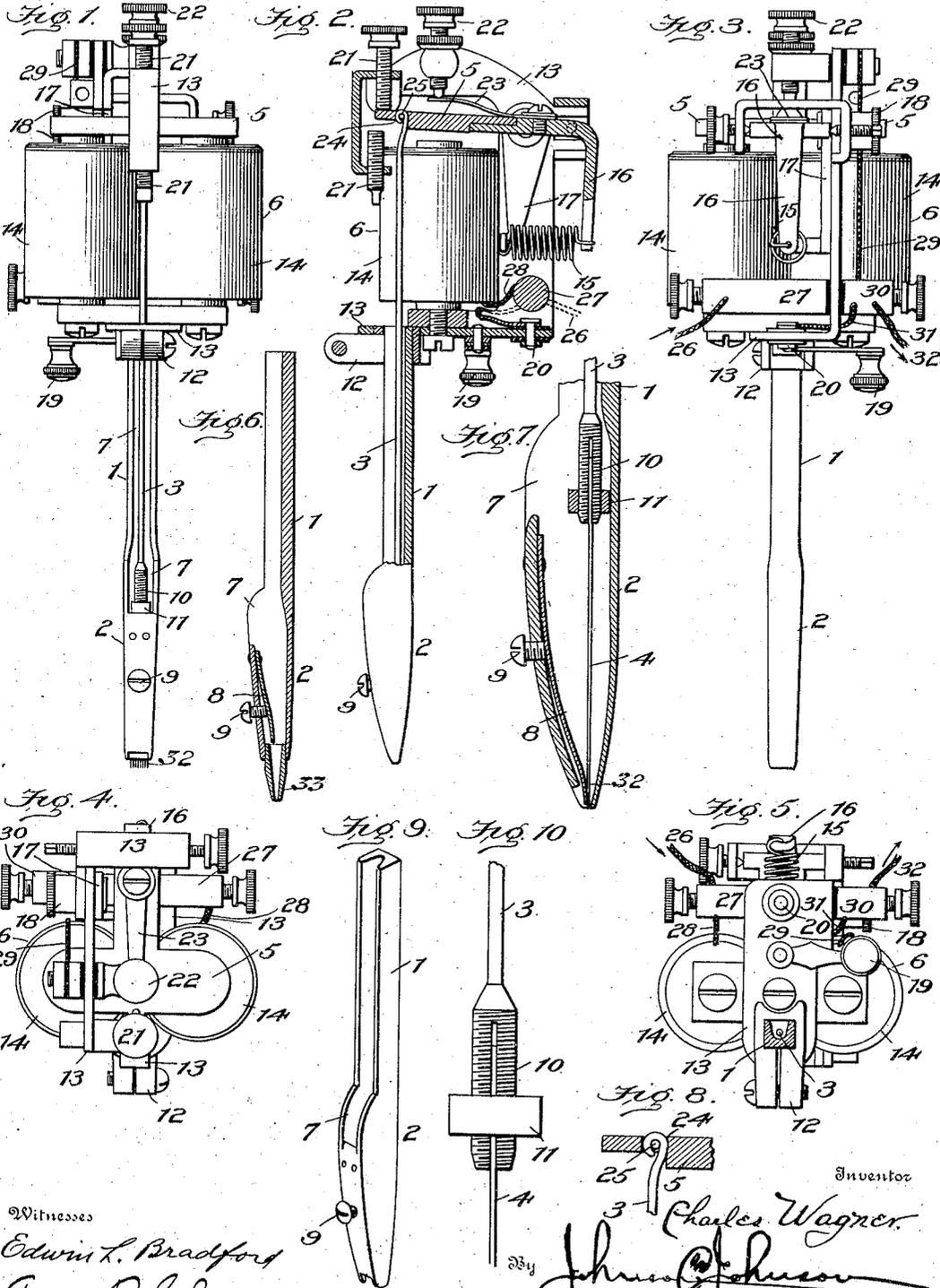


No. 768,413.

PATENTED AUG. 23, 1904.

C. WAGNER.
TATTOOING DEVICE.
APPLICATION FILED APR. 19, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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TATTOOING DEVICE.

SPECIFICATION forming part of Letters Patent No. 768,413, dated August 23, 1904.

