(No Model.)

J. FRANSMANN.

VENTILATOR FOR APARTMENTS.

No. 500,880. Patented July 4, 1893.

Fig: 1.

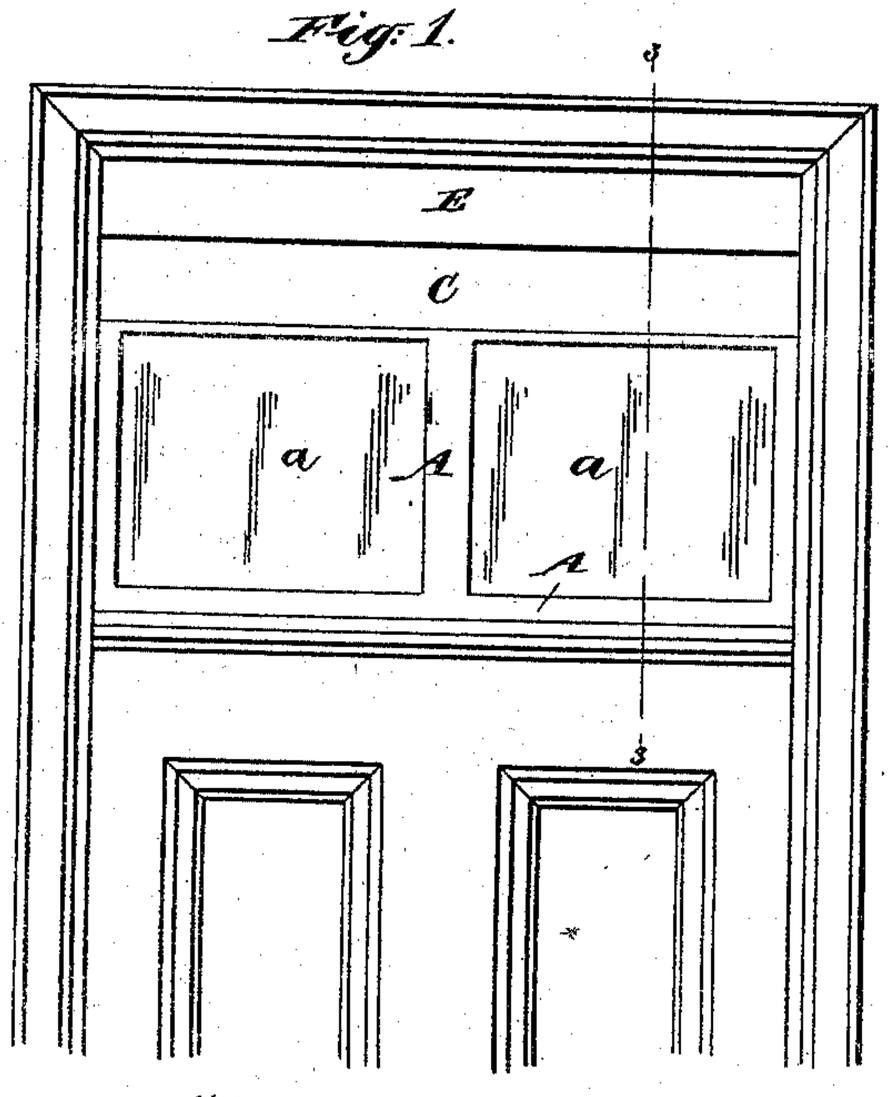


Fig: 2.

