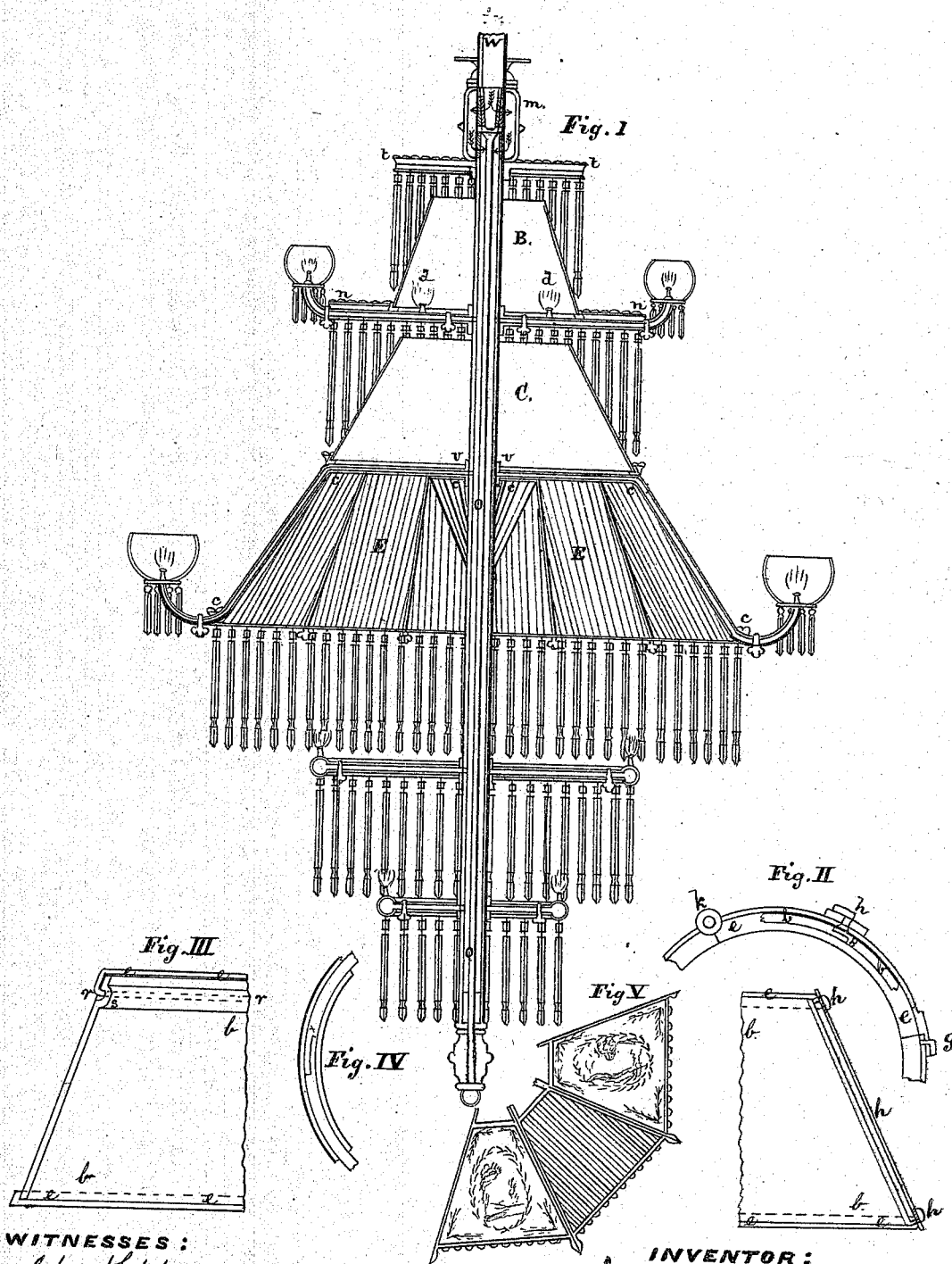


C. F. JACOBSEN.

Chandelier.

No. 112,351.