Application filed April 19, 1904. Serial No. 203,927. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WAGNER, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Tattooing Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

For tattooing I have produced an electrically-operated device which embodies certain features of novel and advantageous construction which will be pointed out in the concluding claims in connection with the accompanying drawings, in which—

Figure 1 represents a front view of the tattooing device particularly showing the ink-supplying orifice in the needle-bar and the needle-carrying rod and its connected armature in the positions they occupy when the needles are perforating and the armature connecting the magnet-cores. Fig. 2 is a vertical section of the same, the armature and its connected needle-carrying rod in the positions they occupy when the needle is not perforating. Fig. 3 is a rear side view of the same. Fig. 4 is a top view. Fig. 5 is a bottom view. Fig. 6 shows a vertical section of a needle-bar adapted for a single outlining-needle. Fig. 7 is an enlarged section showing the ink-chamber, the needle, and the plate-spring for steadying the needle and regulating the flow of the ink. Fig. 8 shows the detachable connection of the needle-bar with the armature. Fig. 9 shows the needle-bar. Fig. 10 shows the needle-carrying rod.

The device comprises three separable parts—a needle-bar, a needle-carrier, and a housing-frame for the electromotor which operates the needles—and this gives an advantageous construction for the interchangeability of the needle-bar and its needle-carrier in using the device with a single perforating-needle for outlining or with a plurality of perforating-needles for the shading operation, which gives character to the tattooing.

The needle-bar 1 forms the handle for manipulating the device and terminates in an integral tubular part 2, forming a chamber for

the ink and a guide for the needle. The suspending end of the needle-bar is of angular cross-section and is clamped in a socket-casting secured to the under side of the electromotor housing-frame. A rod 3 lies in a groove in the needle-bar and carries the needle or needles 4 within its tubular part, while the upper end of said rod is detachably connected to the armature 5 of the electromotor 6, whereby this needle or needles is operated in its perforating function at the open end of the ink-chamber. The tubular part which forms the ink-chamber opens into a side groove at 7 in the bar, and this gives a convenient external means of supplying the ink. While the ink-chamber forms the guide for the needle, it is important that the movement of the needle be steady, and for this purpose I provide the ink-chamber with a plate-spring 8, its inner end fixed by riveting, its free end terminating at the open end of the ink-chamber and caused to be pressed against the needle by a set-screw 9 in the wall of the ink-chamber, thus preventing the wobbling or tremble of the needle-carrying rod from being communicated to the needle. The flat point of the spring by its contact with the needle also serves to govern and regulate the flow of the ink in the operation of the needle and in giving steady movement thereto prevents the splattering of the ink in its delivery at the perforation made in the skin. A clamp 10 is formed on the end of the needle-rod, into which the needle 32 is set to give it the desired perforating projection. This clamp is formed by screw-threading the end of the rod, splitting it, and providing it a nut 11, so that the needle is clamped in a socket, and the needle-bar also being clamped in a socket allows ready separation of the needle-bar from the needle-rod to set the needle. The needle-bar clamp 12 is a pair of jaws fixed to the under side of a frame 13, on which a pair of electromagnets 14 14 are mounted and form the electromotor, the armature for which is pivotally mounted in the upper part of said frame. The armature is connected to and actuates the needle-rod, and for regulating the stroke of the latter the housing is provided with set-screws 21 21, between the contact-points of

