

No. 682,477.

Patented Sept. 10, 1901.

W. A. MARTEL.
SMOKE CONSUMER.

(Application filed Apr. 16, 1901.)

(No Model.)

Fig 1

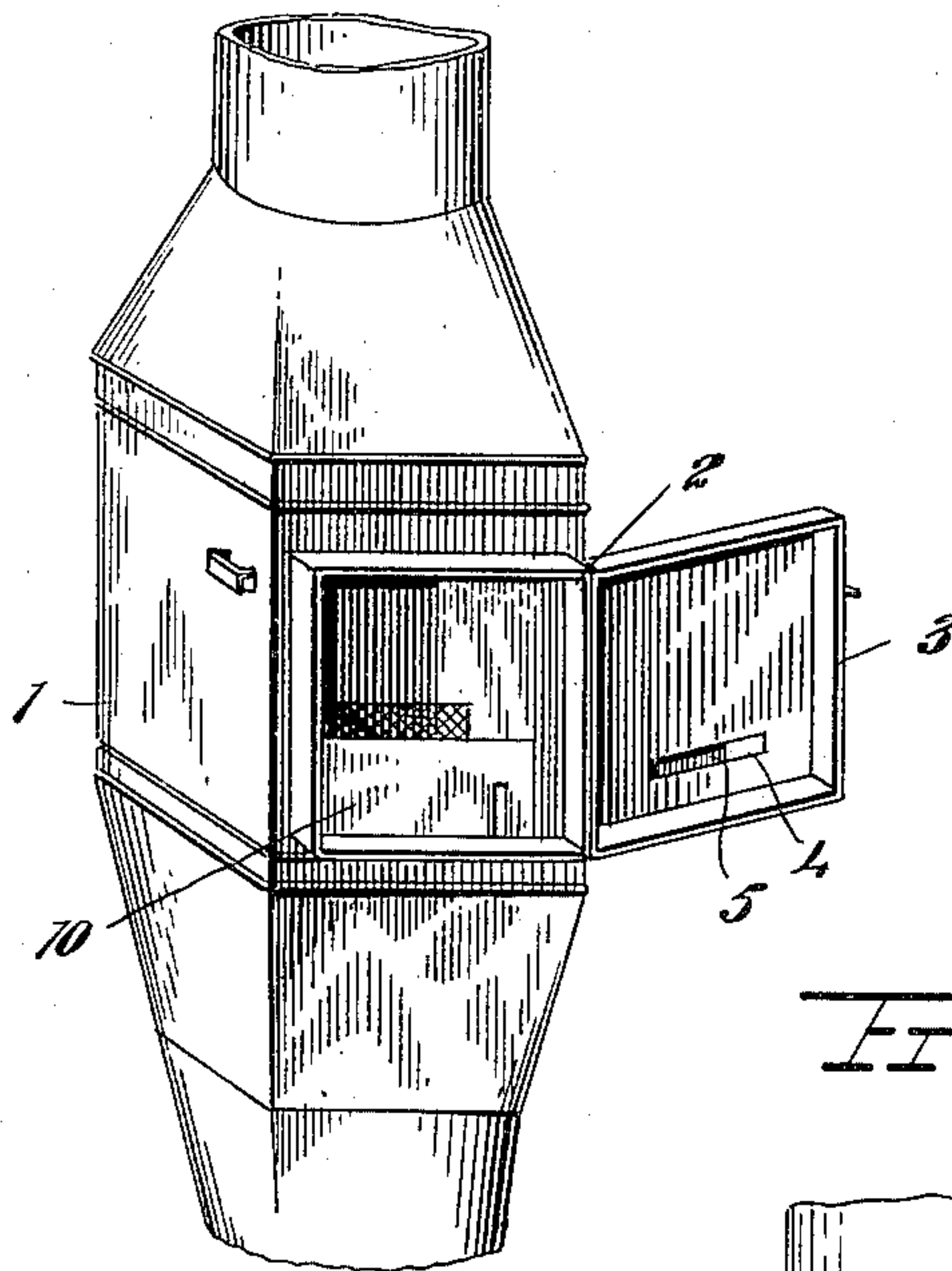


Fig 2

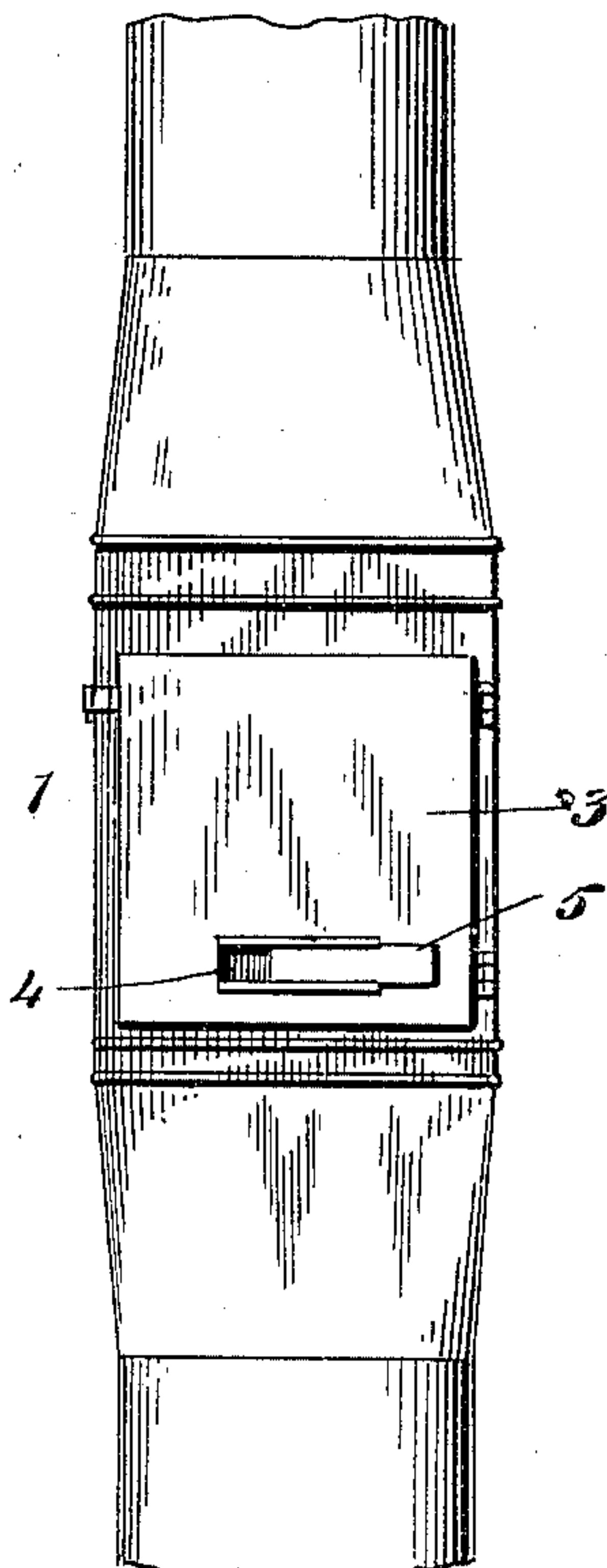


Fig 3

