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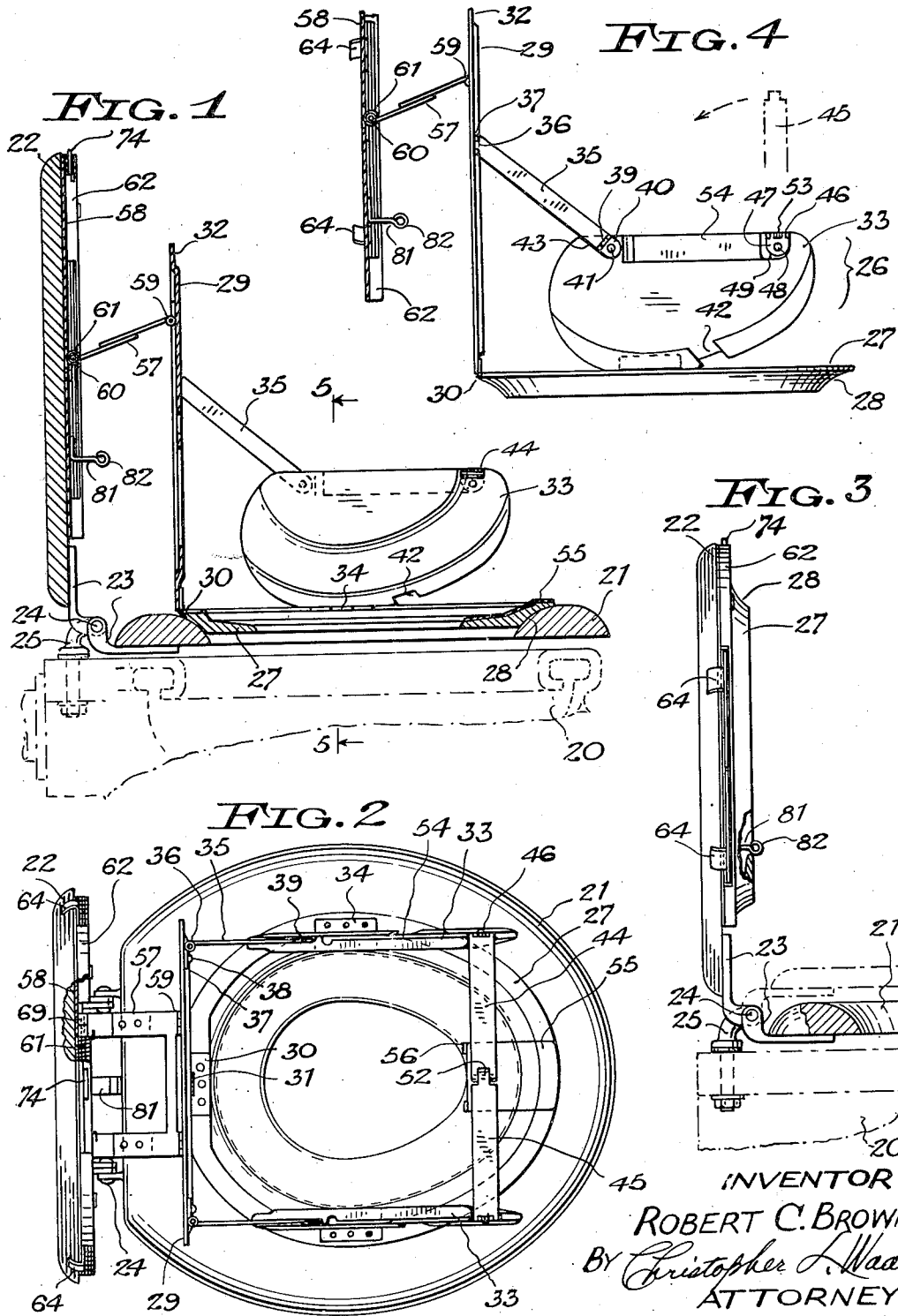
R. C. BROWN

