

T. F. PAYNE.
JOINT.

APPLICATION FILED JULY 17, 1911.

1,034,499.

Patented Aug. 6, 1912.

2 SHEETS—SHEET 1.

FIG. 1.

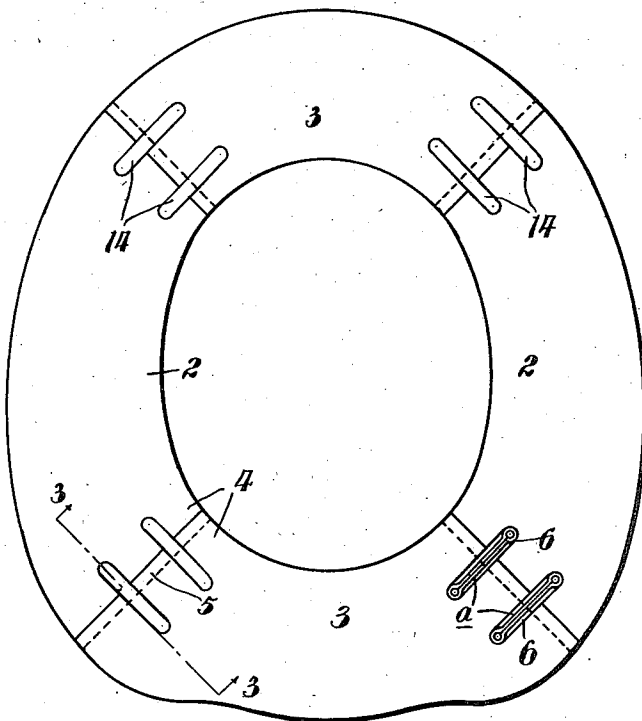


FIG. 2.

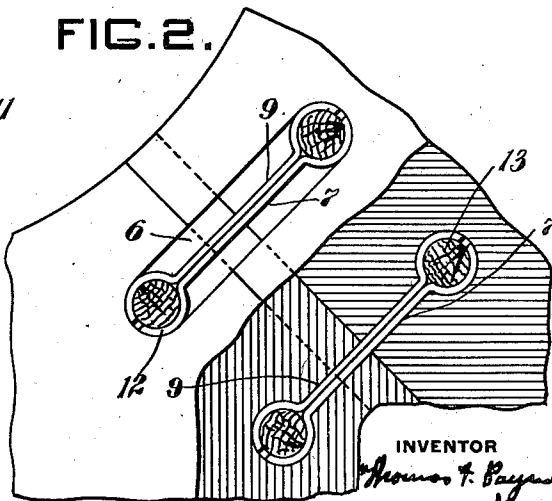
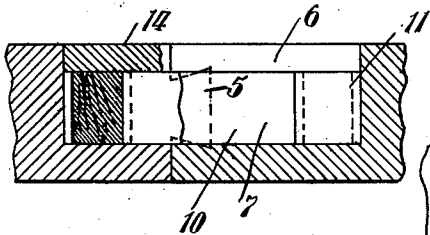


FIG. 3.



WITNESSES

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2 SHEETS-SHEET 2.

FIG. 4.

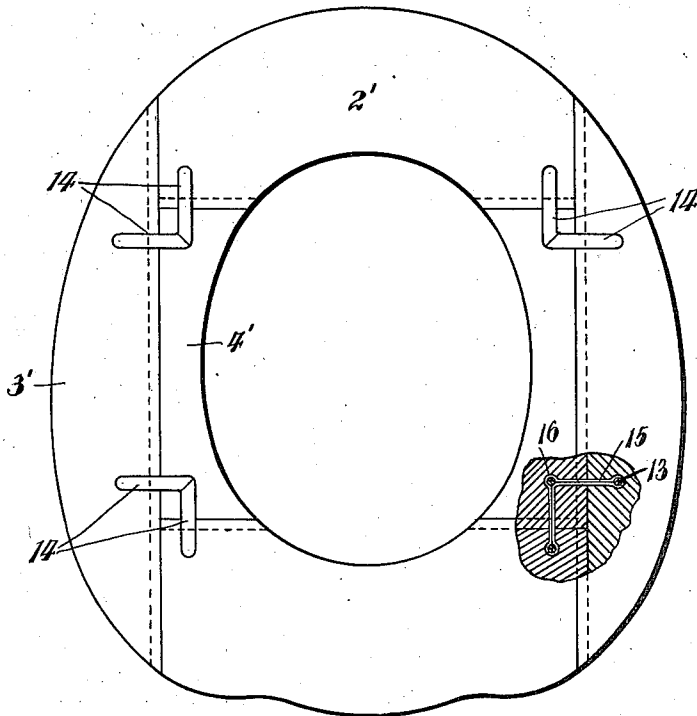


FIG. 6.

