

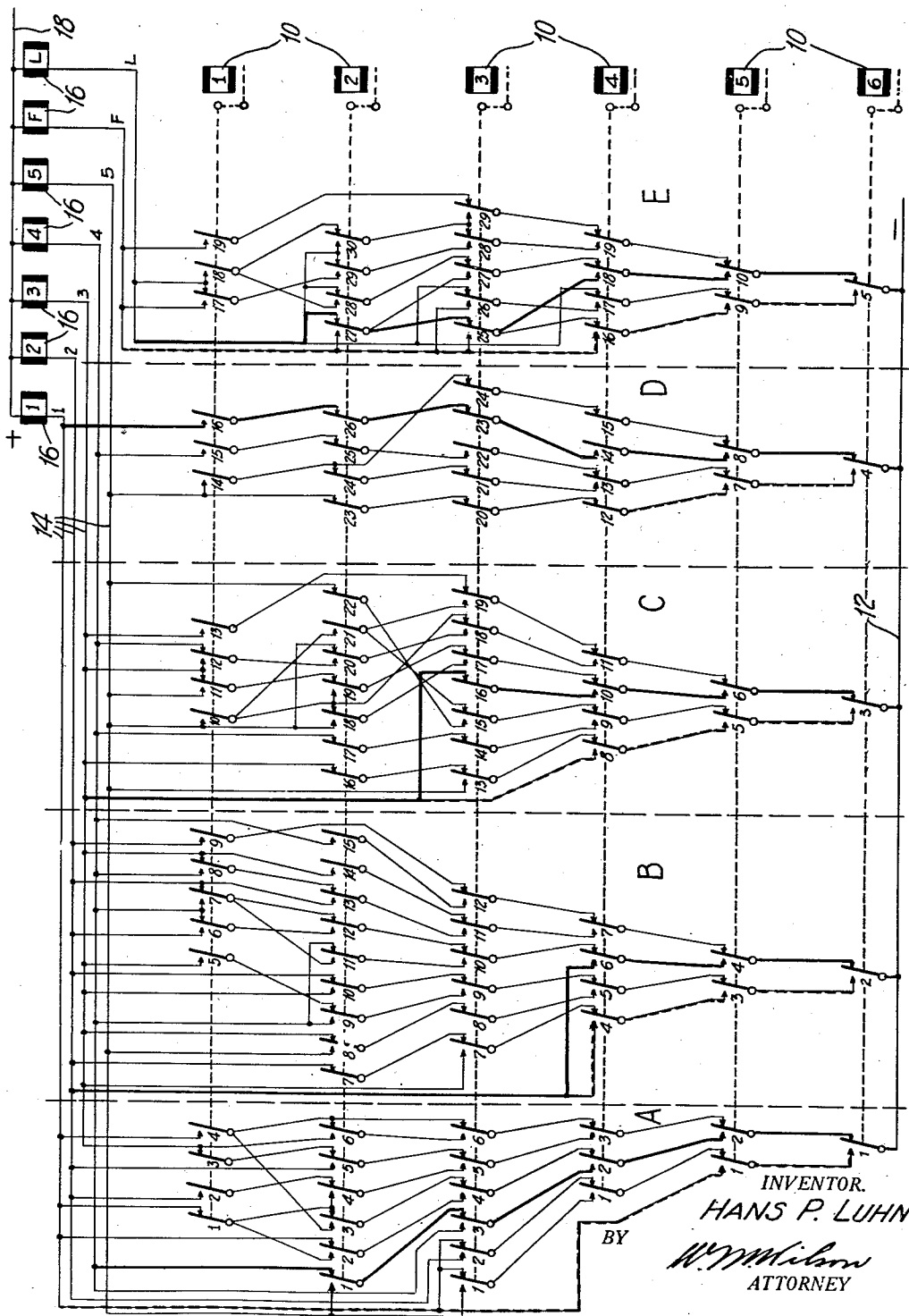
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CODE TRANSLATOR

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CODE TRANSLATOR

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This invention relates to a code translator, and more particularly to a translator for translating the representation of a character expressed in one system of coding to an expression in a different system of coding.

A more particular object of the invention is to provide an all electric code translator, in which characters expressed in a six position system by combinations of one to four positions may be translated into a seven position system in which the characters are expressed by different combinations of one to five positions.

A more specific object is to provide a translator in which a number of relay magnets, one for each of the code positions of a given system, are energized in selected combinations to adjust related sets of contacts. These contacts are wired to form a number of chain relay circuits, equal in number to the greatest number of code positions concurrently employed in a second system, so that separate parallel circuits will be completed to represent a character in the second system.