2,486,631

TOILET SEAT

Filed July 19, 1946

3 Sheets-Sheet 1



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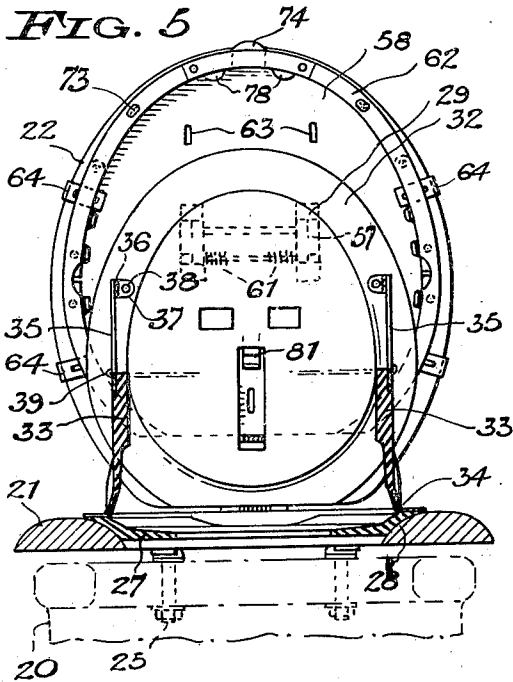
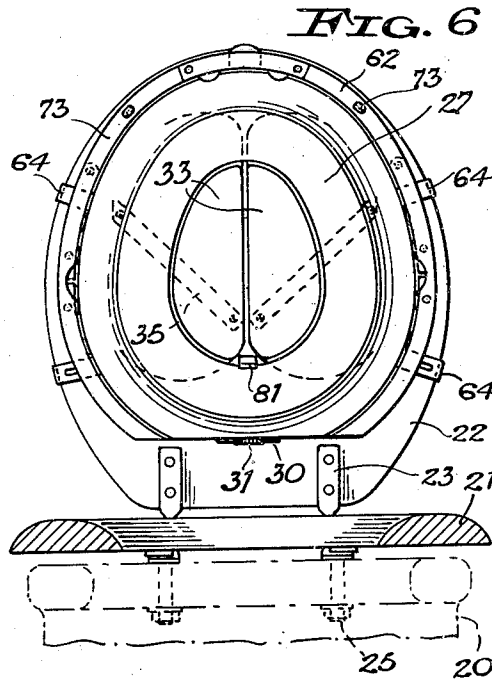
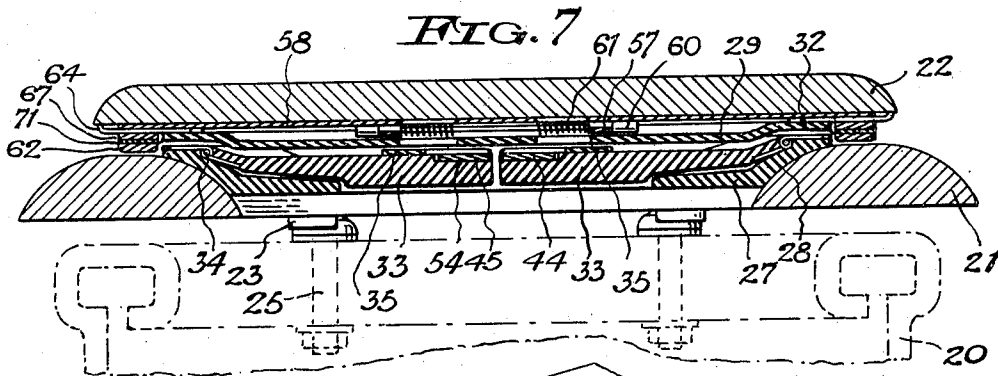
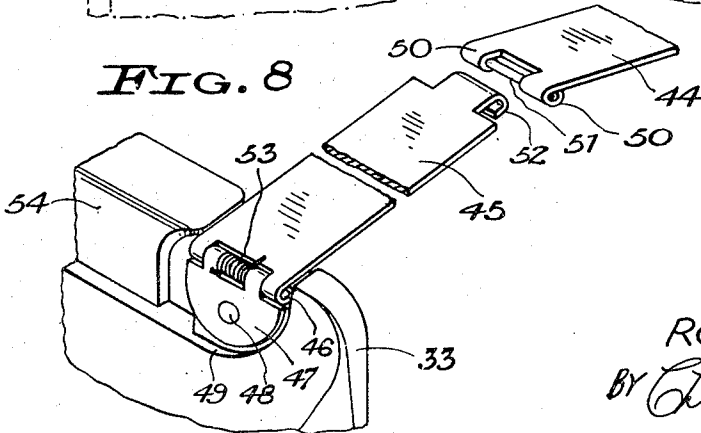
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3 Sheets-Sheet 2



