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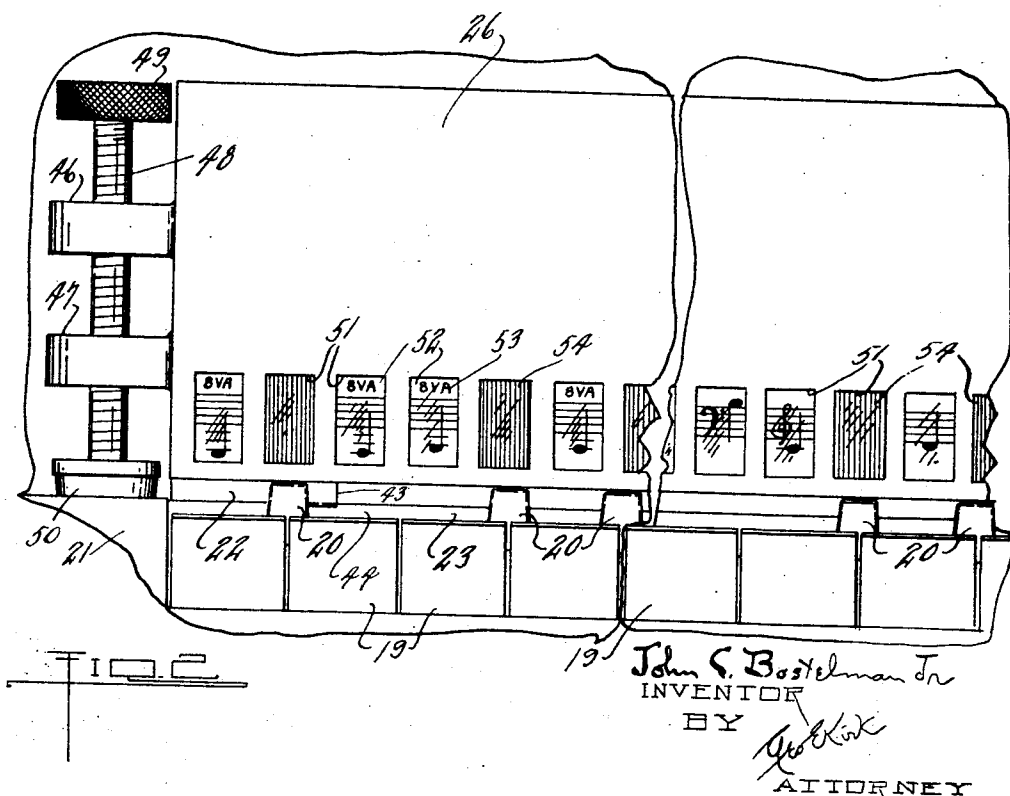
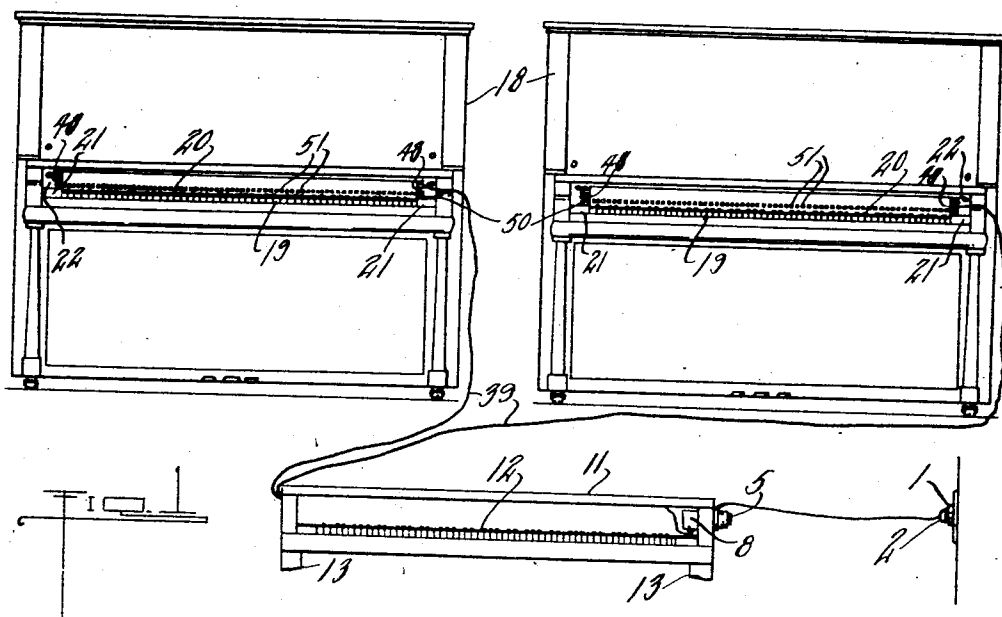
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MUSICAL INSTRUCTING AND DIRECTING EQUIPMENT

