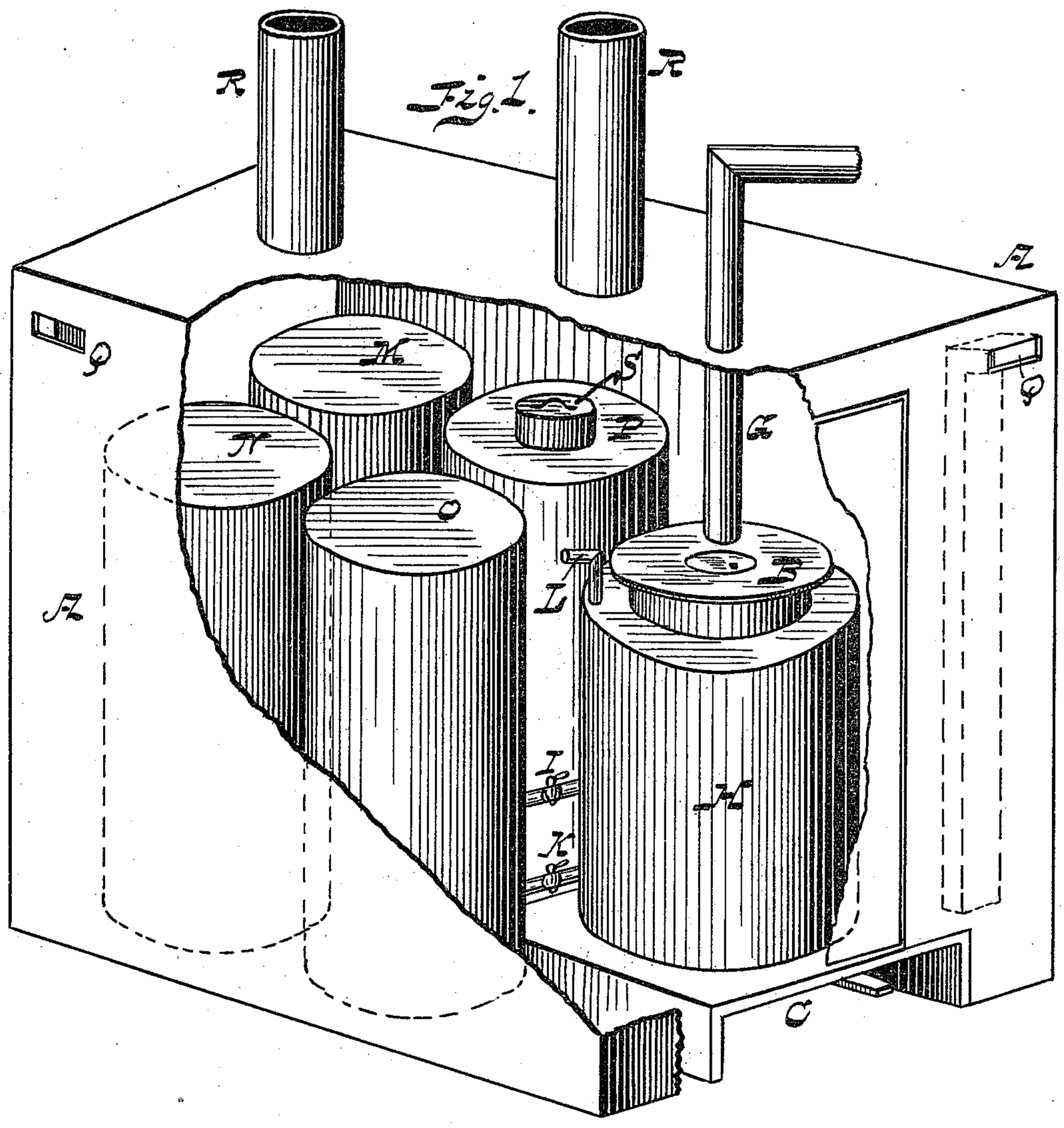
(No Model.) 4 Sheets—Sheet 1.

