

(No Model.)

T. CRÜGER.  
CHIMNEY COWL.

No. 312,978.

Patented Feb. 24, 1885.

Fig. 1.

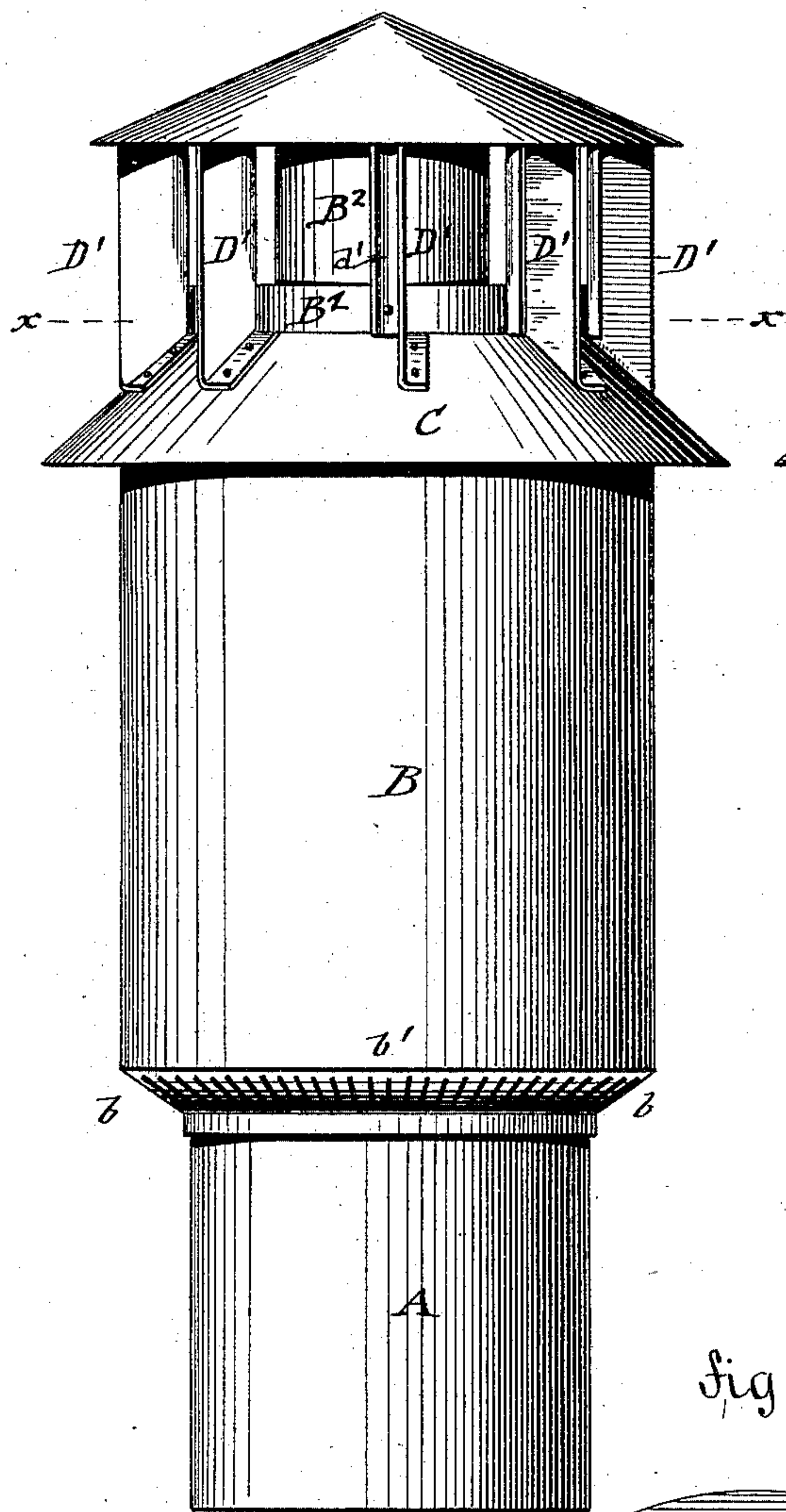


Fig. 2.

