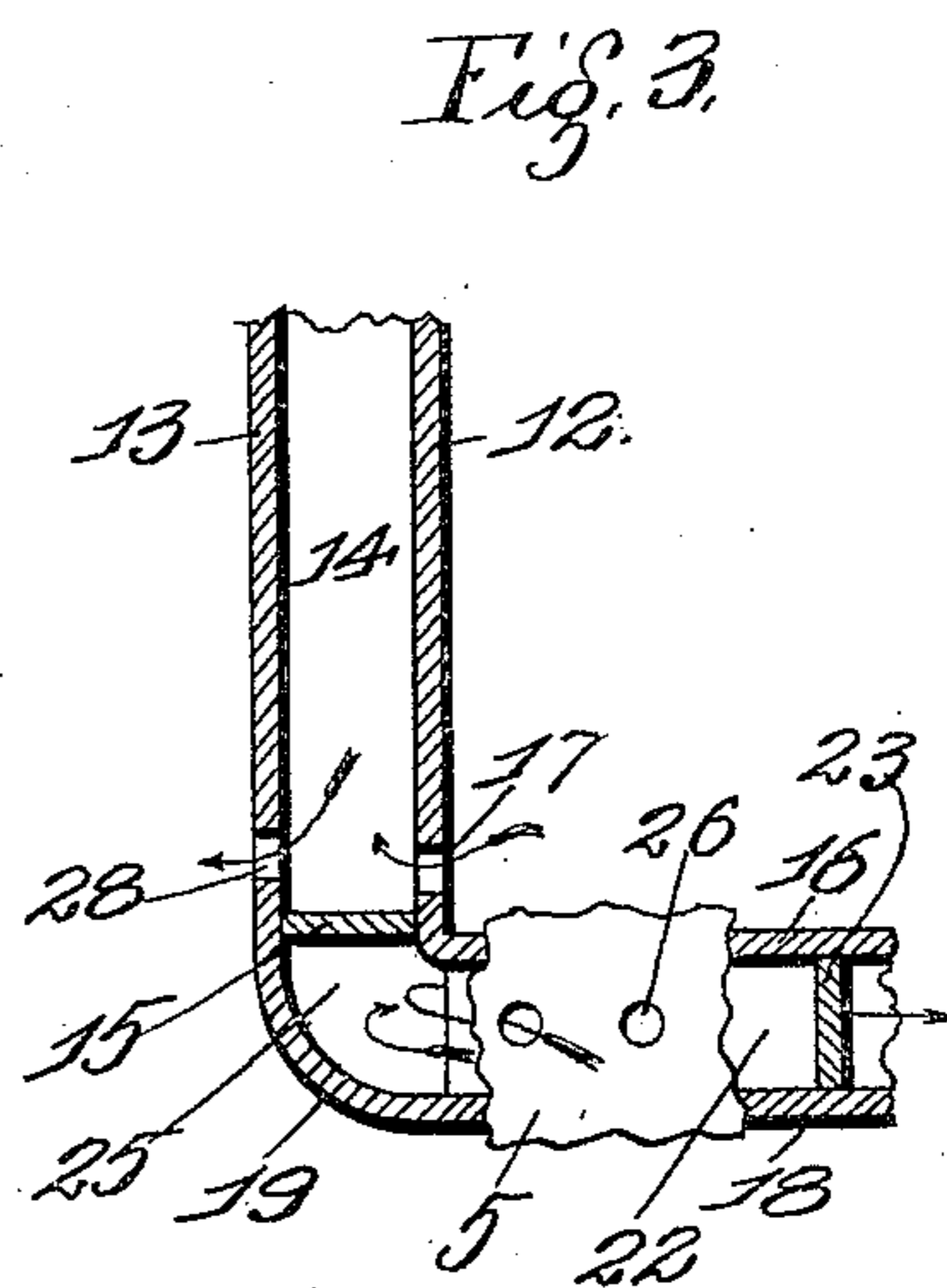