C. M. TAYLOR.

DEVICE FOR HEATING BUILDINGS.

No. 408,444. Patented Aug. 6, 1889.



WITNESSES
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INVENTOR
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by E. H. Bates
Attorney

(No Model.) 4 Sheets—Sheet 2.

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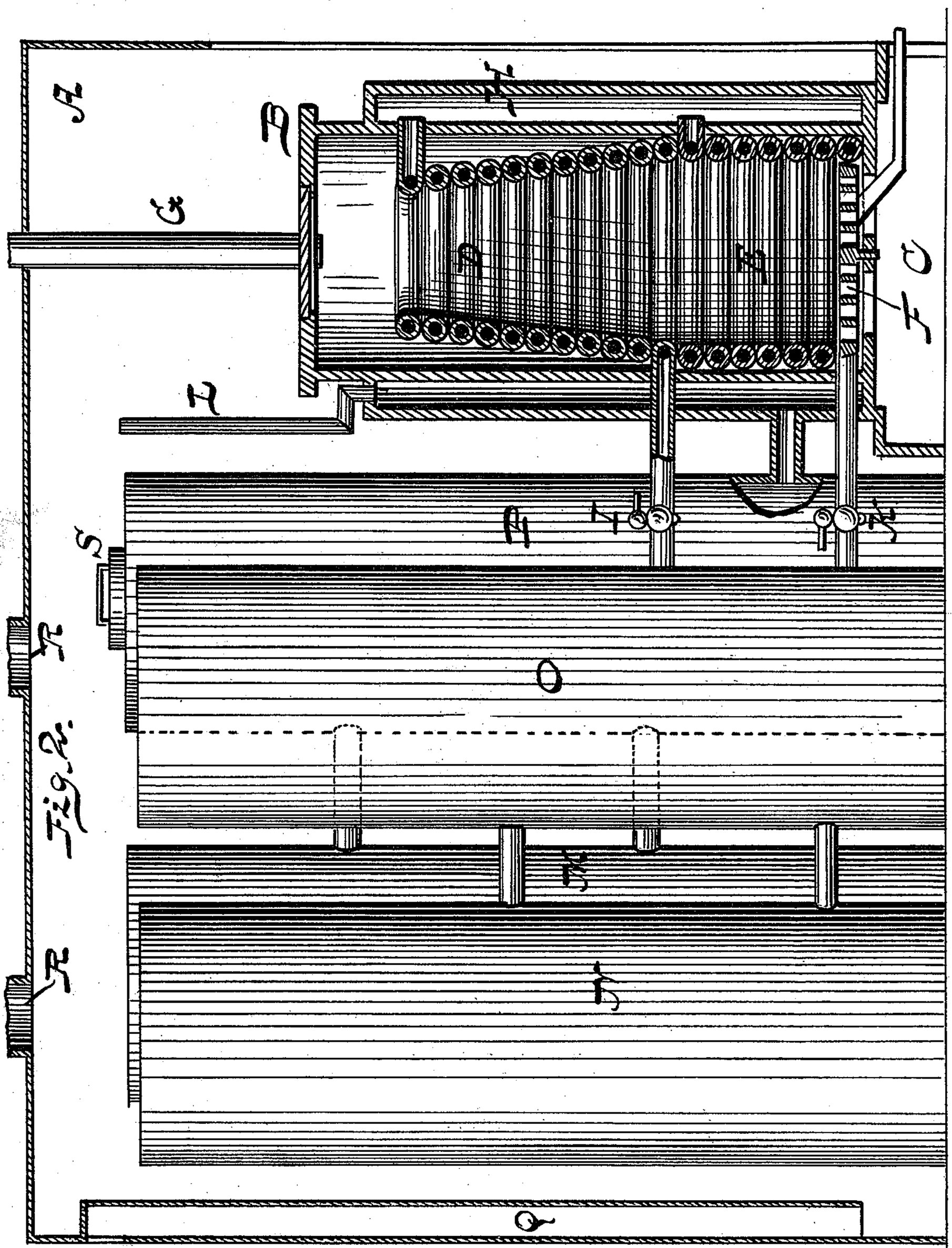

WITNESSES

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(No Model.) 4 Sheets—Sheet 3.