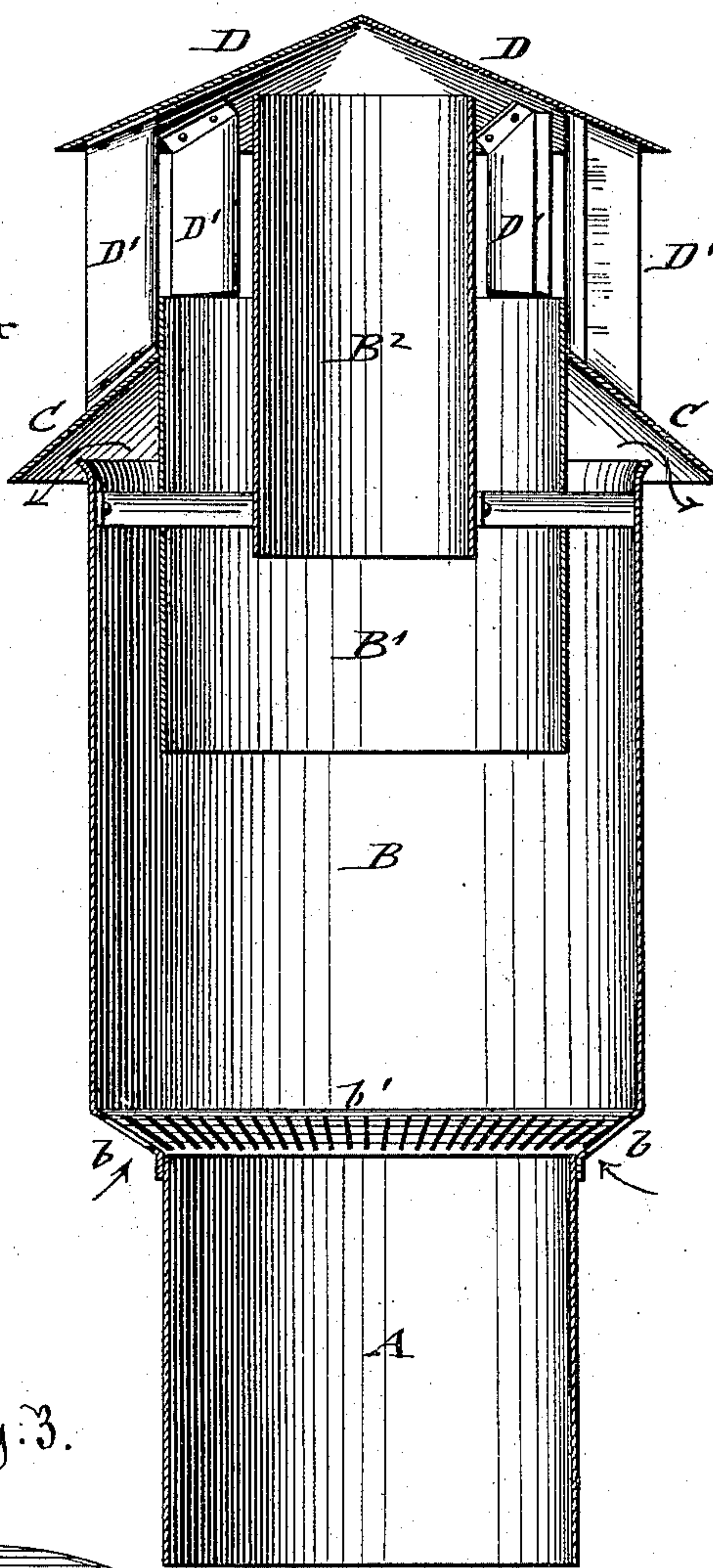
