

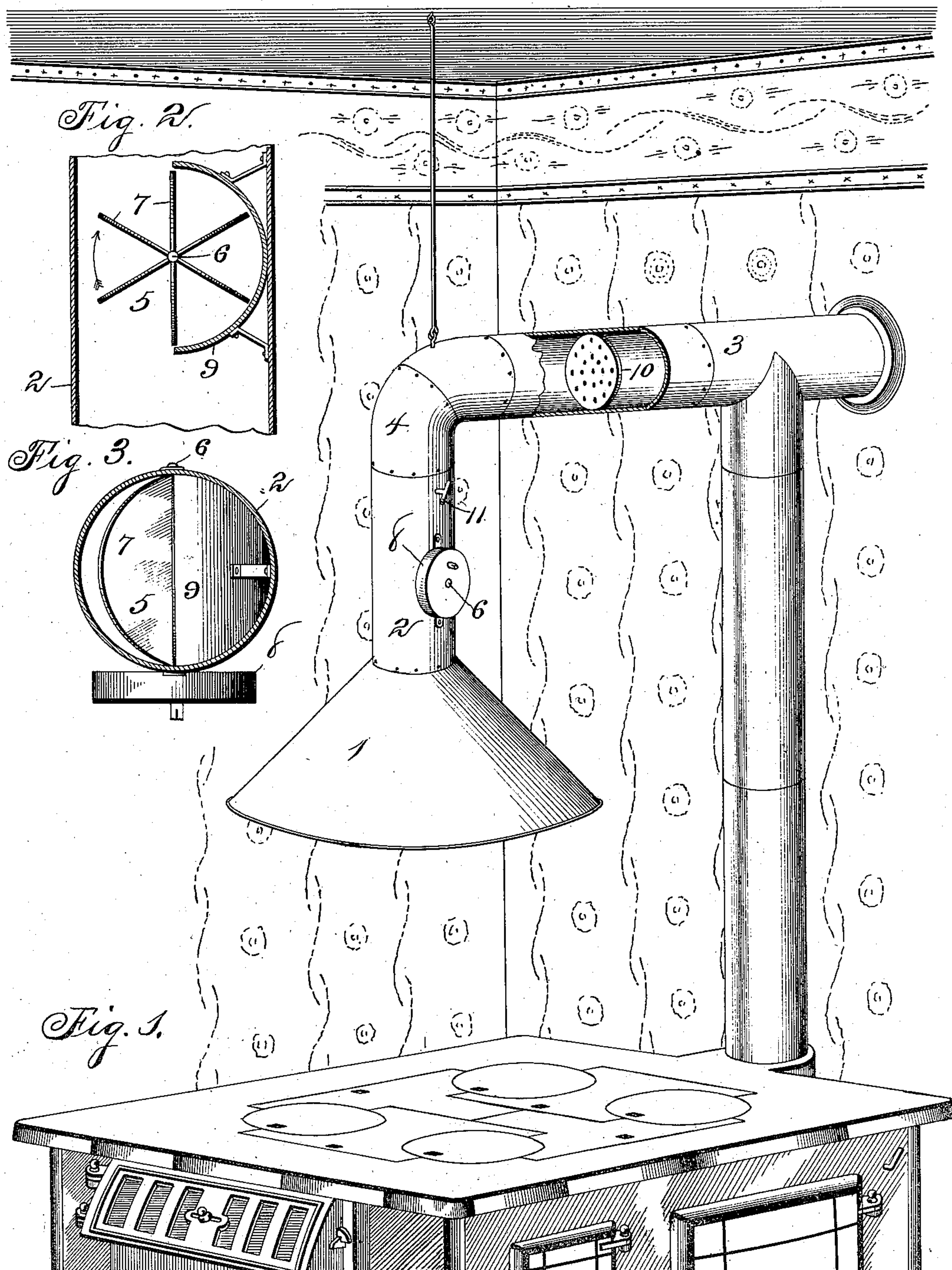
(No Model.)

