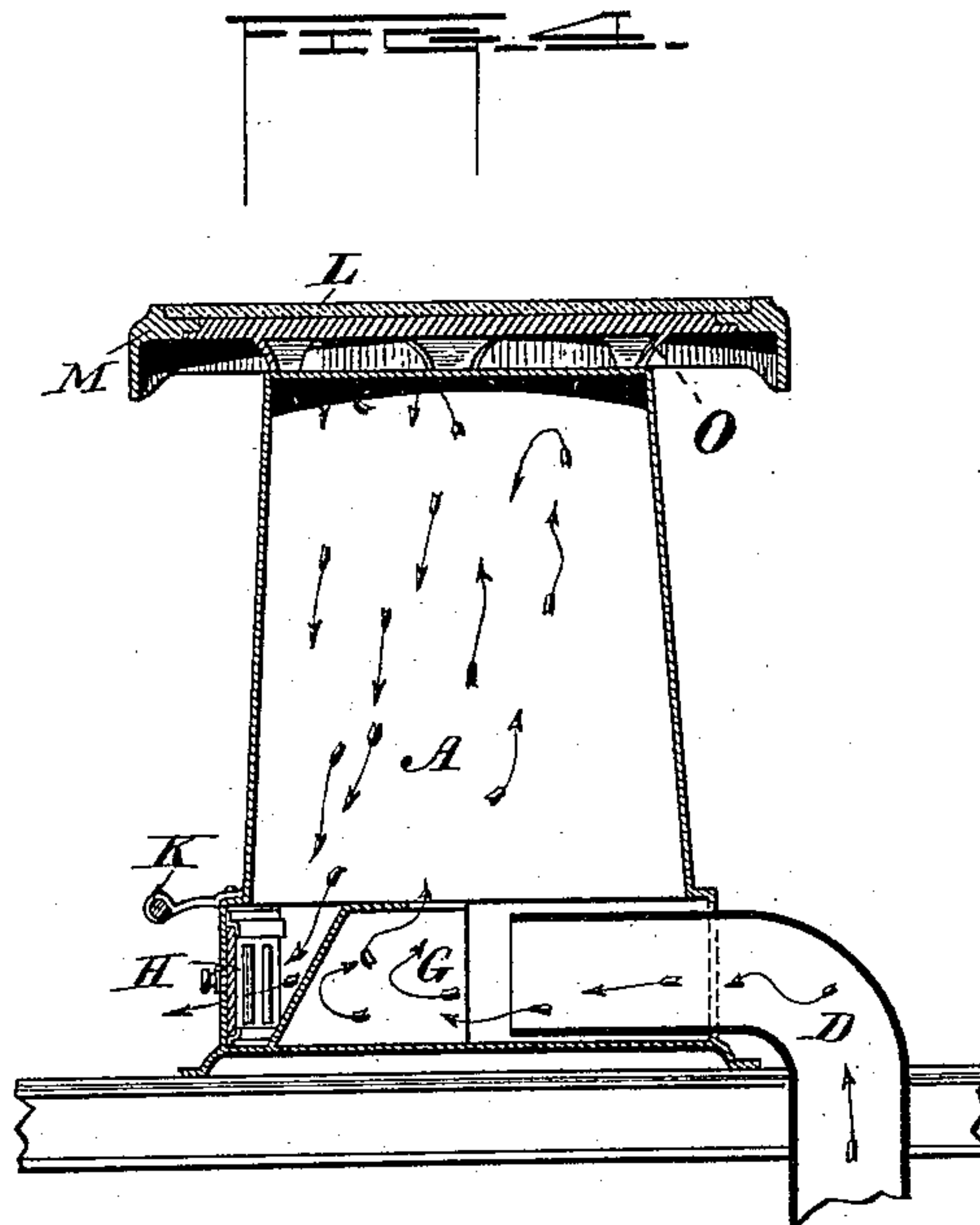