C. M. TAYLOR.

DEVICE FOR HEATING BUILDINGS.

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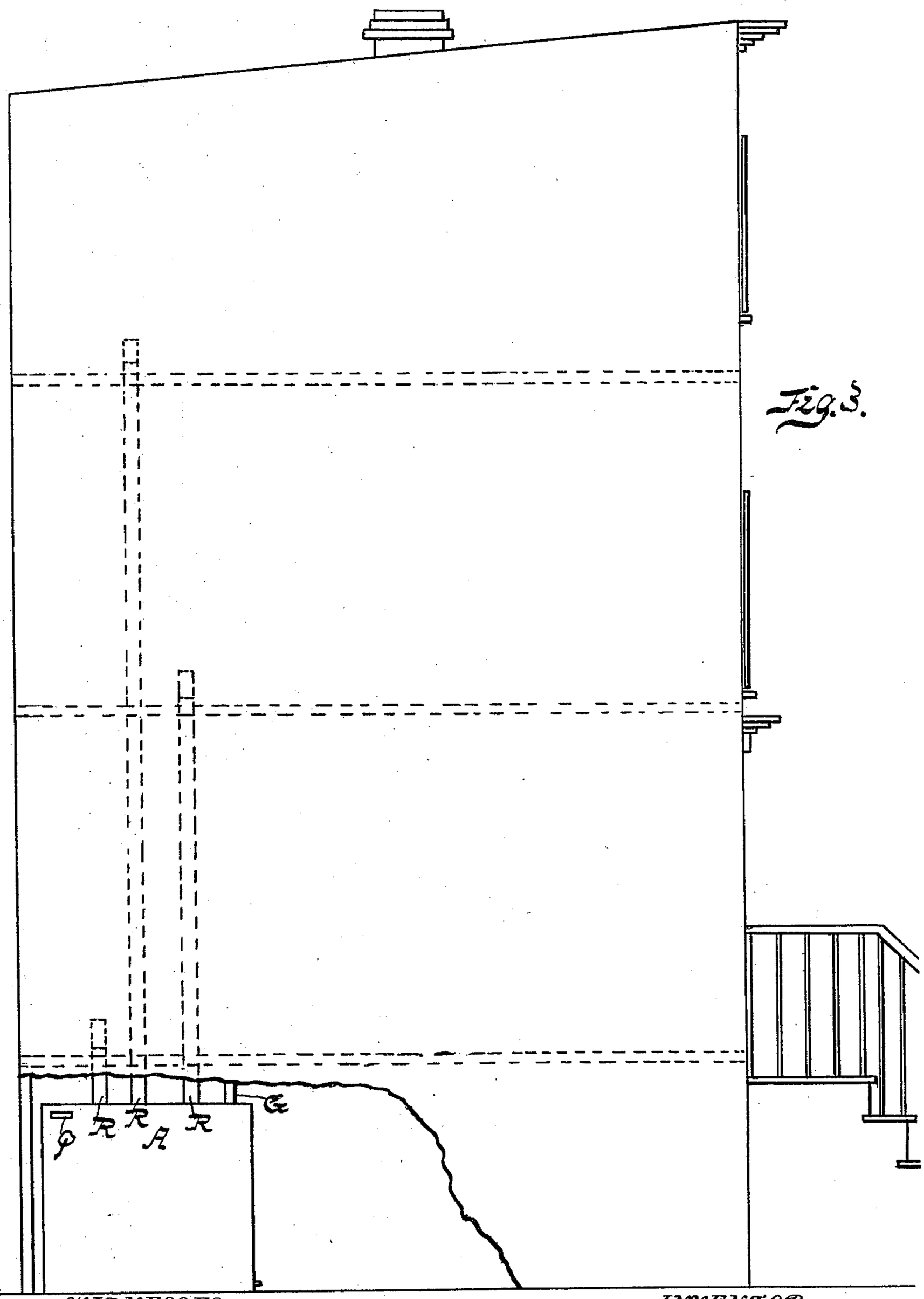

Fig. 3.

