

No. 672,103.

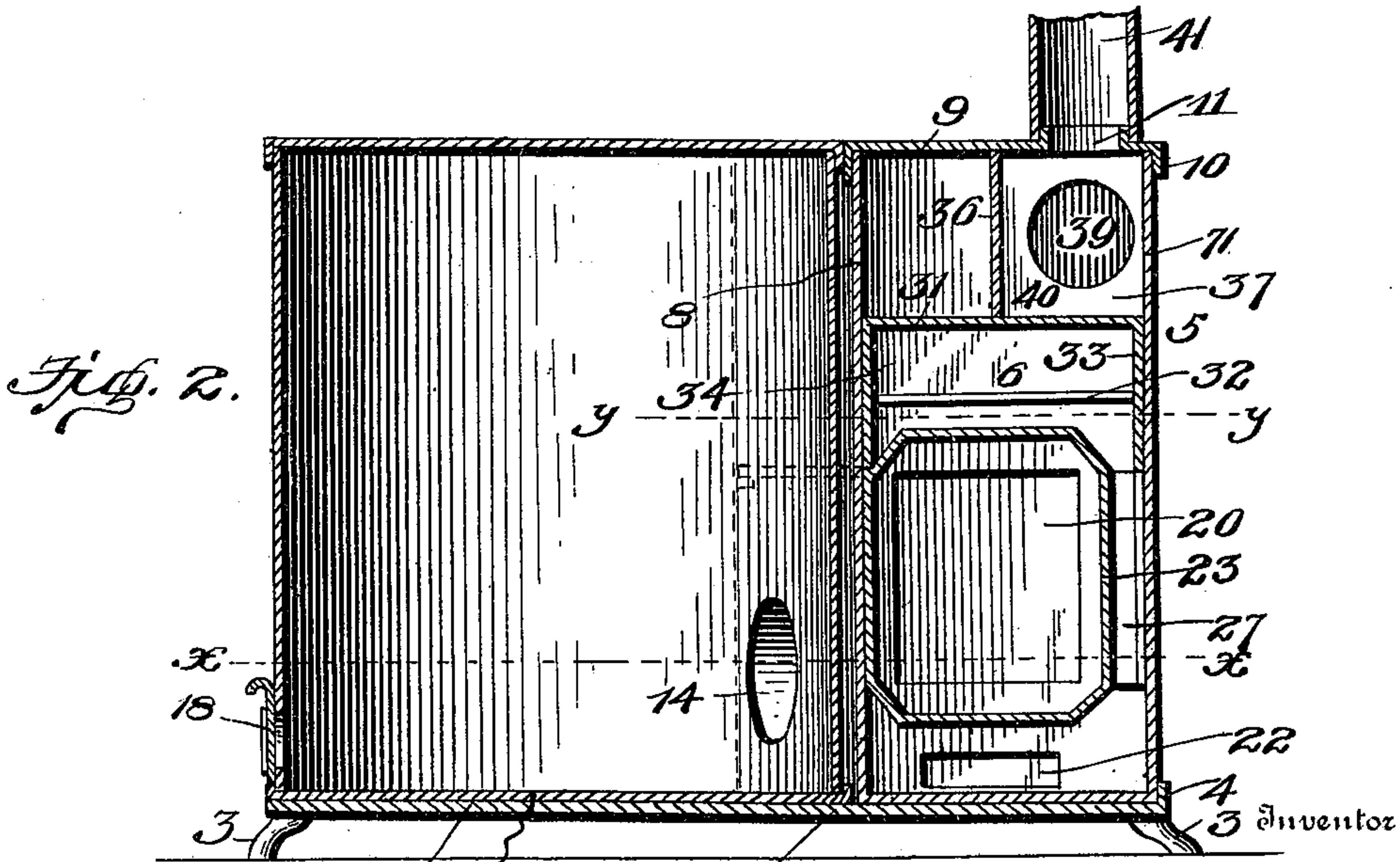
