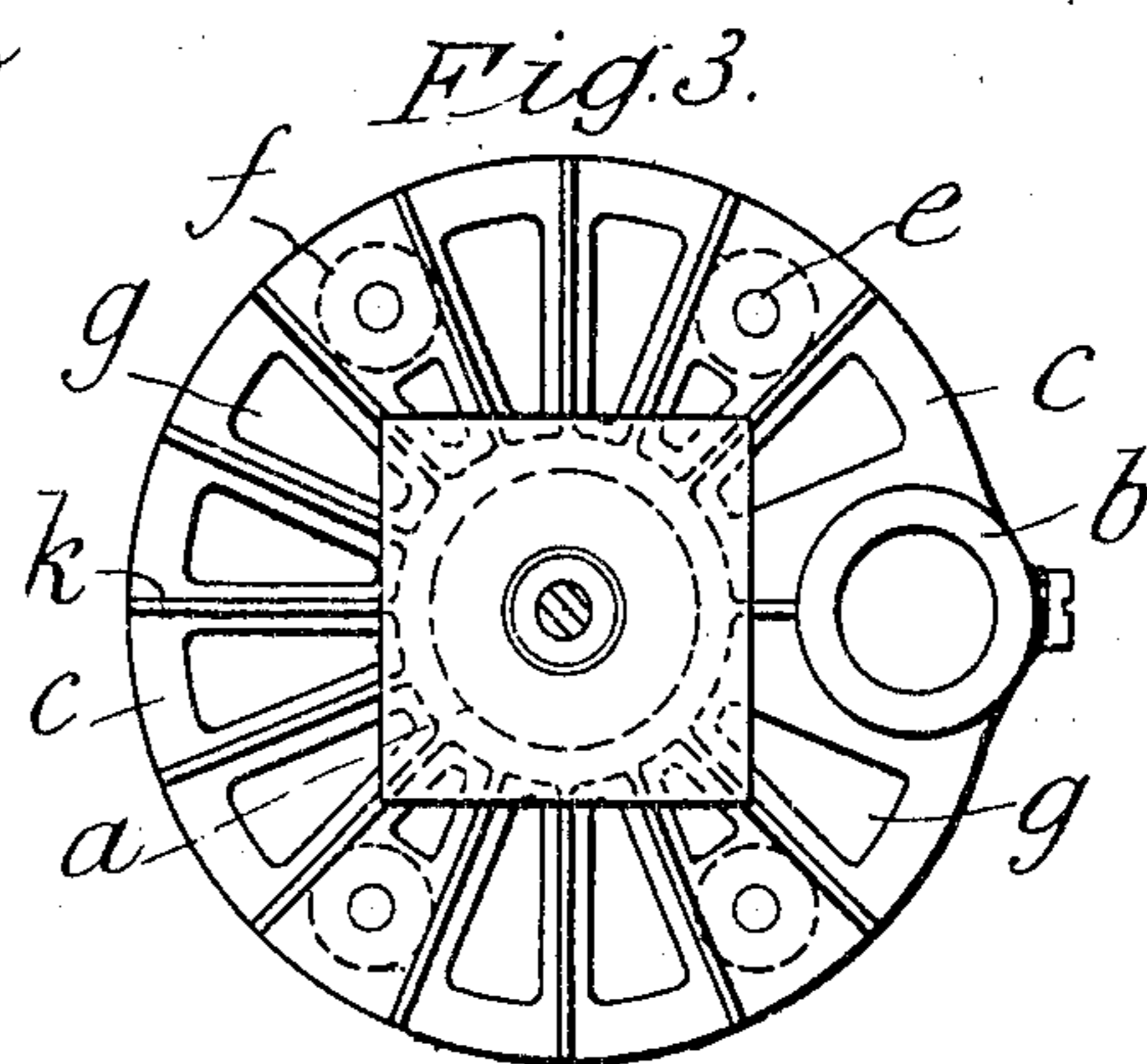
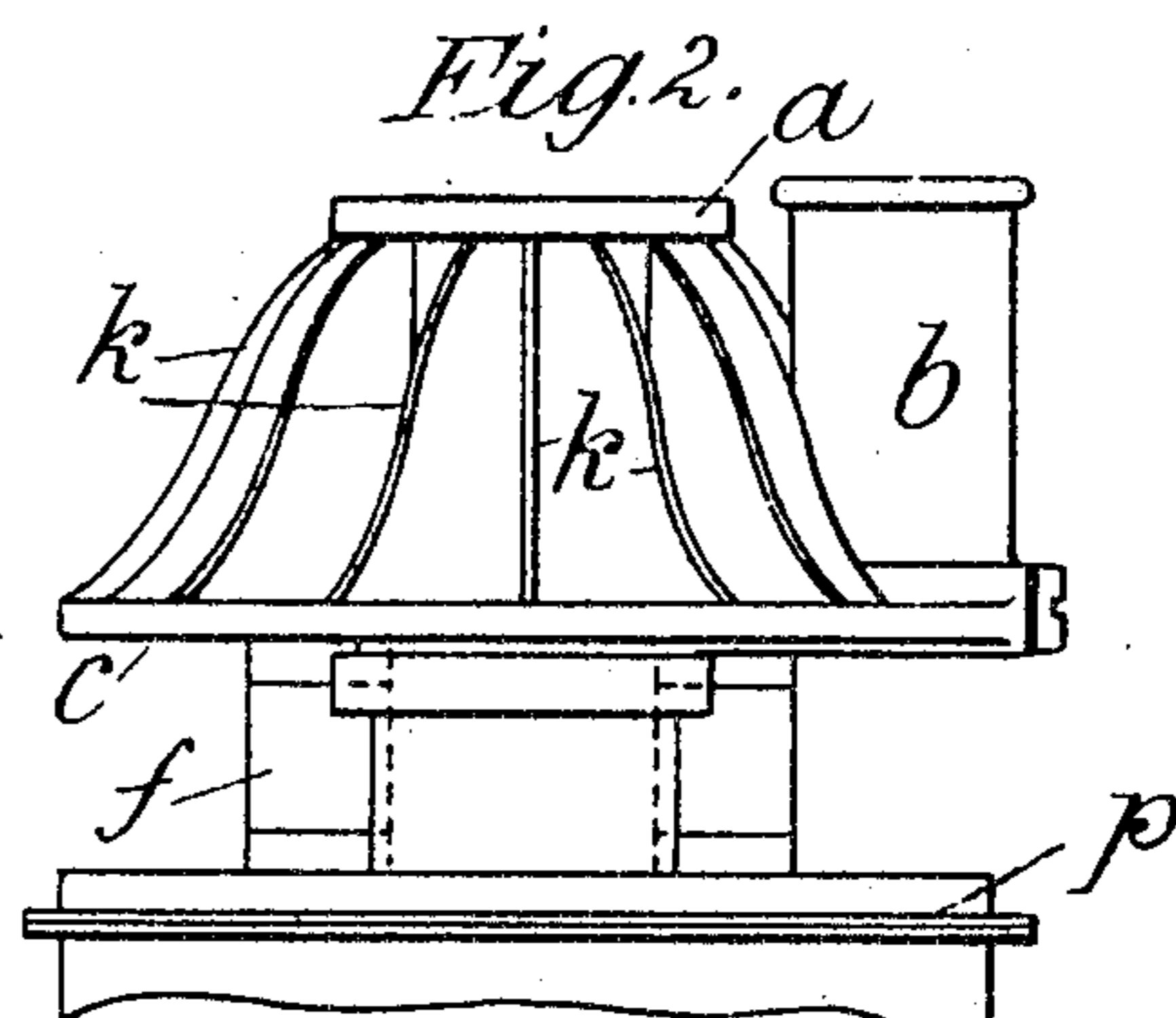
