

No. 646,786.

Patented Apr. 3, 1900.

A. A. ARMITAGE.
STOVEPIPE COUPLING.
(Application filed Dec. 23, 1899.)

(No Model.)

Fig. 1.

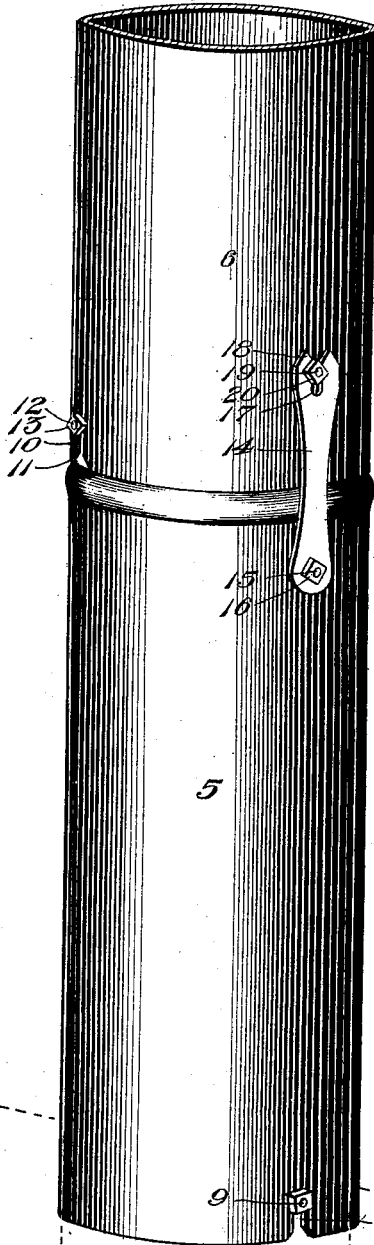


Fig. 2.

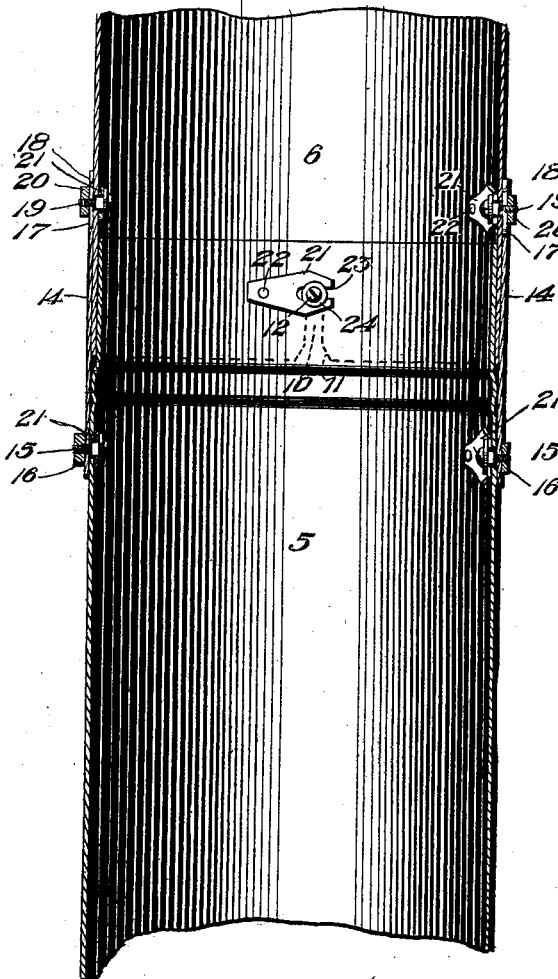


Fig. 3.

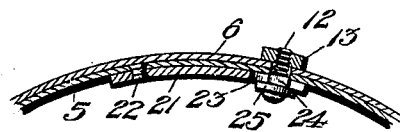
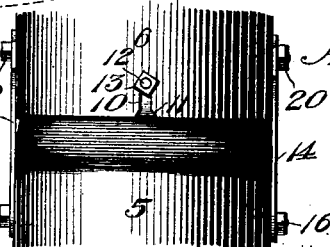


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

ALBERT A. ARMITAGE, OF KENESAW, NEBRASKA, ASSIGNOR OF ONE-HALF
TO HOMER C. ARMITAGE, OF SAME PLACE.

