J. H. CORCORAN.

HEAT SAVER FOR FURNACES.

APPLICATION FILED FEB. 11, 1919.

1,325,276.

Patented Dec. 16, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

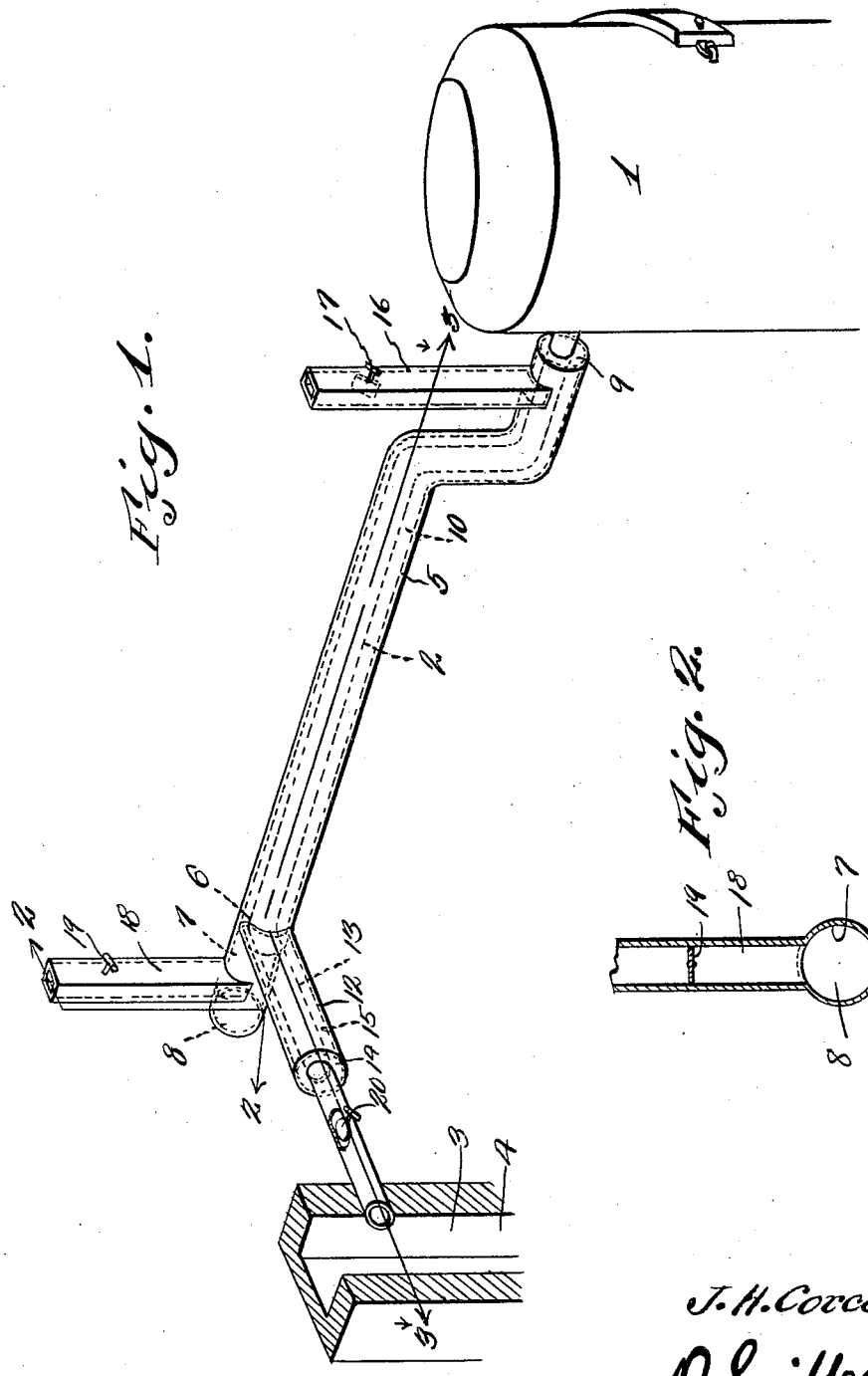


Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

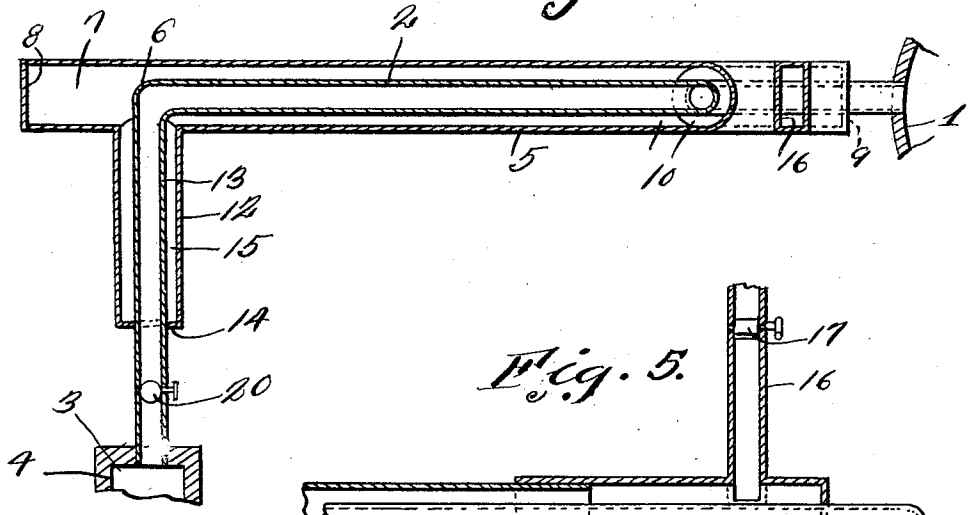