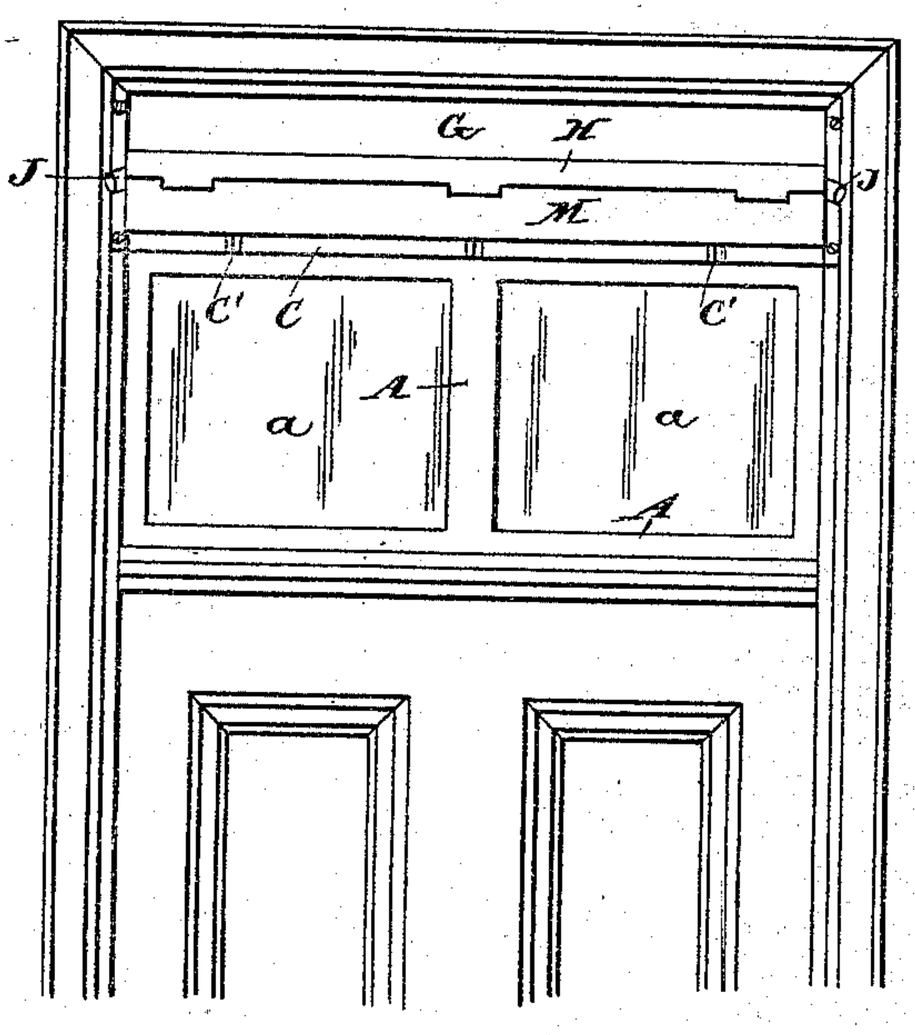


Fig: 3.

