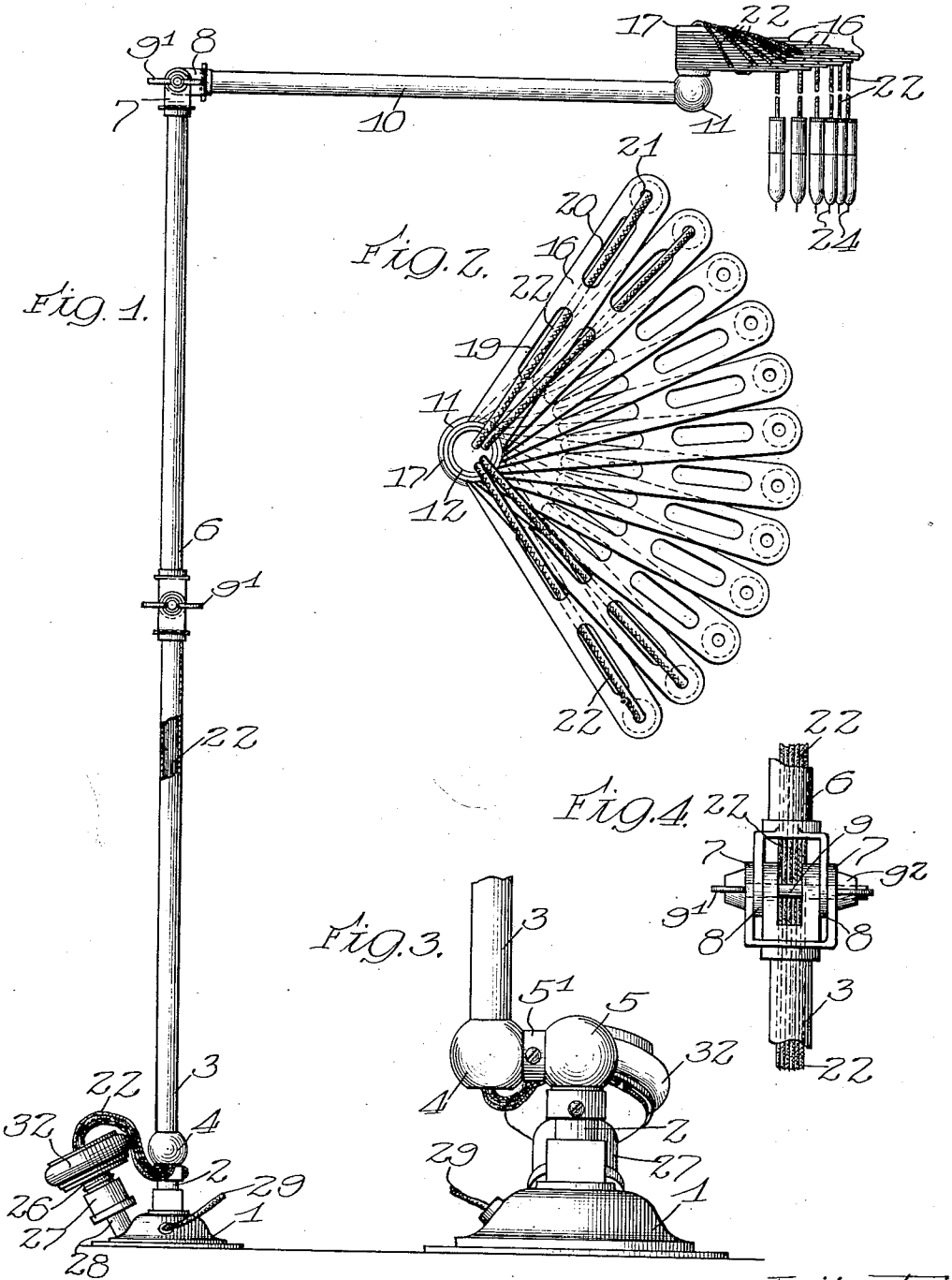
E. K. WILLISON.

MULTIPLE NEEDLE HOLDER FOR ELECTROLYSIS.

APPLICATION FILED DEC. 15, 1911.