which the armature moves, and by adjusting the screws is caused to have a greater or less stroke. The armature is normally held out of contact with the magnet-core by a spiral spring 15, connecting an arm 16 of the magnet with an arm 17, pivotally mounted in the frame and made adjustable by a clamp-screw 18 to give the spring greater or less tension, regulating thereby the movement of the needle to give a light or a heavy puncture, and this tension of the spring determines the force of the blow, so that lessening the tension will produce a more forcible blow, and vice versa. The movement of the armature causes the device to have a slight vibrating movement to give the pricking or perforating movement. The current-wires are connected to the electromagnets and to the battery in the usual manner to operate the armature, and for controlling the electrical current I have arranged the switch-lever 19 on the under side of the frame for making connection at the will of the operator with the insulated contacts 20, which connects by suitably-disposed wires with the magnets and with the insulated adjustable screw 22 and the leaf-spring 23 of the armature. In Fig. 1 the needle-bar is seen as adapted for use with a plurality of needles for shading, and Fig. 6 shows the needle-bar as adapted for use with a single needle for outline perforations and in which an ink-chamber terminates in a conical guide-point 33 for the needle. For rendering the needle-rod interchangeable its upper end is formed with an eye 24, and the arm of the armature has a slot through which the eye is passed and within which it is secured by a pin 25, so that when the single outlining-needle has been used the needle-bar and its needle-rod are removed, and the needle-rod having a plurality of needles and the needle-bar adapted for use with a plurality of needles are attached for use by the same means, thereby rendering the needle-bars interchangeable to suit a needle-rod having a single needle and a needle-rod having a plurality of needles, and it will be understood that the needle-bars are formed at their point to suit a single needle and a plurality of needles. I prefer to make the needle-bar with a groove in its front side to receive the needle-carrying rod, because it is a convenient way of providing an external orifice for filling the ink-chamber and because it lightens the weight of the device.

The operator in using the device grasps it and supports the electromotor part on the back of his hand and adjusts the switch-lever to the contact 20 to render the current active, and for this purpose the contact 20 is insulated from the frame. The turning of the switch-lever 19 to the contact 20 causes the current to pass from the battery (not shown) by the wire 26 to the insulated binding-post

27 at the left in Figs. 3 and 5. Thence by the wire 28 it circulates through the connected magnet-coils. Thence by the wire 29, Fig. 3, it passes to the insulated adjustable contact-screw 22, to the leaf-spring 23 on the armature 5, thence to the frame 13 through the fulcrum of the armature, and thence to the switch-lever. From the switch-lever the current passes to the insulated contact 20 and thence to the other binding-post 30 by the wire 31 and from thence by the wire 32 back to the battery; but these magnet connections can be made in any suitable way to effect the operation of the armature. The operation of the electrical connections are similar to those in an ordinary electric vibrating bell. The current in passing through the iron cores of the coils causes them to become magnetized and to attract the armature to make contact with the iron cores, effecting thereby the separation of the contact on the leaf-spring and the point of the screw 22. This separation demagnetizes the cores, and the coil-spring 15 acts to draw the armature away from the cores to again put the contacts in electrical connection, and in this way the armature is given the required rapidity of vibratory movement. Obviously where necessary to effect this operation the parts may be insulated from the frame in a well-known way.

I claim—

1. In a tattooing device, the needle-bar terminating in an integral ink-chamber having an external ink-supply orifice, a needle, and a needle-carrying rod and means for operating the needle-rod.

2. In a tattooing device, the needle-bar, terminating in an integral ink-chamber having an external ink-supply orifice, a needle, a needle-carrying rod, a plate-spring within the ink-chamber, means for causing the spring to exert pressure on the needle and means for operating the needle-rod.

3. In an electric tattooing device, a frame, a pair of jaws fixed to the base thereof and having an angular opening between them, a clamp-screw for the jaws, a needle-bar having a groove and clamped within said jaw-opening, a needle-carrying rod terminating in an eye, a pivotally-mounted vibrating armature, a pin connecting the eyed end, of the needle-rod with the armature, and an adjustable spring connecting the other end of the armature and the frame for the purpose stated.

4. In a tattooing device, a frame, a needle-bar secured thereto and terminating in an ink-chamber having an external supply-orifice, a needle, a needle-carrying rod, an electromotor, an armature connected with the needle-rod and set-screws for controlling the movement of the armature to regulate the perforating stroke of the needle.

5. In a tattooing device, a needle-bar, a needle, a needle-carrying rod and adjustable

means carried by the needle-bar for affording a lateral bearing-support for the needle and means for operating the needle-rod.

6. In a tattooing device, a frame, a needle, 5 a needle-bar secured to the frame, a needle-carrying rod, an electromotor, an armature connected with the needle-rod, means connected with the armature for regulating the perforating force of the needle consisting of 10 a spring connected to normally maintain the

armature away from the cores of the motor, and an arm adjustably pivoted to the frame for adjusting the tension of the spring.

In testimony whereof I have signed my name to this specification in the presence of two sub- 15 scribing witnesses.

CHARLES WAGNER.

Witnesses:

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