An improved electric therapeutic apparatus.

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PROVISIONAL SPECIFICATION.

An Improved Electric Therapeutic Apparatus.

We, PERCY JOHN WILKINSON, of the West Kirby Hydropathic Company, West Kirby, in the County of Chester, Medical Practitioner, and CHARLES PHILIP LOWNDES TITHERLEY, of 6A, Stanley Street, Liverpool, in the County of Lancaster, Electrical Engineer, do hereby declare the nature of this invention to be as follows:—

This invention relates to a therapeutic apparatus by means of which the part of the body affected, say the foot or arm, may be subjected for some time to the continuous and uniform influence of radiant heat and light electrically produced.

We provide a casing of aluminium or other suitable metal, which for convenience we will term the bath, the shape of which is made to suit the part of the body to which it is intended to be applied, which we will assume, for convenience of description, to be the foot.

The bath is fitted with a number of electrical radiators each of which consists of a glass tube from which the air has been exhausted, and in which is fitted a filament of metal or carbon adapted to be heated to incandescence by the passage of a current of electricity which enters and leaves the filament by suitable terminals.

A number of the radiators are grouped together and are surrounded by an outer glass tube from which the air may also be exhausted, and the terminals are so arranged that the current may be passed through the individual tubes either in series or in parallel.

A number of such groups are carried so as to lie inside the bath and are so disposed that when the foot is inserted in the bath it is surrounded by the radiators, the tubes of the latter being, if necessary, so shaped as to follow the configuration of the foot. A suitable regulator is provided by means of which the temperature is maintained within the prescribed limits.

In some cases the walls of the bath, (the inner surfaces of which are polished so as to absorb as little light and heat as possible) are so shaped that, with the aid of reflectors, the light and heat may be focused on any particular part of the foot.

We find that in the case of sprains, gout, and the like, if the part affected is subjected to the continuous influence of the light and heat thus generated and radiated relief is afforded, and the process of healing considerably helped.

The apparatus is, as stated, modified to suit the configuration of the part of the body to which it is intended to be applied, and in some cases the radiators may be used without the outer glass tube.

Dated this 3rd day of March 1899.

SLOAN & LLOYD BARNES,
Chartered Patent Agents, 34, Castle Street, Liverpool.

[*Price* 8*d.*]

COMPLETE SPECIFICATION.

An Improved Electric Therapeutic Apparatus.

We, PERCY JOHN WILKINSON, of the West Kirby Hydropathic Company, West Kirby, in the County of Chester, Medical Practitioner, and CHARLES PHILIP LOWNDES TITHERLEY, of 6A, Stanley Street, Liverpool, in the County of Lancaster, Electrical Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a therapeutic apparatus by means of which the part of the body affected, say the leg and foot, or arm, may be subjected for some time to the continuous and uniform influence of radiant heat and light electrically produced.

We, have illustrated our invention in the accompanying drawings, in which Fig. I is a longitudinal elevation in medial section; Fig. II is a sectional elevation on the line A A of Fig. I; Fig. III is a plan in section on the line B B of Figs. I and II; and Fig. IV is an end elevation.

Throughout the drawings, the same parts are indicated by the same reference figures, and in the case of sections the direction in which they are viewed is indicated by the small arrows placed adjacent to the letters denoting the plane of section.

1 is a casing preferably of aluminium, which for convenience we will term the bath, the shape being made to suit the part of the body to which it is intended to be applied; by way of example, we have illustrated an apparatus suitable for the leg and foot or the arm, which enters the bath by the opening 2. For convenience of application, the casing is made in three parts, two side pieces 1, and a bottom 1^1, simple hook or other fastenings (of which two are shown at 3 in Fig. IV), being provided to connect the parts. If the limb is too stout to permit the sides to be clasped together, the opening between them may be covered with a cloth or the like to retain the heat.

The apparatus being generally used in the horizontal position, yielding cushions of, say, asbestos (which are not shown in the drawings) are provided on the bottom to support the limb, and 4 is an inspection door.

The bath is fitted with a number of electrical radiators 5, each of which consists of a glass tube from which the air has been exhausted, and in which is fitted a filament of metal or carbon adapted to be heated to incandescence by the passage of a current of electricity, which enters and leaves the filament by suitable terminals.

The radiators are shown arranged in groups of four, surrounded by outer glass tubes 6 as a protection against mechanical injury. Metallic caps 7 are flanged over the ends of the tubes 6 and are perforated to locate the radiators 5, the ends of the latter being further located by recesses in the slate blocks 8, into which they fit, the whole group being bound into a single structure by the long through bolts 9. The groups are located within the bath by the slate blocks 8 which are secured to the sides of the casing.

