No. 868,621. PATENTED OCT. 15, 1907.

J. P. ZELENKA.

TELEGRAPHIC INSTRUMENT.

APPLICATION FILED FEB. 4, 1907.

Fig. 1.

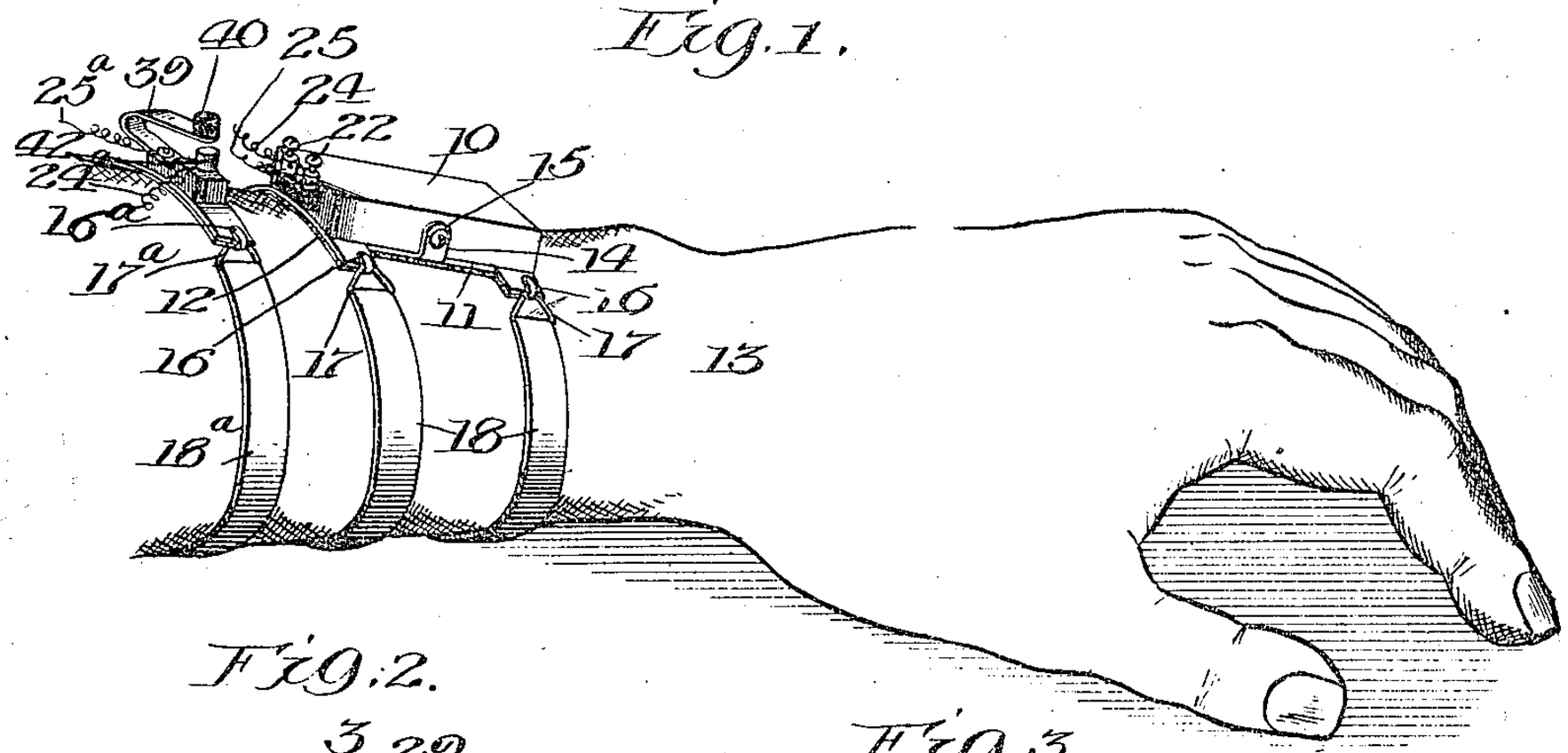


Fig. 2.

