

(No Model.)

J. ASKINS.
RADIATOR.

No. 365,663.

Patented June 28, 1887.

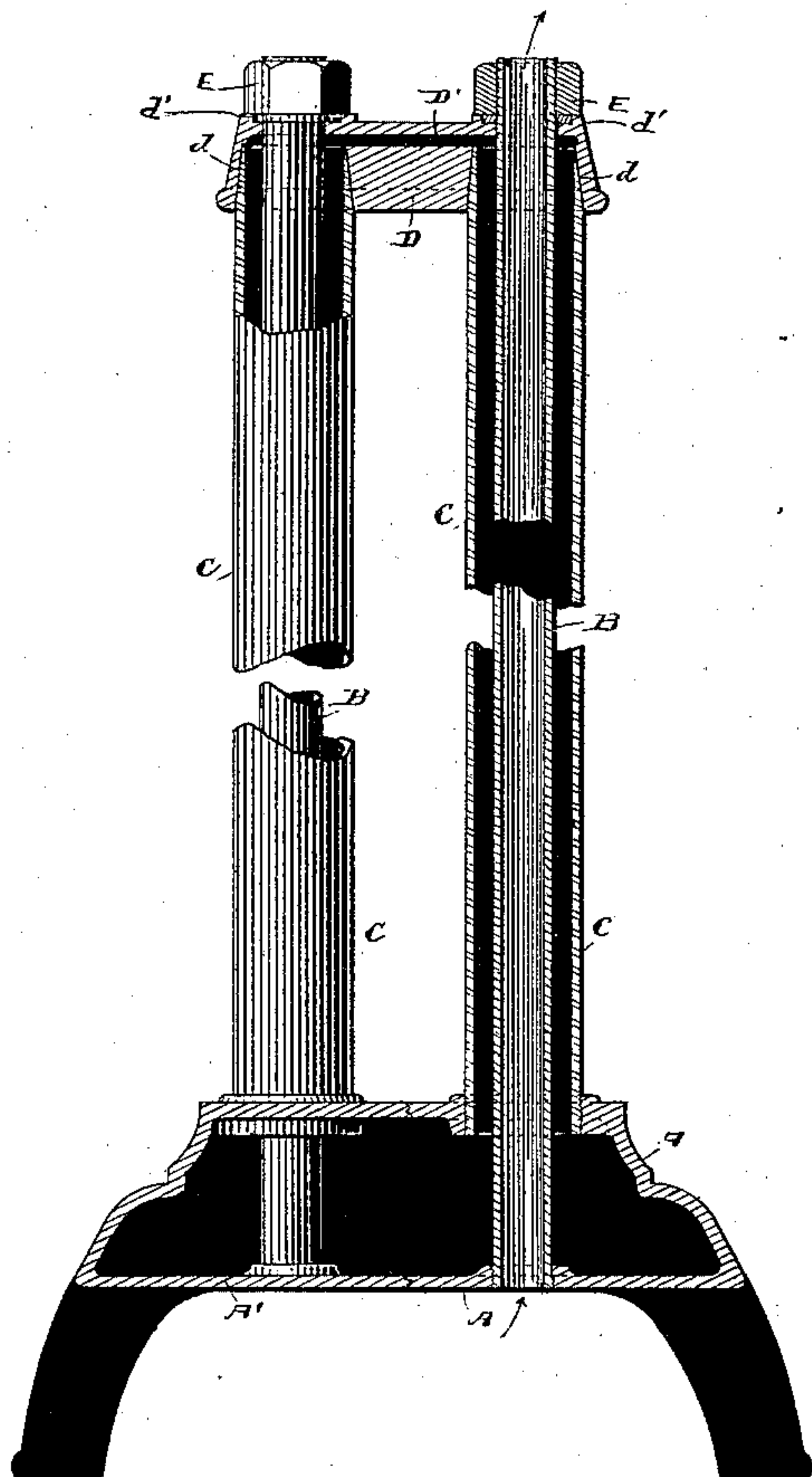


Fig. 1.

