

A. ESPOSITO.  
FUEL IGNITER.  
APPLICATION FILED APR. 20, 1909.

934,512.

Patented Sept. 21, 1909.

Fig. 1.

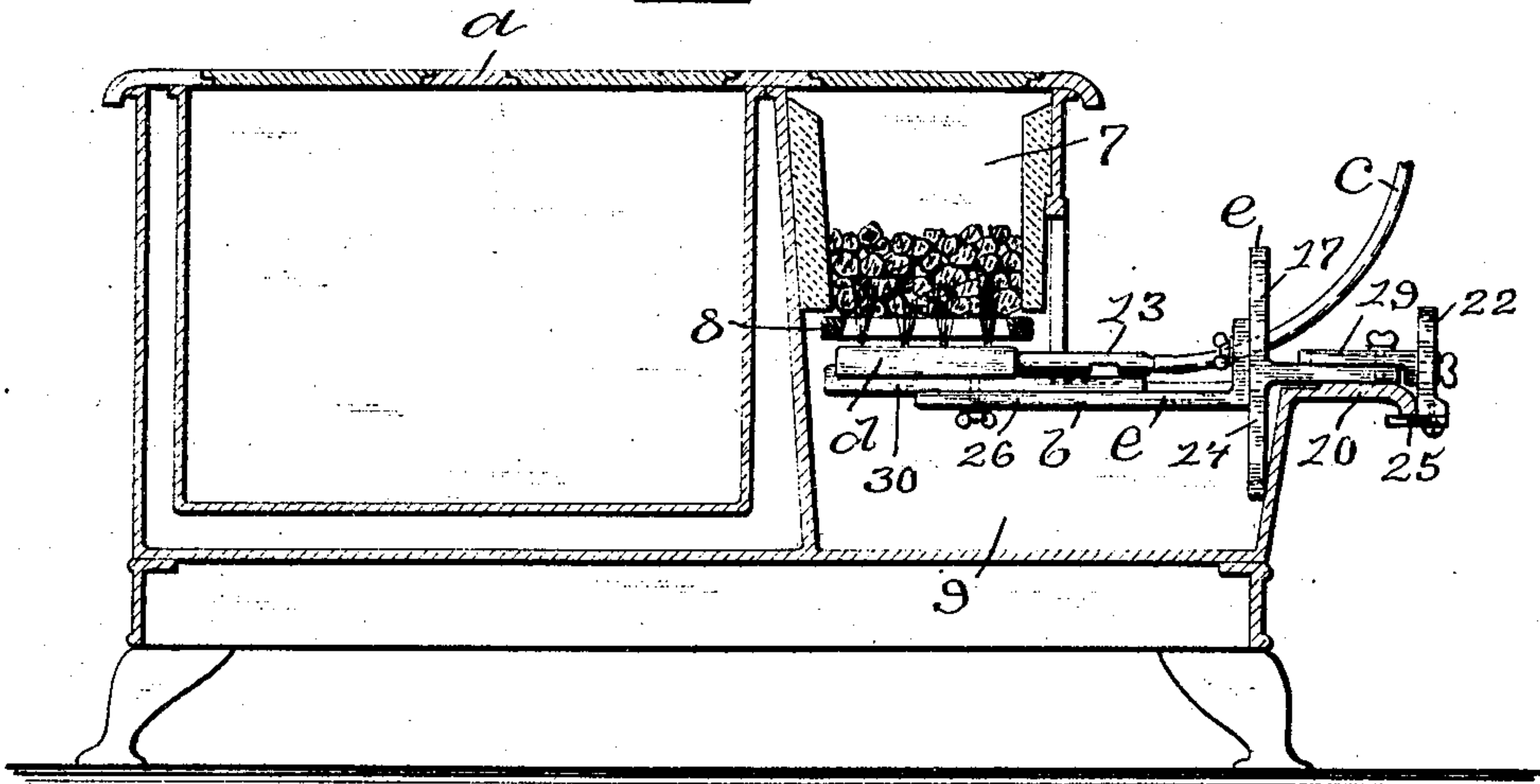


Fig. 2.