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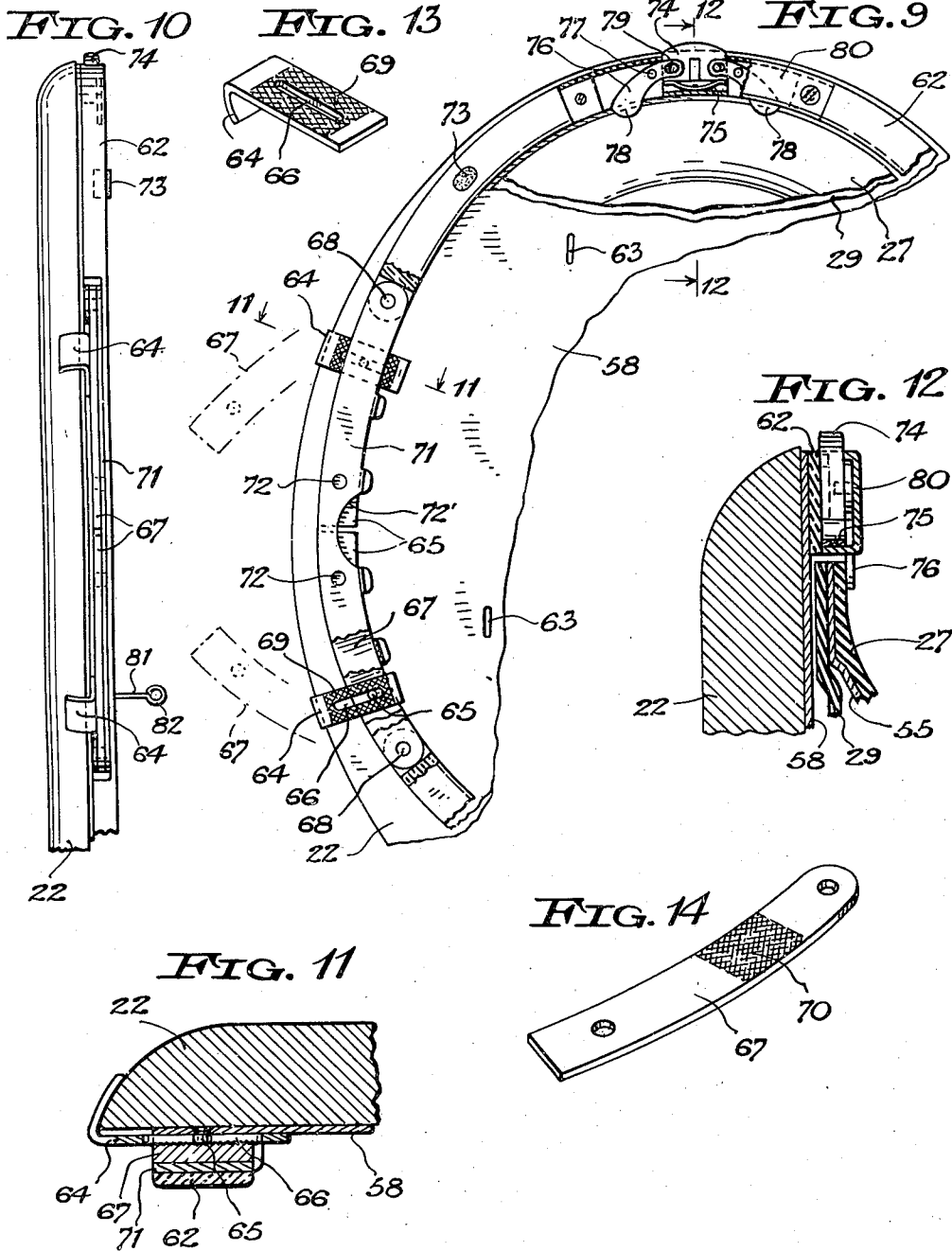
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TOILET SEAT