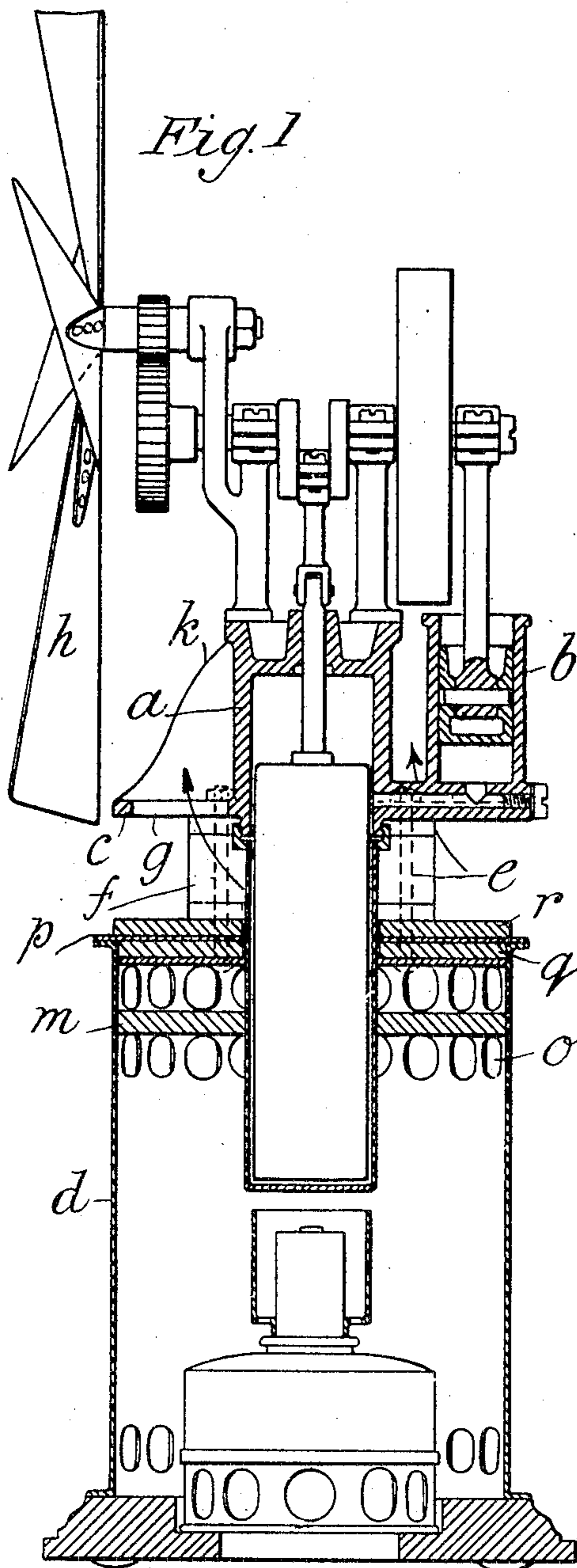


