

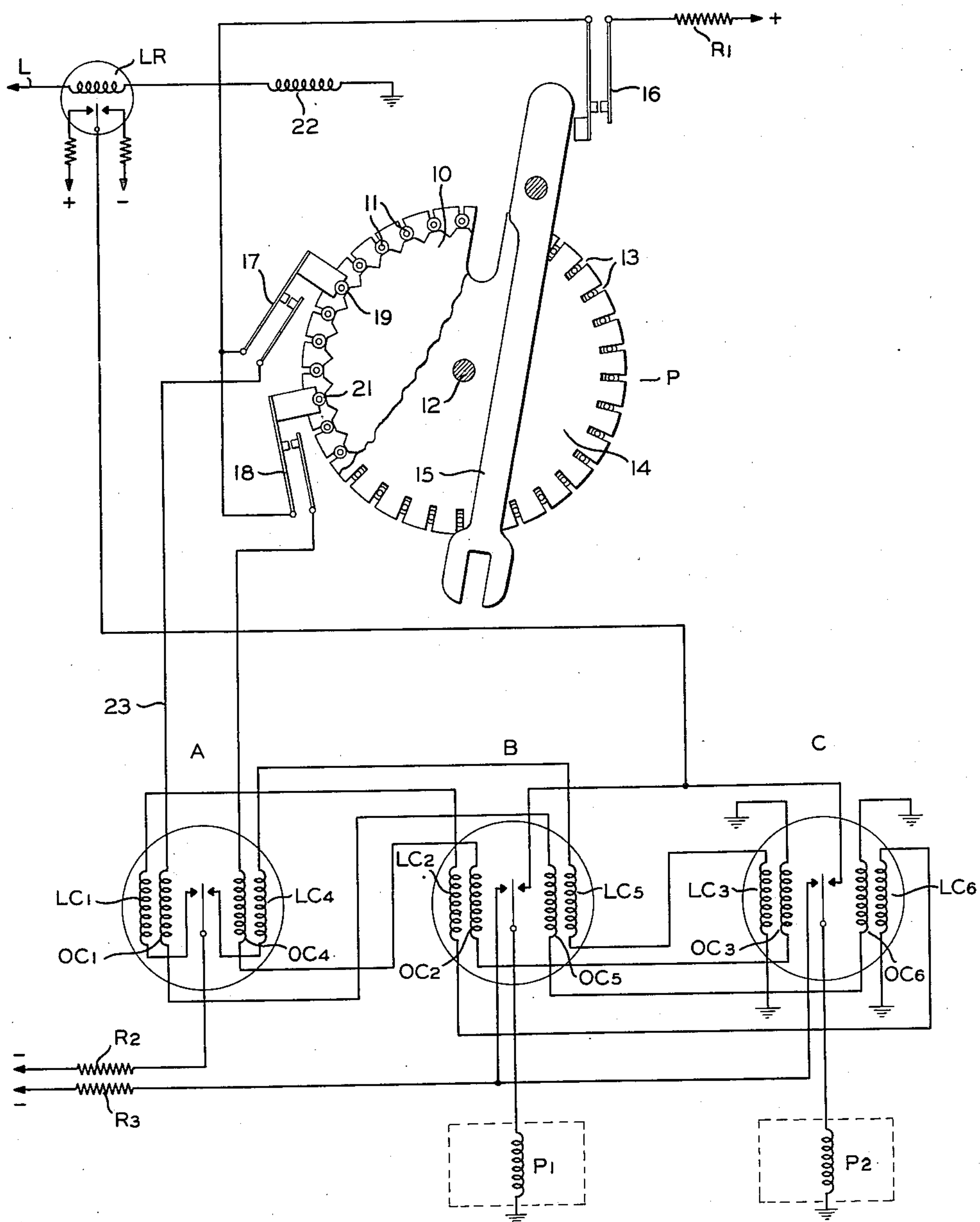
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SELECTIVE MARKET SYSTEM

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SELECTIVE MARKET SYSTEM

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This invention relates to a telegraph system and more particularly to a system for separating received signals into two or more groups for distribution to two or more printers or groups of printers.