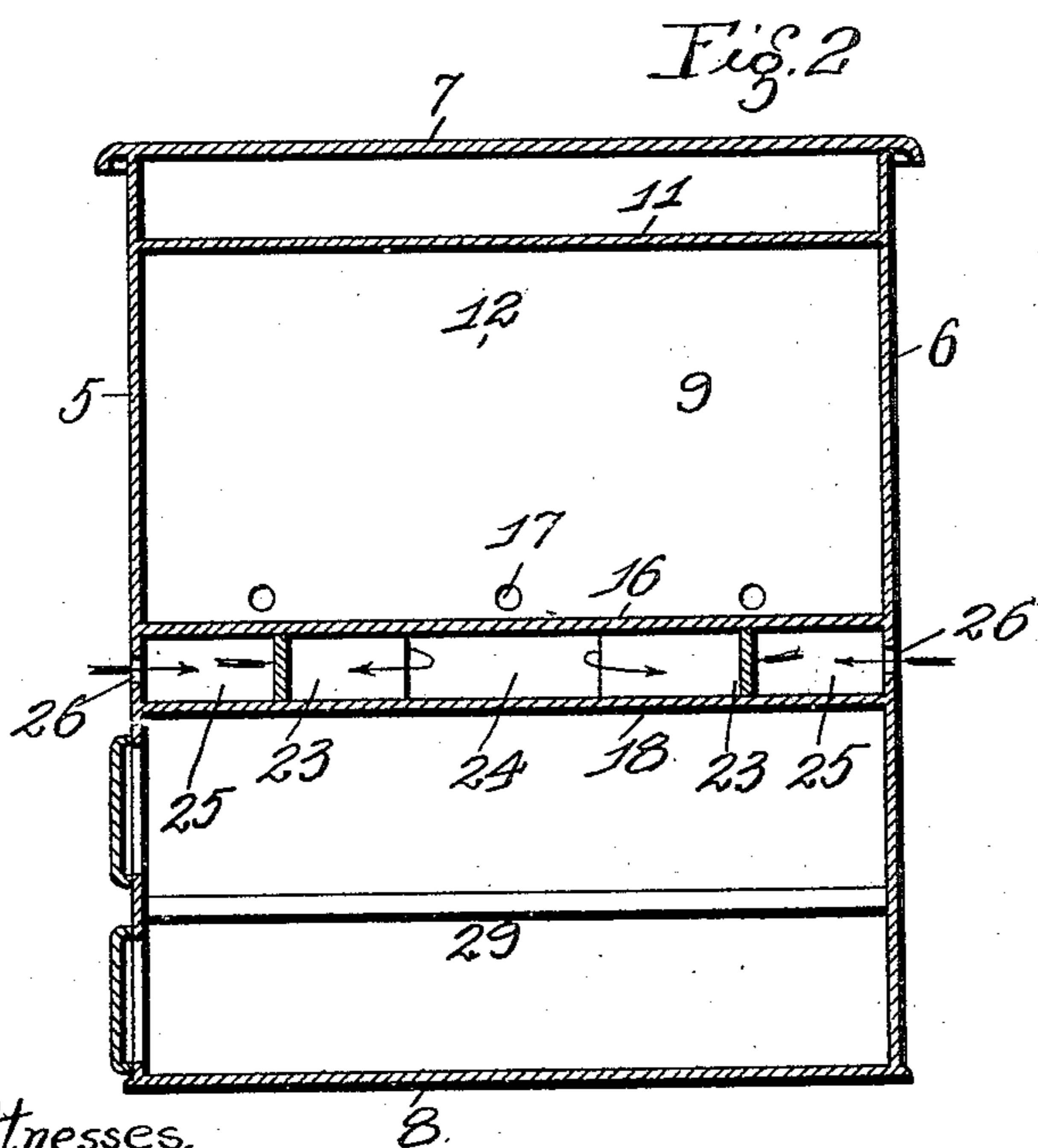
