

No. 714,724.

Patented Dec. 2, 1902.

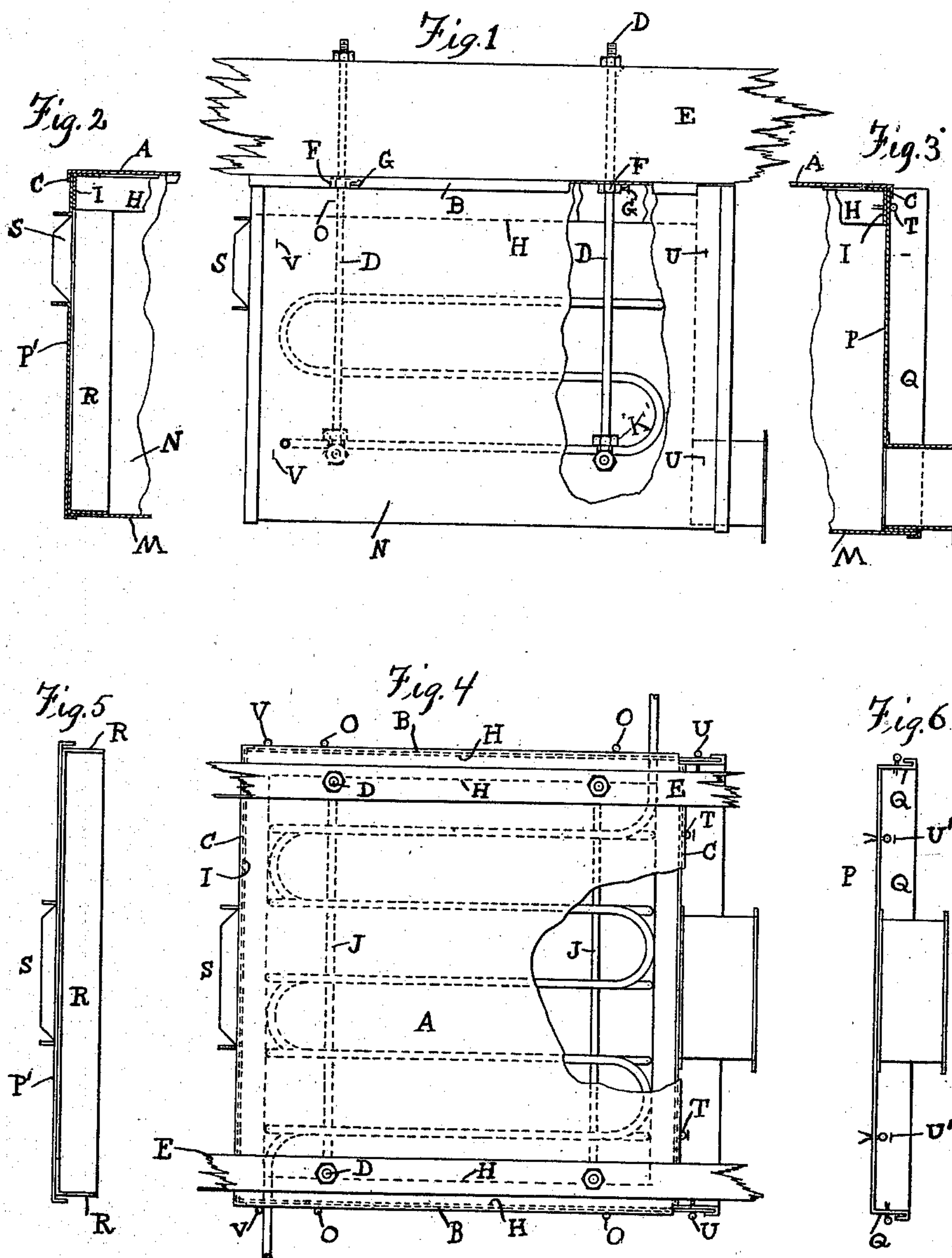
E. J. MALLEN.

