

W. J. HACKMANN.
BURNER.

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975,859.

Patented Nov. 15, 1910.

Fig. 1.



Fig. 2.

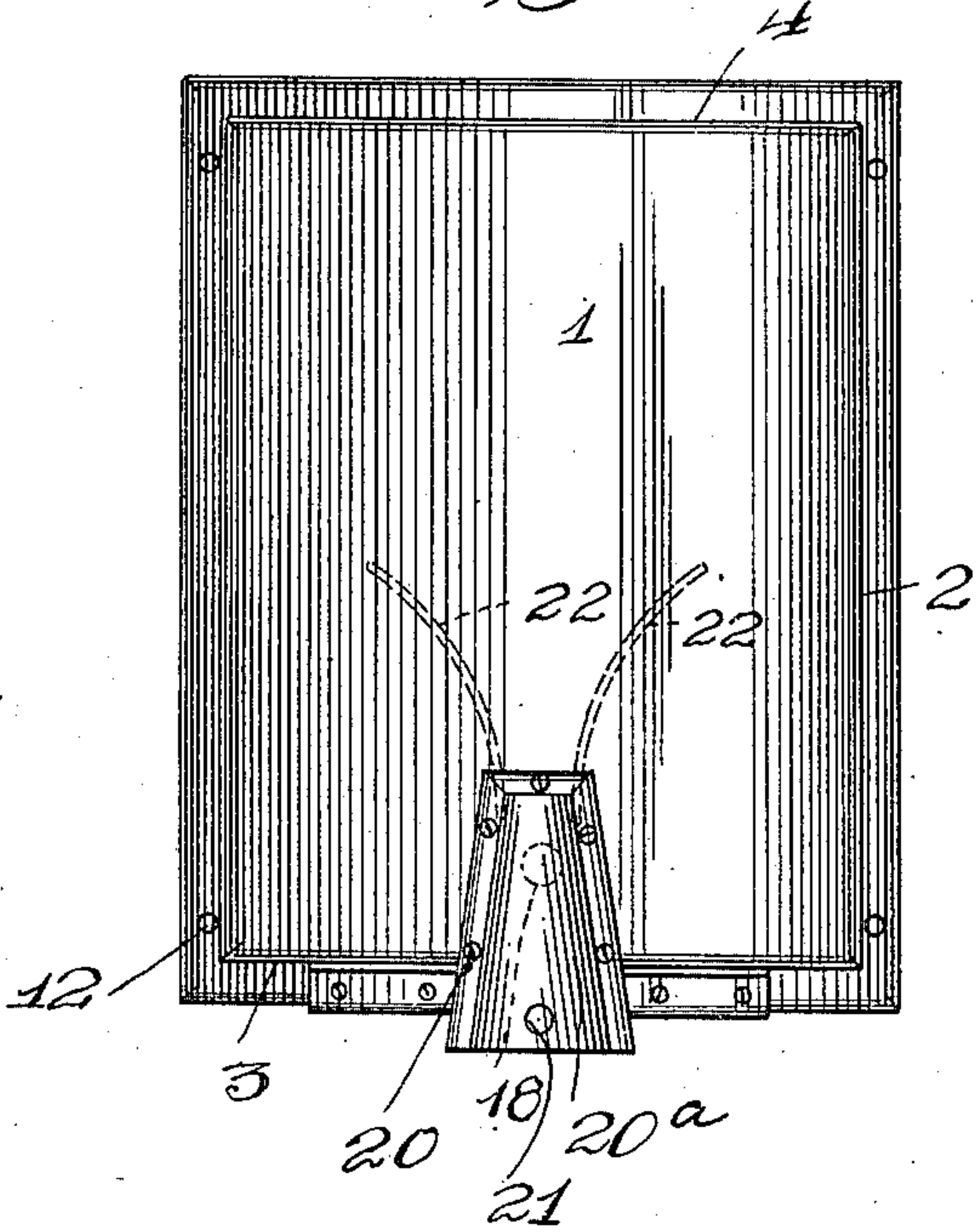


Fig. 3.

