

B. F. MANN.

Chimney.

No. 95,702.

Patented Oct. 12, 1869.

Fig. 1.

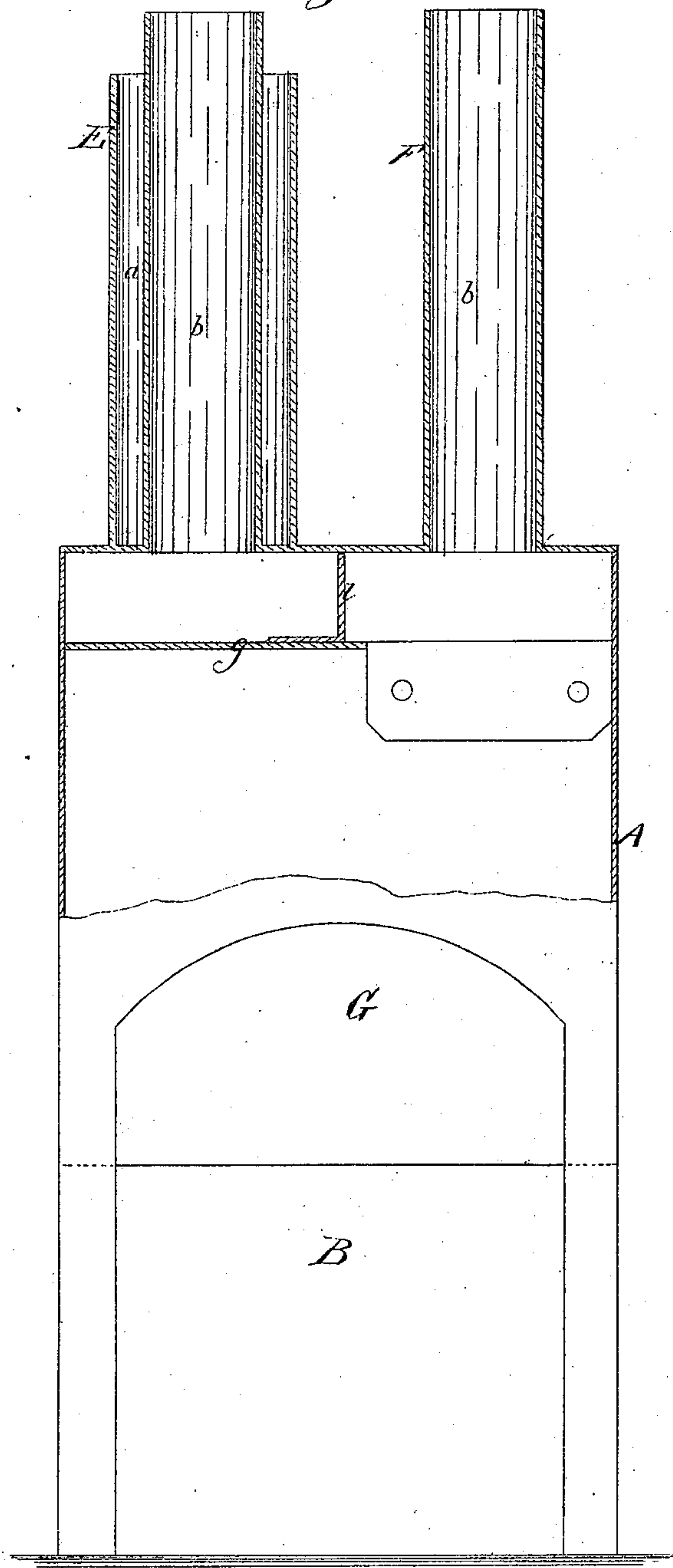


Fig. 2.