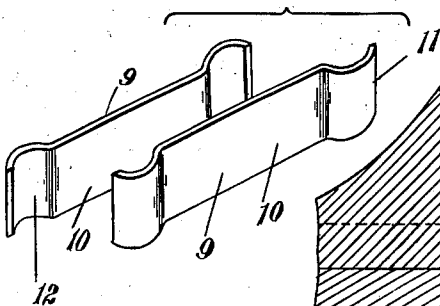
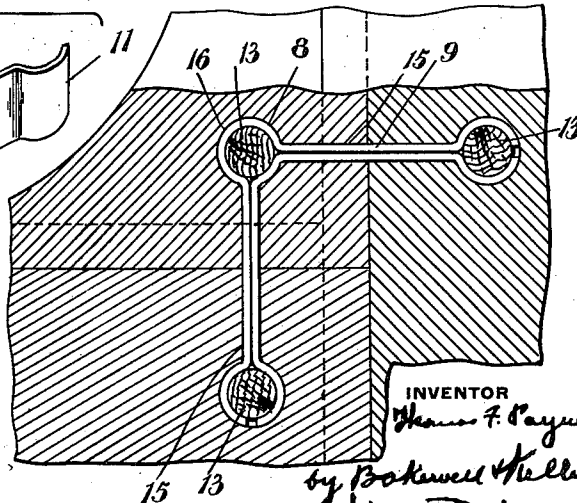


FIG. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

THOMAS F. PAYNE, OF PITTSBURGH, PENNSYLVANIA.

JOINT.

1,034,499.

Specification of Letters Patent.

Patented Aug. 6, 1912.

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To all whom it may concern:

Be it known that I, THOMAS F. PAYNE, a citizen of the United States of America, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Joints, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to fasteners for joints and has particular reference to fasteners for water closet seats, and its primary object is to provide a simple, inexpensive improved construction therefor in which the sections are firmly locked together.

The many abnormal conditions to which a water closet seat is subjected has rendered it difficult heretofore to provide simple and effective means for tying the sections of the seat together. The seat not only is subjected to shrinkage and swelling by the water in the bowl of the closet, but is also subject to strains due to uneven or irregular mounting of the seat over and sudden dropping of it upon the closet-bowl, all of which tend to separate the seat sections, both in direct separation and the relative sliding of the sections one upon the other.

My invention is designed to overcome these difficulties as will be hereinafter more fully described.

The following description of the invention is to be taken in connection with the accompanying drawing, it being fully understood, however, that many changes may be made in the construction shown without departing from my invention; this description being addressed to those skilled in the art and to which various changes will readily suggest themselves which would not alter or change the principle of the invention.

Figure 1 is a plan view of the under side of a closet seat embodying my invention; Fig. 2 is an enlarged fragmentary plan view of the under side of the seat, being taken at the juncture of the opposing ends of a plurality of seat sections; Fig. 3 is a transverse section taken on the line 3—3 of Fig. 1; Fig. 4 is a plan corresponding with Fig. 1 but showing my invention as embodied in a closet-seat in which a plurality of seat sections angularly disposed with respect to lines of abutting surfaces as distinguished from the seat of view 1 and 2; Fig. 5 is an

enlarged plan view of the seat shown in Fig. 4, being taken at the point of union of the several sections; and Fig. 6 is a perspective view of the binding clip employed by my invention and to be hereinafter more fully referred to.

The seat shown in Figs. 1, 2, and 3 is of the four piece type, that is, the seat proper is made up of the four segmental portions 2 and 3. The opposing ends 4 of these sections 2 and 3 may be dove-tailed into one another as indicated at 5 thereby conforming to the common practice of so uniting the sections. My invention, however, concerns the locking of these sections 2 and 3 against relative movement and separation, and while the sections may be provided with the tongue and groove arrangement 5, shown, I do not limit my invention to any specific manner of binding the sections together.

Leading from one seat section to another at the opposing ends thereof is the slot or recess 6 which is countersunk from the under face of the seat. This slot 6 has the restricted channel or kerf 7 which terminates at each end in the circular enlargement or socket 8 and formed complementarily with this slot 7 and the sockets 8 is the clip 9, made from sheet metal or other suitable material, the clip comprising the double shank-like portion 10 which is curved as at 11 to fit the contour of the sockets 8. The clip preferably is made from two pieces co-operatively formed as shown in Fig. 6, the two oppositely disposed heads or curved portions 11 forming an eye 12 adapted to be received by a socket 8.

