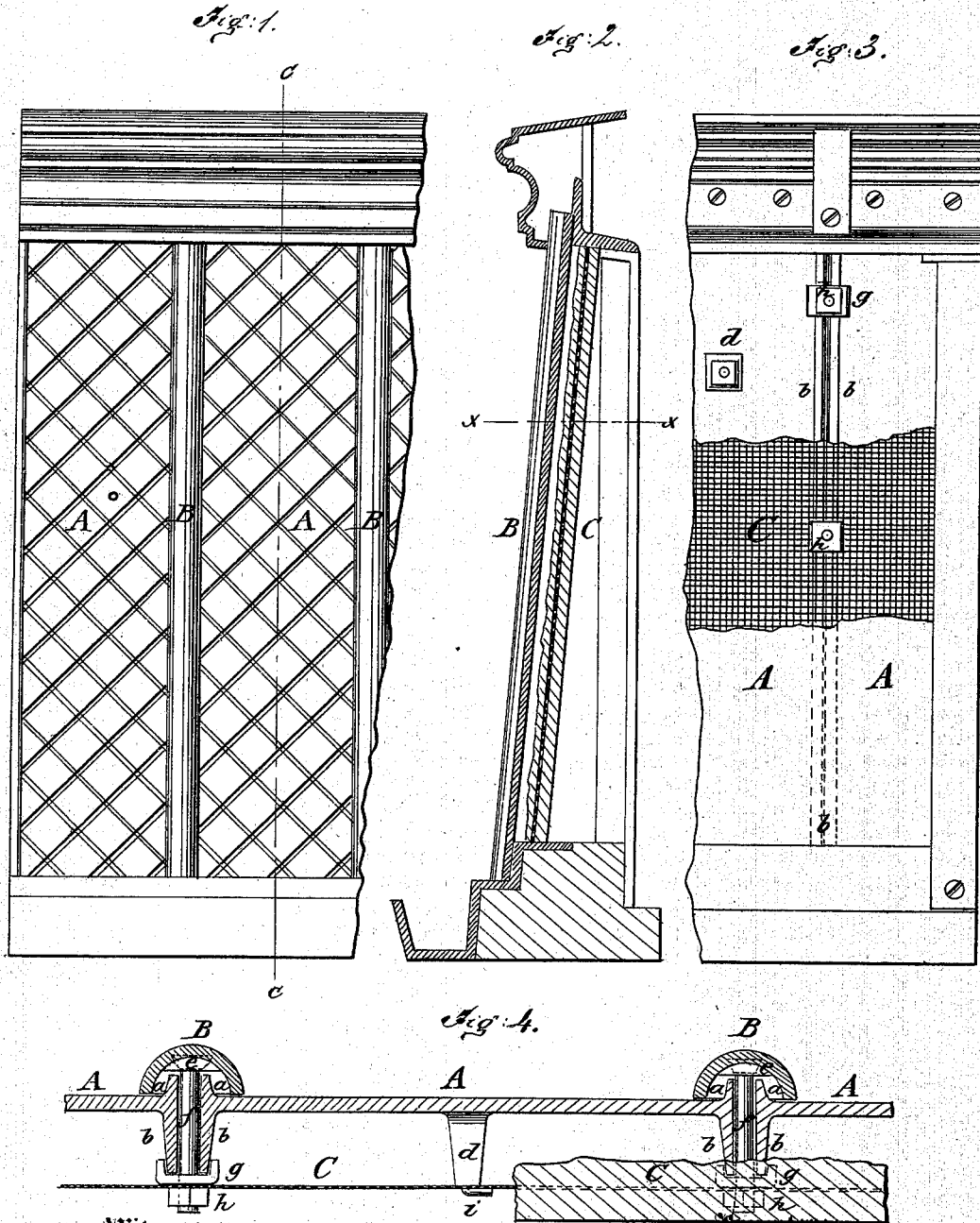


N. POULSON.  
Fire-Proof Roofs.

No. 139,607.

Patented June 3, 1873.



Witnesses:

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# UNITED STATES PATENT OFFICE.

NIELS POULSON, OF NEW YORK, N. Y.

## IMPROVEMENT IN FIRE-PROOF ROOFS.

Specification forming part of Letters Patent No. **139,607**, dated June 3, 1873; application filed February 15, 1873.

*To all whom it may concern:*

Be it known that I, NIELS POULSON, of the city, county, and State of New York, have invented a new and Improved Fire-Proof French Roof, of which the following is a specification:

Figure 1 is a front view of my fire-proof French roof. Fig. 2 is a vertical transverse section of the same on the line *c c*, Fig. 1. Fig. 3 is a rear view, showing arrangement of plastering; and Fig. 4 a horizontal section on the line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of my invention is to construct a strong, durable, and fire-proof French roof of cast metal, for the purpose of avoiding the combustible material of which they are built at present, so that the fire is communicated too rapidly from house to house, and discredit brought on the system of French roofs. The ornamental features of the same may thereby be preserved, and at the same time full protection against the spread of fire rendered.

My invention consists of cast-iron plates of suitable size, joined firmly together by means of outside ribs or caps and interior bolt arrangement, representing an elegant front, impervious to atmospheric influences and absolutely fire-proof.

In the drawing, A represents the plates, forming the principal part of the roof, made by preference of cast-iron, of suitable dimensions. They may be cast on their outward side with ornaments corresponding to the style of architecture in which the building is designed, or in imitation of the plainer slate roofing, as indicated in Fig. 1. Each plate A is provided at the sides with longitudinal projecting front flanges *a*, and rear flanges *b*, which latter extend somewhat further back than those at the front, so as to carry the wire-gauze and plastering at proper distance from plates A. Should plates A be of larger width,

so that the wire-gauze stretched between the flanges is not sufficiently rigid to receive the plaster, it may be desirable to cast intermediate lugs *d* at regular intervals, so as to better support the plastering. Plates A are connected with the cornice and gutter-pieces, braced, and are supported in the customary manner. Longitudinal ribs or cappings B embrace the outer flanges *a*, at the joints of plates A, and have cast at their inner sides at suitable distances lugs *e* for the insertion and rigid retention of the connecting-bolts *f*. These bolts *f* lead through the joints of plates A, and press the ribs B firmly on the same by means of washer-clamps *g* and nuts *h*, which rest on and embrace the interior flanges *b*, establishing a close and efficient connection. The intervals between lugs *e*, bolts *f*, and flanges *a* may be filled with cement, or, preferably, with putty, paper, felting, or any other pulpy, absorptive material, care being always taken that proper space for the expansion of the different parts is provided. A net-work of coarse wire-gauze, C, is stretched between the flanges *b*, and held in position by being placed between the washer-clamps *g* and nuts *h*; also, if necessary, by supporting-lugs *d* and hooks *i* placed therein, Fig. 4. The plastering is spread over the wire-gauze in sufficient thickness. The in and outsides of plates A are coated with suitable paint, as protection against the weather.

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

Plates A, having front and rear flanges *a* and *b*, held in connection with ribs B and wire-gauze C by means of lugs *e*, bolts *f*, washer-clamp *g*, and nuts *h*, forming the fire-proof French roof, substantially as described.

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Witnesses:

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