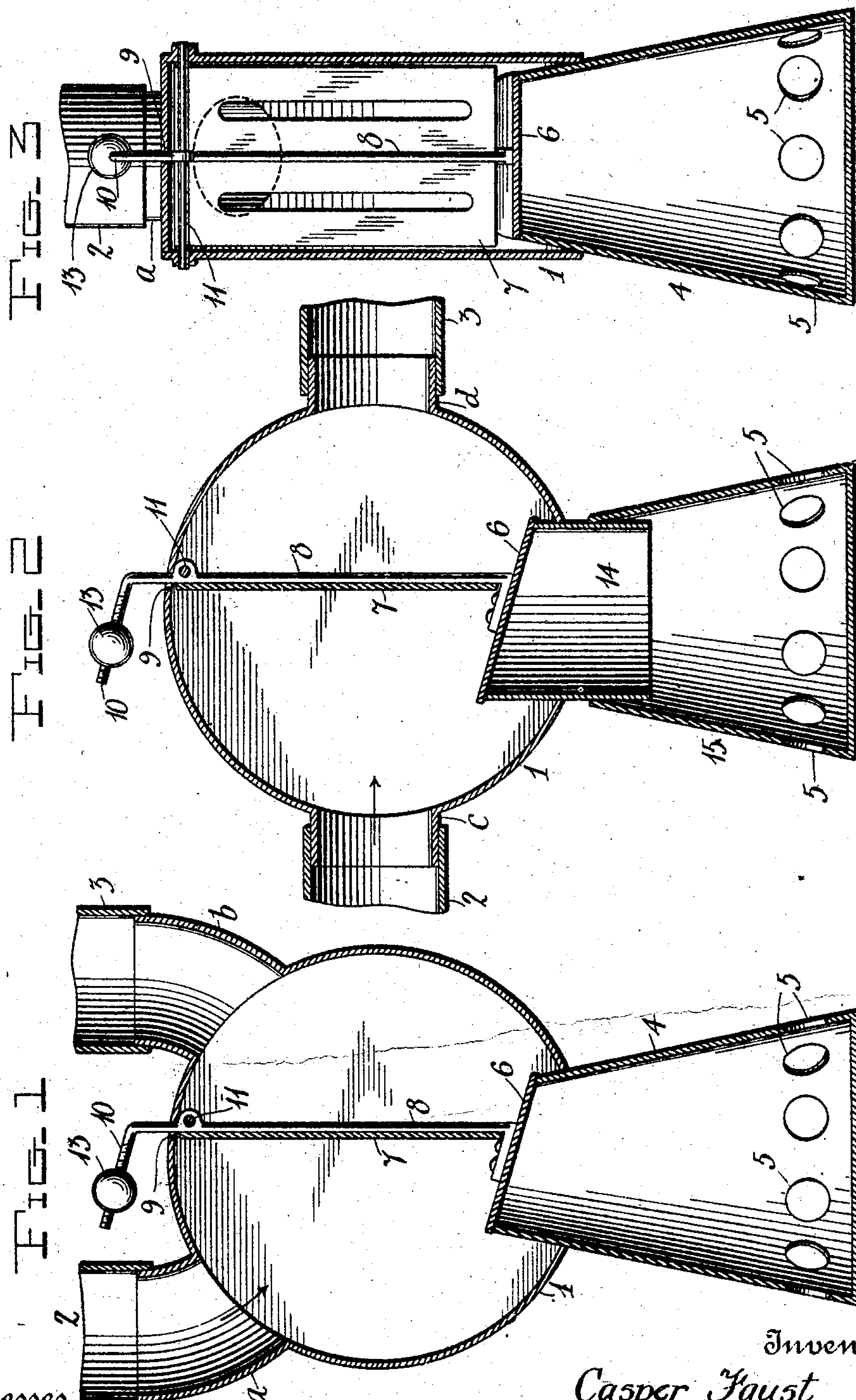
No. 806,653. PATENTED DEC. 5, 1905.

C. FAUST.

AUTOMATIC DRAFT REGULATING HEATING SYSTEM.

APPLICATION FILED MAY 9, 1905.



