E. I. SEAVEY.

WATER CLOSET SEAT AND CONNECTION THEREFOR.

APPLICATION FILED MAY 20, 1915.

1,163,111.

Patented Dec. 7, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

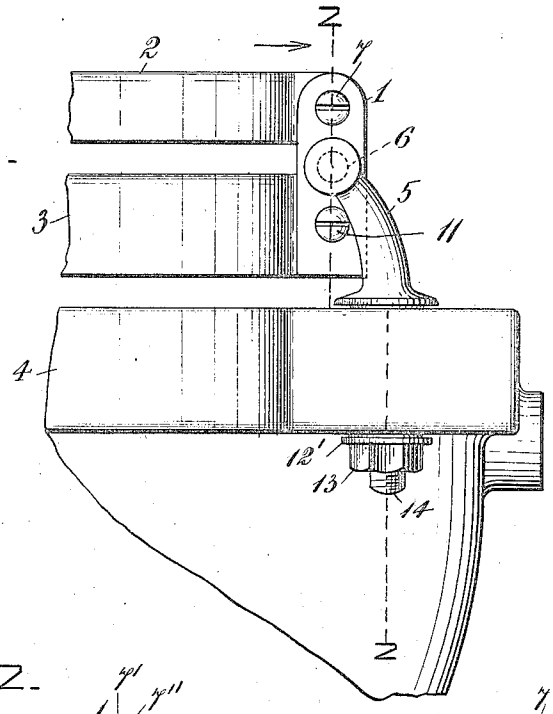
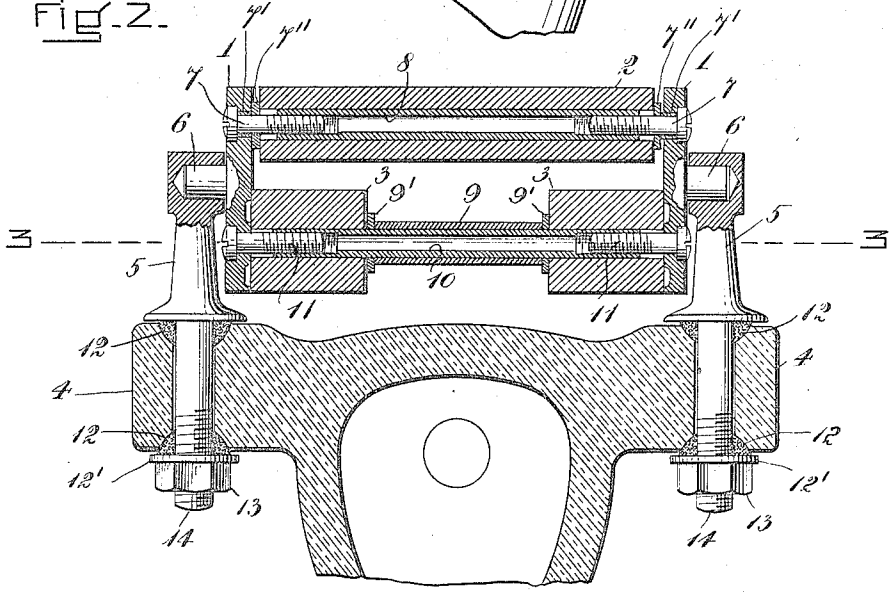


Fig. 2.



