

Aug. 8, 1933.

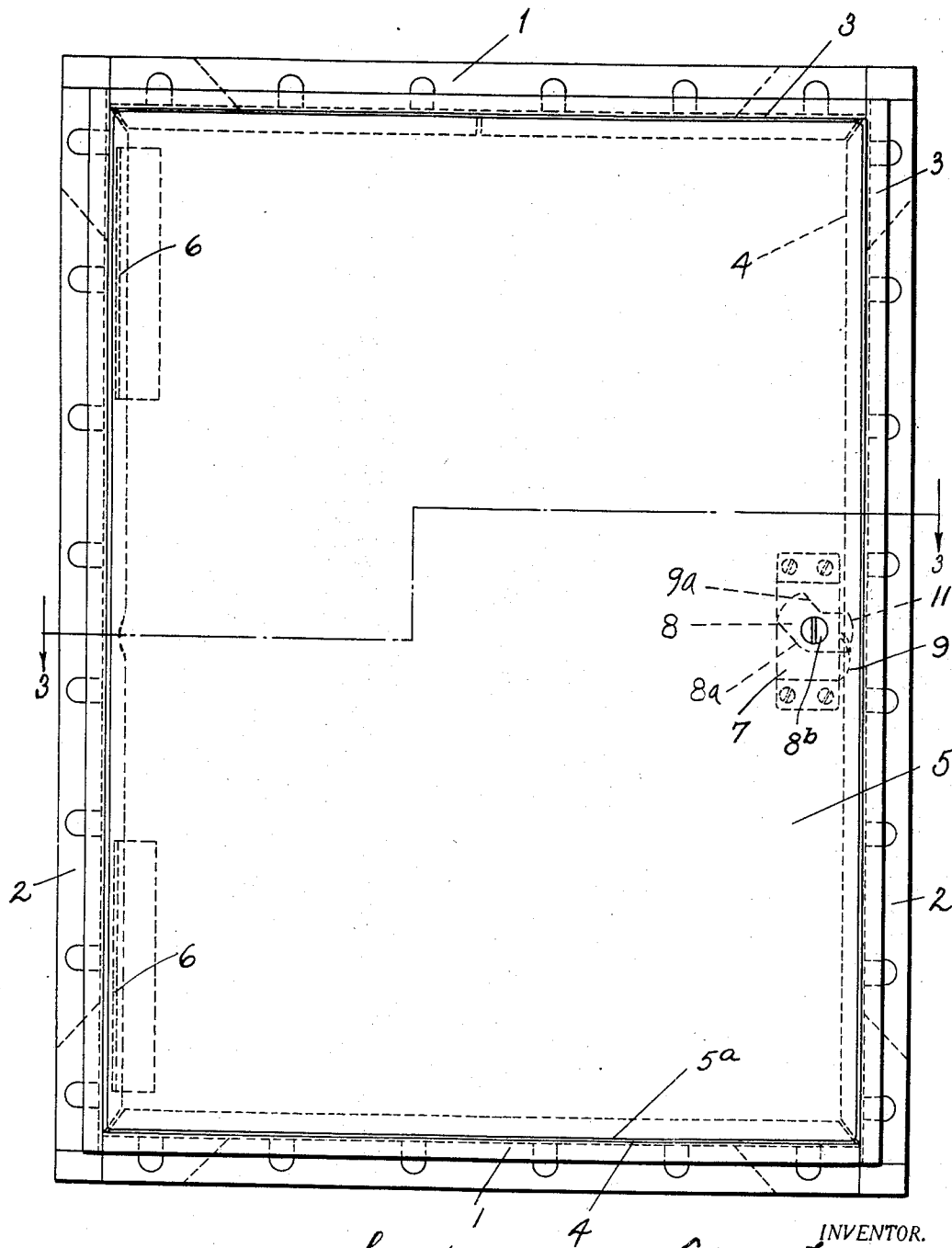
C. TRAUT

1,921,051

ACCESS PANEL LATCH

Filed Sept. 18, 1930

2 Sheets-Sheet 1



BY

INVENTOR.
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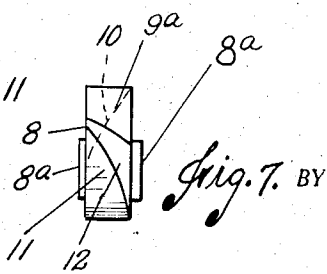
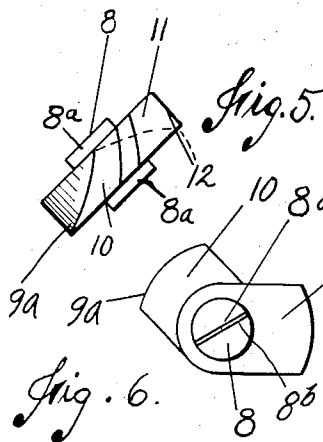
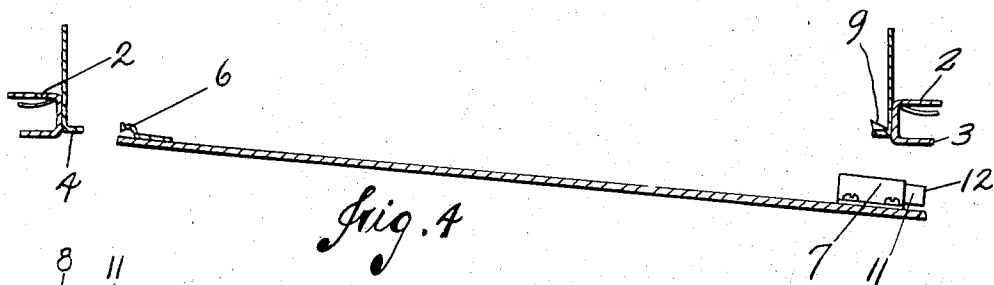
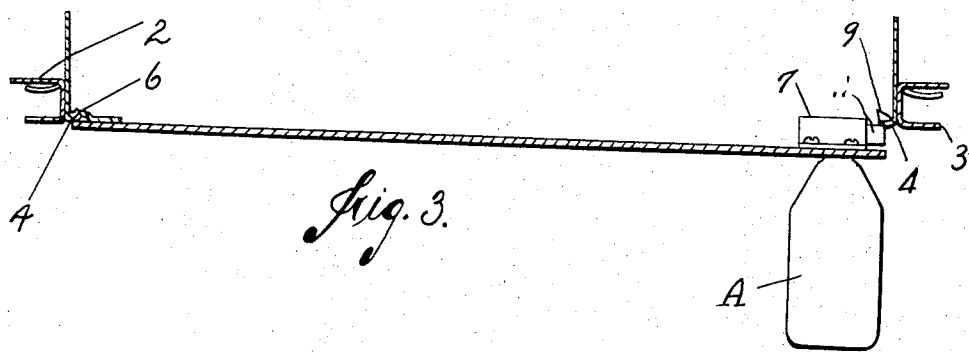
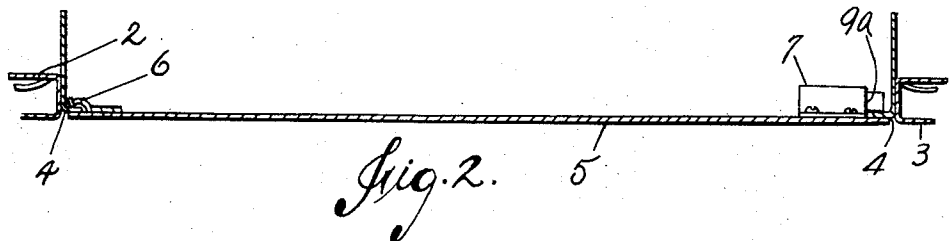
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

1,921,051

ACCESS PANEL LATCH

Clifford Traut, Newport, Ky., assignor to The
Higgin Manufacturing Company, Newport, Ky.,
a Corporation of West Virginia

Application September 18, 1930.
Serial No. 482,851

5 Claims. (Cl. 292—241)

My invention relates to latching devices for access panels, and particularly to concealed latches which may be actuated by a screw driver or other suitable instrument.

The employment of cams for latching devices has been suggested in the past.

It is my object to provide a latching device which has a latching portion, and a cam surface which cooperates with an inclined or cam surface of the supporting frame of an access panel, so that by turning the latch in one direction the panel will be securely locked in place, and by turning the latching device in the other direction the edge of the panel on which the latch is mounted will be wedged away from the panel frame so that it may be readily removable.

It is further my object to provide a latch in which arms of a rotary member have correspondingly beveled cam surfaced portions mounted in opposed directions so that one cam surfaced arm will latch in back of the access panel supporting frame while the other will, upon reverse movement of the latching member, cam the access panel out to a position where it may be readily grasped with the fingers.

Referring to the drawings in which I have illustrated a preferred type of construction, Figure 1 is a front elevation of the access panel and frame showing the position of the latch when the access panel is partially open.

Figure 2 is a horizontal sectional view showing the position of the panel with the latch closed.

Figure 3 is a sectional view as would appear along the lines 3—3 in Figure 1, with the access panel moved to partially open position.

Figure 4 is a sectional view showing the access panel being removed from the panel frame.

Figure 5 is a side elevation of the latching member showing the two cam surfaced portions, one of which locks the latch while the other one wedges upon the panel with reversed movement of the latching member.

