

APPLICATION FILED OCT. 31, 1914. RENEWED APR. 23, 1919.

Patented Nov. 11, 1919.

2 SHEETS--SHEET 1.

The drawing consists of two views of a mechanical device. The upper view is a top-down perspective showing a rectangular assembly. It features a central horizontal component (18) and a vertical component (16) on the left. A series of horizontal lines (19, 20) represent a layered or segmented structure. Various fasteners and pins are labeled: 21 and 21' on the left, 23 in the center, and 1, 3, 4, 5 on the right. A dashed line (2) indicates a hidden internal part. The lower view shows a similar assembly from a different angle, with components labeled 21'', 23, 3, and 5. Dashed lines indicate internal or hidden parts.

Fig. III.

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STOVEPIPE THIMBLE.

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1,321,675.

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2 SHEETS—SHEET 2.

Fig. IV.

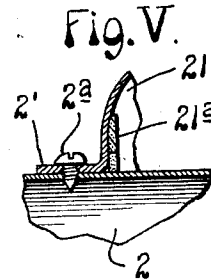
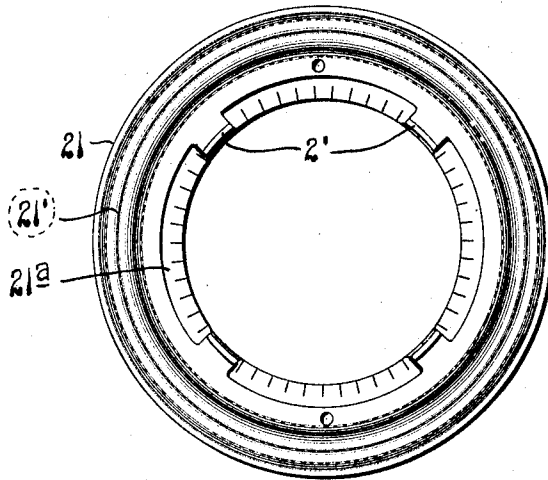


Fig. VI.

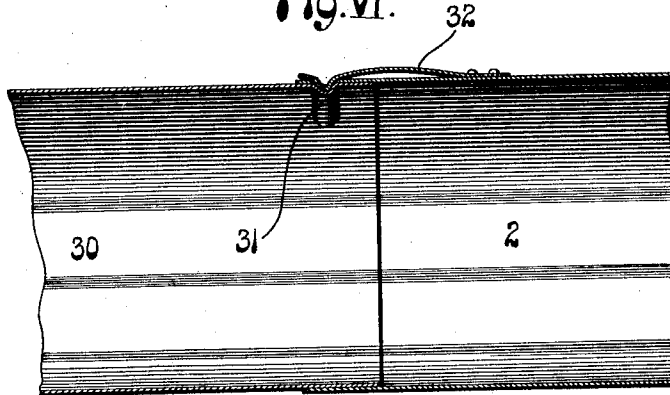
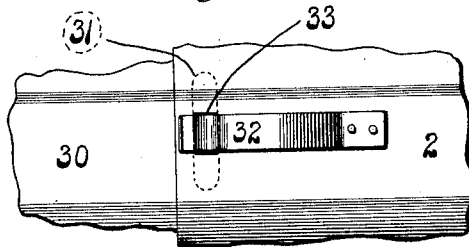


Fig. VII.



Attest

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UNITED STATES PATENT OFFICE.

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STOVEPIPE-THIMBLE.

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Specification of Letters Patent.

Patented Nov. 11, 1919.

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To all whom it may concern:

Be it known that I, RALPH SHURTLEFF, a citizen of the United States of America, a resident of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Stovepipe-Thimbles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to improvements in flue construction, and more specifically stated to a stove pipe thimble provided with means for preventing leakage of air or the escape of sparks, smoke or gas at the junction of the stove pipe and its receiver.

Figure I is a vertical section of a chimney provided with a stove pipe thimble embodying the features of my invention.

Fig. II is an enlarged horizontal section taken approximately on line II—II, Fig. I.

Fig. III is an enlarged vertical section taken approximately on line III—III, Fig. I, looking in the direction indicated by the arrow.

Fig. IV is an enlarged detail view of the stove pipe collar.

Fig. V is a fragmentary view showing the means for securing the stove pipe collar to the stove pipe.

Fig. VI is an enlarged vertical section illustrating the means for connecting the stove pipe sections.

Fig. VII is a top or plan view of the connecting device shown in Fig. VI, showing it applied to the stove pipe sections.

A designates a chimney which may be built of brick or other suitable material, and 1 designates a wall section forming part of the chimney structure. The wall section 1 is preferably a fire-clay frame having an opening for the reception of a stove pipe section 2 and also having an undercut plaster receiving flange 3 which surrounds the stove pipe section. The flange 3 is approximately in the form of a dove-tail adapted to interlock with the plaster 4 and adapted to lie between the plaster and the stove pipe to protect the plaster from the heat and also to prevent the plaster from being broken away at points adjacent to the stove pipe.

A thimble section 5 is preferably a metal tube arranged partly within the circular opening in the wall section 1 and projecting therefrom as shown in Fig. I. To interlock the metal tube 5 with the fire-clay wall sec-

tion 1, I preferably form grooves 6 and 7 in the wall section and provide the tube 5 with lugs 8 which lie within said grooves. The lugs are retained in the grooves 6 and 7 by plugs 9 of cement or other suitable material adapted to be firmly secured to the grooves.

