E. J. CASA-CALVO.

SAFETY CHIMNEY THROAT.

APPLICATION FILED MAR. 6, 1913.

1,106,491.

Patented Aug. 11, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

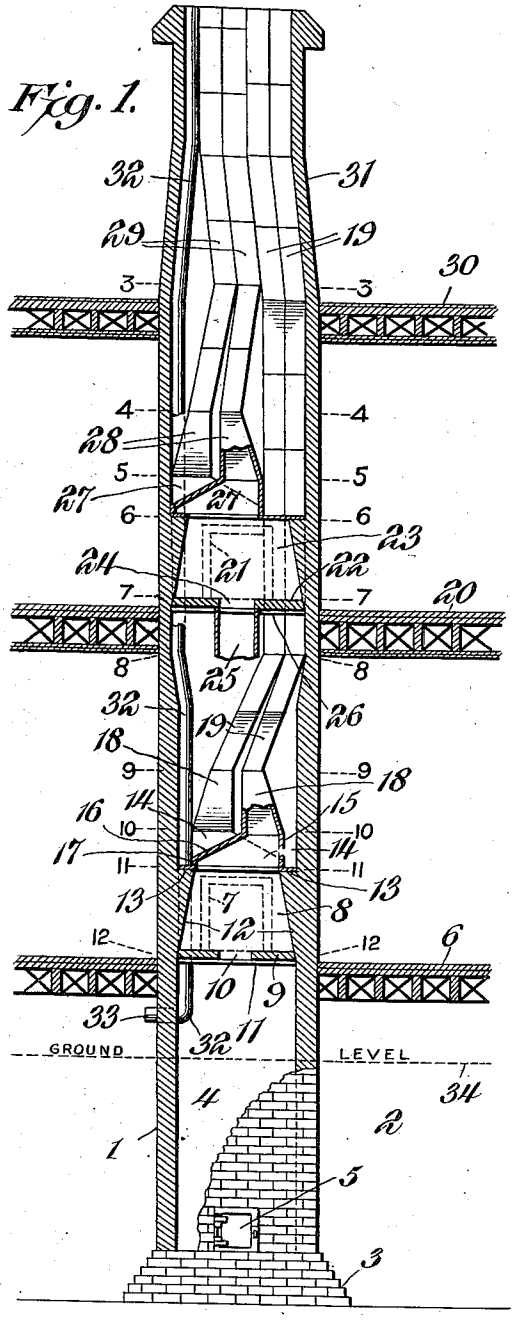
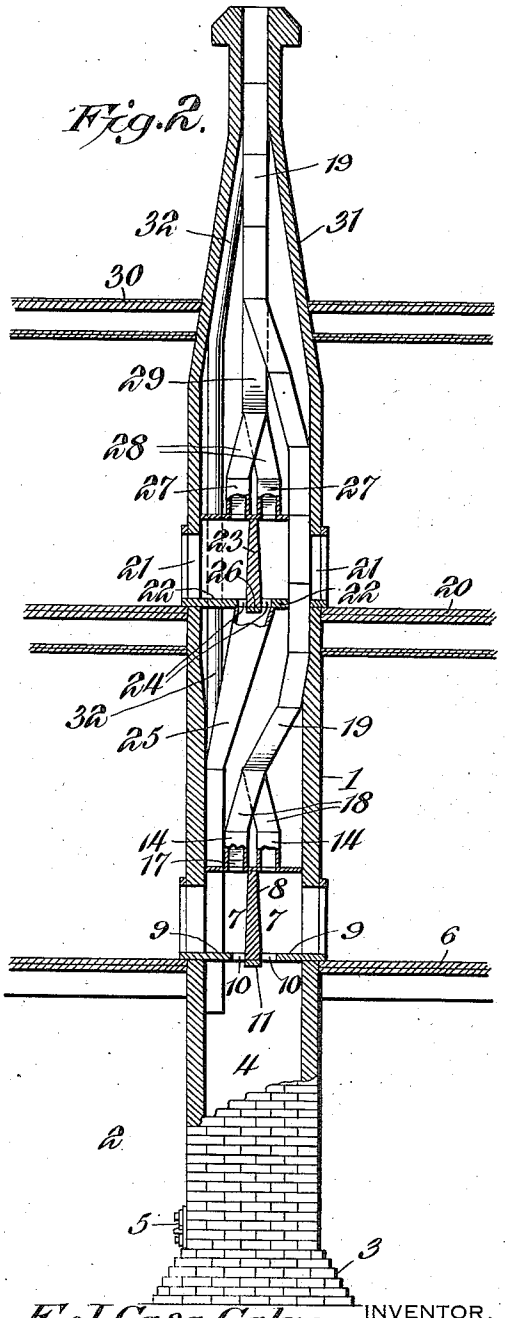


