

(No Model.)

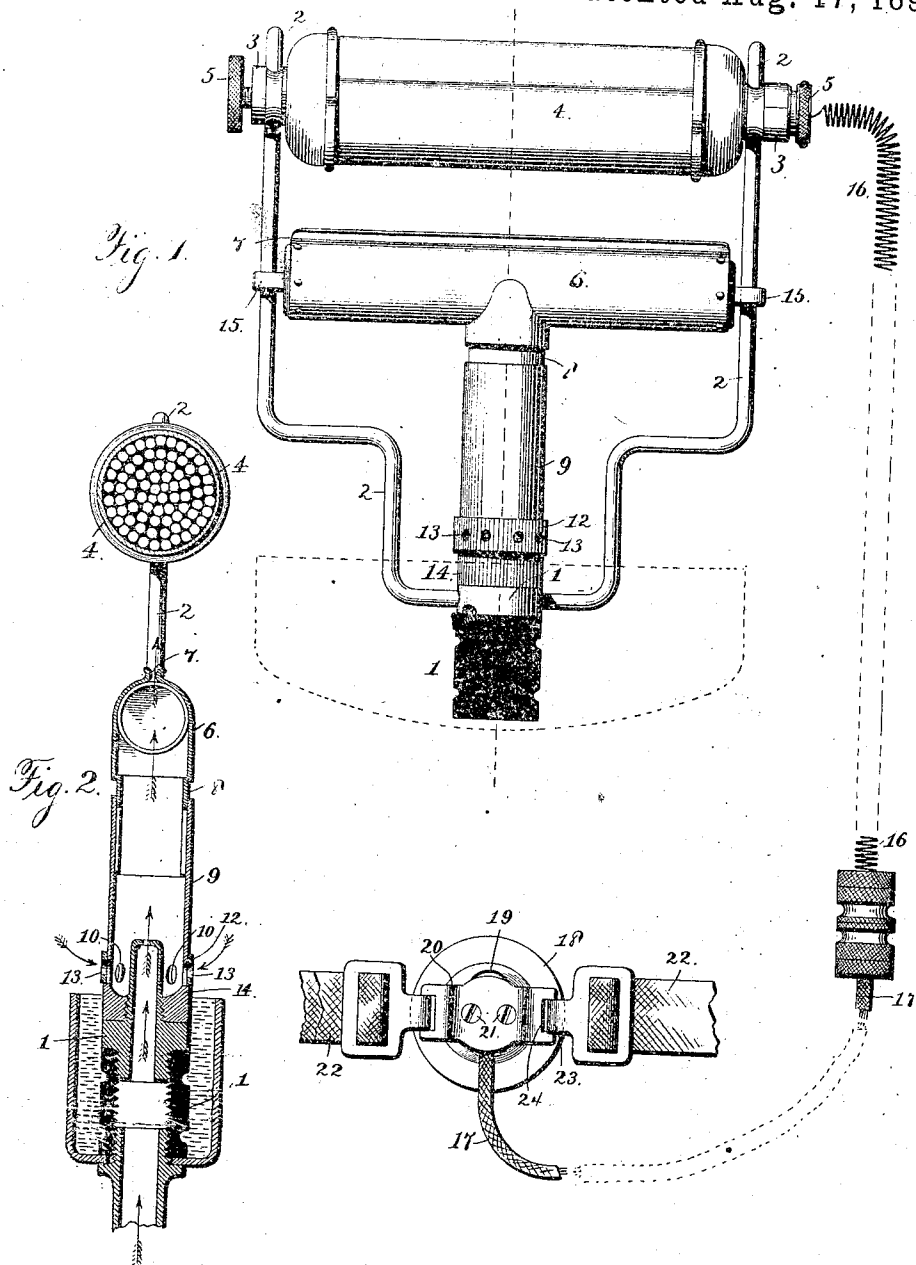
2 Sheets—Sheet 1.

H. SANCHE.

APPARATUS FOR TREATMENT OF DISEASES.

No. 588,483.

Patented Aug. 17, 1897.



Witnesses:
Jas. E. Hutchinson.
Gennies Shumby.