B. F. WOOD.

AUTOMATIC KITCHEN VENTILATOR AND STOVEPIPE ATTACHMENT.

No. 594,508.

Patented Nov. 30, 1897.



Witnesses: } Inventor: Benjamin F. Wood,
W. J. Sankey } By Thomas G. and J. Ralph Orwig, Attys.
R. H. Orwig

UNITED STATES PATENT OFFICE.

BENJAMIN F. WOOD, OF DES MOINES, IOWA, ASSIGNOR OF ONE-HALF TO
C. D. RAWSON, OF SAME PLACE.

AUTOMATIC KITCHEN-VENTILATOR AND STOVEPIPE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 594,508, dated November 30, 1897.

Application filed July 27, 1894. Renewed April 12, 1897. Serial No. 631,840. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. WOOD, a citizen of the United States of America, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Automatic Kitchen - Ventilator and Stovepipe Attachment, of which the following is a specification.

My invention consists in the arrangement and combination of operative parts with a stovepipe and stove, as hereinafter set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my complete ventilator, showing the same connected to a stovepipe, as required for practical use. Fig. 2 is a sectional view of a portion of the ventilator, showing the fan and deflector of which use is made in carrying out my invention. Fig. 3 is a transverse sectional view of the ventilator, more clearly showing the fan and deflector.

Referring to the drawings, the numeral 1 designates the hood, which is formed of sheet metal and conical in side elevation and open at its lower and upper ends, and fixed to the upper end thereof is a vertical pipe 2, which is connected to horizontal pipe 3 by means of an elbow 4. When the ventilator is used in connection with a wood or coal stove, the stovepipe is connected directly to the horizontal pipe 3, which leads to the chimney.

5 indicates a fan composed of a straight shaft 6 and a series of blades 7, semicircular in form and extended radially from said shaft.

The numeral 9 indicates a deflector made of a piece of round sheet metal and bent in the form of a semicircle and having braces riveted to the end portions of the outer faces thereof. This deflector is of a size and shape adapted to enter an ordinary round stovepipe and be secured therein by the said braces being riveted thereto. The fan is connected with the stovepipe by having its shaft 6 extended through openings in the pipe, with one end thereof projecting some distance through the openings, and is adapted to rotate freely within the deflector. This, it is obvious, will

provide a cheap and simple exhaust-fan that may readily and easily be connected with an ordinary stovepipe without cutting the pipe.

8 indicates a casing having perforated lugs at its top and bottom and adapted to admit the projected end of the shaft 6. Suitable spring-actuated clockwork mechanism is placed within this casing adapted to rotate the fan.

10 designates a perforated partition which is located in the horizontal pipe 3 between the elbow 4 and the intersection of the stovepipe. This perforated partition is to prevent the soot or dust from passing from the chimney into the ventilator and room.

A damper 11 of ordinary construction is located in the pipe 2, immediately above the fan 5, for regulating the draft of the ventilator in connection with the clockwork.

Having thus described the operation of each part in connection with the mechanical description thereof, I shall now proceed to describe the operation as a whole.

When a fire is placed in the stove, the heat radiating therefrom will rise, and the fan being in motion will cause a suction in the hood which will cause all of the heat and smell arising therefrom to be drawn up through the pipes into the chimney, and thus prevent any odor from escaping through the room, as otherwise would be the case if the ventilation was dispensed with.

Having fully described my invention, what I claim is—

A kitchen-ventilator comprising a stovepipe-elbow having a hood fixed to its lower open end, a rotary fan within the pipe and above the hood, a spring-motor in a case fixed to the outside of the pipe to operate the fan, a damper within the elbow and a perforated partition in the upper portion of the elbow-shaped pipe, in combination with a stove, substantially as shown and described to operate in the manner set forth.

BENJAMIN F. WOOD.

Witnesses:

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