1,070,370. Patented Aug. 12, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

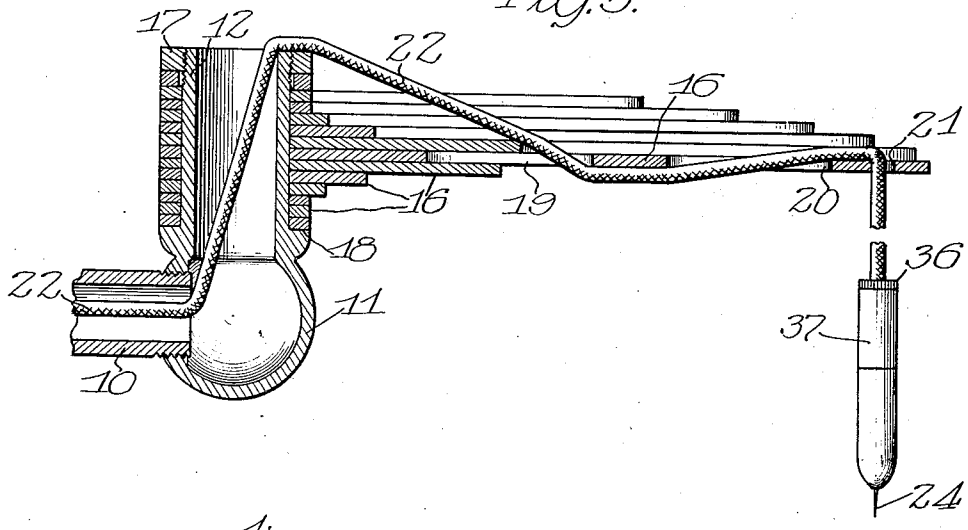


Fig. 6.

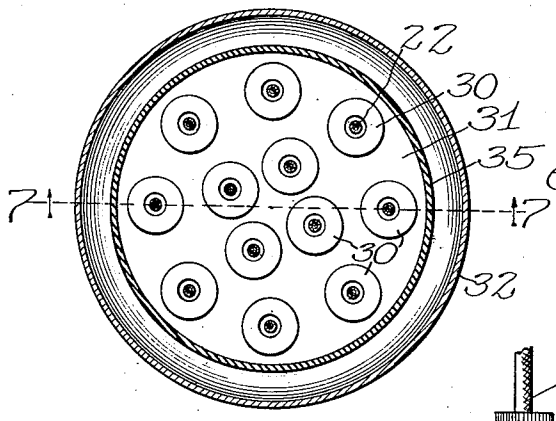


Fig. 7.

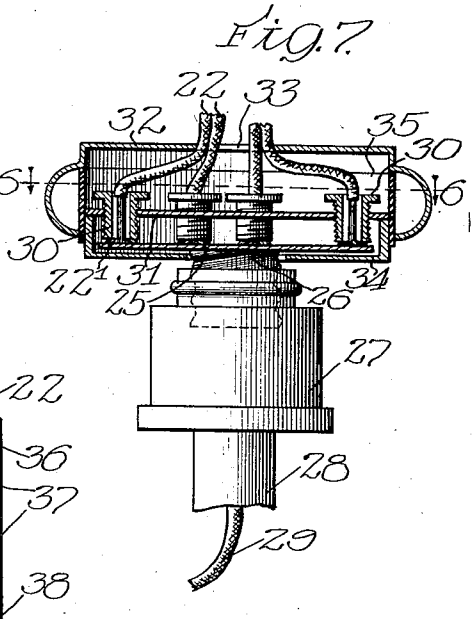


Fig. 8.

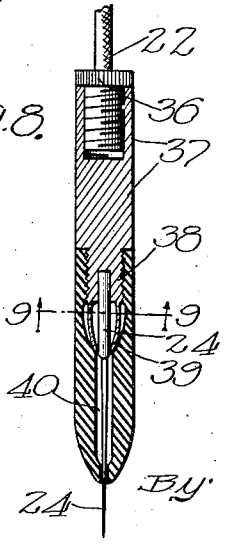
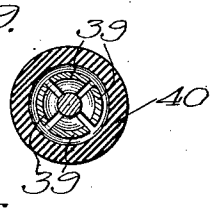


Fig. 9.



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UNITED STATES PATENT OFFICE.