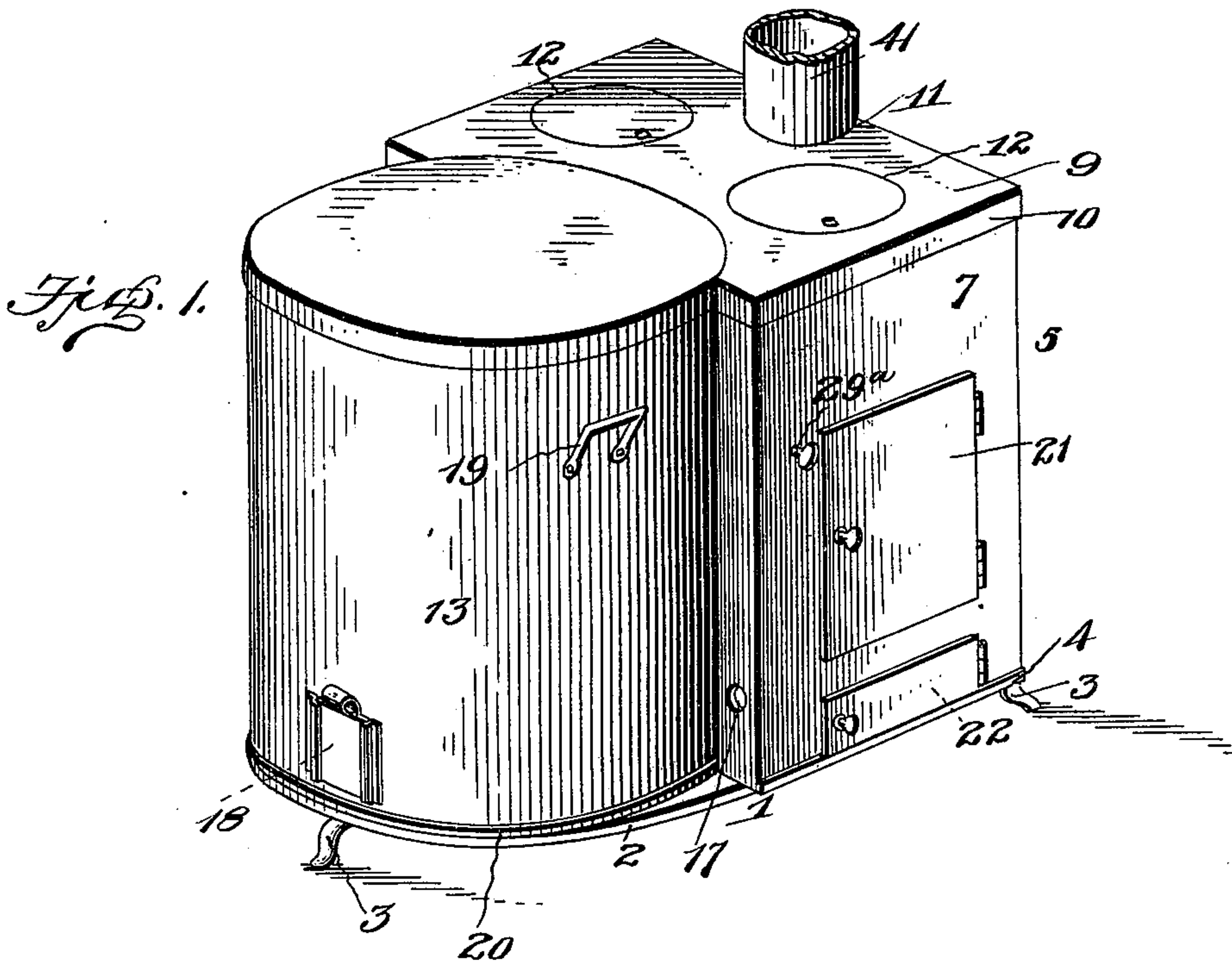
Patented Apr. 16, 1901.

