

No. 654,246.

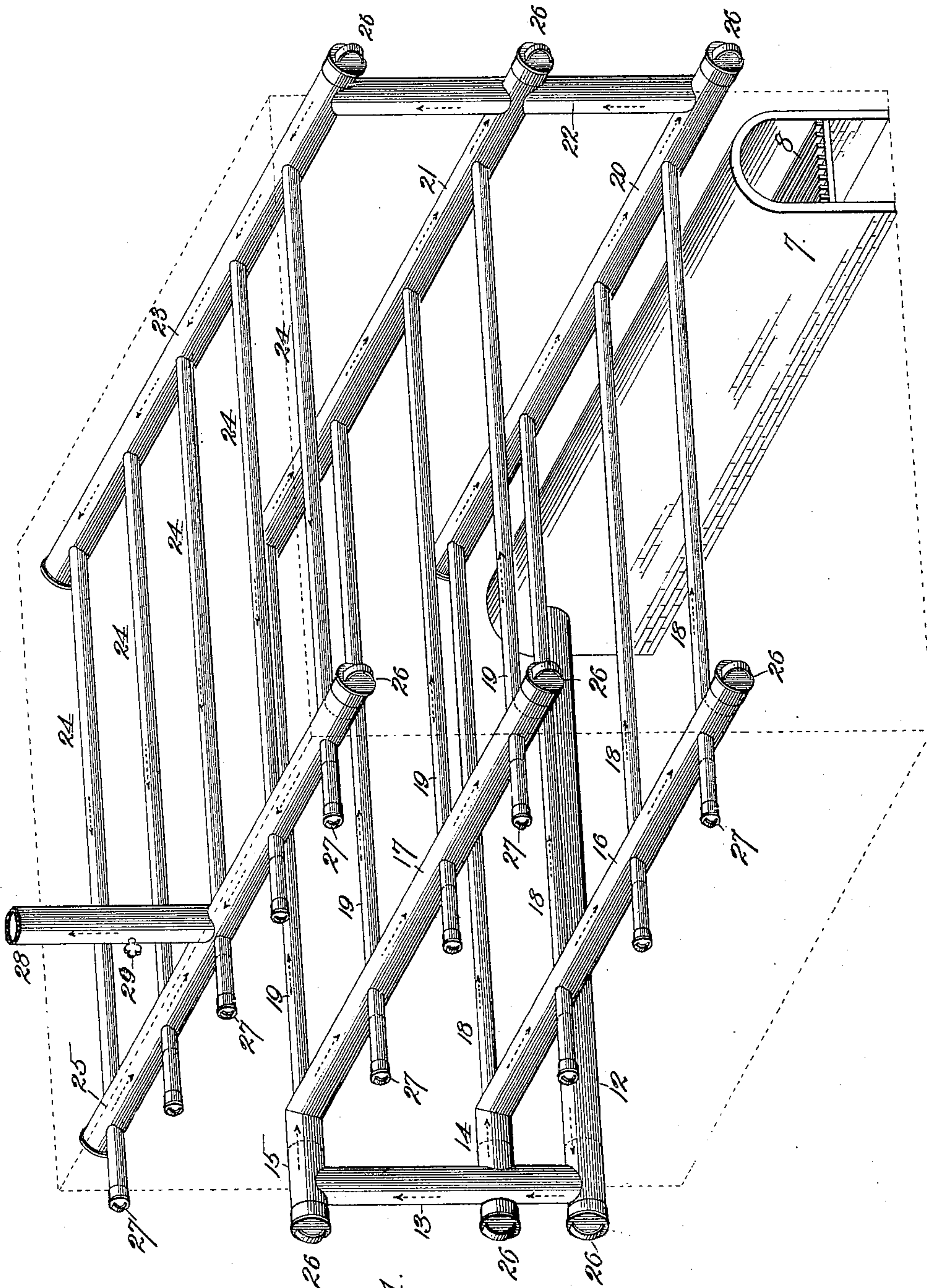
Patented July 24, 1900.

W. GRIFFIN.
BAKER'S OVEN.

(Application filed May 17, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

H. C. Rodgers.
J. M. Wagoner

Fig. 1.

Inventor:

William Griffin
By Fischer & Thorpe
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM GRIFFIN, OF KANSAS CITY, MISSOURI.

BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 654,246, dated July 24, 1900.

Application filed May 17, 1900. Serial No. 16,965. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GRIFFIN, a citizen of the United States, residing at Kansas City, Jackson county, Missouri, have invented a new and useful Baker's Oven, of which the following is a specification.

My invention relates to baker's ovens; and my object is to produce an oven which by utilizing practically all heat units generated can be operated with great economy and efficiency, which can be easily, quickly, and thoroughly cleaned, and which is of simple, strong, durable, and cheap construction.

With this object in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 represents a skeleton perspective view of an oven embodying my invention, the floors thereof being omitted and the walls indicated only by dotted lines. Fig. 2 is a central cross-section of the oven looking toward the rear. Fig. 3 is a longitudinal section taken on the line III III of Fig. 2.

Referring to the drawings in detail, 1 designates an oven of rectangular configuration and constructed, by preference, of sheet metal, being provided with horizontal partitions 2, forming floors, and formed with openings 3 to aid in effecting a uniform distribution of heat. The partitions or floors 2 subdivide the oven into the furnace-chamber 4 and the baking-compartments 5 and 6.

In the rear end of the furnace-chamber 4 and extending transversely thereof is the furnace 7, provided with the usual horizontal grate 8 and furnace and ash-pit doors 9 and 10, the chambers 4, 5, and 6 being provided with doors 11 at the front end of the oven, as shown in Fig. 3.

12 designates a flue extending from the rear end of the furnace forward and projecting through the front wall, and 13 a vertical flue connected at its lower end to the external portion of flue 12, between the front end of the latter and the oven.