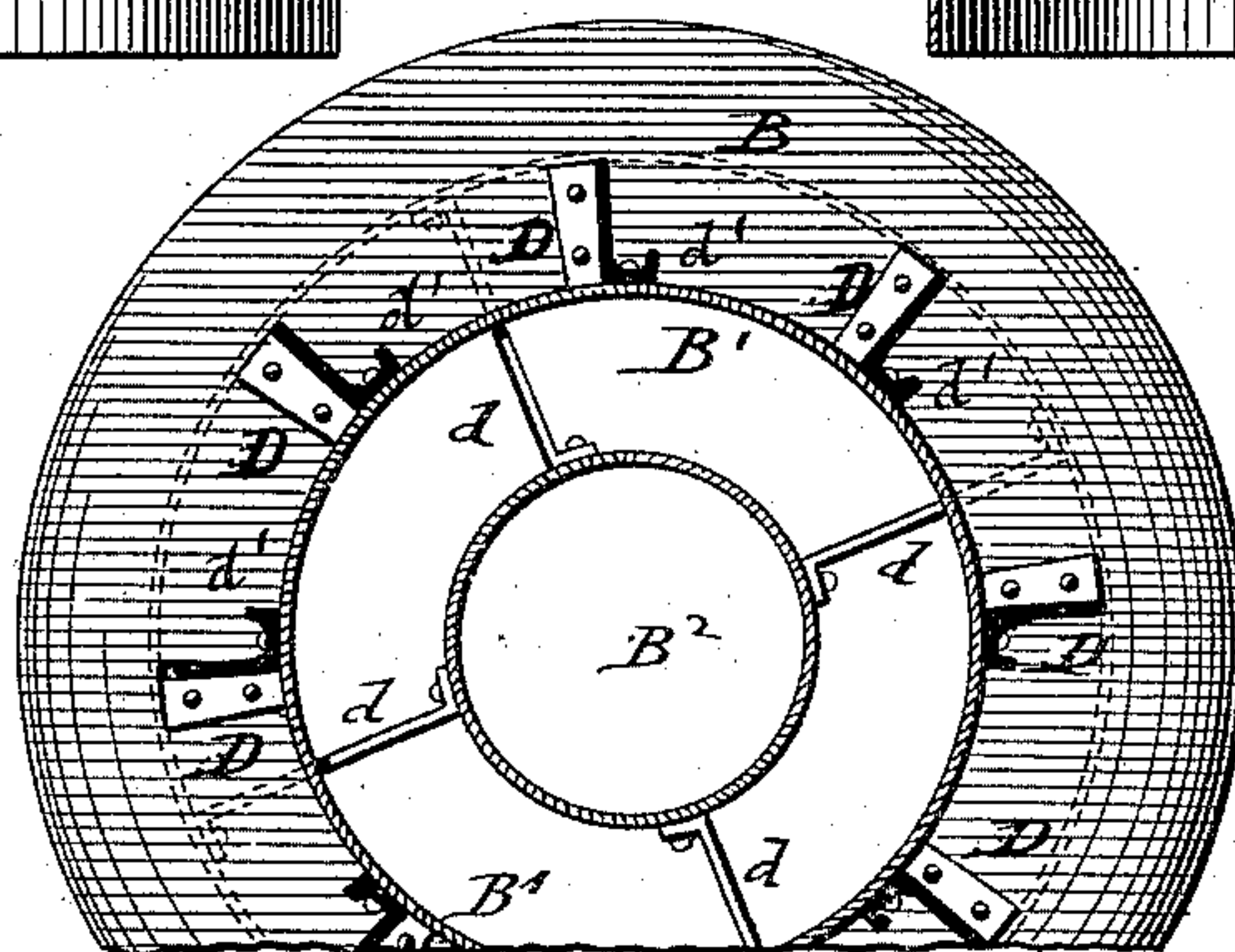


