Nov. 29, 1927. 1,651,275

H. HIRSCH

ELECTRIC SIGN CONTROLLER

Filed Sept. 24, 1923 2 Sheets-Sheet 1

Fig.1.

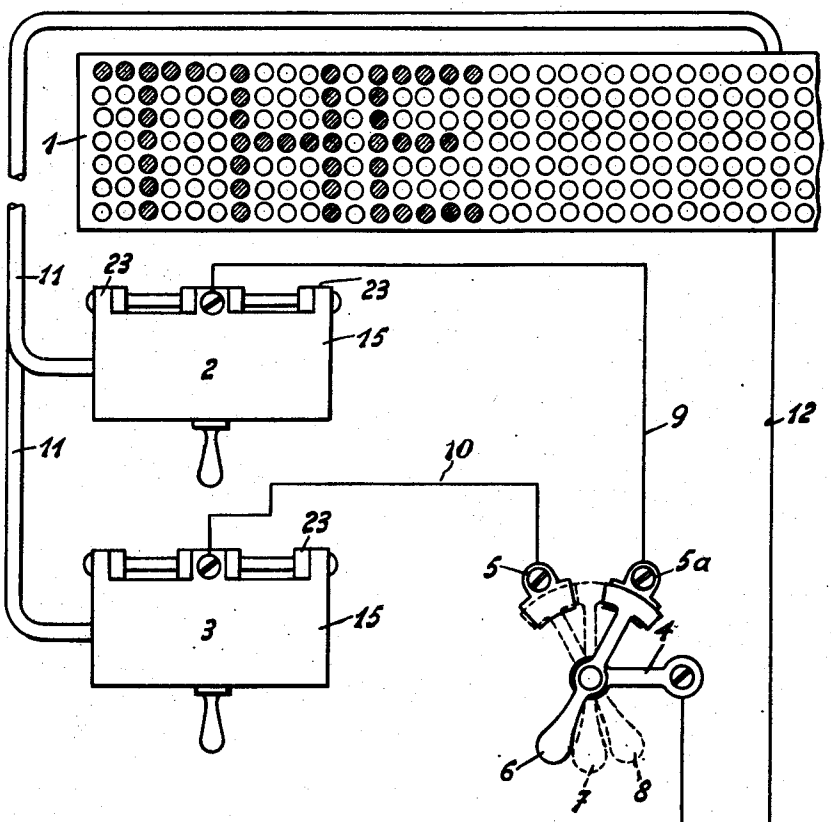
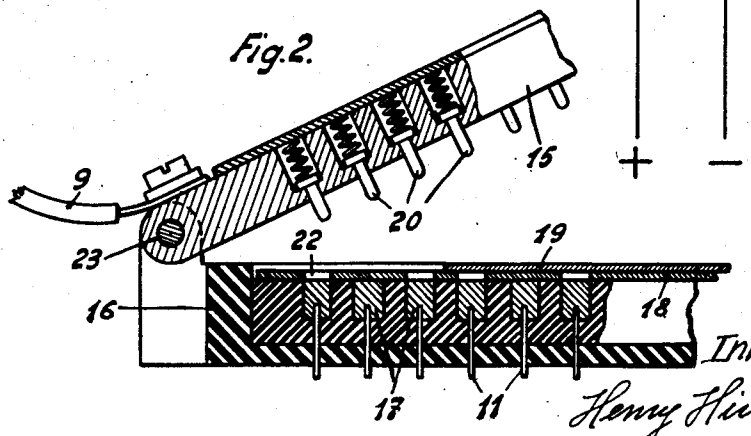


Fig.2.