14 15 designate short flues arranged vertically above and parallel with the flue 12 and projecting rearward from flue 13 into cham-

bers 4 and 5, respectively, and just below the floors 2 and also projecting slightly forward from said flue 13, the rear ends of said short flues communicating with the horizontal flues or headers 16 and 17, respectively; extending transversely of the furnace near the front wall thereof, and said headers project at one end through the side wall of the oven.

18 19 respectively designate two series of small horizontal flues which communicate with and project rearwardly from the headers 16 and 17, and all of the flues 18 and 19 which are not in longitudinal alinement with the short flues 14 and 15 also extend forwardly from said headers through the front wall of the oven. The rear ends of said flues 18 and 19 communicate, respectively, with the large cross flues or headers 20 and 21, arranged horizontally near the rear wall of the oven and projecting at one end through the side wall thereof, above the furnace-doors, by preference. The inner ends of flues 20 and 21 are closed, and a large vertical flue 22, arranged between the outer ends of said flues and the side wall of the oven, through which they project, communicates at its lower end with flue 20, near its middle with flue 21, and at its upper end with a third cross flue or header 23, the latter being arranged vertically above the flue 21, with its inner end closed and its outer end projecting beyond the side wall of the oven and flue 22.

24 designates a third series of small flues, which series by preference exceeds in number either of the series 18 and 19 and extends forwardly near the top wall of the furnace and connects with a large cross flue or header 25 and also projects forwardly from said header through the front wall of the oven. Flue 25 is arranged vertically above flue 17 and has its inner end closed and its outer end projecting through the side wall of the oven, and said outer end and the corresponding ends of flues 12, 14, 15, 16, 17, 20, 21, and 23 are closed by removable clean-out caps 26, smaller caps, but similar and numbered 27, closing the outer ends of longitudinal flues 18, 19, and 24.

The chimney or escape-flue 28 extends down through the top of the oven and communicates centrally with cross flue or header 25

and is provided with a damper 29 of any preferred construction.

From the arrows shown on Fig. 1 the course of the heat and products of combustion from the time of generation until the time of escape through the chimney can be readily followed, and from the above description and the drawings the operation of the oven will be readily understood.

By the particular construction and arrangement of the parts it is apparent that the oven is accessible for repairing or for cleaning. To clean the oven thoroughly, the clean-out caps are removed and suitable instrumentalities, such as swabs, of dimensions to accommodate the size of the flues are employed, small flues 18 and 19 in longitudinal alignment with short flues 14 and 15 being reached through said short flues and the accumulation of soot therein forced back into cross flues or headers 20 and 21, from which it can be readily extracted. The preferred method of cleaning out the small flues is to force the soot back into the headers or large flues and extract the same from the latter in any preferred manner.

By the construction shown it is obvious that each compartment or each chamber of the oven can be thoroughly heated, and in practice it has been found that when the products of combustion escape through the chimney practically all heat units have been extracted, which is an evidence of the economical operation of the oven.

From the above description it will be apparent that I have produced a baker's oven embodying the features of advantage enumerated as desirable in the statement of invention and that while I have illustrated and described the preferred embodiment of the invention I reserve the right to make such changes in its detail construction, form, arrangement, or proportion of the parts as shall not involve a departure from the spirit and scope or sacrifice any of the advantages of the invention.

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

1. A baker's oven, provided with a furnace-chamber, one or more superposed baking-compartments, a furnace located in the furnace-chamber, a flue extending forward from the furnace and projecting through the front wall of the oven, horizontal flues or headers extending transversely of and within the oven near the front and rear walls thereof and projecting at one end beyond the corresponding side of the oven, longitudinal flues connecting said cross flues or headers within the oven, a short flue projecting from the inner end of one of the front flues or headers through the front wall of the oven and connected to the

projecting end of the flue connected to the furnace, a short flue connecting the projecting ends of the rear flues or headers, and a damper-controlled chimney extending through the top of the oven and connected at its lower end to the upper front cross flue or header, substantially as described.

2. A baker's oven, provided with a furnace-chamber, one or more superposed baking-compartments, a furnace located in the furnace-chamber, a flue extending forward from the furnace and projecting through the front wall of the oven, horizontal flues or headers extending transversely of and within the oven near the front and rear walls thereof and projecting at one end beyond the corresponding side of the oven, longitudinal flues connecting said cross flues or headers within the oven, a short flue projecting from the inner end of one of the front flues or headers through the front wall of the oven and connected to the projecting end of the flue connected to the furnace, a short flue connecting the projecting ends of the rear flues or headers, a damper-controlled chimney extending through the top of the oven and connected at its lower end to the upper front cross flue or header, and clean-out caps closing the outer or projecting ends of the longitudinal flues and of the cross flues or headers, substantially as described.

3. A baker's oven, provided with a furnace-chamber, one or more superposed baking-compartments, a furnace located in the furnace-chamber, a flue extending forward from the furnace and projecting through the front wall of the oven, horizontal flues or headers extending transversely of and within the oven near the front and rear walls thereof and projecting at one end beyond the corresponding side of the oven, longitudinal flues connecting said cross flues or headers within the oven, and projecting forward from the front cross-flues through the front wall of the oven, a short flue projecting from the inner end of one of the front flues or headers through the front wall of the oven and connected to the projecting end of the flue connected to the furnace, a short flue connecting the projecting ends of the rear flues or headers, a damper-controlled chimney extending through the top of the oven, and connected at its lower end to the upper cross flue or header, and clean-out caps closing the outer or projecting ends of the longitudinal flues and of the cross flues or headers, substantially as described.

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

WILLIAM GRIFFIN.

Witnesses:

H. C. RODGERS,
G. Y. THORPE.