No. 773,734. PATENTED NOV. 1, 1904.

W. U. GRIFFITHS.

HOPPER FLANGE.

APPLICATION FILED JUNE 19, 1903.

NO MODEL.

FIG. 1.

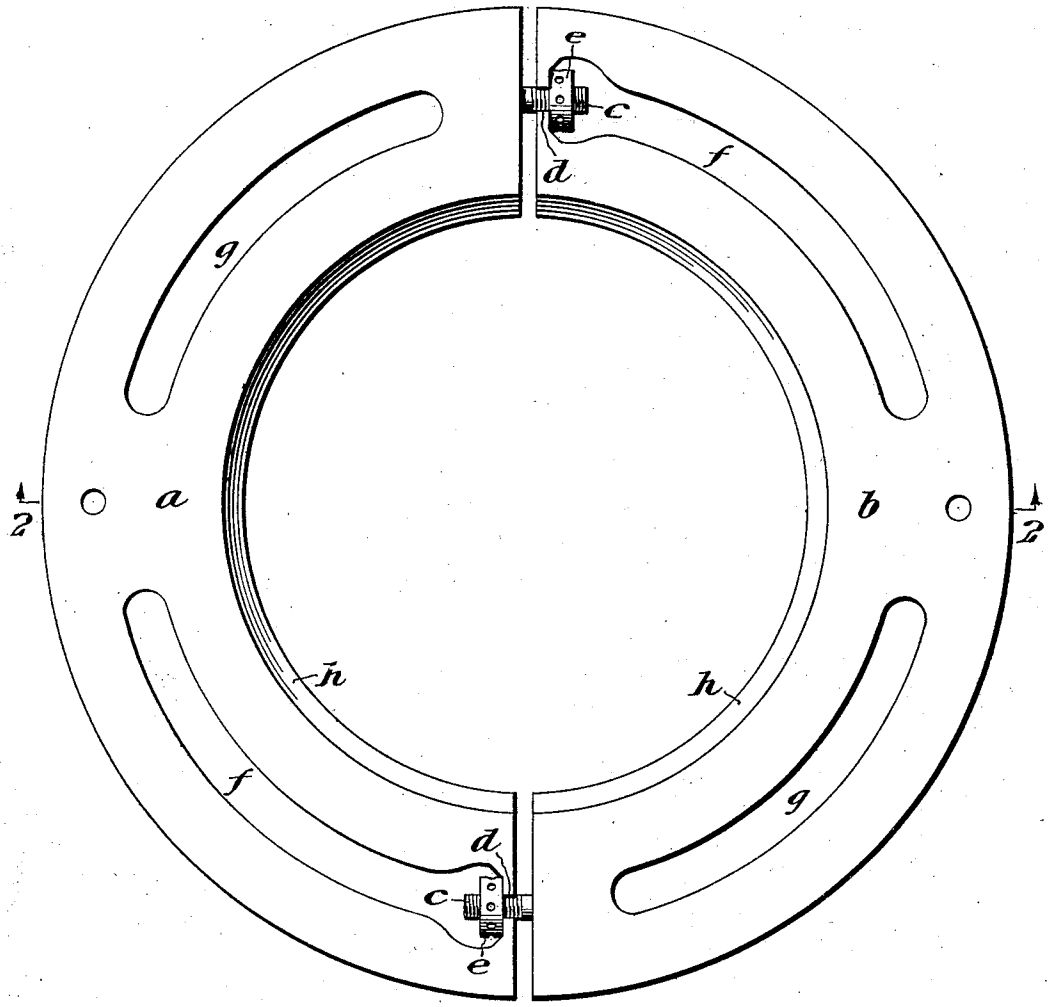


FIG. 2.