Fig. 2.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3.

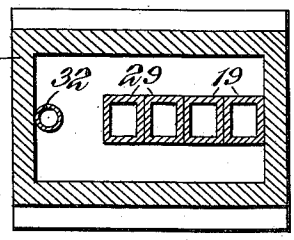


Fig. 8.

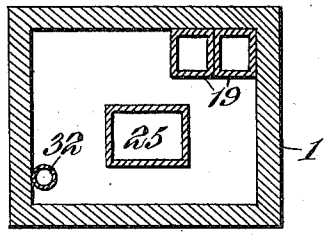


Fig. 4.

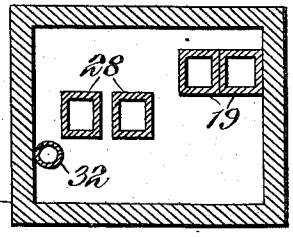


Fig. 9.

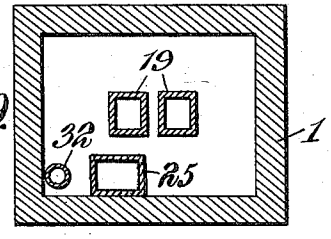


Fig. 5.

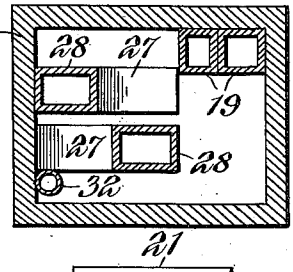


Fig. 10.

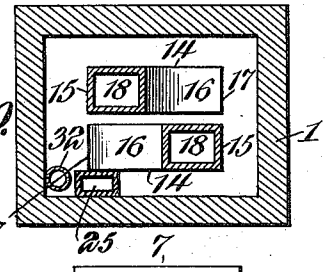


Fig. 6.

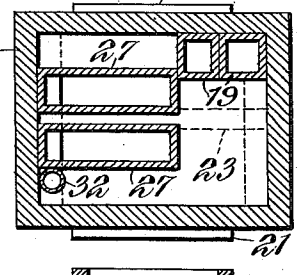


Fig. 11.

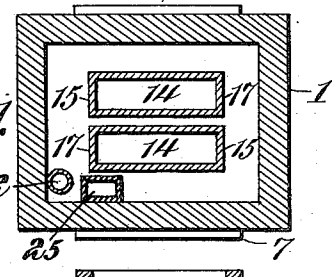


Fig. 7.

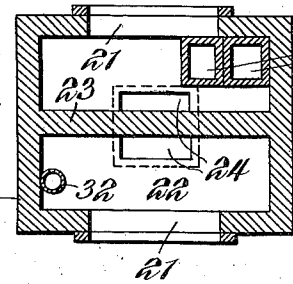
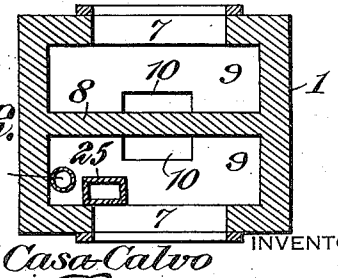


Fig. 12.



WITNESSES

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UNITED STATES PATENT OFFICE.

ERNEST JOSEPH CASA-CALVO, OF GREENVILLE, MISSISSIPPI.

SAFETY CHIMNEY-THROAT.

1,106,491. Specification of Letters Patent. Patented Aug. 11, 1914.

Application filed March 6, 1913. Serial No. 752,511.