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3 Sheets-Sheet 3



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TOILET SEAT

Robert C. Brown, Milwaukee, Wis.

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10 Claims. (Cl. 4—239)

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The present invention relates to toilet seats and more particularly to auxiliary toilet seats adapted for use by small children.

An object of the invention is to provide a child's toilet seat which is adapted for attachment to an adult toilet seat, and which is compactly foldable to a position adjacent to the underside of the cover member, so as to permit normal use of the adult toilet seat.

Another object is to provide a child's toilet seat which can be mounted in a simple manner and which is capable of easy folding and unfolding.

A further object is to perfect details of construction generally.

The invention further consists in the several features hereinafter described and claimed.

In the accompanying drawings:

Fig. 1 is a longitudinal sectional elevational view of an adult toilet seat and a cooperating child's toilet seat of the invention, the cover member of the adult toilet seat being raised, and the seat member of the child's toilet seat being in seat-forming position;

Fig. 2 is a top view of the seat assembly of Fig. 1, parts being broken away and parts being shown in section;

Fig. 3 is a fragmentary side elevation of the seat assembly with the child's toilet seat folded against the raised cover member of the adult toilet seat, parts being broken away and parts being shown in section;

Fig. 4 is a side elevation of the child's toilet seat in its unfolded condition, parts being shown in section;

Fig. 5 is a sectional elevational view taken generally on the line 5—5 of Fig. 1;

Fig. 6 is a similar view but with the child's seat folded against the raised cover member as in Fig. 3;

Fig. 7 is a transverse sectional elevation in the same plane as Fig. 5, but with the child's seat folded and the cover member lowered;

Fig. 8 is a fragmentary detail perspective view of a side member and cross strap of the child's toilet seat;

Fig. 9 is a fragmentary detail view of the underside of the cover member and attached parts of the child's seat, parts being broken away and parts being shown in section;

Fig. 10 is a fragmentary side view of the raised seat member;

Fig. 11 is a detail sectional view taken along the line 11—11 of Fig. 9;

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Fig. 12 is a detail sectional view taken along the line 12—12 of Fig. 9;

Fig. 13 is a detail perspective view of a clamping hook, and

Fig. 14 is a detail perspective view of a locking lever for the hook.

In the drawings, 20 designates a conventional closet bowl on which is mounted a conventional hinged toilet seat, the latter comprising a seat member 21 and a cover member 22 provided at their rear portions with hinge members 23 which are pivotally connected by pintles 24 to upstanding bracket bolts 25 rigidly secured to the bowl. The seat member 21, which is designed for adult use, consists of the usual rim with a rounded upper surface, and is here shown to be of the closed-front type, although an open-front seat member of conventional type may be used instead.