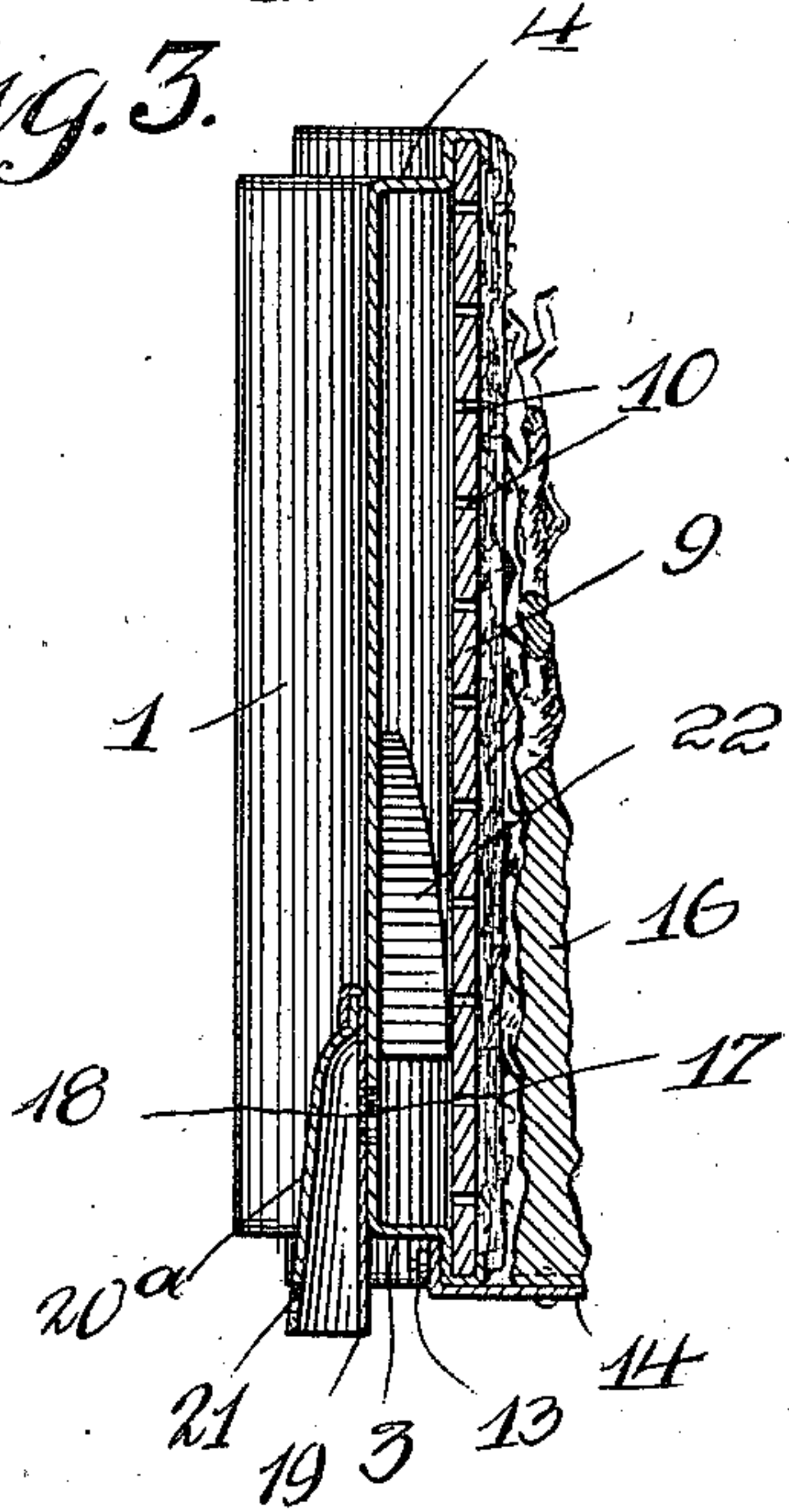
