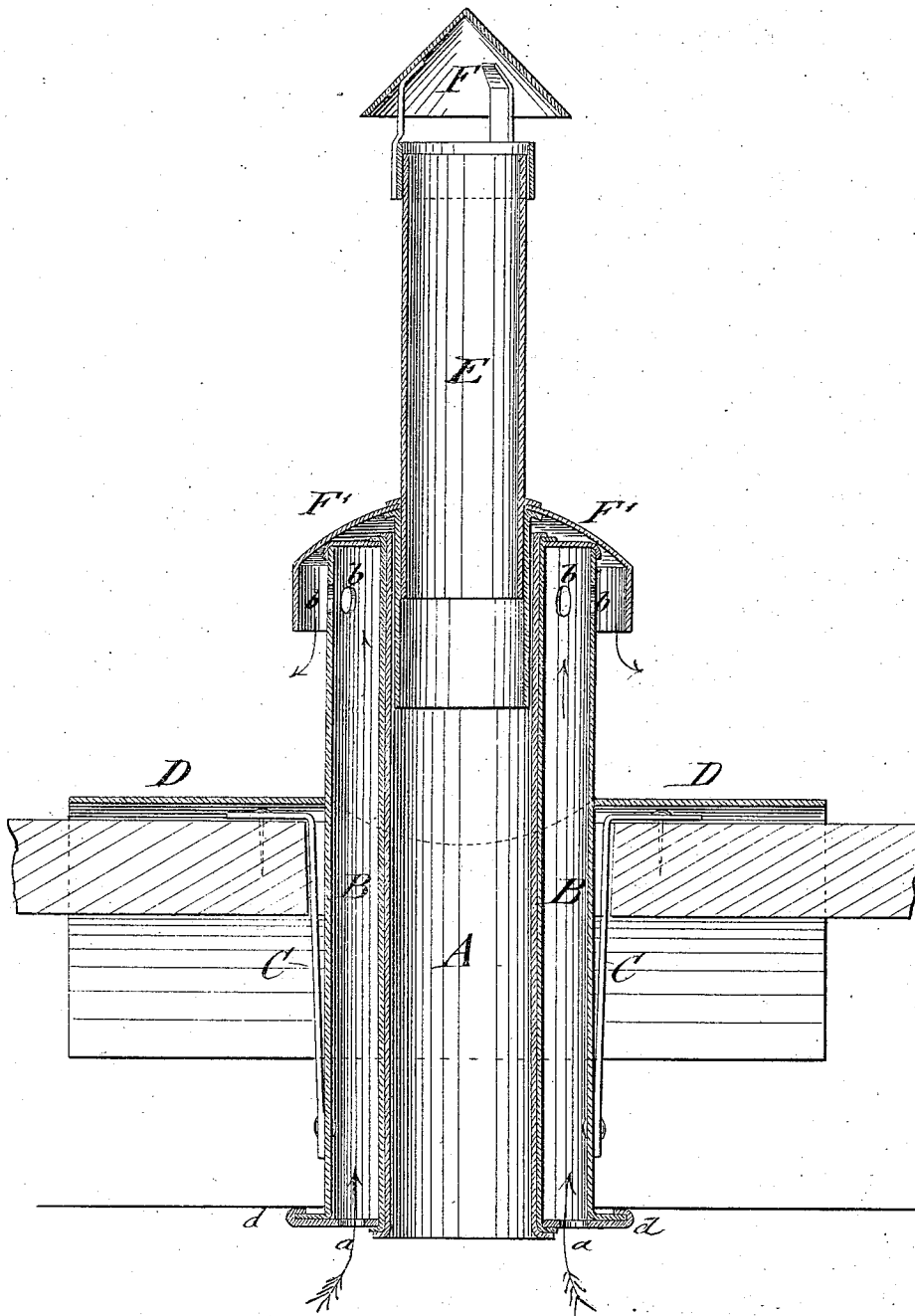


W. R. HINCKLEY & C. J. DIBRELL.
Combined Ventilators and Chimneys.

No. 152,994.

Patented July 14, 1874.



WITNESSES:

Chas. Nida
Edgwick

INVENTOR:

W. R. Hinckley
C. J. Dibrell
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WALTER R. HINCKLEY AND CHARLES J. DIBRELL, OF DALLAS, TEXAS.

IMPROVEMENT IN COMBINED VENTILATORS AND CHIMNEYS.

Specification forming part of Letters Patent No. **152,994**, dated July 14, 1874; application filed May 29, 1874.

To all whom it may concern:

Be it known that we, WALTER R. HINCKLEY and CHARLES J. DIBRELL, of Dallas, Dallas county, Texas, have invented a new and Improved Combined Ventilator and Chimney, of which the following is a specification:

The accompanying drawing represents a vertical central section of our improved combination ventilator and chimney.

The object of our invention is to construct, for the purpose of dispensing with the heavy brick chimneys and foundations, an improved ventilator and chimney, which is firmly and securely applied to the ceiling and roof, perfectly fire-proof, readily cleaned from soot, and productive of an effective ventilation in the building.

Our invention consists of an iron-lined inner flue secured within an outer casing with suitable bottom and top perforations for establishing a ventilating air-current around the flue. The casing is securely attached to the ceiling and roof and supported on suitable hangers or straps. A detachable extension-flue is set into the upper end of the inner flue, and provided with rain-protecting caps or sheds at its top and above the upper perforated end of the ventilator.

In the drawing, A represents the chimney-flue, which is made preferably of double-lined sheet metal, and of round, square, octagonal, or other shape, to be surrounded by an outer casing, B, of suitable sheet metal and corresponding shape, forming a ventilating air-space around flue A. The air enters through perforations *a* of the outer casing B, and leaves through perforation *b* at the upper end of the same above the roof of the building. The lower part of casing B is suitably attached by a flange, *d*, to the ceiling, while the body of the casing is hung to the timbers of the roof by supporting- straps C, of suitable strength, so that the heavy foundations of brick chimneys may be dispensed with and a

considerably lighter chimney be produced. The water-proof connection of casing B with the roof at the point of its passage through the aperture of the same is made by a sheet-metal plate, D, of suitable size, which encircles the casing, being soldered thereto, and is firmly applied to the roof in any approved substantial manner. A chimney extension or tube, E, is fitted into the upper end of chimney A, and protected against the rain at its upper or top end by a detachable cap or shed, F, while a second cap, F', is soldered at some distance from the lower end, and made of suitable size and diameter to extend around casing B and protect the upper perforations of the same. The heat of the smoke and gases of combustion passing up through the chimney-flue produces the heating of the air in the ventilating-space around the same, so as to cause, by the rising of the same to the outside, a draft from the room, and thereby the ventilation of the same. The outer air casing surrounds the chimney completely, and prevents thereby any contact of the wooden parts of the building with the same, avoiding any danger of fire from the chimney.

The whole chimney is very light, readily cleaned by detaching the top extension-flue, economical, and very useful for lighter structures.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination of the outer casings having bottom and top perforations, inner double-lined chimney-flue, and extension chimney-tube with top cap and protecting cap or shed extending around the ventilating-apertures, all as shown and described.

WALTER R. HINCKLEY,
CHAS. J. DIBRELL.

Witnesses:

JAS. W. GILLESPIE,
JOS. A. CRAWFORD,