To all whom it may concern:

Be it known that I, JEAN F. WEBB, SR., a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful VACUO-THERMIC-BODY-TREATMENT APPLIANCE, of which the following is a specification.

It has been well known to medical science that artificial heat when applied to any part of the human body increases the blood circulation to the part subject to the applied heat, and that this increased circulation of the blood gradually enables it to absorb and carry off various forms of congestion or morbid conditions which cause pain, and that when such congestion or morbid condition was finally absorbed and carried off, normal circulation would be restored, and a cure effected.

It has also been long known that placing any part of the human body in a closed vacuum appliance and gradually exhausting the air therefrom would quickly increase the circulation of the blood in the part or organ so inclosed.

Various forms of vacuum appliances have heretofore been invented and used for such treatment, with more or less success, but generally the construction of such appliances or the manner of their application has been such that the user has found it difficult, without the aid of an attendant to maintain the appliance or device in the applied position for effecting the desired curative results.

My invention primarily has for its purpose to produce an appliance of the character and for the purposes stated, simple and inexpensive in structure and which, in its general contour, may be readily designed to suit the special part or organ of the body to be treated and which can be conveniently applied and operated by the patient and which will speedily effect the desired curative conditions.

Another and essential object of my invention is to provide an appliance of the character stated so designed that the part or organ to which it may be applied can be treated by either heat or vacuum alternately, or by both simultaneously, and said appliance used for self-treatment by the patient.

With further objects in view and hereinafter stated, my invention comprehends a vacuo-thermic medical appliance for the general purposes stated, that embodies the peculiar features of construction and novel arrangement of parts as mentioned in the following detailed description, as specifically outlined in the appended claims and illustrated in the accompanying drawings, in which:

Figure 1 is a plan view, parts being in horizontal section of my improved appliance, the same being shown as especially designed for the treatment of rheumatism, writer's cramp, etc.

Fig. 2 is a vertical section, partly in elevation, of my appliance designed for treatment of varicose veins, sprained ankles, etc.

Fig. 3 is a perspective view that illustrates my appliance designed for the treatment of varicocele, orchitis and other forms of congested or weakened conditions of the sexual organs.

Fig. 4 is a detail longitudinal section of the outer end of the appliance shown in Fig. 3.

Fig. 5 is a front elevation of the appliance shown in Fig. 3.

Fig. 6 is a perspective view of a further modification of my appliance hereinafter further referred to.

Figs. 7, 8, 9 and 10 are detail horizontal sections taken substantially on the lines 7-7, 8-8, 9-9 and 10-10 on Figs. 1, 2, 3 and 6, respectively.

My improved appliance or instrument embodies, generally, a bulbular body shaped to suit the particular treatment for which it is to be applied. This body can be made of rubber, metal or bakelite in which continuous wire coils of nickel alloy or German silver of suitable size to carry the electric circuit current needed are embedded, or molded in the walls, to act as resistance coils for generating the desired heat.

Preferably the body 1 of the appliance is made of a heat resisting glass in which the wires 2 are embedded and the glass annealed in the same manner as "fire glass" is made.

The body being of transparent material and since the effect of the vacuum or heat treatment is visible to the patient in self-treatment, the said treatment can be regulated as desired and in the manner hereinafter explained.

In the manufacture of my invention, the body of the different forms of appliances are shaped to suit the particular treatment for which they are to be applied.

In every form, the same general character-
istic of my invention is maintained and they comprise essentially a bulbular body having the electric heating coils 2 embedded therein, for generating the heat, a switch connection, preferably attached to the body, and a connection on the body for the attachment thereof of an air or vacuum creating bulb, and when the member or part being treated is to be entirely incased, suitable means is attached to the body for making an air tight closure at the open end of the body.

As shown in Fig. 1, the body 1 is of a bulbular shape and of a size suitable for receiving therein the hand and the wrist of the user, it being understood that the said body 1, may be long enough to extend near to the elbow, to adapt it for the ready treatment of a sprained wrist or forearm.

At the open end, the body 1, shown in Fig. 1, is restricted and it there terminates in a tubular extension 10 which provides for the convenient attachment thereto of a broad stock rubber band 3 that aids in keeping the attachment in the desired operative position and also effects an air tight closure for the hollow body.

In the form referred to, the body 1 at the outermost end has a tubular nipple or extension 11, for receiving the end of a flexible hose 4 of an ordinary vacuum bulb device 40, which, when manipulated in the usual way, draws the air from and creates a vacuum within the said body 1.

At a suitable point, preferably at the straight neck, the body 1 is formed with a coupling block 12, designed for receiving the ordinary type of plug switch 6 and which may have the usual regulating lever 60 for controlling the strength of the current that passes through the heat coils 2.