Witnesses

[illegible]

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AUTOMATIC DRAFT-REGULATING HEATING SYSTEM.

No. 806,653. Specification of Letters Patent. Patented Dec. 5, 1905.

Application filed May 9, 1905. Serial No. 259,528.

To all whom it may concern:

Be it known that I, CASPER FAUST, a citizen of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Automatic Draft-Regulating Heating Systems; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in automatic draft-regulating heating systems; and it consists in the construction, combination, and arrangement of devices hereinafter described and claimed.

The object of my invention is to provide an improved apparatus which may be connected to and included in the smoke-discharge pipe of a stove or furnace and which will serve as a drum to radiate the heat from the heated products of combustion and also to automatically control the draft, so as to preserve an even temperature.

In the accompanying drawings, Figure 1 is a sectional view of an apparatus embodying my improvements, the same being especially adapted for use in connection with a heating-stove. Fig. 2 is a similar view showing a modified construction of my improved apparatus especially adapted for use in connection with a furnace, and Fig. 3 is a central view taken on a plane at right angles to that of Fig. 1.

In the embodiment of my invention I provide a flue-section, which is here shown as a drum 1 and which is provided with sections *a b* for attachment, respectively, to the pipe 2, which leads from a stove, and to a pipe 3, which leads from the said section 1 to the chimney. The said section or drum may be of any suitable size and may be of any suitable construction. It is here shown as provided with a supporting intake-cone 4, the lower end of which is closed and which is provided near its lower end with a series of openings 5. The upper end of the intake-cone extends into the bottom of the drum or section 1, is inclined, and forms a seat for a damper 6. The said damper is secured to and is at the lower end of a vane or baffle-plate 7, which is here shown as secured to a rod 8, the lower end of the said rod projecting below the said vane or baffle and being attached to the said damper. The upper portion of the rod passes through an opening 9 in the top of the drum or section 1 and terminates in an arm 10, which is screw-threaded. Said rod is pivotally connected to the upper portion of the section or drum 1, as at 11, for vertical angular movement to adapt the vane or baffle-plate and the damper for such movement. On the screw-threaded arm 10 is an adjusting and counterbalancing weight 13.

The weight of the damper and vane combined exceeds that of the regulating-weight 13, so that the damper is normally closed to prevent the admission of air into the drum through the openings 5. The heated products of combustion from the stove pass through the drum or section 1 in the direction indicated by the arrow in Fig. 1, the velocity of the current depending on the heat of such products. When the heat of the same exceeds a certain predetermined degree, the current, by acting against the vane 7, partly turns the rod 8, so as to partly raise the damper 6 and cause air to be admitted to the drum through the cone 4, hence reducing the draft of the stove. As soon as the temperature of the heated products becomes lowered the damper closes automatically by overcoming the weight 13, and so on, the result being that the vane, damper, and weight-lever 10 coact to automatically regulate the draft.

In Fig. 2 I show a modified construction of my invention, in which the drum is provided at opposite sides with connections *c d* for attachment, respectively, to the smoke-pipe which leads from the furnace and to a pipe which leads to the chimney. In this form of the invention the supporting-cone is formed of a plurality of sections telescopically connected together, such sections 14 15 being here indicated. Any suitable number of the sections may be provided according to the required height of the drum above the floor.

Not only does my improved apparatus serve to regulate the draft of a stove or furnace, and hence effect an economy of fuel burned therein, but since the supporting-cone of the drum has its intake-opening immediately above the floor the air which is admitted into the drum is the coldest air in the room, as will be understood, so that the apparatus serves also to automatically utilize the coldest air in the room when acting upon the damper.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

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

The herein-described automatic draft-regulator comprising a drum, a supporting-base therefor forming an air-intake discharging into the lower side of the drum and having an inclined upper side, said drum having a connection for the attachment of a pipe leading from the stove or heater, and an attachment for the connection of a pipe leading to a flue, a damper to lie on the upper end of the air-intake, a pivoted vane in the drum between the attachments and connected to the damper, and a counterbalancing-weight for said vane and damper.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CASPER FAUST.

Witnesses:
JOHN KLOECKNER,
JOSEPH KLOECKNER.