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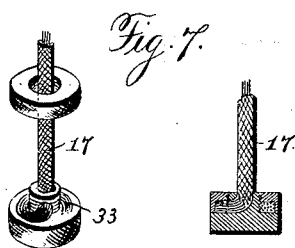
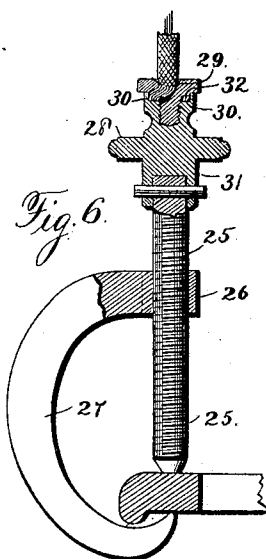
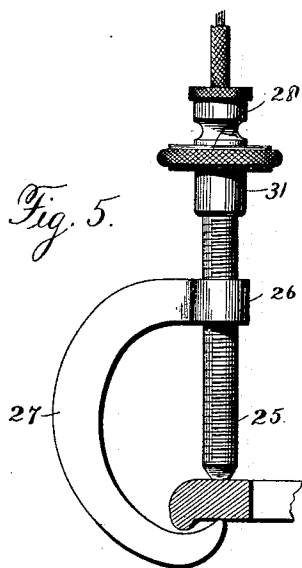
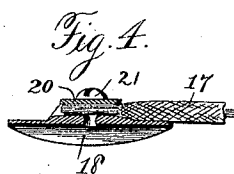
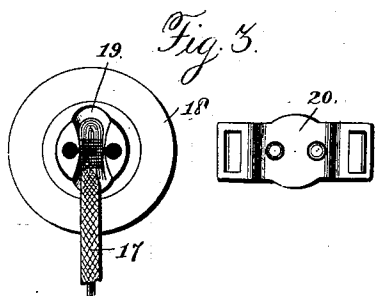
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2 Sheets—Sheet 2.

H. SANCHE.
APPARATUS FOR TREATMENT OF DISEASES.

No. 588,483.

Patented Aug. 17, 1897.



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UNITED STATES PATENT OFFICE.

HERCULES SANCHE, OF DETROIT, MICHIGAN, ASSIGNOR TO THE ANIMARIUM COMPANY, OF NEW YORK, N. Y.

APPARATUS FOR TREATMENT OF DISEASES.

SPECIFICATION forming part of Letters Patent No. 588,483, dated August 17, 1897.

Application filed May 29, 1890. Serial No. 353,613. (No model.)

To all whom it may concern:

Be it known that I, HERCULES SANCHE, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Apparatus for the Treatment of Diseases, of which the following is a specification.

My invention relates to apparatus for the treatment of diseases; and it consists in the several novel parts and combinations of parts hereinafter explained, and then particularly pointed out and defined in the claims annexed to this specification.

To enable others to understand and to make, construct, and use my said invention, I will proceed to explain the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation showing the complete apparatus. Fig. 2 is a central vertical section of the same, the section plane being transverse to the cylindrical parts. Fig. 3 is a similar view showing the terminal contact-plate. Fig. 4 is a further view of the terminal contact-plate, showing the manner in which connection is made therewith. Fig. 5 is a view showing a device which may be substituted for that illustrated in Fig. 1. Fig. 6 is a sectional view of the devices shown in Fig. 5. Fig. 7 is a view showing a modified construction of one of the cable connections.

In the drawings the numeral 1 indicates a burner-tip, such as my ordinary gas terminal, provided, however, for its present use with a connecting-section, into one end of which the tip is screwed, the other end of the connection being mounted on the pipe supplying the gas. Upon the tip or terminal 1 is rigidly mounted a yoke-frame 2, having parallel arms which rise vertically to enter openings in the extremities 3 of a cylindrical casing or shell 4, which is entirely closed, but packed within with small copper or other metallic bars—such, for example, as copper wire cut up into proper lengths—so that their ends shall rest against the ends of the cylindrical casing. The latter is secured to the yoke-frame by binding-screws 5. Upon the parallel arms of the yoke-frame is mounted also a cylindrical casing or shell 6, having upon

its upper side a long narrow slot 7, and communicating with this cylinder is a central tube 8, which slides within a tube 9, rising from the gas-tip 1. In this tube a little above the tip I form a series of air-openings 10 and mount upon the tube over said openings a ring 12, having a like series of such openings 13, whereby a considerable quantity of air may be admitted to the tube, this volume being adjustable by simply turning the ring, which rests for its support upon a collar 14. It will be seen that by this device the burner may be converted into a burner of the Bunsen type, or, if for any reason it is desired, the air may be wholly cut off and gas only employed.

By the construction shown and described also the cylinder 6 lies beneath the cylindrical casing 1 and is provided with nipples 15, through which the arms of the yoke pass, whereby it may be raised and lowered relatively to the cylinder 1 and the heat thereby increased or diminished as it is exerted upon the cylinder or pile 1. All the metallic parts above the tip are insulated from earth by means of the material of which said tip is made, this being any good insulating substance—such, for example, as hard rubber. To prevent the overheating of the rubber tip, I provide a small cup, which may be integral with or fitted upon the tip and which may contain water to keep the rubber cool. This cup is shown by dotted lines in Fig. 1.

