

T. McCONNELL.  
VACUUM APPARATUS.  
APPLICATION FILED MAR. 21, 1919.

1,314,409.

Patented Aug. 26, 1919.  
2 SHEETS—SHEET 1.

*Fig. 1.*

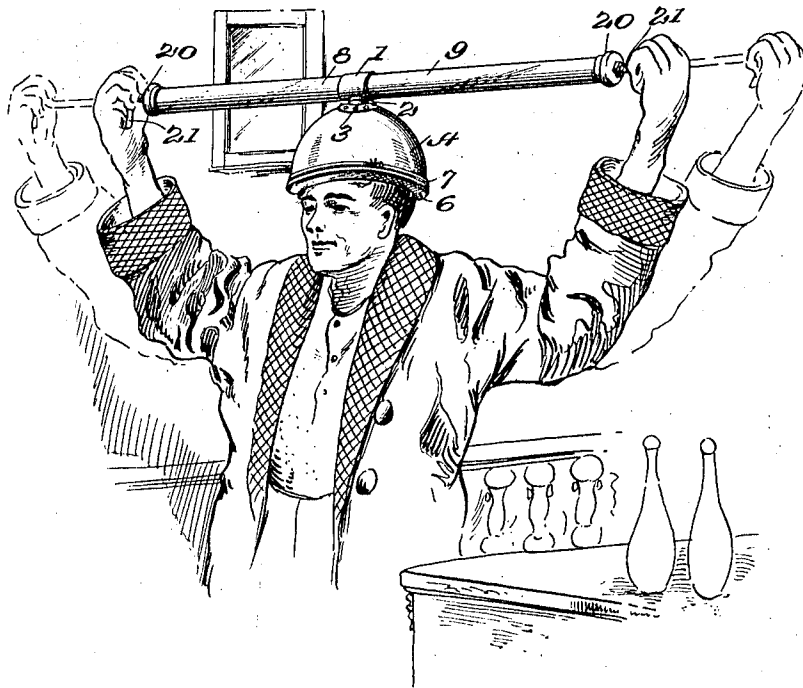
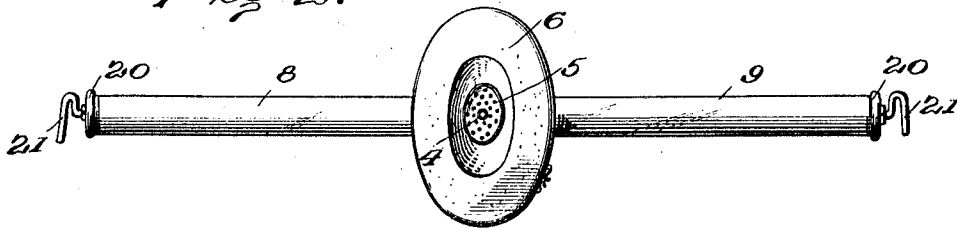


*Fig. 2.*



*Inventor.*  
J. McConnell,  
*by,* A. Pattison  
*Attorney.*

T. McCONNELL.  
VACUUM APPARATUS.  
APPLICATION FILED MAR. 21, 1919.

1,314,409.

Patented Aug. 26, 1919.

2 SHEETS—SHEET 2.

Fig. 3.

