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2,034,436

NUMBER SELECTOR

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Fig. 1.

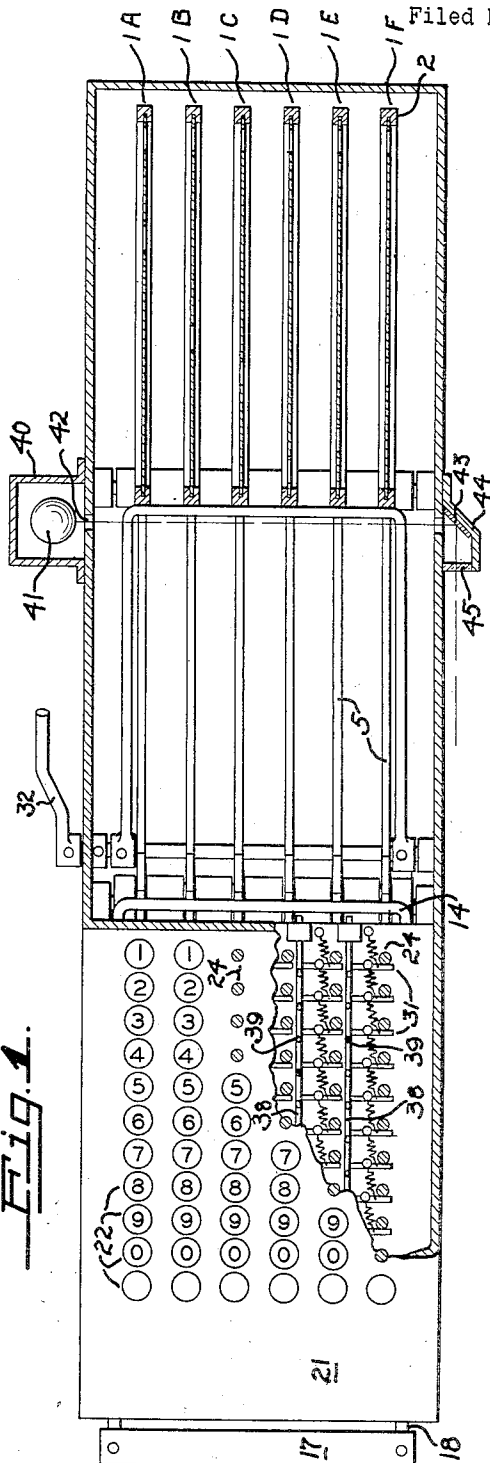
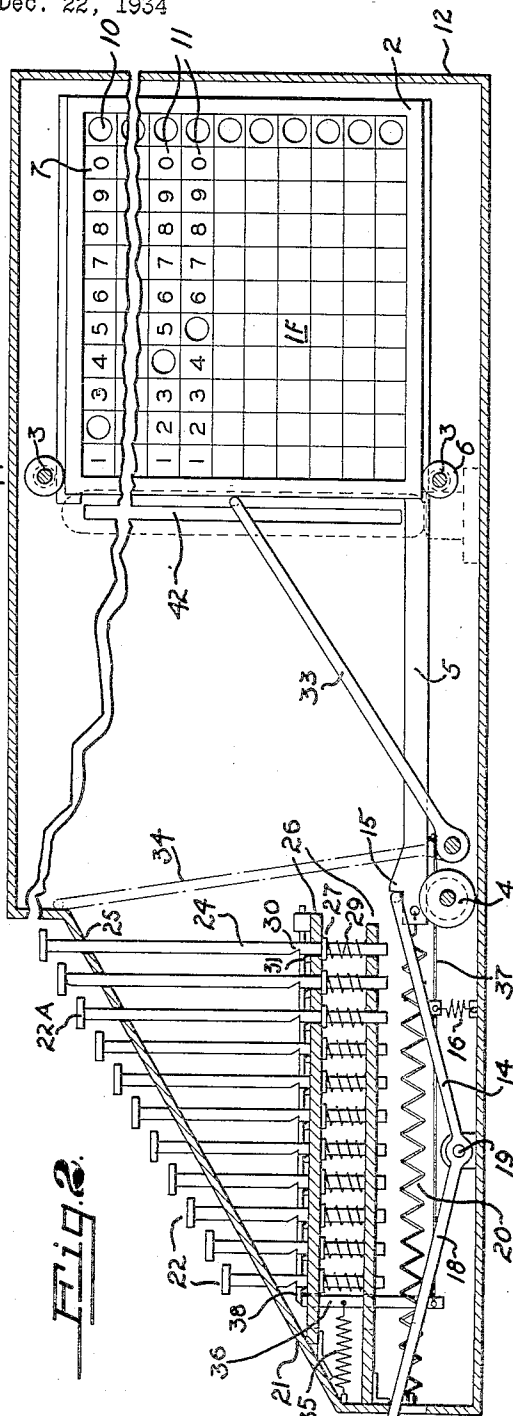


