

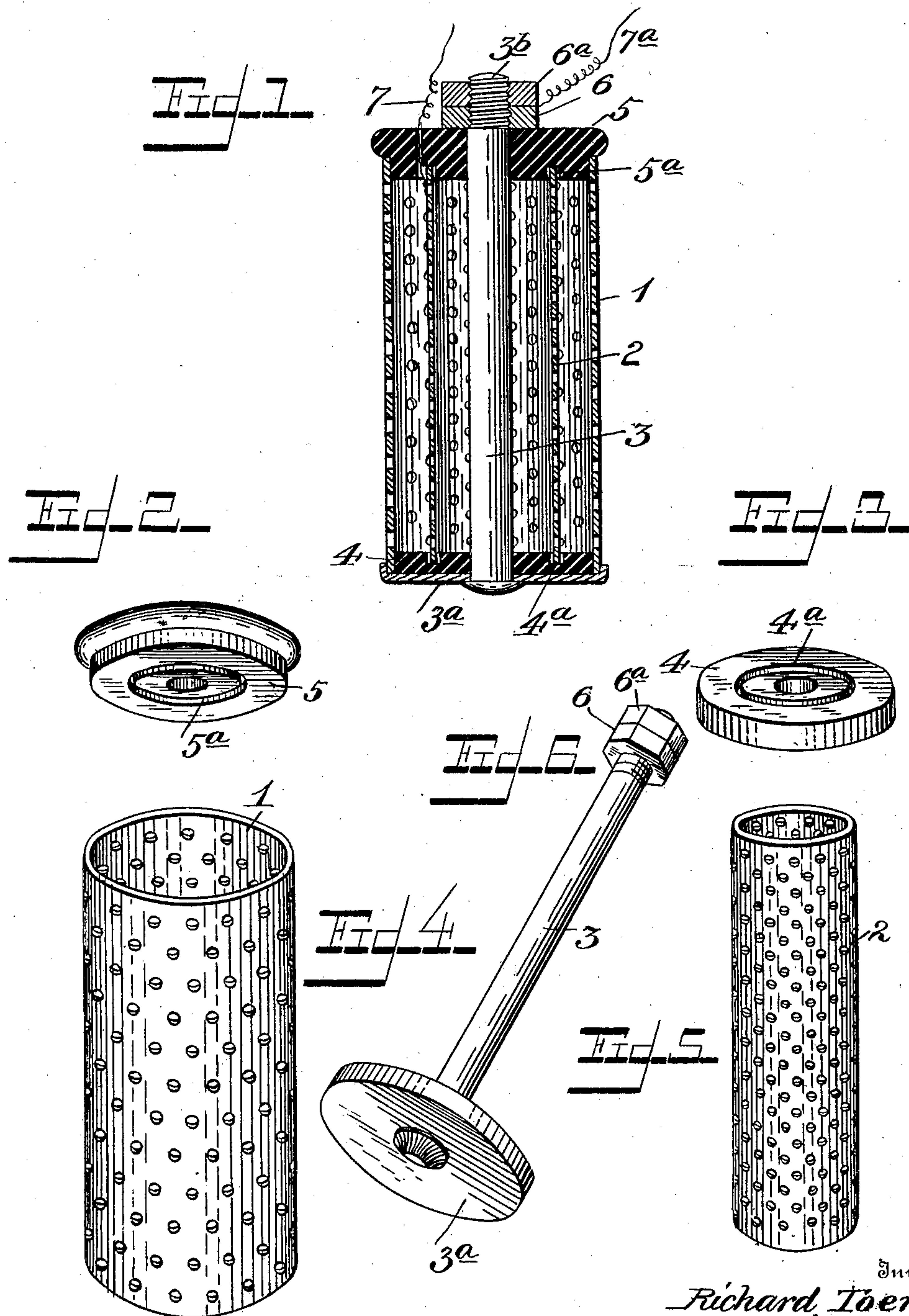
No. 760,280.

PATENTED MAY 17, 1904.

R. TOENNES.
ELECTRIC WATER HEATER.
APPLICATION FILED JAN. 27, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
W. N. Durand
J. H. Whister

Inventor:
Richard Toennes

Louis Sagger & Co.
Attorneys.

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2 SHEETS—SHEET 2.

Fig. 7.