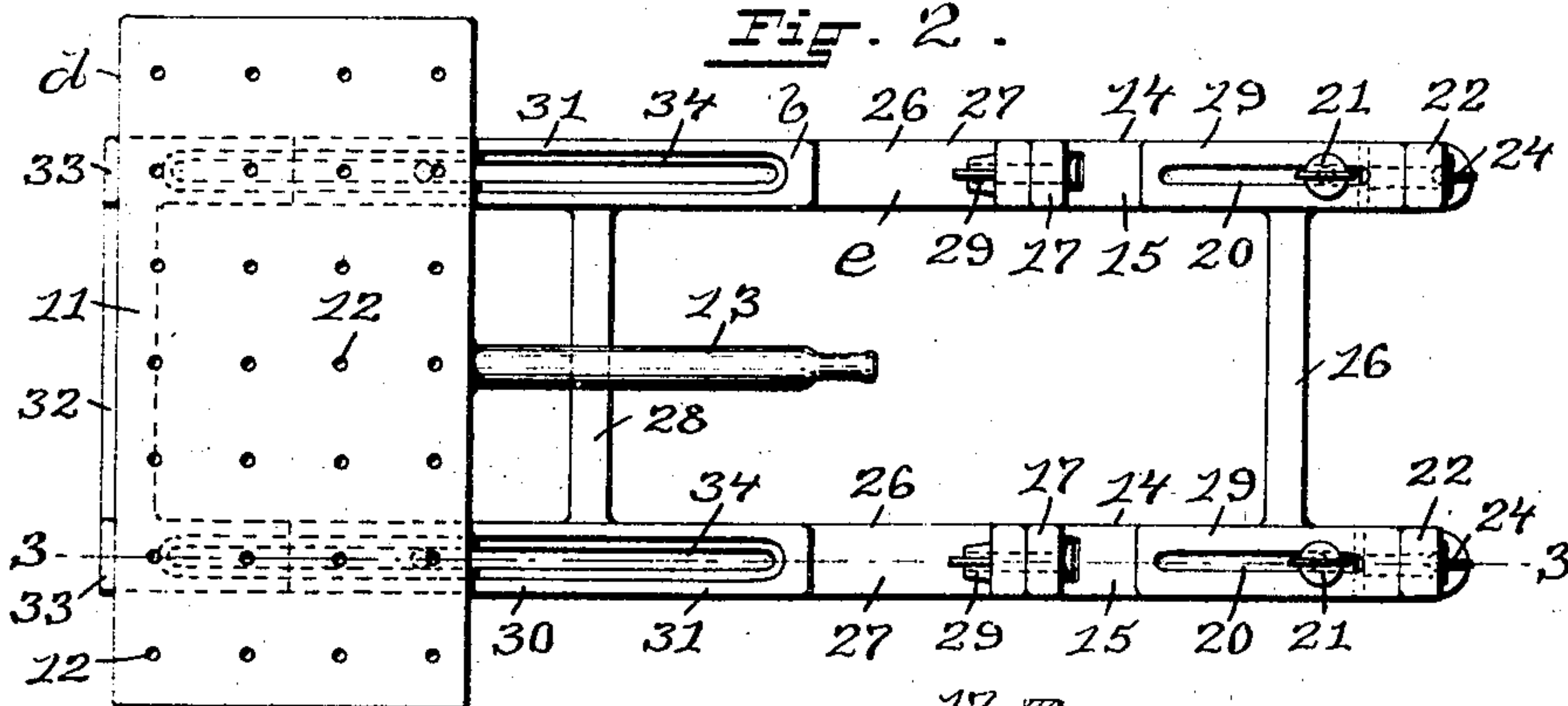


Fig. 3.