H. E. McCONNELL.
STRAW BURNING STOVE.

(Application filed Jan. 10, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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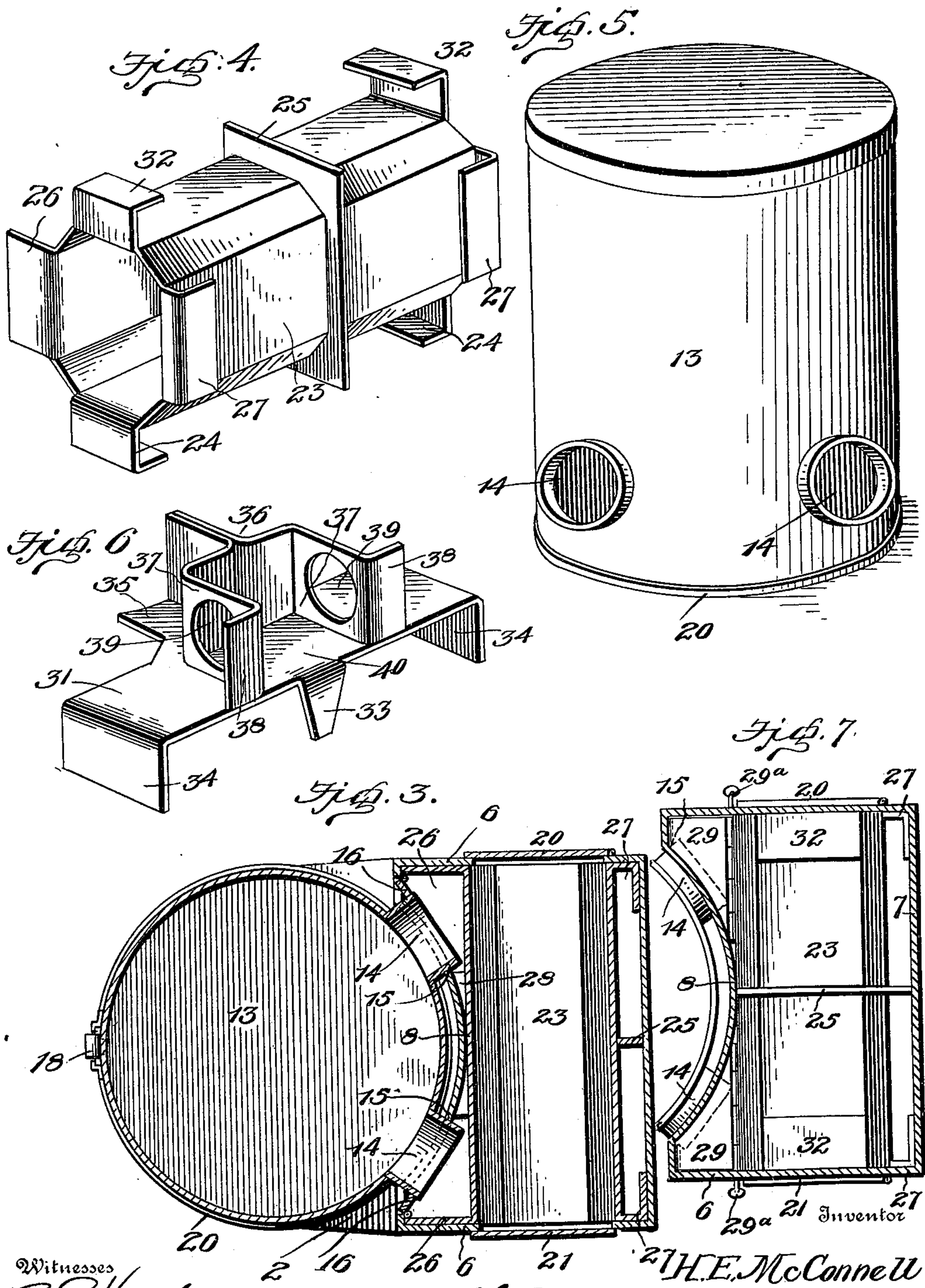
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UNITED STATES PATENT OFFICE.

HUGH E. McCONNELL, OF MONTROSE, SOUTH DAKOTA.

STRAW-BURNING STOVE.

SPECIFICATION forming part of Letters Patent No. 672,103, dated April 16, 1901.

Application filed January 10, 1901. Serial No. 42,761. (No model.)

To all whom it may concern:

Be it known that I, HUGH E. McCONNELL, a citizen of the United States, residing at Montrose, in the county of McCook and State of South Dakota, have invented certain new and useful Improvements in Straw-Burning Stoves; 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.

This invention relates to a combined heating, cooking, and baking straw-burning stove.

The objects of the invention are to provide a stove of this character which shall be simple of construction, durable in use, comparatively inexpensive of production, and which will permit of its being expeditiously converted from a heating or cooking stove into a baking-stove, to provide for the ready application and removal of the drum, to provide means for collecting the moisture from the burning straw and preventing it from running down the sides of the stove, and to provide for the effective circulation of the heat around the oven, so as to secure the even heating thereof.

With these and other minor objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

Figure 1 is a perspective view of my improved stove. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a horizontal section on line *xx* of Fig. 2. Fig. 4 is a detail perspective view of the oven. Fig. 5 is a detail perspective view of the magazine or drum. Fig. 6 is a similar view of the upper partition. Fig. 7 is a detail sectional view on line *yy* of Fig. 2, illustrating the position of the dampers.

Referring to the drawings, the numeral 1 represents a base having a forwardly-extending shelf 2 and supporting-legs 3. The side and rear edges of the body portion of this base may, if desired, be provided with flanges 4 to serve as supports for the stove-body in the event that said body be made removable.

5 represents the body or casing of the stove,

having rectangular back and side walls 6 and 7 and a concaved or recessed front wall 8.

9 denotes the top of the stove, provided with marginal flanges 10 to embrace the walls of the casing or body portion 5 and provided with a pipe-hole 11 and pot-holes 12.

13 denotes the fuel drum or magazine, which seats upon the shelf 2 and fits at its rear in the concavity of wall 8 and is provided at the rear and near its lower end with fire-holes or draft-openings having short pipe-sections 14, which fit within draft-openings 15, formed in the front wall of the body 5, said wall having hinged portions 16, forming a part of the wall of each opening and adapted to permit of the ready insertion and removal of said pipe-sections 14.

