W. E. YOUNG.

CLOSET BEND OR FITTING.

APPLICATION FILED APR. 22, 1907.

954,604.

Patented Apr. 12, 1910.

2 SHEETS—SHEET 1.

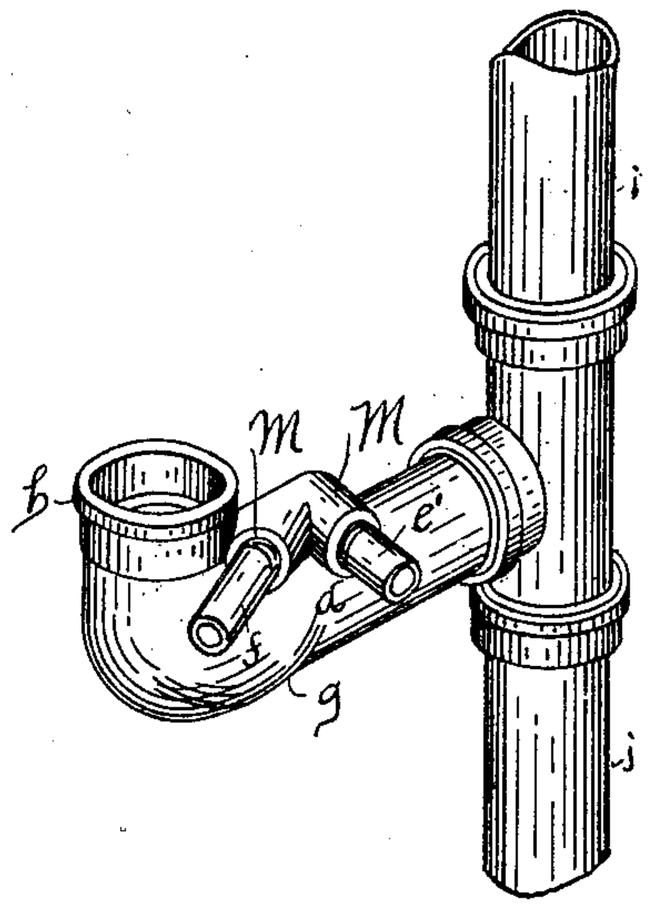

Fig 1.

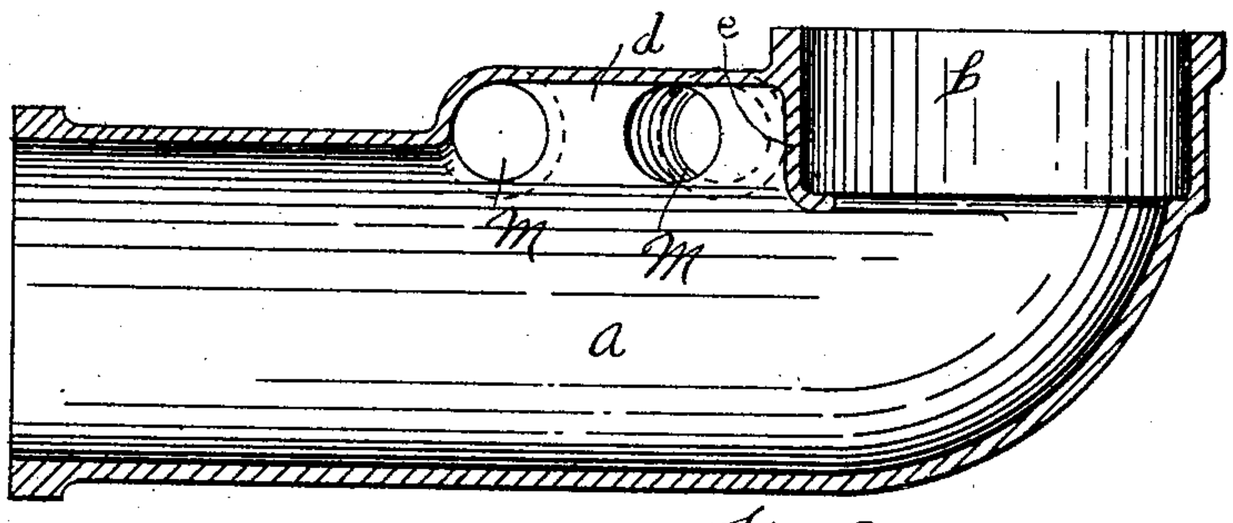

Fig 2.