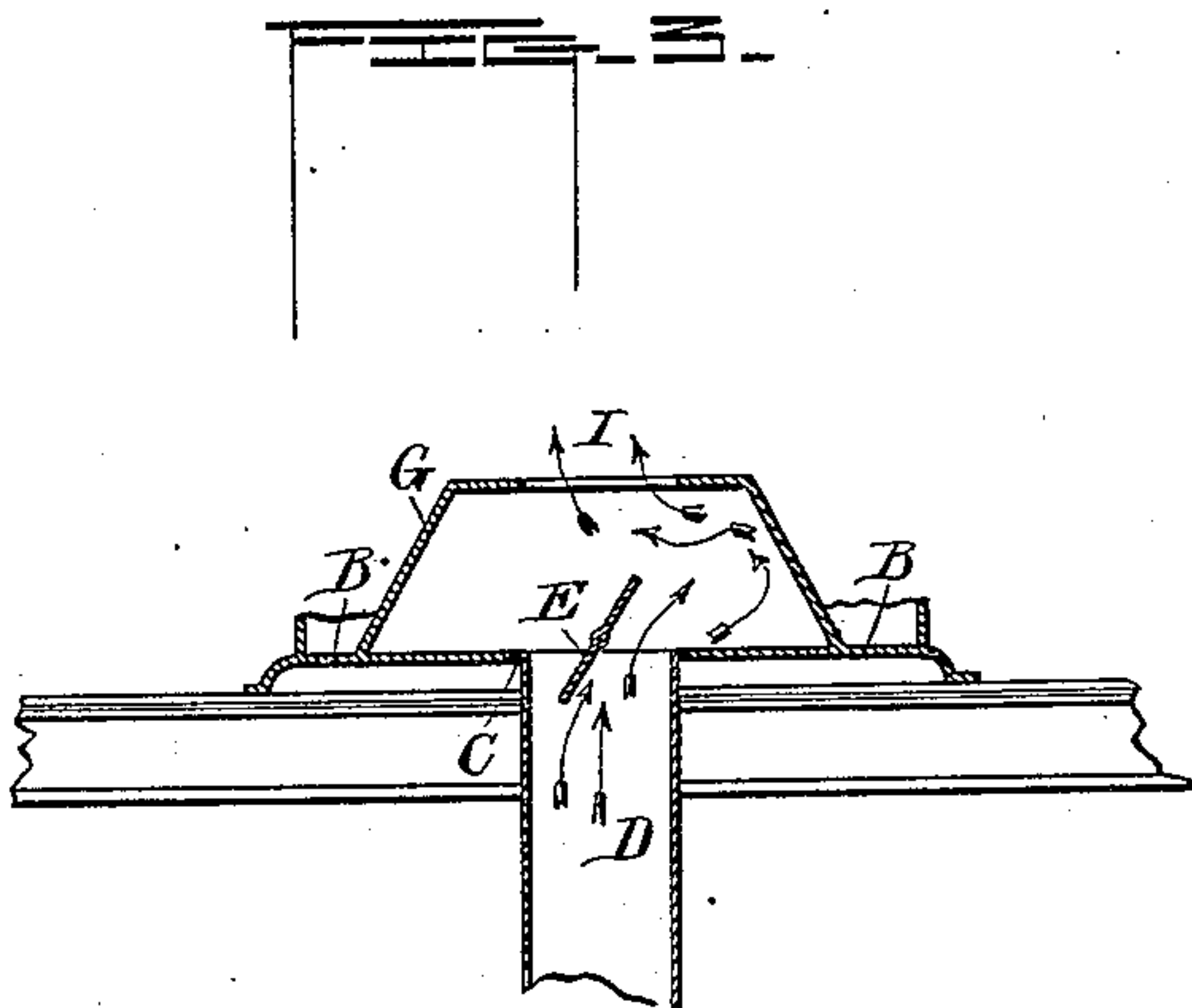
