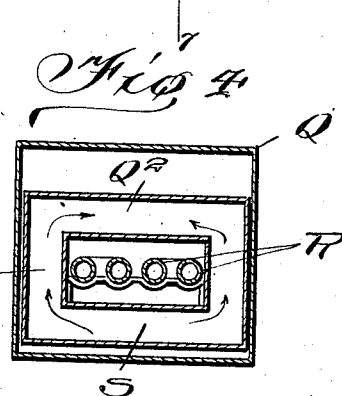
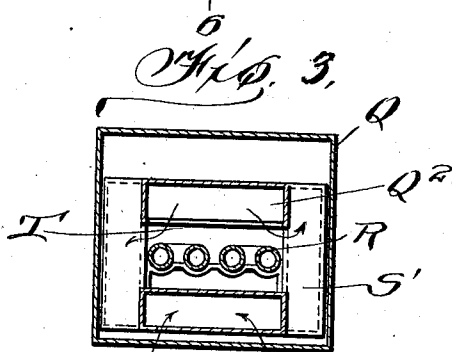
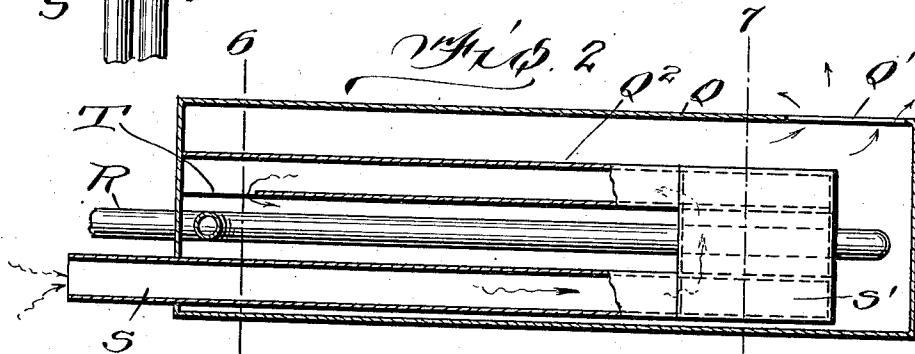
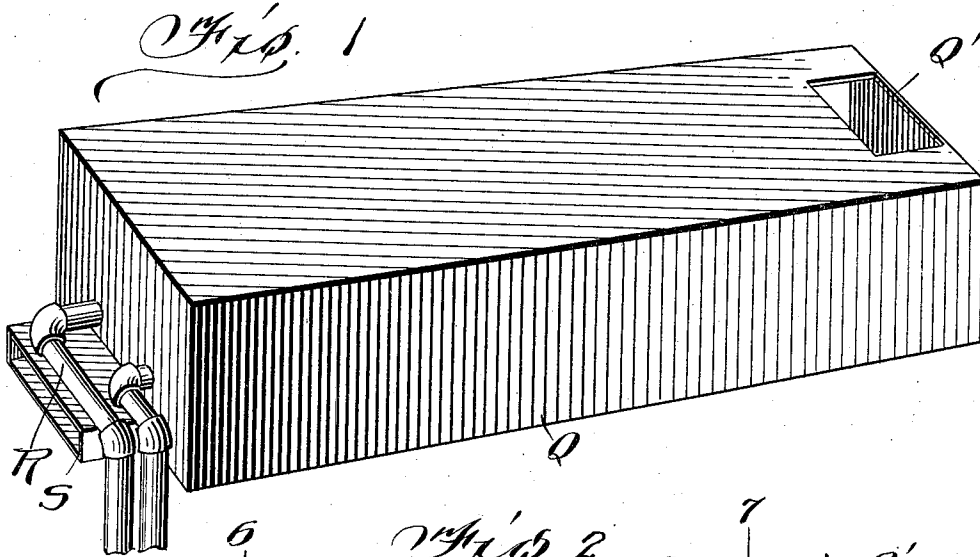


H. C. SKINNER & E. H. WELLS.
HEATING SYSTEM.
APPLICATION FILED JULY 8, 1910.

996,733.

Patented July 4, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

HARRY C. SKINNER AND EDWARD H. WELLS, OF DETROIT, MICHIGAN.

HEATING SYSTEM.

996,733.

Specification of Letters Patent.

Patented July 4, 1911.

Application filed July 8, 1910. Serial No. 571,058.

To all whom it may concern:

Be it known that we, HARRY C. SKINNER and EDWARD H. WELLS, citizens of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Heating Systems; and we 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in heating apparatus and the object in view is to produce means adapted to heat outside atmospheric air and deliver the same to registers.

In carrying out our invention, it is our purpose to utilize the space below the lower joists or rafters of walls to form air flues through which the heating pipes pass and so arranged that the outside air as it enters the flue is slightly heated before it comes in direct contact with the pipes through which the heating liquid passes.

Our invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of our heating system. Fig. 2 is a sectional view longitudinally through Fig. 1. Fig. 3 is a cross sectional view on line 6—6 of Fig. 2, and Fig. 4 is a cross sectional view on line 7—7 of Fig. 2.

Reference now being had to the details of the drawings by letter, Q designates a casing which is provided with an exit opening Q' and in which casing a coiled pipe R is mounted through which the heating agent is adapted to circulate. A fresh air conduit designated by letter S has its outer open end projecting through the end wall of the casing Q and extends substantially the length of the latter and has laterally extending passageways S' communicating with the upper portion of the flue Q². The flue thence has an exit end T at a location adjacent to the

forward end of the casing and over the coiled pipe as shown, thus causing the cold outside air to circulate through the flue and to be partially heated before coming in direct contact with the coil R, which will be readily understood.

The operation of our heating system will be readily understood and is as follows:— When the apparatus is adjusted in the manner shown, the hot water or steam coursing through the coils will cause the air within the casing Q to be heated and rise through the register opening into the room above. By this action a suction will be formed in the flue S, causing outside cold air to be drawn into the flue, taking the course indicated by arrows in Fig. 2 of the drawings and making exit through the opening Q' in the top of the casing. In this movement of the air and coming in contact with the heating pipes, the air will be gradually heated as it passes through the casing.

What we claim to be new is:—

In combination with a casing having a heating chamber adapted to be positioned between the studs of the building, said casing having an exit opening in its top, heating pipes passing through the end of the casing opposite said exit opening, an air inlet flue extending through the end of the casing through which said pipes pass, said flue being extended to substantially the opposite end of said casing and having a return portion formed with an opening through the under side thereof adjacent to its end, said portions of the flue within said casing being parallel and spaced apart, said heating pipes formed into coils and positioned intermediate parallel portions of the flue.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

HARRY C. SKINNER.
EDWARD H. WELLS.

Witnesses:

W. H. MAYBEE,
CECIL DOUGLASS.