

No. 662,107.

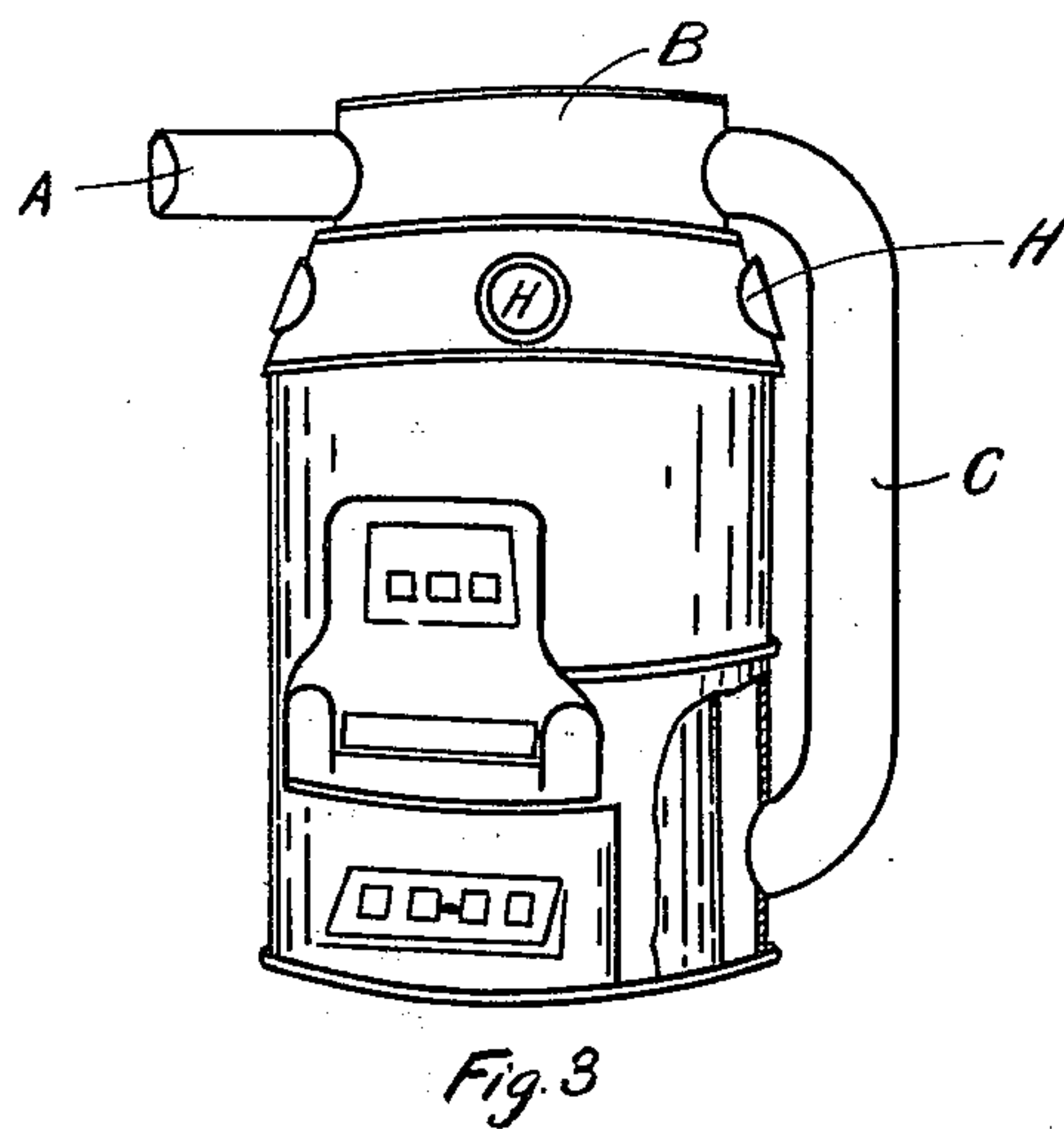
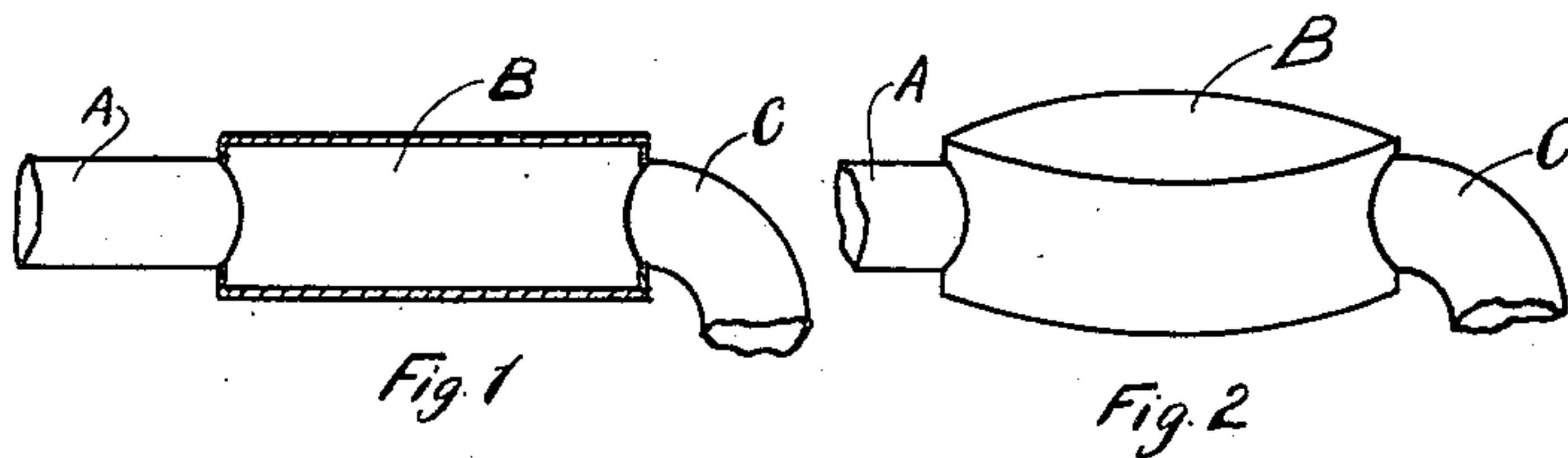
Patented Nov. 20, 1900.