Fig. 2.



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NUMBER SELECTOR

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4 Claims. (Cl. 88—14)

My invention relates to number selectors and more particularly to a device by which listed numbers may be individually selected, at will. My invention is particularly adaptable for use in checking the numbers of stolen automobiles.

Among the objects of my invention are: To provide a means for setting up a predetermined list of numbers or characters and thereafter by setting up a number to determine whether or not the latter number was originally included in the first list. To provide a means for checking automobile numbers. To provide a means for determining whether or not a number is on a list, this determination being accomplished in less time than could be accomplished by visual inspection of the list.

Other objects of my invention will be apparent or will be specifically pointed out in the description forming a part of this specification, but I do not limit myself to the embodiment of the invention herein described, as various forms may be adopted within the scope of the claims.

In the drawing, Figure 1 is a view partly in section and partly in elevation of a particular embodiment of my invention.

Figure 2 is a sectional view taken at right angles to the view shown in Figure 1.

The broad aspect of my invention may be more particularly understood by reference to the drawing. A character chart 1F is mounted in a moving frame 2 on rollers 3—3 and 4, a single lower arm 5 being extended from the frame 2 to contact a roller 4. These rollers are provided with flanges 6 so that the entire frame may slide laterally in upright position. A plurality of such charts are provided and so positioned that each frame may move in a parallel plane with relation to the others, and are similarly mounted on rollers.

The charts are provided with a plurality of horizontal divisions, each row comprising a character series. In this case, the upper row 7 of each chart is a number series beginning with 1, ending with zero, and with an additional division which is provided with an aperture 10. On all the charts the upper row contains the same identical characters and are, when the charts are lined up, registered, so that the divisions and numbers will all be in line. Below the upper line are a plurality of additional character series 11 which may be the same as those in the upper row. It will be seen that the number of character series which can be placed on a single card will be limited only by the depth of the card, and it is quite possible to get several hundred

of these series on a single card without increasing the size to which it cannot be readily handled.

For purposes of illustration, considering the keyboard as the front, I have chosen to call the left hand card 1A, the next card 1B, the next 1C and so on to the last or right hand card, which I designate as card 1F. I prefer then to use card 1A for the first digit of six character numbers, 1B for the second digit, 1C for the third, 1D for the fourth, 1E for the fifth and 1F for the sixth. In pre-setting the charts, therefore, I punch card 1A with a hole in the square enclosing the digit corresponding to the first digit of the number set up; and then punch 1B for the next digit with a hole corresponding to the next digit, 1C the next and so forth until the entire number has been punched out, using only for this number the first row of characters at the top of the chart. The next number set up will be set up on the second row, the third on the third and the fourth on the fourth until the entire chart has set upon it, as punched holes, all the numbers it is desired to list on the charts.

In this regard, it may be pointed out that with so-called automobile numbers, it is common in some states to have one of the series in the number a letter. In this case, if a letter appears as the second digit of a state series, chart 1B may be made wider than the number charts and printed to include all the letters of the alphabet; or the alphabet may be split in the middle, and placed on two charts. If it should happen that the letters are placed in other positions in the "number", the chart corresponding to that position may be made a letter chart. There also may be other uses which will be later suggested where all the character series would be letters instead of numbers.