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MULTIPLE-NEEDLE HOLDER FOR ELECTROLYSIS.

1,070,370. Specification of Letters Patent. Patented Aug. 12, 1913.

Application filed December 15, 1911. Serial No. 666,045.

To all whom it may concern:

Be it known that I, ELLA KELLER WILLISON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Multiple-Needle Holders for Electrolysis, of which the following is a description.

My invention belongs to that general class of devices known as surgical instruments, and relates to an adjustable support for carrying a plurality of needles, or other surgical instruments, and particularly instruments for the removal of superfluous hair by electrolysis or similar treatments.

The invention has among its objects the production of a device of the kind described that is simple, convenient, durable, efficient, attractive and satisfactory for use wherever found applicable.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference characters indicate like or corresponding parts, Figure 1 is a side elevation of my complete improved device. Fig. 2 is a top plan view of the adjustable carriers. Fig. 3 is a side elevation of the base, similar to Fig. 1, and turned a quarter around to show the construction. Fig. 4 is a view in elevation of one of the connections between the sections of the support. Fig. 5 is a sectional view taken through one of the adjustable arms 16 and its support. Fig. 6 is a sectional view taken substantially on line 6, 6 of Fig. 7. Fig. 7 is a sectional view taken substantially on line 7, 7 of Fig. 6. Fig. 8 is a partial longitudinal sectional view of one of the needle holders, and Fig. 9 is a cross sectional view of the same taken substantially on line 9, 9 of Fig. 8.

Referring to the drawings, the preferred form of my device comprises a suitable base 1 and a plurality of sections 3, 6 and 10, which are pivotally secured together and to the base. Secured to the base is an extending part or section 2 provided with a part 5, which is pivotally connected through the part 5^1 to a knob 4 on the section 3. The parts 3 and 6 and 6 and 10 are pivotally connected as illustrated in Fig. 4, or in an equivalent manner. Referring to Fig. 4, the part or arm 6 is provided with a forked end 8, 8 arranged to coöperate with the forked end 7, 7 on the part 3. The two parts are secured together by a pin 9, which, for convenience in operating, may be provided with an enlarged end 9^1. The opposite end of the pin 9 is preferably threaded, and a similar part or nut 9^2 provided at one end. The connection between the parts 6 and 10 is substantially similar. At the free end of the arm 10 is arranged a comparatively short section 12, having an end 11 for attachment to the part 10, the parts 3, 6, 10, 11 and 12 being hollow, or constructed of tubing, as shown. Upon the extended end 12 are arranged a plurality of arms or carriers 16, the same being arranged to pivot or swivel about the extension 12. As is most clearly shown in Fig. 5, the part 12 is preferably provided with a shoulder 18, upon which the arms 16 are carried, and with a flange 17 for retaining the parts 16 on the extension. The arms 16 are preferably provided with slots 19 and 20 and an opening 21, the size of the openings 19, 20 and 21 being as desired.

Each of the arms 16, of which there may be any number, carries a needle 24, the preferred holder for the same being more fully described hereafter. The needle holders are arranged at the end of cables or transmitting conductors 22, which extend from the needle through the openings 21, 20 and 19 through the sections 12, 10, 6 and 3 and out through the end 4, where they make electrical contact with a plate 25, or its equivalent. It may be mentioned that the conductors 22 may be of any desired size and suitably insulated in any preferred manner. The plate 25 is electrically connected with a main conductor 29, which is connected with a battery or other source of electrical energy. As shown, the conductor 29 extends in the base and up through a hollow section 28, which carries a socket 27. The socket 27 is similar to those commonly used, for example, incandescent lamps, and a description of the same is believed unnecessary. The plate 25 is connected electrically with a part 26, which is arranged to screw or extend in the socket 27 and make electrical contact with the conductor 29. The conductors 22 are electrically maintained in contact or connected with the plate 25 at their ends, 22^1 by members 30, which screw into a plate 31. As shown, the contact plate 25 and plate 31 are arranged within a support

or casing 34, 35, which is covered with a cover 32, having an opening 33 through which the conductors 22 are extended.

