

No. 695,872.

Patented Mar. 18, 1902.

J. L. BANGLEY.
HEATING STOVE.

(Application filed Sept. 11, 1901.)

(No Model.)

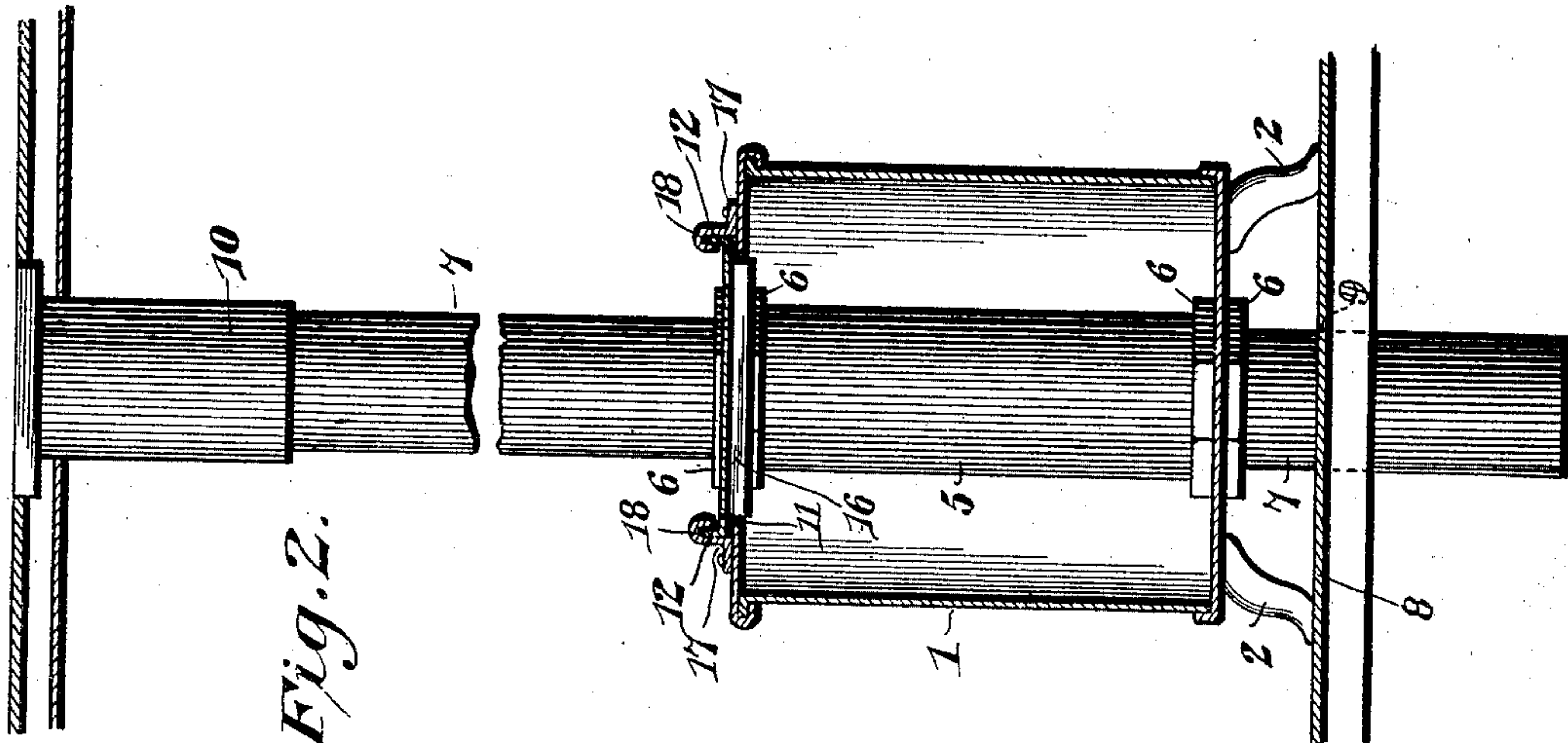


Fig. 2.