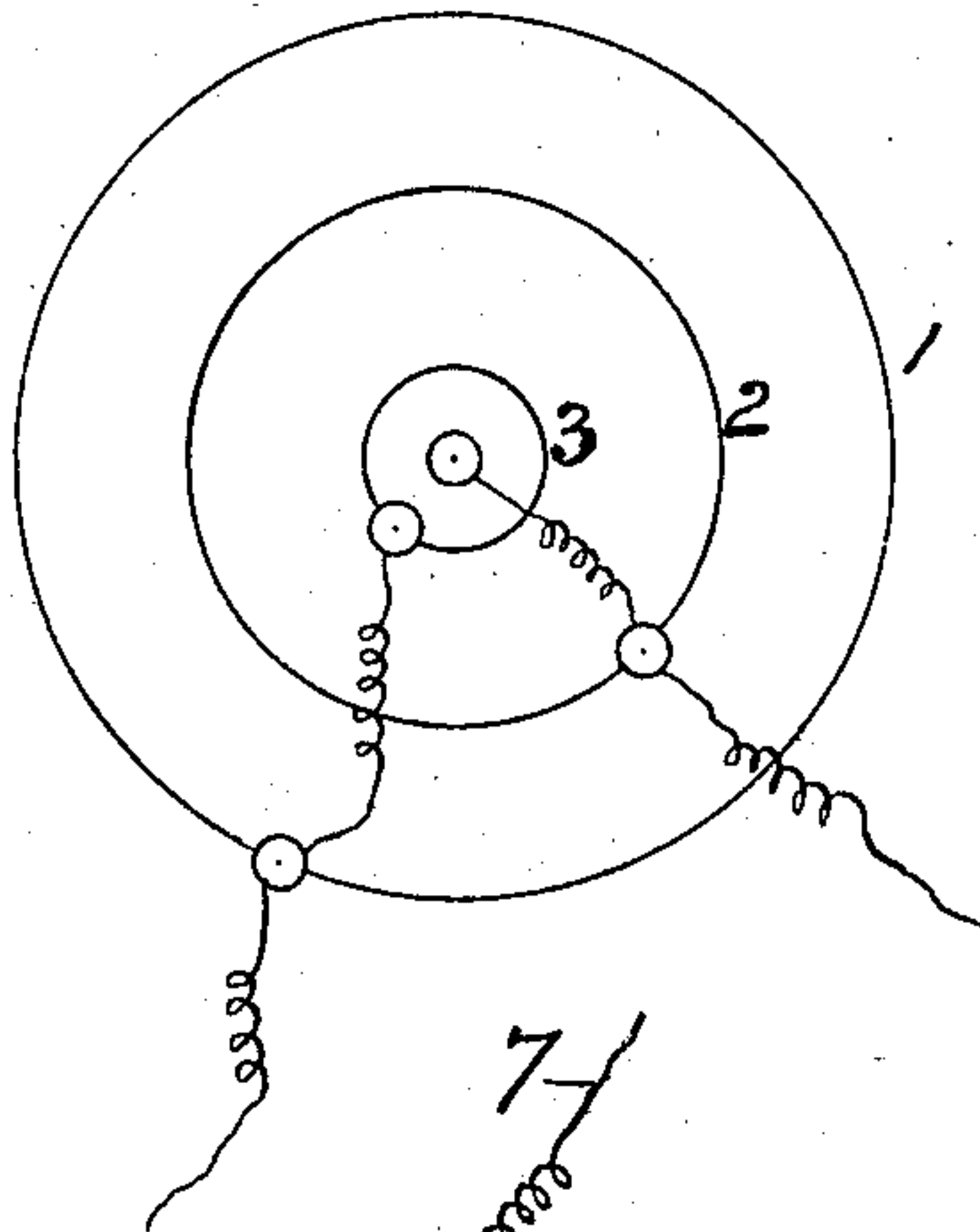


Fig. 8.