STOVEPIPE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 646,786, dated April 3, 1900.

Application filed December 23, 1899. Serial No. 741,775. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. ARMITAGE, a citizen of the United States, residing at Kenesaw, in the county of Adams and State of Nebraska, have invented a new and useful Stovepipe-Coupling, of which the following is a specification.

My invention relates to improvements in stovepipe-couplings; and one object in view is to provide an improved construction by which joints or lengths of pipe may be held rigidly together in a straight line or at different angles to prevent soot and flame from leaking through the joints between the lengths or sections of pipe, to obviate the necessity for the employment of wire and other braces for holding the pipe in position, and to minimize the liability of the occurrence of mysterious fires.

A further object is to provide permanent means for holding the clamping-bolt from turning on the application of the nuts in the operation of coupling the pipe-sections or the removal of the nut to uncouple said pipe-sections and at the same time provide for the ready introduction and removal of the bolt, whereby the pipe-sections may be quickly and easily connected and detached.

With these ends in view the invention consists in the novel construction and arrangement of parts, which will be hereinafter fully described.

In the drawings, Figure 1 is a perspective view of two lengths of pipe united by a coupling in accordance with my invention. Fig. 2 is an enlarged vertical section through the meeting ends of two lengths of stovepipe, the plane of the section being longitudinally through the coupling-plates, which are fastened at diametrically-opposite points to one section or length of pipe. Fig. 3 is a horizontal section through a fragment of overlapping meeting ends of two pipe-sections, illustrating the means which I have invented for preventing the clamping-bolt from turning on the application of the nut. Fig. 4 is an elevation of the joint between two meeting ends of the pipe lengths or sections, with the latter turned one-fourth of the way around from the position shown by Fig. 1 in order that the notch in the lower end of the upper pipe-section

and the relation of the coupling-plates thereto may be fully brought out.

The same numerals of reference are used to indicate like and corresponding parts in each of the several figures of the drawings.

5 6 designate two lengths or sections of pipe which are constructed and equipped with means in accordance with my invention for the purpose of being united rigidly together and of adjustment in alinement or at angles according to the direction in which it may be desired to lead the pipe from a pipe-collar on a stove to the chimney-thimble. The section 5 is provided at its lower edge with a slot 7, and said slotted edge of the section is fitted over the pipe-collar of the stove, which is provided with a transverse opening adapted to receive a bolt 9, the latter passing through the slot 7 and receiving a suitable nut for the purpose of holding the pipe-section 5 firmly on the pipe-collar. Each of the other sections of the stovepipe is provided in one edge, preferably the lower edge thereof, with slots 10, which are formed at diametrically-opposite points in the pipe-section, each slot having a flared mouth 11, which extends through the end edge of the pipe-section. As shown by Figs. 1 and 2, the section 6 is provided in its lower edge with the flare-ended slots, and this edge overlaps the pipe-section 5 in a position for the slots therein to receive the bolts 12, the same passing through the section 5 from the inside thereof and having the nuts 13 screwed on the outer ends.

14 designates a pair of coupling-plates which are fixed to the pipe-section 5 at points between and equidistant from the bolts 12, that engage with the notched edge of the section 6, and these coupling-plates extend from the section 5 for suitable distances, so as to overlap the lower portion of the pipe-section 6. Each coupling-plate is made fast to the section 5 by a bolt 15, having a nut 16, and in the free or unconfined end of this coupling-plate is provided a longitudinal slot 17, the edges of which are inclined to form the flared mouth 18. Clamping-bolts 19 pass through the section 6 at points suitable for engagement with the slotted end of the coupling-plates 13, said bolts having the nuts 20 screwed on the outer ends thereof, so as to

span the slotted ends of the coupling-plate and bind the latter against the pipe-section 6.