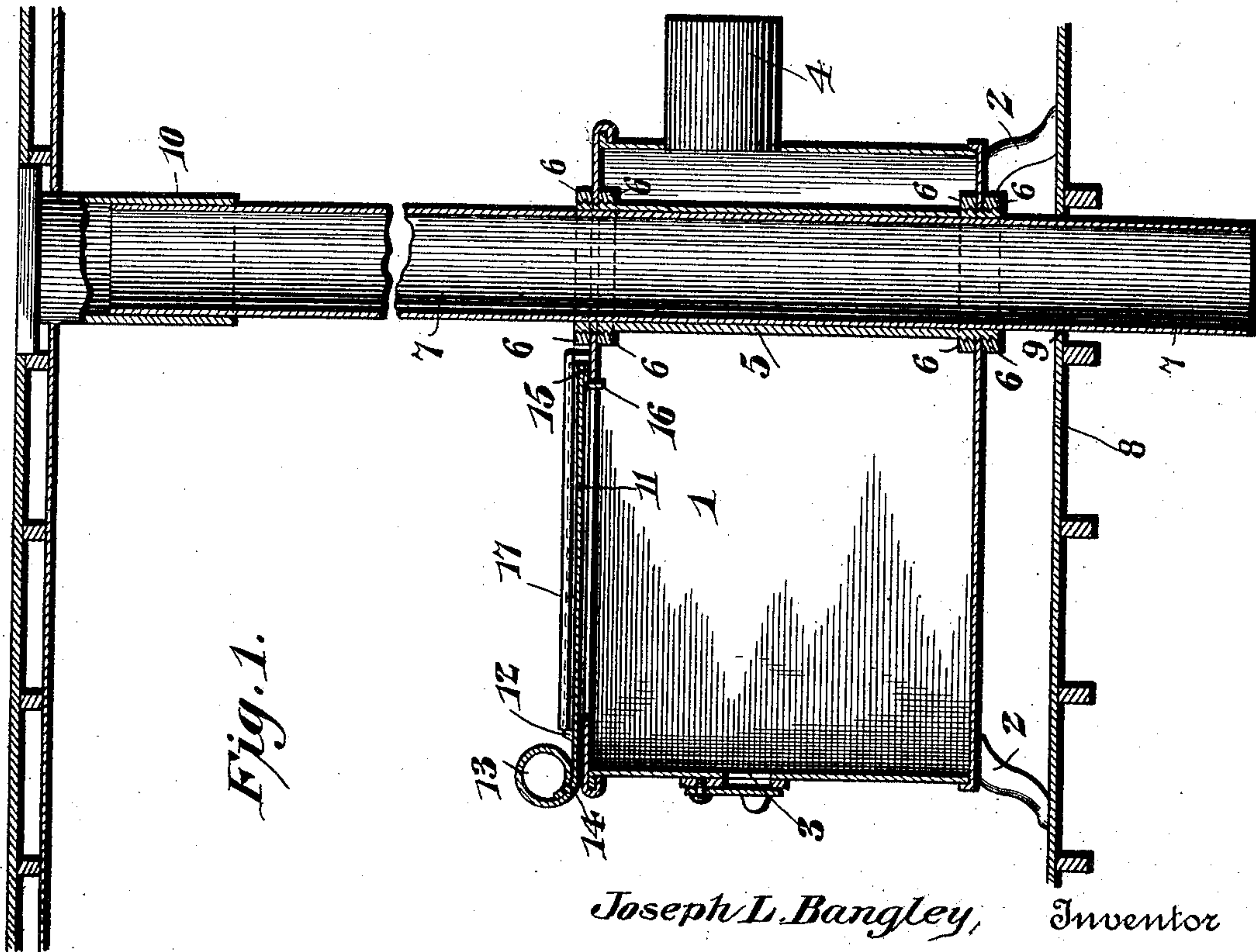


Fig. 1.

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JOSEPH LEWIS BANGLEY, OF SUFFOLK, VIRGINIA, ASSIGNOR OF ONE-HALF TO THOMAS JACKSON ELEY AND HENRY W. CAMPBELL, OF SUFFOLK, VIRGINIA.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 695,872, dated March 18, 1902.

Application filed September 11, 1901. Serial No. 75,087. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LEWIS BANGLEY, a citizen of the United States, residing at Suffolk, in the county of Nansemond and State of Virginia, have invented a new and useful Heating-Stove, of which the following is a specification.

This invention relates to stoves, and is particularly designed to provide improvements in wood-burning stoves wherein air is heated and given off in a simple and effective manner; and it is furthermore designed to provide for adjusting the air-heating means so as to accommodate the same to the varying conditions of the air surrounding the stove.

A further object is to arrange the air-heating means so as to receive the full benefit of the fire and at the same time to obviate obstructing the fuel-opening and fire-box of the stove, whereby the latter is particularly adapted for burning wood in comparatively long sticks.

