

No. 693,700.

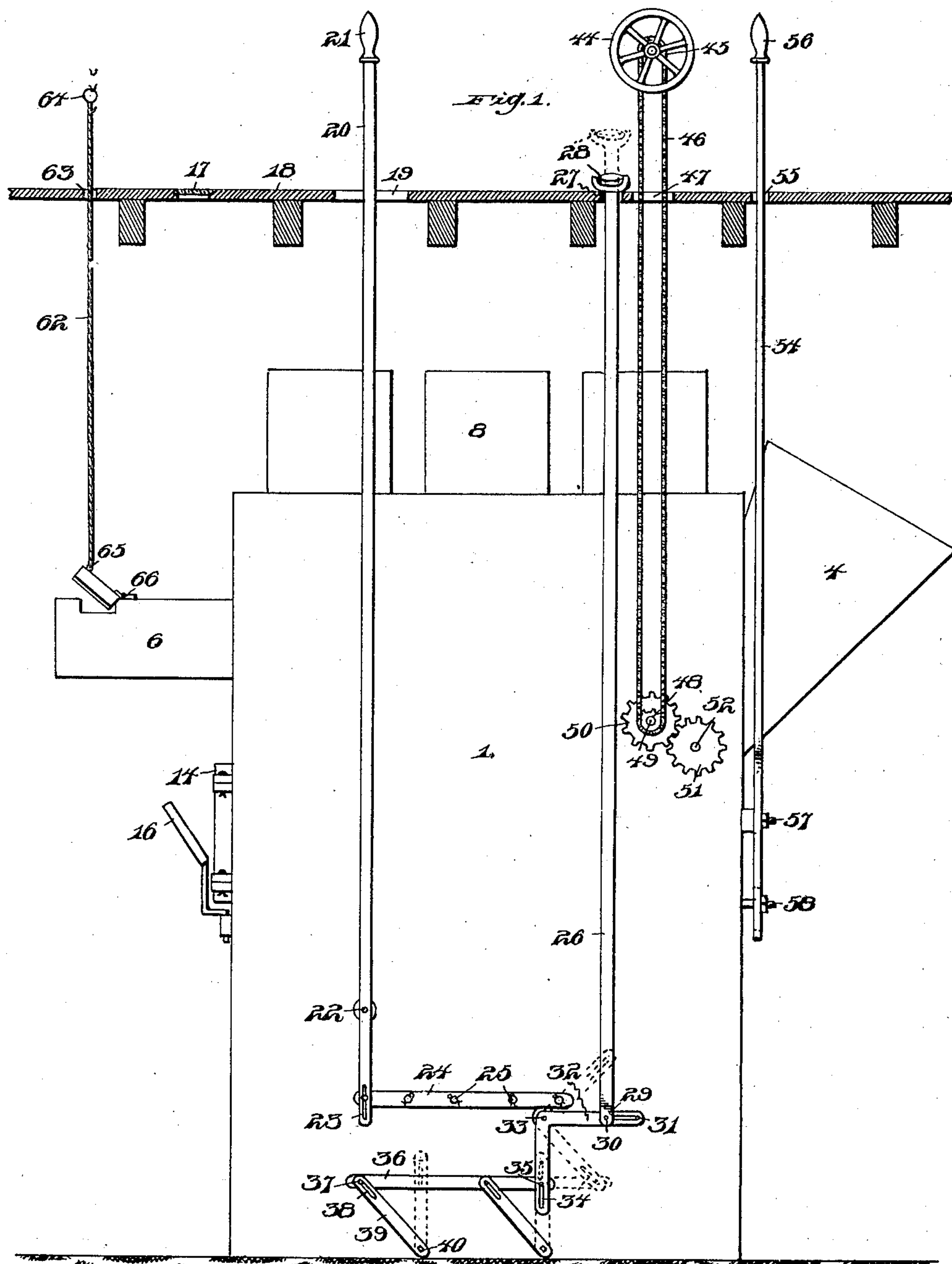
Patented Feb. 18, 1902.

