June 19, 1928. 1,673,915

E. L. LOWE

HINGE CONSTRUCTION FOR TOILET SEATS AND COVERS

Filed Nov. 6, 1925

Fig. 1.

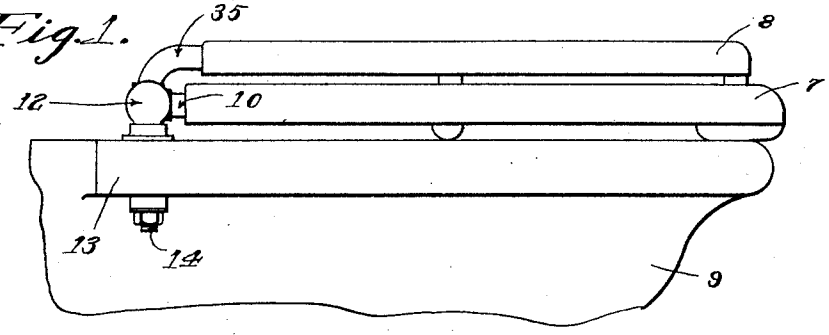


Fig. 2.

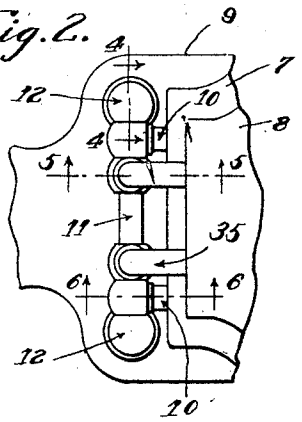


Fig. 3.

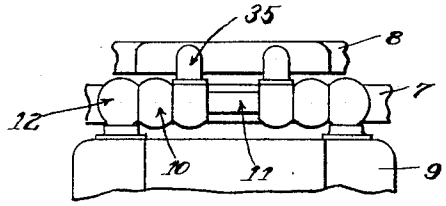


Fig. 4.

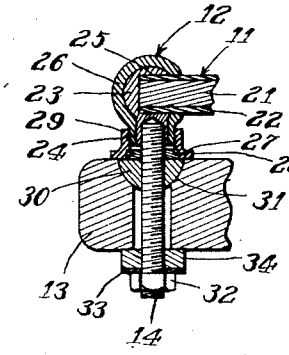


Fig. 5.

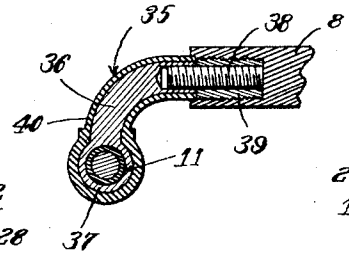
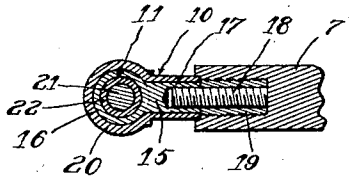


Fig. 6.



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Patented June 19, 1928. 1,673,915

UNITED STATES PATENT OFFICE.

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HINGE CONSTRUCTION FOR TOILET SEATS AND COVERS.

Application filed November 6, 1925. Serial No. 67,250.

This invention relates to improvements in toilet seats and has more particular reference to the provision of improved hinge fittings for the seat and its cover.

The principal object of the invention is to provide hinge fittings of a thoroughly practical and highly durable construction, which are non-corrodible and will not be attacked by acids and alkalies, and which can be kept clean readily, and will always present a glossy and attractive appearance without the necessity for frequent and laborious polishing.

The invention is characterized by the provision of Bakelite, metal re-enforced hinge fittings in place of the usual nickel-plated fittings which required frequent polishing to present a cleanly appearance and which were objectionable for the reason that they corroded under the action of the acids and alkalies coming in contact therewith in service.

In the accompanying drawing illustrating the invention—

Fig. 1 is a fragmentary side elevation of a toilet bowl with the seat and cover thereon provided with my improved hinge fittings;

Fig. 2 is a fragmentary plan view of the hinge fittings;

Fig. 3 is a rear view;

Fig. 4 is an enlarged vertical sectional detail of one of the seat supporting end attaching posts and is taken on the line 4—4 of Fig. 2; and

Figs. 5 and 6 are vertical cross sectional details of the cover and toilet seat hinges respectively and are taken on the lines 5—5 and 6—6 of Fig. 2 looking in the direction of the arrows.