Another object is to provide a tight and durable connection between the air-heating means and the top and bottom of the stove, so as not to interfere with the effective burning of the fuel and at the same time to facilitate the adjustment of the air-heating device.

Final objects reside in the provision of an improved closure for the fuel-opening, said closure being constructed and mounted for convenience in operation and also to stiffen and strengthen the same and to insure a tight connection between the closure and the top of the stove when the former is in its closed position.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a central longitudinal sectional view of a heating-stove constructed and arranged in accordance with

the present invention. Fig. 2 is a transverse sectional view thereof, taken on the line 2 2 of Fig. 1.

Like characters of reference designate corresponding parts in both figures of the drawings.

Referring to the accompanying drawings, it will be seen that the stove has a substantially rectangular body 1, which is preferably made of sheet metal and is supported by means of any ordinary or preferred form of legs 2, so as to space the bottom of the stove at a suitable distance above the floor. In the front of the stove there is provided a suitable damper-controlled draft-opening 3, and connected to the upper portion of the rear end of the stove is a smoke-pipe 4.

In the extreme rear end of the stove and situated vertically therein and substantially midway between the opposite sides thereof there is provided a heating-drum 5, which has its opposite ends externally screw-threaded and projected through the top and bottom of the stove. The upper end of the drum is connected to the top of the stove by means of a pair of nuts 6, which are applied to the screw-threaded terminal of the drum and tightly clamped against the opposite sides of the top of the stove, thereby to form a tight and durable connection therewith. The opposite end of the drum is connected to the bottom of the stove in the same manner as described for the upper end of the drum, it of course being understood that the opposite ends of the drum project but slightly—that is to say, just enough to permit of the application of the external nuts. Within this open-ended heating-drum there is provided a pipe 7, which has a tight fit therein and is capable of endwise adjustment, the frictional contact between the pipe and the drum being sufficient to hold the former in any adjusted position. The lower end of the adjustable air-pipe is open and also designed to communicate with a source of fresh cool air, and therefore may terminate short of the floor 8, upon which the stove rests, or it may project through a suitable opening 9, formed in the floor, in order that the inlet end of the pipe may be projected through the floor for communication with a source of air cooler than that which may be

obtained in the room containing the stove—
as, for instance, the pipe may be projected
into a cellar. It is important that the air
tube or pipe be of such a length as to be pro-
5 jected through the floor, for the reason that
when the air of a room becomes heated the
circulation through the pipe is comparatively
poor, and thus it is necessary to have the pipe
constantly in communication with a source of
10 comparatively cool air.

The advantage of employing a single end-
wise-shiftable pipe projected both below and
above the stove is to afford convenient ac-
cess to the pipe for adjustment, as it may
15 be readily taken hold of above the stove, and
therefore it is not necessary to stoop down
and reach beneath the stove to adjust the pipe.

It will of course be understood that the pur-
pose of the air-pipe is to convey the heated
20 air to rooms other than that in which the stove
is placed, and therefore it is designed to have
the upper end of the pipe slidably received
within a pipe-section 10, fixed to the ceiling
and piercing the same for connection with a
25 register, (not shown,) but commonly employed
for the distribution of heat from a heating-
stove. Besides being useful to thrust the
pipe downwardly through an opening in the
floor it is also useful to adjust the lower open
30 end of the pipe vertically with respect to the
floor, so as to adapt the pipe to the air condi-
tions of the room, especially drafts, and there-
by to secure an effective updraft through the
pipe.

35 The fuel-opening is formed in the top of
the stove and is comparatively large, so as to
readily receive long sticks of wood, as this is
the character of fuel for which the present
stove is designed. The closure for this open-
40 ing is formed from a single plate or sheet of
metal 11, which lies upon the top of the stove,
is slidable in an endwise direction, and is pro-
vided with opposite upstanding longitudinal
integral flanges 12, the outer end of the plate
45 or sheet being reduced and rolled over upon
the top thereof in a coil 13, so as to form a
handle, the extreme end of the coil being se-
cured to the adjacent body portion of the
plate by means of a rivet or other suitable fas-
50 tening 14. The inner end of the closure-plate
is folded upon the under side thereof, as in-
dicated at 15, so as to stiffen the inner end of
the closure, and the free extremity of this
folded portion is bent downwardly to form a
55 stop-flange 16 for engagement with the in-
ner end of the fuel-opening, and thereby to
limit the inward movement of the closure, the
folded inner end portion of the plate being
adapted to overlap the inner end of the open-
60 ing, and thereby support the intermediate
edge portion. It will of course be under-
stood that the opposite ends of the stop-flange
16 are cut away, so as to permit of said flange
entering the fuel-opening. For guiding the
65 closure-plate there is provided a pair of guide-
ways, each of which is formed from a single
sheet of metal 17, which is riveted or other-