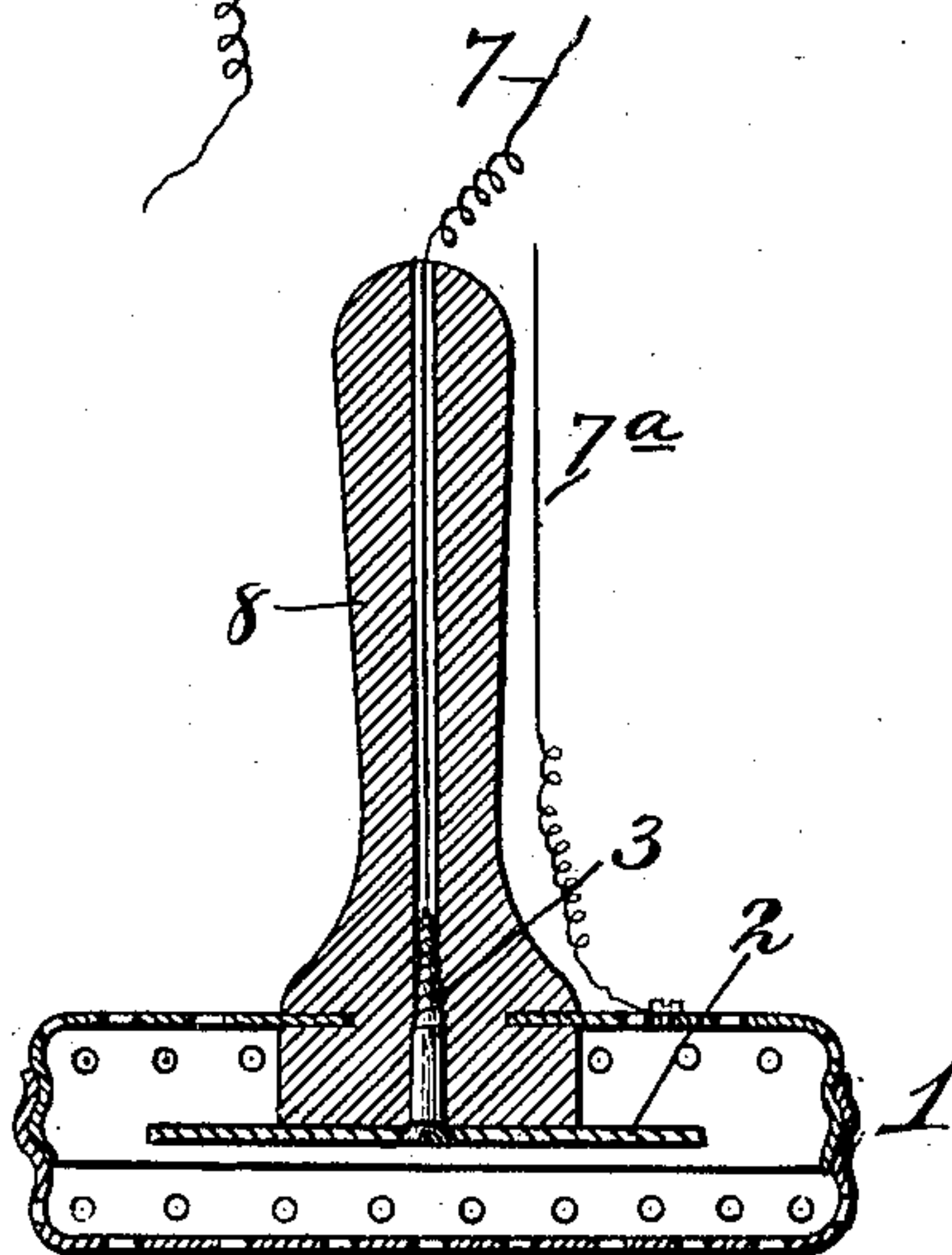
