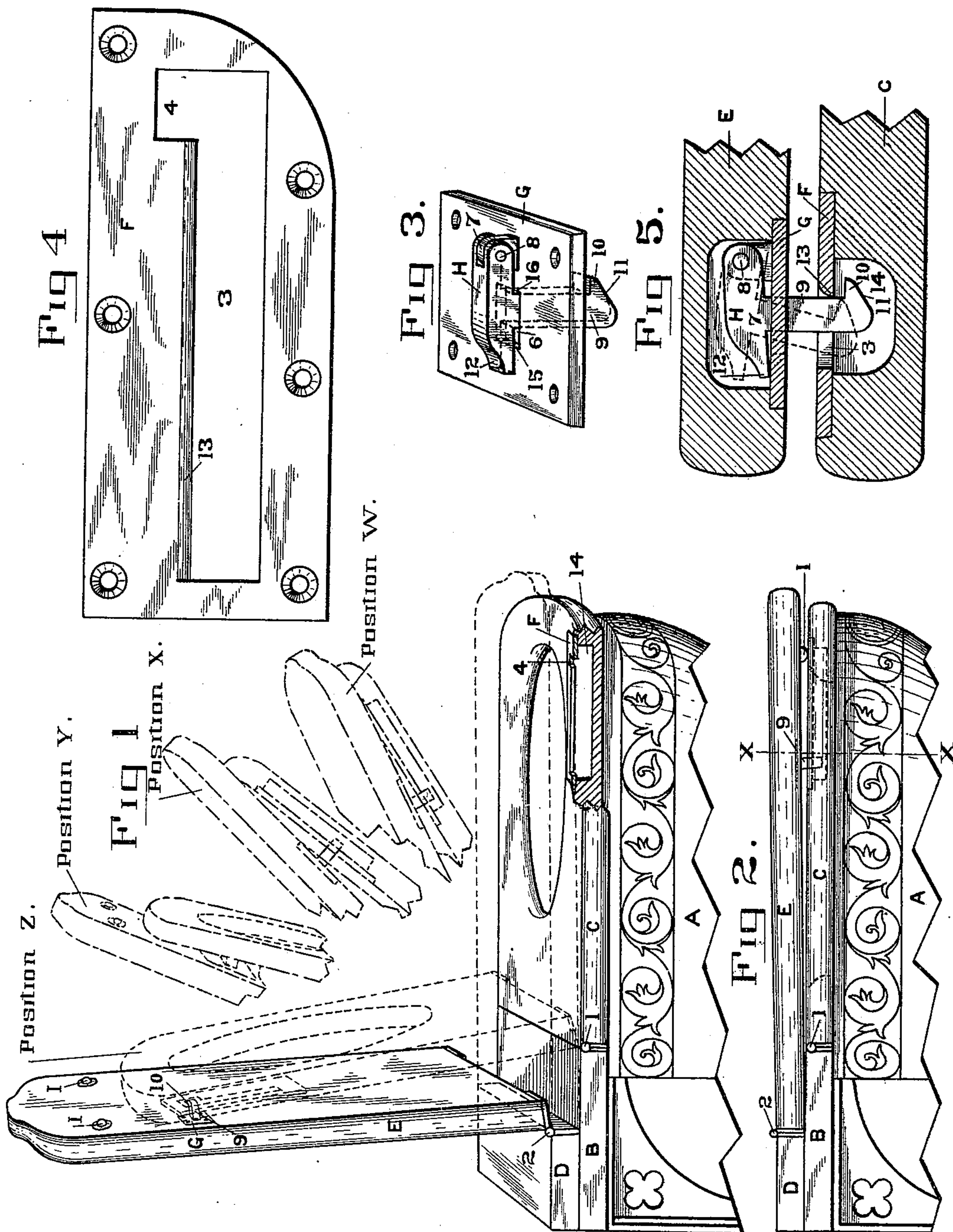
No. 619,894.