The inner end portion of the thimble section 5 contains an internal annular seat 11 which engages the end portion of the stove pipe section 2. This annular seat is tapered so that the stove pipe may be firmly forced onto said seat with the result of contracting the inner end of the pipe, thereby firmly engaging the pipe with its seat. A very tight joint at the end of the pipe is primarily obtained by forcing the pipe onto the tapered seat, and since the pipe may be easily loosened from a seat of this kind, I provide means for retaining the pipe in the position shown in Fig. I.

12 designates an anchor lug formed integral with the thimble section 5, adapted to be engaged by the inner end of the stove pipe and adapted to interlock with a hook 13 secured to the inner end portion of the stove pipe. When the stove pipe section 2 is firmly engaged with its tapered seat 11 said stove pipe section is turned to interlock the hook 13 with the anchor lug 12, thereby securing the stove pipe to the stove pipe thimble to maintain the stove pipe in engagement with said tapered seat 11.

16 designates the wall plaster of a room, and 17 designates studding between said plaster and the chimney. To positively prevent the escape of sparks into the wall structure, or the leakage of gases, smoke or sparks into the room of the building, or the leakage of air from the wall structure into the flue, I secure an outer tube 18 to the wall structure to produce a pocket 19 around the stove pipe section 2. The inner end of this pocket 19 is closed by a sheet of asbestos packing 20 surrounding the inner thimble section 5 and closely fitted to the inner end of the outer tube 18. The outer face of the inner thimble section 5 is preferably tapered and the sheet of asbestos packing is preferably provided with a circular opening for the reception of said tapered outer face. To insure a very firm contact, the circular inner margin of the packing is slitted to produce a series of yieldable tongues 20' which engage the tapered outer face of the inner thimble section 5.

The outer end of the pocket 19 is closed by a stove pipe collar 21 having an annular groove for the reception of asbestos packing 21' which lies between said collar 21 and the plaster 16. This collar is preferably made of yieldable sheet metal, and it is preferably connected to the inner thimble section 5 by screws 22 passing through said collar and into said thimble section 5. The heads at the outer ends of screws 22 engage the outer face of the collar 21, and these screws may be adjusted to compress the packing 21' between the collar 21 and the plaster 16, thereby positively preventing the escape of sparks, smoke or gases at the outer edge of stove pipe collar. An asbestos packing ring 21^a, secured to the inner margin of the collar 21, is preferably slitted as shown in Fig. IV to produce a series of yieldable tongues which firmly engage the outer face of the stove pipe.

As previously pointed out, the stove pipe section 2 is securely held on its tapered seat 11, by means of the hook 13 which interlocks with the anchor lug 12. However, the stove pipe section may be loosened and removed from its seat by turning said stove pipe section to release the hook 13 from the anchor lug 12, and I, therefore, provide means for locking the stove pipe to prevent it from turning in the thimble section 5. The stove pipe collar 21 is prevented from turning by the screws 22 which connect said collar to the thimble section 5, the latter being firmly interlocked with the wall section 1. To prevent the stove pipe section from turning, the collar 21 is provided with flexible tongues 2', engaging the outer face of said stove pipe section, and secured thereto by means of screws 2^a (Fig. V) having pointed inner ends which may be readily forced through the stove pipe.

The vertical margins of the packing sheet 20 are arranged in vertical guides 23 secured to the inner end of the outer tube 18 and the packing is slidably fitted to these guides so that it may move downwardly with the thimble section 5 when the chimney structure settles and moves downwardly.

It will be noted that leakage of air from the building structure into the flue as well

as the escape of gases, smoke or sparks from the flue into the building structure is prevented by the firm joint at the inner end of the stove pipe, and also by the stove pipe collar 21 and the packing 20 serving as closures for the ends of the pocket 19.

A stove pipe section 30, fitted to the stove pipe section 2, is provided with a depression 31 adapted to receive a latch device 32 secured to the section 2. This latch device is preferably a small spring riveted to the stove pipe section 2 and adapted to pass through a hole 33 in said section so as to interlock with the section 30. The stove pipe sections are securely connected by the latch device and the latter may be readily unlocked by removing its free end from the depression 31.

I claim:—

1. An article of the character described comprising a frame adapted to be mounted in a flue opening, a thimble secured to said frame and projecting beyond an end thereof, a tube surrounding the projecting end of said thimble, and a collar coöperating with said tube to form a chamber, the joints of which are sealed.

2. An article of the character described comprising a frame adapted to be mounted in a flue opening, a thimble secured to said frame and projecting beyond an end thereof, a tube surrounding the projecting end of said thimble, and a collar secured to said thimble and coöperating with said tube to form a chamber, the joints of which are sealed.

3. An article of the character described comprising a frame adapted to be mounted in a flue opening, a thimble secured to said frame and projecting beyond an end thereof, a tube surrounding the projecting end of said thimble, a packing surrounding said thimble to which the inner end of said tube is fitted, and a collar coöperating with said tube to form a chamber, the inner end of which is closed by said packing.

RALPH SHURTLEFF.

In the presence of—

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