In accordance with the invention, an auxiliary or child's toilet seat, designated generally by the number 26, is associated with the adult seat and includes a dished seat member 27 of generally oval shape which detachably nests into the adult seat member 21, the auxiliary seat member having a concave bottom surface 28 to fit the rounded surface of the adult seat member. A back rest or plate 29 is connected by a spring hinge 30 to the rear end of the auxiliary seat member 27, the hinge having a coiled torsion spring 31, Figs. 2 and 6, tending to move the auxiliary seat member and back rest angularly apart. The marginal portions 32 of the back rest are offset rearwardly. A pair of side plates 33 are connected by hinges 34 to the opposite side portions of the auxiliary seat member 27, and are swingable upwardly to parallel vertical positions, as seen in Figs. 1, 2, 4, and 5. The side plates are shaped to fold inwardly about parallel hinge axes to a nested position within the dished auxiliary seat member, as indicated in Figs. 6 and 7, and in this position the hinged back rest is foldable over the side plates and nests into the folded side plates. The auxiliary seat member, back rest and side plates are preferably formed wholly or mainly of a hardened plastic material such as Bakelite. The back rest and side plates are connected by flat brace bars 35 each of which at one end is hinged at 36 to a bracket or ear 37 swiveled at 38 to the marginal portion of the back rest, and which at the other end is hinged at 39 to a bracket or ear 40 swiveled at 41 to the upper edge portion of the associated side plate. In the folded position of the parts the flat brace bars 35 are interposed between the side plates and the back rest, as seen in Fig. 7, the side plates having

marginal notches 42 at their dished edges and recesses 43 at their upper edges to accommodate the brace bars. The side plates, when in their upstanding position, have their front portions connected by a metal cross strap comprising complementary flat bars 44 and 45 each of which is hinged at 46 at its outer end to a bracket or ear 47 swiveled at 48 on the outer side of the associated side plate, there being a recess 49 in the side plate to accommodate the ear. The cross bar 44 has spaced end knuckles 50 carrying a cross pin 51 detachably engageable by a terminal hook 52 on the bar 45, and the two cross bars are held down in aligned position by coiled torsion springs 53 on the respective hinges of the bars. In the folded condition of the auxiliary seat the swiveled cross bars extend in rabbets 54 formed along the outer sides of the side plates and are held therein by the torsion springs 53.

In some instances, the auxiliary seat member 27 is provided at its upper front portion with a deflector plate 55 which is hinged at 56 at its rear edge and is frictionally retained in position, the deflector plate being bent to conform to the contour of the seat member.

The back rest 29 is connected by a link 57 with a mounting plate 58 which is adapted to be secured to the underside of the cover member 22 of the adult seat, the link having a hinge connection 59 with the back rest and a hinge connection 60 with the mounting plate, the axes of the hinge connections being parallel with the axis of the hinge pintles 24. The hinge connection 60 is provided with one or more torsion springs 61 tending to urge the back rest away from the mounting plate. In the unfolded position of the auxiliary seat, seen in Fig. 1, the back rest 29 is approximately parallel to the cover member 22. The mounting plate 58 has a rim or bead 62 adapted to conceal the edge portions of the auxiliary seat when the latter is folded, the rim or bead being preferably formed mainly of a hardened plastic material. If desired, the mounting plate may be attached to the cover member by screws, not shown, slots 63 being provided in the plate for this purpose. The mounting plate is here shown to be adjustably secured to the cover member by pairs of hook members 64 engaging opposite side edges of the cover member. Each hook member bears on the mounting plate and is guided by a stud 65 which is secured to the plate and extends in a slot 66 in the hook member. A pair of levers 67 are pivotally secured at 68 to each side of the mounting plate and bear on the respective hook members, the hook members and levers having cooperating roughened clamping surfaces 69 and 70. The pair of levers are confined by a cover plate 71 which is secured to the mounting plate 58 and is disposed in a recessed part of the rim 62. Each cover plate has detents 72 to engage recessed parts of the levers when the latter are in their closed position. The cover plate also has a notch 72' at its inner edge to facilitate outward displacement of the levers. If desired, the rim may be provided with inset rubber bumpers 73.