The invention is shown applied to use in connection with a conventional type toilet seat 7 and cover 8 on a toilet bowl 9 of any suitable type. The seat 7 has a pair of hinge arms 10 extending rearwardly therefrom for pivotal movement on a pintle 11 mounted in posts 12, bolted to the flange 13 of the toilet bowl 9, as by means of studs 14 in the usual manner ordinarily the fittings referred to are nickel-plated. As a result they require frequent polishing if any semblance of cleanliness is to be maintained because the finish is quickly attacked by alkalies and acids coming in contact therewith. For example, lyes and other disinfectants and deodorants very easily dulled the nickel-plating. At any rate the fittings soon show evidences of corrosion and it is common experience to find heavy verdigris coatings on these parts. Where any attempt is made to keep the surfaces polished the plating soon disappears and exposes the intermediate copper plating and eventually the brass itself, of which the fittings are invariably made. Of course unless the parts were frequently replated, their appearance was anything but attractive and the lack of nickel-plating allowed the faster progress of the corrosive action of the acids and alkalies. According to the present invention it is contemplated to cover all exposed surfaces of the fittings with Bakelite which is not at all subject to any of the objections just enumerated, as it is not attacked by acids or alkalies and is thoroughly practical and durable for use in this connection. The Bakelite finish lends itself to easy cleaning and presents a smooth glossy appearance without any great amount of polishing. Also the material comes in different colors and finishes and, therefore, presents a neat and ornamental appearance, particularly when provided to match Bakelite seats and covers.

The hinge arms 10 are metal re-enforced as indicated at 15, providing a bearing 16 for the pintle 11 and a neck 17 for the threaded reception of a stud 18 projecting rearwardly from the toilet seat 7. Where the seat is of molded material, such as Bakelite, which does not afford good enough purchase for the screw threads of the stud 18, a bushing insert 19 may be supplied. It will be noted that the entire exposed surface of the hinge arm 10 has a cover 20 of Bakelite molded thereon leaving no visible brass or nickel-plated parts exposed to the action of the acids and alkalies referred to so that nothing on the fitting will corrode. Molding the protective covering on the fitting gives flush surfaces without any crevices or joints and the matter of cleaning is greatly facilitated. The seat is preferably counterbored slightly as shown to receive the Bakelite covered neck 15 of the hinge arm so that no metal is exposed even in a crevice, which would otherwise be left between the Bakelite covering of the hinge arm and the seat proper. The character of the molding material, namely the Bakelite, gives a smooth, slick appearance and very little polishing

brings it to a lustre that makes for attractive appearance. The pintle 11 may be provided in the form of a wooden core 21 or a rod of any other suitable material with a covering 22 of Bakelite. The covering 22 may be molded, as in the case of the covering 20, or it may be in the form of impregnated sheet material wound about the core 21 and molded thereon. There are, of course, the same advantages in connection with this covering where the pintle is exposed between the hinge arms as shown in Figs. 2 and 3, as in the case of the other fittings.

The posts 12 supporting the pintle 11 at opposite ends thereof, each comprise a metal re-enforcing head 23 with a depending shank 24 in which the bolt or stud 14 is threadingly engaged as indicated. The head 23 is provided with a cylindrical socket 25 to receive the end of the pintle 11. A covering 26 of Bakelite is molded about the head and its shank, as illustrated, leaving no metal parts exposed at the connection with the pintle 11, and, as will appear in a moment, leaving no metal parts exposed at the connection with the stud or bolt 14. The stud 14 has an adjusting nut 27 threading thereon to permit slight adjustment of the elevation of the pintle 11. A collar 28 of molded material, such as Bakelite, is molded about the nut 27 and has a hollow neck 29 rising therefrom and telescoping with the shank of the head 23 about the Bakelite covering 26 thereon, as illustrated. This, of course, conceals all of the metal parts within a covering of Bakelite to obtain the advantages hereinbefore noted. The bolt or stud 14 is ordinarily fitted with a seat plug 30 of rubber or other suitable material to fit a recess 31 provided in the flange 13 of the toilet bowl. The nut 32 on the bolt 14 also has a metal washer 33 and a washer 34 of rubber or other resilient material therebeneath to jam up against the under side of the flange 13.

Where the toilet seat is fitted with a cover, the latter has a hinge arm 35 of a goose-neck form to extend to the rear and downwardly for pivotal engagement with the pintle 11. In this case, as in the case of the hinge arms 10, metal reenforcements 36 are provided affording a bearing at 37 for the reception of the pintle 11 and having studs 38 threadingly engaged therein and received in bushing inserts 39 provided in the cover 8. The covering 40 of Bakelite or similar molded material is provided to avoid the exposure of any metal parts, as in the case of the other fittings, to attain like advantages. In this case also the cover is counterbored slightly to receive the end of the Bakelite covered hinge arm so that the metallic reinforcing part will not be exposed in a crevice where rusting would occur.

I claim:

The combination in a toilet seat hinge construction of a seat supporting and attaching post comprising a metallic head to provide a bearing for a hinge pintle and having a depending shank portion, said head being covered with Bakelite molded thereon, a stud depending from said shank portion for reception in the seat-supporting bowl, and a nut threading on said stud for adjustment relative thereto, said nut having a collar of Bakelite molded thereon to cover the same, said collar having a portion telescoping with the shank portion of said head.

In witness of the foregoing I affix my signature.

EDGAR LEROY LOWE.