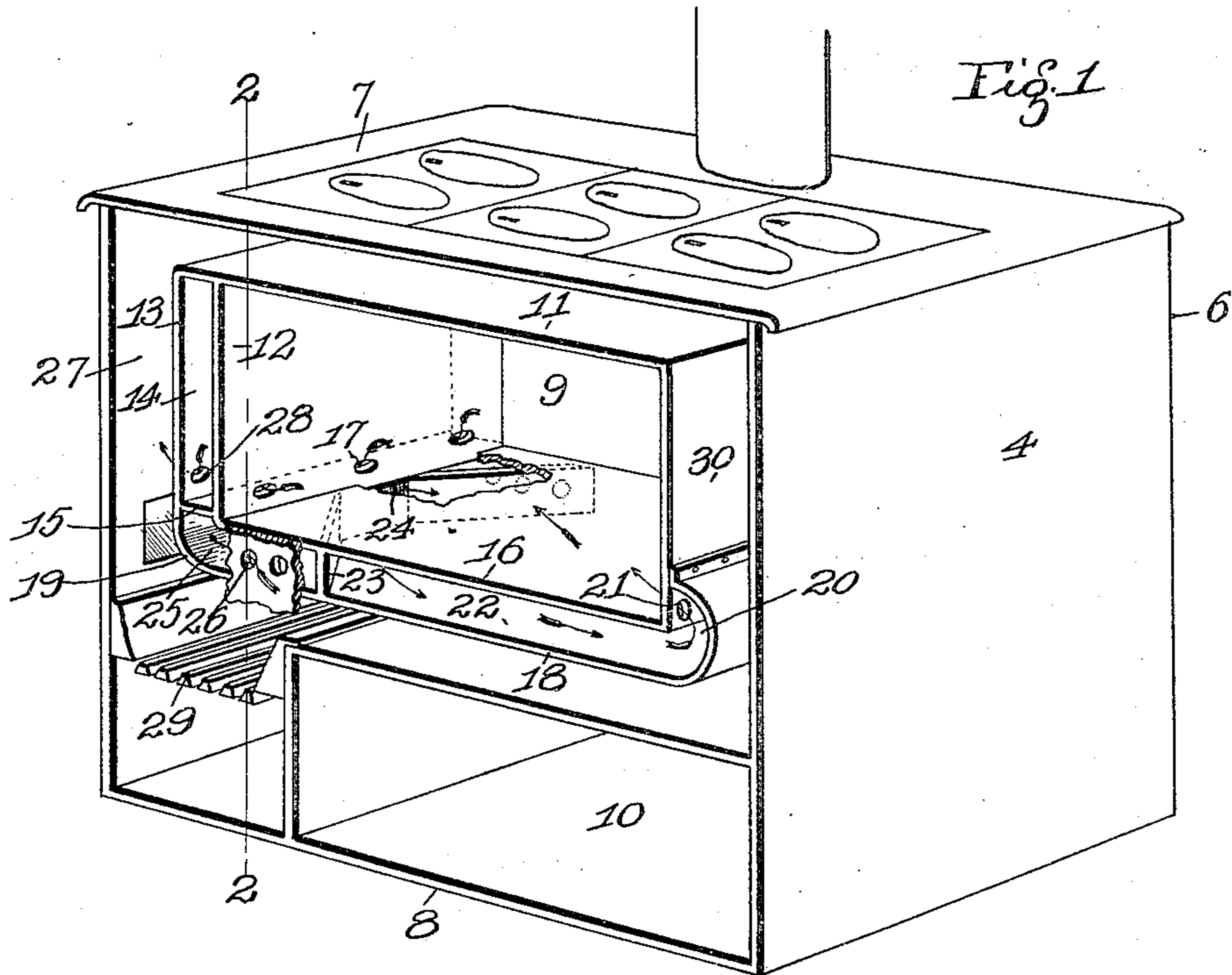


