

P. SHWAB.
WATER CLOSET SEAT.
APPLICATION FILED MAY 11, 1909.

963,820.

Patented July 12, 1910.

Fig. 1

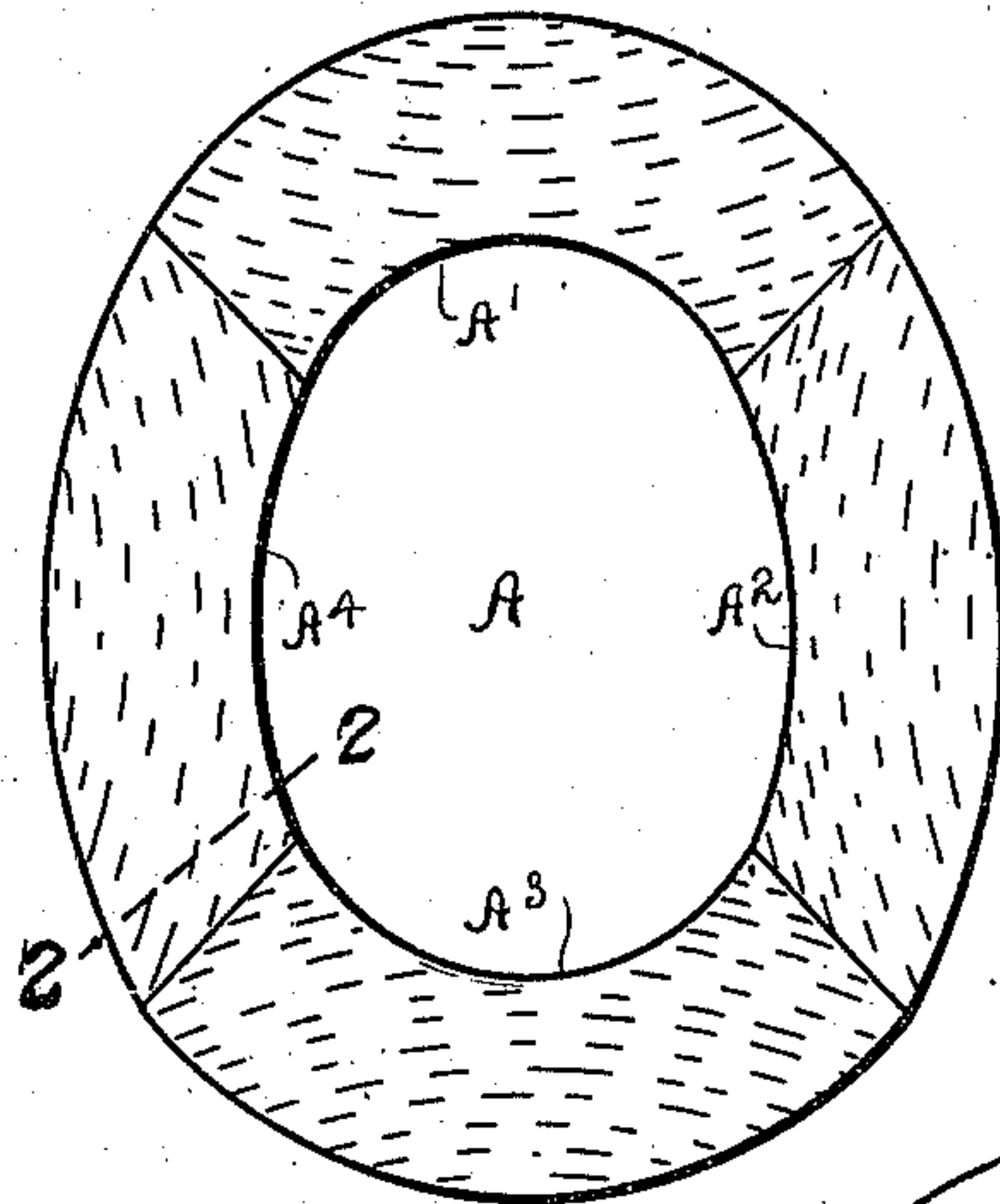


Fig. 3