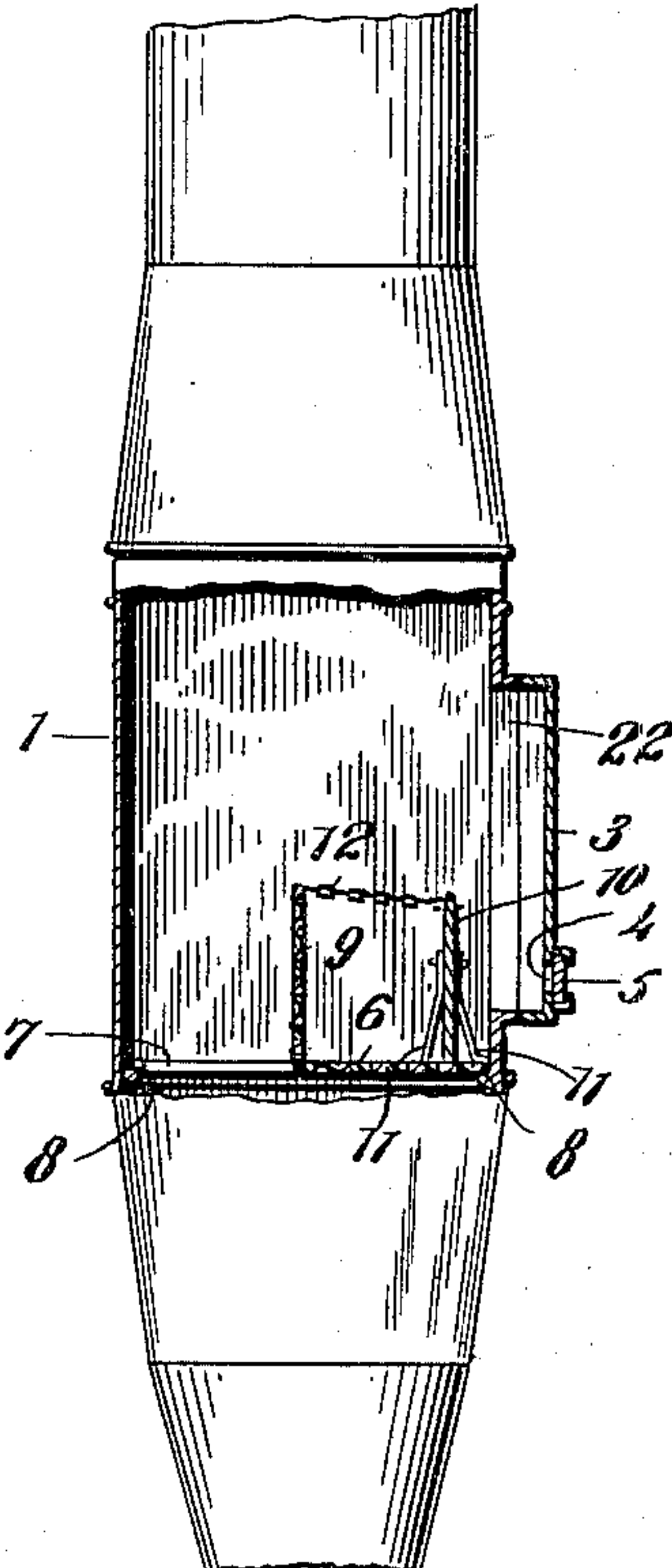


Fig 4

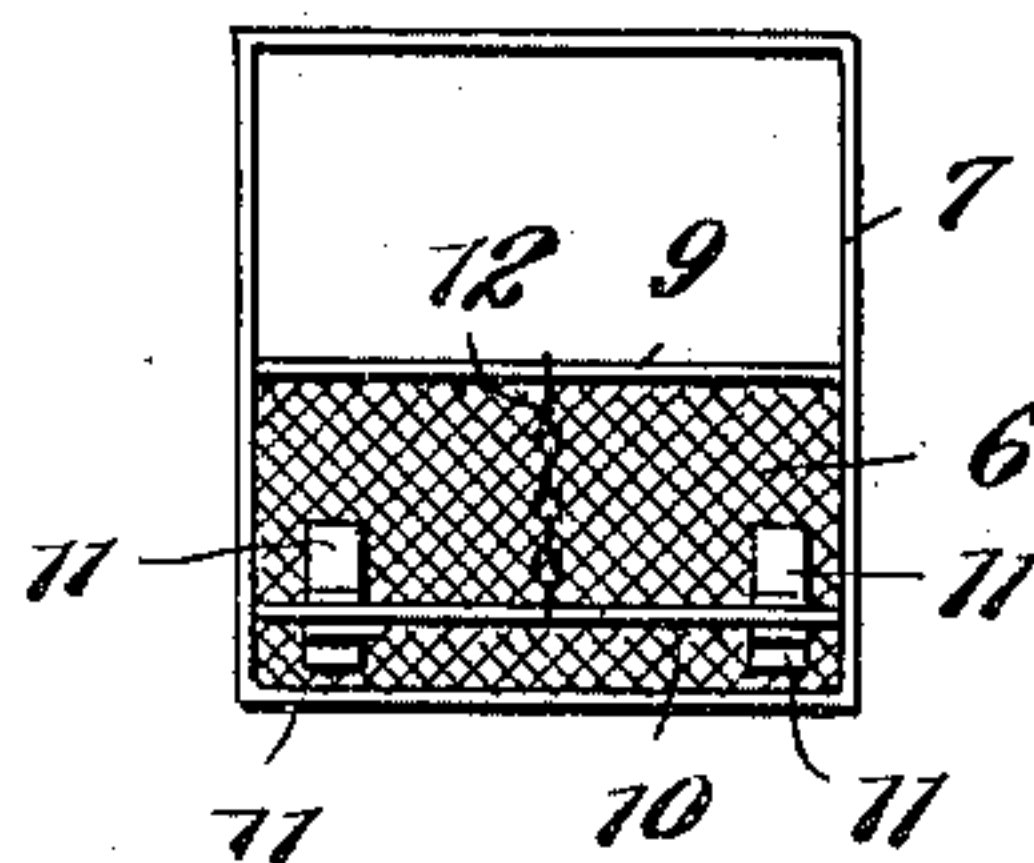
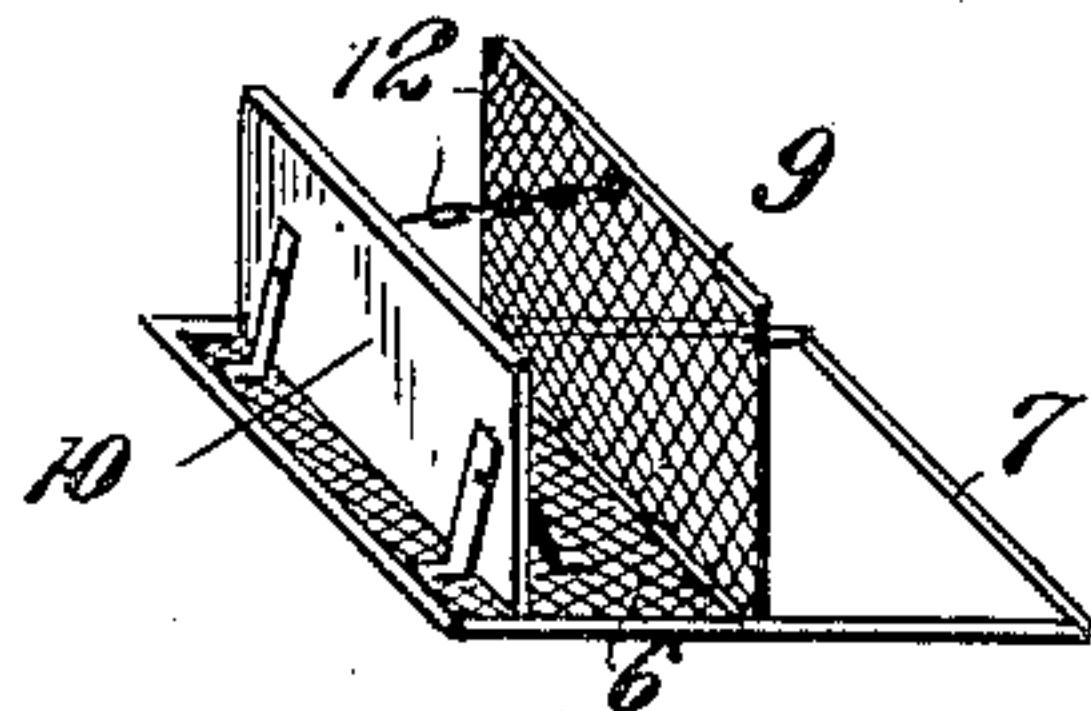


Fig 5



WITNESSES:

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WILLIAM ANGUS MARTEL, OF BRANDON, CANADA.

SMOKE-CONSUMER.

