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CONTACT GLOVE

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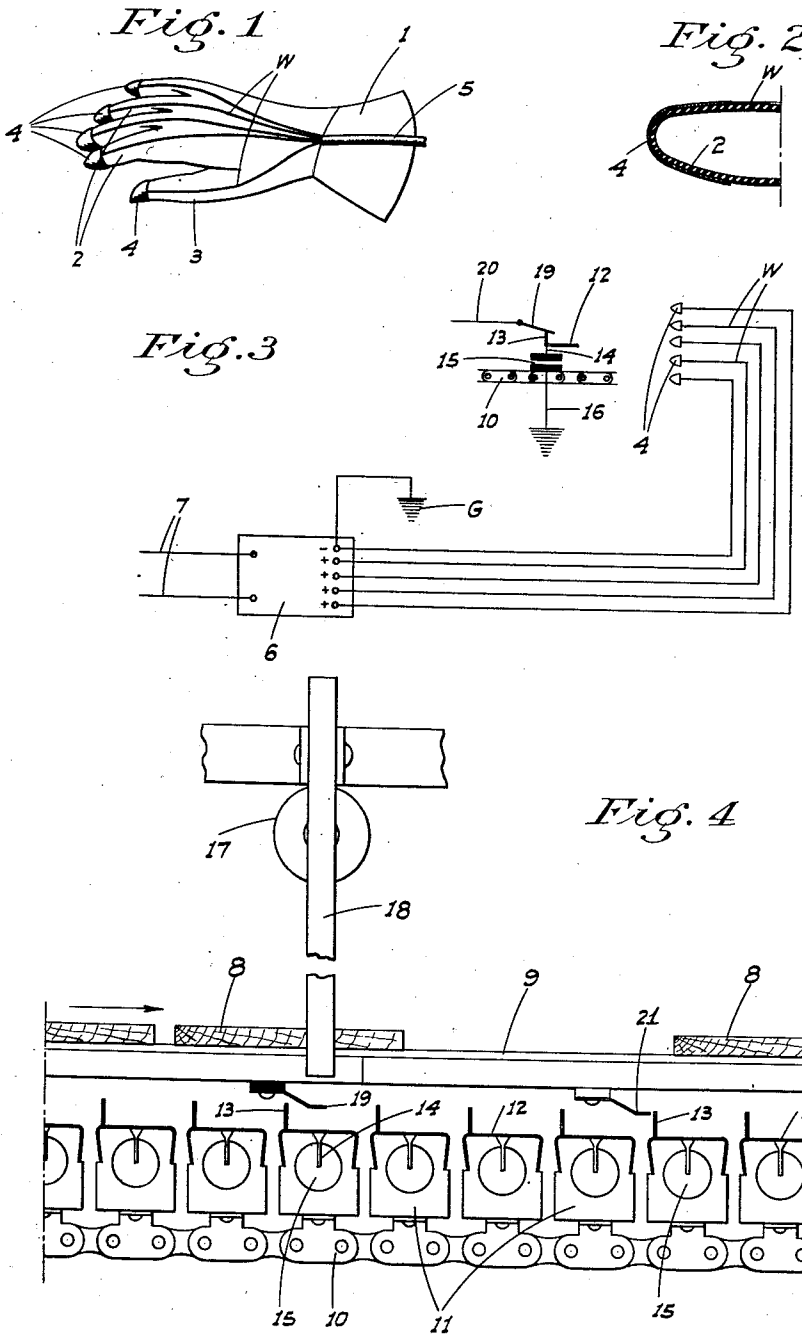


Fig. 4

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CONTACT GLOVE

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235,476. Divided and this application Septem-
ber 3, 1940, Serial No. 355,203

8 Claims. (Cl. 175—265)

This invention relates in general to an electric appliance, and in particular the invention is directed to, and it is my principal object to provide a unique contact glove adapted to be worn and employed by an operator of an article sorting apparatus, or the like, which includes exposed potential receiving and holding elements such as shown in my copending application for United States Letters Patent on Article sorting apparatus, Serial No. 235,476, filed October 17, 1938; the present application being a division of such above identified pending application.

Another object of the invention is to provide a contact glove, as above, wherein a plurality of the fingers of the glove are each provided with a separate contact element or thimble; each such thimble being charged with a different potential.

An additional object of the invention is to provide the glove with contact elements or thimbles on a plurality of the fingers thereof; certain ones of said contact elements being charged with a potential of like polarity, while one of said contact elements is charged with an opposite and preferably negative polarity.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Figure 1 is a perspective view of the contact glove.

Figure 2 is an enlarged fragmentary, longitudinal section of the end of one finger of the glove with the contact element affixed thereto.

Figure 3 is a diagram of the electric circuit employed in connection with the contact glove.

Figure 4 is a fragmentary elevation of one form of apparatus with which the contact glove is adapted to be used, as shown in said copending application.

Referring now more particularly to the characters of reference on the drawing, my novel contact glove comprises a glove 1 of flexible dielectric material such as rubber; the fingers of said glove being indicated by the numeral 2 except the thumb which is indicated by the numeral 3.

The tips of the fingers 2, and including the thumb 3, of the glove are each fitted with an

exposed metallic contact element or thimble 4; said thimbles being of any desired external configuration and suitably secured on the dielectric fingers of the glove.

A five wire electric cord 5 leads from a conventional power supply unit 6 which receives current from supply wires 7.