HOT AIR CASING FOR HEATING SYSTEMS.

(Application filed July 30, 1901.)

(No Model.)

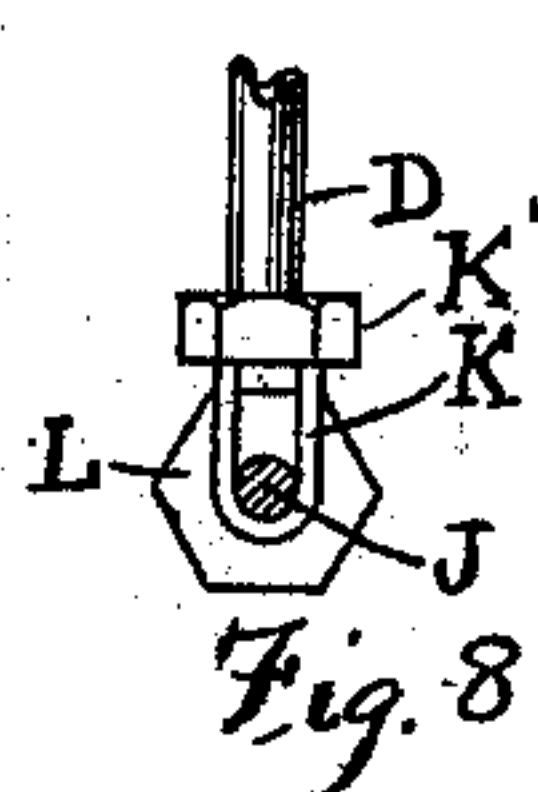
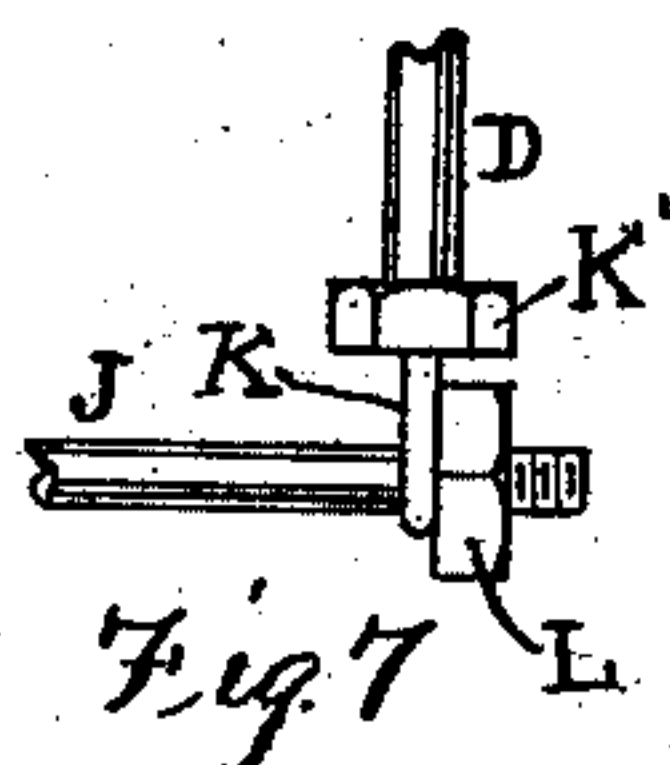
2 Sheets—Sheet 1.



WITNESSES:

A. A. de Bonneville

William P. Francis



INVENTOR

E. J. MALLEN.

BY

Edward P. Thompson
ATTORNEY

No. 714,724.

Patented Dec. 2, 1902.