Filed Nov. 30, 1925

2 Sheets-Sheet 1



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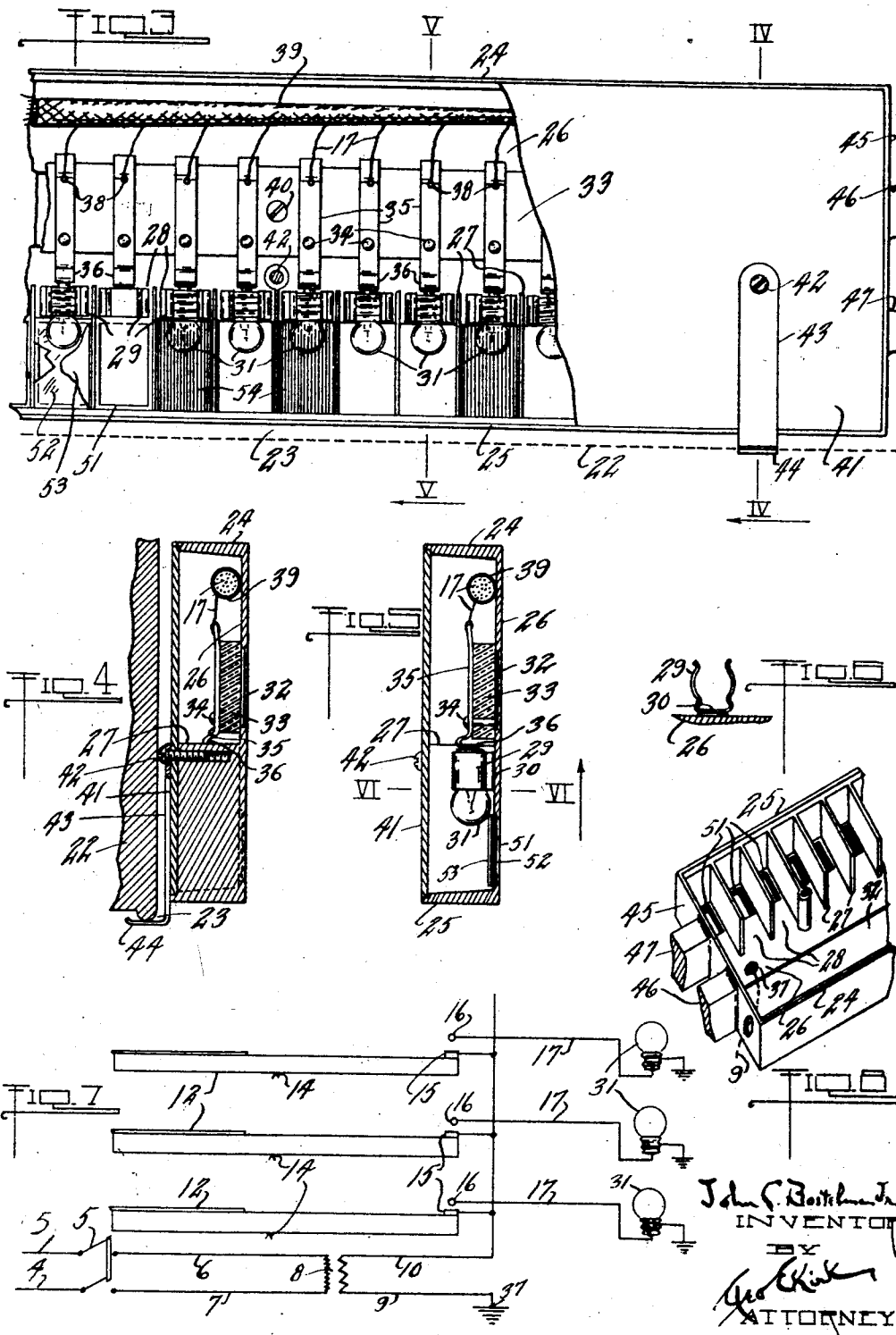
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MUSICAL INSTRUCTING AND DIRECTING EQUIPMENT

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2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE.