To all whom it may concern:

Be it known that I, ERNEST JOSEPH CASA-CALVO, a native-born citizen of the United States, residing at Greenville, in the county of Washington and State of Mississippi, have invented a new and useful Safety Chimney-Throat, of which the following is a specification.

The invention relates to improvements in chimneys.

The object of the present invention is to improve the construction of chimneys, and to provide a simple, efficient and comparatively inexpensive chimney presenting a smooth fireproof interior to conform to the requirements of the fire underwriters' associations, and adapted to afford a perfect draft.

A further object of the invention is to provide a chimney of this character, adapted for use in houses of one or more stories with or without a basement, and equipped with opposite fireplaces adapted to accommodate grates of various sizes.

The invention also has for its object to provide a chimney having means for conveying the ashes from the fireplaces to an ash pit and provided with a foul air escape for ventilating a cellar to carry away the foul air, which invariably pockets at the top of the cellar.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a vertical sectional view of a chimney, constructed in accordance with this invention. Fig. 2 is a vertical sectional view, taken at right angles to Fig. 1. Fig. 3 is a horizontal sectional view on the line 3—3 of Fig. 1. Fig. 4 is a horizontal sectional view on the line 4—4 of Fig. 1. Fig. 5 is a horizontal sectional view on the line 5—5 of Fig. 1. Fig. 6 is a horizontal sectional view on the line 6—6 of Fig. 1. Fig. 7 is a horizontal sectional view on the line 7—7 of Fig. 1. Fig. 8 is a horizontal sectional view on the line 8—8 of Fig. 1. Fig. 9 is a horizontal sectional view on the line 9—9 of Fig. 1. Fig. 10 is a horizontal sectional view on the line 10—10 of Fig. 1. Fig. 11 is a horizontal sectional view on the line 11—11 of Fig. 1. Fig. 12 is a horizontal sectional view on the line 12—12 of Fig. 1.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

In the accompanying drawings in which is illustrated the preferred embodiment of the invention, the chimney 1 is constructed for a two-story house having a cellar or basement 2, but the chimney is applicable to houses having one or more stories, whether provided with a cellar or not, and the size of the chimney will, of course, correspond with the size of the house with which it is built.

The chimney 1, which is constructed of brickwork in the usual manner, is preferably provided with an enlarged base 3, and it has a hollow lower portion 4 constituting an ash pit and equipped with a suitable ash door 5 to enable the ashes accumulating in the bottom of the chimney to be readily removed therefrom. The ash pit 4 preferably extends from the bottom of the chimney to the first floor 6 where the chimney is provided at opposite sides with open fireplaces 7, separated by a vertical partition 8 and having horizontal bottoms 9. The bottoms 9 of the open fireplaces are provided adjacent to the partition 8 with openings 10 to permit the ashes to fall into the ash pit. In practice the fireplaces may be equipped with any suitable closures for the ash openings 10. The partition 8, which separates the fireplaces and constitutes the rear wall or back of the same, extends the entire width of the chimney, and is preferably tapered upwardly, as clearly illustrated in Fig. 2 of the drawings. A horizontal bar 11 extends beneath and forms a support for the partition, but the latter may, of course, be mounted in any other desired manner.

The fireplaces which divide the chimney into separate portions are preferably tapered upwardly, the side walls 12 being inclined upwardly and inwardly and the side portions of the chimney at the fireplace forming upper shoulders 13 at the top of the fireplace to support a pair of chimney throats 14, constructed of terra cotta or other fireproof material and mounted upon

