

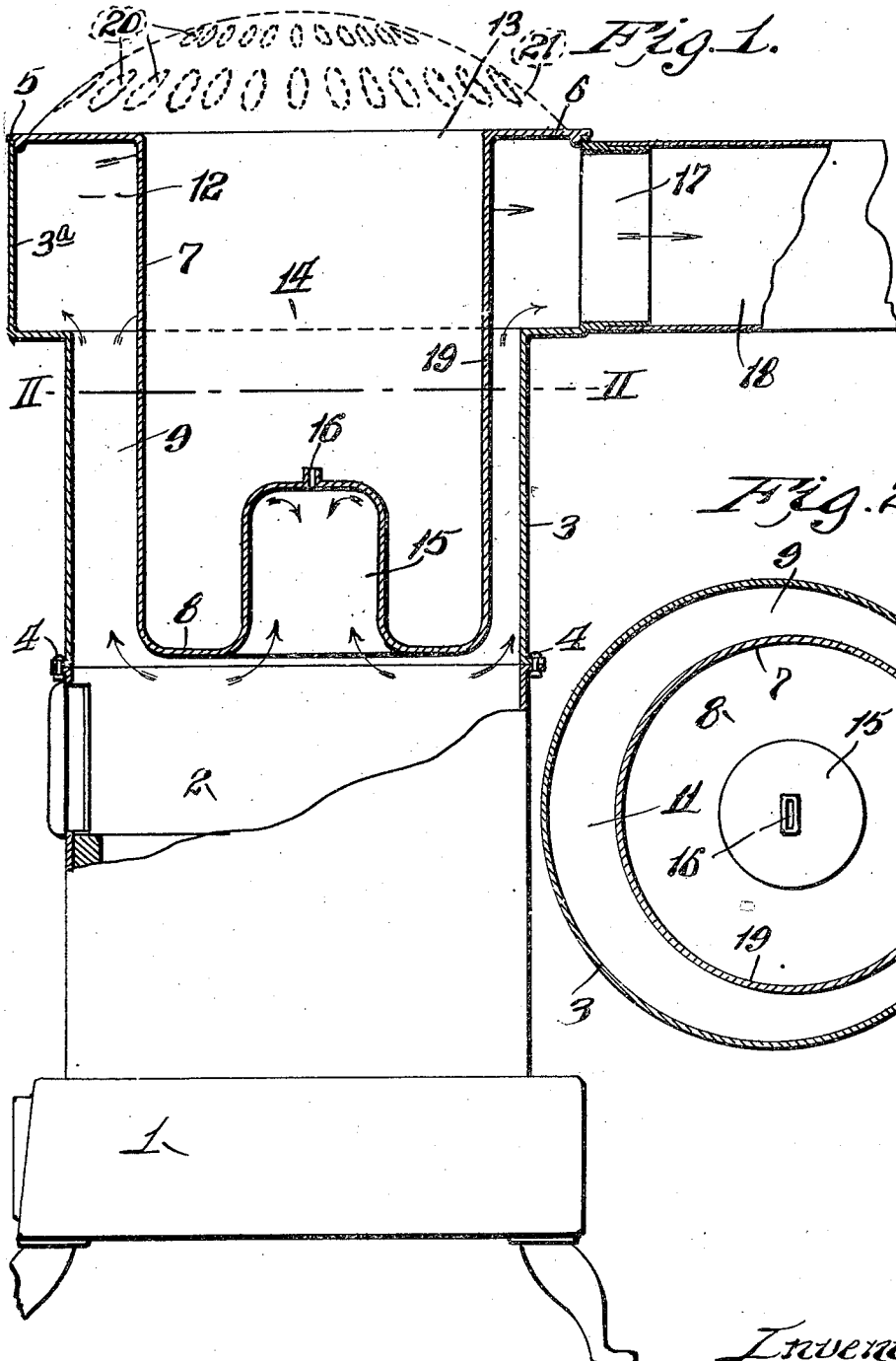
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HEATING STOVE

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HEATING STOVE.

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This invention relates to an improvement in heating stoves and has for its primary object the purpose of providing an improved form of discharge passageway for the discharge of the products of combustion as they are entrained from the combustion chamber to the stove pipe or stack.

Another object of the invention is in providing a stove with an improved upper structure.

A further object of the invention is in providing an improved form of discharge passageway for the products of combustion whereby the discharging heated products will be entrained or spread in a manner so as to force the discharged products to the wall of the stove.

A still further object of the invention is in providing an annular passageway in a stove for the discharged products of combustion thereof and to provide a heating chamber interiorly of the annular passageway.

Other and further objects will appear in the specification and be specifically pointed out in the appended claims, reference being had to the accompanying drawings, exemplifying the invention, and in which:—

Figure 1 is a side elevation of this improvement, the upper structure thereof being broken away and shown in section.

Figure 2 is a horizontal section taken on the line II—II of Fig. 1.

With reference to the accompanying drawings, 1 designates the usual ash-pit portion of the stove to the combustion chamber 2 thereof and extending upwardly from said chamber is an annular wall 3, which is secured above the combustion chamber by bolts such as 4.