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WITNESSES:

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IMPROVEMENT IN CHANDELIER.

Specification forming part of Letters Patent No. **112,351**, dated March 7, 1871.

To all whom it may concern:

Be it known that I, CHARLES F. JACOBSEN, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Reflecting-Chandeliers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, making a part of this specification.

To facilitate the comprehension of the improvements hereinafter described, reference is made to my original patent, No. 91,135, dated June 8, 1869, and to the drawing which accompanies the same.

The first portion of my invention consists in furnishing my chandelier with supplementary branch lights or arms, with burners, globes, and pendants, and springing from the corners of the panels of my outer reflecting-cone, or from any or all of the ring-pipes, said branch lights being added for the purpose of displaying the painted or ornamented panels upon the outer side of the larger reflecting-cone, and also to increase the general beauty of the fixture.

The second part of my invention consists in providing my chandelier with a peculiar spider or arrangement of radiating pipes, conveying gas from the main feed-pipe through the arms which spring from the lower reflecting-cone. This spider is also designed to support the weight of both the reflecting-cones heretofore supported by chains.

The third part of my invention consists in supplying my fixture with a series of diaphanous truncated cones, peculiarly constructed and held in place, being designed to act as chimneys or conductors of the various products of combustion, so that the numerous glass pendants which ornament my fixture will not become tarnished by the smoke, or by moisture condensed upon their surfaces from the surrounding atmosphere by the heat.

Having thus set forth in general terms the nature of my various improvements, I will now proceed to detail the manner in which their introduction may best be carried into effect.

Of the accompanying drawing, which gives views in section, Figure 1 gives a detailed view of my double-cone reflecting-chandelier, with all the improvements *in situ*. Fig. 2 shows one of the sections of the diaphanous

cones, showing also one description of the brass collar for the support of the chimneys. Fig. 3 is a section of the chimney embraced by another description of collar. Fig. 4 shows the method by which the various sections are joined together by means of rabbeted or overlapping edges. Fig. 5 is a bird's-eye view of the lower reflecting-cone of my chandelier, and shows the outer ornamented or painted panels of the same.

To render more clear the method of attachment of the supplementary branch lights referred to as the first portion of my invention, I will state that I propose to use additional circular or ring pipes provided with glass pendants, as shown at *nn* and *tt*, Fig. 1. Any number of these may be introduced above the reflectors, according to the size of the fixture; but they should be arranged so as to decrease in diameter from the bottom upward. They may be used in combination with the upper canopies or in place of these latter.

If deemed expedient burners may be used in connection with these additional ring-pipes for the purpose of counteracting the shadow cast on the ceiling by the opaque panels of the reflecting-cones below.

The gas is to be brought to these ring-pipes by means of small gas-pipes radiating from the central pipe, *W*, to the periphery of the rings.

The burners, in connection with any or each of these additional ring-pipes, may either be set round the periphery of the pipes or placed upon the small radiating gas-pipes, as shown at *dd*. It is believed that the latter method will prove the best, enabling me to use the chimney *B*, hereinafter described, while, if the burners were set at the periphery of the rings, said chimney could not be used, as the glass pendants from *t* (the gallery above) would then fall within the ring of lights below; but I do not, however, claim these additional ring-pipes as of my invention.

I. At *c* and *n* are shown the supplementary branch lights of my improved fixture, which are provided with burners, globes, and pendants of glass, hooked upon a suitable flange or collar attached beneath the globe for that purpose. These branch lights may spring from any of the ring-pipes, as also from the upper or lower corners of the panels which form the

outer reflecting-cone, and gas is supplied to these last-named branches by the means which I am now about to detail.