The needle holder comprises a part 37, preferably of metal, having an extended part 38 formed with prongs 39, which are resilient and engage the needle and hold it in place. The conductors 22 extend through a cap 36, which is secured to the part 37 to electrically connect the conductors with the part 37, through which the electricity is conducted to the needle 24. The part 38 is preferably threaded and a cap 40 arranged over the needle 24 and screwed upon the end 38. With this construction the cap 40 is adjustable relative the needle, and by rotating the same about the extended part 38, the length of the needle outside of the part 48 may be as desired.

In use, assuming that the base 1 is suitably secured to a table or the like, and the main conductor 29 conducted to a suitable source of energy, the energy is conducted from the conductors 29 by the plate 25 and conductors 22 to the needles 24. The patient, when an electrolysis treatment is to be given, is suitably connected to the other side of the battery, as for example, by holding a wet sponge connected to the battery, etc., so that when the needles are inserted a circuit is formed through the patient. By employing a plurality of needles and an adjustable support for each needle, the operator can use a plurality of needles at one time, thereby shortening the time required for the treatment. If it is not desired to use all the needles, the arms 16 holding the needles in use may be swung out of the way. The pivoted connections of the arms 3, 6 and 10 permit the arms 16 to be held in any desired position. The device is particularly attractive, inasmuch as the conducting wires 22 are entirely covered with the exception of the joints between the sections at the base, and at the arms 16. They are therefore protected from wear and dust, and the device is attractive rather than unsightly.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention, hence I do not wish to be understood as limiting myself to the exact form, construction, arrangement or combination of parts herein shown and described, or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:—

1. In a device of the character described, a supporting base, a tubular supporting arm extending upwardly from said base and provided at its free end with a tubular pivot portion in communication with the interior thereof, a plurality of superposed needle carrying arms pivotally supported upon the tubular pivot portion of said supporting arm, a transmitting conductor suspended from the free end of each of said needle carrying arms, said transmitting conductors extending through the tubular pivot portion and the tubular supporting arm to the base, a main conductor carried by the base, and means for electrically connecting said main conductor and said transmitting conductors.

2. In a device of the character described, a base, a plurality of pivotally connected tubular arms, one of which is secured to said base, the outermost arm being provided with a laterally projecting tubular pivot stud in communication with the interior thereof, a plurality of superposed needle carrying arms pivotally supported upon said tubular pivot stud, a transmitting conductor suspended from the free end of each of said needle carrying arms, said transmitting conductors extending through the tubular pivot stud and the pivotally connected tubular arms to the base, a main conductor carried by the base, and means for electrically connecting said main conductor and said transmitting conductors.

3. In a device of the character described, a pivotally supported tubular arm, a plurality of superposed needle carrying arms pivotally supported at the end of said tubular arm, and a plurality of transmitting conductors extending through said tubular arm, said arms having an opening at the free end thereof and an engaging part intermediate its ends, and each of said conductors being adapted to movably engage said engaging parts and project through said openings whereby they are freely suspended.

4. In a device of the character described, a supporting base, a supporting arm pivotally connected at its lower end to said supporting base, the free end of said supporting arm being provided with a tubular pivot portion in communication with the interior thereof, a plurality of superposed needle carrying arms pivotally supported by the tubular portion of said supporting arm, an inclosed casing carried by the base adjacent the lower end of the supporting arm, a contact member within said casing electrically connected to a main conductor, a plurality of transmitting conductors, one of said transmitting conductors being suspended from each of the needle carrying arms, said transmitting conductors extending through the tubular pivot portion and the tubular supporting arm to the supporting base, and into the casing secured thereto, and means for connecting the transmitting conductors to the contact member within said casing.

5. In a device of the character described, a base, a tubular supporting member extending upwardly from the base, a plurality of horizontally disposed needle carrying

arms pivotally connected to the outer end of said supporting member so as to swing horizontally, a casing carried by the base, a contact member within said casing electrically connected to a main conductor, a plurality of transmitting conductors, one of said transmitting conductors being suspended from each of the needle carrying arms, said transmitting conductors extending through the tubular supporting member to the base of the device and into the casing secured thereto, and means for connecting the transmitting conductors to the contact member within said casing.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

ELLA KELLER WILLISON.

Witnesses:
ROY W. HILL,
CHARLES I. COBB.