

S. M. PIKE.
Steam Heater.

No. 96,613.

Patented Nov. 9, 1869.

Fig. 1.

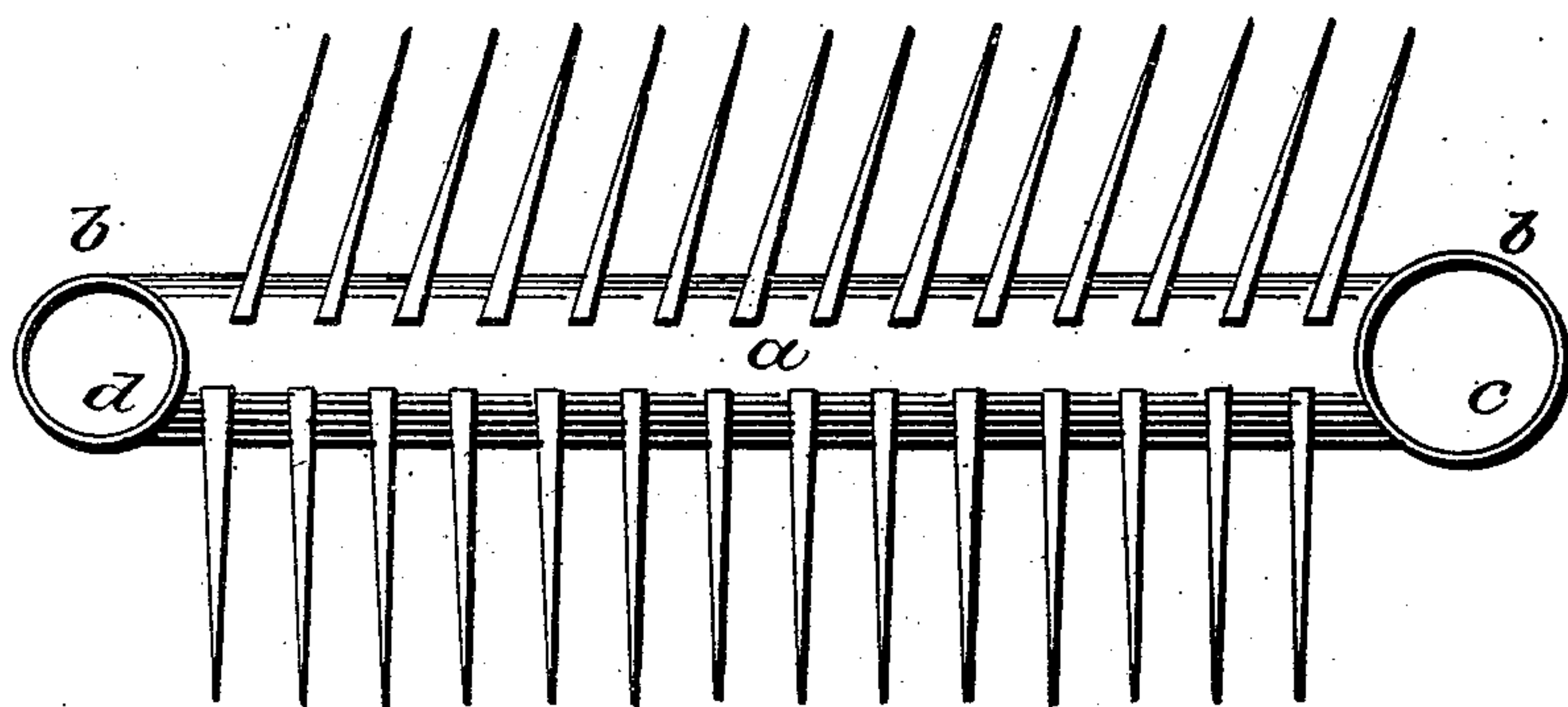
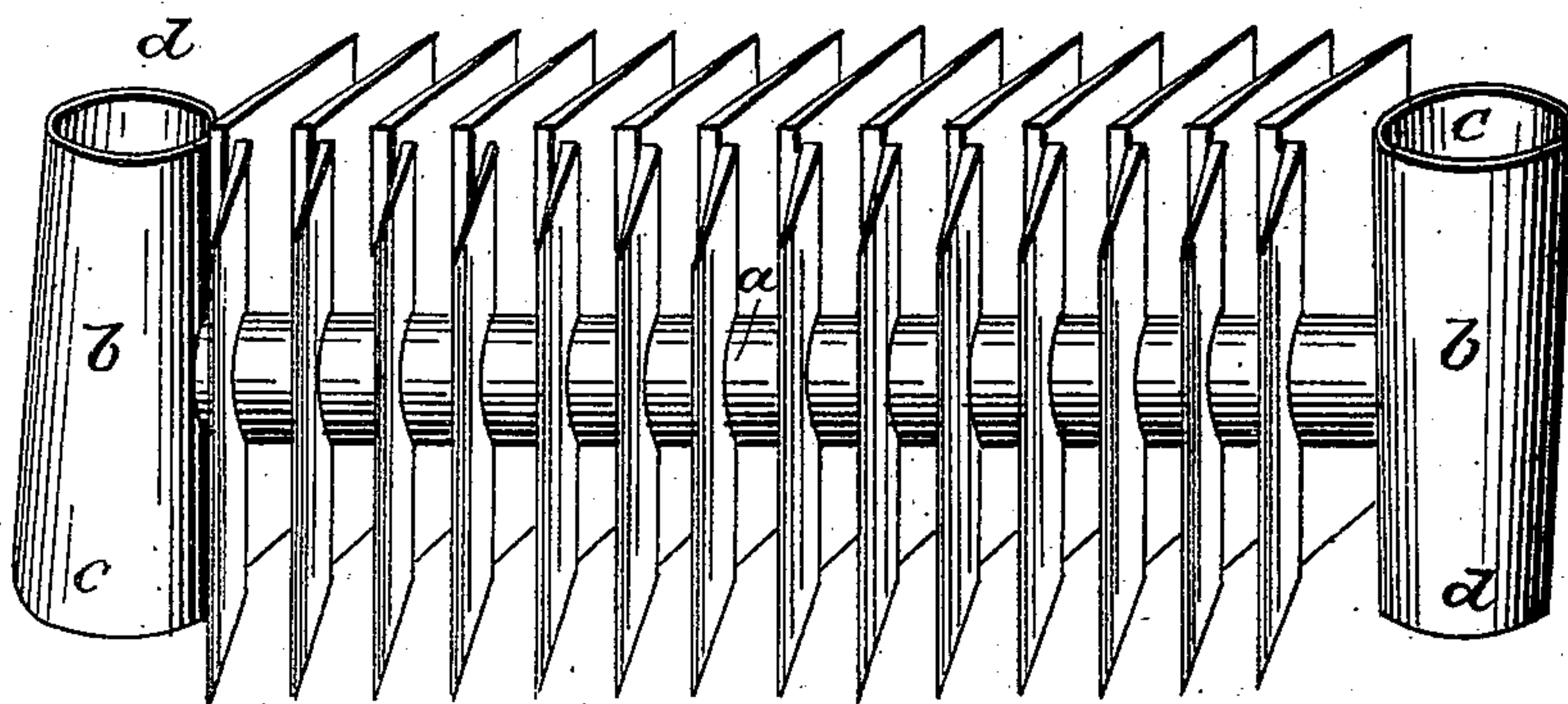