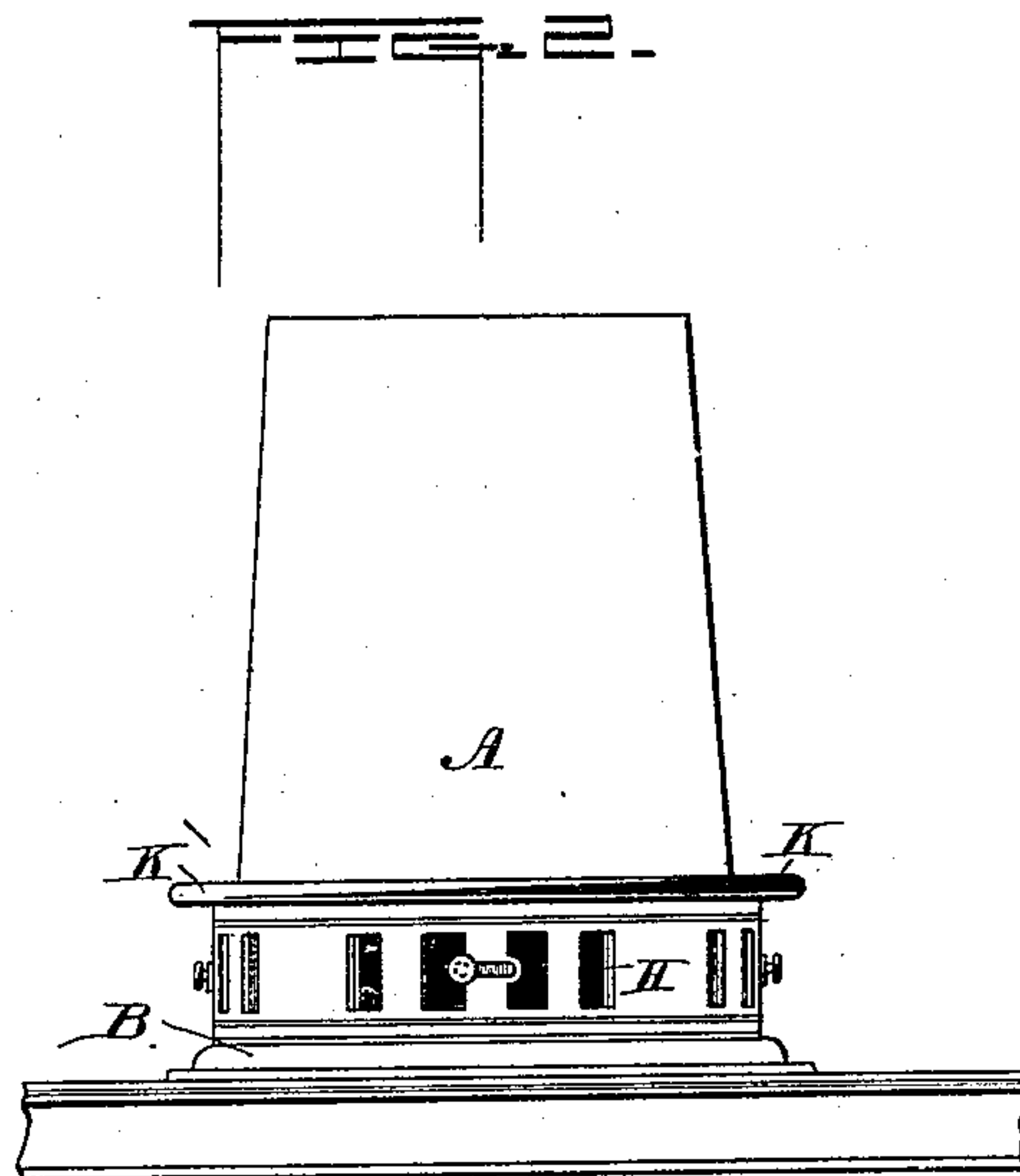