It is particularly advantageous in connection with market service where it is desired to transmit two or more different markets over a single line and at a distant station to distribute each market to separate printers or over separate ticker networks. For example, it may be desired to transmit from some central situation such as Chicago to a remote city such as Denver a number of different markets no one of which consume the entire line time, and at the latter city to distribute any or all of said markets to brokers, banks, etc., in the adjoining sections of the country.

For instance, certain brokers may desire only the cotton market, others the grain market, etc. Neither of these markets is sufficient to occupy the complete line and therefore it has been proposed, heretofore, to transmit a number of such markets over a single line and at the city of destination to retransmit manually the various markets over their individual networks. This system is not efficient, however, in that it requires the service of a number of operators and causes an inherent delay in the retransmission of the signals.

One of the objects of the present invention is, therefore, to provide a system whereby a number of such markets or services can be transmitted over a single circuit and at the receiving station automatically separated and distributed over circuits individual to each market or service.

Another object is to enable the line to be divided between such services in proportion to the volume of business transacted in connection with each service.

A still further object is to enable two or more printers to be operated selectively over a single line in accordance with the signals intended for each printer.

Another object is to provide a selective distributing system of this nature which is simple, inexpensive and requires a minimum of change in standard equipment.

Other objects and advantages of the invention will hereinafter appear.

In accordance with our invention we contemplate that each group of signals representing a particular market will be preceded by an identifying or transfer signal indicative of such market, the receiving apparatus responding to such

identifying signals to determine the particular printer on which the succeeding signals are to be recorded or the line or network over which they are to be repeated.

The invention is shown in connection with signals of the permutation code type, but it is not limited thereto, being also applicable to any other code. The equipment required for effecting the selection between two markets, at the receiving station comprises three standard relays and a standard telegraph printer to which has been added three contacts.

The invention will be best understood by reference to the accompanying drawing in which the single figure represents diagrammatically a market selecting system embodying the present invention.

The apparatus comprises a standard telegraph printer P, and three polar relays A, B, and C. If the signals are assumed to be of the start-stop variety, that is in which each character code group is preceded by a starting impulse and followed by a rest impulse, the printer P will necessarily be of the simplex type and is illustrated as of the form known in the art as a 5—A ticker. The construction of this ticker is fully disclosed in United States patent to Morton, No. 1,821,110, dated Sept. 1, 1931. This printer employs a group of five notched code discs 10, surrounded by an annular row of stop pins 11, one of which is adapted to be forced into the notches of the discs when they are set in alignment. The pins 11 serve to stop the type wheel (not shown) mounted on a shaft 12 in a pre-selected position. The pins 11 are guided in the slots 13 of a disc or comb 14.

In the code employed the first five impulses determine the angular position of the type wheel through the setting of the discs 10 and the sixth or shift impulse determines the case position of the type wheel. The type wheel is shifted either to letter or figures case position by a shift lever 15 controlled, as stated, by the polarity of the sixth impulse. Three contacts 16, 17 and 18, are added to the standard printer to control the relays A, B and C. The contact 16 is disposed adjacent the upper end of the shift lever 15. It is arranged to be held open in the letters shift position and to be closed by the lever 15 in the figures shift position. Contacts 17 and 18 are disposed opposite two of the stop pins, designated 19 and 21, and are arranged so as to be held open normally by these stop pins, but to close when either of the pins are selected to enter the aligned notches of the discs 10.

Any of the pins 11 may be employed for operating the contacts 17 and 18 so long as they correspond to positions of the type wheel which are not employed for printing functions in at least one case shift position. It has been assumed in the present embodiment that both pins 19 and 21 are idle in the figure case position.

The pilot printer P is controlled through a selecting magnet 22, connected directly in the incoming line L, whereby the printer responds to all signals received over the line. The line signals are also repeated through the line relay LR to either one or the other of two printers P1 and P2, depending upon which one of the two markets they represent. Relay B serves to connect the printer P1 to the tongue of the relay LR and relay C serves to connect the printer P2 to the tongue of relay LR. The control circuits for relays A, B and C will now be traced.