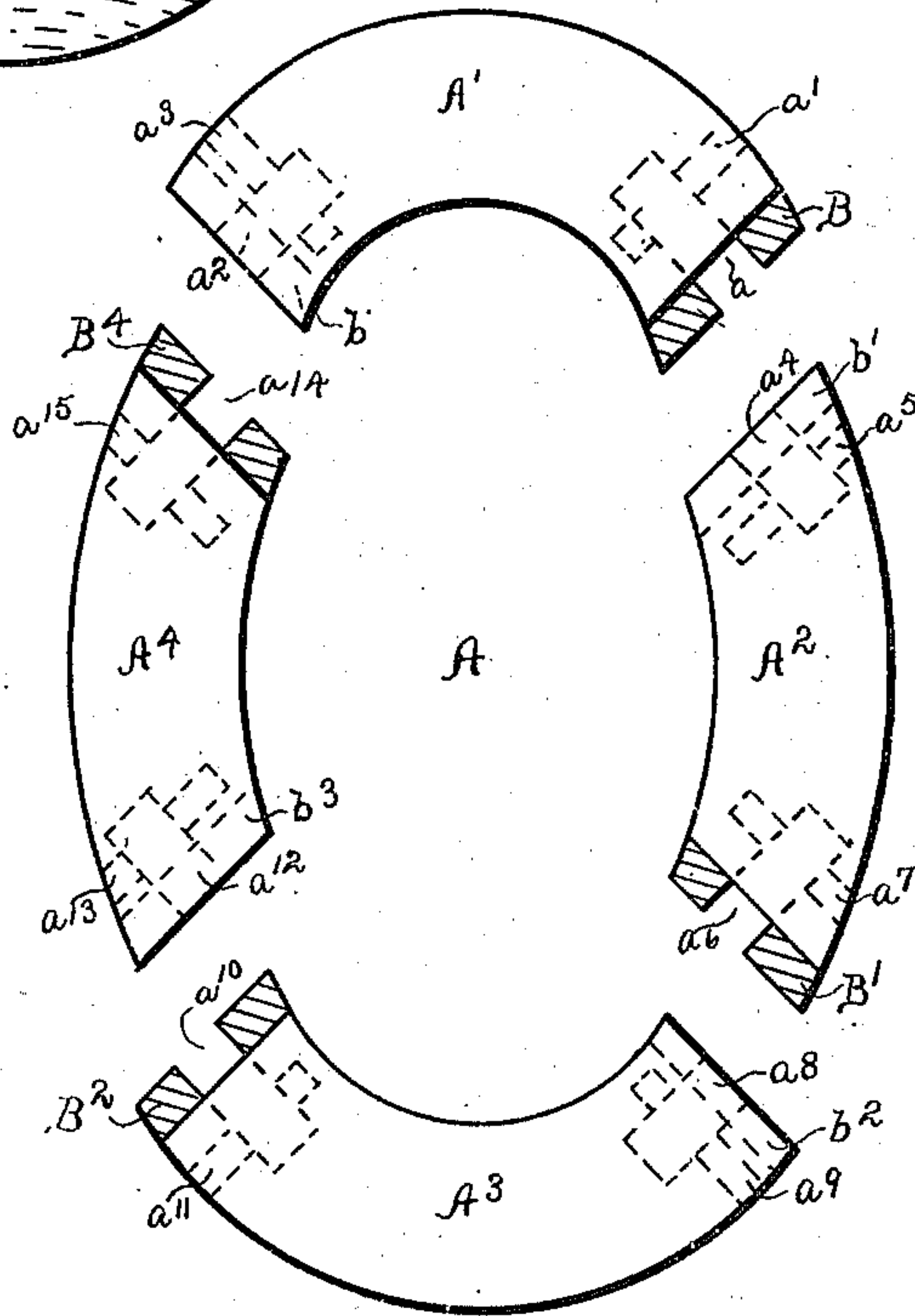
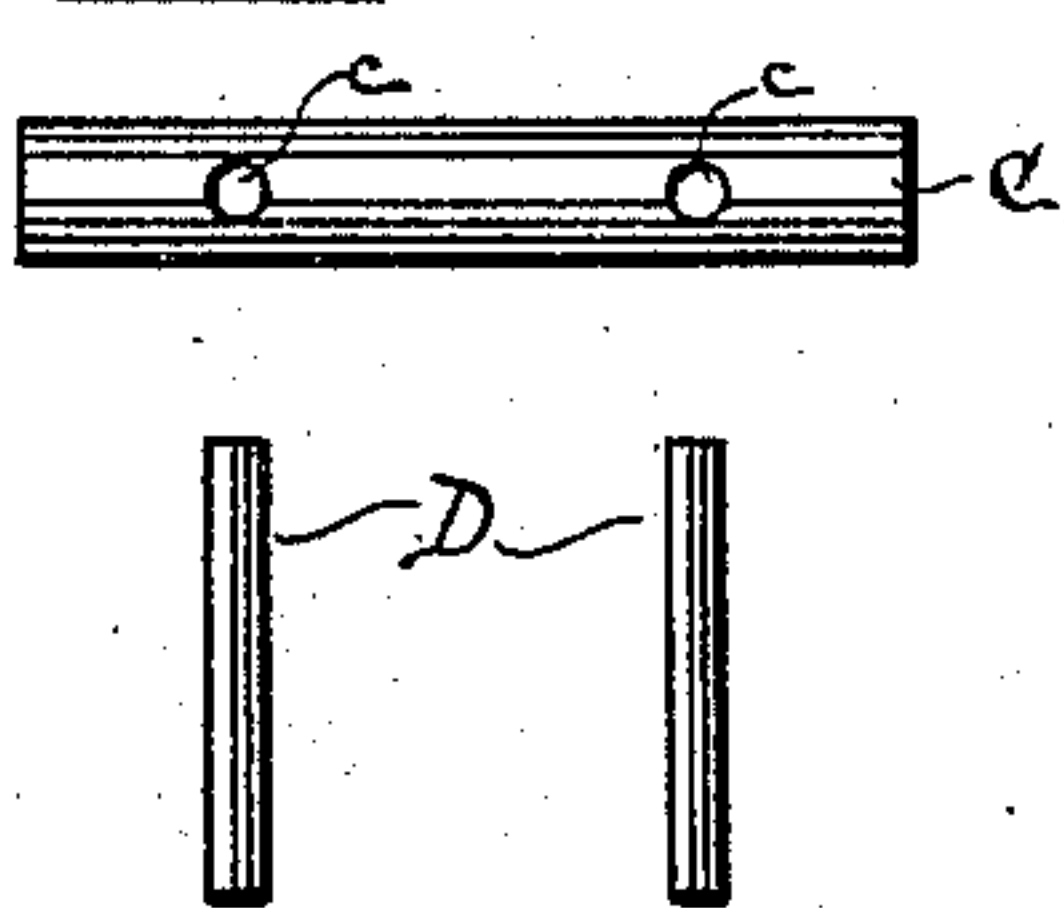