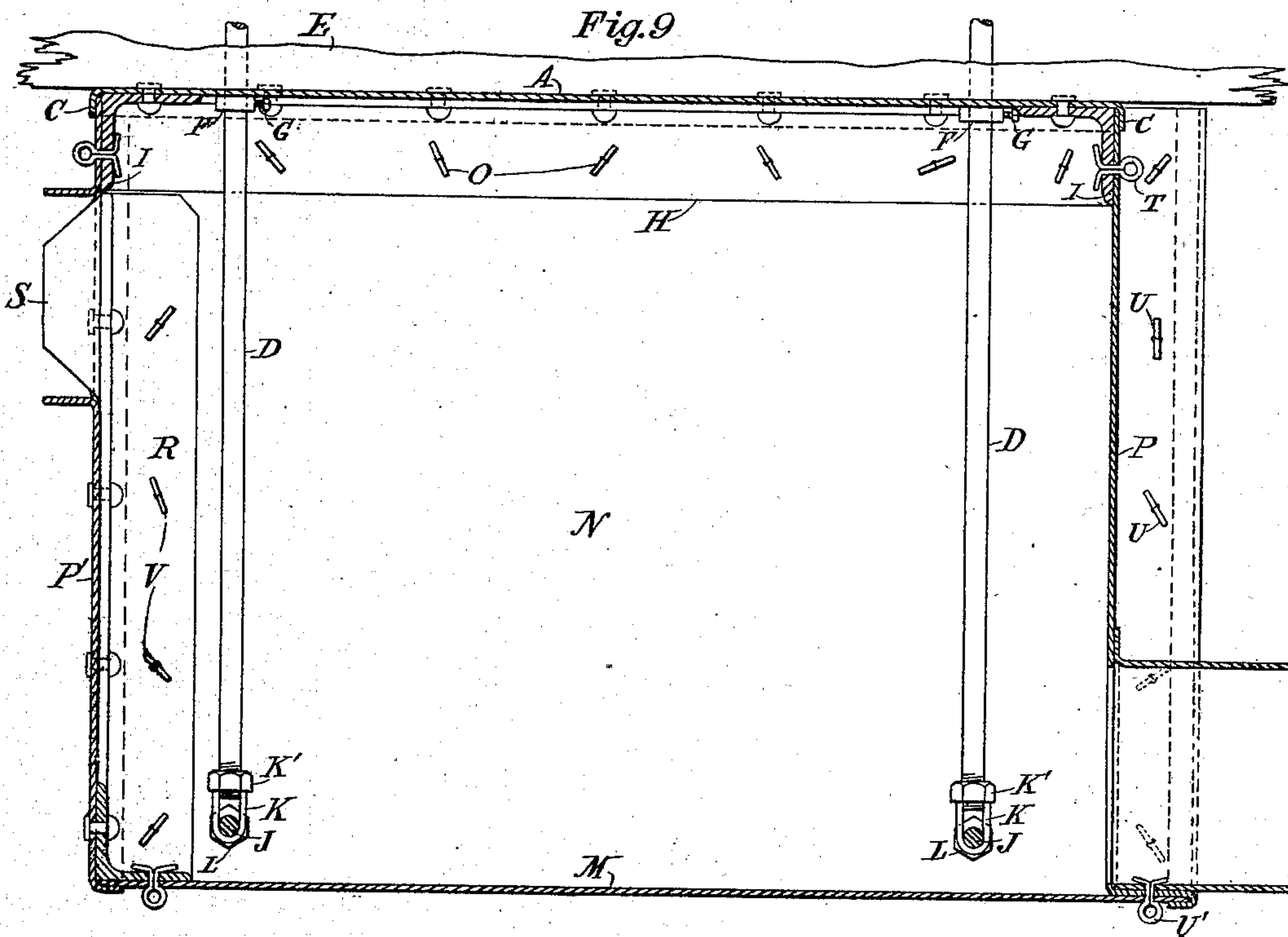
E. J. MALLEN.

HOT AIR CASING FOR HEATING SYSTEMS.