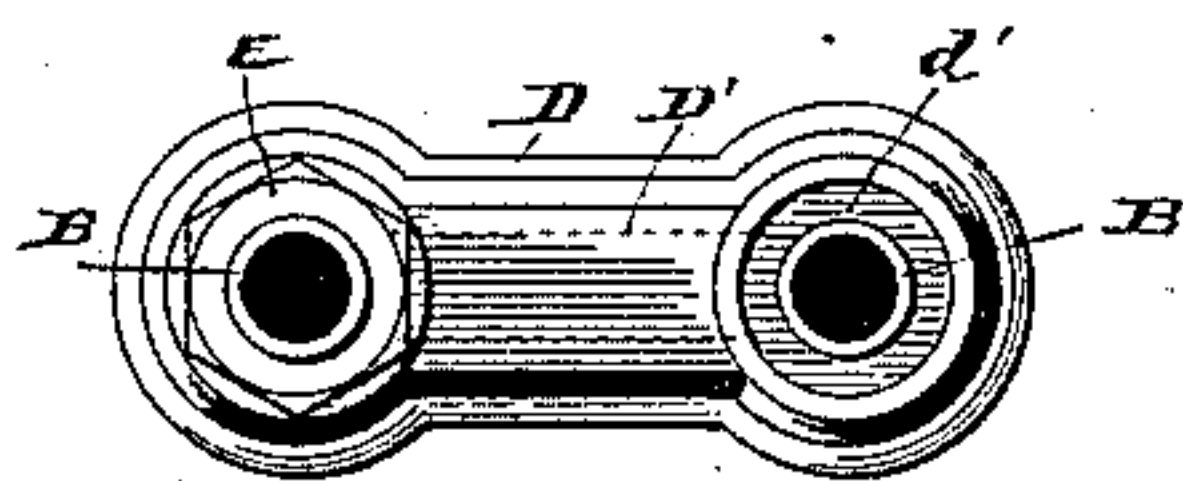


Fig. 2.

WITNESSES
W. S. Amstrong
Geo. W. King

INVENTOR
Joseph Askins
By
Siggett & Siggett Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH ASKINS, OF LIMA, OHIO.

RADIATOR.

SPECIFICATION forming part of Letters Patent No. 365,663, dated June 28, 1887.

Application filed February 2, 1887. Serial No. 226,261. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ASKINS, of Lima, in the county of Allen and State of Ohio, have invented certain new and useful Improvements in Radiators; 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 pertains to make and use the same.

My invention relates to improvements in radiators; and it consists in certain features of construction, and in combination of parts, hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an end elevation, partly in section, of a radiator embodying my invention. Fig. 2 is a plan of one section of the radiator.

A represents the base of the radiator, and may be made of any length required to receive the desired number of pipes. The base is cast hollow, having a steam-chamber, A', therein, and the ends are provided, in the usual manner, with nozzles or threaded holes for attaching the necessary steam-pipes.

Air-tubes B are set in pairs and screwed into threaded holes made through the bottom wall of the base. Steam pipes C are screwed into threaded holes made through the top wall of the base, each steam-pipe inclosing an air-tube, as shown in Fig. 1, the relative sizes of the two tubes being such as to leave ample steam-space between the two tubes. A cap, D, connects the two sets of tubes, as shown in Fig. 1. The top ends of the tubes C are made tapering and fit into tapering sockets *d*, made in the under side of the cap. Holes lead up through the cap for the passage of the tubes B, the latter being threaded at the upper end and provided with nuts E, by tightening which the caps draw down upon the tubes C, so as to form a tight joint. Annular recesses *d'* are made in the top of the cap around each tube B, and these recesses are packed, preferably, with asbestos washers, which latter being compressed by tightening the nuts a tight joint is made around the tubes B. The caps D are cast hollow, having a chamber, D', which, when the parts are in adjustment, is in open

relation with each tube C, so that a free circulation of steam is had through the pipes and the cap, which latter may therefore be called a "return-cap." The air-tubes, being open at the top and bottom, as they become heated with the steam with which they are surrounded heat the air inside of them, and thus is established a current of air up through these air-tubes that produces a circulation of air through the room.

The construction is simple, and the parts are easily assembled and as easily separated for repairs or for other purposes. These radiators may be shipped "knockdown" and in bulk, as they are easily put together, when wanted, by any ordinary mechanic.

What I claim is—

1. In a radiator, the combination, with a hollow base, steam-pipes, and air-pipes set in the upper and lower walls, respectively, of the base, the air-pipes being inside of the steam-pipes, of a return-cap made to connect the two sets of pipes, said cap having a chamber in open relation with the steam-pipes, and having tapering sockets for receiving the tapering ends of the steam-pipes, and holes through the top for the passage of the air-pipes, the latter having nuts for engaging the cap to press the parts together, substantially as set forth.

2. In a radiator, the combination, with a base and steam-pipes and air-pipes set in the upper and lower walls, respectively, of the base, the steam-pipes having their upper ends made tapering, of a cap connecting the pipes and provided with tapering sockets to receive the tapering ends of the steam-pipes, with openings for the passage of the air-pipes, and with a steam-chamber in open communication with the steam-pipes, and nuts for securing the cap in position on the pipes, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 18th day of January, 1887.

JOSEPH ASKINS.

Witnesses:

W. A. WALLEY,
JOHN HUGHES.