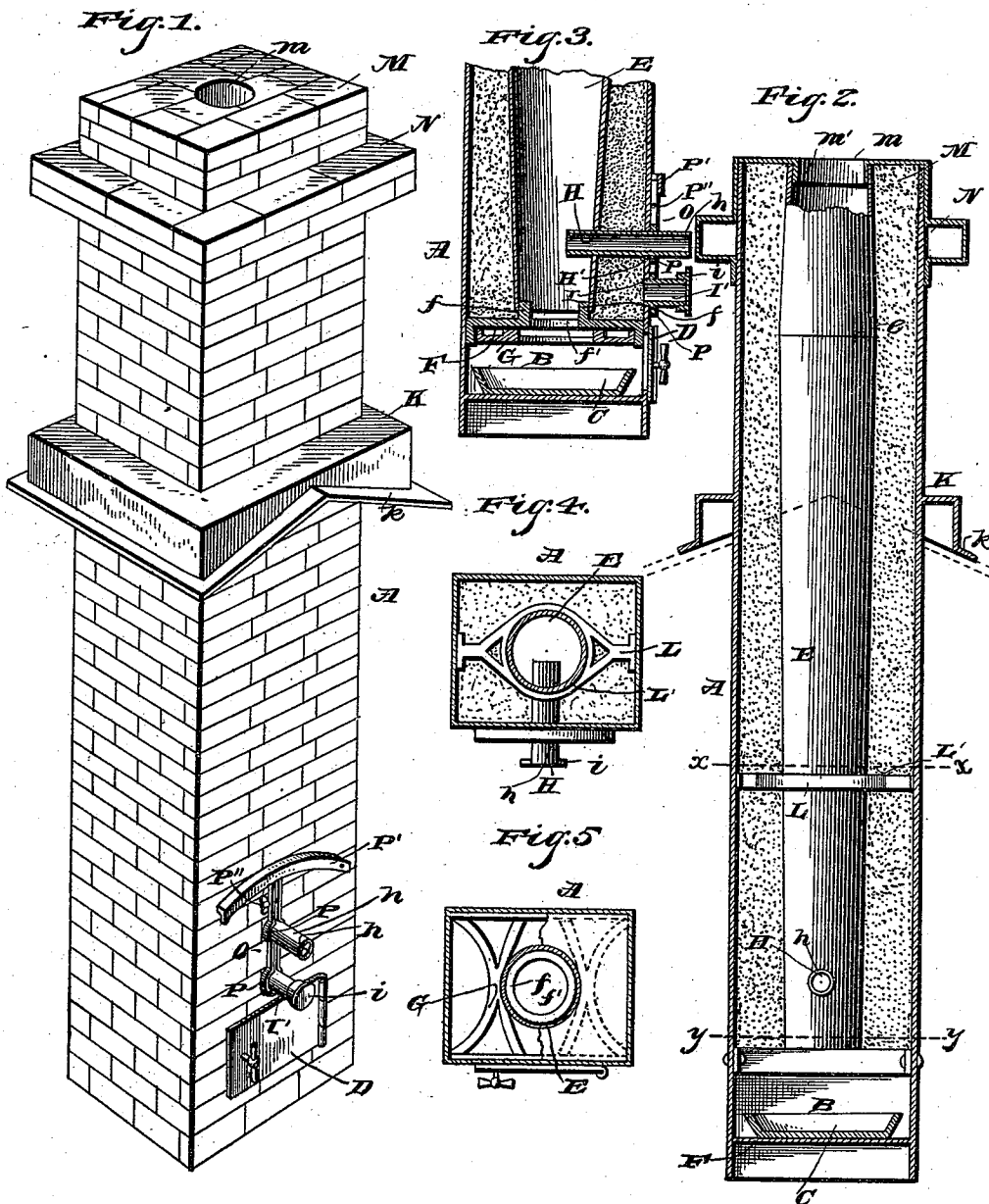


(No Model.)

J. M. JARVIS.
PORTABLE FIREPROOF CHIMNEY.

No. 512,707.

Patented Jan. 16, 1894.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES MELVILLE JARVIS, OF MESICK, MICHIGAN, ASSIGNOR OF ONE-HALF
TO JEDEDIAH DARROW, OF SAME PLACE.

PORTABLE FIREPROOF CHIMNEY.

SPECIFICATION forming part of Letters Patent No. 512,707, dated January 16, 1894.

Application filed December 7, 1892. Serial No. 454,371. (No model.)

To all whom it may concern:

Be it known that I, JAMES MELVILLE JARVIS, a citizen of the United States, residing at Mesick, in the county of Wexford and State of Michigan, have invented a new and useful Portable Fireproof Chimney, of which the following is a specification.

My invention relates to a portable chimney, adapted to be attached and detached at will, and the objects in view are to provide means to prevent the accumulation of soot upon the side walls of the smoke-flue; furthermore, to provide means for giving an alarm when the smoke-flue becomes injured or burned out; furthermore, to provide improved means for maintaining the smoke-flue in place within the outer casing or shell; furthermore, to provide improved means for attaching the chimney to the roof of the building; furthermore, to provide improved means for collecting and containing the soot, from which the same may be removed at intervals, and furthermore, to provide means whereby access may be had to the interior of the casing or shell, between the walls of the same and the exterior of the smoke-flue, for purposes of repair, &c.