Connected to one end of the cylinder 4 is a closely-coiled spring 16, of such length as to prevent any great excess of heat from being transmitted to a cable 17, which consists of a core, such as tinsel-wire, firmly covered by a braided covering of silk or wool, the material shown in the present instance being worsted. This wire is of any required length, and at its end it is connected with a disk or contact-plate 18, bent into concave form in one direction. Upon the back of this disk is a seat to receive the end of the wire from which the covering has been removed. A plate 20 is then laid over the seat and upon the wire and fastened down by screws 21, which firmly fasten the cable and grips the exposed metallic ends of the tinsel-wire. To one end of this plate 20 is connected by a closed hook

one end of a silk strip 22, which is provided at its other end with a similar but open hook 23, engaging a slot 24 in the other end of the plate 20. This hook may be adjusted along
 5 upon the strap in the manner of a garter-clasp to enable the strap to be applied to different parts of the body.

I may substitute for the heating devices shown in Fig. 1 the clip shown in Fig. 5. The
 10 latter may be attached to any part of a stove or range or to any other source of heat by means of the threaded rod 25, tapped through the loop 26 at the end of the arm or bow 27. When this substitute device is employed, I
 15 introduce the cable through the head of the binding-screw 28 by way of a concentric opening 29, which opens at one side of the screw, and the tinsel-wires are laid in a seat 30, formed in a head or terminal 31 upon the
 20 threaded rod 25, which engages with a slightly-raised boss 32 on the binding-screw which presses the terminals of the wires closely down upon the seat 30 and holds them fast therein. I may, however, introduce a wire
 25 through the point of the binding-screw instead of the head, as shown in Fig. 7, and tap the point into a substantially similar cup, the wires being passed through an opening 33 in the threaded stem and coiled or spread upon
 30 the flat abutting face of the end piece, said cable passing through the threaded opening in the engaging piece which receives the centrally-drilled point of the binding-screw through which the wires are passed.

35 The spring intermediate between the end of the cylinder or pile 1 is connected with and disconnected from the end of the cable by a duplex connection of the kind last described, save that the wire and cable are introduced
 40 through the heads of the binding-screws.

It is unnecessary to state the theory of action of this apparatus. The effects of heat and cold in dynamic respects are known, in part, and it is a scientific fact that the appli-
 45 cation of heat to one terminal of a connecting-cable, such as the terminal represented by the terminal pile 1, and raising the temperature considerably as compared with the other terminal, will establish a relatively op-
 50 posite potential at these terminals, the extremity of which and the time occupied in effecting the change will depend upon the size of the connector and the difference of temperature between said terminals, respec-

tively. The mild and gradual action of the
 55 instrument, extending over a period of some hours, will produce effects of marked character and benefit.

What I claim is—

1. In an apparatus of the type described, 60 the combination with a shell containing a thermal pile, or series of closely-packed metallic rods, of a heating device, a conducting-cable connected to the pile, and a contact-plate connected to the cable, and provided 65 with means whereby it may be attached, or applied, to some part of the body, substantially as described.

2. In an apparatus of the type set forth, the combination with a cylindrical shell con- 70 taining a thermal pile, a series of closely-packed metallic rods, of a heating device consisting of a cylinder adjustable toward and from the shell upon a frame supporting the latter, a tube having communication with the 75 adjustable cylinder and having an insulating-tip, adapted for attachment to a gas-burner, and a movable collar having air-openings which may be adjusted with reference to open- 80 ings in the tube, to open, close, or partly close the air-inlets, substantially as described.

3. In an apparatus of the type described, the combination with a shell containing a thermal pile of metallic rods, of means sub- 85 stantially as described for imparting heat to said pile, a cable connected to one end of the shell by an elastic wire coil and contact-plate having a head upon its back and a seat therein to receive the stripped or denuded terminal 90 of the cable, and a plate screwed down, upon the denuded terminal and binding it upon the contact-plate, substantially as described.

4. In an apparatus of the type set forth, the combination with a frame of a shell mounted 95 between the parallel arms of said frame and containing a thermal pile, a shell adjustable on said parallel arms, and provided with a slot in the wall adjacent to the shell containing the thermal pile, a tube entering the op- 100 posite side of said shell, a gas-burner in said tube and a tip adapted to be attached to a gas-fixtue, substantially as described.

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

HERCULES SANCHE.

Witnesses:

JAMES L. NORRIS,
 J. A. RUTHERFORD.