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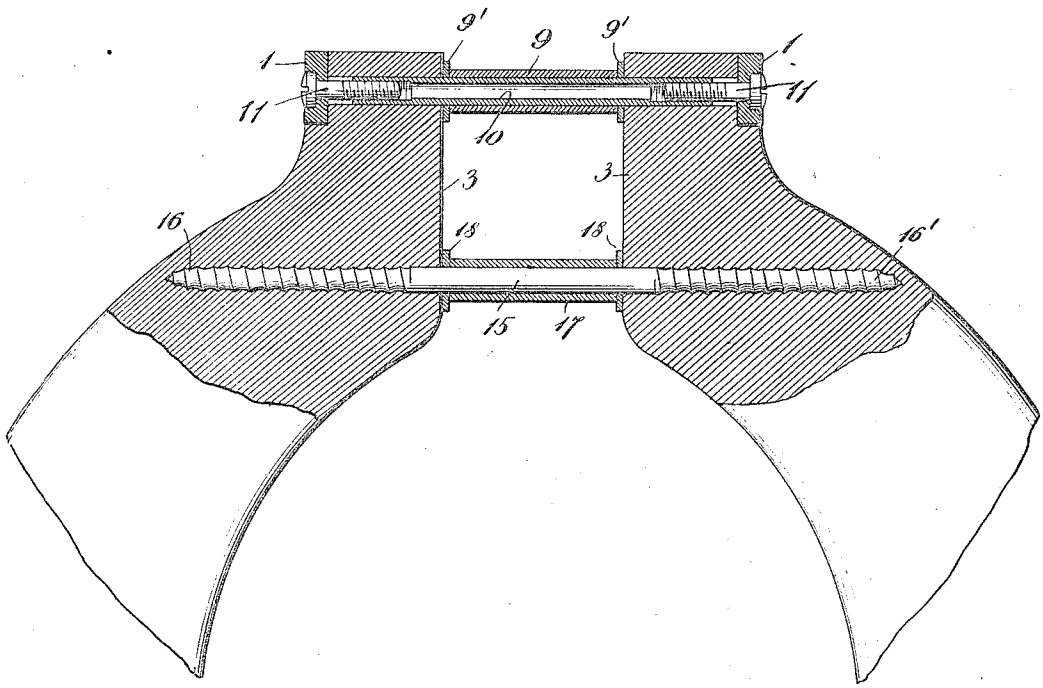


Fig. 3.

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UNITED STATES PATENT OFFICE.

EDWARD I. SEAVEY, OF HYDE PARK, MASSACHUSETTS, ASSIGNOR TO B R E MANUFACTURING COMPANY, OF HYDE PARK, MASSACHUSETTS, A CORPORATION.

WATER-CLOSET SEAT AND CONNECTION THEREFOR.

1,163,111. Specification of Letters Patent. Patented Dec. 7, 1915.

Application filed May 20, 1915. Serial No. 29,417.

To all whom it may concern:

Be it known that I, EDWARD I. SEAVEY, a citizen of the United States, residing in Hyde Park, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Water-Closet Seats and Connections Therefor, of which the following is a specification.

My invention relates, first, to an improved construction of water closet seat, and second, to a novel hinge connection by which the seat may be connected to the water closet bowl and the cover, when a cover is employed, to the seat.

The object of the invention is mainly to provide a seat which is thoroughly sanitary, and at the same time to simplify the construction and reduce the cost of construction of such seat and of the means for connecting the seat and cover to the closet.

In the drawings, Figure 1 is a fragmentary side elevation of a water closet bowl, seat, and cover with the means for connecting the same to one another. Fig. 2 is a vertical sectional view taken on line 2—2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is a plan view of the rear part of a seat embodying my invention and represented as cut away on the plane of the line 3—3 in Fig. 2.

The same reference characters designate the same parts in all the figures.

By referring to the drawings the characters 2 and 3 designate, respectively, the cover and seat of a water closet which are hinged together by a device composed in part of the ears or hinge leaves 1; and 4 represents the water closet bowl over which said seat and cover are mounted, being connected by means of posts 5, secured to the bowl, and trunnions 6 projecting from the ears or plates 1 and contained in bearing sockets in the posts, as appears best in Fig. 2.

One of the features of the invention relates to the construction of the seat, which is made of two members, each of which is designated by the numeral 3 in Fig. 3, which members are preferably alike but are distinct and separate from one another. As here shown the seat members are bowed or crescent shaped in form so that the space between them is widest at the middle portion of the seat, but I do not restrict the members to any particular form. Preferably also the material of which the seat members are made is wood, but here again I do not restrict the invention, as I may use any other material suitable for seat construction, either for the entire seat or for the covering surface thereof, which is now considered suitable for use in devices of this nature, or which may hereafter be found adaptable thereto. The two members of the seat are connected to one another by a tie member 10 and screws 11, and a screw 15, and are spaced apart by thimbles 9 and 17 and washers 9′, 9′ and 18, 18. The tie member 10 is a tube passing from one seat member to the other and occupying holes which pass transversely through the rear parts of the seat members, and the screws 11 are engaged with threads formed in the ends of these tubes. The heads of such screws bear on the heads or lugs of plates 1 and rigidly secure the latter to the seat members. The second tie member or screw 15 is a bar with threaded ends, such ends being preferably formed as wood screws 16, 16′ so as to penetrate the material of the seat members, said second tie member is in front of the tie 10 and approximately parallel therewith. The spacing sleeves or thimbles 9 and 17 surround the tie members 10 and 15, respectively, and, with the washers 9′, 9′ and 18, 18 maintain the proper spacing between the seat members. The washers are located between the ends of the spacing sleeves and the seat members, as is clearly shown in the drawings, or may be one with the respective sleeves.

