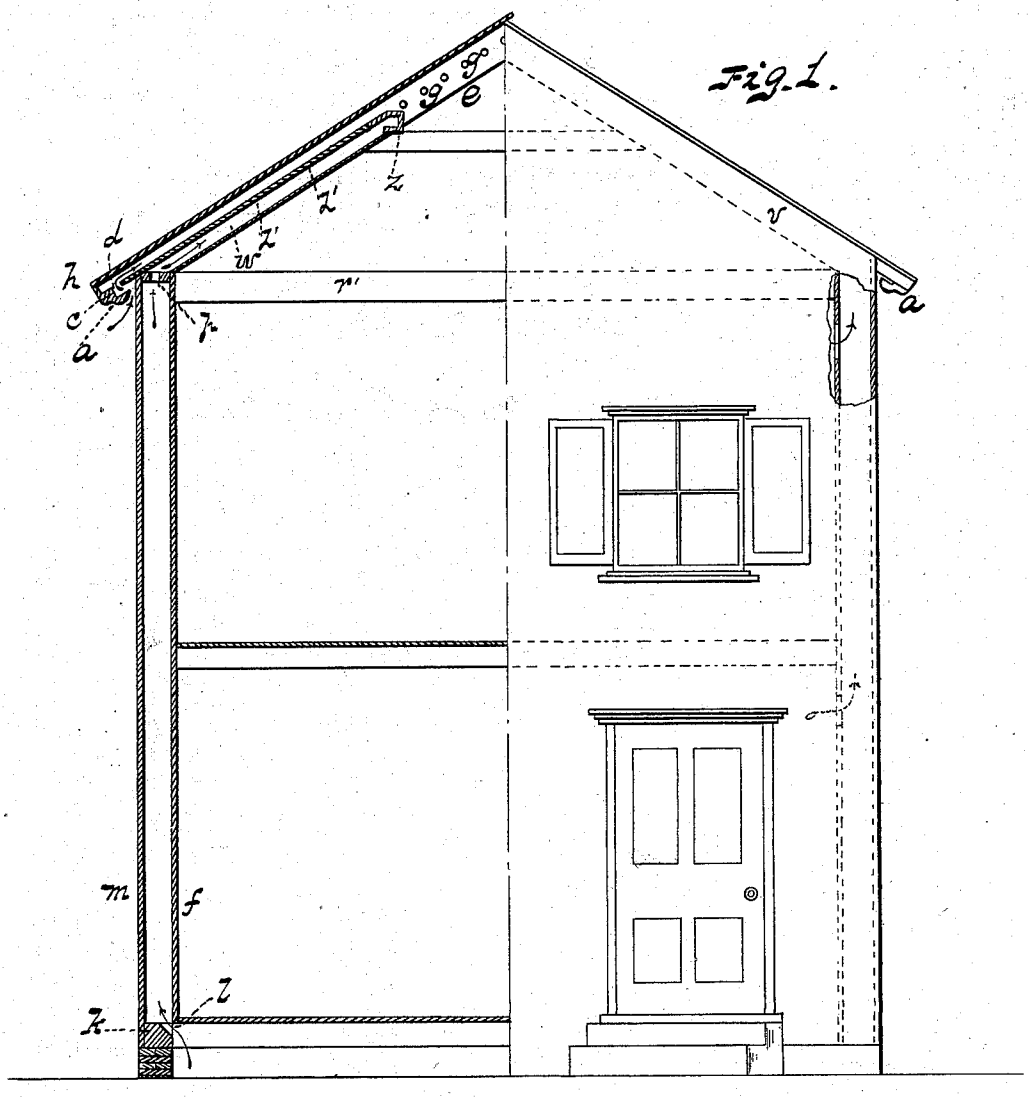
(No Model.)

P. G. EATON.

CONSTRUCTION OF HOUSES FOR PURPOSES OF VENTILATION, &c.

No. 255,608. Patented Mar. 28, 1882.

Fig. 1.



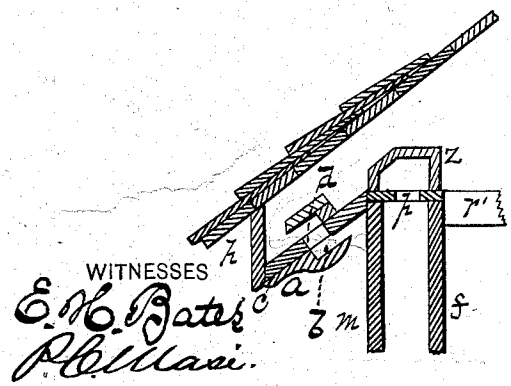


Fig. 2.

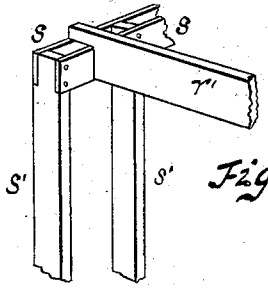


Fig. 3.

WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

PEREGRINE G. EATON, OF SPRINGVILLE, NEW YORK.

