

(No Model.)

2 Sheets—Sheet 1.

W. A. SPICER.
COOKING STOVE.

No. 248,808.

Patented Oct. 25, 1881.

Fig. 1 .

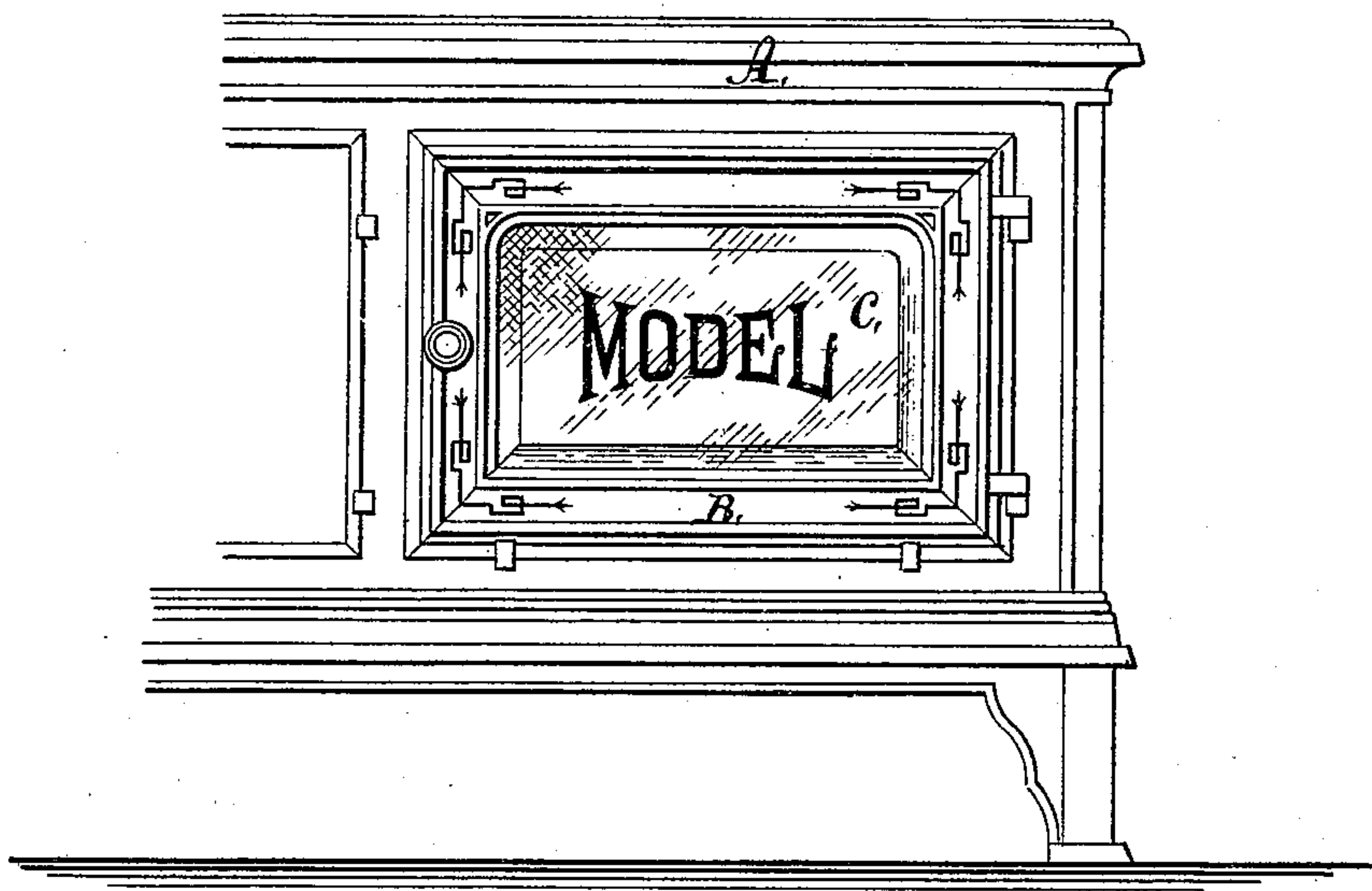
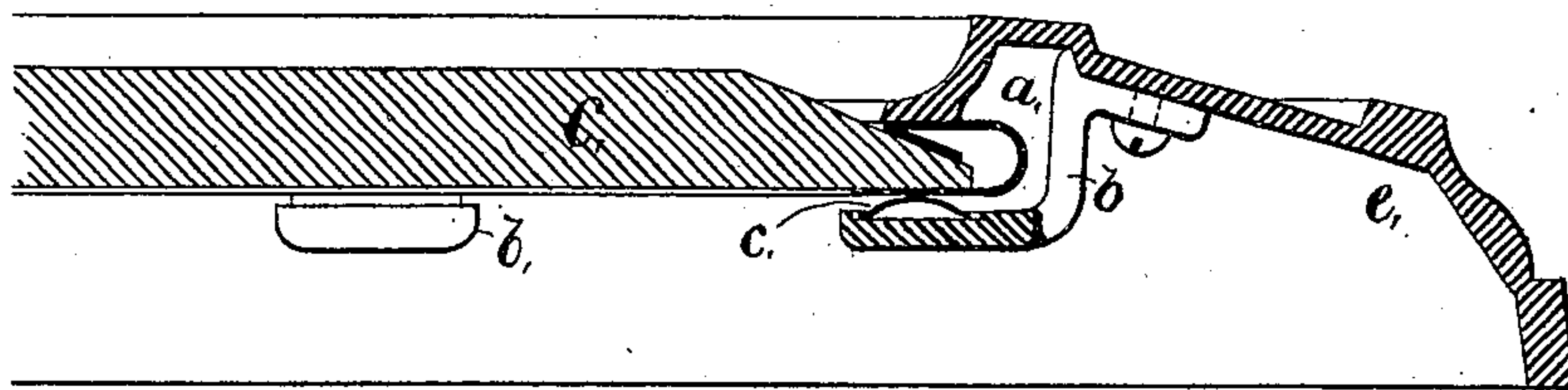