Figure 6 is an end elevation of the latch member.

Figure 7 is another view of the latch member in a slightly different position than that in which it is shown in Fig. 5.

The access panel frame comprises upper and lower bars 1 and side bars 2 welded or secured together in an integral assembly. The metal pieces forming the frame have flanged exposure edges 3 which ordinarily lie flush with the wall surface.

Inturned ribs 4 are set back from the face of the frame, against which ribs the access panel 5

is received. One side of the panel 5 is provided with a clip 6 which interlocks with the rib 4 at one side of the frame. Since the lower edge 5a of the panel seats within the lower side of the panel frame, no support is required to prevent the panel from dropping out.

Opposite the side on which the clips 6 are mounted, I provide the latching arrangement which forms the subject matter of my invention.

This latch arrangement comprises a housing 7 with a cam member 8 therein, and a cam portion 9 formed on the adjacent frame rib 4. The housing 7 is made of a strip with its upper and lower ends bent forward and fixed to the back of the panel 5, leaving its back spaced from the panel, and open sides. The cam member 8 has aligned short spindle portions 8a on its back and front, respectively, one journaled in the housing back and the other in the panel 5 with its front end even with the front face of the panel 5 and having a slot 8b into which an instrument A may be inserted as shown in Fig. 3, for turning the member 8. This cam member 8 has radially diverging arms with their adjacent diverging edges beveled, one arm 9a on its front, forming cam surface 10, and the other arm 11 on its back, forming cam surface 12. It is turned clockwise for latching; the cam surface 10 gradually wedging down in back of the rib 4. The frame cam portion 9 is a backward distension of the edge of the adjacent rib 4, located down from the axis of the cam member 8 where, upon turning this member counterclockwise, the upper front edge of the arm 11 may enter the space left in front of this portion 9 and ride its rear beveled cam surface 12 up the inclined upper end thereof onto the straight front surface of the rib 4, forcing the panel 5 forward far enough for engagement of the fingers to lift the panel from the opening.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A latch structure for use in securing a panel to the outer face of a panel frame rib, comprising a portion of said rib, having a recess in said outer face, a rotary cam member on the inner face of said panel having a portion to enter said recess and pass to the outer face of the rib to force the panel outwardly as the cam member is rotated in one direction, and a portion to pass out of said recess to the inner face of the rib and lock the panel in place as the cam member is rotated in the opposite direction.

2. A latch structure for use in securing a

- panel to the outer face of a panel frame rib, comprising a portion of said rib, having a recess in said outer face, a rotary cam member on the inner face of said panel, said panel having an opening through which said cam member is accessible for rotation, and said cam member having cam faces with edges in axially spaced planes and inversely presented along said planes, one edge passing into said recess and passing therefrom to the outer face of the rib to force the panel outwardly as the cam member is rotated in one direction, and the other edge passing out of said recess to the inner face of said rib to draw the panel inwardly as the cam member is rotated in the opposite direction.
3. A latching structure for use in securing a panel in flush position with relation to the outer face of a wall frame having a rib inset from its outer face, against which the panel is to be seated, comprising a portion of said rib recessed, a rotating cam member adjacent the inner face of the panel, arranged to enter said recessed portion out of engagement with the inner face of the rib as the cam member is rotated in one direction, and to pass to the inner face of the rib as the cam member is rotated in the opposite direction out of the recess, whereby the panel is forced outwardly from the frame on the former motion and locked in place on the latter motion.
4. A latching structure for use in securing a panel in flush position with relation to the outer face of a wall frame having a rib inset from its outer face, against which the panel is to be seated, comprising a portion of said rib bent and leaving a recess therein and an outwardly presented cam surface in the recess, a rotating cam member adjacent the inner face of the panel, arranged to enter said recess into engagement with the cam surface of the rib to force the panel outwardly from the frame as the cam member is rotated in one direction, and to pass out of said recess to the inner face of the rib to lock the panel in the frame as the cam member is rotated in the opposite direction, and means to be engaged at the outer face of the panel for rotating said cam member.
5. A latching structure for use in securing a panel in flush position with relation to the outer face of a wall frame having a rib inset from its outer face, against which the panel is to be seated, comprising a portion of said rib bent and leaving a recess therein and an outwardly presented cam surface in the recess, a rotating cam member adjacent the inner face of the panel, arranged to enter said recess into engagement with the cam surface of the rib to force the panel outwardly from the frame as the cam member is rotated in one direction, and to pass out of said recess to the inner face of the rib to lock the panel in the frame as the cam member is rotated in the opposite direction, and means to be engaged at the outer face of the panel for rotating said cam member.

CLIFFORD TRAUT.

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