WITNESSES

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C. M. TAYLOR.

DEVICE FOR HEATING BUILDINGS.

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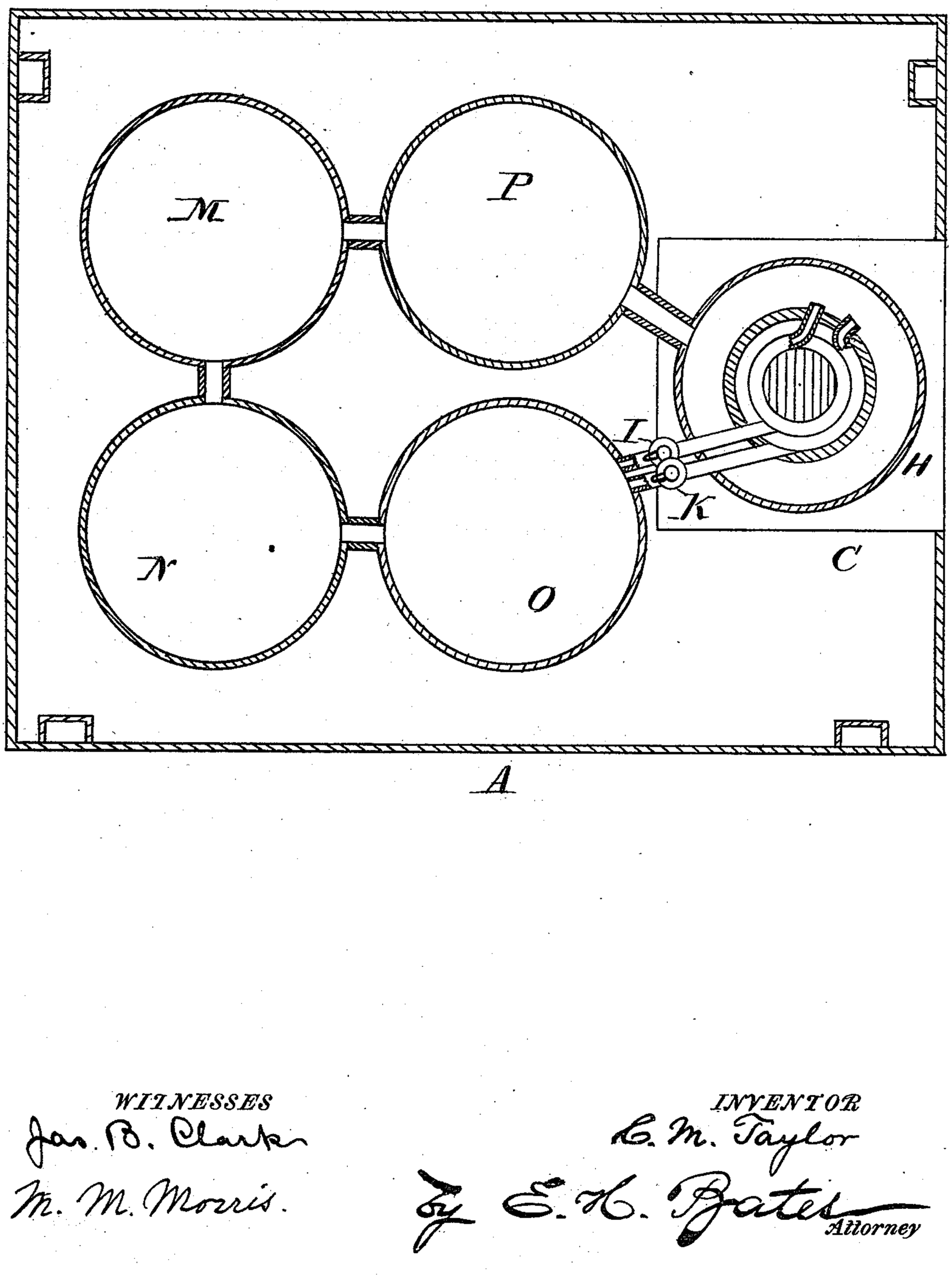
Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES M. TAYLOR, OF PRINCEVILLE, ILLINOIS.

