

W. J. BEST.
BURNER IGNITER.
APPLICATION FILED MAY 22, 1911.

1,020,075.

Patented Mar. 12, 1912.

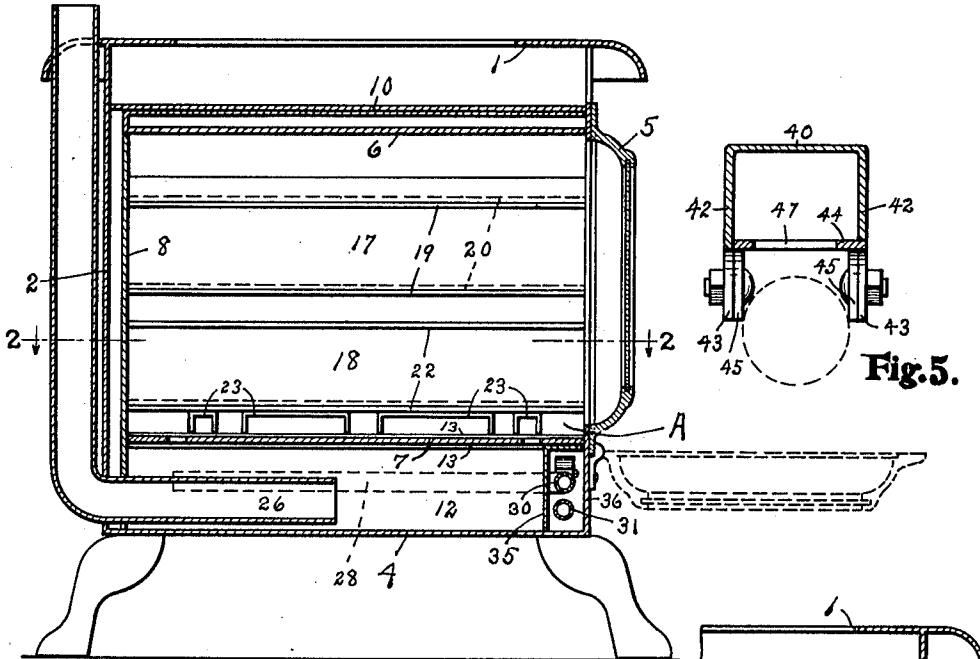


Fig. 1.

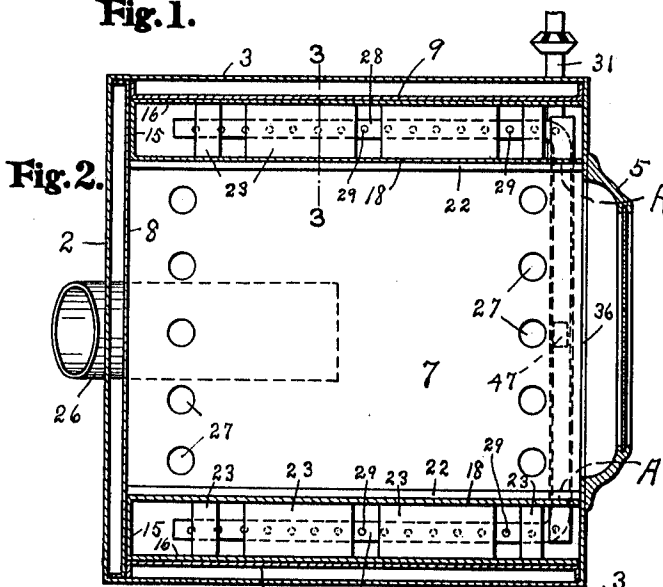


Fig. 2.

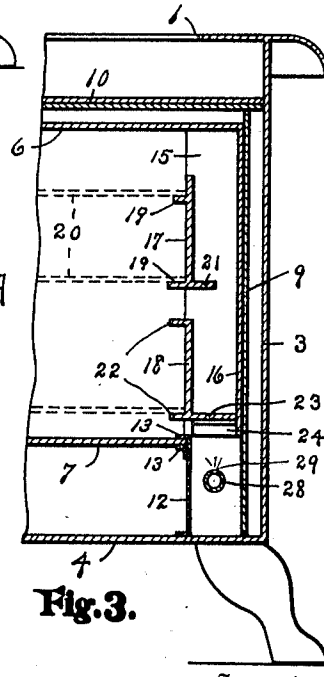
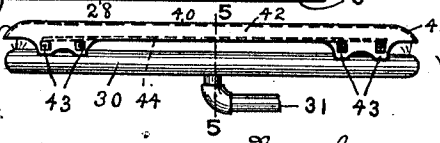


Fig. 3.

Fig. 4.

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WILLIAM J. BEST, OF DETROIT, MICHIGAN.

BURNER-IGNITER.

1,020,075.

Specification of Letters Patent.

Patented Mar. 12, 1912.

Application filed May 22, 1911. Serial No. 628,730.

To all whom it may concern:

Be it known that I, WILLIAM J. BEST, a citizen of the United States, and a resident of Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Burner-Igniter, of which the following is a specification.