Fig. 5.

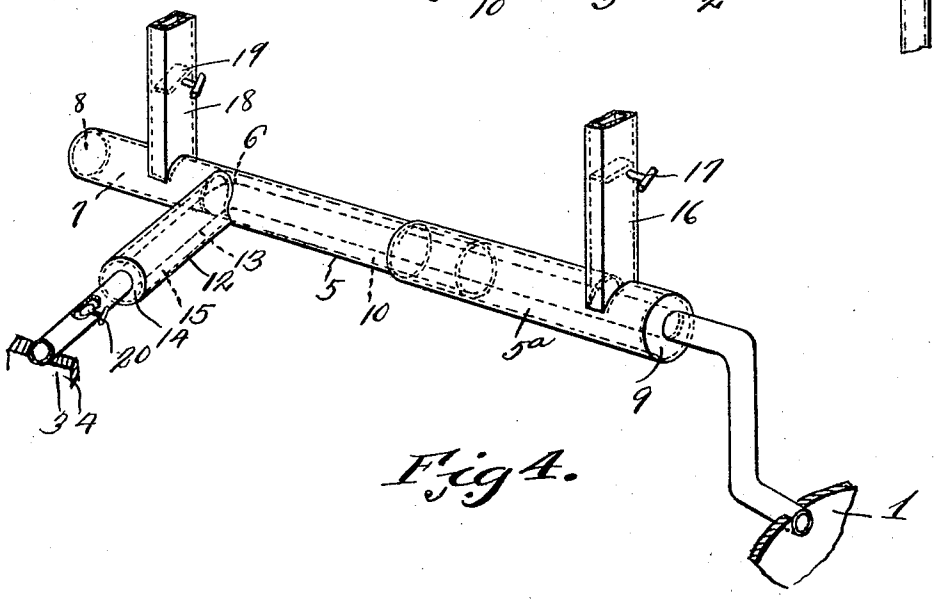


Fig 4.

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JOHN H. CORCORAN, OF POPEJOY, IOWA.

HEAT-SAVER FOR FURNACES.

1,325,276. Specification of Letters Patent. Patented Dec. 16, 1919.

Application filed February 11, 1919. Serial No. 276,319.

