

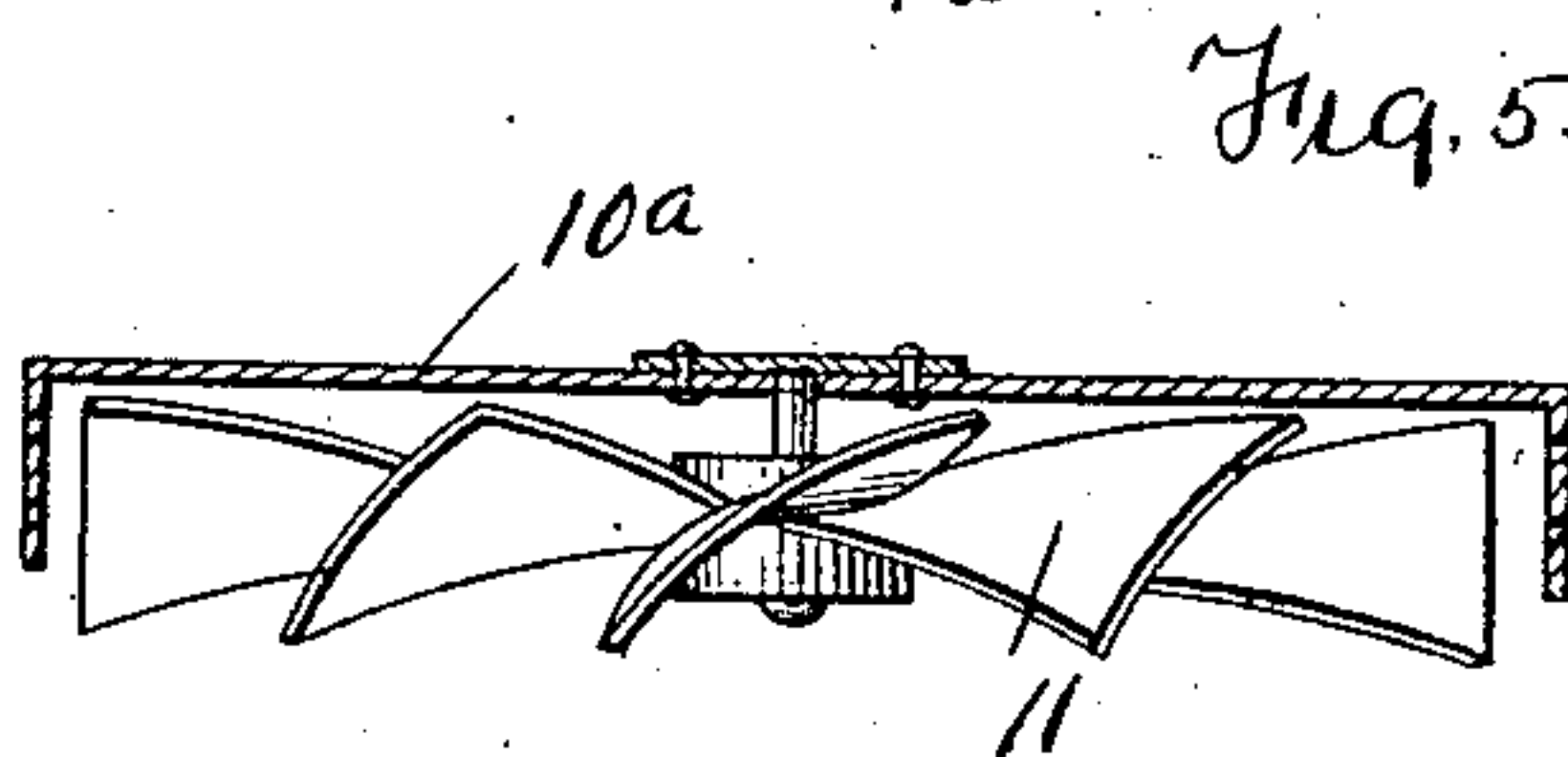