wise secured to the top of the stove and par-
allel with the adjacent edge of the fuel-open-
ing, the inner edge of the plate being bent up- 70
wardly and then downwardly, so as to form
an inverted substantially U-shaped groove or
guideway 18 for the slidable reception of the
respective upstanding flanges 12 of the clo-
sure-plate, whereby the latter is capable of 75
endwise movement and is held against dis-
placement and looseness.

From the foregoing description it will be
noted that the air-heating device is located at
the rear extremity of the stove, and the inte- 80
rior of the latter is otherwise unobstructed,
and therefore the heating device lies wholly
within the fire-box of the stove and is there-
by subjected to direct contact with the flames,
whereby the air contained in the heating de- 85
vice is quickly and effectively heated and is
not located remote from the fire. Further-
more, by locating the heating device at the
extreme rear of the stove the top of the latter
is otherwise unobstructed, whereby it is pos- 90
sible to provide a comparatively large fuel-
opening, so as to facilitate the introduction
of large sticks of wood.

Having thus described my invention, what
I claim as new, and desire to secure by Letters 95
Patent, is—

1. A heating-stove, having a heating-drum
provided with an exit-opening in communica-
tion with the air surrounding the stove, and
an endwise-adjustable inlet-pipe communi- 100
cating with the interior of the drum and pierc-
ing the bottom of the stove, the lower end of
the inlet-pipe being normally in communica-
tion with the air surrounding the stove and
adjustable vertically to accommodate the in- 105
let end of the pipe to the conditions of said air.

2. A heating-stove, having an upright air-
heating pipe piercing the top and bottom of
the stove, the lower end of the pipe being
normally in communication with the air sur- 110
rounding the stove, and the entire pipe also
being endwise shiftable to accommodate the
same to the conditions of the said air.

3. A heating-stove, having an open-ended
air-heating drum fixed to and piercing oppo- 115
site sides of the stove, and an open-ended end-
wise-adjustable pipe fitted within the drum.

4. A heating-stove, having an open-ended
air-heating drum fixed to and piercing oppo- 120
site sides of the stove, and an endwise-ad-
justable air-pipe frictionally fitting the inner
walls of the drum, the frictional engagement
between the drum and the pipe forming means
to hold the latter at any endwise adjustment.

5. A heating-stove, having an open-ended 125
air-heating drum piercing opposite sides of
the stove and projected outwardly beyond
the same, the opposite ends of the drum be-
ing screw-threaded, inner and outer nuts ap-
plied to each end of the drum and snugly 130
clamping the adjacent side of the stove be-
tween the same, and an endwise-adjustable
air-pipe mounted within the drum.

6. A heating-stove, having a smoke-pipe

connected at its rear end, an open-ended up-
right air-heating drum piercing the top and
bottom of the stove at the rear ends thereof,
and an endwise-adjustable air-pipe fitted
5 within the drum and projected both above
and below the stove, the lower end of the
pipe being constructed to form an inlet, and
the upper end of the pipe being constructed
to discharge the heated air, the top of the
10 stove being provided with a fuel-opening lo-
cated in front of the drum.

7. A stove having a fuel-opening, external
guideways provided at opposite sides of the
fuel-opening, and an endwise-slidable closure
15 having upstanding flanges slidably engaging
the guideways, and having its inner end
folded upon its underside to stiffen the clos-
ure and then bent downwardly to form a stop-
flange for engagement with the inner edge of
20 the fuel-opening, the opposite ends of the
flange being cut away to permit of the flange

working between the opposite sides of the
fuel-opening, and the outer end of the closure
being rolled over upon the upper side thereof
to form a handle, the free portion of the roll 25
being secured to the closure.

8. The combination of a heating-stove hav-
ing aligned openings at the top and bottom
thereof, an open-ended endwise-shiftable pipe
fitted in said openings and projected above 30
and below the stove, and a pipe-section to
telescopically engage the upper end of the
shiftable pipe and capable of being connected
to the ceiling of a room so as to form a con-
tinuation of the shiftable pipe. 35

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

JOSEPH LEWIS BANGLEY.

Witnesses:

C. A. NEALE,

F. E. HARRISON.