II. At *c c c* is shown my second improvement, which consists of a spider or series of small gas-pipes radiating from the main pipe *W* in a peculiar manner, conveying gas to the branch lights, which spring from the edges of the outer cone-reflector. These small pipes spring from a bulb or body at *v v*, and pass first in a horizontal direction to the upper edges of panels *E E*, where the pipes deflect and pass down between the edges of each pair of panels to their lowest corners, whence they project for about two inches, having the branches screwed upon them. The whole course of these pipes is shown by the letters *c c c*. It will be easily seen that in no other way could the gas be so readily brought to the auxiliary branches, as pipes radiating from the center across the base of the outer reflecting-cone would mar its beauty and obstruct the passage of the reflected light. These spider-pipes *c c c* are made to support the whole weight of both the reflecting-cones, thus adding very greatly to the strength of my fixture and taking the place of the chains formerly used.

III. A glance at Fig. 1 shows the peculiar construction of my chandelier, with pipes radiating, as at *c c*, from the center, and supplying gas to the burners of the various rings. On account of these radiating pipes, therefore, the glass prisms or pendants cannot be protected from smoke or condensed moisture by a continuous chimney. I propose, therefore, to place within the successive tiers of pendants situated above the reflectors truncated cones of glass or other diaphanous material, as shown at *B* and *C*, these cones being so arranged upon the galleries or ring-pipes of the chandelier that the base of each successive cone shall be larger than the apex of the one immediately beneath it, thus securing a perfect conduction of all products of combustion past the pendants which hang outside the cones.

It is obvious that it will be best to cast or make these cones in two or more sections, so that they may be easily removed and cleaned without taking the chandelier to pieces. They must also be so secured in place and held together that they will not readily be broken or displaced by any shock or jar.

At *b b* is shown, in section, a half of one of the diaphanous cones, the parts or sections of which may be made with ordinary straight edges and set together; or they may be made with recessed or rabbeted edges, as at *x*, Figs. 2 and 4, which overlap, and thus form a more perfect joint.

The bases of these cones rest within ordinary brass collars *e e*, Figs. 2 and 3, flanged at their periphery, and soldered upon the radiating pipes, as at *c c*, Fig. 1.

The various sections of these cones may be held together at the apex in different ways;

but I would select the two following methods as being at once the most simple and the most secure:

First, the cones may be made with an annular depression near the apex, as shown at *s*, Fig. 3, or a mere groove cut round them would suffice. The various sections of the cone are set together properly within the lower brass socket, and a narrow upset collar, of brass, cut through transversely at one point of its circumference, is sprung over the apex of the cone, with its upset resting in the depression, as shown at *r r*, Fig. 3. One end of this collar is furnished with a button or catch, *g*, Fig. 2, and the other with a button-hole slot, by which means the collar is securely clasped round the apex of the chimney.

In the second method, the apex of the cone has no depression or groove. The bottom socket is the same as that already described, with the addition of two rotating buttons upon its outer rim or flange. (See *h*, Fig. 2.)

The upper collar is a simple brass ring, cut through or opened by a rule joint or hinge, (see *k*, Fig. 2,) and is fastened round the apex of the chimney by a catch and button-hole slot, *g*, Fig. 2, and bears upon its circumference two more catches, *h h*, Fig. 2.

Narrow strips of brass, with button-hole slots at each end, are secured, *h h h*, Fig. 2, by the catches of the upper and lower collars, thus forming braces which pass down the sides of the chimney and assist in holding both collars and chimney firmly together.

In some cases—as, for instance, with small chandeliers, where the chimneys can be reached and cleaned without much trouble—I propose to use diaphanous truncated cones, made in a single piece, resting within a bottom collar only, and not removable from the fixture unless the latter be taken to pieces.

I propose, also, where it may be deemed expedient, to use diaphanous cones of various colors, to add to the beauty of the chandelier.

I claim as new and desire to secure by Letters Patent—

1. In a double-cone reflecting-chandelier having pipe rings or tiers of light, with flanges and glass pendants, the supplementary branch lights *c n*, constructed and arranged substantially as described.

2. The spider or radiating pipes, so arranged as to form supports for the double-cone reflector and convey gas to the branch lights without obstructing the rays of reflected light, substantially in the manner set forth.

3. In combination with a double-cone reflecting-chandelier having pipe-rings, with flanges and glass pendants, the truncated diaphanous cones and chimneys *B C* and *b b*, constructed and arranged substantially as hereinbefore set forth.

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