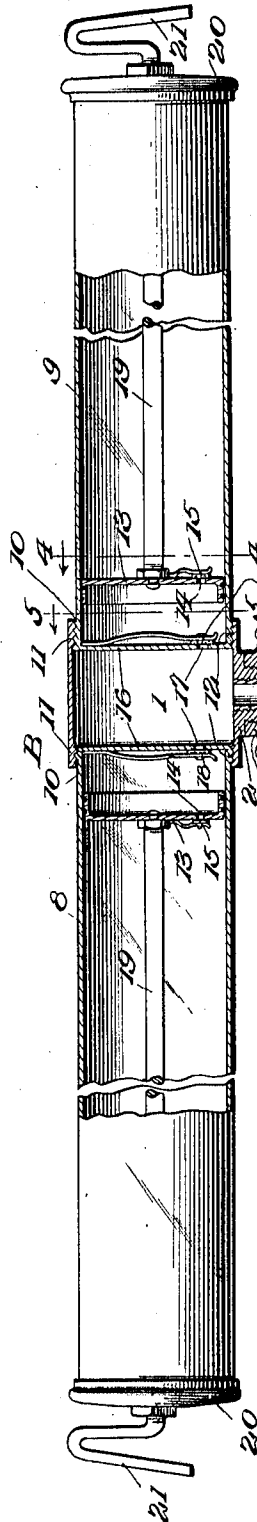


Fig. 5.

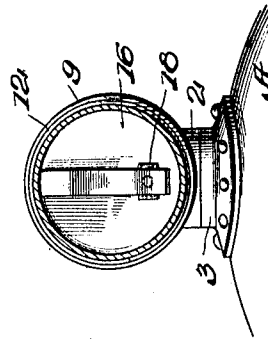
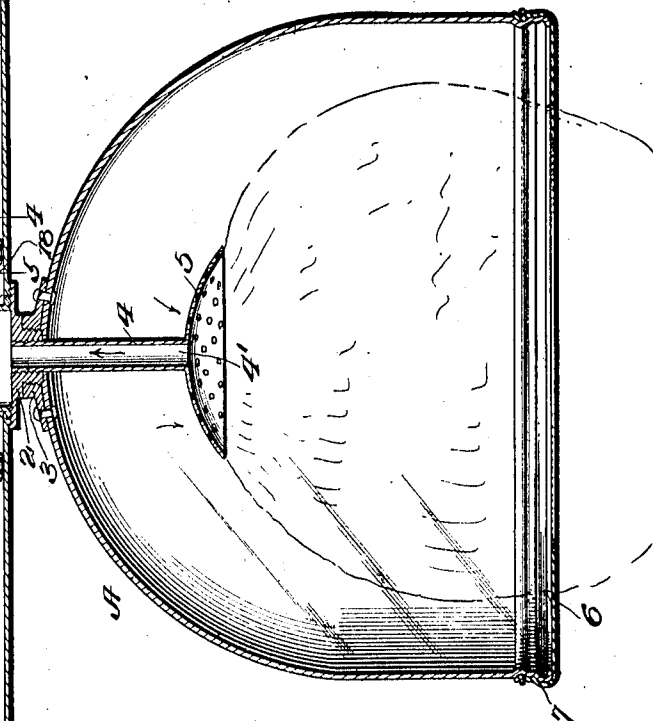
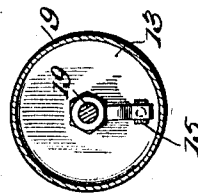


Fig. 4.



Inventor.  
J. McConnell  
by C. S. Pattison  
Attorney.

# UNITED STATES PATENT OFFICE.

THOMAS McCONNELL, OF NEW KENSINGTON, PENNSYLVANIA.

## VACUUM APPARATUS.

1,314,409.

Specification of Letters Patent. Patented Aug. 26, 1919.

Application filed March 21, 1919. Serial No. 284,169.

*To all whom it may concern:*

Be it known that I, THOMAS McCONNELL, a citizen of the United States, residing at New Kensington, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Vacuum Apparatus, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in physical culture appliance, and is designed to develop with equal facility the muscles of the body and scalp.

The primary object of the invention is to construct a combined scalp treating and muscle developing apparatus whereby the muscles of the arm and body and of the scalp are simultaneously exercised.

In the accompanying drawing—

Figure 1 is a perspective view of my apparatus showing it in operative position on the head of the operator.

Fig. 2 is a bottom plan view.

Fig. 3 is a sectional view, taken longitudinally through the pump cylinders, and transverse the helmet.

Fig. 4 is a sectional view on the line 4—4 of Fig. 3, looking in the direction indicated by arrow.

Fig. 5 is a sectional view on the line 5—5 of Fig. 3, looking in the direction indicated by arrow.