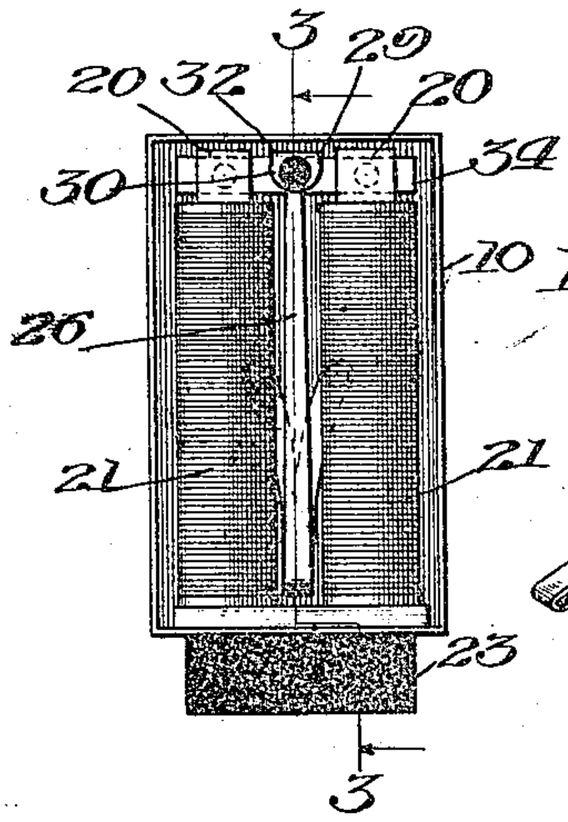


Fig. 3.

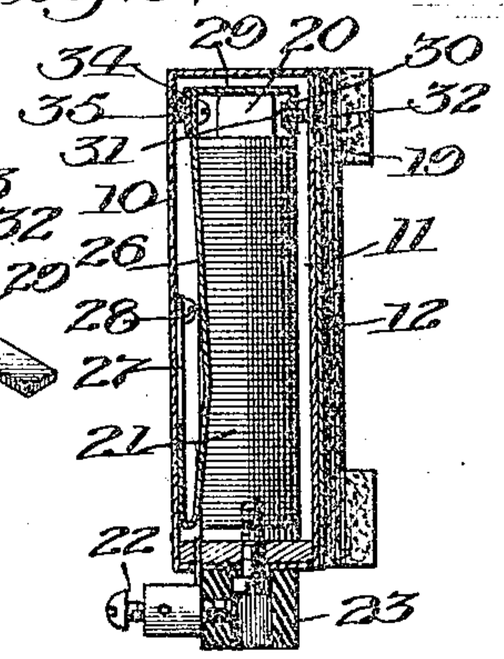


Fig. 4.

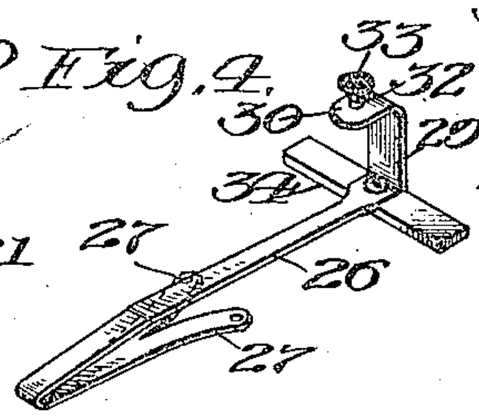
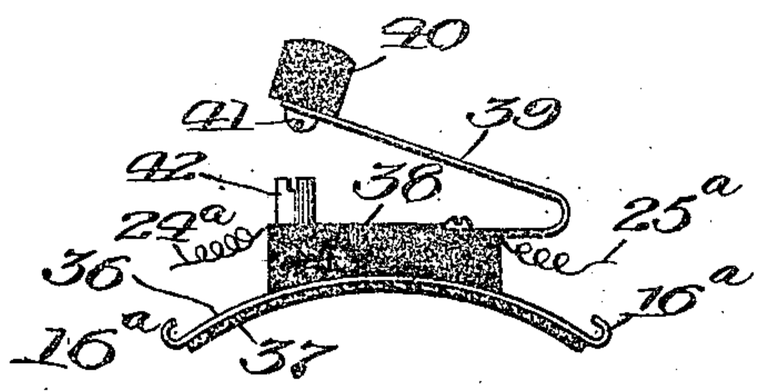


Fig. 5.