E. B. GOSLINE.
SLACK COAL HEATER.

(Application filed Feb. 8, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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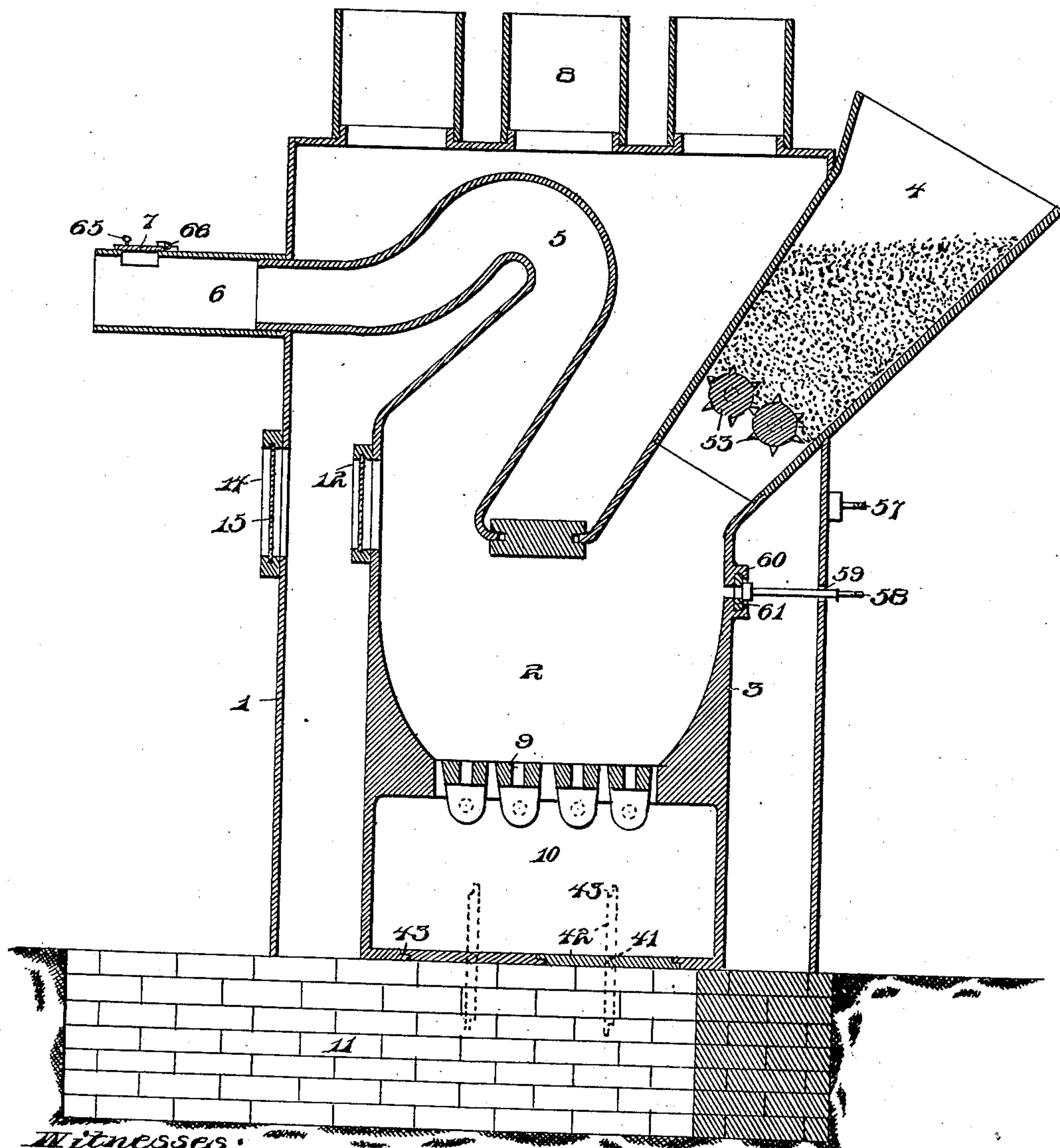
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2 Sheets—Sheet 2.

Fig. R.



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UNITED STATES PATENT OFFICE.

EDWIN B. GOSLINE, OF CARNEGIE, PENNSYLVANIA.

SLACK-COAL HEATER.

SPECIFICATION forming part of Letters Patent No. 693,700, dated February 18, 1902.

Application filed February 8, 1901. Serial No. 46,537. (No model.)

To all whom it may concern:

Be it known that I, EDWIN B. GOSLINE, a citizen of the United States of America, residing at Carnegie, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Slack-Coal Heaters, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in furnaces, and relates more particularly to the means employed for dumping the contents of the ash-pit into a receiving-vault located therebeneath.

15 The invention aims to provide a bottom for the ash-pit formed of two or more sections, which sections are simultaneously operated from the exterior of the furnace.

20 With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claim.

25 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout both views, and in which—

30 Figure 1 is a side elevation of my improved furnace, showing in vertical section the floor above, the furnace being equipped with my improvements. Fig. 2 is a vertical sectional view of the furnace proper.

35 In the drawings the reference-numeral 1 indicates the outer casing of the furnace; 2, the combustion-chamber; 3, the inner casing of the furnace, and 4 the hopper.