The wall 3 adjacent its upper end is extended annularly outwardly therearound as designated at 3^a and resting on the upper edge 5 of said outward extension is the top portion 6 of a hollow member 7, said hollow member having a bottom 8.

The hollow member 7 is smaller in diameter than the outer wall 3, said hollow member being depended interiorly of the wall 3 in an eccentric position thereto, thereby providing an annular passageway 9 between the wall 3 and the hollow depending member 7, said annular passageway 9 on account of the eccentric disposition of the hollow member 7 being narrower in width as designated at 10 than is the opposite side of the annular pas-

sageway as designated at 11. From an inspection of Fig. 1, it is to be noted that the annular passageway 9 at its upper end communicates with the enlarged passageway 12 which is formed by the outwardly extending portion 3^a of the wall 3.

The hollow member 7 on account of being open at its upper end as designated at 13 provides a heating chamber 14 and extending upwardly into said chamber from the central portion of the bottom 8 of the hollow member 7 is a heating dome or chamber 15 provided with a small opening 16 at its upper end.

Formed in the outwardly extending wall 3^a is a discharge opening 17, said opening being formed adjacent the upper end of the narrowest portion 10 of the annular passageway 9, and in communication with said opening 17 is a stove pipe or flue 18.

In the operation of this improved stove, the products of combustion from the burning of fuel within the combustion chamber 2 will ascend upwardly into the annular passageway 9, the bottom 8 of the hollow member 7 causing the products of combustion to spread and as they ascend upwardly they will be entrained into the annular enlarged passageway 12 from where the products of combustion will be discharged through the discharge opening 17 to the flue 18.

The spreading of the products of combustion as they ascend from the combustion chamber, and the entraining of them into the annular passageway 9 provides for the forming of an annular body of heated products of combustion in which one side of the body of ascending products of combustion will be forced against the wall 3 whereas the inner side of the annular body of ascending products of combustion will engage the wall 19 of the hollow member 7, said walls 3 and 19 receiving heat from the ascending products of combustion and expelling or radiating the heat from the ascending products of combustion.

The dividing of the ascending products of combustion into an annular formation or body not only forces the heated products against the inner wall of the stove but also provides for the breaking up of the ascending products of combustion so that the products will not arise in a solid body to the flue as is done by the operation of the ordinary stove, but divides and mingles the unburnt

carbon gases with the combusting ascending products so that the combustion of the products will be more complete.

The heat given off from the wall 19 of the hollow member 7 will be received by the heating chamber 14 from where it will arise and pass through the openings 20 of the ornamental cover 21, said chamber 14 also receiving heat from the dome 15 which extends upwardly within said chamber.

On account of the narrowness of one side of the annular flue 9, designated at 10 and from which the discharge opening 17 of the flue 18 leads, said narrow side of the annular flue 9 will not be large enough to accommodate the draught area from the combustion chamber to the discharge opening 17 therefore said narrow portion of the annular passageway will cause a draught to entrain upwardly and completely around the annular passageway to the enlarged passageway 12, and after the products of combustion have entered the passageway 12 they will be entrained transversely around said passageway 12 and discharge into the flue 18.

The opening 16 provided in the top of the dome 15 will permit a down draught of air to be admitted into said dome, the down air draught through said opening or duct being introduced to the direct center of the combustion chamber thereby further aiding the combustion.

What I claim is:—

1. A stove having a combustion chamber, a vertically extending passageway leading from said chamber, and a heating chamber formed interiorly of said passageway in off-set disposition thereto.

2. A stove comprised of a combustion chamber, an outer wall extending upwardly from said chamber, and a hollow member closed at its lower end mounted interiorly of said outer wall in eccentric position thereto, said hollow member being smaller in diam-

eter than the diameter of said outer wall thereby providing an annular passageway which leads from said combustion chamber, said passageway at its upper end terminating into an enlarged annular passageway, and a discharge flue leading from said enlarged passageway.

3. A stove or the like provided with an interiorly located member arranged off-set thereto so as to provide an encircling passageway which gradually increases in size towards a part of the passageway, said passageway extending upwardly towards the top of the stove, and a discharging pipe leading from said passageway adjacent the stove top on the decreased side of said passageway.

4. A stove or the like provided with a fire pot, an unobstructed encircling passageway leading upwardly from said fire pot, a discharging pipe leading from said passageway, said passage being of a shape wherein the products of combustion from said fire pot will be forced thereby to traverse the entire area of said encircling passageway while the products of combustion are traveling upwardly towards said pipe.

5. A stove or the like comprising a heating chamber, a fire pot disposed beneath said chamber, a wall surrounding said chamber providing an annular passageway around said chamber which leads from said fire pot, said passageway having a constricted part, and a discharge pipe leading from said passageway adjacent the constricted part thereof.

6. A stove or the like comprising a heating chamber, a fire pot disposed beneath said chamber, a wall surrounding said chamber providing an annular passageway around said chamber which leads from said fire pot, said passageway having a constricted part, and a discharge pipe leading from said passageway.

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