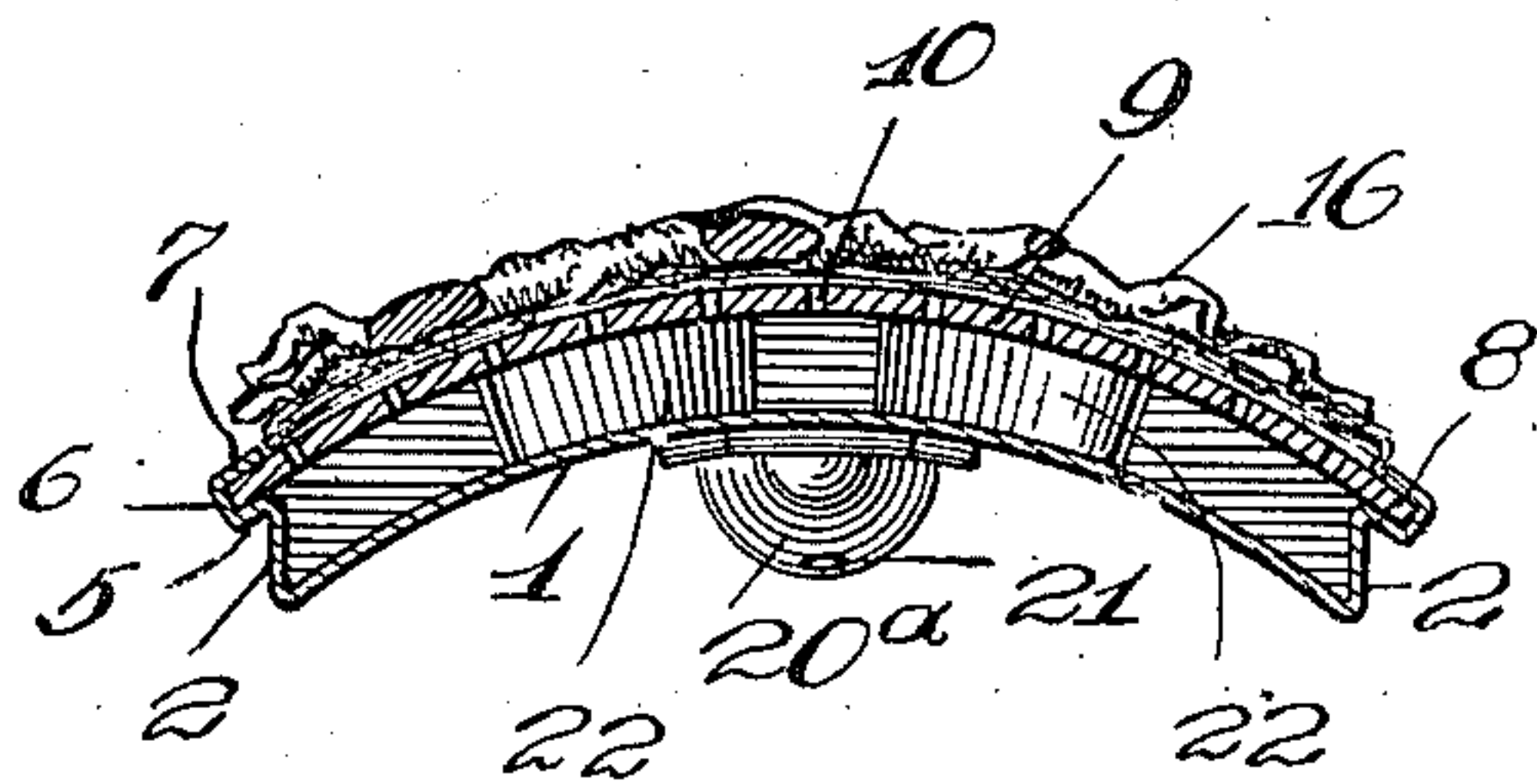