Fig. 2 .



WITNESSES:

Wm. L. Cooper

Joseph A. Miller Jr

INVENTOR:

William A Spicer

by Joseph A Miller
att'y

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Fig. 3.

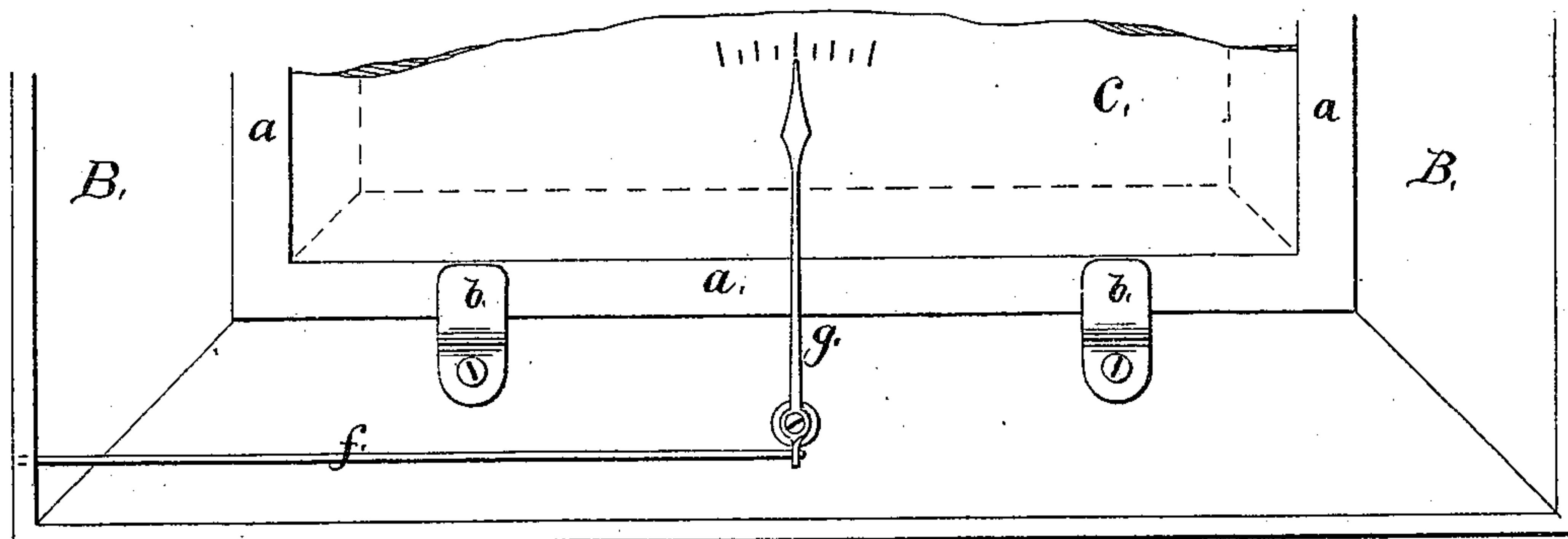
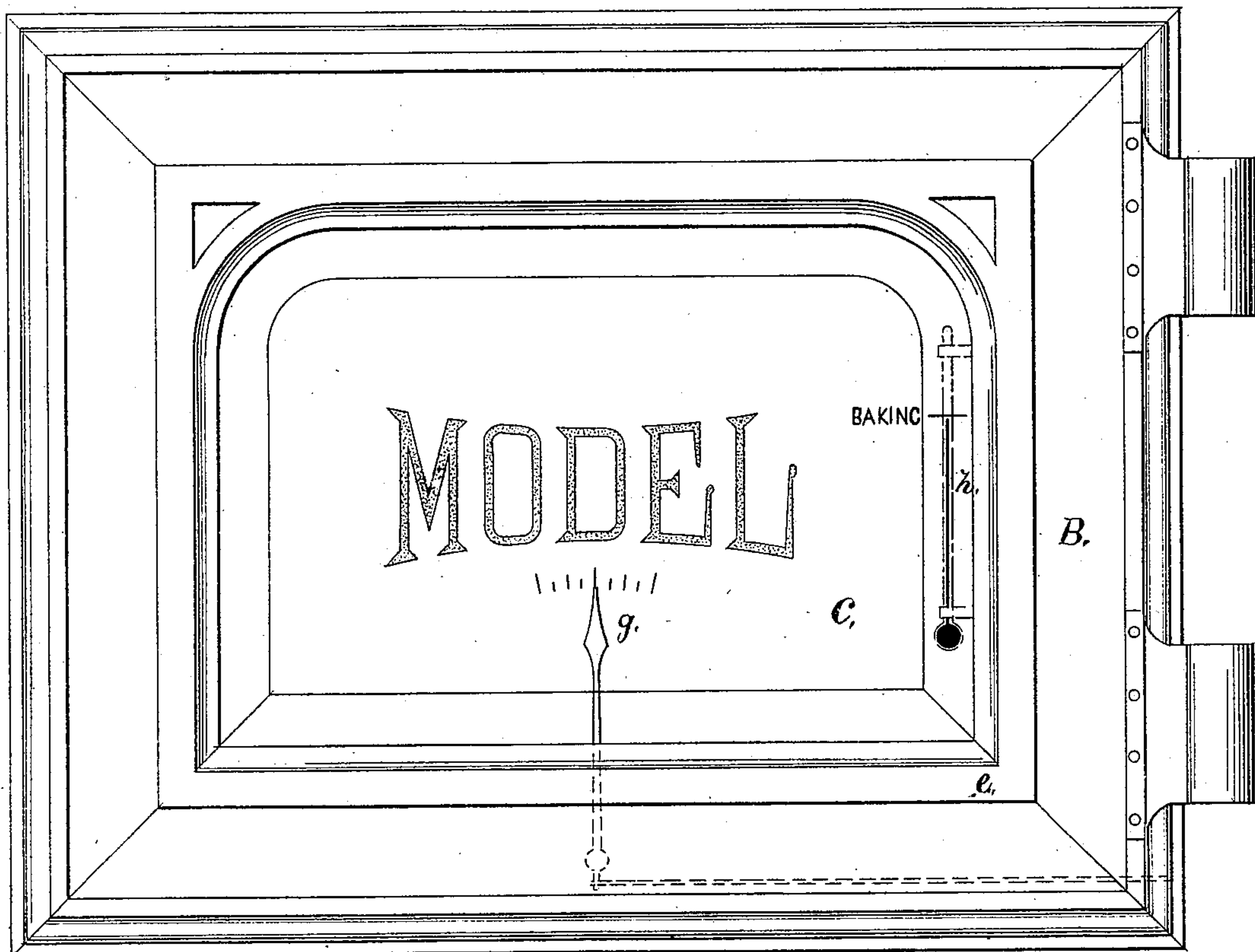


Fig. 4.

WITNESSES:

Wm. L. Cook
Joseph A. Miller Jr

INVENTOR:

William A Spicer
by Joseph A Miller
Atty

UNITED STATES PATENT OFFICE.

WILLIAM A. SPICER, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO
SPICERS & PECKHAM, OF SAME PLACE.

COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 248,808, dated October 25, 1881.

Application filed February 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. SPICER, of the city and county of Providence, and State of Rhode Island, have invented a new and
5 useful Improvement in Cooking Stoves and Ranges; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

10 This invention has reference to an improvement in the oven or ovens of stoves or ranges; and it consists in providing such ovens with a pointer or indicator pivotally connected with the door of said oven and moved by the expansion or contraction of a metal rod connected to
15 its lever-arm, induced by a higher or lower temperature in the oven, to indicate the temperature.