a horizontal top wall. Each chimney throat is tapered upwardly and is composed of parallel side walls, a vertical end wall 15 and an inclined top wall 16, extending upwardly and inwardly from the opposite end of the throat, which has a short end wall 17. The chimney throats are reversely arranged, the inclined top walls being located at the opposite ends of the throats, which are open at the top at opposite ends and support superimposed upwardly tapered laterally inclined flue sections 18, tapered upwardly and extending toward each other and having their upper ends arranged in the same transverse plane and connected with chimney flues 19, preferably constructed of sections. The tapered sections 18 are oppositely inclined, and the sections of the chimney flues 19 are designed to be constructed of terra cotta or other fireproof material, and the said flues 19 have their upper portions arranged contiguous to each other and extend to the top of the chimney. The chimney presents a smooth fireproof interior from the fireplace to the top of the chimney, and it offers no obstruction to the passage of smoke and products of combustion, and it is adapted to afford a perfect draft. The chimney is also provided at the second floor 20 with open fireplaces 21, having flat bottoms 22 and separated by an upwardly tapered partition 23. The flat or horizontal bottoms 22 are provided with ash openings 24, which communicate with an ash chute 25 extending downwardly from the second floor through the bottom 9 of one of the fireplaces at the first floor and discharging into the ash pit. The ash chute may be constructed of any suitable material, and its upper portion, which is tapered, is of a size to extend beneath both of the ash openings 24. The partition 23 is supported by a bar 26 in the same manner as the partition 8, and a pair of reversely arranged chimney throats 27 are arranged above the fireplaces 21, and are connected by upwardly tapered laterally inclined flue sections 28 with chimney flues 29 also having their upper portions arranged contiguous to each other and contiguous to the upper portions of the chimney flues 19 and extending to the top of the chimney. The chimney throats 27, the laterally inclined sections 28 and the chimney flues 29 are constructed similar to the chimney throats 14, the sections 18 and the flues 19 heretofore described, and they present smooth fireproof interiors and are adapted to afford a perfect draft. The chimney flues 19 are gradually deflected at the second floor 20 to arrange them against one of the walls of the chimney and to space them from the partition 23. At the roof 30 the flues are brought into the same transverse plane and the upper portion 31 of the chimney is preferably tapered, as shown. Each of the fireplaces has an independent flue extending from its chimney throat to the top of the chimney and it operates independently of the other fire places, and one or more of the fire places may be used as desired without affecting the draft of the other fire places, and it is not necessary that all of the fire places should be simultaneously in use to produce a perfect draft.

The chimney is equipped with a foul air escape 32, preferably consisting of a pipe and extending from the lower portion of the chimney at a point below and adjacent to the floor 6 to the top of the chimney. The foul air escape is provided at its lower end with a horizontal arm 33, piercing the wall of the chimney above the ground level 34 and forming an inlet for conducting the foul air upward through the chimney to prevent such foul air from pocketing in the upper portion of the cellar 2. Any other suitable form of inlet may, however, be employed. No claim is made in the present application to the ventilating tube or the ash pit.

What is claimed is:—

1. The combination of a chimney having an ash pit at its lower portion and provided with opposite fire place openings, a horizontal bottom wall or partition extending across the chimney at the bottoms of the said openings, a vertical wall or partition extending upwardly from the bottom wall and forming separate fire places, said bottom wall being provided with ash openings located at opposite sides of the vertical wall or partition, separate flues connected with the fire places and leading to the upper portion of the chimney, and an ash chute extending from the bottom wall or partition and communicating with the ash pit, said ash chute having its upper end located beneath the vertical wall or partition and being of a size to extend beneath both of the ash openings.

2. A chimney of the class described provided at a plurality of points with opposite fireplace openings, horizontal bottom walls or partitions extending across the chimney at the bottoms of the said openings and dividing the said chimney into separate portions, vertical back walls extending upwardly from the bottom walls and forming separate fireplaces, chimney throats arranged side by side in pairs at the top of the fireplaces and tapered upwardly and having outlets at their opposite ends, and separate flues leading from the chimney throats to the upper portion of the chimney.

3. A chimney of the class described provided at intervals with opposite fireplace openings and having its side walls tapered above the openings and forming upper shoulders, horizontal bottom walls or par-

titions located at the bottom of the said openings and dividing the chimney into separate portions, tapered back walls extending upwardly from the horizontal bottom walls or partitions and arranged between the tapered portions of the side walls of the chimney, horizontal top walls supported by the said shoulders, tapered chimney throats arranged in pairs and mounted at the said top walls at opposite sides of the back walls, and separate independent flues connected with the chimney throats and extending to the upper portion of the chimney.

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

ERNEST JOSEPH CASA-CALVO.

Witnesses:
F. V. BACCHUS,
D. H. HOOD,
NICK STEPHANY.