It is to be observed that one pipe-section is provided with the slots 10 and the bolts 19, while the other pipe-section has the bolts 12 and the slotted coupling-plates. The contiguous or meeting ends of the two pipe-sections are fitted together for the bolts 12 to enter the slots 10 in the section 6, while the slots in the free ends of the coupling-plates receive the bolts 19. The flared mouths of the slots in the pipe-section and the coupling-plates serve to direct the bolts into the slots, so as to facilitate the assemblage of the members. The bolts 12, which engage the slotted edge of the section 6, are disposed in alternate relation to the bolts 19, that engage the slotted ends of the coupling-plate on the section 5, and the meeting ends of the two pipe-sections are thus adapted to be clamped rigidly together, because I provide a plurality of clamping-bolts which are spaced equidistant around the joint of the pipe-sections. It is to be observed that the slots in the pipe-sections and in the coupling-plates are elongated, so as to permit the section and the plates to have a limited amount of movement with relation to the bolts when the nuts are loosened. This is an important advantage in my coupling, because it permits the pipe-sections to be drawn closer together at their meeting ends. The equidistant arrangement of the slots in the pipe-section and the coupling-plate enable the pipe-sections to be adjusted in variable relations, so that they can be extended in directions upward, downward, or toward the right or left from the stove; but when the nuts are tightened on the bolts the pipe as an entirety is made rigid and firm at either of the angles or positions described. This adaptation is advantageous because it prevents the pipe from coming out of the chimney-thimble or moving too far into the same, and as the pipe-sections are joined rigidly together it is not necessary to employ braces or holding-wires, which are ordinarily resorted to when a considerable horizontal length of pipe is provided between the stove and the chimney—as, for example, in halls, churches, and schools. In the use of a long line of pipe under the conditions mentioned I prefer to employ the slotted pipe-sections, the slotted plates, and the plurality of bolts on each joint; but when a comparatively-short pipe is used, which requires a comparatively-few number of joints, I find it necessary to only employ the coupling-plates and the complementary bolts, the notches in the pipe-section and the bolts therefor being omitted. It is furthermore to be noted that the slots in the pipe-section face in one direction, while the slots in the coupling-plate on the other pipe-section face or open in the reverse direction. This provides for the ready assemblage of the pipe-sections, and the bolts limit the movement of the pipe-sections relatively to each other.

I employ means for holding the bolts against turning on the application or the removal of the nuts. This means for each bolt is arranged, preferably, on the inside of the pipe-section, so that the bolts may pass there-through and the nut may be applied conveniently from the outside of the pipe; but I do not limit myself specifically to this particular arrangement. Each locking device is in the form of a plate 21, which is fastened to a pipe-section permanently by a rivet 22, said plate being provided in its free end with a slot 23. The bolt is provided with an angular or square shoulder 24, as shown by Fig. 3, adapted to be received in the slot of the plate and to be held thereby from rotating. A washer 25 is interposed between the bolt-head and the locking-plate, and the nut is screwed on the threaded protruding end of the bolt, so as to draw the washer and the head toward the locking-plate. It is evident that the bolt may be readily removed and inserted from the inside of the pipe-section; but on the application or removal of the nut the locking-plate restrains the bolt against rotation.

Having thus described the invention, what I claim is—

1. The combination of meeting pipe members, one of which is provided at its overlapping end with diametrically-opposite straight slots arranged to open in one direction through the pipe member, plates fastened to the other pipe member in alternate relation to the slots and projecting from said pipe member across the joint into overlapping relation to the first-named member and also provided at their free ends with straight slots which open through the ends thereof in an opposite direction to the slots in the pipe member, and bolts engaging with the slotted pipe member and with the slotted plates, and clamping the pipe members and the plates laterally together whereby the pipe members are held against rotative and endwise movement in either direction, as set forth.

2. The combination of meeting pipe members, one of which is provided with diametrically-opposite straight slots which open through the edge thereof, plates secured fast to the other pipe member and arranged thereon in alternate relation to the slots in the first-named member, said plates provided in their free ends with open-ended straight slots and also arranged to overlap the joint between the meeting ends of the pipe members, and bolts engaging detachably with the slotted edge of one pipe member and the slotted ends of the plates and clamping the pipe members and the plates laterally together, substantially as described.

3. The combination of a pipe-section having slots, another pipe-section, plates secured to the last-named pipe-section to extend across the joint and also provided with slots, locking-plates secured on the inside of the pipe-sections and having slots which lie coincident with the slots in one pipe-section and the

plates on the other pipe-section, bolts passing through the slots of the pipe-section and the plates and having shouldered portions engaging with the slotted locking-plates, and nuts
5 screwed on the protruding ends of the bolts, substantially as described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in the presence of two witnesses.

ALBERT A. ARMITAGE.

Witnesses:

F. C. ARMITAGE,
FRED ARMITAGE.