The front end of the rim or bead 62 carries retaining means, Figs. 9 and 12, to hold the folded auxiliary seat within the rim. The retaining means is here shown to include a suitably guided forwardly projecting push slide 74 which is urged outwardly by an arched leaf spring 75. A pair of fingers 76 are pivoted at 77 in the rim and have inwardly projecting end portions 78 to engage the front edges of the auxiliary seat member 27. 75

The other ends of the fingers have pin-and-slot connections 79 with the push slide, whereby inward displacement of the push slide will retract the fingers. The retaining mechanism is here shown to be held in the rim 62 by a closure plate 80. In some instances, a resilient retaining finger 81 with a rounded front end 82 may be secured to the mounting plate 58 to engage the rear portion of the folded auxiliary seat member, the back rest 29 being suitably apertured to pass this finger.

To install the auxiliary toilet seat 26 on the adult toilet seat, the former is folded flat and rested on the adult seat member 21 to nest therein, the levers 67 being swung outwardly. The cover member 22 is then lowered onto the mounting plate 58, and the hook members 64 are then pushed inwardly against the edges of the cover member. The locking levers 67 are then pushed inwardly to their locked inner positions, causing the hook members to grip the opposite side edges of the cover member. The assembly is then ready for use. When it is desired to transfer the auxiliary seat to another toilet seat, the auxiliary seat can be readily detached by swinging out the locking levers 67. The auxiliary seat can be installed without the use of tools and without marring the adult seat.

When the conventional toilet seat is to be used by an adult, the auxiliary seat is folded and latched on the mounting plate, as seen in Figs. 3, 6, and 7, whereupon the auxiliary seat will swing as a unit with the cover member 22. When the auxiliary seat is to be used, it is unlatched from the mounting plate preferably while the cover member is in its horizontal position, shown in Fig. 7, whereupon the cover member is raised to the approximately vertical position shown in Figs. 1 and 2, causing the auxiliary seat to unfold. In this operation, the spring hinges 30 and 60 tend to open the linkage and keep the auxiliary seat member 27 nested in the main seat member 21. After the child is seated on the seat member 27, the cross straps 44 and 45 are swung inwardly from the side plates 33 and are joined by the hook connection 51, 52, thus preventing the child from falling. The auxiliary seat member 27 is here shown to have a closed front, but in some cases this seat member may have an open front.

What I claim as new and desire to secure by Letters Patent is:

1. A child's toilet seat adapted for use with a conventional adult toilet seat having a main seat member and a hinged cover member, comprising an auxiliary seat member adapted to removably rest on the main seat member, a back rest pivotally connected to the rear portion of said auxiliary seat member, said back rest and auxiliary seat member being foldable together, and linkage for connecting said back rest with the underside of said cover member to permit the child's toilet seat to be folded flat against said cover member, said linkage forming a means for carrying the folded child's toilet seat from the cover member when both of the latter are in raised position.

2. A child's toilet seat adapted for use with a conventional adult toilet seat having a main seat member and a hinged cover member, comprising an auxiliary seat member adapted to removably rest on the main seat member, a back rest pivotally connected to the rear portion of said auxiliary seat member, said back rest and auxiliary seat member being foldable together, a mounting plate adapted to be secured to the underside of

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the cover member, and linkage connecting said back rest and said mounting plate, said linkage and mounting plate forming a means for carrying the folded child's toilet seat from the cover member when both of the latter are in raised position.

3. A child's toilet seat adapted for use with a conventional adult toilet seat having a main seat member and hinged cover member, comprising an auxiliary seat member adapted to rest on the main seat member, a back rest pivotally connected to the rear portion of said auxiliary seat member, side members pivotally connected to the opposite side portions of said auxiliary seat member, linkage connecting said side members and said back rest, said side members being foldable inwardly over said auxiliary seat member and said back rest being foldable over the folded side members, and linkage connecting said back rest with the underside of the cover member.

