

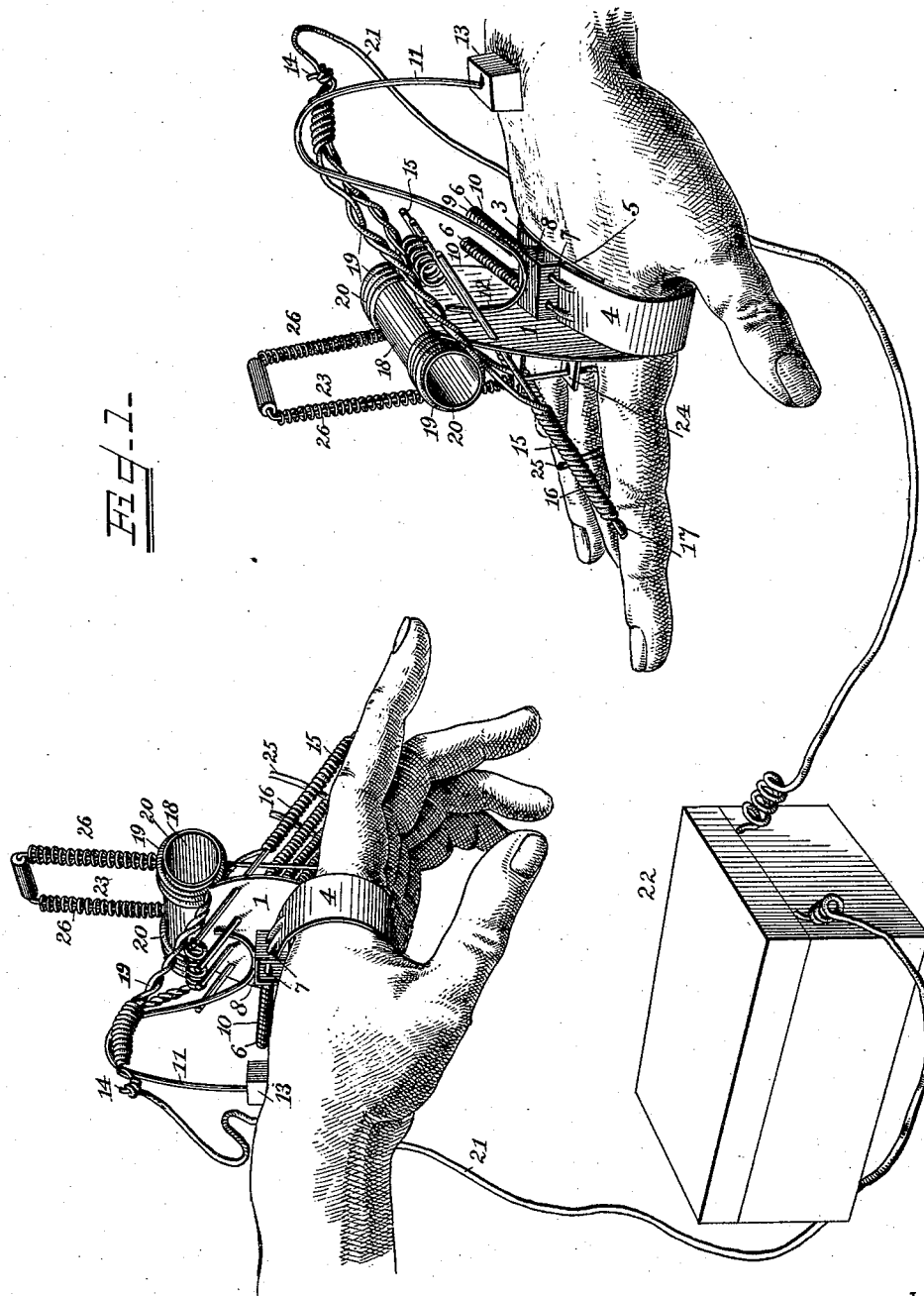
(No Model.)