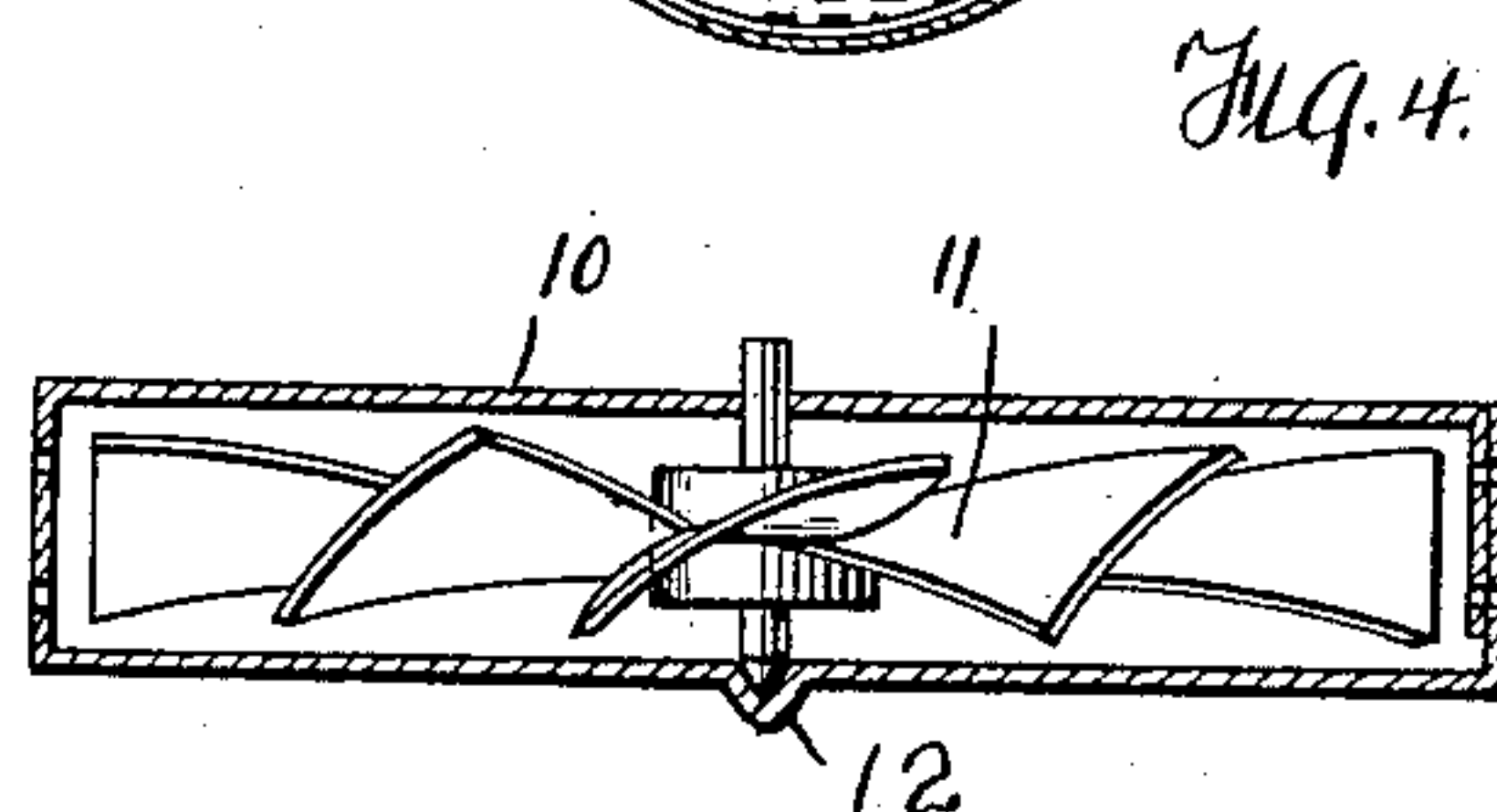