One side of the contact 16 is connected to positive battery through a resistance R1 and the other side of the contact is connected to one side of contact 17 in parallel with one side of contact 18. The opposite side of contact 17 is connected by conductor 23 to operating coil OC1 of the polar relay A in series with operating coil OC5 of relay B, in series with operating coil OC6 of relay C to ground. The corresponding side of contact 18 is connected through operating coil OC4 of relay A in series with the operating coils OC2 and OC3 of relays B and C respectively, to ground. Each relay has two locking windings designated LC1 to LC6, locking winding LC1 being connected to the left contact of relay A in series with locking coils LC2 and LC6, respectively, of the relays B and C. Similarly locking coil LC4 is connected to the right contact of the relay A in series with locking coils LC5 and LC3 respectively of relays B and C. The tongue of the relay A is connected to negative battery through resistance R2 and the tongues of relays B and C are connected respectively to the operating magnets of the printers P1 and P2. The left or spacing contacts of relays B and C are connected in parallel through the resistance R3 to negative battery and the right contacts of these relays are connected in parallel to the tongue of the line relay LR.

The operation of the system is as follows. The incoming line signals are assumed to be composed of two markets which may be designated as market 1 and market 2, market 1 to be printed upon the printer P1 and market 2 to be printed upon the printer P2. Associated with the signals representative of each market is a special identifying signal which we have termed the transfer signal and which determines the printer upon which the succeeding signals are to be recorded.

As previously stated the receiving pilot ticker P receives all of the signals coming over the line and consequently it prints both markets. Its function is to set up certain circuits in the relays A, B and C by means of the contacts 16, 17 and 18.

Assuming that all of the tickers P, P1 and P2 are idle and it is desired to print market 1 upon the printer P1. The first character to be received over the line will be the transfer character associated with market 1. This character code group serves to select the stop pin 19 thereby permitting a switch 17 to close. Assuming this transfer code to consist of units 1, 2, 3, 4 and 5 spacing and unit 6 marking, the first five impulses will cause the discs 10 to be moved in such position as to bring the notches in alignment opposite the pin 19, thereby closing the switch 17. The sixth pulse being marking shifts the lever 15 in

such manner as to close the contact 16. The two contacts 16 and 17 will be closed simultaneously and thus complete a circuit from positive battery through the contact 16, contact 17, conductor 23 and coils OC1, OC5 and OC6 of relays A, B and C respectively, to ground. The direction of current through these windings is such as to cause the tongues of relays A and C to move to their left contacts and the tongue of relay B to move to its right contact, thereby (1) establishing a circuit from negative battery through the resistance R2, locking windings LC1, LC2 and LC6 to ground; (2) completing a circuit from the tongue of the line relay LR through the tongue of relay B to the printer P1; and (3) connecting negative battery through the resistance R3 and left contact of relay C to the printer P2 to hold this printer idle. It will be understood that with simplex printers the idle line condition is continuous negative battery. Due to the locking circuit established, all of the relays will retain this position during the transmission of the subsequent signals, which signals will be recorded upon the printer P1.

Assuming that after several quotations of market 1 have been transmitted over the line and recorded upon the printer P1, it is desired to print market 2 on the printer P2. This is effected by sending a transfer character signal over the line so as to select the stop pin 21 in upper or figures case position. Such a transfer character will cause contacts 16 and 18 to be closed at the same time, thereby completing a circuit through these contacts and through coils OC4, OC2 and OC3 of relays A, B and C, respectively, to ground. The direction of current to these coils is such as to place the tongues of relays A and C on their right contacts and the tongue of relay B on its left contact. Consequently, the printer P1 is disconnected from the line and connected to negative battery through the resistance R3 and the printer P2 is connected to the tongue of the line relay LR. The locking circuits for the relay is completed from negative battery through the resistance R2, tongue and right contact of relay A, coils LC4, LC5 and LC3 to ground. Succeeding signals will then be recorded upon the printer P2. It is to be understood that in place of the printers P1 and P2 repeating relays may be provided for repeating the signals over individual ticker networks, or if desired, tongues of relays B and C may be connected directly through outgoing lines.

