F. DOW & L. D. EDMINSTER.

STOVEPIPE JOINT.

APPLICATION FILED AUG. 23, 1917.

1,281,307. Patented Oct. 15, 1918.

Fig. 1.

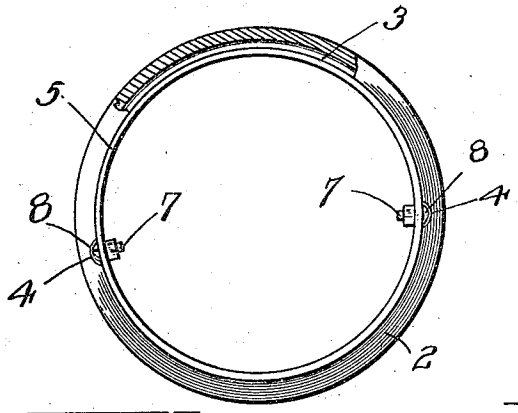


Fig. 2.

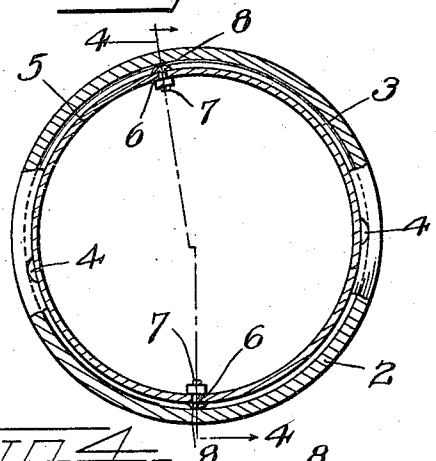


Fig. 3.

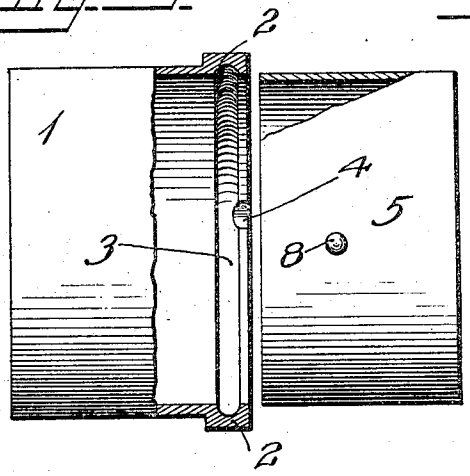


Fig. 4.

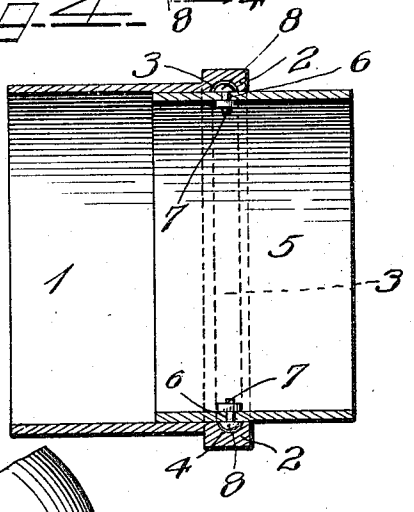


Fig. 5.

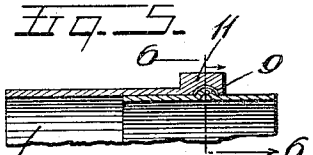


Fig. 6.

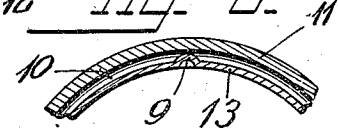
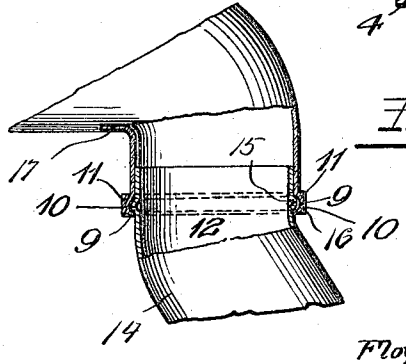


Fig. 7.



Witness

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STOVEPIPE-JOINT.

1,281,307. Specification of Letters Patent. Patented Oct. 15, 1918.

Application filed August 23, 1917. Serial No. 187,864.

To all whom it may concern:

Be it known that we, FLOYD DOW and LLEWELLYN D. EDMINSTER, citizens of the United States, residing at Wyanet, in the county of Bureau and State of Illinois, have invented certain new and useful Improvements in Stovepipe-Joints; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in stove pipe joints and more particularly to novel means for detachably locking two tubular members together in a safe and reliable manner.

