

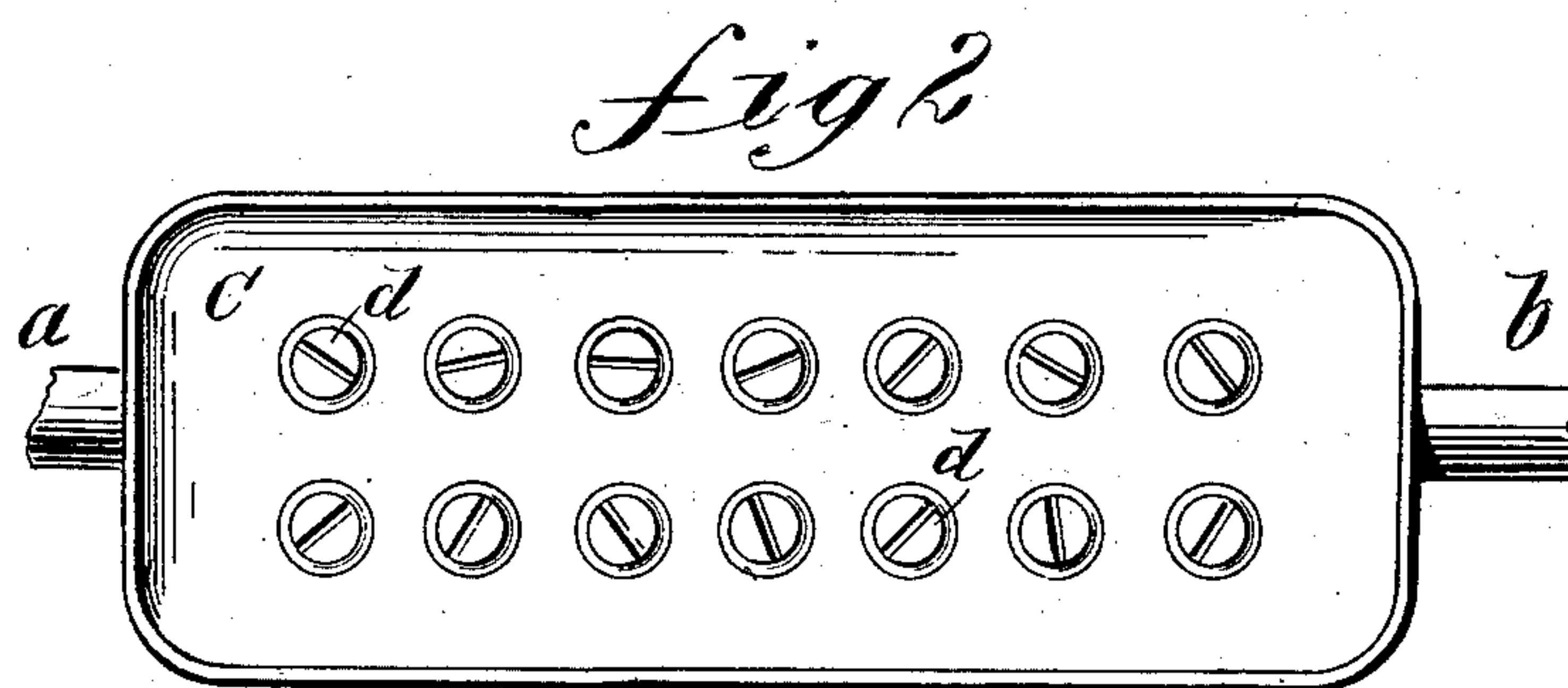
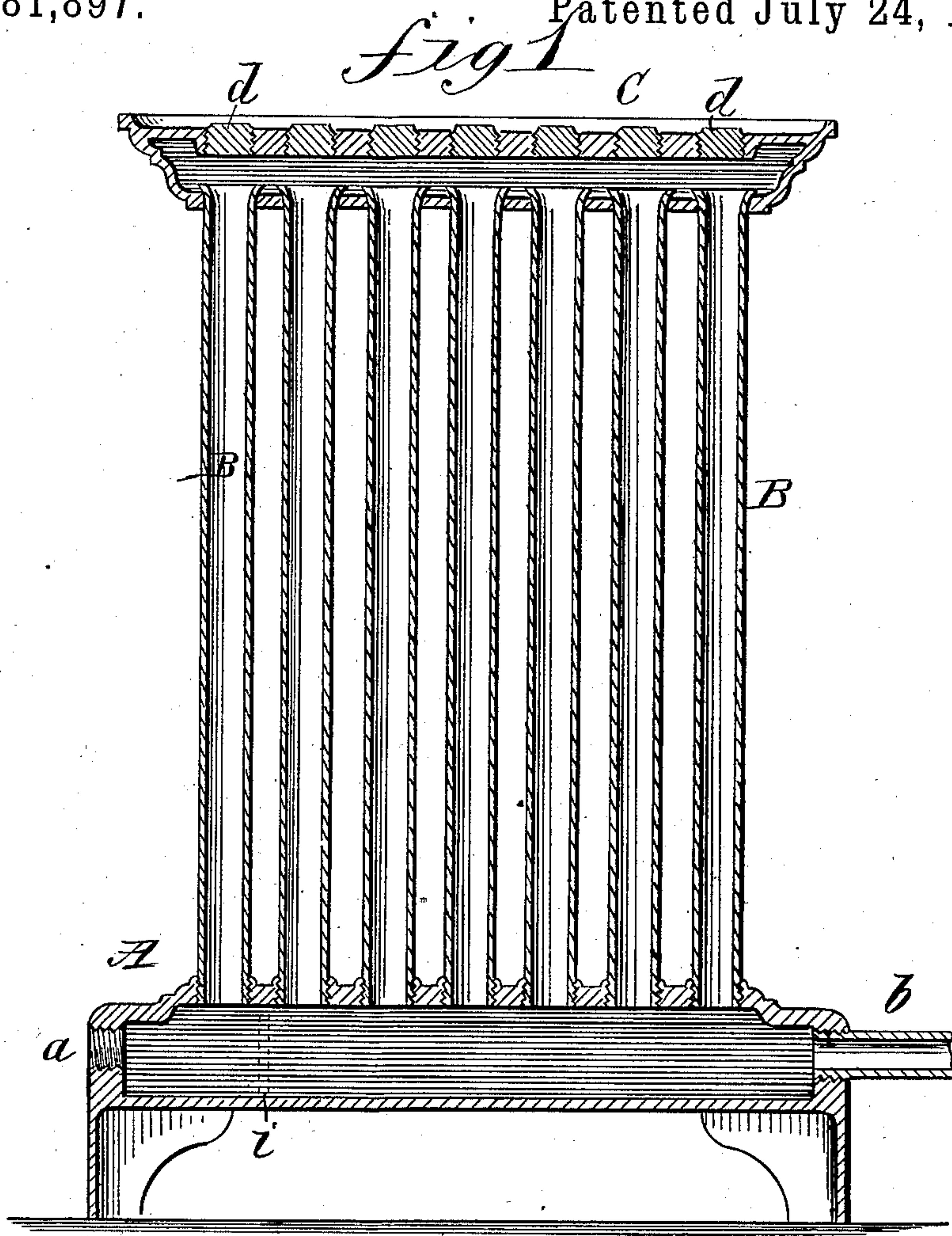
(Model.)