The sole purpose of contact 16 is to prevent the operation of the relays A, B and C when the stop pins 19 and 21 are selected in the lower case or letters position. If these stop pins correspond to blank spaces on the typewheel in both shift positions, the contact 16 will not be required.

Obviously, numerous changes may be made in the system and apparatus without departing from the invention and, therefore, we do not desire to be restricted to the specific embodiment shown but contemplate all such obvious variations as coming within the scope of the appended claims.

What we claim is:

1. A selective market system comprising a source of signals, said signals consisting of a plurality of groups of permutation code selecting conditions, each group representing a particular market and being preceded by a single identifying permutation, a receiving station, a separate recording circuit for each market terminating at said station, and means responsive to said identifying permutation for connecting the circuit associated with the market represented by

one identifying permutation, to said source of signals and disconnecting the other circuit therefrom.

2. A selective market system comprising a source of signals, said signals including a plurality of groups of character permutations, each group representing a particular market and being preceded by a single identifying permutation, a receiving station, a separate recorder for each market, and means including a printing machine responsive to said character permutations to produce a record thereof and also responsive to said identifying permutations for connecting the recorder associated with the market represented by each identifying permutation, to said source of signals.

3. A telegraph system comprising a source of signals, and a recorder responsive to predetermined of said signals for producing a record thereof, said recorder responding to predetermined others of said signals to distribute said first predetermined signals selectively to a plurality of other recorders.

4. A telegraph system comprising a source of permutation signals, a recorder responsive to predetermined of said signals for producing a record thereof and a plurality of recording circuits, said recorder being responsive to a single received permutation for connecting said signal source selectively to one or another of said recorder circuits.

5. A telegraph system comprising a source of permutation signals, a pilot recorder, a plurality of printers, said recorder responding to all of said signals and serving to distribute predetermined of said signals to one or the other of said printers.

6. A telegraph system comprising a source of permutation signals including character selecting conditions and case selecting conditions, a recorder responsive to all of said signals, a plurality of printer circuits, and means including said recorder, responsive to predetermined of said character selecting conditions, in association with a predetermined case selecting condition for distributing said signals selectively to one of said printer circuits.

7. A telegraph system comprising a source of permutation signals including character selecting conditions and case selecting conditions, a plurality of recorder circuits, and means responsive to predetermined character selecting conditions in association with a predetermined case selecting condition for connecting one of said recorder circuits to said source of signals and disconnecting the other recorder circuit therefrom.

8. A selective market system comprising a source of signals, said signals including a plurality of groups of character permutations and case selecting conditions, each group representing a predetermined market, a recorder for each market, and means responsive to all of said signals and controlled by said case selecting conditions for selectively distributing each group of character permutations exclusively to its corresponding recorder.

9. A selective market system comprising a source of permutation signals, each permutation consisting of character selecting conditions and a case shift selecting condition, a receiving apparatus having a plurality of character selecting elements and a case shift selecting element, a plurality of recording circuits, contacts associated with predetermined of said character elements and a contact associated with said case shift selecting element, and means controlled by the operation of said latter contact and at least one of the former contacts for distributing said signals over one only of said recording circuits.

10. A telegraph switching system comprising a source of signals having character selecting and case selecting conditions, a receiver having a plurality of character selecting elements and a case selecting element, a plurality of recording circuits, a relay for each circuit for connecting its associated circuit with the source of signals, and means controlled by the combined positions of said character selecting and case selecting elements for selectively operating said relays whereby to connect one of said recording circuits to the source of signals and to disconnect another recording circuit therefrom.

11. A telegraph switching system comprising a source of signals, a telegraph printer having character and case selecting elements, contacts associated with certain of said selecting elements, and means controlled by the position of said contacts for connecting said source of signals to one or another of a plurality of recording circuits.

12. A telegraph switching system comprising a source of signals consisting of groups of character permutations, a pilot printer, a plurality of other printers associated therewith, said pilot printer being arranged to respond to all signals received from said source, and means controlled by the selective operation of said pilot printer for distributing one group of said signals to one of said other printers and another group to another printer.

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