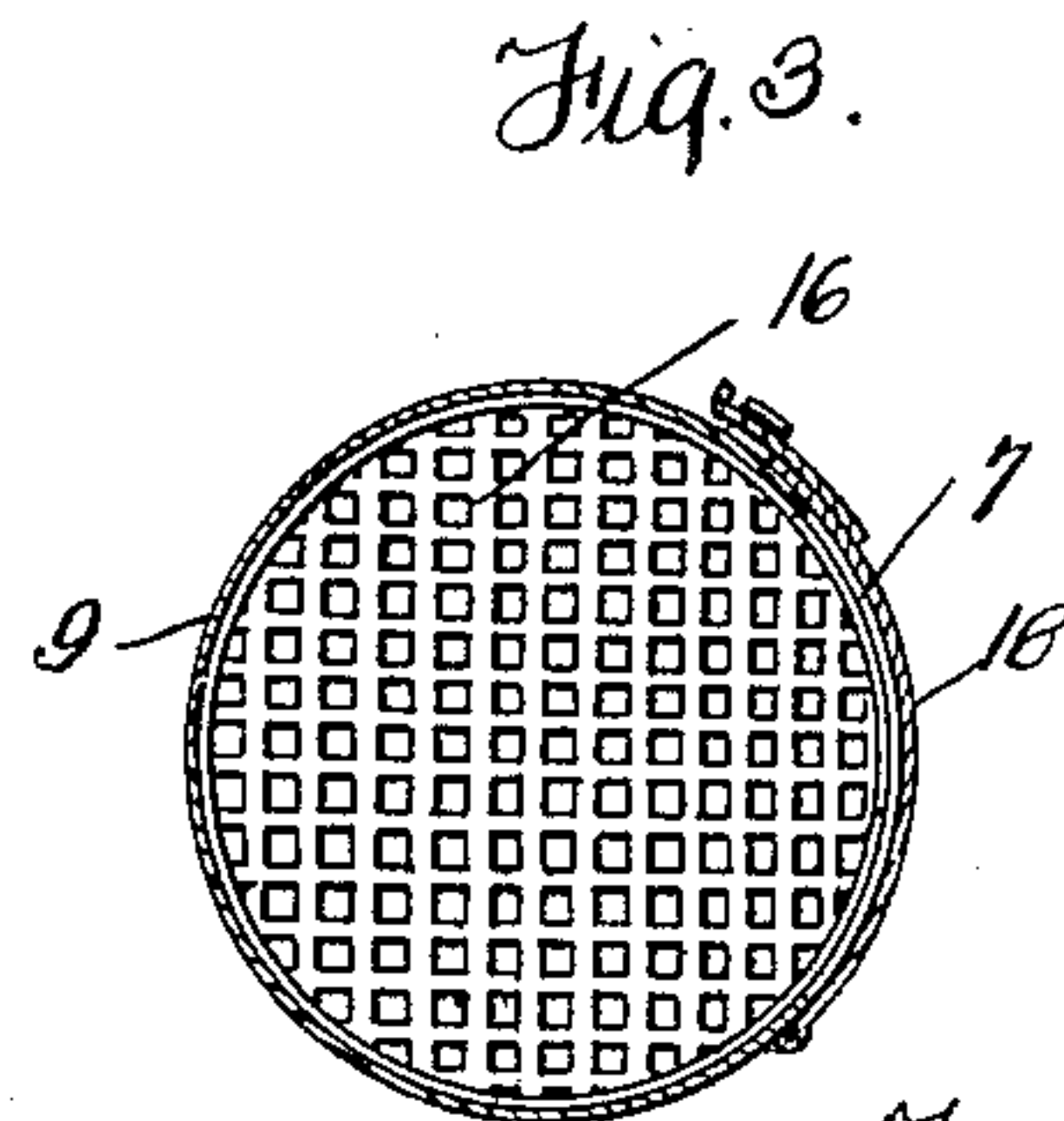