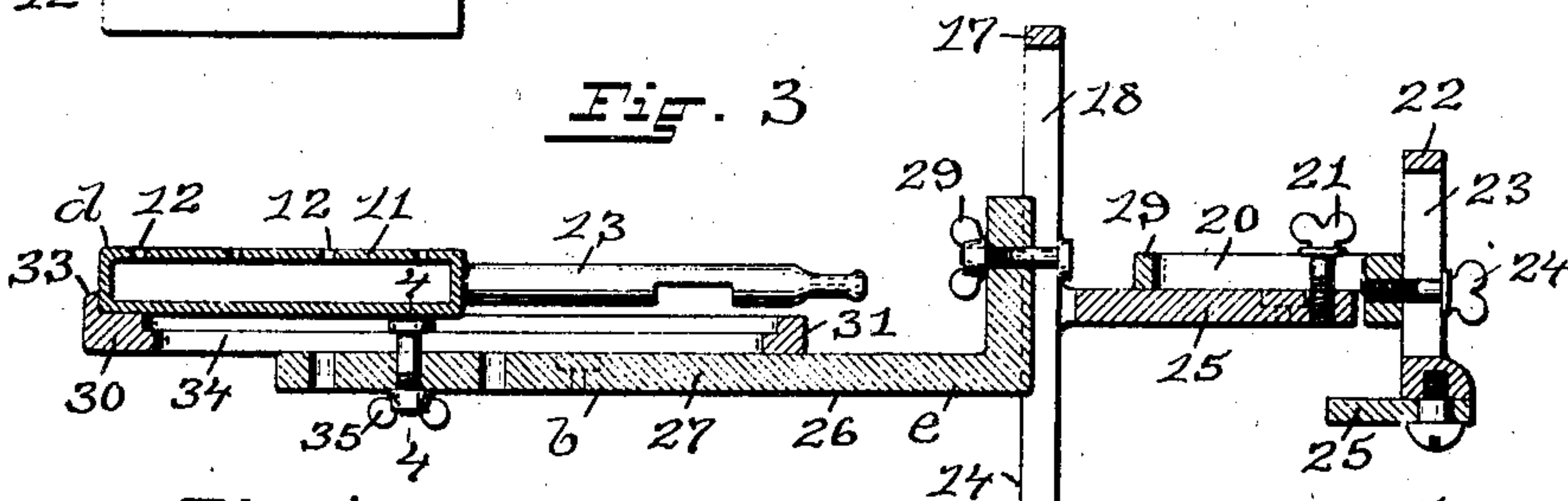


Fig. 4.

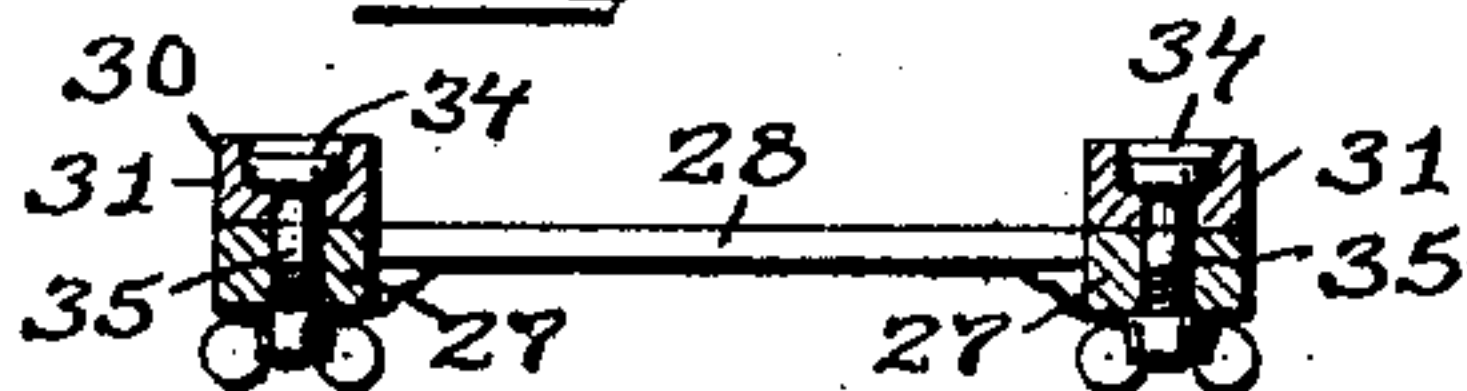


Fig. 5.



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# UNITED STATES PATENT OFFICE.

ANIELLO ESPOSITO, OF PROVIDENCE, RHODE ISLAND.

## FUEL-IGNITER.

934,512.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed April 20, 1909. Serial No. 491,163.

*To all whom it may concern:*

Be it known that I, ANIELLO ESPOSITO, a subject of Italy, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Fuel-Igniters, of which the following is a specification.

This invention has reference to an improvement in igniters and more particularly to an improvement in fuel igniters for igniting the coal in a cook stove or range without the use of kindling material such as wood or coke. Fuel igniters as heretofore constructed for this purpose usually have a portable gas burner supported on a tripod which in turn is supported on the bottom of the ash pit under the grate of the stove. This form of igniter necessitates the removal of the ashes from the ash pit before the igniter can be used in the ordinary cook stove or range, which removal of the ashes delays the use or quick starting of the fire by the igniter.

The object of my invention is to improve the construction of a fuel igniter, whereby the igniter may be adjusted for any size cook stove or range and may be quickly placed in position and the fire started, without removing the ashes from the stove.

My invention consists in the peculiar and novel construction of a fuel igniter for coal stoves or ranges, said igniter consisting essentially of a portable gas burner supported on an adjustable frame having details of construction, as will be more fully set forth hereinafter and claimed.

Figure 1, is a vertical sectional view through the fire pot, ash pit and oven of a cook stove, showing my improved fuel igniter in position under the grate, for igniting the coal in the stove. Fig. 2, is an enlarged top plan view of the igniter. Fig. 3, is a vertical sectional view of the igniter taken on line 3. 3. of Fig. 2. Fig. 4, is a transverse sectional view of the frame of the igniter taken on line 4. 4. of Fig. 3, and Fig. 5, is a detail view of one of the locking fingers looking at the underside of the same.