The main terminals 10 are connected to the electric supply leads and from them the current is distributed in parallel through all the radiators, each being fitted with its own switch 11 so that the radiators can be individually switched on or off, thus giving very complete control of the amount of heat and light. The electrical connections, being exactly similar to the ordinary wiring of incandescent lamps in parallel, are only conventionally indicated.

In some cases the radiators and their protecting tubes may be so shaped as

to follow the configuration of the part to be operated upon and the walls of the bath (the inner surfaces of which are polished so as to absorb as little light and heat as possible) may be so shaped that, with the aid of reflectors, the light and heat may be focused on any particular part desired.

We find that in the case of sprains, gout and the like, if the part affected is subjected to the continuous influence of the light and heat thus generated and radiated, relief is afforded, and the process of healing considerably helped.

The apparatus is, as stated, modified to suit the configuration of the part of the body to which it is intended to be applied, and in some cases the radiators may be used without the outer glass tube.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:—

The improved electric therapeutic apparatus, substantially as described.

Dated this 2nd day of December 1899.

SLOAN & LLOYD BARNES,
Chartered Patent Agents, 34, Castle Street, Liverpool.

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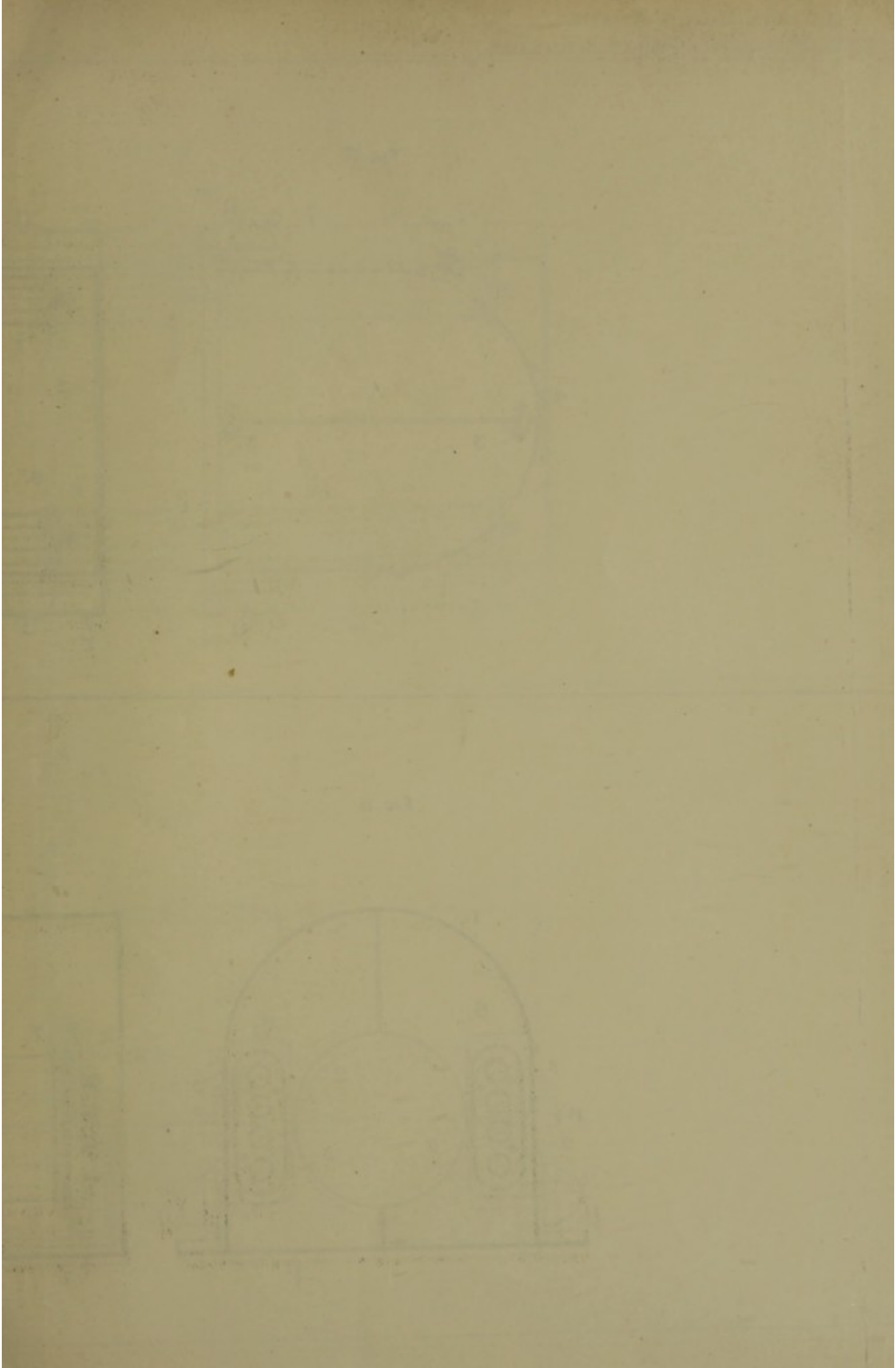