E. ABBS & J. J. GLYNN.

AIR HEATING PROTECTOR FOR FURNACES.

(Application filed Nov. 22, 1899. Renewed Oct. 24, 1900.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

EDWARD ABBS AND JAMES JOSEPH GLYNN, OF TORONTO, CANADA.

## AIR-HEATING PROTECTOR FOR FURNACES.

SPECIFICATION forming part of Letters Patent No. 662,107, dated November 20, 1900.

Application filed November 22, 1899. Renewed October 24, 1900. Serial No. 34,178. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD ABBS and JAMES JOSEPH GLYNN, tinsmiths, subjects of the Queen of England, residing at Toronto, in the county of York and Province of Ontario, Dominion of Canada, have invented or discovered certain new and useful Improvements in Cold-Air Regulators and Fire-Pro-  
10 to be a full, clear, and exact description of the invention or discovery, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part  
15 of this specification.

Our invention relates to a cold-air regulator and fire-protector as applied to hot-air furnaces, and has for its object to provide a means for reducing the concentration of heat  
20 at the head or top of the furnace and utilizing the heat that accumulates there to raise the temperature of the cold air before it enters into the bottom of the furnace.

In the accompanying drawings like letters  
25 refer to similar parts throughout the several views.

Figure 1 represents a sectional elevation of our invention; Fig. 2, a perspective view of the same, and Fig. 3 is a perspective view of  
30 our invention in place on the top of the furnace.

Our invention consists simply of a hollow metallic cylinder B, having an outlet A and one or more outlets C, as shown in the different figures.  
35

The receptacle B may be adapted to be placed on the top of any furnace, and the operation of it is as follows: As the cold air passes in through the conduit, as shown at A,

it enters into the enlarged receptacle shown 40 at B, which may be made of any suitable material and of any particular shape, so as to fit the top of the furnace and so as to present a heating-surface to the air which enters it. One or more conduits C leads the air 45 from the receptacle B down into the lower part of the furnace, where it rises and becomes more highly heated and thence passes out through the openings H. The attachment may be connected to almost any furnace, the 50 receptacle B being merely set on the top of the furnace. It is clear from the described arrangement of the cold-air conduit and receptacle over the top of the furnace that it allows the cold air to become heated before it 55 enters the inner part of the furnace, thus using up the excess of heat that would otherwise be conducted away and be practically lost. It also prevents the overheating of the top of the furnace, thus removing the liability 60 of causing fire.

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

An attachment for furnaces, comprising a 65 cold-air reservoir placed on the top of the furnace and substantially conforming in shape to the said top, an inlet-pipe to said reservoir, and one or more outlet-pipes therefrom leading to within the lower part of the furnace, 70 substantially as described.

In testimony whereof we have hereunto set our hands this 23d day of September, 1899.

EDWARD ABBS.

JAMES JOSEPH GLYNN.

Witnesses:

H. ECKARDT,

A. C. MACDONELL.