(Application filed July 30, 1901.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses

Anna P. McEly
Dalhousie C. Gellan

Inventor

Edward J. Mallen,
Inventor

by Edward P. Thompson
Attorney

UNITED STATES PATENT OFFICE.

EDWARD J. MALLIN, OF NEW YORK, N. Y., ASSIGNOR TO BAKER SMITH AND COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

HOT-AIR CASING FOR HEATING SYSTEMS.

SPECIFICATION forming part of Letters Patent No. 714,724, dated December 2, 1902.

Application filed July 30, 1901. Serial No. 70,201. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. MALLIN, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Hot-Air Casings for Heating Systems, of which the following is a specification.

My invention relates to a knockdown casing for surrounding a steam-heating coil having the usual holes for the entrance of cold air and the exit of heated air for house-warming purposes.

The organization comprising the invention consists of the combination of a top sheet adapted to be suspended from an overhead support and having a pair of parallel depending flanges surrounding its edges, a second sheet forming bottom and sides of the casing and having its edges projecting between said projecting flanges and secured thereto by pins passing transversely through said edges and one of said depending flanges, end pieces having likewise double flanges formed on their edges, enabling them to surround the lateral edges of said second sheet and to form an air-tight joint, and pins passing transversely through said lateral edges and one of the flanges and securing the ends to the other casing-sections.

The further nature and scope of the invention are defined in the appended claims.

Figure 1 is a side elevation of the metal casing with a portion of the side broken away to show the interior construction. The figure includes a beam in the building, to which the construction is fastened. Fig. 2 is a vertical central section of the left-hand end of the construction. Fig. 3 is a similar section of the right-hand portion. Fig. 4 is a plan of the whole device with a portion of the supporting-beams. A part of the top sheet is broken away to disclose the interior. Fig. 5 is an exterior or plan of an end piece for the casing ready to be applied thereto. Fig. 6 is a similar view of the other end piece. Figs. 7 and 8 are different views, on an enlarged scale, of one of the details of the construction. Fig. 9 is a longitudinal vertical sectional view through the center of the casing with the heating-coil removed.

Dotted lines in all the figures represent hidden parts.

The device consists of the combination of a top sheet A, suitably of galvanized iron, with downwardly-turned edges B at the sides and C at the end at right angles to the plane of the sheet; vertically-hanging rods D, suspended from the beams E; adjustable collars F, with set-screws G, for supporting said sheet against or just below said beams E; an angle-iron rectangular frame riveted to said top sheet A, whose sides which hang down and are lettered H at the sides of the casing and whose sides at the end of the casing are lettered I, said frame extending around the edges of said top sheet, so as to leave a distance between the frame and the downwardly-turned edges B and C about equal to the thickness of the sheet-iron, said rods D being terminated by eye-rings K; horizontal rods J, passing through said rings in pairs and held therein by nuts L on the ends of said horizontal rods, which are for supporting the coil of steam-pipe; a sheet M of galvanized iron below and substantially parallel to the horizontal rods J and bent vertically upward to form the opposite side N of the casing, said sides terminating between two of the downwardly-bent edges of the top sheet A of the casing, respectively, and the outside of the angle-irons H at two of the opposite edges of said top sheet A, to which angle-irons the said sides of the casing are detachably secured by split pins O, the said sides and bottom sheets projecting farther horizontally than the top sheet; an end sheet P, with its top edge between the downwardly-turned edge C of the top sheet A and the end angle-iron I, and said end sheet having three of its edges bent outward at right angles and lying against the inner surface of the side and bottom sheet and bent over to and lying against the outside surface of the said side and bottom sheet, and the said end sheet having an opening for the admission of cold air; a second left-hand sheet P', with its top edge lying between the downwardly-turned edge C of the top sheet A and having its other three edges turned off to overlap the end of the sides N and the bottom M, and angle-irons R, riveted to the three edges of said second end sheet and bearing against

the inner surfaces of said side and bottom sheet, and second end sheet P', having an opening at S for the exit of the air heated by said steam-coil.