Fig. IV

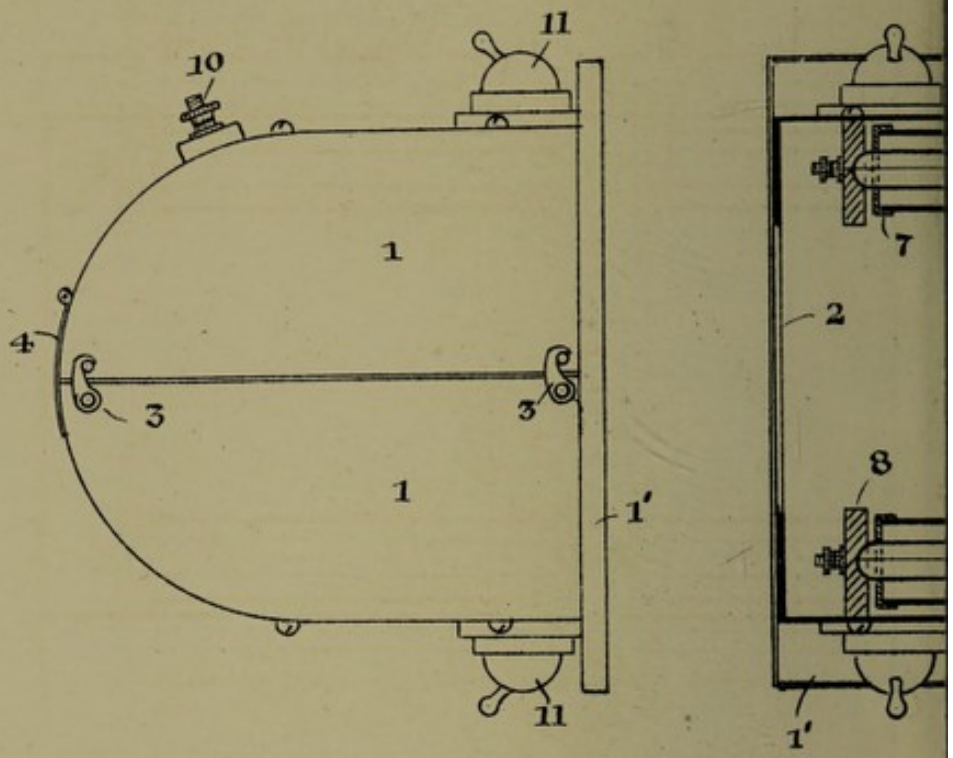


Fig. II

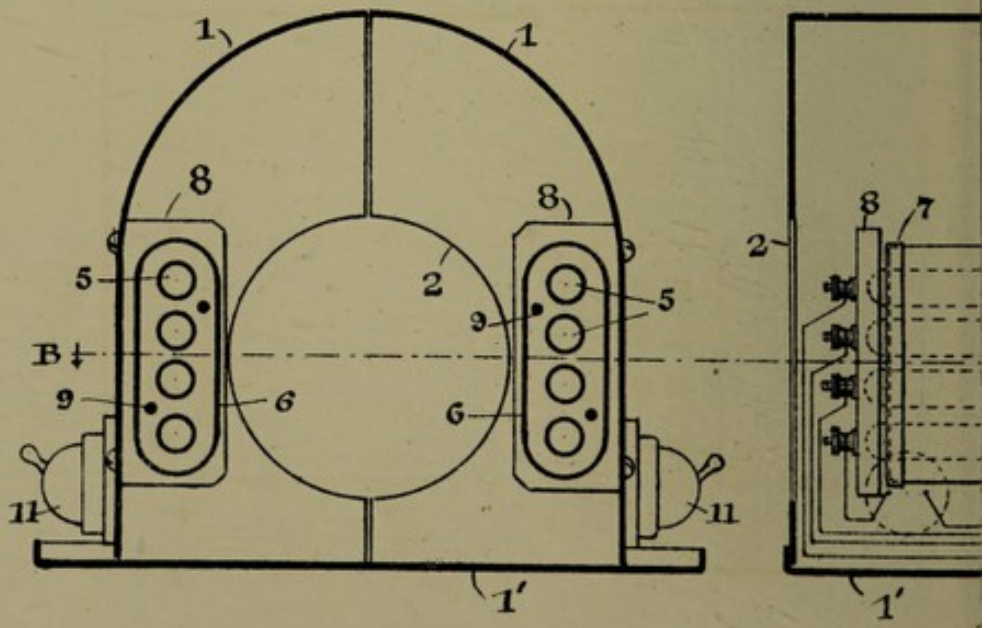


FIG. III.