4. A child's toilet seat adapted for use with a conventional adult toilet seat having a main seat member, and a hinged cover member, comprising an auxiliary seat member adapted to rest on the main seat member, a back rest pivotally connected to the rear portion of said auxiliary seat member and foldable thereover, a mounting member adapted to be secured to the cover member, linkage connecting said back rest and mounting member, and spring means tending to urge said back rest angularly away from said auxiliary seat member, said linkage forming a means for carrying the folded child's toilet seat from the cover member when both of the latter are in raised position.

5. A child's toilet seat adapted for use with a conventional adult toilet seat having a seat member and a hinged cover member, comprising an auxiliary seat member adapted to rest on the main seat member, a back rest pivotally connected to the rear portion of said auxiliary seat member and foldable thereover, a mounting member adapted to be secured to the cover member, linkage connecting said back rest and mounting member, spring means tending to urge said back rest angularly away from said auxiliary seat member, and spring means tending to urge said back rest forwardly and downwardly from said mounting member.

6. A child's toilet seat adapted for use with a conventional adult toilet seat having a main seat member and a flat-bottomed hinged cover member, comprising an auxiliary seat member adapted to rest on the main seat member, a back rest pivotally connected to the rear portion of said auxiliary seat member, said back rest and auxiliary seat member being foldable together, a flat mounting plate adapted to be secured to the underside of the cover member, linkage connecting said back rest and said mounting plate, a rim on said mounting plate to form therewith a space receiving said back rest and auxiliary seat member when the latter are folded, and means carried by the front portion of said mounting plate for releasably retaining said back rest and auxiliary seat member in folded condition.

7. A child's toilet seat adapted for use with a conventional adult toilet seat having a seat member and a hinged cover member, comprising an auxiliary seat member adapted to rest on the main seat member, a back rest pivotally connected to the rear portion of said auxiliary seat member, a mounting plate adapted to be secured to the

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underside of the cover member, linkage connecting said back rest and mounting plate, clamping hooks movably carried on said mounting plate and adapted to engage the edges of the cover member, and means for retaining said clamping hooks in clamping position.

8. A child's toilet seat adapted for use with a conventional adult toilet seat having a seat member and a hinged cover member, comprising an auxiliary seat member adapted to removably nest into the opening of the main seat member and having a dished top, a back rest pivotally connected to the rear portion of said auxiliary seat member, side members pivotally connected to the opposite side portions of said auxiliary seat member and foldable inwardly from an upright position to nest into said auxiliary seat member and to be below the top plane of said auxiliary seat member, and linkage connecting said side members and said back rest, said back rest being foldable over the folded side members.

9. A child's toilet seat adapted for use with a conventional adult toilet seat having a seat member and a hinged cover member, comprising an auxiliary seat member adapted to removably nest into the opening of the main seat member and having a dished top, a back rest plate pivotally connected to the rear portion of said auxiliary seat member, a mounting plate adapted to be secured to the underside of the cover member, linkage connecting said back rest plate and said mounting plate, side members pivotally connected to the opposite side portions of said auxiliary seat member and foldable inwardly from an upright position to nest into said auxiliary seat member and to lie below the top plane of said auxiliary seat member, and linkage connecting said side members and said back rest plate, said back rest plate being foldable over the folded side members, the folded side members presenting a depression at their outer sides, and said back rest plate being dished and when in folded condition extending into said depression.

10. A child's toilet seat, comprising an auxiliary seat member adapted to rest on the main seat member of an adult toilet seat, a back rest pivotally connected to the rear portion of said auxiliary seat member, side members pivotally connected to the opposite side portions of said auxiliary seat member, and links connecting said back rest and the respective side members, each link having pivoted and swiveled parts at opposite ends, said side members and back rest being foldable over said auxiliary seat member, and said back rest being foldable over said side members.

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