CONSTRUCTION OF HOUSES FOR PURPOSES OF VENTILATION, &c.

SPECIFICATION forming part of Letters Patent No. 255,608, dated March 28, 1882.

Application filed February 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, PEREGRINE G. EATON, a citizen of the United States, resident at Springville, in the county of Erie and State of New York, have invented a new and valuable Improvement in Ventilating Houses; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front view of a house, partly in section, showing my improvement. Fig. 2 is a detail view of the upper corner of the house, and Fig. 3 is a perspective detail view of the rafters of the house.

This invention has relation to means for preventing snow from melting on the upper parts of houses, for cooling the upper apartments, and ventilating the cellar or lower portion; and it consists in the construction and novel arrangement of the perforated or slotted plancher and perforated end rafters, and in the combination therewith of air-passages extending upward between the lath and plaster and the outside sheathing, all as hereinafter set forth.

The object of this invention is mainly to prevent snow from melting on the tops of houses and the resultant water from backing up at the edges of the roof over the tips of the shingles and flooding the house.

In the accompanying drawings, the letter *a* designates the plancher or under part of the cornice of the roof of a house. This projecting portion of the roof is built hollow, and the plancher is perforated around the entire building with holes or slots *b;* or the plancher may be made of two boards laid side by side, with an aperture or space of an inch or more or less between them. The aperture or perforations are usually screened from view and shielded from the driving snow by means of a molding, *c*, having the upper rear corner rabbeted at *d*, thereby giving an L-shaped termination to the opening in the plancher. Through the aperture or perforations *b* cold air is let into the upper part of the house, under the roof, along the under side of the eaves.

To obtain an outlet for the heated air and cause a good current, the outer or end rafters, *e*, are perforated with slots or holes *g*, thereby letting the current of heated air enter the end or gable cornice, *h*, whence it finds exit at the peak through the aperture or holes in the plancher, already referred to. By the simple means described the roof of a house can be kept cool, so that the snow will melt thereon only during a rise of temperature outside the house, and cannot therefore freeze at the edge of the roof and bank up. The current of air passing along under the roof can be greatly increased and the cellarage, or space between the house and the ground, thoroughly ventilated, removing dead air and preventing dampness, by the following devices: The upper inside corners of the sills *k* are beveled at intervals, forming passages *l*, which allow the air from the cellar to ascend between the lath and plaster *f* and the outside sheathing, *m*, to the top of the wall of the house, where it passes through openings *p* and joins the current under the roof.

In constructions where a plate is used as a support for the rafters the openings *p* are made in the plate; but it is preferred to connect the tops of the studding by means of inside and outside boards, *s*, on which the rafters are designed to be rested. The opening between these boards affords a large and free passage for the air.

An additional beneficial effect of the construction is designed to be found in the rooms next the roof, these being rendered cool and pleasant in the heat of summer and preferable as sleeping-apartments to the rooms below.

The various apartments of the house may be ventilated in an improved manner through the medium of the devices hereinbefore described, suitable register-openings being provided leading into the space between the studs behind the plaster. The air passes up through the openings in the plate or between the boards *s* at the top of the wall. If the wall is plastered no higher than this point, a horizontal box or conduit, *z*, is arranged over the openings *p* and connected with said openings, so that the draft coming up between the studs which confine the room-ventilation passes into said box, whereby it is conveyed through an opening in the end rafter into the end cornice of the building, whence it passes out through the venti-

lating-openings in the plancher. In this construction it will be seen that the side-wall ventilation does not join the roof-current until the cornice is reached, so that the warm air from the rooms cannot neutralize the effect of the cool current from the cornice under the roof, although the latter is improved thereby. If the house is plastered in the garret portion as high as the roof-ties, the box or air-conduit *z* is placed above the ties, and a flue, *w*, is constructed next the lath and plaster by means of a partition, *z'*, said flue leading from the openings *p* at the top of the side wall to the conduit. The partition *z'* is built between the rafters *r'*, which are above the studs *s'*, which confine the room-ventilation, and is parallel to the roof-boards and separated therefrom by a space, *v*, forming an air-flue next the roof for the passage of the cool current from the cornice.

It will be observed that the draft from the cornice passes over the partition *z'*, while the draft from the side wall passes under the same.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The plancher *a*, having the aperture or perforations *b* and the perforated end rafters, *e*, combined substantially as specified.

2. The plancher *a*, having the aperture or perforations *b* and the rabbeted guard-molding *c*, combined substantially as specified.

3. The combination, with the perforated plancher *a* and the perforated end rafters, *e*, of the air-passages *l* in the sills and the opening *p* in the top of the wall, substantially as specified.

4. The combination, with the perforated plancher and the perforated end rafters, of the air-passages in the sills, the side-wall air-passages, and the air box or conduit leading from the top of the side-wall air-passages to the end rafter, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

PEREGRINE G. EATON.

Witnesses:
SCOTT CUMMINGS,
EDWARD C. SMITH.