Patented Feb. 21, 1899.

J. KIRBY, JR.
SEAT RAISING DEVICE.

(Application filed Sept. 6, 1898.)

(No Model.)



Attest:

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JOHN KIRBY, JR., OF DAYTON, OHIO, ASSIGNOR TO THE DAYTON MANUFACTURING COMPANY.

SEAT-RAISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 619,894, dated February 21, 1899.

Application filed September 6, 1898. Serial No. 690,261. (No model.)

To all whom it may concern:

Be it known that I, JOHN KIRBY, Jr., a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a certain new and useful Improvement in Seat-Raising Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention consists in an improved device adapted to be attached to the lids and seats of water-closets and dry closets and whereby the lid in closing automatically engages with the seat and on being raised carries the seat with it and automatically disengages when the seat and lid reach a predetermined point in the course of their upward movement, and it is designed to improve upon the devices shown and described in United States Letters Patent Nos. 368,717, 456,007, and 542,633. It is not my intention, however, to seek to claim herein as my invention any of the inventions shown and described in said patents or either of them.

The objects of my invention are to provide a device which will automatically engage and disengage the lids and seat of such closets and which will be positive in its action, not liable to get out of order, and which may be so constructed that no part will project beyond the edge of either the seat or lid of such closets, and which shall also be equally applicable to other places where the use of such a device may be desirable; and to these ends it further consists in the combination, with the seat and lid hinged separately to the casing of the closet or to some fixture adjacent thereto, of a gravity-operating latch rotatively connected with a plate adapted to be secured, preferably, to the lid and adapted to engage a slotted catch-plate secured to the seat, the combinations and arrangement of parts constituting my invention, together with its mode of operation, being hereinafter fully described, and pointed out in the claims at the end of this specification.

In the accompanying drawings, which form a part hereof, Figure 1 is a perspective view of a portion of a closet, with the lid represented as swung up to a point slightly beyond

a perpendicular line and the seat in its normal position, the latter being broken away and showing the catch-plate and recess below same in section, the seat being also shown by dotted lines in the position in which it disengages from the lid and both being shown by broken lines in several intermediate positions. Fig. 2 is a side view showing the lid and seat down; Fig. 3, a perspective view of the gravity-latch and its pivot-plate; Fig. 4, a plan view of the slotted catch-plate with which the gravity-latch engages; and Fig. 5, a cross-section through line X X of Fig. 2, the latch being represented by dotted lines in its position when about to engage the catch-plate and by solid lines in such engaged position. In Figs. 3, 4, and 5 the parts are represented in actual size as usually made.

Similar letters and numerals of reference indicate corresponding parts in the several figures.

A represents the closet, and B a portion of the woodwork, to which a seat C is hinged at 1. D represents another portion of the woodwork, to which a lid E is hinged at 2.

F is a metal catch-plate, which is preferably mortised into and secured to the upper surface of the seat C and preferably away from one edge thereof, as shown more clearly in Fig. 1. This plate is provided with a longitudinal slot 3, terminating at one end in an opening or cut-out 4, extending at right angles to said slot, the seat being recessed beneath said plate for a purpose which will presently appear.

G represents a plate, of metal, having an opening 6 and standard 7, the latter projecting upwardly from the upper side thereof.

H represents an arm one end of which is rotatively connected, preferably by pivoting, as shown at 8, with the standard 7 and from which arm depends, through the opening 6, a branch 9, whose lower end terminates in a hook 10, having a beveled surface 11, the same constituting a gravity-operating latch and for which a projection 12 forms a stop to limit the downward movement thereof by striking against the surface of plate G, which is adapted to be mortised into and secured to the under side of the lid E in proper relation to the

plate F. Suitable screw-holes are provided in the plates F and G, by which they can be secured to the lid and seat, respectively.