To all whom it may concern:

Be it known that I, JOHN H. CORCORAN, a citizen of the United States, residing at Popejoy, in the county of Franklin, State of Iowa, have invented a new and useful Heat-Saver for Furnaces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to furnaces and has for its object to provide the pipe leading from the furnace, through which the products of combustion are carried off, with a jacket forming a collection chamber for the heat radiated from the pipe leading from the furnace to the chimney flue. Also to provide one end of the pipe forming the jacket with an inlet duct controlled by a damper and the other end with a discharge pipe, having a damper whereby the heat from the collection chamber may be regulated and the amount discharged controlled. Also to provide the pipe through which the products of combustion pass with a damper located adjacent the chimney, by which damper the products of combustion in the pipe may be retarded so as to increase the heat that is radiated.

A further object is to provide the jacket forming the collection chamber with a telescoping end, whereby the size of the collection chamber may be varied as desired.

With the above and other objects in view the invention consists in the combination and arrangement of parts as hereinafter set forth, shown in the drawings and described, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:

Figure 1 is a perspective view of the furnace pipe and furnace, showing the jacket applied thereto.

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is sectional view taken on line 3—3 of Fig. 1.

Fig. 4 is a perspective view of another form of the invention, showing the telescoping feature.

Fig. 5 is a detail sectional view through the telescoping end of the jacket.

Referring to the drawings the numeral 1 designates a conventional form of furnace and 2 the pipe leading from the furnace to the flue 3 of the usual form of chimney 4. Surrounding the pipe 2 is a jacket 5 formed of sheet metal. One end of said jacket extending beyond the bend 6 of the pipe 2 so as to form a collection chamber 7, the ends of the jacket 5 being closed as at 8 and 9 thereby forming a collection chamber around the pipe 2, in which chamber 10, the heat radiated from the pipe 2, as the products of combustion pass therethrough heat the same. The jacket 5 may be provided with a covering of asbestos or other material if desired so as to prevent, as far as possible the radiation of the heat from the same.

The jacket 5 is provided with an extension 12, which covers the portion 13 of the pipe 2, the end of the extension 12 being closed as shown at 14, thereby forming an extension chamber which is in communication with collection chamber 10. It will be seen by this construction that a collection chamber for the heat radiated from the pipe 2 is provided for substantially its full length, in which the heat will collect.

An intake pipe 16, having a damper 17 communicates with one end of the collection chamber, through which intake pipe 16 cool air is admitted to the collection chamber 10. In which chamber it becomes heated by contact with the pipe 2 and the heat radiated by said pipe. The outlet from the collection chamber being through the pipe 18, which communicates with the chamber 7, formed by the extension of the jacket 5. This outlet, which may be led to any part of a house is under the control of the damper 19. From the above it will be seen that the heat which is ordinarily passed through the pipe 2 and discharged into the chimney is used as an auxiliary heating means, thereby reducing the consumption of fuel.

In Figs. 4 and 5 the jacket 5 is provided with a telescoping end 5^a by the movement of which the size of the collection chamber 10 may be varied as desired and to fit various lengths of pipes. However in both forms a damper is placed in the discharge end of the pipe 2 and beyond the end of the jacket 12 so that the products of combustion in the pipe 2 may be retarded, thereby increasing the radiation of heat from

the pipe 2 into the collection chambers 10 and 7.

The invention having been set forth what is claimed as new and useful is: —

A heat conserver for furnaces, comprising a jacket surrounding and of greater diameter than the exit pipe through which the products of combustion are discharged into a chimney flue, said jacket having closed ends thereby forming a collection chamber for collecting the radiated heat from the exit pipe, said exit pipe having a right angled bend, a jacket around the portion of the pipe formed by the bend, the first mentioned jacket extending beyond the exit pipe bend and having a closed end so as to form a collection chamber adjacent and in communication with a damper controlled discharge duct and a damper controlled intake duct at the other end of the jacket for admitting cool air into the chamber formed by the jackets.

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

JOHN H. CORCORAN.

Witnesses:
A. C. SCHLOSSER,
E. B. SAWDEY.