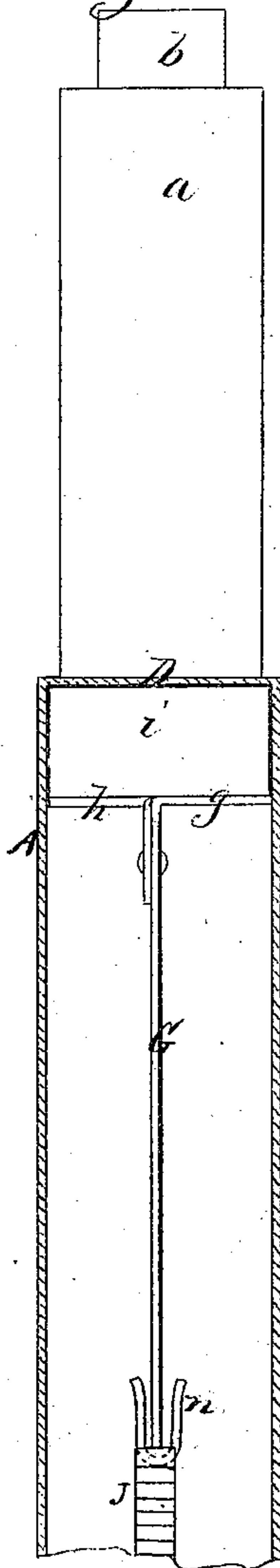
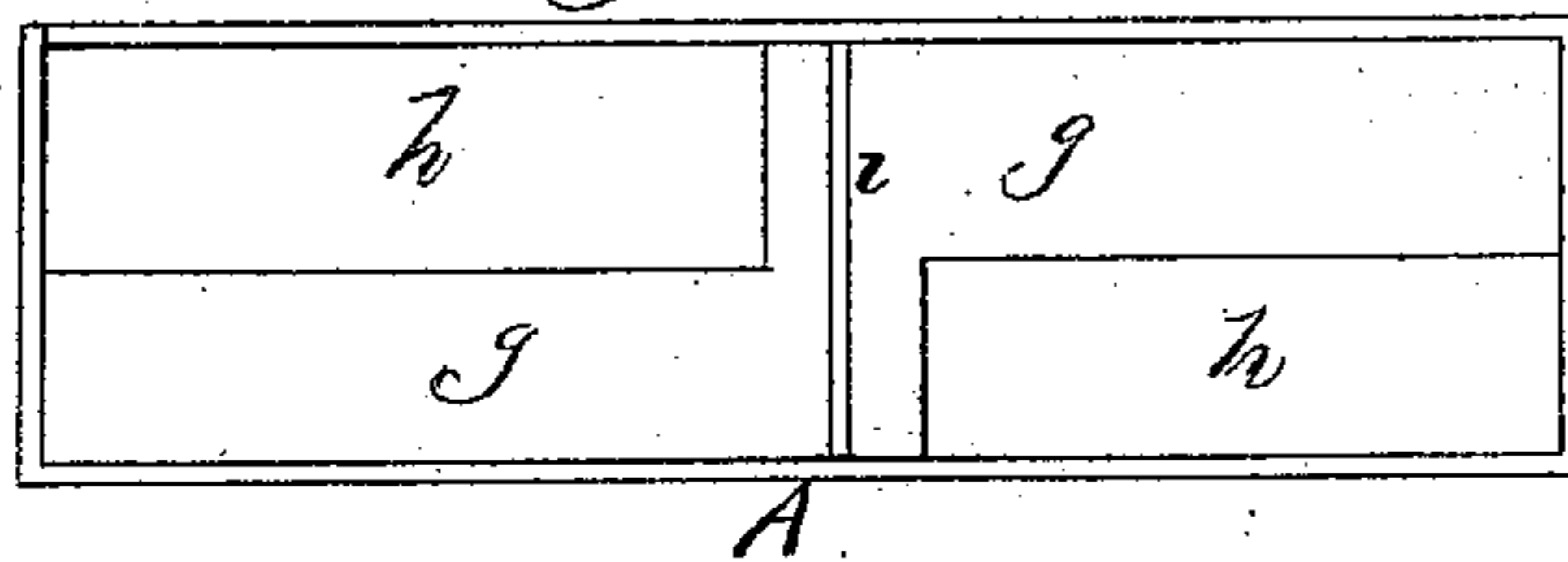


Fig. 3.



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Letters Patent No. 95,702, dated October 12, 1869.

IMPROVEMENT IN CHIMNEYS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, BENJAMIN F. MANN, of Oakland, county of Alameda, State of California, have invented an Improved Earthquake-Proof Chimney; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use my said invention or improvement, without further invention or experiment.