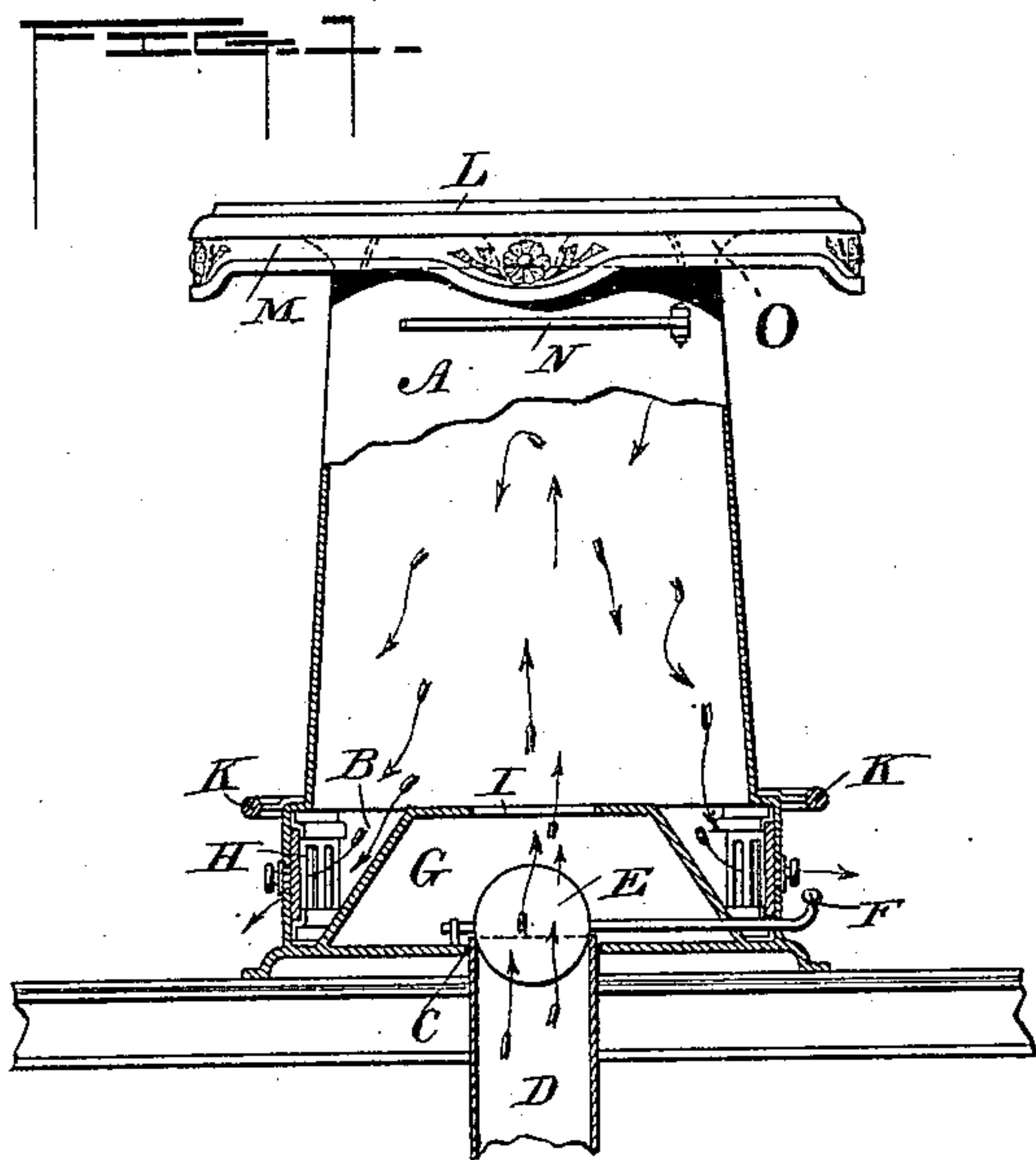


