

J. PUDLINER.
HINGE.
APPLICATION FILED OCT. 15, 1912.

1,052,273.

Patented Feb. 4, 1913.

Fig. 1.

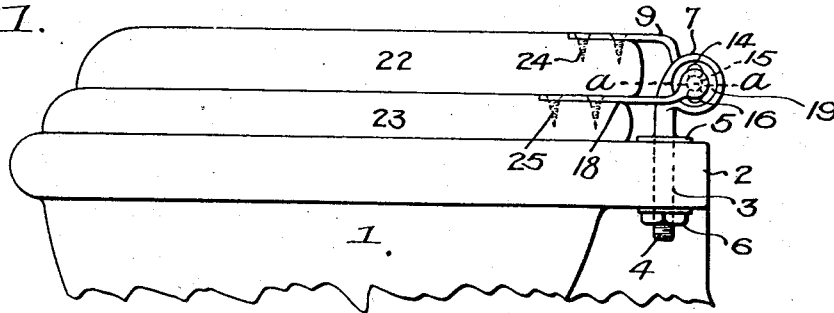


Fig. 3.

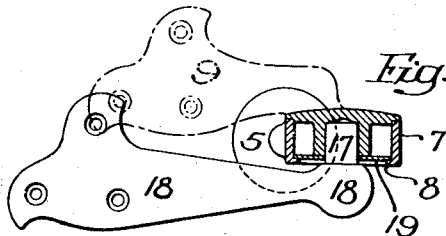


Fig. 2.

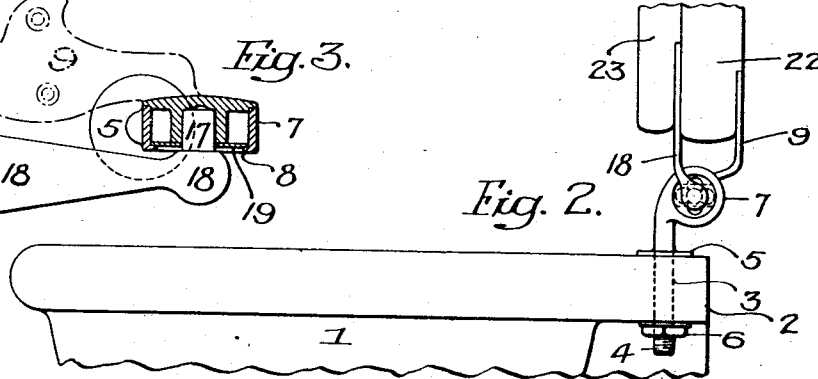


Fig. 4.

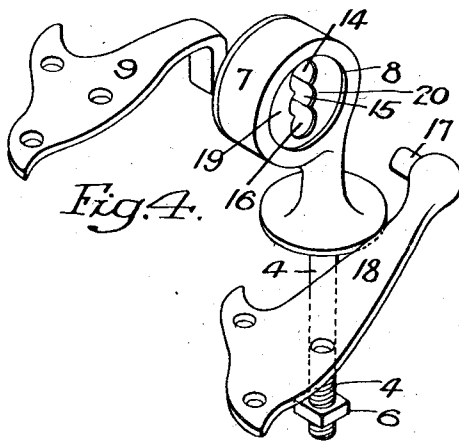


Fig. 6.

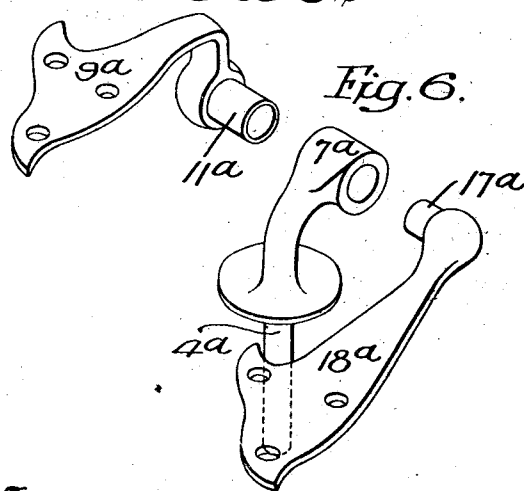


Fig. 5.