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UNITED STATES PATENT OFFICE.

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TELEGRAPHIC INSTRUMENT.

No. 868,621. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed February 4, 1907. Serial No. 356,556.

To all whom it may concern:

Be it known that I, JEROME P. ZELENKA, 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 Telegraphic Instruments, of which the following is a specification.

This invention relates to telegraphic instruments of a type by means of which messages may be taken or received silently and directly by the sense of touch, and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a telegraphic instrument, which shall be simple and inexpensive in construction, strong, durable and efficient in operation, and so made as to provide means to enable telegraph operators (even if deaf) to receive messages or despatches through the medium of direct touch with the human body, and when desired, without the use of sounders, indicators or impressions on paper, and thus secure greater secrecy, rapidity and accuracy in the work of receiving the same, as well as, enabling operators who may be deaf and blind to receive messages or act as operators.

Another object of the invention is to so construct the instrument that it may be readily secured to one of the wrists or hands of the operator to the end that he will be enabled to secure direct, distinct and perfect transmission of the electric impulses, and further, so that he may use the other hand to write out or send messages.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it, referring to the accompanying drawing, in which—

Figure 1 is a perspective view of a hand and wrist, showing a telegraphic instrument for receiving messages and embodying my invention secured to the wrist, and also illustrating a transmission key or device secured on the wrist. Fig. 2 is a bottom plan view of the instrument with the lower plate of the casing or holder removed, and illustrating the electro-magnets and spring actuated armature in place within the casing. Fig. 3 is a longitudinal sectional view taken on line 3—3 of Fig. 2 looking in the direction indicated by the arrows, but showing the bottom plate of the casing in position thereon. Fig. 4 is a detached perspective view of the spring which carries the armature and adjustable screw for contact with a portion of the human body; and Fig. 5 is a view in side elevation of a transmission key, which may be used in connection with the instrument.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawing.

The reference numeral 10 designates the holder or casing for the various parts of the instrument, which holder or casing may be made of any suitable size, form and material, but preferably of metal and rectangular or box-like in shape. As shown in the drawing, the bottom of the casing or holder 10 is closed by means of a curved plate 11, which is provided on its lower surface with a sheet of felt 12 or other suitable material to rest on the wrist or hand 13 of the operator or user. The curved plate 11 is provided at each of its side edges with an upturned portion 14, through an opening in each of which a screw 15 is passed which engage the sides of the casing or holder 10 and secures the plate 11 in position thereon, as will be readily understood by reference to Fig. 1 of the drawing. At each of its corners, the plate 11 is provided with an upturned hook 16 which are adapted to engage loops 17 on the ends of bands or straps 18, which are preferably made of elastic material and extend around the wrist so as to hold the casing or holder 10 in position thereon. Near one of its ends, the bottom plate 11, as well as the felt or material 12 thereon, is provided with an opening 19, for the purpose to be presently explained. Located longitudinally in the holder or casing 10, and secured thereto at one of its ends, is an electro-magnet 20, of the ordinary or any preferred construction, the coils 21 of which are electrically connected to binding posts or screws 22 which are located in a block of insulation 23, such as fiber or other suitable material, which block is secured to one end of the holder or casing 10, as is clearly shown in Figs. 1, 2 and 3 of the drawing. Leading from the binding posts 22 to connections for receiving and transmitting messages by electric or electro-magnetic currents (not shown) are conductors 24 and 25, of the ordinary kind.