This invention relates to gas-stove ovens of the general type shown in the Simpson Patent No. 722,414, dated March 10, 1903, and in the Best Patent No. 979,413, dated Dec. 27, 1910, and its object is to provide means for the ignition of the gas issuing from one burner-tube from the flame of the other.

This invention consists in a flame conductor extending across between the burner tubes of gas-stove ovens, and comprises a pipe of any desired cross-section having a hood at each end extending over gas-openings in a burner-tube and an opening in this conductor intermediate its ends for the escape of the air.

In the accompanying drawing, Figure 1 is a central vertical section of an oven embodying this invention. Fig. 2 is a horizontal section on the line 2—2 of Fig. 1. Fig. 3 is a vertical section on the line 3—3 of Fig. 2. Fig. 4 is a front elevation of the flame conductor. Fig. 5 is a cross section of the conductor at the escape opening.

Similar reference characters refer to like parts throughout the several views.

The drawings show a range casing having a top 1, back 2, sides 3, bottom 4 and front door 5. Within the range is an oven comprising a top 6, a perforated bottom 7, a back 8, and sides 9. The sides and back may be separated from the casing by air spaces. The casing has an inner plate 10 below the top 1, from which the top of the oven may be separated by an air space. Projecting upwardly from the casing bottom 4 are the plates 12 which carry guides 13 in which the oven bottom 7 is slidable.

Within the oven are removable flues comprising upright ends 15, outer plates 16, and longitudinal plates 17 and 18. The longitudinal plates 17 have in-turned ribs 19 to support shelves 20 and the out-turned flanges 21 to cause a portion of the rising burned gases and hot air to enter the oven below these flanges. The plates 18 have similar shelf-supporting ribs 22 and between their lower edges and the plates 16 are the deflector plates 23 having down-turned flanges

24. The pipe 26 extends horizontally between the bottoms 4 and 7, the inlet end being preferably about midway between the front and rear rows of perforations 27 in the plate 7. The pipe may extend in any desired direction after leaving the range. Burner tubes 28 extend horizontally between the plates 12 and the sides 9 and have holes 29 for the passage of the gas. They connect at their front ends to the cross pipe 30, which, in turn, is connected to and supplied by the feed pipe 31. Any desired connection may be had between the pipe 31 and the source of gas supply.

The flame conductor may be transversely positioned at any point on the tubes 28, but is preferably located at the front of the oven. Between the bottoms 4 and 7, and between the plates 12 which support the bottom 7 is an upright plate 35, which is parallel to the front plate 36 of the casing. Within the small chamber thus formed, and below the bottom 7 of the oven, are the gas pipes 30 and 31, and the flame conductor which constitutes the present invention. This conductor is a horizontal body of any desired cross section, having hoods extending over perforations in the burner pipes so that the body may fill with an explosive mixture. The preferred construction is shown in Figs. 4 and 5.

Two strips of sheet metal may be properly pressed to form the conductor. The upper portion consists of a longitudinal top 40 having downwardly curved ends 41 to form hoods, and sides 42, having the feet 43 adapted to rest on the cross pipe 30. The lower portion of the conductor is formed of a flat plate 44 and small lugs or feet 45 secured to the feet 43. This plate 44 forms the bottom of the flame conductor, and its length is so much less than the upper portion that spaces are left at the ends of the conductor, immediately over burner openings in the burner tubes 28. An opening 47, intermediate the ends of the conductor, preferably in its bottom, permits the escape of the air within the tube.

When gas is turned on, it will flow through the pipes 31 and 30 and out of the perforations 29. It immediately rises and may be ignited at an opening A at either side of the oven. When the gas at one side only is lighted, as has happened because of the ignorance or absent-mindedness of the cook, the gas from the other side soon fills

the oven and an explosion results. The flame conductor shown in the drawings permits mixed gas and air to pass from the openings 29 under the ends 41, up and inward toward the opening 47 through which the air escapes. When the gas at one side is ignited, a flame of explosion runs through the body of the conductor and immediately ignites the gas at the other side of the oven. As this flame conductor is inclosed except at its ends, there is no danger of injury to the person lighting the burners. The design and proportions of this conductor may be varied to meet the requirements of other designs of burners.

Having now explained my construction, what I claim as my invention and desire to secure by Letters Patent is:—

1. In a gas stove, the combination with a plurality of burner tubes having gas openings, of a flame conductor extending above and across between the tubes and comprising a hollow tubular body having openings in its bottom at the points where it extends over openings in the burner tubes and means to position it above said tubes, said body having an opening intermediate its ends to

permit the escape of air so as to permit the passage of gas from both of the burner tubes.

2. In a gas stove, the combination with a plurality of burner tubes having gas openings, of a flame conductor extending across between the tubes and comprising a bottom, sides and top, the top having downwardly inclined ends to form hoods over the tubes, the bottom ending short of the tubes to leave openings above the tubes for the admission of gas from openings in the tubes, and the sides connecting the top and bottom and formed with feet to support the flame conductor, said conductor having an opening in its bottom intermediate the ends to permit the escape of air so as to permit the passage of gas from both of the burner tubes.

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

WILLIAM J. BEST.

Witnesses:

EDWARD N. PAGELSEN,
ELIZABETH M. BROWN.