2 Sheets—Sheet 1.

A. J. SPEARE.
ELECTRIC HAND APPLIANCE FOR MASSAGE.

No. 524,120.

Patented Aug. 7, 1894.



Inventor

Andrew J. Speare.

Witnesses

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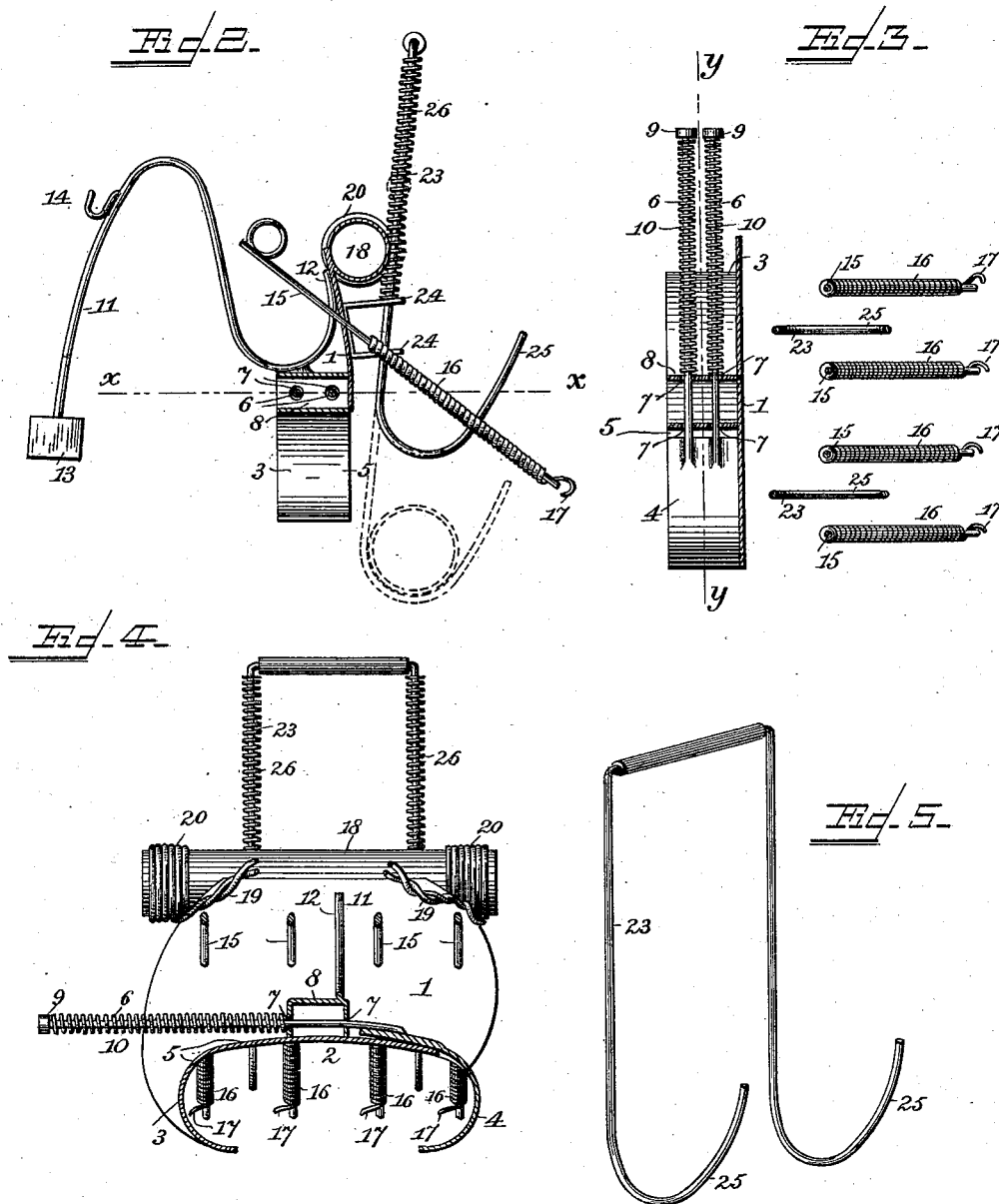
By his Attorneys.