It further consists in providing the oven-door
20 with marks or words, whereby the interior condition of the oven may be indicated by a pointer or indicator pivotally connected with said door and moved by the expansion or contraction of a metal rod connected to the lever-arm of said
25 pointer, induced by a higher or lower temperature in the oven, all of which will be more fully set forth hereinafter.

Figure 1 is a view of part of a cooking stove or range, showing a door of the oven provided
30 with a beveled glass panel. Fig. 2 is an enlarged sectional view, showing a beveled glass panel secured so as to allow of free expansion and contraction. Fig. 3 is a view of a door for a stove or range oven provided with a glass
35 panel and a thermometer placed so that it can be read through the glass panel without opening the door. Fig. 4 is a partial view, showing the interior of the door, showing a thermometer consisting of a pivoted pointer connected with a rod of metal, the ratio of expansion of which is greater than the ratio of expansion of the metal to which it is secured,
40 marks being made on the glass panel, so that the pointer will indicate the condition of the interior of the oven.

In the drawings, A represents a portion of a stove or range; B, the door of the same, and C a glass panel, made of thick glass with a beveled edge. Around the panel *a* is a sheet-
50 metal frame, in which the beveled glass panel is supported, this frame being preferably made

of brass, so as to expand and contract more under variation of temperature than either the iron of the stove or range, or the frame of the door and the glass panel, so that in the expansion and contraction the glass panel shall not
55 be strained, and the brass frame will interpose between them and protect the glass against injury. By using thick glass the same is not so liable to injury by the unequal expansion, and
60 the beveled edges enter the sheet-metal frame like a wedge, so that when the metal (which expands more than the glass under a given rise in temperature) expands it will readily slide on the beveled edge, and when it contracts it
65 will draw up the beveled surface, thus always holding the glass panel firmly, while the same is never strained or liable to break by the opening or closing of the door.

b b represent clamps for holding the sheet-metal frame *a* and the panel, which clamps may
70 be provided with springs *c*, so as to allow still more freedom to the glass panel.

e represents the frame of the door, made, as usual, of cast-iron.

In stoves or ranges used for domestic baking
75 it is desirable to watch the process of baking, and for this purpose the door is frequently opened, and at each opening the temperature of the oven is much reduced. In most kinds
80 of dessert-baking this reduction of the temperature and disturbance of the baking is very injurious and often ruins the articles.

By the use of the glass panel the interior of the oven can be readily seen and the process
85 of baking observed without opening the door. Time and fuel are therefore saved, and the loss of articles by burning, overbaking, or the sudden stoppage of baking is avoided, while inexperienced and timid cooks will be thus enabled
90 to watch the process and secure the exact quality in baking desired.

It is also desirable to ascertain the best heat of the oven to cook or bake certain kinds of dishes or bread, and to know when the desired
95 heat is reached and whether the same is maintained. Some articles must be placed in the oven at a high heat, which must be gradually diminished to obtain the best results, while others require the opposite graduation of heat.
100 To enable the cook to at all times know the condition of the oven, I place within the oven

or upon the door a thermometer, pyrometer, or other heat-measurer, preferring for this purpose the rod *f*, made of metal, such as brass, that will expand more than iron on a given rise in temperature. This rod *f* is secured at one end to the frame of the door, to any other part of the oven, or to a separate iron rod, and at the other end to the short arm of the pointer *g*, the pointer being pivoted to the iron of the door or to the iron rod referred to. The difference in the expansion of the rod *f* will move the long arm of the pointer over either a graduated scale or other marks by which the condition of the oven is indicated—such as “baking” or “baking-point,” “pastry,” “bread,” or other words, marks, or signs. The thermometer *h*, made in the usual manner, but with a small bulb and long glass, may also be used, secured on the inside of the oven, so as to be readily seen through the glass panel.

By this construction of stoves and ranges

their usefulness is much increased, and much time, labor, care, and food are saved, while greater cleanliness is insured, the interior of the oven being open to view.

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

1. The combination, with the door of an oven provided with a glass panel, of the rod *f*, fixed with one end to the door, and the pivoted pointer *g*, to a lever-arm of which the other end of the rod *f* is fixed, all constructed to indicate the temperature of the oven, as described.

2. The combination, with the door *B*, rod *f*, pivoted pointer *g*, and glass panel *C*, of marks or words made on the glass panel, so that the motion of the pointer will indicate the interior condition of the oven, as described.

WILLIAM A. SPICER.

Witnesses:

JOS. A. MILLER,

JOSEPH A. MILLER, Jr.