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J. L. LEMEROND

1,637,081

COUPLING

Filed Feb. 14 1927

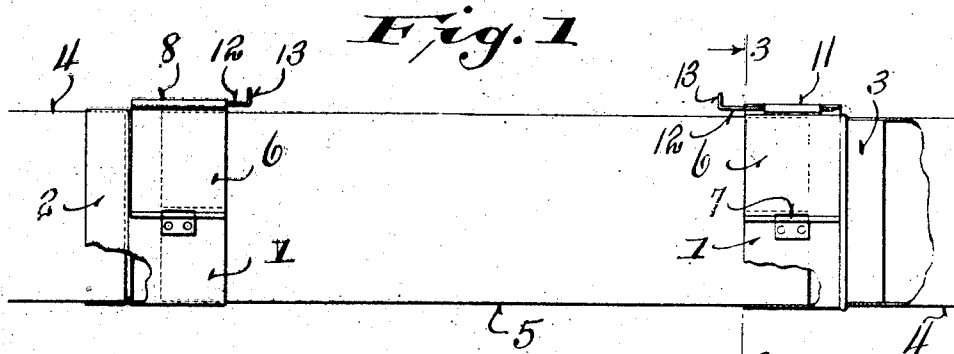


Fig. 3

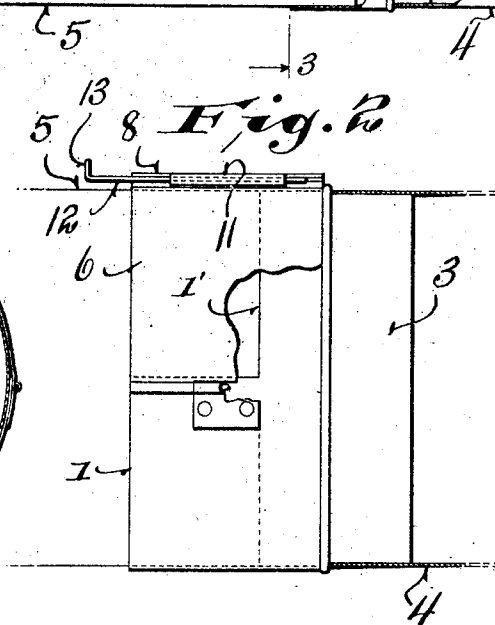
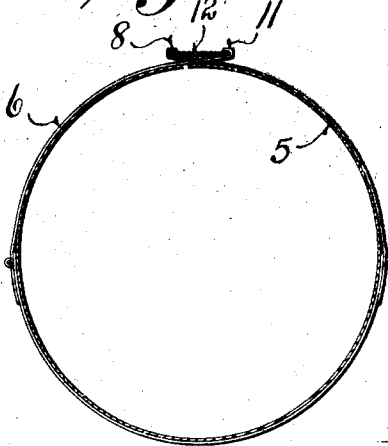
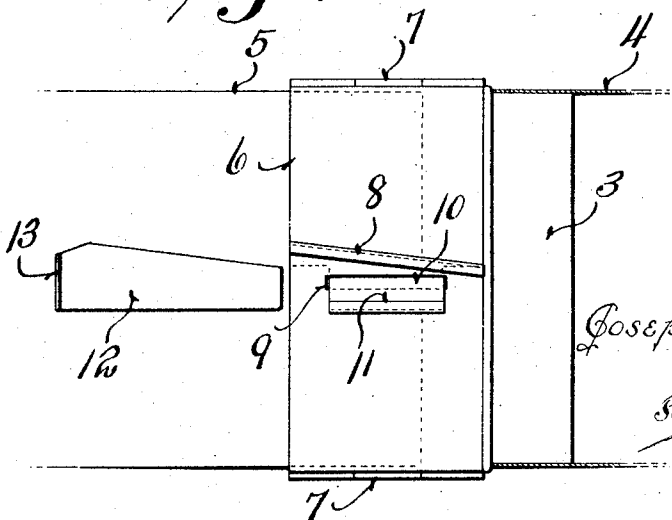


Fig. 4



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COUPLING.

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This invention relates to couplings.

Objects of this invention are to provide a novel form of coupling which may be used on a smoke pipe or on a hot air pipe of a furnace to permit the ready removal of a section of the pipe without disturbing the remainder of the pipe so as to provide access for cleaning and other purposes in an easy and simple manner.

Further objects are to provide a coupling which can be operated by any one without requiring skill or experience; and which is so constructed that it insures a very tight and secure joint when closed.