I prefer to enclose the entire series of charts in a case 12 to which the rollers 3—3 and 4 are attached. The charts are maintained in their starting position by means of a release latch 14 held against chart stops 15 formed on all of the extended arms 5. The latch 14 is held against the stop by a latch spring 16 and is operated from outside the case by a release key 17 through a latch arm 18 and a latch pivot 19. Each individual extension arm 5 is provided with an actuating spring 20 affixed to the case and tending to pull the charts against the latch and over the rollers toward the keyboard. One end of the device is provided with a sloping surface 21 upon which a key assembly is mounted. Keys 22 correspond to the character series on each chart, including the key for the blank or aperture space 10 on the

chart, and as shown, are lined up in the plane in which each chart operates. Each key comprises a single rod 24 which is given a three point support by a key aperture 25 in the sloping face of the case and by apertures through two key plates 26 mounted within the case. Each key is also provided with an upper stop 27 bearing against the upper key plate 26 and held in that position by a key spring 29. In this normal position the lower end of the key rod 24 just misses the top of the stop 15 so if the release key 17 were pushed, the chart would be released to roll toward the keyboard under the urge of spring 20 without being stopped along its course. When, however, one of the keys is depressed, a rod notch 30 is engaged by spring controlled latch bar 31 so that the key stays in depressed condition. The key rod when depressed is put in a position so that the end will engage notch 15 of the chart and stop the travel of the chart toward the key board at that position.

For example, taking the chart shown in plan in Figure 2, if key 22A is depressed and locked in depressed condition and release key 17 operated, the chart 1 along with the others will roll on its rollers toward the keyboard and will stop when the stop 15 engages the lower end of the key rod attached to key 22A. Thus, each one of the charts released will stop in accordance with the setting of the keys 22 in their individual number series. I prefer to set up the number I desire on the keyboard and then release the charts. Each chart will come to rest its own proper distance along its path as determined by the key settings. When it is desired to return the charts to the starting position, lever 32 is operated to cause the return arm 33 to pick up each chart and push them toward the original position, and as they arrive at that position, latch 14 drops again behind the stop on each chart to hold them all in starting position until again released.

After the latch 14 has engaged the stops 15, the return arm 33 is returned to a position shown by a dotted line 34 by a return spring 35 operating through a key release bar 36 and an arm rod 37. The upper part of the key release bar is attached to series of release pins 38, each having a number of key latch pins 39 positioned to kick the latch bars out of rod notches 30 to allow the keys to return to normal position. If a mistake in set up is made before the charts are released, lever 32 may be operated to release the keys for correction.

I then prefer to provide indicating means to show when apertures which previously have been punched on the chart, are in line. I do this by providing on one side of the case a light housing 40 containing a lamp 41 which is preferably of the so-called "bung hole" type, having a long single filament, preferably the length of the charts. I place this light in upright position so that the filament will throw its light through an upright slot 42 in the side wall of the case to illuminate the digits on the left hand chart in a single line extending from the top of the chart to the bottom. On the other side of the case, directly opposite, I position a mirror 43 at an angle so that any light passing through the charts at any level will be reflected forward to the eyes of the operator sitting at the keyboard. In this regard, I prefer to have a case 44 surrounding the mirror, the portion 45 of the case toward the operator being preferably of ground glass and in some instances it is advantageous to have a red filter in the light

line so that the spots shown on the ground glass will be red in color, thus making the spot more visible in day light.

In discussing over-all operation of the device, let us assume that the charts have been punched with automobile numbers corresponding to several hundred stolen cars. The number selector with its operator is preferably positioned at a strategic position on the highway where the operator can take the numbers of cars that pass. It is of course not known in the beginning whether the number of the passing car is on the list set up in the chart or not. My device will tell the operator immediately whether this number is on the list. For example, if we assume the number of a passing automobile is 123 456, as soon as the operator sees the number, he presses key No. 1 in the left hand number series, key No. 2 in the next series, key No. 3 in the next, 4 in the next, 5 in the next and 6 in the last. He then presses the release key 17 and all the charts move forward to their respective positions, as determined by the depressed keys, chart No. 1A moving forward only a short distance, 1B a little further, 1C still further, so that character spaces on all of the character series are in the relation 123 456 in the line of the light path through the casing, so that if these numbers were previously punched out on the list at any level there is a clear path at that level through from the lamp 41 to the mirror 43 and thence to the ground glass, an indication being shown on that glass in the form of a spot of light. The operator knows that all the cars listed on his chart are stolen, therefore, he knows if he gets a light response that the car number he has just set up on his keyboard is that of a stolen car. He may then notify other officers stationed in a position to stop the suspected car. After one number has been set up the charts are returned to the starting position and the numbers of other cars that come along are set up as they appear.