T. McAVITY, Jr.

RADIATOR.

No. 281,897.

Patented July 24, 1883.



WITNESSES:

*J. D. Garfield*  
*C. Sedgwick*

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*T. McAvity Jr.*  
BY *Mum & Co.*  
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# UNITED STATES PATENT OFFICE.

THOMAS McAVITY, JR., OF ST. JOHN, NEW BRUNSWICK, CANADA.

## RADIATOR.

SPECIFICATION forming part of Letters Patent No. 281,897, dated July 24, 1883.

Application filed March 9, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, THOMAS McAVITY, Jr., of St. John, New Brunswick, Canada, have invented a new and useful Improvement in Radiators, of which the following is a full, clear, and exact description.

This invention relates to an improvement in radiators for steam and hot-water heating apparatus; and it consists of the combination and arrangement of parts, substantially as herein-after fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both figures.

Figure 1 is a vertical section of a radiator of my improved construction, and Fig. 2 is a plan view of the same.

A is the hollow base or chamber provided with inlet *a* and outlet *b*.

B B are the tubes, and C the upper or circulation chamber. The tubes B are of wrought-iron, brass, or copper, and are screwed into the lower base, A, and expanded at their ends entering the upper chamber, so that they are held firmly and the joint made steam-tight; or in place of being expanded the tubes may be brazed.

To allow of the work of securing the upper

ends of the tubes the upper plate of the chamber C is formed with openings above the holes in the lower plate, so that proper tools can be inserted, and these openings are closed by screw-plugs *d*.

This construction of radiator secures a perfect circulation and a large extent of heating-surface.

The radiator may be used with either steam or hot water, and in the latter case the base is to be fitted with a division-plate, as shown in dotted lines at *i*, to insure the circulation of the water through the tubes.

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

The radiator consisting of the base-chamber A, with a subdividing-partition, *i*, arranged between the supply and discharge openings *a b*, the series of parallel tubes B, screwed upon the base-chamber, and the circulating top chamber, C, superposed and wedged upon the upper ends of the tubes B, said top chamber having a series of screw-threaded plugged apertures, essentially as shown and described.

THOMAS McAVITY, JR.

Witnesses:

CHAS. COSTER,  
F. E. KETCHUM.