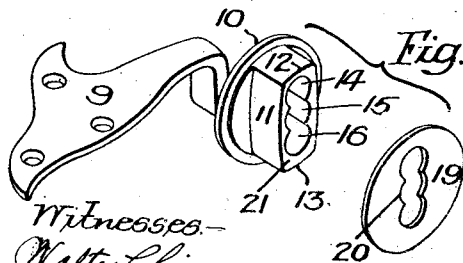
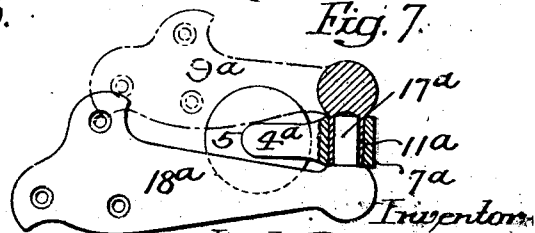


Fig. 7.



Witnesses—
Walter Chism
Walter Burrows.

Inventor—
Jacob Pudliner
By his Attorneys
Hewson & Hewson

UNITED STATES PATENT OFFICE.

JACOB PUDLINER, OF ALLENTOWN, PENNSYLVANIA.

HINGE.

1,052,273.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JACOB PUDLINER, a citizen of the United States, residing in Allentown, Pennsylvania, have invented certain Improvements in Hinges, of which the following is a specification.

My invention relates to hinges and consists of a hinge which is especially adapted for use on the seats and covers of water-closets or the like.

One object of my invention is to make a hinge which may easily be adjusted to suit seats and covers of different sizes and closets of different shapes.

Another object of my invention is to construct a hinge that will take up very little room and which will be durable and may be manufactured at a very low cost.

These objects and other advantages which will be hereinafter mentioned, I attain in the following manner; reference being had to the accompanying drawings in which:

Figure 1, is a side elevation of sufficient of a water-closet to illustrate my invention; Fig. 2, is a view of similar nature to Fig. 1 showing the cover and seat in a raised position; Fig. 3, is a sectional plan view of a hinge taken on the line *a-a* Fig. 1; Fig. 4, is a detached perspective view of the hinge shown in Figs. 1, 2 and 3; Fig. 5, is a perspective view showing a relative position of two of the elements constituting part of my invention; Fig. 6, is a detached perspective view of a modified form of my invention; and Fig. 7, is a transverse sectional view of a form of hinge shown in Fig. 6, showing the parts assembled.

Referring to the drawing, 1 is a bowl of an ordinary water-closet having the usual upper flange 2 with a bore 3 for the reception of a hinge post 4. The post 4 is provided with a flange 5 which rests on the upper face of the closed flange 2 and has a nut 6 on the lower threaded end; said nut acting to jam against the lower face of the flange 2 and rigidly securing the post 4 to the flange 2. A sleeve 7 is formed integral with the top of the post 4 and is provided with an inwardly extending flange 8 as is clearly shown in Figs. 3 and 4. The arm 9 of the hinge is provided with a disk-shape plate 10, in the present instance, of a diameter equal to the outer diameter of the sleeve 7 and the plate 10 is formed integral therewith. An extended portion 11 having sur-

faces 12 and 13, which are circular-convex are of the same contour as the inner surface of the sleeve 7 so that the portion 11 may be projected and rotated within the sleeve 7 with comparatively no lost motion. The portion 11 is provided, preferably with cylindrical bores 14, 15 and 16, in such a manner that each of the said bores may act as pivot or journal bearings for a cylindrical pin 17 on the other hinge arm 18. Also, as is shown in the accompanying drawings these bores 14, 15 and 16 are so placed that the bore 15 is concentric and in alinement with the axis of the disk plate 10, and the bores 14 and 16 are eccentric to the axis of the disk. A washer or facing plate 19 is provided with an aperture 20 having a contour shaped to register with the bores 14, 15 and 16 as clearly shown in the assembled position in Fig. 4. The facing plate 19 in use is adapted to engage the inner surface of the flange 8 as clearly shown in Fig. 3 and is in turn abutted by the outer face 21 of the portion 11.