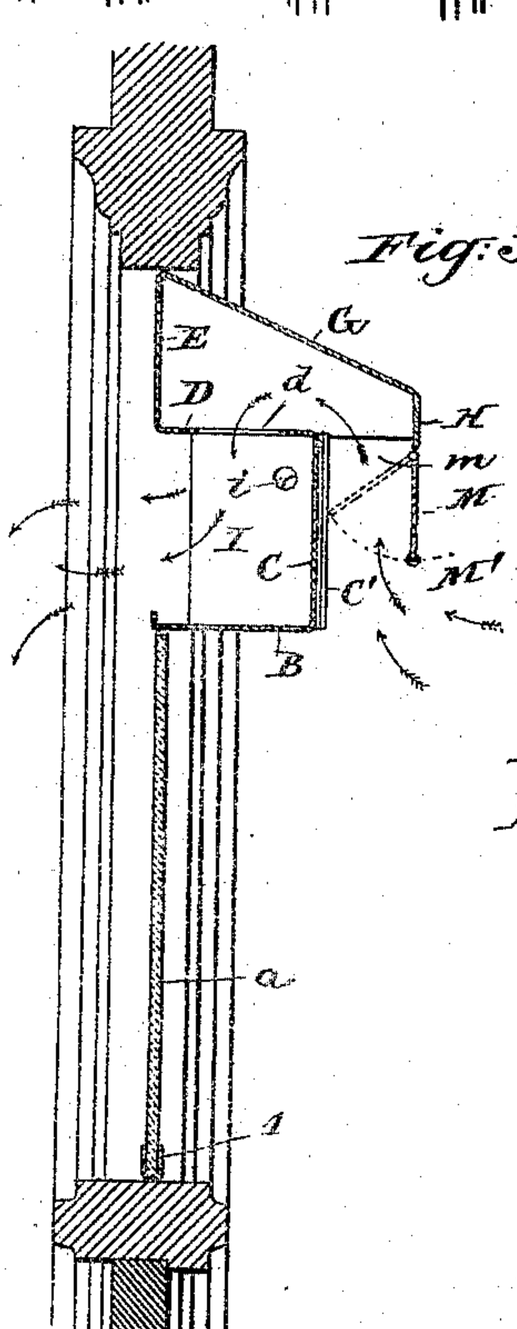
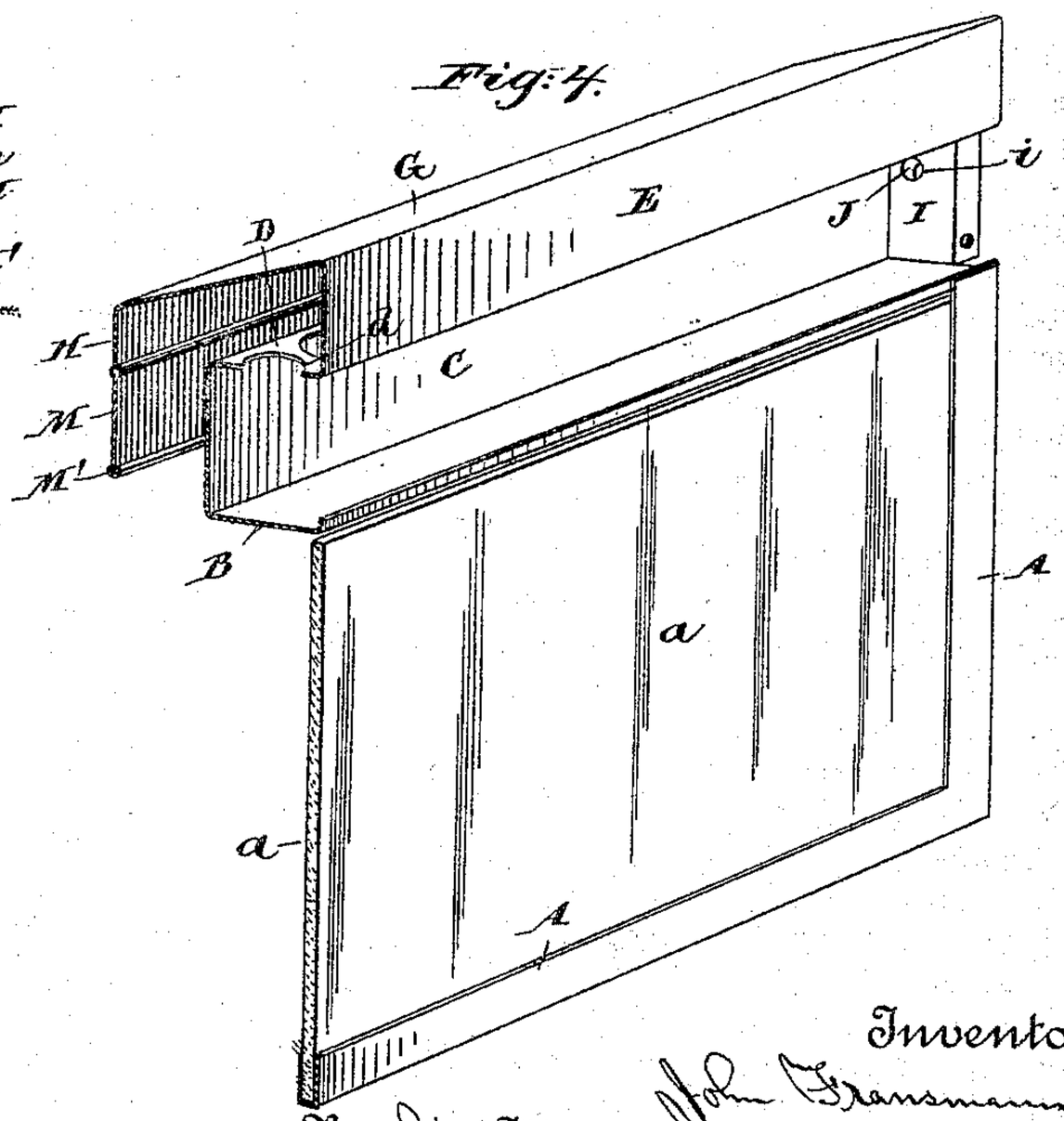


Fig: 4.



Witnesses
Edwin R. Searle.
M. F. Boyle.

Inventor
John Fransmann.
By his Attorney
Thomas Drew Stetson

UNITED STATES PATENT OFFICE.

JOHN FRANSMANN, OF NEW YORK, N. Y.

VENTILATOR FOR APARTMENTS.

SPECIFICATION forming part of Letters Patent No. 500,880, dated July 4, 1893.

Application filed June 22, 1892. Serial No. 437,628. (No model.)

To all whom it may concern:

Be it known that I, JOHN FRANSMANN, a citizen of the United States, residing in the city and county of New York, in the State of New York, have invented a certain new and useful Improvement in Ventilators for Apartments, of which the following is a specification.

My improved ventilator is adapted to apply in the top of a window or door, or in the transom over a door. I will describe it as applied in the latter position, with glass lights below performing their usual functions. The glass may be capable of partially revolving on a shaft or of being otherwise opened so as to increase the opening for the movement of air when desired.

The advantages of my invention are most realized in cold weather when it is desired to insure efficient ventilation for health and comfort without too much cooling the room or exposing the persons therein to strong drafts.

Some of the provisions of my ventilator are mainly useful in keeping out rain and snow when the device is used in connection with apertures opening directly to the exterior of the building, as the tops of windows.