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

THEODOR CRÜGER, OF NEW YORK, N. Y.

## CHIMNEY-COWL.

SPECIFICATION forming part of Letters Patent No. 312,978, dated February 24, 1885.

Application filed October 20, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, THEODOR CRÜGER, of the city, county, and State of New York, have invented certain new and useful Improvements in Chimney-Cowls, of which the following is a specification.

This invention has reference to an improved chimney-cowl by which a uniform and effective draft is established in the chimney, whatever be the direction of the wind, and without the employment of rotating hoods; and the invention consists of a chimney-cowl made of three cylindrical parts, an exterior cylinder having air-openings at its base and a conical deflecting hood above its upper edge, an intermediate cylinder extending above the exterior cylinder, and an interior cylinder extending above the intermediate cylinder, the interior and intermediate cylinders being surmounted by a conical cap supported by vertical stays radiating from the intermediate cylinder and having curved flanges at their inner ends.

In the accompanying drawings, Figure 1 represents a side elevation of my improved chimney-cowl. Fig. 2 is a vertical central section, and Fig. 3 a horizontal section on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

A in the drawings represents the cylindrical base portion of my improved chimney-cowl, which base is secured into the chimney in such a manner that the spaces between the cylinder and the walls of the chimney are hermetically closed by cement or other suitable material. The chimney-cowl itself consists of three concentric cylinders, B B' B<sup>2</sup>, an exterior cylinder, B, intermediate cylinder, B', and interior cylinder, B<sup>2</sup>. The exterior cylinder, B, is of larger diameter than the base portion A, and connected to the latter by an offset, *b*, that is provided with a series of slots or openings, *b'* *b'*, for the admission of air. The intermediate cylinder, B', is of less height than the outer cylinder, B, and is extended above the upper edge of the exterior cylinder, B. The intermediate cylinder, B', is provided with a conical cap, C, that extends over the upper edge of the outer cylinder, B, so as to prevent the

rain from entering into the same. The intermediate and interior cylinders, B' B<sup>2</sup>, are supported by radial stays *d d*, that are riveted to the cylinders B and B<sup>2</sup> and passed through slots of the intermediate cylinder, B', as shown in Figs. 2 and 3. The inner cylinder, B<sup>2</sup>, extends from a point at or near the middle of the intermediate cylinder to some distance above the same, and is surmounted by a conical cap, D, which is supported by vertical radiating stays D', that extend from the lower cap, C, to the upper cap, D. The stays D' are riveted to the caps C and D, and are provided at their inner edges with curved flanges *d'*, that serve to increase the strength of the stays. As the wind passes freely through the open spaces intermediately between the stays D', it creates a suction at the upper end of the intermediate cylinder, B'. The column of warm air and smoke that passes through the chimney into the cowl is thereby drawn up and divided into three bodies, the outer one being acted upon by the air that is forced in through the slots *b'* *b'* of the outer cylinder, B, and conducted off at the upper end of the cylinder, between the same and the cap C, as indicated by arrows in Fig. 2. The next adjoining column of air and smoke is drawn up through the intermediate cylinder, while the innermost body of air and smoke is conducted off through the interior cylinder, B<sup>2</sup>, and below the top cap, D, to the outside. Whatever be the direction of the wind, the cowl will secure an effective upward draft in the chimney, owing to the direct action of the wind forced in the cowl through the slots *b'* *b'*, and, secondly, owing to the suction exerted by the wind on the air and smoke in the cowl, whereby the intermediate and interior cylinders are kept in action. The smoke will always pass to the outside of the cowl at the side opposite to that struck by the wind, so that by the joint operation of the three cylinders of the cowl a lively draft is kept up in the chimney. The cowl is of strong and durable construction, has no parts that are liable to get out of order, and can be furnished at comparatively low cost.

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

1. A chimney-cowl composed of a cylindri-

cal base, A, an outer cylinder, B, of larger diameter than the base, and provided with slots  $b' b'$  at the lower end, an intermediate cylinder, B', having a cap, C, extending over  
5 the edge of the outer cylinder, an interior cylinder, B<sup>2</sup>, and a top cap, D, supported by vertical stays D', substantially as set forth.

2. The combination of an outer cylinder, B, an intermediate cylinder, B', having a cap, C,  
10 extending over the upper edge of the outer cylinder, an interior cylinder, B<sup>2</sup>, a top cap, D, and radiating vertical stays D', substantially as set forth.

3. The combination of an outer cylinder, B,

an intermediate cylinder, B', having a cap, C, 15 extending over the upper edge of the outer cylinder, an interior cylinder, B<sup>2</sup>, having a cap, D, and radiating vertical stays D', connecting the caps C and D, said stays having curved flanges at their inner ends, substan- 20 tially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

THEODOR CRÜGER.

Witnesses:

PAUL GOEPEL,  
SIDNEY MANN.