One object is to provide a device of this character in which a thimble and a pipe section or two pipe sections may be securely connected and in which the one member of the joint may be rotated approximately 355 degrees without separating the two joint sections.

A further object is to provide a device of this character which may be used as a substitute for the present form of stove pipe joint and will retain the members in proper relative position and at the same time be readily separable.

With these and numerous other objects in view, our invention resides in the novel features of construction and in the combination and arrangement of the several parts as pointed out in the specification and the claim, and clearly illustrated in the accompanying drawings which form a part of this application.

Figure 1 is an end elevation of the joint showing a portion in section.

Fig. 2 is a vertical transverse sectional view of the joint.

Fig. 3 is a side elevation of the joint showing a portion thereof in section.

Fig. 4 is a sectional view on the plane of line 4—4 of Fig. 2.

Fig. 5 is a detail sectional view of a modified form of retaining projection.

Fig. 6 is a sectional view on the plane of line 6—6 of Fig. 5, and

Fig. 7 is a fragmentary section of the joint used with a furnace elbow.

The preferred embodiment of our invention as illustrated in Figs. 1 to 4 of the drawings includes a thimble formed from cast iron or the like and comprising a main body 1 in the form of a cylinder, one end of which is provided with a flange 2 to prevent movement of the thimble inwardly through an opening in a wall and is also provided with an annular groove 3 in the inner face of the flange at a point near the end of said flange, and whose function will be hereinafter set forth.

For a purpose to be hereinafter described the flange is provided with a pair of oppositely disposed notches 4 in its inner face which lead from the annular groove to the adjacent edge of the flange. These notches although oppositely disposed are not diametrically opposite each other, the purpose of which will be hereinafter fully set forth.

The end of the pipe section 5 to be secured in the thimble is provided with a pair of oppositely disposed apertures 6 which are positioned in the same relation as the aforesaid notches 4 in the flange. A pair of bolts 7 are secured in the apertures 6 with their heads 8 positioned on the outer face of the pipe section. When connecting the pipe and thimble the bolt heads 8 are placed in alinement with the notches 4 in the thimble, and then the pipe is moved longitudinally inward until the heads 8 are positioned in the annular groove, whereupon the pipe section is rotated thereby locking the thimble and pipe against relative longitudinal movement. From the position in which it is inserted into the thimble, the pipe may be rotated practically one full revolution before the notches in the thimble and the bolt heads 8 are again alined, which position is essential before the two members can be separated. Should the pipe be rotated only one-half of a revolution the notches and bolt heads would not aline, one of the bolts being about 5° away from the adjacent notch. It is readily seen that this form of connection could be advantageously used in joining stove pipe sections to each other as shown in Fig. 5 in which the projections 9 which are received in the groove 10 in the inner face of the flange 11 of the female 12, are formed integral with and punched from the male section 13.

This joint could be readily used in connecting elbows of furnace pipe sections and the like in which the elbows are to be disposed at various angles, whereas in other types of joints the extent of relative rotation of the section or elbow is limited so that should the elbow be positioned at certain angles it would become disconnected. This

use of the joint is illustrated in Fig. 7 of the drawings in which the elbow is shown connected by this means, the male member 14 being provided with the oppositely disposed projections 15 to be received in the annular groove in the inner face of the flange 16 on the female member 17.

While we have shown in the drawing and described as a preferred embodiment of the invention, a joint or connection between a pipe and chimney thimble it will be understood that the invention may be embodied in a joint between any two pipe sections and that two or more of the same joints may be arranged in the same smoke pipe in order with one or more so that the pipe line may have its parts adjusted angularly to accommodate the relative positions of the stove and chimney opening, and that there will be no danger of such joint sections separating during such adjustment. By thus using two or more joints in connection with pipe sections and elbows, the extremity of the pipe may not only be positioned in different horizontal planes, but also in different vertical planes according to the height of the smoke outlet of the stove and the opening in the chimneys.

From the foregoing description of construction and operation of our improved pipe joint, the operation thereof will be readily understood, and it is also to be understood that numerous changes in the minor details of construction may be made without sacrificing the principal advantages of the invention as defined in the following claim.

We claim:—

A pipe joint comprising an outer pipe section having near one end an internal continuous circumferential groove and having a pair of substantially opposed internal grooves leading from said circumferential groove through said end of the pipe, an inner pipe section having an end receivable in said end of the outer section, and a pair of substantially opposed external projections on said end of the inner section, said projections being insertible into said circumferential groove through said pair of grooves, one of said pair of grooves being disposed adjacent but in slightly spaced relation to a diametrical line intersecting the other grooves of said pair, and said projections being correspondingly related for the purpose set forth.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

FLOYD DOW.
LLEWELLYN D. EDMINSTER.

Witnesses:
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A. H. MALM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."