The arms 9 and 18 of the hinge may be secured to the covers and seats 22 and 23 respectively by screws 24 and 25 or by any other means after the parts have been assembled as heretofore stated. If the pin 17 is made to engage the bore 15 in order to form a pivot for the arm 18 which is secured to the seat 23, the movement of the seat, when raised will be concentric to the movement of the cover 22. On the other hand, if the pin 17 is made to engage either the bore 14 and 15, the upper movement of the cover and seat 22 and 23 will be eccentric to each other and will tend to move the seat 23 at a greater distance either forward or backward than it would move if the pin 17 was in the bore 15. This adjustment is serviceable especially since water-closets of this nature are often confined to a very small space and are set very close to the wall, and if the seat and cover are thrown off the center, in this way not only serves to bring the seat and cover a little farther back in the raised position but tends to keep them from falling down after they have been raised. Another advantage of this construction is that standard hinges can be made to accommodate seats and covers of different thicknesses.

Any number of bores, such as 14, 15 and 16, may be made within the portion 11; said latter portion being capable of being

made any size. Also, with this construction a hinge is provided which is very easy of rotation as both the portion 11 and the bore 15 have long surface bearings, and has
 5 constructed with the sleeve 7 a flange 8. The same is of very compact and neat construction and takes up a minimum amount of space and will not tend to rock or vibrate when being used. Also, the construction
 10 is such that the hinge may be readily taken apart and assembled, for example, if it is desired to change from one position to another position the same can be done merely by removing the pin 17 and placing
 15 it in another one of the bores.

In the modified form of the hinge shown in Figs. 6 and 7, the post 4^a is enlarged at its upper end to form a sleeve 7^a and the arm 9^a is provided with a sleeve portion
 20 11^a which is adapted to engage the inner surface of the sleeve 7^a and rotate therein. The arm 18^a is provided with a pin 17^a at one end and the said pin 17^a is constructed to fit within the sleeve portion 11^a as is
 25 clearly shown in Fig. 7. This construction forms a large surface hinge bearing which is very compact and which may be easily detached and assembled.

I claim:--

30 1. A hinge comprising a member having a plurality of journal bearings; and a member capable of engaging any of the said journal bearings.

2. A hinge comprising a movable member
 35 having a plurality of journal bearings therein; and a member having a portion adapted to engage any of the journal bearings.

3. A hinge comprising a standard; an
 40 arm having a portion rotatably mounted within the standard, said arm being provided with a plurality of journal bearings; and a second arm having a portion capable of engaging and rotating within any of the
 45 said journal bearings.

4. A hinge comprising a standard having a sleeve at one end; a hinge having a portion rotatably mounted within the sleeve, said portion being provided with journal
 50 bearings; and a second hinge arm having a portion adapted to engage any of the journal bearings.

5. A hinge for water-closet seats and cov-

ers or the like comprising a standard; means for securing the standard to the portion of the closet; a flanged sleeve on the standard; a hinge arm adapted to be secured to a cover of the water-closet and having a portion rotatably mounted within
 60 said sleeve, said portion having a plurality of journal bearings; a second hinge arm adapted to be secured to the seat of the closet and having a portion adapted to engage any of the said journal bearings.

6. A hinge for water-closet seats and covers or the like comprising a standard; means for securing the standard to the closet, said standard having a flanged sleeve thereon; a hinge arm adapted to be secured
 70 to a cover of the closet and having a portion rotatably mounted within the sleeve, said portion having a plurality of journal bearings; a plate interposed between the said latter portion and the flange of the sleeve and having an aperture adapted to
 75 register with the journal bearings; and a second arm adapted to be secured to the seat of the closet, and having a portion adapted to pass through the aperture in the plate and engage any of the journal
 80 bearings.

7. A hinge for water-closet seats and covers or the like comprising a standard; means for securing the standard to the closet, said standard having a flanged sleeve
 85 thereon; a hinge arm adapted to be secured to a cover of the closet and having a portion rotatably mounted within the sleeve, said portion having a plurality of journal bearings, said arm having a disk-shape
 90 plate thereon and abutting the sleeve; a plate interposed between the said latter portion and the flange of the sleeve and having an aperture adapted to register with the journal bearings; and a second arm
 95 adapted to be secured to the seat of the closet, and having a portion adapted to pass through the aperture in the plate and engage any of the journal bearings.

In testimony whereof, I have signed my
 100 name to this specification, in the presence of two subscribing witnesses.

JACOB PUDLINER.

Witnesses:

MARY O'DONNELL,
 LAWRENCE H. RUPP.