The time required for a complete set up is very small—much less than that which would be necessary for the perusal of an extended list of numbers, and as several hundred numbers can be set up on the charts, the check-up on stolen cars may be much more thorough than is at present possible when either relying on the memory of an officer or on a visual list.

While I have described my device as being adapted particularly for the detection of stolen automobiles, it should be understood that any combination of numbers or letter characters can be used on the charts for any purpose, as may be suggested to those skilled in the art, from the description given above.

It will be noticed that I have provided on one end of my chart a complete series of apertures. I prefer to call these apertures blanks. These blanks are used to distinguish between series of numbers which have less than six digits, and those beginning or ending with zeros. For example, the number 00525 would be punched on the charts "00525", but the number 525 could be either set up as "blank-blank 525" or "525 blank-blank". In other words, these blank spaces are simply to allow light to go through where numbers are less than the number of digits on the complete key board. It is also possible to use, for example, other means for getting the indication. An eyelet machine could be used on the charts whereby a brass eyelet or similar contact could be inserted in the card so when the proper number lined up, an electrical contact would be

made passing through all the eyelets on the chart. It is also possible to use sliding shims on each number series with a permanent hole therein which can be slid back and forth until the hole is in the proper number position. If this is done, however, other provisions should be made for the blank or permanently apertured position.

Other modifications of the device will be apparent to those skilled in the art, and I do not wish to be limited to the flat charts. The same result can be obtained from the use of concentric cylinders, the apertures being punched in spaces provided for them on the cylinders and the light source on the inside of the innermost cylinder and showing the indication on the outermost cylinder when the apertures are in line. Similar modifications will be apparent to those skilled in the art without departing from the spirit of the invention as described and claimed.

I claim:

1. In combination, a plurality of superimposed charts adjustably mounted to move upon a support in a common direction in parallel paths, a plurality of similar and parallel rows of characters parallel to said paths on each chart, said rows on all of said charts being normally in register, means preselecting one character on each chart representing in order a known character series, means for moving each of said charts in said common direction along said paths a predetermined distance corresponding to a related number of rows, said moved charts representing in order a known character series, and means for indicating when said preselected characters are in alignment normal to the planes of said charts.

2. In combination, a plurality of superimposed charts adjustably mounted to move upon a support in a common direction in parallel paths, a plurality of similar and parallel rows of characters parallel to said paths on each chart, said rows on all of said charts being normally in register, means preselecting one character on each chart representing in order a known character series, means for setting stops for limiting movement of each of said charts along said paths a

predetermined distance corresponding to a related number of rows, said moved charts representing in order a known character series, means for releasing said charts, means for moving said charts along said paths against said stops, and means for indicating when said preselected characters are in alignment normal to the planes of said charts.

3. In combination, a plurality of superimposed charts adjustably mounted to move upon a support in a common direction in parallel paths, a plurality of similar and parallel rows of characters parallel to said paths on each chart, said rows on all of said charts being normally in register, means preselecting one character on each chart representing in order a known character series, means for setting stops for limiting movement of each of said charts along said paths a predetermined distance corresponding to a related number of rows, said moved charts representing in order a known character series, means for simultaneously releasing said charts against said stops, and means for indicating when said preselected characters are in alignment normal to the planes of said charts.

4. In combination, a plurality of superimposed charts adjustably mounted to move upon a support in a common direction in parallel paths, a plurality of similar and parallel rows of characters parallel to said paths on each chart, said rows on all of said charts being normally in register, means preselecting one character on each chart representing in order a known character series, means for setting stops for limiting movement of each of said charts along said paths a predetermined distance corresponding to a related number of rows, said moved charts representing in order a known character series, means for simultaneously releasing said charts against said stops, means for indicating when said preselected characters are in alignment normal to the planes of said charts, and means for returning said charts to starting position after alignment trial.

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