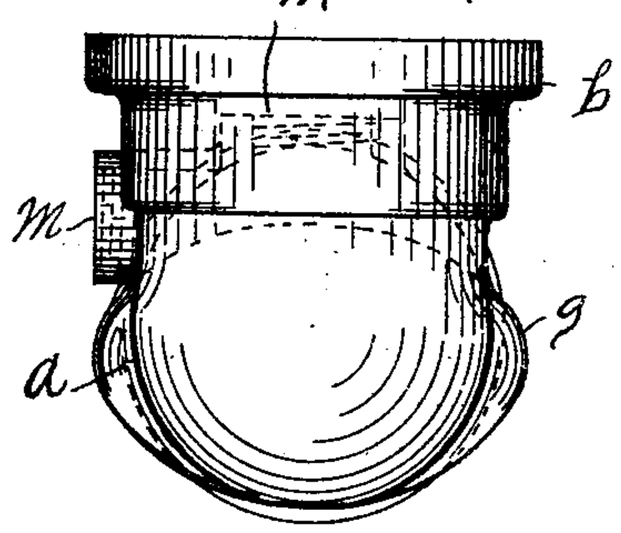

Fig 5

Witnesses:
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2 SHEETS—SHEET 2.

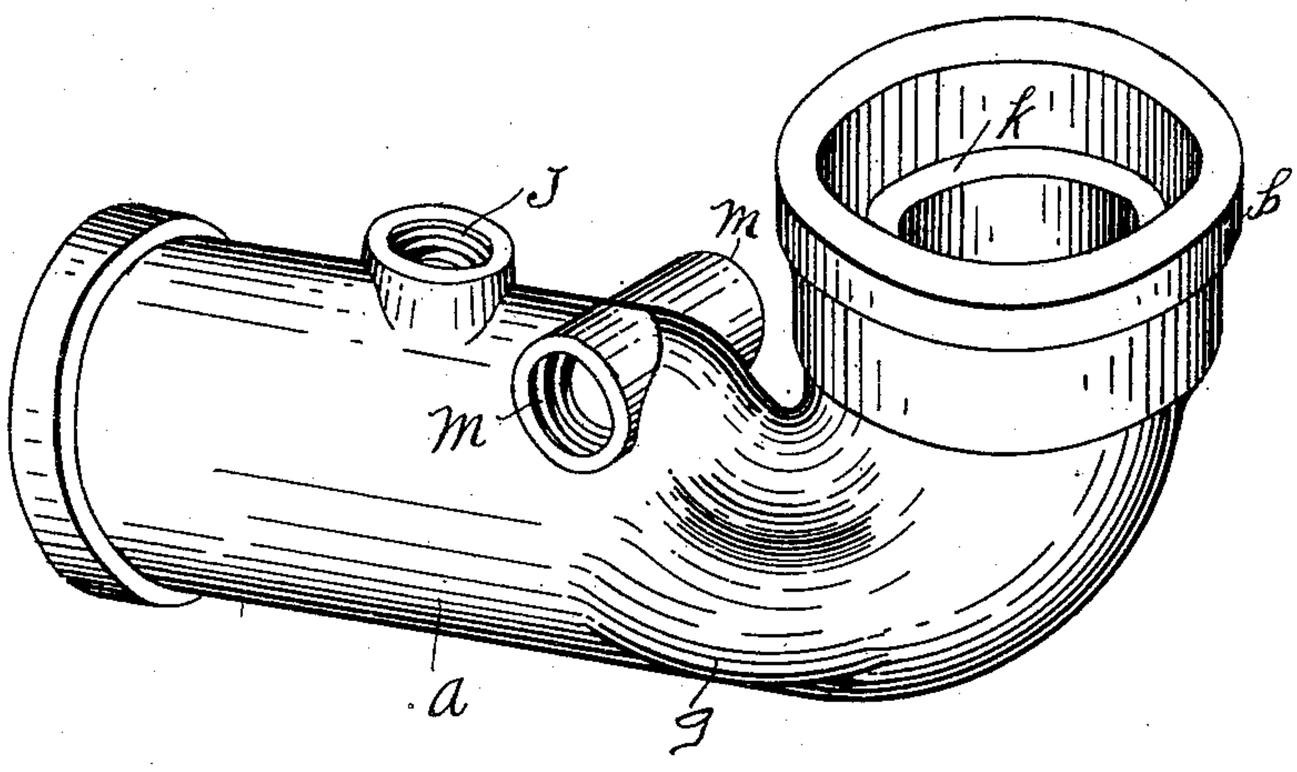

Fig 3

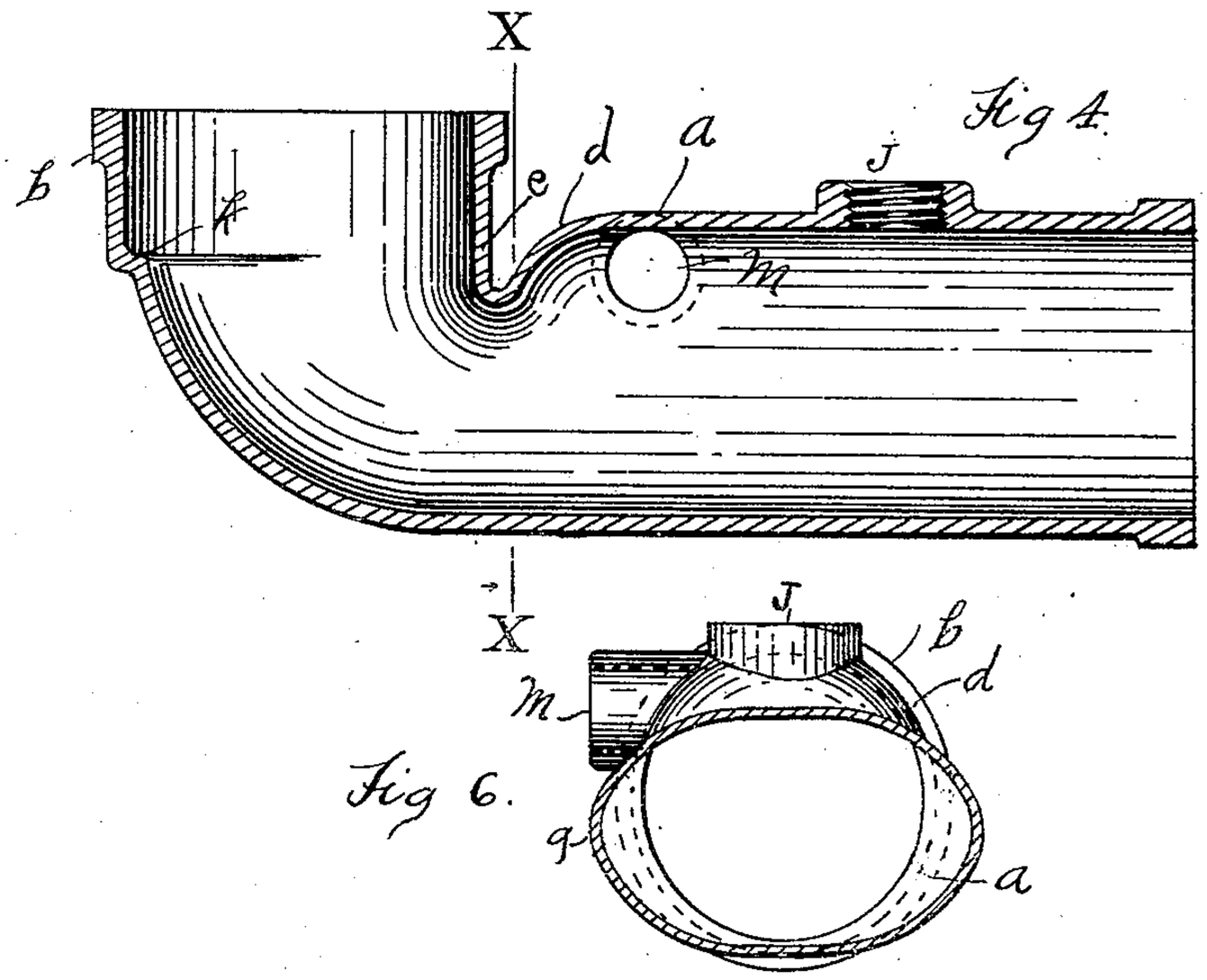

Fig 4.

Fig 6.

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UNITED STATES PATENT OFFICE.

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CLOSET BEND OR FITTING.

954,604. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed April 22, 1907. Serial No. 369,487.

To all whom it may concern:

Be it known that I, WILLIAM E. YOUNG, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Closet Bends or Fittings, of which the following is a specification.

My invention has for its object to provide a closet bend or fitting of superior construction and utility, and the same consists of the construction hereinafter described and claimed and illustrated in the accompanying drawings, in which,

Figure 1 is a view in perspective, illustrating features of my invention. Fig. 2 is a view in longitudinal section through the bend or fitting proper. Fig. 3 is a view in perspective illustrating a modification. Fig. 4 is a longitudinal section through the device shown in Fig. 3. Fig. 5 is a view in end elevation. Fig. 6 is a view in cross section on the line *x*—*x*, Fig. 4.