(No Model.)

E. W. WELLS.
HOT AIR RADIATOR.

No. 420,845.

Patented Feb. 4, 1890.



WITNESSES:

L. A. Connor Jr.
J. P. Davis.

INVENTOR,

E. Walter Wells
per *R. J. D. Doy.*
his Att'y.

UNITED STATES PATENT OFFICE.

EDWARD WALTER WELLS, OF OSKALOOSA, IOWA.

HOT-AIR RADIATOR.

SPECIFICATION forming part of Letters Patent No. 420,845, dated February 4, 1890.

Application filed May 10, 1889. Serial No. 310,242. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WALTER WELLS, a citizen of the United States, residing at Oskaloosa, in the county of Mahaska and State of Iowa, have invented certain new and useful Improvements in Hot-Air 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 appertains to make and use the same.

My invention relates to hot-air radiators; and the object of it is to provide a radiator that can be easily connected with the pipe of a furnace, so that the heated air, instead of passing directly up into the upper part of the room, will flow out of the lower part of the radiator and more perfectly heat the air close to the floor; and a still further object of my invention is to construct the radiator in such a manner that the heated air arising from the furnace may be entirely cut off and prevented from escaping into the room containing the radiator, while at the same time the latter will continue to radiate the heat.

With these ends in view my invention consists in the peculiar features and combinations of parts more fully described hereinafter, and pointed out in the claim.

Referring to the accompanying drawings, Figure 1 represents a sectional elevation of my complete device; Fig. 2, a detail view of the register; Fig. 3, a detail view of the damper arrangement, and Fig. 4 a modification.

The reference-letter A indicates the main body of a radiator having a closed upper portion and being made wider at the bottom than at the top, in order to allow the hot-air current to escape more freely from the lower portion, and also to facilitate nesting for shipping purposes.

The base B of the radiator is provided with a central opening C, which registers with the mouth of a hot-air flue D, which flue is shown in Fig. 1 as passing up through the floor of the room. The mouth of the flue is commanded by a damper E, adjusted by a laterally-extending handle F. A shell G, having the form of a truncated cone, with an opening I in the top, is placed over the mouth of

the flue to form a trap or drum for the purpose of retarding the flow of hot air in its passage into the radiator, in order to prevent the inflowing current from interfering with the free flow of the outgoing current in its downward passage. The sloping sides of the shell serve to deflect the current outwardly and laterally, the direction of the flow of the hot air being shown by arrows. The hot air escapes from the radiator through the outlet-passage H, located opposite the sloping sides of the shell G. These outlet-passages are provided with a register J. (Shown more clearly in Fig. 3.) This register permits the radiator to be entirely closed up, so that the hot air from the furnace will not escape into the room and the heat will be radiated only from the exterior of the radiator. By thus compelling the heat to escape at the bottom of the radiator a person's feet can be easily warmed by placing them upon the foot-rests K, located just above the escape-passages H.

The radiator is surmounted by a top L, having an overhanging cornice M and supported by the legs O, which makes it useful as a table or stand, while a hinged arm N, for hanging towels, &c., makes the radiator still further convenient as an article of furniture.

It will readily be seen from the construction just described that the heat will pass from the furnace-flue D into the antechamber O, and thence through the opening I up through the body A, and coming in contact with the top its course will be reversed, and it passes down out into the room through the escape-orifices H, being assisted in its course by the sloping walls of the shell G. Thus the heated air is made to diverge laterally from the bottom of the radiator, thereby heating the air near the floor, instead of passing directly to the upper part of the room, as from ordinary radiators.

In the modification shown in Fig. 3 the furnace-flue enters the radiator at the side instead of through the bottom, and it is evident that many other slight changes which might suggest themselves to a skilled mechanic could be resorted to without departing from the scope and spirit of my invention; hence I do not limit myself to the precise construction herein shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

5 The combination of a hollow body having its upper portion closed and being smaller at the top than at the bottom, a conical shell located within the body and having a central opening in its top, the sloping sides of the shell being located opposite outlet-passages
10 in the bottom of the body, a register for adjusting said passages, a flue emptying into

said shell, a damper commanding the mouth of the flue, and a handle extending to the exterior of the radiator for adjusting the damper, all arranged and adapted to operate substantially as described. 15

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

EDWARD WALTER WELLS.

Witnesses:

JAMES A. RICE,
W. R. CAMMACK.