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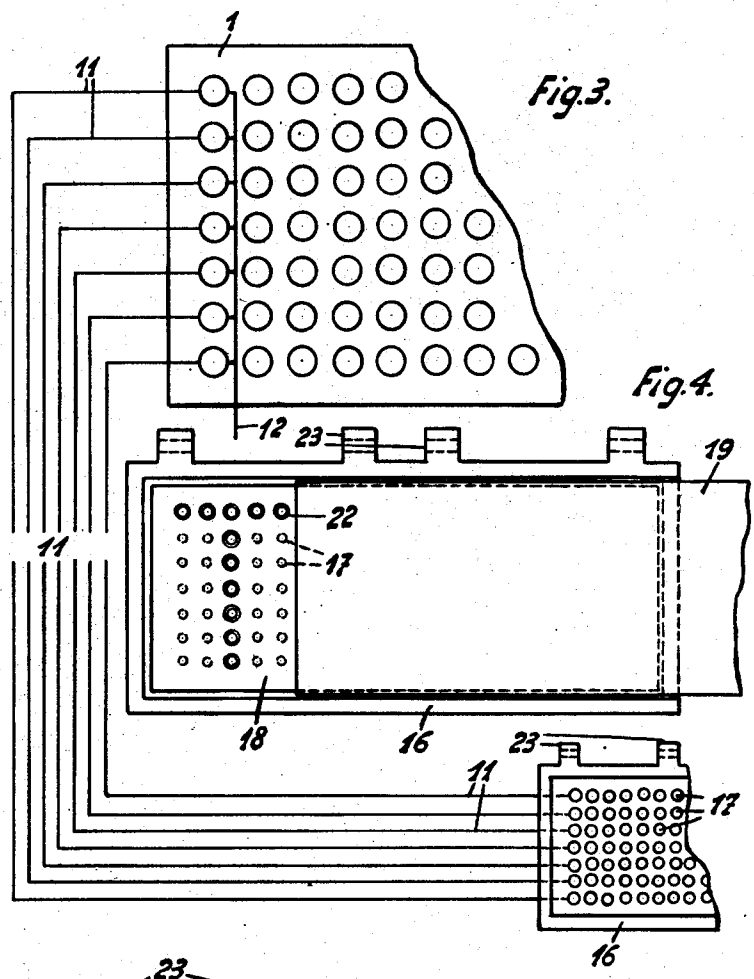


Fig.3.

Fig.4.

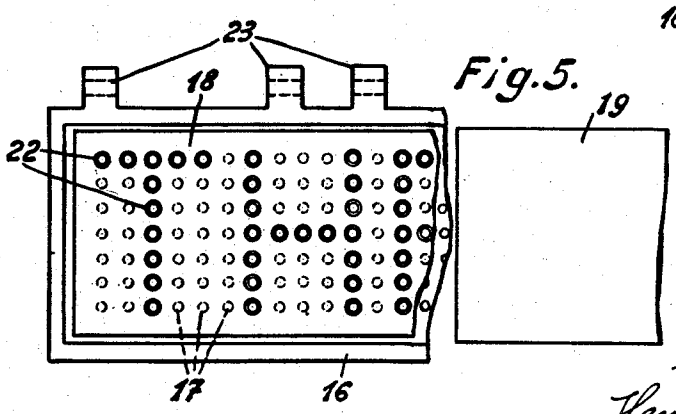


Fig.5.

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UNITED STATES PATENT OFFICE.

HENRY HIRSCH, OF ZURICH, SWITZERLAND.

ELECTRIC-SIGN CONTROLLER.

Application filed September 24, 1923, Serial No. 664,615, and in Germany September 27, 1922.

This invention relates to an improved method of using of and apparatus for advertising at night by electric incandescent lamps. With my new system it is possible to produce all kind of letters, series or sequence of words, sentences, designs or the like by the simplest expediences, giving at the same time the impression as if the words or the like were written on the display board by an invisible hand, while the next advertisement develops itself out of the first one, which vanishes without any interval of darkness.

In order that my invention may be clearly understood, I have illustrated the same in the accompanying drawings, wherein

Fig. 1 is a diagrammatic view of a part of the advertising or display board with the contact devices and the three-way switch.

Fig. 2 shows an enlarged fragmentary view of a part of a contact device in sectional elevation.

Fig. 3 illustrates diagrammatically the connections between the incandescent electric lamps of the advertising board and the lower part of a contact device.

Figs. 4 and 5 show parts of a contact device bearing the perforated sheet, with the non-perforated cover moved in another position.

In the drawings:—Fig. 1 indicates an advertising or display board, provided with a large number of incandescent electric lamps placed in parallel rows, the lamps being at equal distances from each other, in horizontal and vertical direction. By switching on definite groups of lamps any letter, word, sentence, design or the like may be produced on the display board because every incandescent lamp is connected with the contact devices by its own wire.

The proper contact system includes two contact devices 2 and 3 and a three way switch 4, all of them connected to the same pole.

To switch-on the lamps two of the described contact devices 2 and 3 are provided, each lamp on the display board 1 being connected parallel with either contact device 2 or 3.

The contact devices 2 and 3 are identical, they are connected by wires 9 and 10 to the three way switch 4 connected to one of the mains. The electric incandescent lamps on the advertising board are connected with the other main by the feed wire 12.