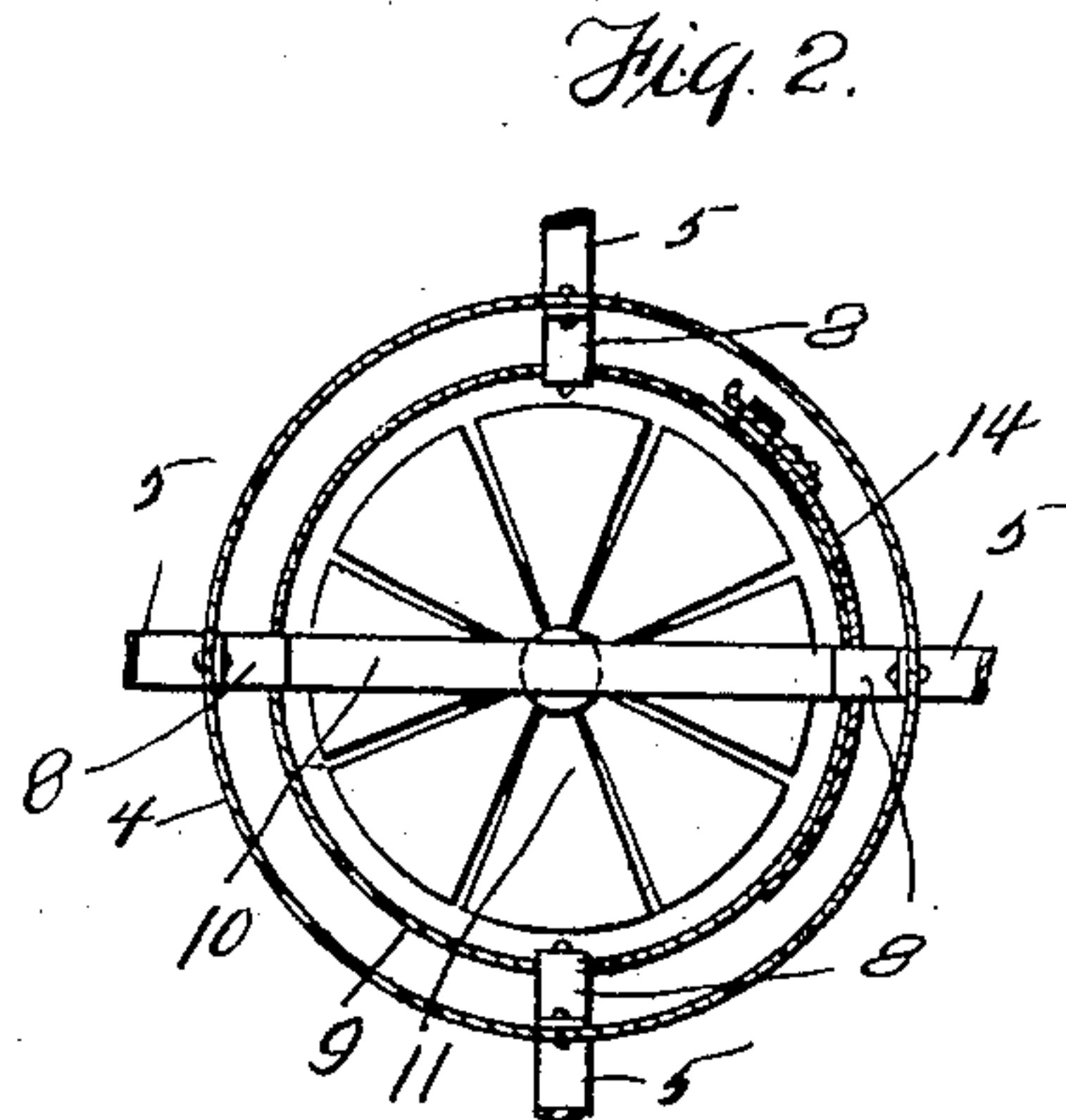