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Charles Ourand
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UNITED STATES PATENT OFFICE.

ANDREW JACKSON SPEARE, OF THAYER, MISSOURI, ASSIGNOR OF ONE-HALF
TO H. J. F. DAVIS, OF SAME PLACE.

ELECTRIC HAND APPLIANCE FOR MASSAGE.

SPECIFICATION forming part of Letters Patent No. 524,120, dated August 7, 1894.

Application filed April 16, 1894. Serial No. 507,751. (No model.)

To all whom it may concern:

Be it known that, I, ANDREW JACKSON SPEARE, a citizen of the United States, residing at Thayer, in the county of Oregon and State of Missouri, have invented a new and useful Electrical Hand Appliance, of which the following is a specification.

This invention relates to electrical hand appliances; and it has for its object to provide a new and useful device of this character that is adapted to be used upon the hands of an operator for the purpose of charging the hand with electricity, or technically speaking, to provide for closing the circuit through the hands of an operator or physician when the hands are placed in contact with the human body.

To this end the main and primary object of the present invention is to provide an electrical hand appliance for therapeutical purposes to insure novel and efficient means for enabling the physician to massage an affected portion of the body with the greatest possible ease and facility, and at the same time securing a larger and more complete distribution of electricity than can be secured by the old way of placing the electrodes or poles of the battery in a person's hand or by the use of the ordinary sponge attached to the hand electrodes.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is an electrical hand appliance constructed in accordance with this invention. Fig. 2 is an enlarged central longitudinal sectional view of the appliance for one hand. Fig. 3 is a sectional view on the line $x-x$ of Fig. 2. Fig. 4 is a similar view on the line $y-y$ of Fig. 3. Fig. 5 is a detail in perspective of the supplemental electrode holder separated from the rest of the appliance.

Referring to the accompanying drawings, 1 designates a metallic holder plate constructed in any suitable size and of any suitable metal, and said metallic holder plate is curved at one edge as at 2 to conform with the curva-

ture of the back of a person's hand, and at the curved edge 2 of said holder plate 1, are arranged the oppositely disposed hand-hold flanges 3 and 4 respectively. The hand-hold flange 3, is fixed and is projected at one side of and beyond the holder plate 1 for engagement with one edge of the hand, and said fixed hand-hold 3, is provided with an elongated back flange 5, that extends nearly the entire width of the holder plate 1 and is slightly curved to conform to the back of a person's hand. The opposing hand-hold flange 4, is movable or adjustable to provide for the adjustment of the hand-hold to different widths of hands, and said movable or adjustable hand-hold flange 4, is arranged to have one end thereof slide at one side of one end of the back flange 5, and has connected to such end the parallel adjusting rods 6, that are arranged to work loosely through the perforations 7, in the guide bracket 8, secured to the under side of the plate 1 and at one side of the flange 5. The said adjusting rods 6, extend beyond one side of the holder plate and are provided with the heads 9, at their outer extremities, and at one side of the heads 9, are arranged the coiled retracting springs 10 bearing at one end against said heads and at the other ends against the bracket 8, to provide means for normally contracting the movable hand-hold flange 4, toward the flange 3, it being noted that the engaging ends of both of said flanges are looped or hooked to completely embrace the side edges of the hand as clearly illustrated in Fig. 1 of the drawings, and it will further be observed that by pushing inwardly on the heads 9, of the rods 6, the curved movable or adjustable hold 4, may be adjusted to provide means for conveniently placing the appliance in position on the hand or for removing the same.