Fig. 4.



WITNESSES

Samuel Payne
N. M. Bogan

INVENTOR

W. J. Hackmann.
Attorneys

by

UNITED STATES PATENT OFFICE.

WILLIAM JOSEPH HACKMANN, OF PITTSBURG, PENNSYLVANIA.

BURNER.

975,859.

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To all whom it may concern:

Be it known that I, WILLIAM JOSEPH HACKMANN, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Burners, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to burners specially designed for use in connection with stoves, open fireplaces, or wherever similar gas burning apparatus is employed.

15 The primary object of my invention is to provide a curved gas burner that can be advantageously used in open fireplaces, the burner being designed whereby it can be easily set in a mantel or open fireplace to enhance the general appearance of the mantel or fireplace.

20 Another object of the invention is to provide a gas burner that will insure a distribution of the gas over the entire ignition surface of the burner, and to furnish a burner with a heat disseminating element that not only increases the efficiency of the burner but adds to its appearance.

25 A further object of the invention is to provide a burner consisting of comparatively few parts, inexpensive and easy to manufacture, durable and efficient for the purposes for which it is intended.

30 The above and such other objects as may hereinafter appear are attained by the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

35 Reference will now be had to the drawing forming a part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof are susceptible to such changes as fall within the scope of the appended claim.

40 In the drawing:—Figure 1 is a front elevation of the gas burner, Fig. 2 is a rear elevation of the same, Fig. 3 is a vertical sectional view of the gas burner, and Fig. 4 is a horizontal sectional view of the same.

45 A gas burner in accordance with this invention comprises a curved gas receiving box or casing stamped or pressed from a single sheet of metal, and it is this structural detail to which I attach considerable importance, inasmuch that it reduces the expense of manufacture, obviates the possi-

bility of a leakage of gas from the casing, and permits of the various parts of the gas burner being easily and quickly assembled. The receiving box or casing comprises a 60 curved back piece 1 having the edges thereof bent forwardly to provide vertical side walls 2, a bottom wall 3 and a top wall 4, these walls are at right angles to the back piece 1 and have their edges bent outwardly, 65 as at 5 in a plane parallel with the back piece 1. The edges are then bent forwardly at an angle, as at 6 and inwardly to provide flanges 7 in parallelism with the outwardly bent portions 5, thus providing a groove 8 70 surrounding the forward edges of the receiving box or casing.

The forward edges of the back piece 1 are shaped or bent around the edges of a curved face-board 9, the edges of said board 75 being supported and retained with the grooves 8. The face-board 9 is made of a non-fusible material, as metal or asbestos fiber and is provided with a plurality of parallel rows of openings or apertures 10. 80 Secured to the outer side of the face-board 9 by silica cement or other adhesive material is asbestos fiber 11, which insures an ignition of gas over the entire outer side or face of the face-board 9, thus producing a sheet 85 of flame that covers the face-board and creates an appreciable draft or suction of sufficient intensity to provide for the drawing of the gas to the surface of the face-board 9.

90 The forward edges of the back piece 1 and the edges of the face-board 9 can be provided with openings 12, whereby the gas burner can be easily secured in an open fireplace or stove.

95 The lower edge of the back piece 1 has secured thereto, as at 13 a forwardly extending bracket 14 and secured to said bracket, as at 15 is a heat disseminating medium, comprising a soft iron ornamental structure 16 extending upwardly in front of the as- 100bestos fiber 11, the structure being curved to conform to the curvature of the gas burner, in this particular instance the outline of a tree is represented with the limbs thereof terminating in proximity to the 105openings or apertures 10 of the face-board 9, whereby the ignited gas will directly impinge the limbs and heat the same to that extent as to produce an intense heat in proximity to the gas burner. 110

The curved back piece 1 adjacent to the lower edge thereof is provided with an open-

ing 17 registering with an opening 18 in a plate 19 secured by screws or other fastening means 20 to the back piece 1, the plate 19 having the edges thereof flanged to receive a frusto-conically shaped hood 20^a serving functionally as an air mixer, the hood having an opening 21 to allow air to enter the same besides passing upwardly into the lower end of the hood. It is into this hood that the gas supply burner extends for supplying gas to the receiving box or casing of the burner.

Arranged between the back piece 1 and the face-board 9 of the burner are two upwardly extending curved deflectors 22, these deflectors preventing the gas from passing upwardly into the central portion of the receiving box or casing, thus preventing an unequal distribution of the gas from the openings 10 of the face-board 9 that would cause the flame to be of greater intensity centrally of the face-board 9 than at the edges thereof. The deflectors 22 deflect the gas toward the vertical edges of the receiving box or casing, and the gas will rebound or circulate to that extent as to insure a flame of equal intensity throughout the surface of the gas burner.

What I claim is:—

A gas burner comprising a curved back piece made of a single piece of material and having the edges thereof bent forwardly and shaped to provide a groove around the forward edges of said back piece, a curved face-board supported in the groove of said back piece and arranged in parallelism with said back-piece, said face-board having apertures formed therein and in conjunction with said back piece providing a gas receiving box, asbestos fiber secured to said face-board, a forwardly extending bracket carried by the lower edge of said back piece, a heat disseminating element mounted upon said bracket in front of said asbestos fiber, an air mixer carried by the lower edge of said back piece and in communication with said gas receiving box, and curved deflectors arranged in said box, substantially as, and for the purpose herein described.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM JOSEPH HACKMANN.

Witnesses:

K. H. BUTLER,
EVA A. MILNE.