The thimbles 4 of four fingers of the glove are each charged through one of the insulated wires W of cord 5 from the power supply unit 6 and each with a different potential but all of like polarity, preferably positive. For example, the four thimbles will be charged—in consecutive order—with positive potentials of 10, 20, 30 and 40 volts respectively. The remaining thimble, preferably the one on thumb 3, carries a negative or ground potential; the wire for said remaining thimble being grounded at G.

The above described contact glove is designed for use in connection with article sorting apparatus, or other mechanisms, which include potential holding elements as a means of article identification; apparatus of such type being shown in the above identified copending application.

For the purpose of clarity and reference I have here shown (see Fig. 4) a partial view of the apparatus disclosed in the aforesaid copending application.

Articles 8 such as pencil slats, to be identified and segregated for grade, etc., are supported in spaced parallel relation on a moving horizontal conveyor 9. An endless chain 10 is disposed with its upper reach parallel to but laterally and downwardly offset relative to conveyor 9; every other link of chain 10 being an attachment link, and an outwardly extending dielectric block 11 being fixed thereon. Each block carries an outer metallic contact face 12 including an outwardly projecting contact ear 13, and a lead wire 14 which connects with one terminal of a fixed condenser 15 set in a bore in the corresponding block 11. The other terminal of each condenser is connected to the adjacent link of chain 10 by a ground lead 16. The conveyor 9 and chain 10 are driven at the same speed, and the above condenser units are of such size and number that at least one thereof aligns with each article 8 on conveyor 9.

A plurality of electrically actuated, article "kick off" mechanisms corresponding in number to the positively charged thimbles are mounted adjacent conveyor 9 in longitudinally spaced relation; one of said mechanisms being shown at 17. These mechanisms are disposed so that when

one is actuated, the kicker lever 13 thereof discharges the aligned article 8 (which is shown as a pencil slot) laterally off conveyor 9 into an adjacent receiving bin, not shown.

A wiping contact 19 is mounted in insulated relation immediately below each "kick off" mechanism, and is adapted to engage each contact ear 13 as it passes; there being a lead 20 from each wiping contact 19 to a separate and suitable electrical apparatus, each of which includes an electronic relay and is operative to effect actuation of the corresponding mechanism 18. The several ones of said electrical apparatus are set to function only with one of the several potentials with which the thimbles 4 of the aforesaid four fingers of the glove are charged.

The operator wears the contact glove on one hand and sits adjacent the conveyor 9 ahead of the "kick off" mechanisms; the articles 8 on said conveyor being visually inspected. As the articles pass and are so inspected, the operator permits one grade to pass. However when an article of a different grade appears the operator touches the contact face 12 of the corresponding condenser 15 with the charged thimble whose potential charge corresponds—by predetermination—with said different grade. This imparts a predetermined potential charge to said condenser which continues to travel and when the contact ear 13 of said condenser engages the wiping contact 19 corresponding to the electric apparatus and "kick off" mechanism 17 set to operate at such potential charge, said mechanism functions and discharges said article into the receiving bin for such grade.

It is thus apparent that the operator can segregate several grades from the passing articles, depending on the number of "kick off" mechanisms and corresponding charged thimbles of the glove. Should the operator charge a condenser by error, the thimble 4 of thumb 3, and which thimble is of negative or ground polarity, is touched to the adjacent plate 12 and the erroneous charge grounded out.

A grounding wiping contact 21 mounted beyond the mechanisms 17 "clears" all condensers as they pass.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

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

1. A device for charging potential holding elements with a selected one of different charges, said device comprising a plurality of contact ele-

ments adapted to be supported on the fingers of an operator's hand, a separate wire leading to each contact element, and a power supply unit connected to said wires and supplying current of different potentials but like polarity to all but one of said contact elements; the power supply unit supplying current of opposite polarity to said one contact element.

2. A device as in claim 1 in which said means comprises a dielectric glove, the contact elements being fixed to the fingers thereof.

3. A device as in claim 1 in which said means comprises a dielectric glove, the contact elements being fixed to the fingers thereof; said one contact element being fixed to the thumb of the glove.

4. A device for charging potential holding elements with a selected one of different charges, said device comprising a glove of dielectric material, metallic thimbles fixed on the ends of the fingers of the glove, an insulated wire leading to each thimble, and a power supply unit having a plurality of output terminals, said terminals supplying current of different potentials and being connected to corresponding ones of said wires.

5. A device for charging potential holding elements, said device comprising a glove of dielectric material, metallic thimbles fixed on the ends of the fingers of the glove, and insulated wire leading to each thimble, and a power supply unit connected to said wires and supplying current of different potentials but like polarity to all but one of said thimbles, and supplying a potential of opposite polarity to said one thimble.

6. A device for charging potential holding elements, said device including a power supply unit having a plurality of outputs of different potentials, and means including flexible wires supported in part by the hand of an operator, to transmit said potentials to, and establish a contact point at, the ends of different fingers of the operator.

7. A device for charging potential holding elements with a selected one of different charges, said device comprising a plurality of contact elements adapted to be supported on the fingers of an operator's hand, a power supply unit having a plurality of output terminals, said terminals supplying current of different potentials, and separate wires leading from said terminals to corresponding ones of said contact elements.

8. A device for charging potential holding elements with a selected one of different charges, said device comprising a plurality of contact elements adapted to be supported on the fingers of an operator's hand, a power supply unit having a plurality of output terminals, said terminals supplying current of different potentials but like polarity, and separate wires leading from said terminals to corresponding ones of said contact elements.

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