The air in passing through my ventilator, is deflected so that its force is greatly reduced. The air enters under a hood, the outer edge of which is an easily turning flap serving as a movable hanging lip. When the wind blows strongly the flap will, by yielding thereto, partially close the aperture for the passage of air. When the motion of the air is gentle the lip will hang vertically and allow a sufficient volume of air to move upward within it. It is deflected first horizontally toward the apartment and then downward, and being again deflected more or less horizontally is introduced into the apartment. In its downward passage it passes through a "deck" which is sufficiently continuous to strengthen the structure, and is liberally perforated to allow the free passage of air.

I have in my experiments, used galvanized sheet iron about No. 20 as the material for the structure, but I do not confine the invention to the employment of any particular material. It is important that it be thin and strong. I prefer galvanized iron.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is an elevation of the upper portion of a door with the ventilator in place as seen from the interior of the apartment. Fig. 2 is a similar view from the outside. Fig. 3 is on a larger scale. It is a vertical section on the line 3—3 in Fig. 1; and Fig. 4 is a perspective view partly in vertical section.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is the framing, and *a* the glass of an ordinary transom, sometimes called a fan-light, mounted over the door of a room. B is an extension of the metal horizontally outward from the upper edge of A. C is a vertical extension or wall of the same metal, or it may be another piece reaching upward; and D is the perforated deck, a horizontal extension of the metal from the upper edge of the wall inward to about the line of the framing A, but sufficiently above it to allow a liberal chamber in which air inducted through the perforations *d* in the deck may be deflected gently inward into the apartment.

E is a wall of metal extended upward from the inner edge of the deck D, and G is a cap or inclined roof extending outward and downward from the upper edge of E to a point sufficiently outside of the wall C to receive the air.

H is a narrow vertical lip extending down rigidly from the outer edge of G, and M is an easily moving lip hinged to the lower edge of the fixed lip H and free to be turned by the force of the wind. The lower edge of the lip or flap M is strengthened by a wire M′. The outer face of the wall C is equipped with a series of projections or vertical ridges C′ which arrest the swinging of the lip M when it is urged inward by a strong wind, and allows a reduced quantity of air to move upward past its lower edge, notwithstanding the main current is arrested by its change of position. When the movement of the air is gentle this lip hangs vertically and allows the whole space between the lip H and the wall C to transmit a current of air upward to be deflected over and introduced downward through the perforations *d* in the deck D, into the apartment.

Each end of the ventilator is closed by a

properly shaped sheet of metal I, except that there is a liberal aperture *i*, in each end, which allows air to be inducted therethrough. A hood J covers each of these apertures *i*, and extends in the shape of a short tube outward and downward. It follows that the air may be inducted not only in a direction at right angles with the wall of the apartment, but also from a direction nearly parallel to such wall, the latter currents being received through the aperture *i* at that end, and also through the considerable triangular passage *m* left open to such parallel currents at each end even when the hinged flap M is deflected inward to its extreme position.

When the ventilator is exposed to the weather the roof G and fixed hanging lip H and hoods J, defend against the entrance of the rain or snow through the ventilator into the apartment. The hinged lip M serves as a still further guard, nearly closing the air passage during the periods of the strongest gusts.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. Instead of ridges C′ formed of separate pieces of metal soldered or otherwise fixed on the outer face of the wall C, I can make such wall corrugated, allowing the corrugations to serve the functions of the ridges C′ and the spaces between the corrugations to provide the contracted passages for the limited quantity of air admitted during the prevalence of a gale or strong gust.

I claim as my invention—

1. The ventilator described having the perforated horizontal sheet or deck D, *d*, base B, vertical partitions or walls C, E, inclined roof G extending beyond the sheet D *d* and hinged hanging lip M hinged to the lower outer edge of the roof, all combined as shown so as to provide the triangular spaces *m* at the end which shall be always open to receive air and allow it to be inducted gently into the apartment through the angular passages provided, all arranged for joint operation substantially as herein specified.

2. The ventilator described, adapted to apply over a door or window, having the perforated horizontal sheet or deck D, *d*, base B, vertical partitions or walls C, E, roof G, hinged hanging lip M and ridges or stops C′, adapted to insure a contracted passage for the air while subject to gusts or gales, all combined and arranged to serve as herein specified.

3. The ventilator described, having a crooked passage for air, and a swinging lip or flap M adapted to automatically reduce the area of the passage during strong gusts or gales, and having the apertures *i* and *m* for receiving currents of air at the ends, all combined and arranged for joint operation substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

JOHN FRANSMANN.

Witnesses:
CHARLES R. SEARLE,
M. F. BOYLE.