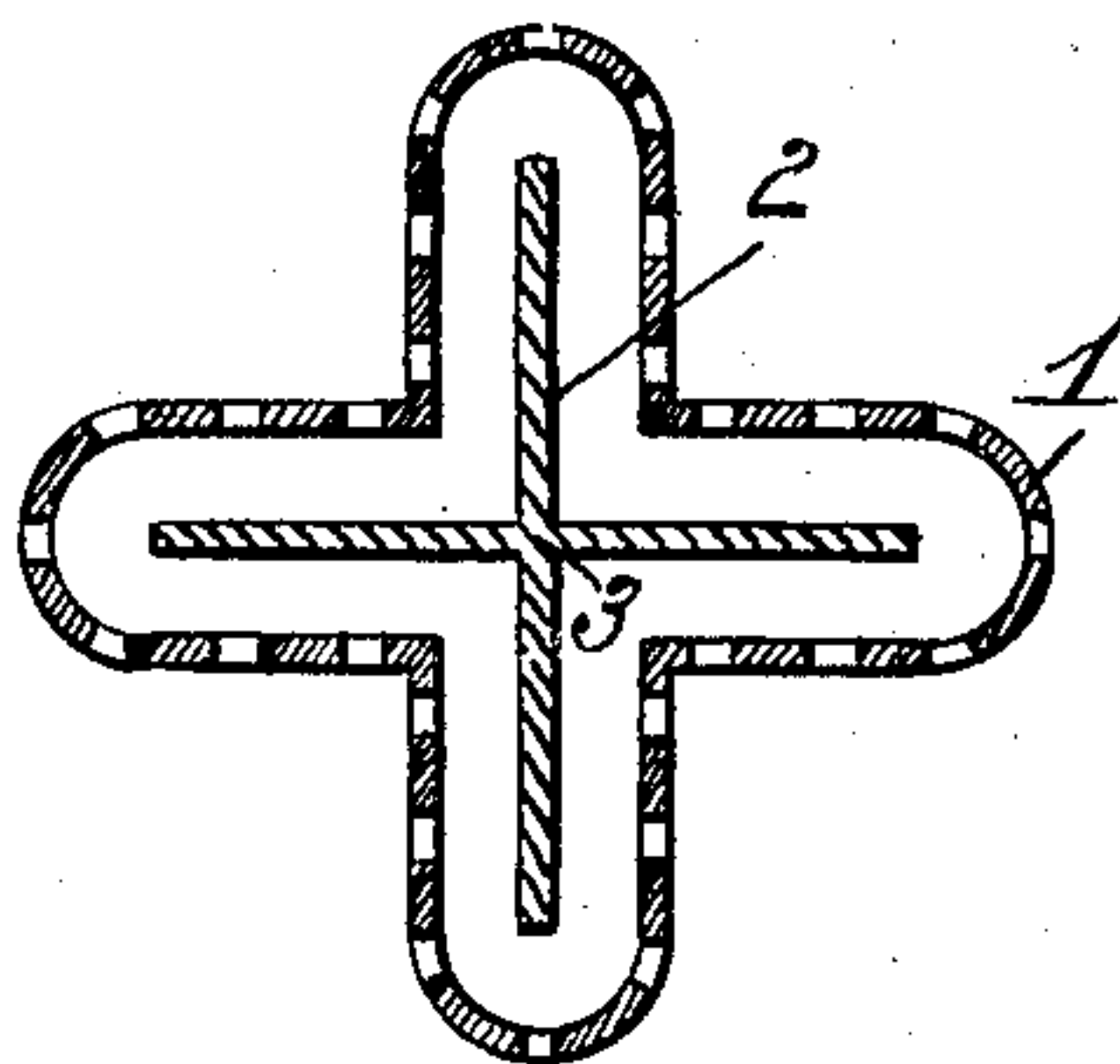