In assembling the seat, the tie rod 15 is screwed into one of the seat members to a given depth, the washers 18 and the spacing sleeve 17 slipped thereover, and the second seat member is then screwed upon the opposite end of the rod 15 as far as permitted by the spacing elements. The bonding and spacing means constituted by the tie member 10, sleeve 9, screws 11 and washers 9′ are then inserted and set up.

The connecting and spacing means above described constitute a bond which rigidly connects the seat members together and preserve the width of the aperture between them. The members of this bond or bonding means are preferably of metal, although I do not limit the invention in this respect. The lugs or plates 1 project above the plane of the seat, as shown in Figs. 1 and 2, and

the rear end of the cover 2 projects between them. The hinge for the pivotal mounting of the cover is completed by screws 7, which pass from the outer sides of the respective lugs into the cover and are secured within the internally threaded ends of a tube or lining 7 which is contained in the cover. Said tube, being preferably of metal, or equivalent hard and tough material provides a more firm anchorage for the pivot screws 7 than would be afforded if the latter was screwed or embedded directly in the wood of the cover. Between the head of each screw 7 of the adjacent part of the cover are a ferrule 7′ and a washer 7″, which enable the screws to be set up tight without causing them to bind the lugs 1, it being remembered that the length of each ferrule is somewhat greater than the length of the bearing surface provided for it in the lug 1. Such ferrule provides a shoulder to take the thrust of the screw when set up tight, and might be made as part of the screw.

The posts 5 may be connected to the closet bowl in any approved or satisfactory manner as, for instance, by means of nuts 13 threaded upon shanks which pass from said posts through a lip on the bowl, soft washers 12 and a metal washer 12′ being placed as shown to avoid injury to the metal material of the bowl.

It will be evident that the bond between the seat members is simple in construction, easy of application, and of the utmost strength and rigidity; also that the hinge and the connection of the same with the cover and seat are all of metal, or equivalent wear-resisting material. In other words the strength of the material of which the seat and cover is made is not relied on at all for connecting the hinge thereto or for any part of the hinge.

Having now described one of the forms in which my invention may be employed, although without attempting to set forth all of the possible constructions embodying the same, I declare that what I claim and desire to secure by Letters Patent is:

1. A water closet seat comprising laterally separated members which together form the seat and bonding means for connecting said members, comprising tie rods passing from one member to the other at the rear part of the seat and spacing means between said members adjacent to said tie rods, one of said rods being composed in part of screws threaded from outside of the seat into the rod, and hinge plates secured to the seat by means of said screws.

2. In a water closet, a seat, hinge members arranged at the opposite sides of the rear end of said seat, screws passing through respective hinge members in the seat and a tie member other than the seat itself connecting such screw at one side of the seat to the corresponding screw at the other side of the seat.

3. In a water closet, a seat and cover hinge construction, comprising hinge plates at each side of the rear part of the seat, screws passing through each plate into the seat, a tie member by which such screws are anchored and tied together, a screw passing through each of the hinge plates into the cover and a tie member passing through the cover from one of the last-named screws to the other, the last-named screws having a rotative bearing in the hinge plates, said plates having external trunnions and posts having bearings in which said trunnions are rotatably contained.

4. The combination of a water closet seat, a cover and a hinge connecting said cover and seat, said hinge being composed of plates overlapping the cover and seat, screws passing through each plate into both the cover and seat, and tie members passing through the cover and seat, respectively, connected together with screws at opposite sides of the cover and seat, respectively, one set of such screws having a rotatable bearing in the plates.

In testimony whereof I have affixed my signature, in presence of two witnesses.

EDWARD I. SEAVEY.

Witnesses:

NATHAN B. BIDWELL,

CLARENCE L. NEWTON.