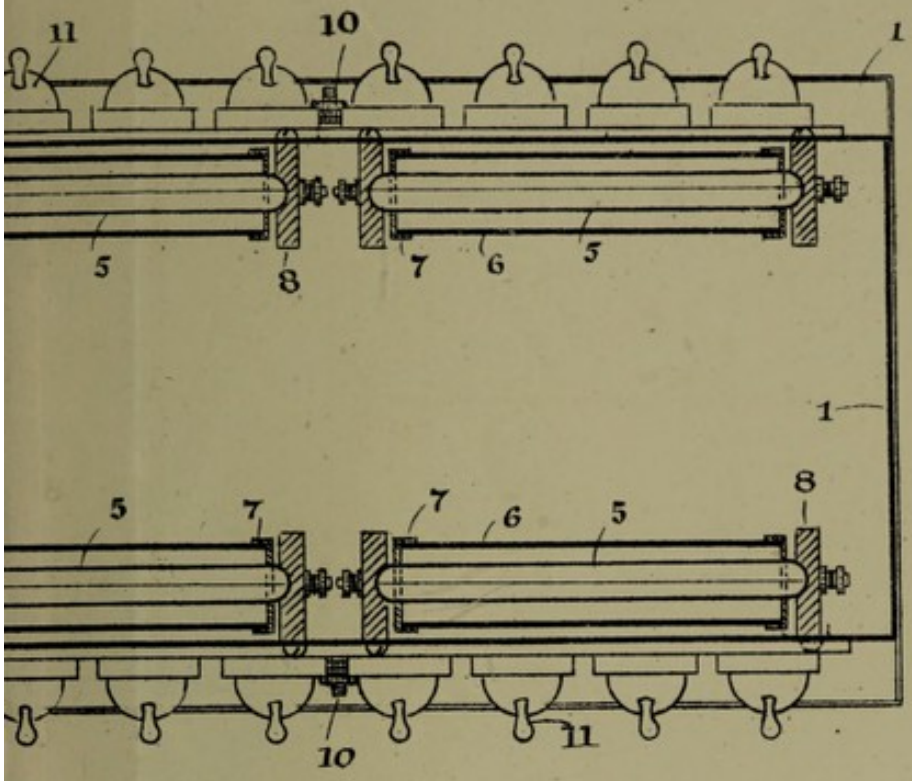
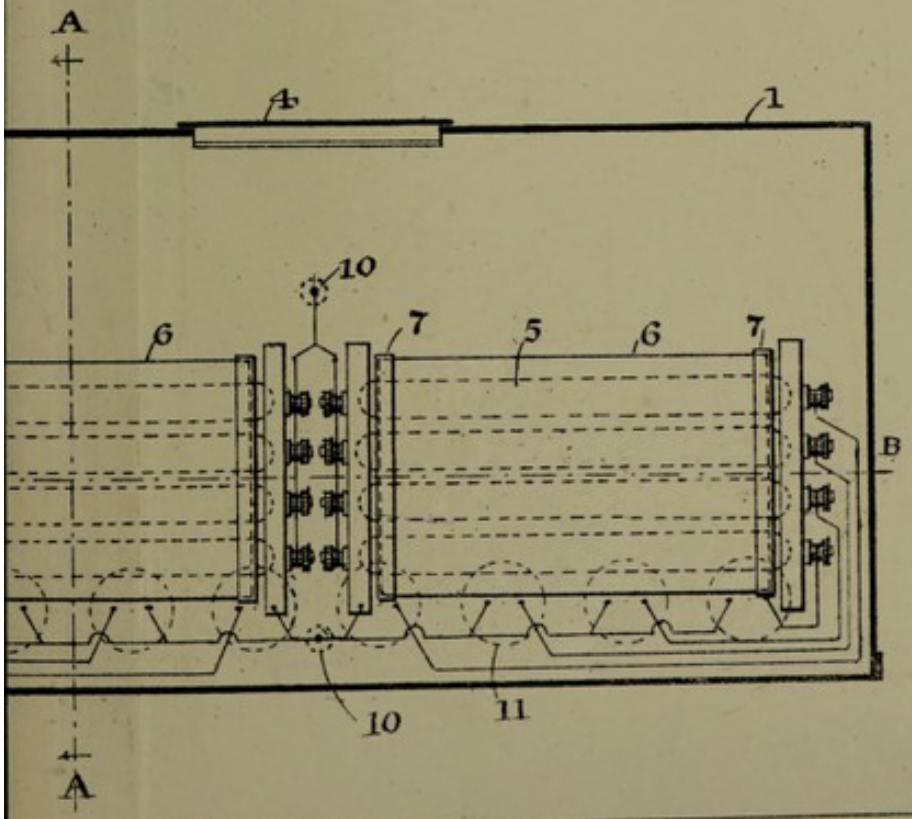


FIG. I



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