No. 843,398.

PATENTED FEB. 5, 1907.

C. JOST.  
MACHINE DRIVEN VENTILATOR.  
APPLICATION FILED OCT. 2, 1905.



Witnesses  
Samuel Percival  
Albert Jones

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# UNITED STATES PATENT OFFICE.

CARL JOST, OF BOMBAY, INDIA, ASSIGNOR OF TWO-THIRDS TO FREDERICK CLARENCE JENKINS, OF HAMBURG, GERMANY.

## MACHINE-DRIVEN VENTILATOR.

No. 843,398.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed October 2, 1905. Serial No. 281,020.

*To all whom it may concern:*

Be it known that I, CARL JOST, a subject of the King of Hungary, and a resident of Bombay, in British India, have invented certain new and useful Improvements in Machine-Driven Ventilators, of which the following is a specification.

It has for a considerable time been the aim to construct the known ventilators which are driven by caloric-engines in as small dimensions as possible without reducing the effect, which can only be attained by finding means for increasing the efficiency of the machine. In caloric or hot-air engines of this kind the efficiency can be increased by keeping the cooling part of the cylinder containing the air as cold as possible.

According to the present invention this object is attained by arranging the ventilator in such a manner that a great part of the air set in motion by the ventilator is forced against the cooling-faces. For this reason the fan or ventilator is brought close to the said faces, and the foundation-plate carrying the upper part of the air-cylinder and the working cylinder is arranged at a distance above the lower part exposed to the gases of combustion, so as to allow air to enter the space created thereby. The foundation-plate, moreover, is provided with openings, thus enabling the ventilator to draw the air from the said space below the foundation-plate up through the latter, in between the cooling-ribs, and against the outside of the upper part of the cylinder. By these means the last-named part of the cylinder is kept very cool, thus increasing the efficiency of the machine to a great extent.

In the accompanying drawings a machine of this class is shown.

Figure 1 shows the machine in a vertical section. Fig. 2 is a side elevation of the upper part of the air-cylinder, and Fig. 3 is a plan of the same.

The foundation-plate carrying the upper part *a* of the air-cylinder and the working cylinder *b* is connected to the lower part of the machine or with the frame *d* by means of bolts *e*, which are surrounded by distance-pieces *f*, made of a heat-insulating material, which pieces hold the plate *c* at a distance from the lower part of the machine, thus cre-

ating a space within which the air can freely circulate. The plate *c* is provided with openings *g*, which allow the air to pass upward in a direction shown by the arrows by the aid of the vanes *h*. Hereby the air passes the cooling-ribs *k* and also the outer face of the upper part *a* of the cylinder. The fan is brought close to the plate *c* in a suitable height for this purpose. The part *a* is thus kept at a very low temperature. In order to keep the heat created in the lower part of the machine off the upper part as much as possible, there is a layer or board *m*, of insulating material, attached to the casing *d*, in which, above as well as below the said board *m*, there is a number of air-outlet holes *o*. Also the ceiling *p* of the frame or casing may be covered with boards *q* and *r*, of insulating material, for the purpose of further preventing heat from passing to the cylinder part *a*.

The caloric-engine shown in the drawings is of the upright standing or vertical type. The ventilator is arranged on the upper part of the engine, which upper part is to be kept cool. The invention, however, is also applicable to engines of the horizontal type, in which case the ventilator must be arranged in such manner that the air by all means is drawn across the parts to be kept cool.

What I claim, and desire to secure by Letters Patent, is—

1. A ventilator comprising a caloric-engine, a fan driven thereby, a perforated frame for supporting said engine, insulating transverse partitions in said frame between said perforations, and distance-pieces for separating the upper part of said engine from the frame.

2. In a ventilator, the combination of a caloric-engine having a casing provided with openings in its side walls near its top and bottom, a non-conducting transverse partition arranged in said casing near its top between the openings therein, and an insulated cover for said casing, a supporting-plate for the upper part of said engine having openings therein, distance-pieces disposed between said plate and frame and a fan arranged above said plate and adapted to draw air in between the openings in the plate to cool the engine.

CARL JOST.

Witnesses:

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