

F. McLEWEE.

Gas Burner.

No. 113,906.

Patented April 18, 1871.

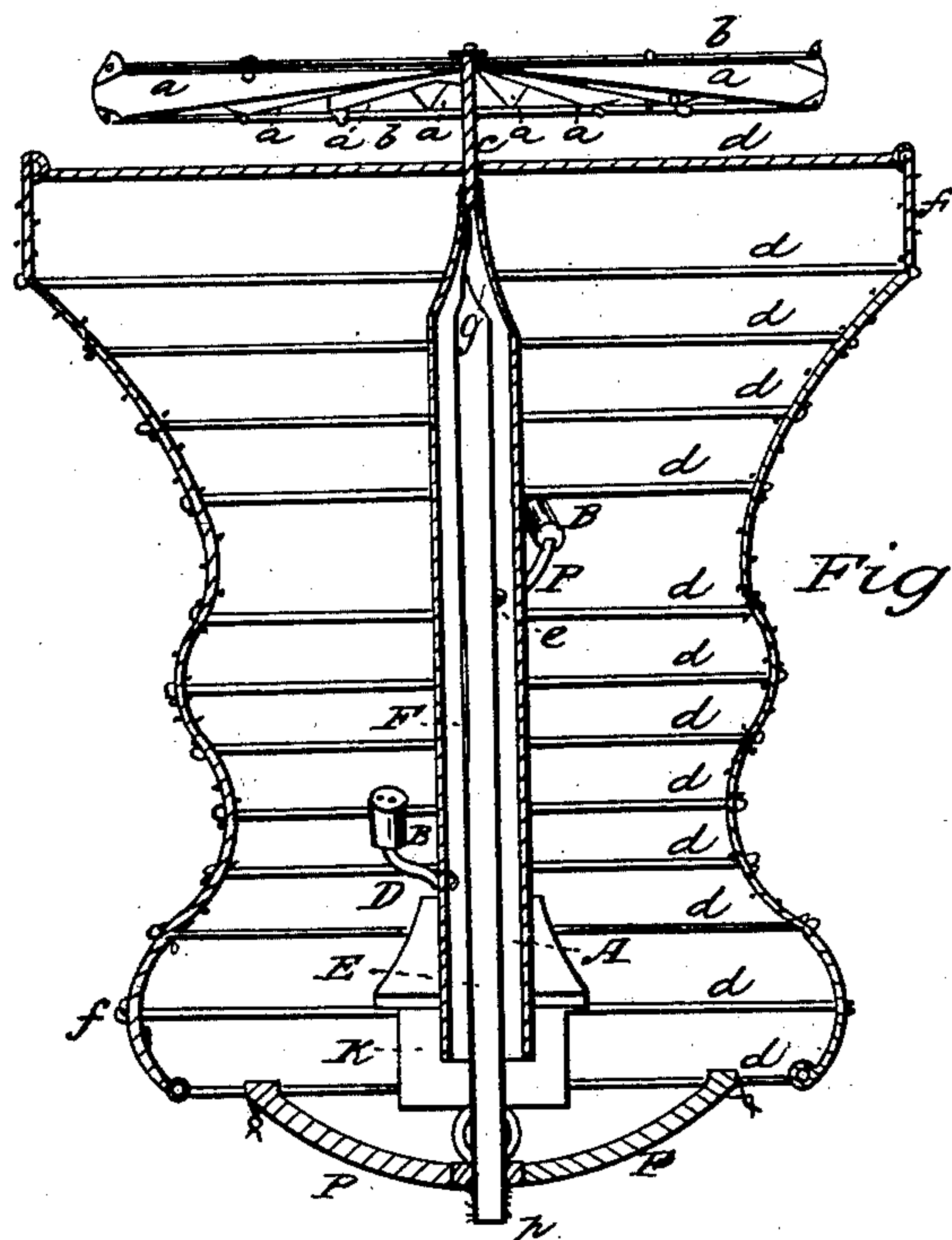


Fig. 1