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MUSICAL INSTRUCTING AND DIRECTING EQUIPMENT.

Application filed November 30, 1925. Serial No. 72,308.

This invention relates to disclosing musical direction or instruction.

This invention has utility when incorporated in connection with key-board instruments as of the organ or piano type, especially for disclosing location and notation by means of a simply attached and detached key register set-up independently of disfiguring the standard cabinet for such instrument.

Referring to the drawings:

Fig. 1 shows an embodiment of the invention for a plurality of receiving instruments as controlled from a manual instead of from a similar instrument to that receiving and displaying;

Fig. 2 is an enlarged front view of a portion of the receiver or disclosing structure of Fig. 1;

Fig. 3 is a rear view, with parts broken away, of a portion of the receiver of Fig. 2;

Fig. 4 is a section on the line IV—IV, Fig. 3;

Fig. 5 is a section on the line V—V, Fig. 3;

Fig. 6 is a partial section on the line VI—VI, Fig. 5;

Fig. 7 is a partial wiring diagram showing control connections; and

Fig. 8 is a fragmentary perspective view of an end portion of the channel structure.

Electric current supply, as socket 1, has plug 2 inserted therein with lines 3, 4, therefrom to switch 5. This switch 5 (Fig. 7) may be turned on to have lines 6, 7, therefrom supply transformer 8 with current for step down from say the ordinary 110 volt sixty cycle lighting circuit as supplied at the socket 1 to say six volt circuit as delivered to lines 9, 10.

As herein shown, these lines 9, 10, extend to a transmitting structure 11 herein shown as having a regular piano key-board, comprising keys 12, mounted by legs 13. These keys 12 are rockable upon fulcrum 14 with the rear extensions thereof carrying terminals 15 from the line 10 to connect with terminals 16 extending by lines 17 to the receiving instruments in parallel with line 9.

Receiving instruments 18 are shown as having key-boards, each having natural keys 19, usually of the white disclosure. Between the full spaced notes of these keys, are intermediate half tone designation keys 20, usually black, which as to the next upper note are flat, and as to the lower note are

sharp, thereby giving a schedule for one-half tones throughout the extent of the key-board for its eight octaves or other extent. Laterally beyond the extent of the key-board are ledges 21. Over the keys and toward the cabinet structure 18 of the piano, is a fall-board 22 having slight clearance 23 above the keys 19.

The device of this disclosure comprises a main channel structure or housing having opposing flanges 24, 25, with web 26 from the flange 24 extending part way to the flange 25. Parallel partitions 27 from the flange 25 extend over the web 26 in completing the channel structure and providing stalls 28 between the partitions 27. On the web 26, as between the partitions 27, spring clips 29 are anchored as by solder 30, as the ground terminal with the metallic or molded housing 24, 25, 26, for light bulbs 31. Along the web 26, adjacent the ends of the partitions 27, as extending toward the flange 24, there is light offset 32 over which is placed insulation bar 33 having mounted thereon by pins 34, terminals 35 having spring ends 36 adjacent the terminal clips 29, as circuit completing terminals for the respective bulbs 31, as detachably mounted by the clips 29.

The line 9 extends to terminal 37 in the housing of this channel structure 24, 25, 26, while solder connections 38 anchor the respective lines 17 to the terminals 35. When the manual is used for more than one remote control or receiving instrument, the lines 17 are provided with branches according to the number of instruments to be placed in the receiving circuits. The lines 17 branch from conduit or bundle 39, as extending from the control or manual. This bundle of wires 39 extends parallel with the bar 32 in the portion of the channel laterally thereof providing clearance for such bundle of wires. The bar 32 is anchored with the channel structure by screws 40. This assembled electrical portion of the apparatus is housed by backing plate 41 anchored by screws 42 with the channel structure. Terminal screws 42 in this mounting have bracket plates 43 therefrom extending to offset portions 44. These offset portions 44 extend rearwardly of the back plate 41 to enter the usual clearance space 23 below the fall-board 22 when in its up or raised position. The channel structure 24, 25, 26, 27, has end closure portions 45 from each of which extends threaded lug 46 and