My invention relates to a new and improved chimney for houses, so constructed that it cannot be affected by shocks of earthquake or high winds. It also presents other advantageous features, which will be hereafter recited, which renders it far preferable to any other form or construction of chimney now used. In California especially, where the ground is frequently shaken by earthquakes, it has been found necessary to provide a more staid and substantial chimney for buildings in order to prevent their being toppled or injured by the shocks.

This I propose to do by constructing the chimney entirely of metal, in such a manner that it will be firmly secured from moving from any cause.

This chimney can also be constructed quicker and cheaper than the ordinary chimneys in use.

To more fully illustrate and explain my invention, reference is had to the accompanying drawings, forming a part of this specification, of which—

Figure 1 is a front view, showing a section of the chimneys.

Figure 2 is a side sectional view, showing the diaphragms for the flues.

Figure 3 is a top view.

Similar letters of reference, in each of the figures, indicate like parts.

A is the lower portion of the chimney, which may extend to the floor of the second story, or above, as found desirable.

This portion of the chimney is made of any suitable shape, and is intended to rest upon any proper foundation or upon the floor, if desired, as the entire weight of the chimney when built will not exceed six or seven hundred pounds.

This portion of the chimney is made of cast, sheet, or boiler-iron, riveted together, and the proper opening, B, is left for a fire-place, which may be built of brick.

If a chimney with a single fire-place and flue is required, the top shown at fig. 2 is employed.

This top is cylindrical in shape, and consists of two cylinders or pipes, *a b*, the one inside of the other having an annular space between them, which I fill

with cement, plaster of Paris, asbestos, or other non-conductor of heat.

This top is secured to the cover D, which is placed over the top of the section A of the chimney, and held by rivets or other means, an opening being left in the cover D, over which the top is placed, to allow the smoke to pass up the chimney.

When the chimney is intended for two fire-places, two flues, E and F, shown at fig. 1, are employed, one placed at each end of the cover D, and constructed similar to the one above described.

In order to separate the main or lower section of the chimney, so that the smoke from each fire-place will ascend through the proper flue, I take a sheet of metal, G, to the upper side of which I attach another metal plate, *g*, at right angles to the plate G. This plate *g* is then bent down in opposite corners, so as to leave the flues *h h* diagonally opposite to each other, as shown at fig. 3.

A small metal plate, *i*, is attached and bent, so as to stand across the chimney above the plate *g*, and at right angles to it.

The plate G, with its attachments, is then placed inside the section A, from the top, and dropped down until it rests upon suitable stops, *n n*, on each side of the section A, bringing the top of the vertical plate *i* even with the top of the lower section; thus, when the cover D is secured over the top of the section A, forming two openings, one on each side, leading into the upper chimneys or flues.

The two fire-places are intended to open into adjoining rooms on opposite sides of the chimney, and the plate G will meet, and may rest upon their common back, or the division between them, built of brick or other suitable material, as shown at J, fig. 2.

This chimney, as before stated, may be placed directly upon the floor of the building, and any suitable fire-proof fire-place be constructed in the recess left in the section A.

The boards or wood-work may be arranged so as to fit close up against the chimneys, and there will be no danger of its taking fire, as the filling in the annular space will keep the outside always cool, and by thus bringing the wood-work close up against it, the chimney will be stayed to its place.

Heating-drums may be connected with the chimney at any point, and thus utilize the heat that would otherwise be wasted, in warming adjacent rooms.

Two rooms on the same floor can easily be warmed by one fire, as the heat in the fire-place on one side will be sufficient to penetrate the back wall, and thus give a pleasant degree of warmth to the room next adjoining.

The lightness of this chimney renders it quite applicable when a fire-place is desirable only in the upper story or stories of a building. It may also become an article of manufacture, and kept on hand by dealers, thereby facilitating the rapid construction of houses.

The exposed portion of the iron, both inside the house and above it, can be painted in imitation of brick-work, or a frame may surround the chimney above the roof, and will thus present a similar appearance to a brick chimney.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

The combination, with two or more metallic chimney-flues, E and F, of a base section, A, provided with a removable partition, consisting of the vertical plate G, the horizontal plate g, having openings h, and the cross-plate i, the same being constructed and arranged substantially as herein described.

In witness whereof, I have hereunto set my hand and seal.

BENJAMIN F. MANN. [L. s.]

Witnesses:

J. L. BOONE,
GEO. H. STRONG.