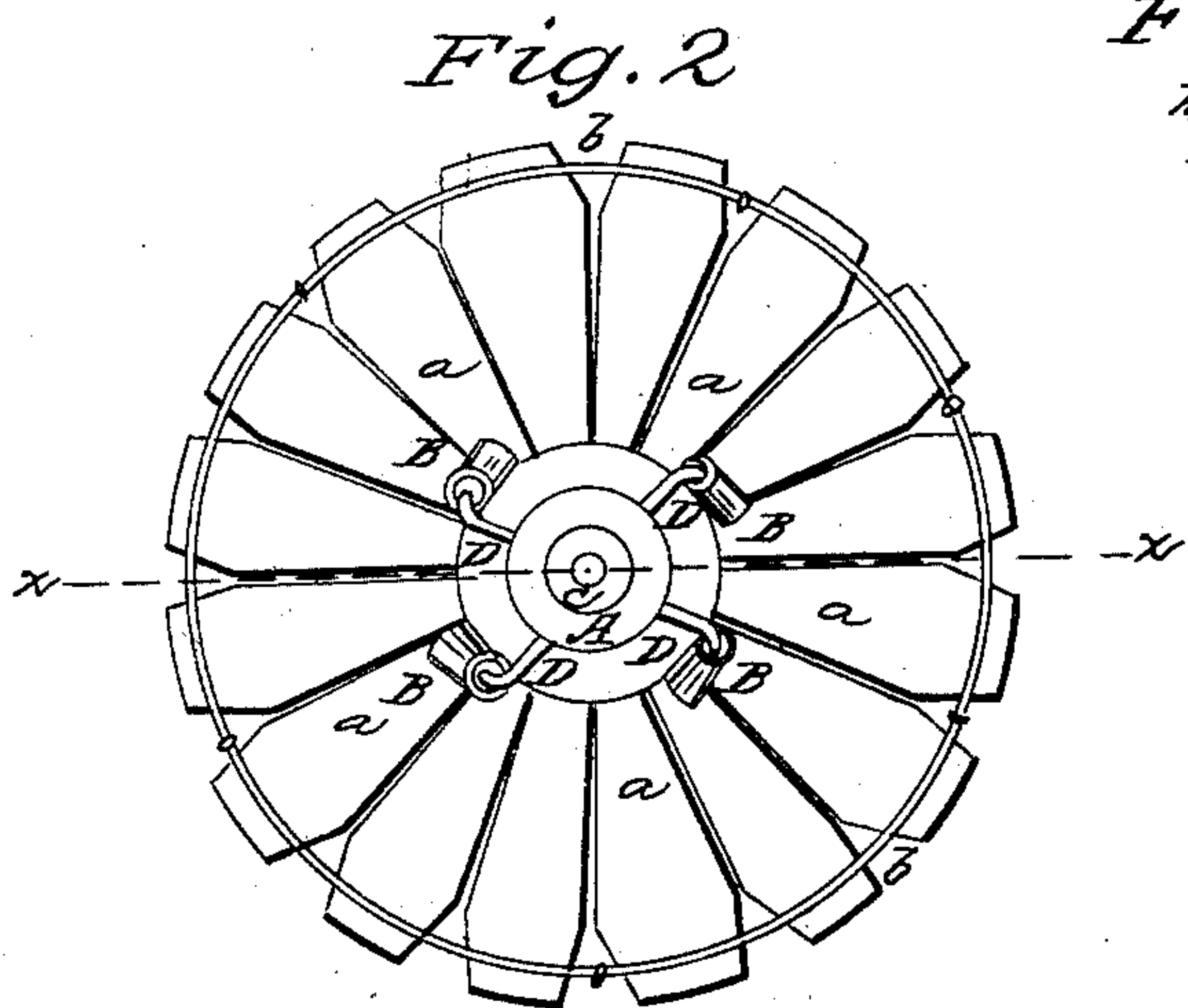


Fig. 2

Fig. 3

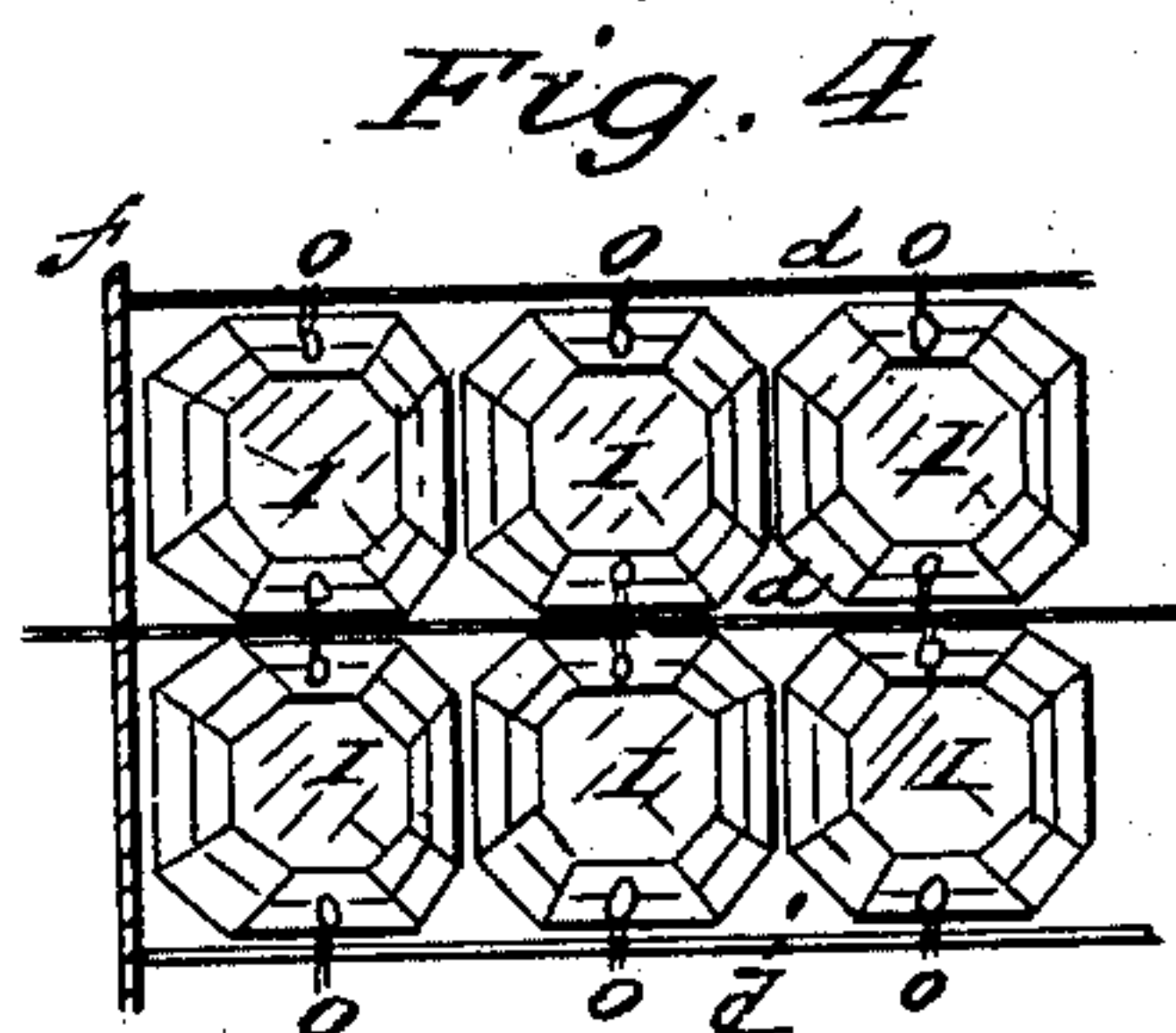
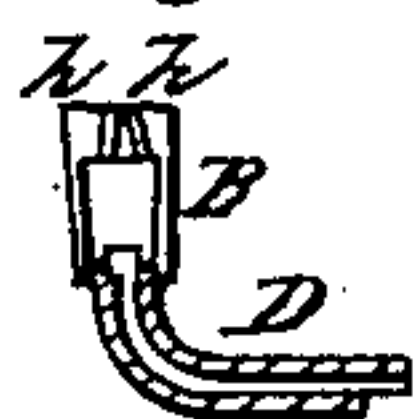


Fig. 4

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UNITED STATES PATENT OFFICE.