D. D. BERRY.  
STOVE OR RANGE.

APPLICATION FILED JUNE 30, 1908.

917,239.

Patented Apr. 6, 1909.



Witnesses.  
H. C. Stein

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# UNITED STATES PATENT OFFICE.

DANIEL D. BERRY, OF SPRINGFIELD, MISSOURI.

## STOVE OR RANGE.

No. 917,239.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed June 30, 1908. Serial No. 441,238.

*To all whom it may concern:*

Be it known that I, DANIEL D. BERRY, a citizen of the United States, and resident of Springfield, Missouri, have invented certain new and useful Improvements in Stoves or Ranges, of which the following is a specification.

This invention relates to improvements in stoves or ranges and consists in the novel arrangement, construction and combination of parts as will be fully hereinafter described and claimed.

The object of my invention is to construct a stove or range having an air circulating passage located beneath and to one side around a portion of the oven walls and bottom in which are located bridge walls and partitions for directing the passage of the air.

Figure 1 is a perspective view of my invention showing the front wall removed. Fig. 2 is a cross sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is an enlarged detail sectional view of a portion of the walls forming the air passage showing the bridge wall and partition.

In the construction of my invention, I provide an ordinary stove or range consisting of the end walls 4, front wall 5 and rear wall 6, top 7 and a bottom 8. In the casing is located the ordinary oven 9 and beneath the same and suitably located is the warm oven 10. The top 11 of the oven is arranged to project beyond the end wall 12 of the oven and to the projection is secured the wall 13 which forms between said wall and the oven end wall 12, an air passage 14. In this passage and between said walls is located a horizontal partition 15 extending from front wall 5 to back wall 6 approximately on a level with the bottom 16 of the oven, and in the oven wall 12 are formed a plurality of openings 17 located a short distance above the bottom 16 through which the heated air from the interior of the oven enters into the passage 14. Beneath the bottom 16, I provide a second bottom 18, the right hand end thereof being bent upwardly and secured to the right hand end wall 30 of the oven, the opposite end of the bottom 18 being a continuation of the end wall 13, the corner being sufficiently rounded as indicated by the numeral 19. The right hand end of the bottom 18 being secured to the wall 30 at a height sufficient to form a circulating passage 20 so as to permit the air to enter into the lower right hand corner of the oven through the perforations or air in-

lets 21. The location of the bottoms 16 and 18 form an air passage 22 through which the air is permitted to circulate and enter into the oven at the lower right hand corner as previously described. In the passage 22, I locate bridge or deflecting walls 23 which extend from the front and rear walls diagonally toward the end wall 12 of the oven forming an elongated air inlet 24, between the inner ends of the bridge or deflecting walls; the said walls dividing the air passage 22 forming a fresh air inlet chamber 25 into which the fresh air is admitted through the openings 26 formed in the front and rear walls of the casing and the said fresh air as it enters into the chamber 25 from the exterior is gradually heated and permitted to enter into the chamber 22 through the inlet 24 and enter into the oven through the openings 21. This heated air is then permitted to pass out of the oven by way of the openings 17 in the wall 12 and enter into the passage 14 located at the end of the oven wall and pass out into the combustion chamber 27 through the openings 28 formed in the wall 13. The fuel is placed in the fire-box 29 which is of ordinary construction the rounded corner 19 of the bottom 18 projecting over the fire-box permitting the heat to contact with the same and heat the fresh air as it is admitted through the openings 26. The direction and circulation of the air are shown by the arrows in the drawing.

By this arrangement the current of air after entering the inlets 26 travels first diagonally across the left hand corners of the oven, thence to the right under the oven, thence through the openings 21 into the interior of the oven, thence out of the oven through the openings 17 into the passage 14 and out through the openings 28 into the combustion or smoke flue 27, mingling with the particles of combustion and assisting in burning the same.

This invention is an improvement over my former patents issued, July 7, 1903, No. 733,129; May 30, 1905, No. 791,400 and also a pending application filed Jan. 22, 1908, Serial No. 412,067 and allowed April 4, 1908.

Having fully described my invention what I claim is:

1. A stove or range comprising an outer casing; an oven; an additional end wall and bottom located to one side and beneath the oven forming an air passage; a division wall located between the end walls; diagonal bridge or deflecting walls located between

the bottoms dividing the air passage into two chambers and forming an inlet through which the air is permitted to pass from one chamber to the other, all of the end walls being provided with openings through which the air is permitted to circulate; the front and rear walls of the casing provided with openings for the admission of the fresh air from the exterior into the chamber in front of the bridge walls, substantially as specified.

2. A device of the class described comprising a casing; an oven located in the casing; an end wall located parallel with the end wall of the oven; a bottom located beneath the oven bottom and forming a continuation of the end wall; the right hand end of said bottom being bent upwardly and secured to the right hand end of the oven; said end walls and bottoms forming an air passage; a horizontal partition wall located between the end walls and approximately on a parallel line with the oven bottom; said end walls being provided with openings through which

the air circulates; bridge walls located in the air passage between the bottoms and located diagonally toward the left hand end of the oven wall forming an air inlet between the inner ends of said bridge walls; the front and rear walls of the casing provided with openings for permitting the air to enter into the air passage in front of the bridge walls; the right hand end of the oven wall provided with openings to permit the air to enter into the oven from the air passage beneath; the said openings so arranged as to permit the air to pass through the oven and out into the combustion chamber or smoke flue assisting in the burning of the articles of combustion, substantially as specified.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

DANIEL D. BERRY.

Witnesses:

W. J. WILDMAN.

D. E. SHULTZ.