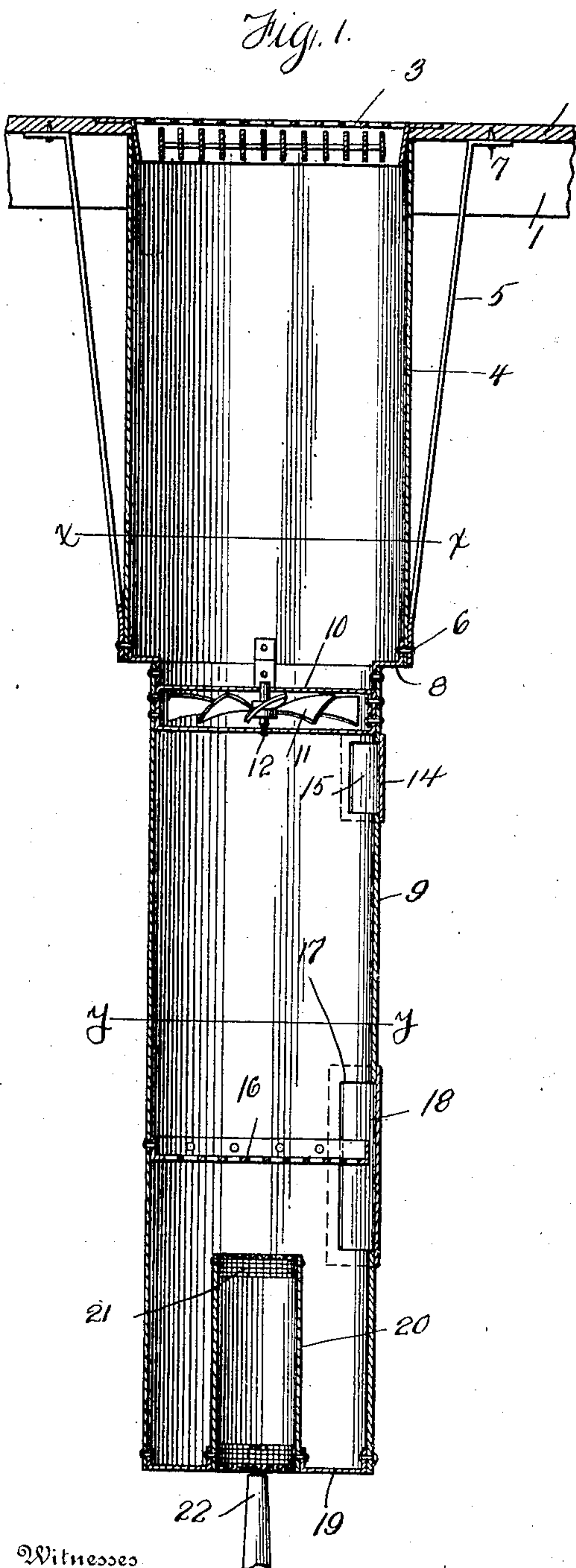
No. 891,680.