My improved massage apparatus embodies essentially a helmet A and a hand-operated pump mechanism B. The helmet A may be composed of any suitable material preferably aluminum for lightness, and the pumping mechanism B, which is attached to the top of the helmet, comprising a chamber 1, which is attached to the top of the helmet by screw-threaded members 2 and 3, carried respectively by the chamber and the helmet. A tube 4 passes through the top of the helmet and through the screw-threaded member 2 and communicates with the chamber 1, while the opposite and lower open end 4' carries a perforated headrest 5.

A horizontal rubber diaphragm 6 is suitably attached to the lower end of the helmet A, as at 7, and this elastic diaphragm 6 will tightly fit the head of the user and automatically adjusts itself to make a suitable air-tight engagement.

The pumping apparatus B comprises in addition to the chamber 1, two air-pump

cylinders 8 and 9, each having an inner open end 10, which telescope and tightly fit oppositely and outwardly extending annular flanges of the chamber 1, and this telescoping attachment is preferably detachable by screw-threads 12, as shown.

A piston 13 is within each of the cylinders 8 and 9, and these pistons are provided with openings 14, which are controlled by spring closed valves 15.

The side walls 16 of the chamber 1, are provided with openings 17, which are controlled by spring-closed valves 18. Each piston 13 has an operating rod 19 attached thereto and passes loosely through the heads 20 of the cylinders 8 and 9, and have their outer ends shaped into suitable handles 21 by means of which the pistons of the pumps are operated by the hands of the user, as shown in Fig. 1.

In the operation of the device, the helmet is adjusted on the head of the user and the pump pistons are reciprocated by the operator, as shown in Fig. 1. The reciprocation of the pistons will extract the air from the helmet and cause a suction action at each reciprocation of the pistons thus creating a pulsating sensation over the entire surface of the scalp, stretching little by little every artery, vein and capillary, thus filling their channels with abundance of pure rich life-giving blood upon which the hair depends for its nourishment. At the same time the arms and shoulders and to some extent the body of the user is being exercised, so that the appliance might be aptly termed a physical culture apparatus.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. A vacuum apparatus comprising a helmet and a pump apparatus supported by the helmet and in communication therewith and adapted to be operated by the user, for the purpose described.

2. A vacuum apparatus comprising a helmet, adapted to fit the head of the user, and a pump supported by the top of the helmet and in communication therewith, the pump adapted to be operated by the user, for the purpose described.

3. A vacuum apparatus comprising a helmet adapted to fit the wearer, a pump supported by the top of the helmet and extending horizontally therefrom, the pump in

communication with the helmet to create a vacuum therein and adapted to be operated by the uplifted arm of the user.

4. A vacuum apparatus, comprising a helmet adapted to fit the wearer, a vacuum creating device supported by and in communication with the helmet, and operating members for the vacuum device extending horizontally outward in opposite directions and adapted to be operated by the uplifted arms of the user.

5. A vacuum apparatus comprising a helmet adapted to fit the head of the user, a chamber mounted outside and at the top of the helmet and in communication therewith, oppositely horizontally extending pump cylinders in communication with the chamber, pistons within the cylinders, piston operating rods projecting through the outer ends of the cylinders and provided with operating handles, the pistons and the walls of the chamber provided with valves arranged to cause a vacuum within the helmet when the pistons are operated.

6. A vacuum apparatus comprising a hel-

met adapted to fit the head of the user, a chamber mounted on the top thereof and in communication with the helmet, oppositely extending pump cylinders detachably connected with the chamber, pistons within the cylinders, operating rods for the pistons extending through the outer ends of the cylinders and provided with operating handles, the inner ends of the cylinders being in communication with the chamber whereby a movement of the pistons will cause a pulsating vacuum action within the helmet, for the purpose described.

7. A vacuum apparatus comprising a helmet adapted to fit the head of the user, an air-pulsating device supported by the outer side of the top of the helmet and in communication therewith, operating members for the air-pulsating device adapted to be operated by the uplifted arms of the user, for the purpose described.

In testimony whereof I hereunto affix my signature.

THOMAS McCONNELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."