Other objects of the invention will be pointed out in the following description and claims and illustrated in the accompanying drawing, which discloses, by way of example, the principle of the invention and the best mode, which has been contemplated, of applying that principle.

The drawing represents the electric wiring of a translator in which combinations in a six position code are translated into other combinations in a seven position code.

The six position code in which characters are represented by combinations of 1, 2, 3 or 4 positions is known as the "Radiotype" code and the seven position code into which the characters are to be translated into combinations of 1, 2, 3, 4 or 5 positions is known as the "Teletype" code. The combinations of the several characters are set forth in the table below, where under "code A" are the combinations for the initial code and under "code B" are the combinations for the resultant code.

Character	Code A, positions						Code B, positions						
	1	2	3	4	5	6	1	2	3	4	5	F	L
A	1					6	1	2					L
B	1		3		5		1			4	5		L
C				4	5			2	3	4			L
D			3		5						4		L
E	1		3			1							L
F				4		6	1		3	4			L
G	1		3	4				2		4	5		L
H			3	4					3		5		L
I		2		4				2	3				L
J		2	3	4			1			4			L
K	1			4	5		1	2	3	4			L
L			3			6					5		L
M	1	2	3						3	4	5		L
N		2	3							4			L
O													L
P	1				5					4	5		L
Q	1	2		4				2	3		5		L
R	1				5	6	1		2	3	4	5	L
S		2	3			6	1			4			L
T		2				6	1		3				L
U	1			4							5		L
V					5		1	2	3				L
W	1		3			6				4	5		L
X	1	2			5		1	2			5		L
Y	1			4		6	1			3	4	5	L
Z	1	2				6	1		3				L
1				4		6	1				5		F
2	1						1	2	3				F
3		2	3		5		1				5		F
4			3	4		6		2		4			F
5				4								5	F
6			3	4		6	1					5	F
7	1			4	5	6	1		3				F
8	1	2	3	4	5	6	1		2	3			F
9	1	2	3		5								F
0	1	2		4	5			2	3	4	5		F
TAB			3					2					F
CR		2			5					4	5		L
		2		4	5								F
	1	2	3			6			3	4	5		F
		2		4	5	6		2	3	4			F
	1	2				6	1						F

Referring to the drawing, six magnets 10 are provided which may be energized combinationally in accordance with the coding of the table designated code A, and the specific manner in which they are energized is not shown. Each magnet is provided with multiple armatures shown arranged in horizontal alignment therewith and numbered consecutively from left to right. Thus, the 1 magnet 10 has nineteen armatures, the 2 magnet 10 has thirty armatures, the 3 magnet 10

has twenty-nine armatures, the 4 magnet 10 has nineteen armatures, the 5 magnet 10 has ten armatures, and the 6 magnet 10 has five armatures.

These armatures are provided with resting and operating contacts grouped in five sections designated A, B, C, D and E with each such group forming a separate relay or contact chain extending from negative line 12 to a group of seven wires 14 designated 1, 2, 3, 4, 5, F, and L. These wires are connected separately to similarly designated magnets 16, which are also connected to positive line 18.

These magnets 18 when energized may operate punching, printing or other indicating or recording devices which are not per se part of the present invention and are, therefore, not illustrated. With the several sets of armatures interconnected as shown, a combinational energization of magnets 10, in accordance with the character in code A, will adjust the related armatures so that a number of parallel circuits are completed through the sections A to E, the number of circuits being equal to the number of positions of the character in the code B with each circuit going through a different section to energize the magnets 16 in accordance with the latter code.

To illustrate this, let it be assumed that magnets 10 are energized to represent the letter K which from code A means that the 1, 4 and 5 magnets 10 are energized and their related armatures are rocked to the left. There will then be five circuit paths completed, which are emphasized in heavy full lines, one extending through each of the sections, to energize the 1, 2, 3, 4 and L magnets 16. Tracing these circuits specifically, they are as follows:

In section A—from negative line 12, armature 1 of 6 magnet 10 (normal); armature 2 of 5 magnet 10 (shifted); armature 2 of 4 magnet 10 (shifted); armature 3 of 3 magnet 10 (normal); armature 1 of 2 magnet 10 (normal) to the 4 wire 14, 4 magnet 16 and to positive line 18.