Fig. 2



Fig. 4



WITNESSES:

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WATER-CLOSET SEAT.

963,820.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed May 11, 1909. Serial No. 495,325.

To all whom it may concern:

Be it known that I, PAUL SHWAB, a citizen of the United States, and resident of borough of Manhattan, in the city and county of New York and State of New York, have invented certain new and useful Improvements in Water-Closet Seats, of which the following is a specification.

In the construction of a wooden seat for use, on the ordinary type of porcelain water closet bowl, it is found necessary to guard against many conditions, any one of which might render the seat temporarily or permanently useless. One of these is the unequal expansion due to the combined action of the atmospheric conditions above and the dampness from the water that is constantly in the bowl below. Another may be the strain due to a sudden dropping of the seat against the porcelain bowl, which is apt to break or crack the seat particularly at the junction of the separate pieces that go to make up the whole. A third may be the strain from an uneven mounting of the seat, or to the unequal surface of the bowl, which it may be required to rest upon.

Many attempts have been made by myself and others to construct a seat which would successfully resist the strain and stress from any abnormal condition, whether it be one of those which I have enumerated or any other which may accidentally present itself.

In this invention I have endeavored by a certain combination of a tongue and groove with a certain novel means of inserting a longitudinal dowel secured in place by transverse pins to obtain the desired result in a cheap though highly efficient manner. Extended experiments have proved that the several dowels do more than simply hold the adjacent parts together. They strongly oppose any twist or warp which would in any other construction exhibit itself. Metal seats have been used but because of the weight and their natural coldness are undesirable. This is true of wooden seats which have a great deal of metal in their joints and fastenings.

The following is what I consider the best means of carrying out this invention.

The accompanying drawings form a part of this specification.

Figure 1 is a plan view. Fig. 2 is a section on the line 2—2 in Fig. 1. Fig. 3 is on a larger scale, in plan, and shows the holes and grooves indicated by dotted lines.

In this figure the structure is disjointed. Fig. 4 shows a dowel and the retaining pins.

Similar letters of reference indicate like parts in all the figures where they appear.

A seat of any of the long approved desirable shapes and sizes is indicated at A. It is made of wood and is in four main parts. Considering the figures, the part indicated by A¹ is at the top which, when the seat is in use is the front portion. A² is the section at the right. A³ the bottom, and A⁴ the section at the left.

The part A¹ in Fig. 3 carries at its lower right hand end, a tongue or rabbet B and is provided with an inwardly extending hole *a* drilled centrally in the end, and a transverse hole *a*¹. On the other end, the left end in the figure, a deep groove *b* is produced and also a centrally located hole *a*² corresponding in depth and diameter to the hole *a*. A transverse hole *a*³ corresponding in depth and diameter to the hole *a*¹, is produced in the same manner as the hole *a*¹ by drilling from the outside edge or rim of the seat inward into the hole *a*² and beyond it, nearly through the whole width of the side of the seat. The next section, the part A² forms the right side of the seat and is provided upon its uppermost end with a deep groove *b*¹ sufficiently deep and broad to receive the adjacent tongue B of the part A¹. A large hole *a*⁴ of approximately the same diameter as the hole *a* is produced, extending downward from the front end, and a transverse hole *a*⁵ corresponding in depth and diameter to the hole *a*¹ is drilled inward from the outside edge, the right edge in the figures, passing through the hole *a*⁴ and ending close to the left, the inner edge of this part of the seat. The lower end of the part A² carries a protruding tongue B¹ corresponding in all respects to the tongue B on the part A¹. A large hole *a*⁶ and a small hole *a*⁷ are produced to correspond to the other holes of similar size and location, which have been described. The third section of the seat is the part A³ at the bottom, and in use this forms the back section of the seat and is the heaviest and largest of the four main parts. The upper right end, the end adjacent the part A² is provided with a groove of sufficient dimensions and depth to receive the tongue B¹ of the part A². This groove is indicated at *b*². Holes *a*⁸ and *a*⁹ similar in all respects to the corresponding holes already described are produced in

this upper right hand end of the part A^3 . The left end also extends upward as this section describes an arc like the part A^1 , though on a larger scale. This left end is
 5 provided with an upwardly extending tongue B^2 , and centrally located in this end is a downward extending hole a^{10} and a transverse hole a^{11} . The fourth and last of the principal members of my seat is the part
 10 A^4 forming the left side connecting the downwardly extending left end of the part A^1 and the upwardly extending left end of the part A^3 , together, thus completing the series. The lower end of the part A^4 is pro-
 15 vided with a deep broad groove b^3 and an upwardly extending hole a^{12} centrally located. I have also produced a transverse hole a^{13} on this end. The upper end of the part A^4 carries an upwardly extending
 20 tongue B^4 and is provided with a large downwardly extending hole a^{14} and a transverse hole a^{15} .