In the drawings, *a*, indicates a cook stove adapted for burning coal, *b*, my improved fuel igniter, and, *c*, a flexible tube connecting the igniter with a source of gas supply, not shown.

The stove, *a*, has the usual fire pot 7, the grate 8, the ash pit 9, and the lipped hearth 10, as shown in Fig. 1.

The fuel igniter, *b*, comprises a gas burner, *d*, and an adjustable frame, *e*, for supporting the burner under the grate, 8.

The burner, *d*, is in the form of a hollow flat rectangular shape box 11, having a plurality of small holes, 12. 12, in the top and an inlet pipe, 13, to which the flexible gas tube, *c*, is connected, as shown in Fig. 1. The pipe, 13, forms a handle for the burner, as shown in Fig. 2, and is preferably constructed to have an air inlet, the air mixing with the gas forming a blue flame on the burner.

The adjustable frame, *e*, consists of a member, 14, having the horizontal side arms, 15. 15 connected by a brace, 16, each arm, 15, having a vertical arm, 17, in which is a vertical slot 18, and horizontal arms, 19. 19, each having a longitudinal slot, 20, by which each arm, 19, is adjustably secured to the arm, 16, by a thumb screw, 21, vertical arms, 22. 22, each having a vertical slot, 23, by which the arm is adjustably secured to the end of the arms 19. 19, by a thumb screw, 24, a horizontal locking finger 25, pivotally secured to the lower end of each of the arms, 22. 22, by a screw, a member 26, having the horizontal side arms, 27, connected by a brace, 28, and adjustably secured at one end to the vertical arms, 17. 17, by bolts, 29. 29, and a member, 30, having the horizontal side arms 31. 31, connected by a brace, 32, having the upwardly extending stops, 33. 33, and the arms, 31. 31 each having a longitudinal slot, 34, by which the member, 30, is adjustably secured to the member 26, by bolts 35. 35, as shown in Fig. 3.

The frame *e*, is adjusted for different makes and sizes of stoves by adjusting the arms, 19. 19., horizontally on the arms 15. 15 for different widths of hearths and securing the arms in the adjusted positions by tightening the thumb bolts, 21. 21., by adjusting the arms, 22. 22., vertically for different thickness of hearths and securing the arms in the adjusted position by tightening the thumb bolts, 24. 24., by adjusting the member, 26, vertically on the member 14, to bring the burner, *d*, close under the grate, 8, and securing the member in the adjusted position by tightening the bolts, 29. 29., and by adjusting the member, 30, horizontally on the member, 26, to bring the burner, *d*, centrally under the grate, 8, and securing the member in the adjusted position by tightening the bolts, 11.



35. 35. The frame *e*, requires no further adjustment after being once adjusted to the stove in which it is to be used.

When in use the tube, *c*, is connected to a source of gas supply (not shown), the fingers, 25. 25., turned outward and the frame, *e*, placed in position with the member, 30, under the grate, 8, and the member 14, resting on the hearth, 10. The fingers 25. 25, are now turned inward under the lip on the hearth, 10, locking the frame *e*, to the stove, the gas turned on and ignited at the burner, *a*, and the burner, *a*, placed on the frame, *e*, and pushed under the grate, 8, the stops 33. 33 limiting the inward movement of the burner. The coal in the stove is now quickly kindled by the intensely hot blue flame, from the burner, *a*, which with the frame, *e*, is then removed from the stove.

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

1. In a fuel igniter, an adjustable frame, stops on the frame, a portable burner supported on the frame, means for adjusting the frame horizontally and means for detachably securing the frame to a stove.

2. In a fuel igniter, an adjustable frame,

stops on the frame, a portable burner, supported on the frame, means for connecting the burner to a source of gas supply, means for adjusting the frame horizontally and means for detachably securing the frame to a stove.

3. In a fuel igniter, an adjustable frame, stops on the frame, a burner on the frame, means for adjusting the frame vertically, means for adjusting the frame horizontally and means for detachably securing the frame to the hearth of a stove.

4. In a fuel igniter, the combination of an adjustable frame, *e*, having the adjustable members, 14., 26, and 30, the adjustable arms, 19, 19, and 22, 22, and the locking fingers 25. 25, and a portable burner, *a*, having the holes 12. 12 and inlet pipe, 13, and means for connecting the inlet pipe, 13, to a source of gas supply.

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

ANIELLO ESPOSITO.

Witnesses:

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B. A. GAGE.