guide lug 47 mounting clamping screw 48 having knurled head 49 and cushion foot 50. Accordingly, to position a housing on the key-board of a musical instrument, it is not
 5 necessary to in any wise deface such instrument. The offsets 44 may enter the clearance 23, then by operating the knurled heads 49, of the screws 48, the cushion foot 50 co-acting with the ledge 21 beyond the key-
 10 board at each end pulls up the housing away from the keys to have the offset 44 snugly against the lower edge of the fall-board 22. The device is thus readily and accurately placed in registry position for the musical
 15 instruction.

In this registry position, the stalls 28 have openings or window portions 51 adjacent the respective bulbs 31. These window portions are closed by colorless transparency 52,
 20 as of celluloid, at each natural key registry position with notation disclosure transparency 53 back of such window 52 so that as the bulb 31 is illuminated, there is not only key location, but simultaneously key notation
 25 disclosure at the receiving instrument to the student or the one being instructed at such instrument. The stalls 28, corresponding to the black keys, are herein shown as having colored transparency, as red celluloid 54 dis-
 30 closing each sharp or flat note and its location with the faint showing of the non-illuminated adjacent tones.

Accordingly, there is in this equipment, a mode of direction and instruction permitting
 35 timing and key location, with the further assistance of reading position on the scale of the notation for such key. There is thus given the student the advantage of sight assistance to supplement the ear especially
 40 when the transmitting instrument 11 is of the same character as the receiving instrument.

What is claimed and it is desired to secure by United States Letters Patent is:

45 1. A plurality of devices for registering with the keys of separate musical-instrument key-boards comprising illumination means at the respective keys, and a common remote control device for controlling simultaneously
 50 the illumination of said separate instrument key-boards.

2. For a musical instrument having keys forming a key-board, a ledge laterally beyond the keys and a fall-board having in its
 55 up-position clearance between its lower edge and the keys of the key-board, a device comprising a rigid structure provided with key registering means having a rearward exten-

sion to engage under said lower edge of the fall-board, and relatively adjustable means
 60 to coact with the ledge to position the structure with its key registering means located as to the keys of the key-board by wedging said extension into frictional holding co-ac-
 65 tion with said lower edge of the fall-board.

3. A remote control dictation device, a plu-
 70 rality of receiving devices for registering with the keys of key-board types of musical instruments, each instrument provided with a fall-board having clearance as to the keys,
 75 and ledges at opposite ends laterally of the keys, of mounting means for the respective receiving devices comprising extensions from the devices for engaging under the fall-boards, and adjusting screws coacting with
 80 the ledges for wedging the extensions into frictional holding positions with the fall-boards for maintaining the devices in key registering position.

4. A device for registering with the keys
 85 of a key-board type of musical instrument, a channel structure embodying opposing flanges, a web from one flange short of the other, partitions from said other flange to said web to provide windows, and notation
 90 disclosing means at said windows.

5. A device for registering with the keys of a key-board type of musical instrument, a channel structure embodying opposing
 95 flanges, a web from one flange short of the other, partitions from said other flange to said web to provide windows, and light bulbs between said partitions.

6. A device for registering with the keys of a key-board type of musical instrument,
 100 a channel structure embodying opposing flanges, a web from one flange short of the other, partitions from said other flange to said web to provide windows, light bulbs between said partitions, and clips between the
 105 partitions as bulb mounting terminals.

7. A device for registering with the keys of a key-board type of musical instrument, a channel structure embodying opposing
 110 flanges, a web from one flange short of the other, partitions from said other flange to said web to provide windows, light bulbs between said partitions, clips between the partitions as bulb mounting terminals, an insulator bar along said web, separate con-
 115 ductor leads for each bulb, spring terminals carried by the bar at each clip, and a remote control for connecting up said leads for controlling illumination of said bulbs.

In witness whereof I affix my signature.

JOHN C. BOSTELMAN, JR.