An embodiment of the invention is shown in the accompanying drawings in which:

Figure 1 is a view of a portion of a pipe equipped with the couplings for the removable section, with parts broken away;

Figure 2 is an enlarged view of a portion of one of the couplings with parts broken away;

Figure 3 is a sectional view on the line 3—3 of Figure 1;

Figure 4 is a plan view of the structure shown in Figure 1, showing the wedge removed.

Referring to the drawings, it will be seen that the couplings each comprise a main body portion 1 which extends around the lower half of the pipe and is provided with an outwardly extending portion. This outwardly extending portion may be either male or female, as indicated by the reference characters 2 and 3 in Figure 1. It is adapted to receive the adjacent section of the pipe 4.

The removable section of the pipe 5 rests in the body portions 1 at its ends and is held locked in position by means of the gates or hingedly mounted quarter sections 6 which, as may be seen from Figure 1, are hinged at 7 to the body portions 1. It is to be noted also particularly from the enlarged view of Figure 2 that the body portions 1 continue completely around the pipe in the form of a narrow band 1', and that the edge or end of the removable section 5 of the pipe abuts such portion 1'.

The hinged gates 6 are provided with fasteners which may take the form of an inwardly folded lip 8 (see Figure 4), which is arranged diagonally at the end of one of the sections 6. This section also has a rectangular slot 9 cut therein through which an upwardly and outwardly bent tongue 10 car-

ried by the other gate or section projects. The tongue 10 is also provided with an inwardly folded lip 11. Preferably, the lip 11 is straight, while the lip 12 is diagonally or slantingly arranged. The members when in the position shown in Figure 4 are adapted to receive the wedge 12 which is slid beneath the lips 8 and 11, and as it is driven in wedges these members. The wedges thus draw the gates 6 tightly around the pipe 5 and the portions 1' of the coupling members. Preferably, the wedge 12 is provided with an upturned flange 13 to facilitate its removal and replacement.

In using the device, assuming that the parts are in place and it is desired to detach the removable portion 5, all that is necessary is to withdraw the wedges 12 and open the gates 6 outwardly. The removable section 5 may then be lifted directly upwardly from the body portions 1 of the coupling. After the pipe has been cleaned, the removable section may be replaced by dropping it into the body portions 1 and closing the gates and inserting the tongue 10 through the slot 9. Thereafter, the wedges 12, slightly tapped or driven, slide into place and thus draw the two sections of the gate tightly around the removable section of the pipe and the portions 1' of the coupling.

When it is considered that furnace pipe is usually put up in a secure manner by expert tinnerns, it will be at once appreciated that this invention fulfills a long felt need in that it provides a readily removable section of pipe in the pipe line and that the couplings are so constructed that a layman can readily operate them to remove or to relock the removable section in place.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

I claim:

1. A coupling for a pipe comprising a body portion having an outwardly projecting pipe receiving member, said body portion being semi-cylindrical and having a narrow continuation thereof extending from one edge of the semi-cylindrical body portion to the other edge thereof, a pair of gate sections hinged to the body portion

and extending part way around the coupling, and means for drawing the gate sections towards each other.

2. A coupling for a pipe comprising a
5 body portion having an outwardly projecting pipe receiving member, said body portion being semi-cylindrical and having a narrow continuation thereof extending from one edge of the semi-cylindrical body portion
10 to the other edge thereof, a pair of gate sections hinged to the body portion and extending part way around the coupling, said gate sections having lips provided with channels with one of the lips
15 arranged in a diagonal manner, and a wedge adapted to be slid between the lips and to be driven into place to thereby draw the gate sections tightly against an enclosed pipe.

20 3. The combination of a pipe line consisting of a pair of stationary spaced portions, couplings carried by each of said portions

and projecting towards each other, each of said couplings having a semi-cylindrical body portion and having a pair of gates
25 hinged to said body portion, a removable pipe section resting within the body portions of the said coupling and partly surrounded by said gates, one of said gates of each pair having a slot therein and having
30 a slanting inwardly turned flange, the other gate of each pair having a tongue adapted to be passed through the slot and having an inwardly turned flange, and a wedge for each pair of gates positioned between the
35 intumed flanges and causing said gate sections of each pair to be drawn into binding engagement with the removable pipe section.

In testimony that I claim the foregoing I have hereunto set my hand at Green Bay,
40 in the county of Brown and State of Wisconsin.

JOSEPH L. LEMEROND.