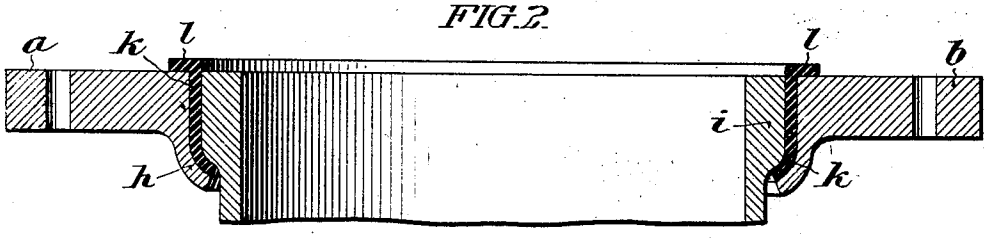
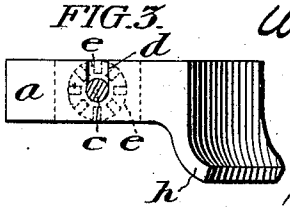


FIG. 3.



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No. 773,734. Patented November 1, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM U. GRIFFITHS, OF PHILADELPHIA, PENNSYLVANIA.

HOPPER-FLANGE.

SPECIFICATION forming part of Letters Patent No. 773,734, dated November 1, 1904.

Application filed June 19, 1903. Serial No. 162,147. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM U. GRIFFITHS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Hopper-Flanges, of which the following is a specification.

This invention relates to an improvement in hopper flanges, and it has for its object to simplify the construction and to produce a hopper flange which can be economically manufactured, and which can be easily applied to the upper end of a soil pipe, and which is adapted to be connected to the flange of the hopper or basin of a water closet.

In order that the construction may be more easily understood, reference is to be had to the accompanying drawings, in which,

Figure 1 is a top plan view of the hopper flange.

Figure 2 is a transverse section taken on the line 2—2 of Figure 1; and

Figure 3 is an end view of one of the members constituting the hopper flange.

The flange consists of a flat ring-shaped device composed of the two elements or members *a* and *b*. Each of the said members is provided at one of its ends with a screw-threaded projection *c*, which is adapted to occupy a position within a depression or recess *d* formed in the adjacent end of the other member and the two members are secured together by means of nuts *e* which are screwed upon the projection *c*.

The depressions *d* open into curved slots *f* which are formed in the members *a* and *b*, one end of each of the slots being located in proximity to the end of the member in which it is formed.

The members *a* and *b* are also provided with curved slots *g*, in addition to the slots *f* referred to, and all of the slots are adapted to receive bolts by means of which the hopper flange is connected to the flange of a water closet basin.

The members *a* and *b* of the hopper flange are provided with downwardly and inwardly extending flanges *h*. *i* designates the enlarged upper end of a soil pipe and located in contact with the said upper end and surrounding the same is a packing *k* of suitable material, preferably rubber. The said packing is located between the upper end *i* of the said soil pipe and the inner edge of the hopper flange. The lower end of the packing is curved inwardly so that it may readily assume a position beneath the enlargement on the upper end *i* of the soil pipe and the upper end of the said packing is provided with a laterally and outwardly extending flange *l* which is adapted to rest upon the upper side of the hopper flange. The flange *l* may be of greater or less width as desired.

In using the hopper flange it is placed in position around the upper end of the soil pipe, the projections *c* being placed within the depressions *d* formed in the ends of the members *a* and *b*, after which the nuts *e* are screwed down upon the screw-threaded projections *c* in order to clamp the members *a* and *b* about the upper end of the said soil pipe.

After this has been done the flange of the water closet basin (not shown) is secured to the hopper flange by means of nuts and bolts (not shown), which extend upwardly through the curved slots *f* and *g*.

It is to be noted that the downwardly and inwardly extending flange *h* extends under the lower portion of the enlargement formed on the upper end of the soil pipe and also underneath the lower portion of the packing *k*, and that by reason of this construction the water closet basin is held in close contact with the flange *l* of the packing *k* and with the hopper flange.

When once the hopper flange has been placed in position and drawn tightly around the upper end of the soil pipe, it cannot be drawn upwardly to become separated from the said pipe on account of the inwardly extending flange *h* which fits under the enlargement formed on the upper end of said pipe.

As illustrated, one of the projections *c* is

formed integral with the member *a* of the hopper flange, while the other projection is formed integral with the member *b* thereof.