5 The operation consists in selecting the proper size of the casing elements from those in stock, applying the hanging rods D to the beams E, slipping the top sheet A, with its angle-irons H and I, over the rods D, then
10 supporting said sheet by means of the adjustable collars F and set-screws G, placing the upper edges of the sides N underneath the downwardly-turned edges B, fastening the sides N to the angle-iron H by the split pins
15 O, slipping the upper edge of the end sheet under the downwardly-turned edge C at the right-hand end, fastening the end sheet P to the angle-iron I by split pins T and to the side N by split pins U and the bottom plate
20 or sheet by split pins U', applying the other end sheet in a similar manner and fastening by split pins V. To take the device apart, the operation is similar except reverse. The coil of steam-pipe is supposed to be support-
25 ed upon the rods J.

Each eye-ring K consists of a ring provided with a tapped nut K' and screwed upon the rod D, which may be cut off and threaded at the right length while putting up the casing.

30 I claim as my invention—

1. A hot-air casing for heating systems comprising a top sheet having a depending flange surrounding its edges, a second sheet forming bottom and sides, and other sheets forming
35 ing ends of the casing and having tongues upon their edges interlocking with said flange, and a parallel flange secured to one of the pieces and overlapping the joint, whereby to prevent the escape or entrance of air.

40 2. A hot-air casing for heating systems comprising a top sheet having a depending flange surrounding its edges, a second sheet forming bottom and sides, and other sheets forming
45 upon their edges interlocking with said flange, a parallel flange secured to one of the pieces and overlapping the joint, and pins passing through the tongue and said overlapping flange, whereby to secure the parts in posi-
50 tion and suspend the side, end and bottom sheets from the top sheet.

3. A hot-air casing for heating systems comprising a top sheet adapted to be suspended from an overhead support and having a pair
55 of parallel depending flanges surrounding its edges, a second sheet forming bottom and sides of the casing and having its edges pro-

jecting between said projecting flanges and secured thereto by pins passing transversely through said edges and one of said depend- 60 ing flanges, end pieces having likewise double flanges formed on their edges enabling them to surround the lateral edges of said second sheet and to form an air-tight joint, and pins passing transversely through said lateral 65 edges and one of the flanges and securing the ends to the other casing-sections, substantially as described.

4. In a hot-air heating system, the combination of hanger-rods adapted to be suspend- 70 ed from an overhead support, heating means suspended therefrom, a top sheet of a heating-casing having a pair of parallel depending flanges surrounding its edges and through which said hanger-rods pass, collars adjust- 75 ably mounted on said hanger-rods directly beneath said top sheet and upon which the latter rests, a three-sided sheet forming sides and bottom of the casing and whose top edges project between the flanges of the top sheet, 80 pins passing transversely through said top edges and the adjacent flange to support said second sheet in position, a rear end sheet whose top edge is similarly secured between the depending flanges of the top sheet and 85 which has similar parallel flanges projecting from its side and bottom edges embracing the corresponding edges of the side and bottom sheet and attached thereto by means of pins, and a front end sheet whose top edge is like- 90 wise secured between the depending flanges of the top sheet, and whose other three sides are provided with an outwardly-extending saddle-flange embracing the lateral edges of the side and bottom sheet and secured thereto 95 in a similar manner by means of pins, the whole forming a heating-casing of four sheets secured in position and forming air-tight joints.

5. In an air-heating casing for hot-air sys- 100 tems, a joint comprising a pair of parallel flanges on one part, a tongue on another part interlocking between said flanges, and fastening means passed transversely through said tongue and one of the flanges, substantially 105 as described.

In testimony whereof I hereunto sign my name and affix my seal this 27th day of July, 1901.

EDWARD J. MALLIN. [L. S.]

Witnesses:

EDWARD P. THOMPSON,
ANNA R. MCCOLE.