With the appliance supported in position on the hands of a person by means of the adjustable hand-hold consisting of the parts 3 and 4, the same is held properly in its off-standing position from the back of the hand by means of the spring rest-wire 11. The spring rest-wire 11, is provided with a compound curve in order to secure the most possible spring or yield for the rest formed thereby, and is securely connected at one end, as

at 12, to the side of the holder plate 1, and the bracket 8, and the other free end or extremity of said spring has attached thereto the rubber or other soft foot-block 13, that is adapted to rest on the back of the wrist to steady the appliance in place and hold all the parts thereof properly in position, and said spring wire rest 11, is further provided, at a convenient point thereon, with the hook 14, the function of which will be presently adverted to.

A series of inclined finger bars or rods 15 is secured fast in the holder plate 1, and extend to both sides of the same, said finger bars or rods 15, being projected at a greater distance from one side of the plate and adapted to have their terminals form rests or stops for the four fingers of the hand, that are raised up into contact with the said terminals of the bars or rods when the appliance is in use. The finger bars or rods 15, correspond in number to the fingers of the hand, and on each of the bars or rods 15, at one side of the holder plate 1, is coiled closely a conductor coil 16. The conductor coils 16, that are arranged on each of the bars or rods 15, are properly supported in position by said bars or rods, and are provided with bared terminal ends 17, that are disposed at one extremity of the bars or rods for contact with the backs of the fingers that are held thereagainst when the appliance is in operation, and thereby providing means for connecting the fingers of the hands in the electrical circuit and charging the same.

The inner ends of the conductor coils 16, are extended from the bars or rods 15 to the opposite ends of the transverse coil core 18. At each end of the transverse coil core 18, the conductor coil wires 19 are coiled around the same to form the coils 20, and leading from the opposite ends of the core 18, the said wires are joined to one end of the main conductor 21, which is connected with one pole of an ordinary battery 22, and said main conductor 21, may be coiled or looped onto the hook 14 of the rest 11, in order to hold the wires properly in place and prevent their tangling or interfering with the free working of the appliance, it being understood that the wires 19, form branch wires to distribute the electric current to the different fingers of the hand.

In order that the circuit may be clearly traced, it is further explained that the wires 19, are simply branched from the main conductor wires 21, all of said wires 19, being electrically united at one end to said main conductors, and the other ends of said wires 19, are formed into the coils 16, it of course being understood that the intermediate portions of the said wires 19 are coiled as at 20 on the ends of the core 18, in order to provide for a proper positioning of the wires. It will therefore be seen that the electric current passing over the wires 21, is branched through the wires 19, to the bared terminal ends 17, thereof.

It is of course understood that the appliance is mounted on both hands of a physician or operator, and the description for one of the same therefore answers for both. The main conductor of one appliance is connected with one pole of the battery and the main conductor of the other appliance is connected to the other pole of the battery in order that the electric circuit may be closed through the hands carrying the appliances when the hands are rubbed on the human body. With the appliances positioned on the hands as noted, the several fingers are in the direct circuit of the electric current, so that it is simply necessary to gently massage the affected parts of the body with the fingers of the hand, to distribute and carry the electric current thereto for the purpose of relieving pain, &c.

In addition to the parts described, each of the appliances is provided with a supplementary U-shaped electrode holder 23. The U-shape electrode holder is constructed of any suitable wire metal and has the looped end thereof extending beyond one edge of the holder plate 1, and the opposite side portions of the holder are arranged to slide in the perforated bracket flanges 24, secured on top of the holder plate 1. The inner ends of the opposite side portions of the holder are provided with the off-standing hook-arms 25, which are adapted to receive an ordinary hand-electrode or pole of those batteries that are usually employed to give shocks, and the off-standing hook arms 25, of the holder, are normally held in an inoperative position away from the fingers of the hand by means of the coiled springs 26, arranged on the opposite side portions of the holder and bearing at one end against the brackets 24.