It should be stated that in practice, the wire cord 7 is supplied with the usual form of switch plug for connecting with the house electric light fixtures or to a battery.

In Fig. 2 is shown substantially the same form of appliance illustrated by Fig. 1, except that the hollow body is shaped for receiving the leg or foot, and the nipple 11 for attaching the vacuum creating bulb device is located below and adjacent the coupling block 12.

In this latter form, a rubber closure band 8 is also used and it engages the neck portion 13 of the body and the leg to make the air tight closure for the upper end.

While the form shown in Fig. 2 is especially adapted for receiving the foot and the leg below the knee, it is obvious the body may be of sufficient length to include the knee joint, and in this latter form, an asbestos plate 9 is located on the bottom of the body 1 to avoid burning the foot.

The form shown in Fig. 2 is especially well adapted for the treatment of gout, varicose veins in the leg and sprained ankles and, when made long enough, for the treatment of rheumatic and other diseases of the knee.

Vacuum tubes for the male organ alone have long been known or used, but they did not inclose the orches (testicles), the seat of the varicocele; and consequently they could not furnish the proper treatment needed to relieve congested or abnormal conditions in all the parts.

Fig. 5 illustrates a further form of my improved appliance that is particularly designed for use for effecting the proper treatment of those parts last referred to and, in the said form, the body 1 includes, in addition to the bulbular body portion 1, a sack-like member 15 for receiving the orches, and a vacuum cup-like open end 30, the cup-like open end being shaped to conform to the contour of the pelvis and the thighs, and to provide an air tight closure, as the appliance is pressed tightly against the body, the said cup-like edge has a flange on which is received a rubber gasket 17 cemented or otherwise made fast to the said edge.

In this latter form of my appliance, the outer end of the glass body 1 which is in the nature of a tube, is closed by a disk 18 (preferably hard rubber) provided with an internally threaded aperture 19, for receiving the threaded coupling 20 on the end of the flexible tube 21 that joins with the air exhausting rubber bulb 40 provided with the usual valve devices 23-24 in the opposite ends thereof, as shown.

Near the inner end, the body 1 has the switch portion for connection with the switch plug 25 on the end of the electric conduit cord that joins with the source of electric supply.

In Fig. 6 is shown a still further modification of my invention, the said form being especially designed for cupping on the local applications to any part of the human body, and in the said form, the body 1 is also provided with a rubber covered edge or rim to provide for an air tight closure as the appliance is held pressed against the part of the human body to be treated.

In the latter construction, the body 1 is bowl-shaped and has its crown or inner end secured air tight in any suitable manner, to a head portion 35 that constitutes a block for receiving the circuit closing member 36 to which the current wire lead 37 connects. 38 designates a central switch in the cord or lead 37 for coupling with the source of electrical energy.

Block 35 has an aperture that opens into the bowl-shaped body and with which connects the stem of a vacuum bulb 31 and it also has a socket 32 for receiving a hard rubber handle 33.

From the foregoing description taken in connection with the drawings, the complete...
construction of, the manner in which the appliances may be used and the advantages thereof will be especially apparent to those familiar with the use of appliances of the character stated.

Among many other advantages of my invention, it should be mentioned that the same may be readily shaped in various forms suitable for the treatment of different parts, or members, of the human body and capable of being readily adapted for use by connecting the appliance with a house service electric plug or battery.

The patient can easily apply the appliance and maintain it at the desired positions for the special treatment desired, and by reason of having the switch connections and the vacuum devices combined with the appliance as shown and described, the user can apply the heat treatment or the vacuum treatment either alternately or together and by observation, he can regulate either curative agent as conditions may make desirable for effecting a speedy and effective cure.

While I have illustrated a number of forms of my invention, to illustrate the adaptability of the same for the treatment of various parts of the body, it is understood appliances either larger or smaller sizes for the treatment of the full length of leg, individual fingers, elbows or other joints may be readily made without in the least departing from the generic form of my invention as comes within the scope of the appended claims.

What I claim is:

1. A vacuo-thermal appliance comprising a container of transparent heat resisting material, electric circulation wires embodied in the entire outside transparent shell of the said container, a circuit closure connected with the said container, the latter being provided with an open end adapted for being secured air tight against the human body, a source of electrical energy connected with the circuit closure and means attached to the container for effecting vacuum within the container, as desired.

2. As a new article, a vacuo-thermal medical appliance that comprises a container open at one end into which may be received a part of the human body to be treated, heat coils embedded in the shell of the container, a block that constitutes a closure for the other end of the container and into which the terminals of the heat coils extend, a circuit closure in connection with the said terminals, the said block having an air passage in communication with the interior of the container and a vacuum creating bulb attached to the said block and in communication with the air passage therethrough.

JEAN F. WEBB, Sr.