DEVICE FOR HEATING BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 408,444, dated August 6, 1889.

Application filed April 4, 1889. Serial No. 305,942. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. TAYLOR, a citizen of the United States, residing at Princeville, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Devices for Heating Buildings; 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.

This invention has for its objects to provide an improved apparatus for heating buildings and other structures; and it has for its objects to utilize the heat of a stove in connection with a series of hot-water tanks or reservoirs, wherein a circulation of the water may be established and maintained by the heat of the stove and imparted by radiation to a volume of continually-moving air, the circulation of which is established and continued by the radiated heat supplied by the circulating water, as more fully hereinafter explained.

The above-mentioned objects are attained by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of my improved heating apparatus, showing a portion of the walls broken away to illustrate the stove and the hot-water tanks forming part of the apparatus, and Fig. 2 represents a vertical sectional view of the same. Fig. 3 is a view of a house, showing my device applied. Fig. 4 is a horizontal sectional view of my device.

Referring by letter to the accompanying drawings, A designates the walls of an inclosure or chamber wherein the heating devices are located. These walls may be constructed of brick or other suitable material, preferably of such having non-heat-conducting properties in order to economize fuel.

B indicates a stove, which is mounted upon a hollow base C, which constitutes the ash-pit, and is provided with the usual doors and draft-openings. Within the stove are located two coils of pipe D and E, the upper one of which constitutes the magazine of the stove and the lower coil the fire-box thereof.

F indicates the grate, and G the chimney through which the products of combustion escape, which flue may be enlarged into a drum.

The upper end of the coil passes outward and connects with the circulating water of the larger coil of pipe. Its upper end also connects with the circulating water in the jacket. The stove is surrounded with a tight water jacket or shell H, into which the ends of the coils open, as indicated in the drawings. The lateral extensions of these coils lead to the tank O, pass through the wall of the jacket H, and are provided with valves I and K, by means of which the circulation of water can be regulated.

L indicates a pipe leading from the top of the jacket, which is a safety-vent to relieve any undue accumulation of pressure in said jacket.

Any number of tanks may be employed; but I represent but four, (indicated by the letters M, N, O, and P.) These are connected by pipes at their upper and lower parts, so that an effective circulation of water may take place through them.

The lower portion of the inclosure A is provided with one or more cold-air ducts Q, for the admission of fresh cold air, and the upper part thereof is provided with eduction-passages R, through which the heated air may be passed off to suitable flues connected with the apartments of a building.

One of the tanks is provided with an opening having a cover S, through which the system of tanks can be filled with water.

The operation of my apparatus will be readily understood in connection with the above description, and is as follows: The tanks as well as the water-jacket being filled with water, (the jacket receiving its supply from the tanks,) it stands at a same level as that in the tanks. The stove receives its fuel at the top, and after the fire is started the heat is initially imparted to the coils, setting up a circulation through the same and through the respective tanks and jacket. The heat radiated from the tanks and jacket is taken up by the cold air entering the inclosure and supplied to the apartments of the building.

What I claim is—

The combination, in a device for heating buildings, of the following instrumentalities:

an inclosure A, a stove having a base C, the two coils of pipes arranged in this stove, the upper coil forming the magazine and the lower coil the fire-box, the grate F, the outlet or chimney G, the surrounding shield H, the tank O, with which said coils communicate, valves I K, safety-vent L, tanks connected together and with the tank O, the cold-air ducts Q, applied to the said inclosure A, the eduction-passage R, and the cover S, applied to tank P, all as specified, and arranged as shown.

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

CHARLES M. TAYLOR.

Witnesses:
O. C. GARRISON,
S. GODFREY.