More especially the aim of my improved closet bend or fitting is to secure an appliance of this character that will be non-siphonic in action, that will secure a deflection of the contents of the fitting in order to provide an air space at the top of the pipe or fitting, said air space preventing any siphonic action either from a closet, bath or lavatory which may be connected therewith, in the operation of flushing.

To these ends the invention consists in the novel construction of the fitting itself, and in the arrangement and combination of its parts.

I carry out my invention as follows: In the drawings my improved closet bend or fitting comprises a tubular section *a* upturned at one extremity as indicated at *b* to form a customary hub. The tubular section *a* is constructed at the throat of the bend, with an inwardly projecting shoulder or flange indicated at *e*, said shoulder or flange forming a point of deflection in the action of flushing which carries the adjacent end of the inlet below the upper part of the bore of the bend, and at the same time an air space *d* in the top of the tubular section or fitting above said shoulder or flange, the tubular section being enlarged preferably above said shoulder or flange as shown.

I do not limit myself to any special means of producing, during the operation of flushing, an air space or passage in the bend or fitting, preferably I employ as above stated, a deflecting wall or flange arranged at the throat or bend or junction of the complementary sections connected with the appliance, said deflecting wall or flange extending within the fitting a sufficient distance to deflect the discharge through the tubular section in such a manner as to form an air space or passage above mentioned, the air passage being maintained within the bend or fitting during the operation of flushing, to perform the function already referred to.

The section *a* may be provided with one or more openings *m* at the top thereof communicating directly with the air passage or space. For example, a connection *e'* may lead to a lavatory and a connection *f* to a bathtub or basin, a usual closet member being supported upon the upper end of the upturned portion of the fitting in the usual manner, all communicating with said air space. The connections *e'* and *f* may be oppositely engaged in lateral openings of the fitting or the connections to the lavatory and bath might lead from the same side of the fitting. I prefer also that the body of the fitting should be enlarged as indicated at *g* to more effectually prevent any liability of choking or clogging during the discharge. The restriction of the fitting within the throat of the bend and the preferable enlargement of the fitting to form the air space acts, obviously, to produce a passageway through the appliance in the operation of flushing without interfering with the air space formed as above set forth.