17 represents openings formed in the front wall 8 to cool the oven and permit of the insertion of a match or torch to light the fuel in the drum.

18 is a slide controlling a draft-opening in the front portion of the drum, and 19 represents handles applied to the drum to facilitate the application and removal of the same to and from the shelf 2. The drum is open at the bottom for reception of the fuel and removal of the ashes and is provided with a removable cover 20 to close said open bottom.

21 21 represent oven-doors in the sides of the body, and 22 22 are openings under said doors for the removal of any ashes which may accumulate beneath the oven.

23 denotes the oven, which is provided at its ends with feet 24 to hold it supported above the base 1 to provide an intervening draft and fire space. At its center the oven is provided with a partition 25, extending around the bottom, top, and rear side thereof and forming independent passages for the circulation of the flame around the oven. The oven is also provided at the front and rear with flanges 26 27, which hold it properly centered, and at the center has a segmental flange or partition 28, which fits closely against the concaved front wall 8 of the body 5 and prevents the upward passage of the smoke and flame at this point. On opposite sides of said flange are pivoted dampers 29 29, each of which is adapted to be actuated from the exterior by a rod 29^a, and these dampers con-

trol the upward circulation of the flame and smoke through the front passage on each side of the flange or partition 28. The dampers normally lie in a horizontal position and close
5 said front passages and may be swung down to a vertical position to open said passages.

Arranged above the oven 23 is a horizontal removable plate or partition 31, which rests upon the partition 25 and upon supporting-
10 brackets 32, formed upon the top of the oven, and is provided with downturned central and end flanges 33 34, which embrace the said partition and brackets and serve the dual function of sealing the spaces between the same
15 and the body 5 and holding the partition securely in position. The partition fits snugly against the rear and side walls of the body 5, but is of less width than the body and is provided at the front with a central extension 35,
20 which fits against the front wall 8 and divides the upper portion of the body at the front to form independent passages upon opposite sides of the center thereof and above the said dampers 29.

25 Between the horizontal partition-plate 31 and the cover or top 9 of the stove is a transverse divider 36, which is carried by said plate 31. This divider is provided in rear of the extension 35 with outwardly and oppositely
30 curved wings 37 37, provided at their rear ends with flanges 38 38, which bear against the rear wall of the body. In the wings are formed ports or openings 39 39 for the outward passage of the products of combustion.
35 The wings form with the partition-plate 31 a trough or catch-basin 40 to collect the vapor and water of condensation should the straw be damp and prevent the same from passing downward into the stove.

40 In operation the cover 20 of the drum or magazine 13 is removed, the drum charged with straw, the cover then replaced, and the drum properly seated on the shelf 2. The dampers are then properly regulated, the
45 straw lighted through the draft-holes, and the fire from the drum enters the body of the stove through the short pipes 14, while the products of combustion finally discharge through the pipe 41. If it is desired to use the stove
50 for heating or cooking, the dampers 29 are opened, causing the flames and products of combustion to pass directly to the top of the body 5 of the stove through the front passages between the oven and wall 8. When it is de-
55 sired to use the oven for baking, the dampers 29 are closed, causing the flame and products of combustion to pass rearwardly and thence upwardly and forwardly, so as to heat all sides of the oven. The flames and prod-
60 ucts of combustion in circulating with the

dampers opened or closed are divided by the partitions and caused to pass outward in two separate currents, which unite in the trough or catch-basin 40 and thence pass out through the pipe 41. This prevents the stove from
65 puffing and at the same time insures a more equable distribution of the heat. Should the straw be damp and vapor generated, the water of condensation therefrom will be retained in the basin 40 and prevented from flowing
70 down the walls of the stove.

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

The device is exceedingly useful for the purpose for which it is designed and may be placed upon the market at a comparatively
80 small cost.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of
85 my invention.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. In a stove of the character described, the
90 combination with a casing having a supporting-shelf and draft-openings, of a fuel-drum seated on said shelf and in communication with said openings, an oven in the casing, partitions at the front and about the oven and
95 forming passages, dampers controlling the flow of the products of combustion through said passages, a horizontal partition above the oven, and a divider carried by said partition, substantially as set forth. 100

2. In a stove of the character described, the combination with a casing having a supporting-shelf and draft-openings, of a fuel-drum seated on said shelf and in communication with said openings, an oven in said casing,
105 partitions at the front and about the oven and forming passages, dampers controlling the flow of the products of combustion through said passages, a horizontal partition above the oven, and a divider carried by said partition
110 and having wings formed with outlet-openings and forming a catch-basin for the water of condensation, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit-
115 nesses.

HUGH E. McCONNELL.

Witnesses:

MARTIN NEILAN,
PAUL KING.