It is to be understood that the said projections may be formed separately from and afterward secured to the members of the hopper flange, and it is also to be understood that both of the said projections may be formed upon or secured to a single one of the said members, and such construction would also necessitate the location of each of the curved slots *g* in a single one of the said members.

I prefer to employ the depressions *d* for the reception of the projections *c* for the reason that the removal of the hopper flanges from their position about the upper end of the soil pipe and the application of the same thereto are thereby facilitated. It will be readily understood that with the construction illustrated, it is only necessary to loosen the nuts *e* upon the projections *c*, in order to remove the hopper flange from or apply it to the upper end of the said soil pipe *h*.

I desire it to be understood that my invention may be embodied in constructions differing somewhat from that illustrated and I do not wish to be limited to the precise construction shown. For instance, perforations extending through the ends of the members *a* and *b* may be substituted for the depressions *d*.

Having thus described my invention, I claim—

1. As an article of manufacture, a hopper flange consisting of two members, and means for securing the said members together, the said means comprising a projection secured to one of the said members and adapted to enter a recess in the surface of the other of said members, the said recess extending only partially through said member and opening upon the end of the same, and an adjustable device secured upon the said projection.

2. A hopper flange comprising two semicircular members the ends of which are adapted to be secured together, one of the members being provided with an elongated slot which terminates adjacent to one of its ends, and a recess in the said member extending from the end of said slot to the end of the member, and the other of the said members having a projection which is adapted to enter the said recess and to project into the said slot, and means provided upon the said projection for securing the said members together.

3. As an article of manufacture, a hopper flange consisting of two members, each of which is provided with a downwardly extending flange, and means for securing the said members together, the said means comprising a projection at one end and a depression formed in the surface at the other end of each of said members, the said depressions extending only partially through the said members and opening upon the adjacent ends of the same so as to permit the insertion of a projection therein by moving it either transversely of the plane of the members of the hopper flange or by moving it in or parallel to the plane of said members.

4. As an article of manufacture, a hopper flange consisting of two parts each of which is provided with a downwardly extending flange, and each of which is also provided with a projection at one end and a depression or recess at the other, each depression or recess being adapted to receive a projection, and means in engagement with the projections for securing the said members together, substantially as described.

5. In combination, a soil pipe provided with an enlarged upper end, a suitable packing surrounding the said end and having an outwardly extending lateral flange, and a hopper flange surrounding the upper end of the said soil pipe and the said packing, and being provided with a downwardly and inwardly extending flange adapted to engage beneath the enlargement upon the upper end of the said soil pipe, substantially as described.

6. In combination, a soil pipe provided with an enlarged upper end, a rubber packing surrounding the said end and which is provided with an inwardly curved portion and also an outwardly extending lateral flange, and a hopper flange surrounding the upper ends of the said soil pipe and the said packing, and being provided with a downwardly and inwardly extending flange adapted to engage beneath the enlargement upon the upper end of the soil pipe and also underneath the inwardly curved portion of the packing, substantially as described.

7. In combination, a soil pipe provided with an enlarged upper end, a hopper flange consisting of two members surrounding the upper end of said soil pipe and being provided with a downwardly and inwardly extending flange adapted to engage beneath the enlargement upon the upper end of the said soil pipe and each of said members being provided with a depression or recess at one of its ends and projections formed integral with the said members and adapted to enter the said depressions, and means provided upon the said projections for securing the said members together, substantially as described.

8. In combination, a soil pipe provided with an enlarged upper end, a suitable packing surrounding the said end and having an inwardly and downwardly curved portion and also an outwardly extending lateral flange, a hopper flange consisting of two members surrounding the upper end of the said soil pipe and the said packing and being located beneath the said lateral flange and provided with a downwardly and inwardly extending flange adapted to

engage beneath the enlargement upon the upper end of the soil pipe, and each member having a depression or recess formed in one of its ends, screw-threaded projections provided upon said members and adapted to enter the said depressions or recesses and nuts adapted to engage the said projections.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 17th day of June, A. D. 1903.

WILLIAM U. GRIFFITHS.

In presence of—

THOS. K. LANCASTER,

LAURA KLEINFELDER.