When it is desired to use the holders 23, the same are pushed inward against the tension of the springs 26, to carry the hook arms 25 between the fingers of the hand so as to dispose the loops formed by said hook arms beyond the inner parts of the fingers, and in this position the hook arms are adapted to receive the hand electrodes or poles of a battery. By releasing the electrode holders, the springs 26, will draw the said hand electrodes or poles against the under sides of the fingers so as to charge the same with electricity, it being understood that the fingers still rest against one end of the finger bars or rods 15. By means of the supplementary electrode holders the operation of the distributing coils on the finger bars or rods may be supplemented, and said holders therefore act in an auxiliary capacity, but when in use to hold the electrodes against the under sides of the fingers, the current may be cut off from the coils 16.

From the above it is thought that the operation and many advantages of the herein-described device will be readily apparent to those skilled in the art, and I will have it understood that changes in the form, proportion and the minor details of construction

may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In an electrical hand appliance, a holder plate having a hand hold adapted to embrace a hand, a series of electrical conductors supported on said plate and having bared terminal ends, and suitable electrical connections with said conductors, substantially as set forth.

2. In an electrical hand appliance, a holder plate having an adjustable hand hold, and a series of electrical conductors supported on said plate and having bared terminal ends adapted to contact with the fingers of a hand, substantially as set forth.

3. In an electrical hand appliance, a metallic holder plate provided with an adjustable hand-hold consisting of looped or hook-shaped flanges one of which is fixed and the other movable, and a spring for normally contracting the movable flange toward the fixed flange, and a series of electrical conductors arranged on the holder plate and having bared terminal ends for contact with the fingers of a hand, substantially as set forth.

4. In an electrical hand appliance, a metallic holder plate provided with an adjustable hand hold consisting of hook-shaped flanges one of which is fixed and the other movable, adjusting rods supported to slide at one side of the fixed flange and connected at one end to the movable flange, springs arranged on said adjusting rods to normally retract the movable flange toward the fixed flange, and an electricity distributing device arranged on the holder plate, substantially as set forth.

5. In an electrical hand appliance, the holder plate, having an adjustable hand-hold, a spring wire rest attached to one side of said plate and adapted to rest on the wrist, and the conductor devices supported on the holder plate, substantially as set forth.

6. In an electrical hand appliance, a metallic holder plate having an adjustable hand-hold, a curved spring-wire rest attached at one end to said plate and provided at its free

end with a foot block adapted to rest on the back of the wrist, said wire rest being further provided at a suitable point with a hook, and electrical conductors supported on the holder plate, substantially as set forth.

7. In an electrical hand appliance, a holder plate having a hand hold and a wrist rest, a series of finger bars or rods arranged at an angle on said plate, the main electrical conductor, and conductor coils arranged on said finger bars or rods and branched from said main conductor, said coils having bared terminal ends at one extremity of said finger bars or rods, substantially as set forth.

8. In an electrical hand appliance, the holder adapted to be arranged on the hand, a series of inclined finger bars or rods arranged at an angle on said holder, a transverse coil core arranged on the holder at one side of said bars or rods, the main electrical conductor, and the coiled wires branched from said main conductor, coiled on the opposite ends of said coil core and on each of said finger bars or rods and provided with bared terminal ends for contact with the fingers of the hand, substantially as set forth.

9. In an electrical hand appliance the combination with the holder plate having a hand hold and a series of off-standing finger bars or rods; of a spring actuated supplemental electrode holder mounted on said holder and provided with hook ends arranged to work between said finger bars or rods, substantially as set forth.

10. In an electrical hand appliance, the combination with a holder having a hand hold and a series of off-standing finger bars or rods; of a U-shaped supplemental electrode holder mounted to slide on said holder and provided with hook ends adapted to work between said finger bars or rods, and suitably arranged springs for normally drawing the hook ends of the holder toward said finger bars or rods, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ANDREW JACKSON SPEARE.

Witnesses:

A. R. SITTON,

W. McLELLAND.