As shown in Fig. 2, the coils 21 comprising the magnet 20 are spaced apart in parallelism, and have located between them the body of a spring 26, which is preferably of the construction shown in Fig. 4, that is to say, it has one of its ends bifurcated, the prongs 27 of which are secured by means of screws 28 or rivets to the inner upper portion of the casing 10. The bifurcated portion of the spring 26 lies against the inner surface of the casing 10, and the body portion is bent to approximate the portions 27 and extends to near the end of the casing 10 opposite that on which the binding posts or screws 22 are located, and is provided at its free portion with an arm or bracket 29 which has its free or lower end, when the instrument is in position for use, inwardly bent as at 30 (see Figs. 3 and 4 of the drawing). The inwardly bent portion 30 is provided with an apertured boss 31 to receive a contact screw 32, which preferably has its head

covered with felt 33, to contact with the flesh of the operator or user. At its free portion and at the juncture of the arm 29 with the spring 26 is transversely secured, on the spring, an armature 34, which has on its surface adjacent to the top of the casing 10 cushions 35, of any suitable material, to prevent noise or clicking should the armature strike said portion of the casing. The spring 26 is so formed or adjusted as to hold the armature 34 in such position that it will be normally out of contact with the magnet, but capable of being attached thereby for the production or development of signals or impulses upon the passage of a proper current and in order to prevent the armature giving forth any sound, the spring 26 may be so formed that the armature will be normally held almost in contact with the magnet, or at such a slight distance therefrom that the noise or click produced by its contact with the magnet will be virtually inaudible.

As shown in Figs. 2 and 3, the contact screw 32 is located on the arm 29 of the spring 26, which arm extends from about the middle of the armature 34, so that the screw 32 may pass through the opening 19 in the bottom plate 11 of the casing or holder. By employing the screw 32, which as before stated, engages an opening in the portion 30 of the arm 29, it is apparent that it can be adjusted with respect to the hand or wrist of the operator, so that it will give, in the movements of the armature, a slight or greater pressure or impact thereon, as may be desired.

In Fig. 1, I have shown a transmission key secured on the arm or wrist of the operator by means of an elastic strap 18^a, which has at each of its ends loops 17^a to engage hooks 16^a on each end of a curved plate 36, which may be lined on its lower surface with felt 37, or other suitable material.

As shown in Figs. 1 and 5 of the drawing, the plate 36 has mounted on its upper surface a block 38, of insulating material, such as fiber or the like, and on one end of this block is secured a spring 39, which has at its free end a button 40 and a contact screw 41, the latter adapted, when pressure is applied to the button 40, to contact with a binding post 42 on the other end of the block 38, thus closing and breaking the circuit through the conductors 24^a and 25^a, which may be in circuit with the conductors 24 and 25 of the receiving instrument, or electrically connected with connections for receiving and transmitting messages.

By the use of the transmitting key just above described, it is apparent that the operator receiving a message through an instrument constructed according to my invention, may ask the sender to repeat or may transmit other messages.

From the above description and explanation, it is obvious that the device is susceptible of some modification without material departure from the principles and spirit of the invention, and for this reason I do not desire to be understood as limiting myself to the precise form and arrangement of the several parts herein set forth in carrying out my invention in practice.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters-Patent, is—

1. In a telegraphic instrument, the combination with a holder or casing, of an electro-magnet carried thereby, a spring secured at one of its ends to the casing or holder and having at its other end an adjustable screw adapted to project through an opening in the holder or casing and to contact with the human body, an armature transversely secured on the spring near its free end, substantially as described.

2. In a telegraphic instrument, the combination with a casing, of means to secure it to a portion of the body of the operator, an electro-magnet located in the casing, a spring secured at one of its ends to the casing and having at its other end an adjustable screw adapted to project through an opening in the casing so as to contact with the body of the operator, and an armature transversely mounted on the spring near its free end, substantially as described.

3. In a telegraphic instrument, the combination with a box-like casing, of a removable plate located on its lower portion and having an opening therein, said plate having a hook at each of its corners, straps having loops at their ends to engage said hooks, an electro-magnet located in the casing, a spring secured at one of its ends to the casing and having at its other end an adjustable screw adapted to operate in the opening of the bottom plate, and an armature transversely secured on the spring near its free end, substantially as described.

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