The metal plate 15 of the contact device 2 is connected by wire 9 to the contact 5^a of the three way switch 4, and the metal plate 15 of the contact device 3 is connected by wire 10 to the contact 5 of said three way switch 4. By shifting a lever 6 either of the plates 15 of the contact devices 2 and 3 may be connected with the supply of electric energy.

Each of the contact devices (Fig. 2) comprises a metal plate 15, having as many pins 20 slidably mounted in the same and provided with curled springs, as the advertising board 1 has incandescent electric lamps. This metal plate 15 is connected to the conductor 9, and is pivoted at 23 and may be fitted with a handle. In the base-board 16 which consists of suitable insulating material, and which is placed right beneath the same, metallic contacts 17 are fixed, one for each pin 20. Each of these contacts 17 is connected to its corresponding electric lamp on the display board 1, while all of the latter receive their current by the main feed wire 12. (Figs. 1 and 3.)

Fig. 2 shows the perforated sheet 18 and the non-perforated cover 19. The first one consists of a thin plate of insulating material, which is perforated previously with such a number of holes as electric lamps should appear lighted on the advertising board 1. The cover 19 consists merely of a thin sheet of any resistant material of the same dimension as sheet 18 without any perforations.

If for instance both of the sheets 18 and 19 were removed, and the metallic plate 15 closed, all the lamps on the display board are lighted as soon as the circuit is closed on the three way switch 4. If however a perforated sheet 18 is placed between a metal cover 15 and a base board 16 (either on 2 or on 3), all those of the pins 20 make contact with the corresponding metallic contacts 17, which pass through the perforations of the sheet 18, and thus the corresponding lamps on the advertising board 1 are lighted up.

If the cover 19 is placed between the pins 20 and the perforated sheet 18 (as illustrated in Fig. 2) no pin can pass through the perforation of the sheet 18, but as soon as the cover 19 is drawn to the right (Figs. 4 and 5) the pins 20 pass one by one the perforations of the sheet 18 and make contact with the contact pieces 17, and the

lamps on the display board 1, are lighted up one by one, and all letters or words or a sentence or the like is made visible in the most simplified manner, just as if it were written by an invisible hand.

By using these two parallel wired and in an identical manner constructed contact devices 2 and 3 alternately or simultaneously, it is possible to switch the electric incandescent lamps in such a manner that the letters, words, designs or the like (melt) merge one into the other without necessity of interposing an interval of darkness, as the letters, words, or the like transforming themselves while the first display disappears, the following display appears.

If for instance the word "The" is to appear on the advertising board 1 the sheet 18 is previously provided with perforations forming the word "The" as shown in Figs. 1, 4 and 5. The sheet 18 so perforated is now inserted in the contact device 2 in such a manner, that the perforations are above the contact pieces 17. Now by pressing down the metallic plate 15, the pins 20 come in contact with the corresponding contact pieces 17 and therefore the lamps, which form the word "The" only are lighted up on the display board 1. If now the word "Best" is to appear on the display board another sheet 18 with perforations corresponding to the word "Best" is inserted now in the contact device 3, while the lever 6 is shifted slowly over the position 7 into position 8 (in dotted lines in Fig. 1). By this it will be attained that both contact devices 2 and 3 are supplied with current one after the other without interruption, so that both of the lighted words "The" and "Best" appear (mingled) merged on the display board 1. Only after the lever 6 of the three way switch 4 has been put slowly in its final position 8, the word "Best" becomes visible on the display board 1 without any previous interval of darkness. For the purpose of obtaining in the same time the appearing of the words, sentences or the like on the display board as if they were written by an invisible hand, the above described covers 19 may be previously laid over the sheets 18 before closing the contact devices and withdrawn before operating the three way switch in the said manner.

Thus the pins 20 come one by one into contact with the contact pieces 17, and the words "The" and "Best" or the like appear, one by one on the advertising board 1 while the first word "The" vanishes, transforming itself into the second word "Best" without any previous interval of darkness, and so on.

It will be understood, that almost any form of contact device for the purpose described can be used without avoiding the principle of my invention.

What I claim is:

An electric sign circuit closer comprising a pair of members, one having spring-projected contact pins, and the other having contact pieces for engagement by said pins, and a sheet of insulating material arranged between said members and having openings which register with certain of said contact pins and contact pieces, and a second sheet of insulating material slidable on the first-named sheet.

In testimony whereof I affix my signature.

HENRY HIRSCH.