The operation of my improvement is as follows: When plate F and plate G, together with its connected latch, are in position on the lid and seat, as hereinbefore described, the lid and seat both being down, the branch 9 will protrude through the slot 3 and the hook 10 will engage the under side of a projection 13 of the plate F near the end toward the hinges, which engagement is brought about and made positive by reason of the pivotal relation of the arm H to the hook 10 and which, it will be observed, is a considerable distance from the vertical center line of the branch 9, thus permitting the said branch to swing in the opening 6 and allowing the hook 10 to clear the edge of projection 13 when the beveled surface 11 of the hook 10 strikes against said edge—which is preferably rounded, as shown—as the lid closes down on the seat, the weight of the branch 9 and projection 12 assisting in the operation, the seat being recessed, as shown at 14, to receive and allow the hook 10 to slide freely therein on the under side of said projection of plate F. The desired movements of branch 9 in the opening 6 may, however, be governed by edges 15 and 16 of plate G, or any other suitable means may be employed for affording the requisite limitation to the movements of said branch 9 and hook 10 to insure perfect operation of the device. The engagement of the hook 10 with the plate F having been thus accomplished, when the lid is raised it will carry the seat with it until both reach a predetermined position at which they shall become disengaged and which position is that of a slight inclination to the rear or just beyond the perpendicular, as shown at position Z in Fig. 1, and where they may be retained by means of a suitable stop (not shown) and from which position the seat may be lowered independently of the lid or both may be lowered together, as may be desired, the relative positions of the hook 10 to the plate F during the movements of the seat and lid being shown in positions W, X, Y, and Z in Fig. 1. I represent rubber cushions, which are intended to receive the shock incident to the sudden fall of the lid.

From the foregoing description of my invention it will be observed that by connecting the latch to one side thereof with the standard 7 engagement of the hook 10 with catch-plate F is made more certain than would be the case if the latch were pivoted on a center vertical line therewith; that no spring is employed, the use of which has been found objectionable for the reason that they sometimes become impaired, in which case the de-

vice will fail to operate, and that my improvement may be so applied to the seat and lid as to avoid all projections from the edges thereof, which such application has been found to be very objectionable on account of liability to tear clothing and of the device to be manipulated by hand, in which case the lid can be and frequently is raised independently of the seat and the purpose of the device thereby frustrated.

It is obvious that the herein-described details of construction of my invention may be modified and departed from in some respects without departing from the spirit thereof, and therefore I do not limit my invention to such exact structural details.

Having thus fully described my invention, I claim—

1. In a seat-raising device, the combination with a seat and a lid hinged independently of each other; the lid being adapted to close down on the seat, of a plate secured to the under surface of the lid and having a standard to which a gravity-operating latch is rotatively connected to one side thereof by means of an arm extending therefrom and at an angle thereto and forming a part of said latch, a catch-plate secured to the upper surface of the seat; the said plate having a slot adapted to receive said latch and an opening to release the same, and a recess below said catch-plate and within which said latch can travel and whereby it automatically engages the under side of said catch-plate as the lid closes down on the seat and likewise disengages the said plate when the lid and seat are raised to a position preestablished for such automatic disengagement, substantially as and for the purpose set forth.

2. In a seat-raising device, a hinged lid having attached thereto, a plate as G provided with a standard as 7 and to which is pivoted an arm as H from which depends a branch as 9 terminating at its lower end in a hook as 10 having a beveled surface as 11, in combination with a hinged seat to which is secured a plate as F having a slot as 3 terminating in an opening as 4 and a recess in the seat below said plate; the said hook being adapted to automatically engage said plate upon the closing down of the lid and to automatically disengage the same when the seat and lid are raised together to a position prearranged for such automatic disengagement, substantially as and for the purpose set forth.

In testimony whereof I hereunto subscribe my name this 1st day of September, 1898.

JOHN KIRBY, JR.

In presence of—

H. S. MILLER,
N. EMMONS, Jr.