At Fig. 4 I have shown a dowel C which in my device is a round wooden pin of the
 25 required length and of such a diameter as to allow it to fit snugly into the large vertically extending holes which have been provided for it in the ends of the four main parts of my seat. In the dowels C I have produced
 30 two small holes c and I provide smaller dowels or pins D to match closely into these holes.

Having fully described the independent sections of my device I will now detail the
 35 method of uniting the whole as certain elements may appear which have not been fully described in the specification. I first select four pieces of wood of much the same length, breadth and thickness and I miter each end
 40 of each piece, in such a manner so that when the four pieces are placed together with their miter joints adjacent a square figure will be formed. Before placing them together a tongue and groove is formed, the
 45 tongue on one end of each block and a properly shaped groove on the other end. At about the center of each tongue and groove a hole of sufficient depth and diameter to accommodate the large dowel C is drilled and now the
 50 parts are ready to be assembled. Care must be taken in accomplishing this to glue well the dowels, tongues and grooves. Dowels are entered a small distance in the holes a , a^2 , a^6 , and a^{12} and the four main sections are
 55 approached closely together. The proper dowels are then entered into the holes a , a^8 , a^{10} , and a^{14} . The four parts are next pressed evenly and firmly inward and the tongues B , B^1 , B^2 and B^4 are glued into their re-
 60 spective grooves. After the joints are closed as tight as possible the holes a^1 , a^3 , a^5 , a^7 , a^9 , a^{11} , a^{13} and a^{15} are drilled and a pin D is glued and inserted into each of these small
 65 holes. The little additional strain upon the larger dowels just before they become tight

is found not to be objectionable. After the glue is well set and the parts are securely held together a pattern of the desired shape is sketched upon the broad flat face of the
 70 wooden form and then with a band or jig-saw the surplus wood is skilfully removed, and the seat assumes the proper shape. Holes are next produced for the accommodation of the small transverse pins, near each junction
 75 of two of the main parts, one on each side of said junction. Into these holes the small pins are inserted after they have been well glued.

The finishing of my seat is carried on in the usual way with this general class of
 80 apparatus, by sand papering, varnishing, etc., and the seat is complete. If the work has been well and skilfully done the result will be a strong locked jointed seat well adapted to resist all of the strains of what-
 85 ever wear and tear it may be subjected, and one that will be found almost impossible to pull apart. Care should be taken to have the grain of the wood in all of the parts run
 90 lengthwise the part, thus avoiding cracking because of a short grain.

I attach importance to the arrangement of the dowels and retaining pins. The dowels
 95 because they run through the center, a thick part of the seat and can therefore be made thick and long without fear of breaking
 100 through. To the pins, because they run across the greatest width of each section and can therefore be made of great length and yet find a firm support on both sides
 105 for their entire length.

Modifications may be made within the scope of the appended claims without departing from the principle or sacrificing the
 110 advantages of this invention.

I have described the use of glue but this can well be dispensed with. I have described the grain of the wood as running in a di-
 115 rection to secure the best results, this can be ignored.

The number of parts which go to make up my seat can be varied within a wide
 120 range yet the whole will operate successfully.

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

1. A water closet seat comprising four complementary curved sections, one end of each section being provided with three re-
 125 cesses, the center recess a^2 , a^4 etc. being of the greatest depth, the other end of each said section, which is also provided with a deep recess carrying a plurality of tongues of less thickness than the main body of the sec-
 130 tion, each end of each said section being provided with a hole a^1 , a^3 , a^5 etc., extending inwardly from the outer edge thereof.

2. A water closet seat comprising four properly shaped sections, one end of each said section being provided with three re-
 135 cesses, the center recess a^2 , a^4 etc. being of

the greatest depth, each said section carrying a plurality of tongues at its opposite end and a cylindrical dowel C between said tongues, pins D extending inwardly from the outer edge thereof arranged to secure said cylindrical dowels by passing through holes which have been produced near each end of said dowels combined as specified.

Signed at New York city N. Y. in the county of New York and State of New York this 23rd day of April A. D. 1909.

PAUL SHWAB.

Witnesses:

F. A. CHICKERING,
G. E. STERRITTE.