The primary object of my invention is to provide a chimney from which fire may not be communicated to the wood-work of the building, and which at the same time may be light and portable.

Further objects and advantages of my invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a chimney embodying my improvements. Fig. 2 is a vertical central section of the same, showing it in place in a building. Fig. 3 is a vertical section through the lower part of the chimney, at right angles to Fig. 2. Fig. 4 is a horizontal section, on line $x-x$ of Fig. 2. Fig. 5 is a similar view, on line $y-y$ of Fig. 2.

A designates the outer casing or shell, which is preferably square in section, and it is provided at its lower end, which extends within the building, with a soot-chamber, B, containing a soot-pan, C, and having a door, D. The

smoke-flue, E, which is arranged axially in the casing or shell, is tapered toward its ends from a point, e , above the roof of the building, this point e indicating the portion of largest diameter. This peculiar shape of flue prevents the accumulation of soot upon the walls thereof. The lower end of the smoke-flue fits over an upright flange, f , which is formed around an opening, f' , in a horizontal plate, F, which closes the lower end of the casing or shell and separates the space between the flue and the walls of the casing or shell from the soot-chamber. This plate is provided with depending flanges which are fastened to the inner surfaces of the walls of the casing or shell. A cast metal brace, G, is fixed in the casing or shell, beneath this plate to secure the parts in their proper relative positions.

The flue is provided near its lower end with a pipe-opening, H, and the casing or shell is provided with a registering opening, H', through which extends the pipe, h , which communicates with the interior of the flue and to the outer end of which is connected the smoke-pipe from the stove or furnace. The side of the casing or shell is further provided with an opening I, into which is fitted a spout, I', provided with a cover or stopper, i .

K represents the roof-bracket, which is riveted to the outside of the casing or shell and is provided at its lower edges with flanges, k , to secure to the roof.

L represents a brace, secured at its ends to the inner surfaces of the walls of the casing or shell, and provided with a yoke, L', to embrace and engage the flue to hold it in place in the casing.

Upon the upper end of the casing or shell is fitted the cap, M, provided with a cornice, N, and having at the center of its upper side an opening, m , which is surrounded by a depending flange, m' , which fits within the upper end of the smoke-flue. This cap is removable to provide means for gaining access to the interior of the casing or shell.

After the casing is erected in its operative position upon the roof, the space between the flue and the casing is filled with fine sharp sand, thus forming a fire-proof jacket around

the smoke-flue, which prevents surrounding wood-work from being over-heated. Should the smoke-flue burn out the sand flows through the opening thus formed, and passing down through the smoke pipe chokes the fire and prevents damage to the property.

When the chimney is to be detached or taken down the sand is first removed through the spout which is provided at the lower end of the casing or shell.

To hold the pipe, *h*, and the spout, *I'*, firmly in place while in operation, and enable them to be readily detached when the chimney is to be removed, I employ a clamp, *O*, comprising the jaws, *P P*, pivoted to the outer surface of the casing or shell, fitting at their upper ends in a grooved guide, *P'*, and connected by a thumb-screw, *P''*. These jaws are curved to fit the spout and pipe and hold them firmly in place when adjusted by means of the thumb-screw.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a chimney, the combination with a smoke flue, of the surrounding casing or shell terminating at its upper end in the plane of the upper end of the smoke flue, and a removable cap fitted upon the upper end of the casing or shell, and provided with a depending interior flange to fit within the upper end of the said smoke flue, and a depending exterior flange to inclose the upper edges of the casing or shell, substantially as specified.

2. In a chimney, the combination with a smoke flue, of a surrounding casing or shell, the walls of which are separated from the inclosed flue to form an intervening space, a cap removably fitted upon the upper end of the casing or shell, and provided with a depending interior flange to fit within the upper end of the flue, and a brace arranged near the bottom of said casing and provided with

a yoke to engage the lower end of the smoke flue, substantially as specified.

3. In a chimney, the combination of a casing or shell, a smoke flue disposed axially in the casing or shell and out of contact with the walls thereof, means to support said smoke flue within the casing, and a soot chamber located in the bottom of the casing beneath the lower end of the smoke flue the soot chamber being in communication with the flue and cut off from the surrounding annular space, substantially as specified.

4. In a chimney, the combination with the smoke-flue, of a surrounding casing or shell, adapted to be filled with a non-conducting material, a pipe fitting in registering openings in the smoke-flue and casing, a spout fitting in an opening in the casing adjacent to said pipe, and a clamp connected to the outer wall of the casing and engaging said pipe and spout to hold them in their operative positions, substantially as specified.

5. In a chimney, the combination with the smoke-flue, of a surrounding casing or shell adapted to be filled with a non-conducting material, a horizontal plate set in the casing at the lower end of the smoke-flue and provided with an opening and an upstanding flange to fit in the lower end of the flue, and a soot-chamber arranged beneath said horizontal plate and provided with a door through which the soot may be removed, substantially as specified.

6. In a chimney, the combination with the smoke-flue of the surrounding casing or shell adapted to be filled with a non-conducting material, and a brace secured at its ends to the inner walls of the casing and provided with a yoke to engage the sides of the flue, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES MELVILLE JARVIS.

Witnesses:

R. D. FREDERICK,

LEROY P. CHAMPENOIS.