SPECIFICATION forming part of Letters Patent No. 682,477, dated September 10, 1901.

Application filed April 16, 1901. Serial No. 56,053. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ANGUS MARTEL, photographer, a citizen of the United States of America, and a resident of Brandon, in the Province of Manitoba and Dominion of Canada, have invented a new and Improved Smoke-Consumer, of which the following is a full, clear, and exact description.

This invention relates to improvements in devices designed to be attached to a stove or heater for consuming products of combustion—such as smoke, soot, and gases—arising from a coal or wood fire; and the object is to provide a device for this purpose that may be readily attached to a stovepipe and by means of which sparks may be arrested and the products of combustion burned and the heat therefrom utilized, thus resulting in an economy of fuel.

I will describe a smoke-consumer embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a smoke-consumer embodying my invention. Fig. 2 is an elevation thereof. Fig. 3 is a vertical sectional view of the same. Fig. 4 is a plan showing a grating and baffle employed, and Fig. 5 is a perspective view thereof.

Referring to the drawings, 1 designates a pipe designed to be substituted for the usual first length of the smoke or stove pipe of a stove or heater. This pipe 1, as shown, is rectangular in cross-section; but it may be otherwise shaped without departing from the spirit of my invention. At the front or one side the pipe has an opening 2, which may be closed by a swinging door 3, in the lower portion of which is an opening 4 to permit the entrance of cold air, this opening being controlled by a slide-valve 5. Arranged in the pipe below the opening 2 is a partition 6 of open-work material—such, for instance, as gauze. This partition 6 is mounted on a wire frame 7, which rests upon ledges 8 on the inner side of the pipe, as clearly indicated in Fig. 3. The partition 6 is made in two sections, one section 9 being mounted to swing relatively to the other section, and supported

on the partition at the forward end or near the inlet-opening 4 is a baffle-plate 10. This baffle-plate is supported in vertical position by means of braces or legs 11 at opposite sides. The swinging section 9 of the partition may be held in an open position or at any required opening by means of a chain 12, extended from the swinging section to the baffle-plate.

In operation when the slide-valve 5 is open and a fire burning in the stove or heater cold air will pass through the opening 4 and strike against the baffle-plate, which will direct it downward, so that the cold air will be drawn through the partition to mingle with the products of combustion underneath the partition, and this extra supply of oxygen will cause the production of a great heat, which will consume the smoke and cinders and gases. The open-work partition, while permitting of a suitable draft, will prevent the upward passage of sparks. In starting the fire the large door is to be opened and the screen portion 9 raised, after which the large door is closed and the fire kindled. When the fire is kindled, close the front drafts in the stove or heater. Then lower the screen portion 9 and open the slide or valve 5, so that a current of cold air may set in and pass down the pipe and feed the fire, forcing down all gas, soot, smoke, &c., which effects a complete combustion. When for any reason it is desired to have the heat ascend the pipe, the portion 9 of the screen or partition is to be raised and held open.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A smoke-consumer, comprising a pipe-section adapted to be connected with the smoke-pipe of a stove or heater, the said pipe-section having an air-inlet at one side, a valve for said inlet, a partition of open-work material arranged in the pipe below said opening, and a baffle-plate on the partition, substantially as specified.

2. A smoke-consumer, comprising a length of pipe designed to be placed in connection with the smoke-pipe of a stove or heater, the said pipe having an air-inlet opening at one side, a valve for said opening, a partition of open-work material arranged in the pipe below said opening, the said partition consist-

ing of two sections, one section being mounted to swing, and a baffle-plate mounted on said partition, substantially as specified.

3. A smoke-consumer, comprising a length
5 of pipe having an opening at one side, a door for said opening, said door having an air-inlet opening, a valve for the air-inlet opening, a partition of open-work or screen material, a frame to which the partition material is at-
10 tached, means for supporting the partition in the pipe below the air-inlet opening, a

baffle-plate extended upward from the partition near the air-inlet opening, and braces extended from the baffle-plate to the partition, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM ANGUS MARTEL.

Witnesses:

E. S. BENNEST,
ROBT. HALL.