40 The reference-numeral 5 indicates a gooseneck hot-air pipe arranged within the outer casing and communicates with the pipe 6, leading to the stack, (not shown in the drawings,) and the reference-numeral 7 represents a damper arranged in said pipe 6.

45 The reference-numeral 8 denotes hot-air flues leading into the outer casing.

9 indicates the grate-bars, 10 the ash-pit, and 11 the receiving-vault arranged below the ash-pit.

50 The reference-numeral 12 indicates the inner door of the furnace, and 14 the outer door,

arranged in the casing, each of said doors having arranged therein mica or isinglass 15.

16 represents a mirror suitably secured to the outer casing, which mirror is so arranged 55 as to deflect against the glass 17, arranged in the floor 18 of the building. A suitable opening 19 is likewise arranged in the floor for the reception of an operating-lever 20, carrying at its upper end a handle 21, fulcrumed at 22, 60 and having formed at its lower end a slot 23, in which is pivotally secured an arm 24, carrying shafts 25, to which the grate-bars 9 are attached in the interior of the furnace.

My improved means comprises a reciprocating lever 26, extending upwardly through the opening 27, arranged in the floor of the building, and is provided with a handle 28. The lower end of said lever is bifurcated, as shown at 29, carrying a pin 30, which is adapted to operate in the slot 31, formed in the bell-crank lever 32, which lever is pivoted at 33 to the outer casing 1. The other end of said bell-crank lever is likewise slotted, as shown at 34, to receive a pin 35 of the lever 36, said lever 75 carrying pins 37, operating in slots 38, formed in the arms 39, said arms being pivotally secured at 40. These pivots or shafts extending through the casing are fixed at 41 to a pair of trap-doors 42, said doors carrying engaging 80 ends 43 to engage and form the floor of the ash-pit and are constructed in a manner to engage each other when closed.

The reference-numeral 44 indicates an operating-wheel, which is suitably journaled on 85 the upper floor of the building. Said operating-wheel upon its shaft carries a sprocket-wheel 45, over which passes an endless sprocket-chain 46, operating through an opening 47, arranged in the floor, and is connected to the sprocket-wheel 48, carrying a shaft 49, extending through the outer casing and through the hopper 4. Upon this common shaft is also keyed a cog-wheel 50, meshing with the cog-wheel 51, the latter having 95 a shaft 52, as shown. Upon these shafts 50 and 51, extending through the hopper, are arranged toothed wheels 53, which serve to feed the fuel from the hopper into the combustion-chamber.

100 The reference-numeral 54 indicates an operating-lever extending through an opening

55, arranged in the floor of the building, and this operating-lever is provided at its upper end with a handle 56 and is fulcrumed at 57 to the side of the casing 1 and carries at its lower end a shaft 58, extending through a slot 59, through the outer casing, and to the inner casing 3. This casing 3 is provided with guides 60 to receive a slide 61, secured to the shaft 58, to operate a damper.

10 The reference-numeral 62 indicates an operating-cord extending through an opening 63 arranged through the floor of the building, and carries a handle 64, the lower end of said operating-cord being connected at 65 to the damper 7, which is hinged at 66 to the pipe 6.

For the purpose of illustrating my invention I have shown the same operated from the floor above the furnace; but it will be noted that the same operation may be accomplished by extending the operating mechanism to the second or third floor above.

In view of the above detailed description it is thought that a detailed description of the operation is unnecessary, and it will be noted 25 that various changes may be made in the details of construction without departing from the general spirit of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by 30 Letters Patent, is—

In a device of the character described, the combination of a casing, an ash-pit, a pair of trap-doors forming the bottom thereof, tongued engaging faces on opposite sides of said doors adapted to engage and lie flush 35 with one another, shafts secured to each of said trap-doors, a reciprocating lever projecting above the floor, a handle secured to the upper end thereof, a bifurcated lower end on said lever, a bell-crank pivotally connected 40 to the casing, said bell-crank having the extremities of its arms slotted, said bifurcated end of said lever having one of said arms secured in said bifurcation, a pin engaging said bifurcated end and operating in said 45 slot, a lever secured transverse to said operating-lever, a pin carried by one end of said lever, said pin engaging in the slot formed in the arm of said bell-crank, arms having one of their ends rigidly connected to the 50 shaft, the other ends of said arms being slotted, and pins carried by said lever and adapted to engage in said slots, substantially as described.

In testimony whereof I affix my signature 55 in the presence of two witnesses.

EDWIN B. GOSLINE.

Witnesses:

JOHN NOLAND,
E. E. POTTER.