In section B—from negative line 12, armature 2 of 6 magnet 10 (normal); armature 4 of 5 magnet 10 (shifted); armature 6 of 4 magnet 10 (shifted) to the 2 wire 14, 2 magnet 16 and to positive line 18.

In section C—from negative line 12, armature 3 of 6 magnet 10 (normal); armature 6 of 5 magnet 10 (shifted); armature 10 of 4 magnet 10 (shifted); armature 16 of 3 magnet 10 (normal), to the 3 wire 14, 3 magnet 16 and to positive line 18.

In section D—from negative line 12, armature 4 of 6 magnet 10 (normal); armature 8 of 5 magnet 10 (shifted); armature 14 of 4 magnet 10 (shifted); armature 23 of 3 magnet 10 (normal); armature 26 of 2 magnet 10 (normal); armature 16 of 1 magnet 10 (shifted), to the 1 wire 14, 1 magnet 16 and to positive line 18.

In section E—from negative line 12, armature 5 of 6 magnet 10 (normal); armature 10 of 5 magnet 10 (shifted); armature 18 of 4 magnet 10 (shifted); armature 25 of 3 magnet 10 (normal); armature 27 of 2 magnet 10 (normal), to the L wire 14, L magnet 16 and to positive line 18.

As a further example, consider the numeral 7 which in code A is represented as 1, 4, 5 and 6 and in code B as 1, 2, 3 and F. With magnets 10 appropriately energized, circuits are traceable through sections A, B, C and E as emphasized in heavy dotted lines to energize the 1, 2, 3 and F magnets 16. The paths of these circuits are be-

lieved to be quite evident from the drawing, so they are not specifically traced herein.

For each of the other characters in code A, there will also be a relative adjustment of the armatures and resultant circuits through two or more sections to energize the magnets 16 in accordance with code B. It is to be particularly noted that the number of relay chains is equal to the greatest number (5) of positions in code B that are used together, and that if code B was arranged, for example, with no more than three positions utilized in combination, only three relay chains would be required.

While there have been shown and described and pointed out the fundamental novel features of the invention as applied to a single modification, it will be understood that various omissions and substitutions and changes in the form and details of the device illustrated and in its operation may be made by those skilled in the art without departing from the spirit of the invention. It is the intention therefore to be limited only as indicated by the scope of the following claims.

What is claimed is:

1. A code translator for translating representations of characters expressed in a first combinational code to representations of the characters expressed in a second combinational code, comprising a set of magnets, one for each position of the first code, a set of multiple armatures for each magnet provided with resting and operating contacts, said armatures and contacts being electrically interconnected to form a number of independent circuit chains equal in number to the greatest number of positions employed to represent a character in the second code, a second set of magnets, one for each position of the second code, energization of the magnets of the first set, in accordance with a character of the first code causing completion of a number of circuit paths, each through a different circuit chain, to energize the second set of magnets in accordance with the combination of said character in the second code.

2. A code translator for translating representations of characters expressed in a first combinational code to representations of the characters expressed in a second combinational code, comprising a set of magnets, one for each position of the first code, contacts adjustable by said magnets, said contacts being electrically interconnected to form a number of independent circuit chains equal in number to the greatest number of positions employed to represent a character in the second code, a set of current responsive devices, one for each position of the second code, said circuit chains being effective upon energization of said set of magnets in accordance with a character representation in the first code for operating said current responsive devices in accordance with the representation of the same character in the second code.

3. A code translator for translating representations of characters expressed in a first combinational code to representations of the characters expressed in a second combinational code, comprising sets of settable arms, one set for each position of the first code, contacts adjustable by said arms, a set of current responsive devices, one for each position of the second code, a circuit network interconnecting said contacts and said current responsive devices to form a number of independent circuit chains equal in number to the greatest number of positions employed to represent a character in the second code, and effective upon setting of said arms combinationally in ac-

cordance with a character of the first code for operating the current responsive devices in accordance with the representation of the same character in the second code.

4. A code translator for translating representations of characters expressed in a first combinational code to representations of the characters expressed in a second combinational code, comprising a set of magnets, one for each position of the first code, a set of multiple armatures for each magnet provided with resting and operating contacts, said armatures and contacts being electrically interconnected to form a number of in-

dependent parallel circuit chains equal in number to the greatest number of positions employed to represent a character in the second code, a second set of magnets, one for each position of the second code, energization of the magnets of the first set, in accordance with a character of the first code, causing concurrent completion of a number of circuit paths, each through a different circuit chain, to energize the second set of magnets in accordance with the combination of said character in the second code.

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