Obviously, such a closet bend or fitting is sanitary and many special advantages will be apparent to the trade. One end of the tubular body, it will be seen, is connected to the stack *i*. The body may also be provided with a top vent J in the upper wall thereof.

The fitting adjacent to the deflection or shoulder *e* to form the air space *d* is shown widened, laterally, particularly in Figs. 5 and 6, at *g*, as above specified. The hub *b* is preferably constructed to be engaged by a combination ferrule, that is a ferrule of lead and iron, the hub being shown formed with a shoulder *k* for this purpose. It is desirable to make the hub as short as convenient, so that the device may be engaged between the eight inch joist. The enlargement or lateral swelling of the wall of the fitting ought to come up to the waste openings.

It will be seen that my improved closet bend or fitting is in the nature of an elbow having an enlarged inlet end.

What I claim as my invention is:

1. A closet bend comprising a tubular body having interior means for forming a longitudinal air space within the body at the top thereof during the operation of flushing.

2. A closet bend comprising a tubular body having interior means at the top thereof for deflecting the contents of the body in flushing, and forming a longitudinal air space therewithin, said body formed with an opening leading into said air space.

3. A closet bend comprising a tubular body having an interior deflecting shoulder forming an air space within the body during the operation of flushing, said body provided with an opening communicating with the air space.

4. A closet bend comprising a tubular body having an interior deflecting shoulder forming an air space within the body during the operation of flushing, said body provided with an opening communicating with the air space, said body enlarged above said shoulder or depression to aid in the formation of said air space.

5. A closet bend comprising a tubular body upturned at one end thereof and provided at the juncture of the upturned portion of the body with the main portion of said body with an inwardly extending shoulder and forming an air space in said body, and a connection communicating with the said air space.

6. A closet bend comprising a tubular body provided with an interior deflecting shoulder, said body formed with an enlargement adjoining said wall for the purpose described.

7. A pipe connection comprising an elbow having an enlarged inlet end, and waste openings near the inlet end above the general axis of the elbow, said elbow formed with an air space toward the top thereof.

8. A water closet bend having auxiliary waste inlets, and a longitudinal air space therewithin toward the top thereof into which said inlets communicate.

9. A water closet bend having auxiliary waste inlets above the center thereof, and a longitudinal air space into which said inlets communicate.

10. A non-siphonic closet bend comprising a body section upturned at one end thereof to form a hub, said body section constructed at the throat of the bend with an inwardly projecting shoulder forming a point of deflection in the action of flushing, and an air space in the top of the body section above said shoulder, said section provided with an opening at the top thereof communicating with said air space.

11. A closet bend comprising a tubular body having an interior deflecting shoulder at the throat of the bend forming an air space at the top of the body to prevent siphonic action, the wall of said body at the throat of the bend being laterally enlarged.

12. A water-closet bend having an inlet, said bend being so constructed that the upper part of its bore, from the delivery end of said bend toward the inlet pipe, shall be above the delivery end of said inlet, and an inlet communicating with said upper part of said bore, for the purpose described.

13. A water-closet bend having an inlet provided with a flange *e* which carries the delivery end of the inlet below the upper part of the bore of the bend, and an inlet communicating with said upper part of the bore, substantially as and for the purpose described.

14. A water-closet bend having an inlet, said bend being so constructed that the upper part of its bore shall be above the delivery end of said inlet, an inlet communicating with said upper part of said bore, and means for placing said upper part of said bore into communication with the outer air, for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. YOUNG.

Witnesses:
N. S. WRIGHT,
E. M. SPIELBURG.