After assembling the seat sections, the clip 9 is inserted in the two co-extending portions of the elongated recess 7 as shown at *a* in Fig. 1. These recesses may be plural in number. I show two of them symmetrically disposed with respect to the width of the seat sections. After placing the clips 9 in the recess 7, I then force into each eye 12 within the sockets 8 the cylindrical plug 13, preferably of wood. This forces the walls 11 of the eye 12 against the wall of the cavity or socket 8 and as it so spreads, it necessarily serves to draw or place a tension on the shank 10 by reason of the take-up of the metal around the wall of the socket. To enable the eye 12 to bindingly engage with the socket 8, the clip 9 is preferably made, as above stated, in two separate pieces. Of course, it is apparent without the necessity

of specific illustration, that the clip 9 may take the form of a continuous sheet metal strip or tape, the movement of the thin sheet metal adapting it to the contour of the walls of the slot 7 and sockets 8. A suitable inlay strip 14, fitting the counter-recess 6, covers the clip, plugs and sockets and completes the arrangement. This strip, as well as the plugs 13, is preferably set with glue. In Figs. 4 and 5 I show a seat composed of the sections 2', 3' and 4' so arranged that the opposing edges of the several sections produce abutments at right angles to one another. To effectually tie these sections against relative movement without the necessity of several independent clips, I form the angular clip 9'. This clip is associated with each seat section in the same manner as the clip 9, with respect to the mounting thereof, but comprises the shanks 15 which correspond in function to the shanks 10 of the clip 9, and the two terminal enlargements or eyes 12' and the intermediate enlargement or eye 16 at the juncture of the shanks 15, each of which corresponds essentially with the eye 12 of the preceding views. It will be seen that by disposing the eye 16 in a socket 8 in the section 4' the shanks 15 may be caused to extend from the section 4' in a divergent manner, the one to the section 2' and the other to the section 3'. That is, the shanks so disposed intersect all the planes of abutment of the several sections.

It will be seen that the eyes 12 with the associated filler plugs 13 serve to prevent one section from pulling away from the other under any abnormal condition, likewise the shanks of the clip 9 or 9' extending from the body of one section to another prevent any relative shifting of the one section on the other.

The advantages of my invention will be found to reside in a seat wherein the segments are firmly bound to one another and which is simple in construction. The distribution of the metal clip is such that the seat is not rendered objectionable through the natural coldness of metal, while the specific form of invention permits of a connection which is neat and not unsightly in appearance.

Various changes may be made in the construction shown and I do not desire to limit my invention in adaptation to any particular structure or object or any specific form of closet seat proper.

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

1. A fastening device for joints, comprising a member having an expansible eye-

shaped enlargement and adapted to be received in complementary formed recesses in the parts to be joined.

2. A fastening device for joints, comprising a sheet metal member having a plurality of eye-shaped enlargements and adapted to be received in complementary formed recesses in the parts to be joined, said eyes being expansible to effect binding thereof in the recesses.

3. A fastening device for joints, comprising a connecting member having eye-shaped enlargements of interrupted cylindrical shape and adapted to be received in recesses in the parts to be joined, the eyes being adapted to receive binding plugs.

4. A fastening device for joints, comprising a connecting member formed of sheet metal and shaped to provide terminal eyes adapted to receive expanding plugs, the said fastener being adapted to be received in complementary formed recesses in the parts to be joined.

5. A fastening device for joints, comprising a connecting member having split eye-shaped enlargements the walls of which are adapted to be spread by expanding plugs.

6. A fastening device for joints, comprising a connecting member having terminal and intermediate eye-shaped expansible enlargements and adapted to be received in recesses in the parts to be joined.

7. A fastening device for joints, comprising an angular shaped tape-like connecting member having a plurality of eye-shaped expansible enlargements disposed at and intermediate the ends thereof and adapted to be received in recesses in the parts to be joined, said eyes being adapted to be expanded by the insertion of plugs.

8. A fastening device for joints, comprising a double walled tape-like sheet metal member, which walls have complementary formed oppositely disposed enlargements which together form expansible eyelets.

9. A fastening device for joints, comprising a member formed of a plurality of tape-like sections having recesses which coöperatively form an eye shaped expansible enlargement.

10. A fastening device for joints, comprising a member formed of a plurality of tape-like sections each of which has terminal semi-circular enlargements adapted to register and form expansible eyelets.

In testimony whereof, I have hereunto set my hand.

THOMAS F. PAYNE.

Witnesses:

M. A. KELLER,
M. A. BARTH.