Fig. 9.



Witnesses:
W. H. Burpud.
J. W. Foster

Inventor:
Richard Toennes,

Lawson Baggett & Co.,
Attorneys,

UNITED STATES PATENT OFFICE.

RICHARD TOENNES, OF BOONVILLE, MISSOURI.

ELECTRIC WATER-HEATER.

SPECIFICATION forming part of Letters Patent No. 760,280, dated May 17, 1904.

Application filed January 27, 1904. Serial No. 190,872. (No model.)

To all whom it may concern:

Be it known that I, RICHARD TOENNES, a citizen of the United States, residing at Boonville, in the county of Cooper and State of Missouri, have invented certain new and useful Improvements in Electric Water-Heaters, of which the following is a specification.

My invention relates to improvements in what may be termed "water-heaters," the heating action being generated by the passage of an electrical current through the water.

Said invention has for its object principally to readily and quickly heat a quantity of water for toilet or domestic purposes. It may be utilized for other purposes, as will be described farther on.

It consists of a certain combination and arrangement of parts, substantially as herein-after more fully disclosed by the following description and particularly pointed out by the claims concluding said description.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a sectional elevation thereof. Figs. 2 and 3 are detached perspective views of the top and bottom non-conducting members, respectively. Figs. 4, 5, and 6 are disassembled views of the conducting members or electrodes. Fig. 7 is a diagrammatic view showing the connection or wiring-up of the conducting members or electrodes. Fig. 8 is a sectional elevation of a modification, involving more particularly the non-conducting members. Fig. 9 is a cross-section of a second modification, relating more especially to the conducting members or electrodes.

In the carrying out of my invention I employ, preferably, three conducting members or electrodes, in the present instance two being in the form of serially-perforated hollow open-ended cylinders 1 2 and the third being a central solid rod 3, all arranged concentrically, the last referred to having a lower end disk-like portion 3^a and an upper screw-threaded end portion 3^b, the purpose of which will presently be apparent. I also provide non-conducting lower and upper members or disks 4 and 5, being preferably of glass, rubber, or glazed earthenware, as what is known as "china," &c., said members

each having a central opening for the passage therethrough of the rod 3 and an annular recess 4^a 5^a, respectively, to receive the upper and lower edges of the member 2. The bottom disk portion 3^a of the rod or bolt 3 has superposed thereon and supports the conducting member 1 and the disk or member 4, said conducting member at its upper end being fitted, preferably, to an undercut shoulder of the member 5, while upon the screw-threaded portion 3^b of said rod or bolt above the member 5 are fitted or screwed nuts 6 6^a to secure in position the last named, one nut, 6, directly engaging said part 5 and the other nut, 6^a, serving as a lock for the former nut. Said members or electrodes are supplied with the electrical current from any suitable source of electricity, as in a dwelling or other place furnished with the same, via the wires 7 7^a, connected to a socket-piece, as usually provided for such purpose, and to said members, said wires alternating in their connection with the latter, as indicated in the diagram of Fig. 7.

It will be observed that in using this device it is bodily submerged in the water it is desired to heat, contained either in an earthenware or metallic vessel, which water, forming a conductor between the members or electrodes 1 2 3, therefore provides for passing an electrical current therethrough and offering such resistance to said current as to generate a sufficient amount of heat. It has been found in actual practice to effect the boiling of such water within ten or twelve seconds. In this heater the electricity is taken from both sides or surfaces of the electrodes, consequently increasing the voltage and the proportionate resistance and accordingly the generation of heat. Said heater is not required to be safeguarded as against danger in handling the same, as the current is broken the instant of the removal of the heater from the water; also, it is obvious from the foregoing no "turning" off of the current is required in the use of said heater and that no current can be passed or formed but by placing the heater in the water. The device is simple, cheaply manufactured, and readily or quickly applied for use.

This device also may be placed in a water-receptacle arranged in connection with means for producing a dimming effect or causing the complete extinguishment of light—as, for instance, in producing a scenic effect upon a theater-stage—by suitably connecting said device with an electric circuit.

In the modification as disclosed by Fig. 8 it will be noted that convenience may be promoted by arranging the non-conducting members in the form of a handle 8, the other members or parts being accordingly rearranged as shown.

In the modification as represented by Fig. 9 the various salient members are produced after the fashion of a Greek cross in their horizontal section or area.

Latitude is allowed as to details herein, as they may be changed as circumstances suggest without departing from the spirit of my invention and the latter yet be protected.

I claim--

1. A heater of the character described, comprising non-conducting members, conducting members arranged intermediately of the former, and means, connecting said conducting members to an electrical supply source, alternating as relates to the connection therebetween and said conducting members, one of said conducting members having a plate upon

which is superposed one of said conducting members and one of said non-conducting members, and having the upper non-conducting member applied to its corresponding end, which latter conducting member has applied thereto said upper non-conducting member.

2. A heater of the character described, comprising non-conducting members, conducting members arranged intermediately of the former, and means, connecting said conducting members to an electrical supply source, alternating as relates to the connection therebetween and said conducting members, two of said conducting members being perforated cells and the other conducting member being a rod or bolt carrying a plate upon which is supported one of said non-conducting members and one of said cells, and having applied thereto, distantly from said plate, the upper non-conducting member, which latter non-conducting member has applied thereto the upper end of the other cell.

In testimony whereof I have signed my name to this specification in presence of two witnesses.

RICHARD TOENNES.

Witnesses:

W. MORRIS JOHNSON,
GEORGE J. GARTHOFFNER.