Fig. 2.



Witnesses

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S. MONTGOMERY PIKE, OF CINCINNATI, OHIO.

Letters Patent No. 96,613, dated November 9, 1869; antedated October 23, 1869.

IMPROVEMENT IN HEAT-RADIATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, S. MONTGOMERY PIKE, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and improved Heat-Radiator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of my invention.

Figure 2 is a perspective view of the same.

Similar letters of reference indicate like parts.

My invention consists in the employment of thin solid flanges, a part of which flanges are arranged and cast on one side of a steam, fire, or hot-water heating-pipe, at right angles with the said pipe, and a part of which are arranged and cast at an oblique angle with said pipe, the base of each flange on each side being opposite the space between the flanges on the opposite side of said pipe, each end of which pipe is provided with transverse arms, which arms are provided with a tenon on one end, and a socket on the other, so that a number of radiators can thus easily and quickly be packed together.

a designates the main or centre pipe.

b b designate pipe-arms at each end of the main pipe *a*.

On one end of each arm, *b*, is a socket, *e*, to receive the other or tenoned end *d*.

By this means a number of radiators can be put together, the small end *d* entering the socket *e*.

I construct the main pipe *a* three inches in diameter, with an inside diameter of two and one-half inches. The pipe-arms *b b* are of nearly the same size.

The flanges *e*, I construct three and one-half inches by seven inches, and about one-half of an inch thick at the base, and make them taper as thin as can be conveniently cast on the opposite edge. I cast these flanges *e* on the main pipe *a*, about one-half of an inch apart at the base, and setting them with said base nearly even with the centre of the main pipe *a*, the flanges *e* being placed on both sides of the main pipe *a*, with the flanges *e* on one side of the pipe *a* cast at right angles with the same, while the flanges *e*, on the opposite side of pipe *a*, are cast at oblique angles with the same, and the base of each flange *e*, on one side of pipe *a*, is opposite the space between the flanges *e* on the opposite side, while the said flanges in no direction extend less than three and one-half inches from the centre of the main pipe *a*,

and form a square body of flanges seven inches square, with the area or outer surface twelve times greater than the area of the steam or inner surface.

The object of the flanges and their arrangement is to present as much heated surface as possible to the air, while I confine the steam in the centre or heart of the same, where it will keep hot a long time without condensing as fast as it would if allowed more room. As the centre of this column of steam must contain latent or insensible heat, it is developed and absorbed by the iron.

As the outer surface of the steam-column is condensed to water, it keeps up the temperature on the outside surface sufficient to warm the air properly, without drawing as much fresh steam from the boiler, and consequently saving a large amount of fuel.

When several of these radiators are connected, they are boxed and supplied with steam in the usual manner.

If desired, in stocking these radiators, part of them might be placed with the oblique flanges pointing in one direction, and others packed with the oblique flanges pointing in the opposite direction, the object being to turn heated air passing through them toward different flues.

The object of placing each flange *e* opposite space is to more thoroughly break up and warm the current of air passing through them than it would if the flanges were placed opposite each other.

By my invention, I produce an article for a radiator which is cheaply and easily cast in one piece. The central or main pipe is only one entire piece, while the connecting pipe-arms *b b* are convenient of access, and easily packed, whereas, in some radiators, the large central pipe is packed at a great expense, and not always tight. It is not only cheaper in first cost than any other radiator, but by actual use has proved to produce the largest amount of heat in proportion to the fuel used.

I do not claim, broadly, the use of flanges in radiators, unless the same are constructed and combined as described.]

What I claim as new, and desire to secure by Letters Patent, is—

The radiator, consisting of pipe *a* and flanges, the arrangement of said flanges in the position and angles herein shown and described.

S. MONTGOMERY PIKE.

Witnesses:

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