PATENTED JUNE 23, 1908.

E. J. DROZ, C. A. DROZ, SR. & C. H. DROZ.

HEATER.

APPLICATION FILED NOV. 4, 1907.



Witnesses

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# UNITED STATES PATENT OFFICE.

EDWARD J. DROZ, CHARLES A. DROZ, SR., AND CHARLES H. DROZ, OF AMBRIDGE,  
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## HEATER.

No. 891,680.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed November 4, 1907. Serial No. 400,485.

*To all whom it may concern:*

Be it known that we, EDWARD J. DROZ, CHARLES A. DROZ, Sr., and CHARLES H. DROZ, citizens of the United States of America, residing at Ambridge, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Heaters, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to heaters, and more particularly to a heater designed for heating halls and compartments, the heater being located beneath the floor of the hall or compartment to be heated.

The object of this invention is to provide a novel heater wherein gas is used for producing heat units, and in connection with the heater, we have devised novel means for causing a thorough radiation of the heat units within the heater prior to their admission to the hall or compartment to be heated.

Our invention aims to utilize the centrifugal force of fans for distributing the heat units in a heater, the fan being suitably located to force heat units below the entire surface of a register, whereby these heat units when emitted from the register will be distributed in the room or compartment to be heated.

The invention will be presently described in detail, and then specifically pointed out in the appended claims.

Referring to the drawing forming a part of this specification, Figure 1 is a vertical sectional view of a heater constructed in accordance with our invention, Fig. 2 is a horizontal sectional view of a heater taken on the line  $x-x$  of Fig. 1, Fig. 3 is a similar view taken on the line  $y-y$  of Fig. 1, Fig. 4 is an elevation, partly in section of a fan used in connection with the heater, and Fig. 5 is a similar view of a slightly modified form of fan.

In the accompanying drawings, we have illustrated joists 1 as supporting a floor 2 in which is located a conventional form of register 3.

Suspended below the register 3 is the heater proper, said heater comprising a cylindrical shell 4 supported in position by a plurality of straps 5, these straps being riveted to the lower edge of the shell, as at 6, and secured to the floor 2 as at 7.

The same rivets retaining the straps 5 in engagement with the shell 4 also serve for retaining angular supporting-brackets 8 in en-

gagement with the bottom edges of said shell, said brackets supporting a cylindrical casing 9.

In the upper end of the casing 9 we rivet a fan frame 10, said fan-frame supporting a fan 11 having a plurality of blades. The fan as illustrated in Figs. 1 and 4 of the drawings is revolubly mounted in the depression 12 formed in the lower bar of the fan-frame 10, but this fan can be readily suspended from a frame 10<sup>a</sup> of the form illustrated in Fig. 5 of the drawings.

In order that the fan 11 can be cleaned any desired time or repaired, we provide the casing with a hinged door 14 directly beneath said fan, said door normally closing a doorway 15.

Approximately intermediate the ends of the casing 9 we arrange a baffle plate or grating 16, said casing being provided with a doorway 17 adjacent to said baffle plate, whereby the baffle plate or grating can be cleaned. The doorway 17 is normally closed by a hinged door 18.

The bottom of the casing 9 is provided with brackets 19 for supporting a burner casing 20, this burner casing being cylindrical in form and having its ends covered with wire gauze 21. Gas is admitted to the burner casing 20 from a suitable gas supply pipe 22 arranged beneath the burner casing 20.

When the heater is in operation, the heat emitted from the burner casing is distributed through all parts of the casing 9 when passing through the baffle plate or grating 16, and as the heat units impinge the fan 10, the centrifugal force of this fan is adapted to further distribute the heat units within the shell 4, before they are finally ejected from the register 3 into the hall or compartment to be heated.

The baffle plate or grating 16 also serves to retard the heat products a sufficient time to permit of the cellar or compartment in which the heater is located to become heated, and as said heater is suspended from the floor of the compartment above, perfect safety is insured from danger of fire or any injury that might be caused by the overheating of the heater.

Having now described our invention what we claim as new, is:—

In combination, a floor having a register opening and a register mounted in said opening, a heater comprising a shell engaging the

register at its upper end, a plurality of supporting straps connected at their lower ends to the shell and at the upper end to the floor, a plurality of angular supporting brackets  
5 attached to the shell at the lower end of the latter, a casing secured at its upper end to said brackets, a fan frame mounted in said casing at the upper end thereof, a fan carried by said frame, a grating arranged within the  
10 casing intermediate the ends thereof, a burner-casing support in the lower end of

said casing, and a burner casing carried by said support.

In testimony whereof we affix our signatures in the presence of two witnesses.

EDWARD J. DROZ.  
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CHARLES H. DROZ.

Witnesses:

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