FREDERICK McLEWEE, OF NEW YORK, N. Y.

IMPROVEMENT IN REVOLVING GAS-BURNERS.

Specification forming part of Letters Patent No. **113,906**, dated April 18, 1871.

I, FREDERICK McLEWEE, of the city, county, and State of New York, have invented certain Improvements in Illuminators and Revolving Gas-Burners, of which the following is a specification:

The objects of my invention are to furnish a plain or prismatic sign or lantern with a column of revolving gas-burners that may be constructed of metal and yet operate at the minimum pressure of gas commonly found in the supply-pipes; to aid the revolutions of such a column of burners by a fan-wheel, and, by the peculiar arrangement of the jets of gas within the lantern, to obtain a flaring flame from the jets, thereby increasing the scintillations from a prismatic lantern.

In the accompanying drawing like letters designate like parts in each of the figures, and Figure I is a longitudinal section taken through the axis of the burner, and showing the frame of a lantern attached thereto. Fig. II is a plan of the revolving portions of the burner. Fig. III is a section taken through the center of one of the burners; and Fig. IV is a plan of a section of a lantern covered with glass prisms, and showing the manner of attaching the same.

The construction and operation of my invention are as follows:

The pipe E is attached to the gas-supply pipe at *p*, and immediately above this connection it is surrounded by a collar, from which the arms P P are extended to support the frame of the lantern or sign. The cup K, revolving tube A, pivot *g*, and slot F are all constructed, arranged, and operated in the same manner and for the same purpose as similar parts in the metallic gas revolving burners heretofore in use, except that the tubes A and E are of greater length.

Attached to the tube A, and opening into the same at *e e*, Fig. I, arranged spirally at equal distances from each other, are the bent tubes D, which conduct the gas that flows from the supply-pipes through the tubes E and A to their several lava tips B, from which the gas escapes through the opening *h h*, Fig. III, in flat tangent jets, where it is burned. These jets are arranged at such distances from each other that the cylinders generated by their revolutions slightly lap upon each other, thus giving a continuous column of light.

To the top of the tube A is attached the pin *c*, Fig. I, which supports, by a rigid attachment, the fan-wheel, composed of the wings *a a*, which are held in position by the wire-loops *b b*. This fan-wheel or propeller is so secured to the tube A that they must revolve together, and its form may be that of any now made to revolve when placed in a current of air.

Resting upon the arms P P, and surrounding the burners, is placed the lantern or sign to be illuminated, which is made of any required shape, design, or transparent material desired.

In the drawing a prismatic sign is shown, composed of the wire frame *d f*, Fig. I, and upon these wires, by wire fastenings *o o*, are secured the prisms I, Fig. IV, as shown by the enlarged sections in Fig. IV.

The bottom and top of the sign are open, and the propeller *a b a*, Figs. I and II, is placed over the top. Gas being turned onto the burner and the jets lighted, the unequal pressure upon the sides of the tubes D from which the gas is escaping tends to cause the tube A to revolve; but the resistance caused by its weight could not be overcome by any ordinary pressure of gas attainable for illuminating purposes. As the air in the lantern becomes heated an upward current is induced, which, acting upon the propeller-wings *a*, aids the pressure of the gas in the tubes D, and thus a regular and certain revolution of the tube A with its burning jets of gas is obtained.

By placing the jets of gas one above another the air in the upper part of the lantern becomes the most heated, and a current of air is maintained throughout the lantern, which causes the lights to flare. In a prismatic sign this flaring is very desirable, as it increases the scintillations from the prisms and heightens the effect they are intended to produce.

I claim as my invention—

1. The use of a fan-wheel or propeller attached to the revolving tube of a revolving gas-burner, as and for the purposes described.
2. Arranging the flat-light burners B B one above another, as and for the purpose described.

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