

M. C. HARLAN.
SECRET CODE APPARATUS.
APPLICATION FILED AUG. 14, 1903.

Fig. 1.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	0
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	0
X	M	O	C	I	\$	7	B	N	Q	5	S	W	.	J	T	6	L	3	:	U	E	G	2	D	:	P	K	8	"	R	?	-	Y	,	

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Fig. 3.

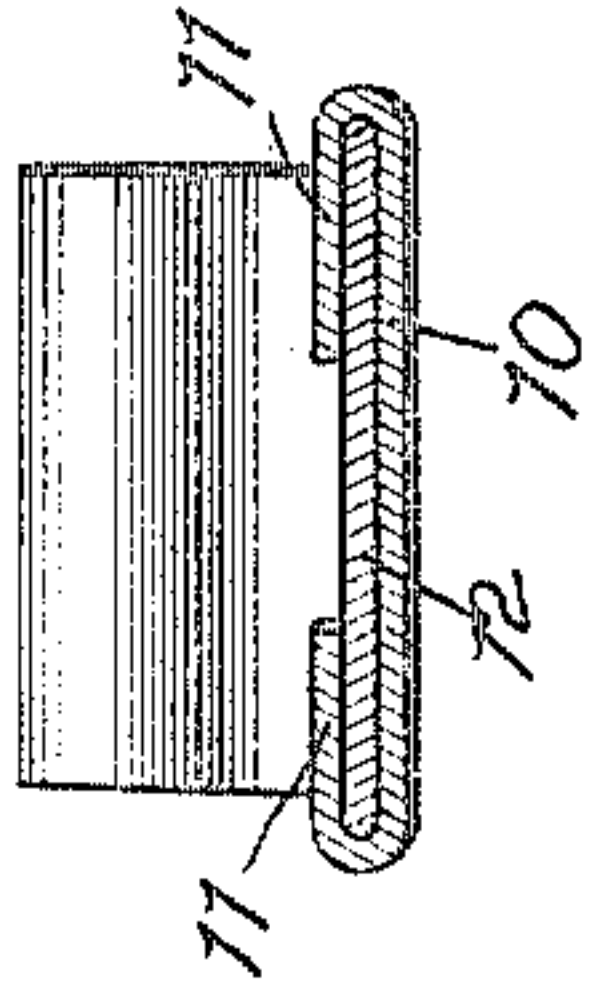


Fig. 4.

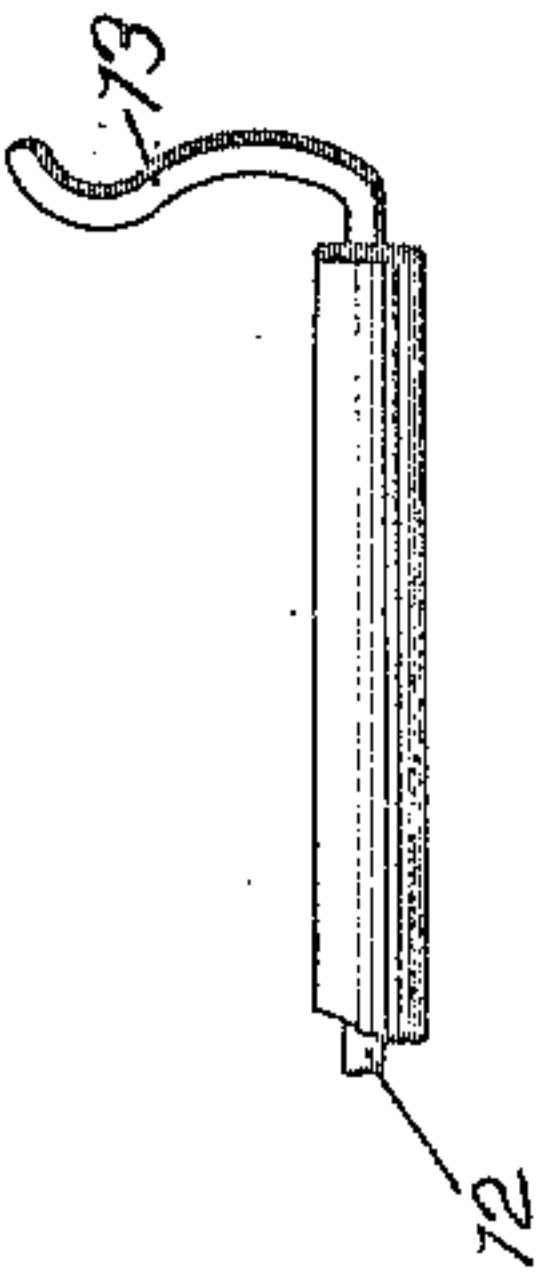


Fig. 2.

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	0										
70										A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	0
X	M	O	C	I	\$	7	B	N	Q	5	S	W	.	J	T	6	L	3	:	U	E	G	2	D	:	P	K	8	"	R	?	-	Y	,											
77										75										76										74															

Witnesses,
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Inventor, M. C. Harlan.
by Orwig Lane Atty.s.

UNITED STATES PATENT OFFICE.

MARTIN C. HARLAN, OF STUART, IOWA.

SECRET-CODE APPARATUS.

No. 847,767.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed August 14, 1903. Serial No. 169,448.

To all whom it may concern:

Be it known that I, MARTIN C. HARLAN, a citizen of the United States, residing at Stuart, in the county of Guthrie and State of Iowa, have invented certain new and useful Improvements in Secret-Code Apparatus, of which the following is a specification.

The objects of my invention are to provide a device of this class of simple, durable, and inexpensive construction by which a number of persons may communicate or correspond with each other by means of a combination of letters, numerals, or arbitrary symbols in such a way that the communication or correspondence will be unintelligible to others except by the use of the secret-code apparatus set to a position previously agreed upon between the parties, and my device is especially designed for use in connection with correspondence by letter-writing, telegraph, telephone, or the like.

A further object is to provide a code apparatus of this class in which the operators may readily and quickly change the code so as to be unintelligible to others not aware of the change.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 shows a top or plan view of the complete apparatus with the movable slide in its closed position. Fig. 2 shows a like view illustrating the movable slide in an extended position. Fig. 3 shows a transverse sectional view through the indicated line 3 3 of Fig. 1, and Fig. 4 shows an edge view of one end of the code apparatus.

Referring to the accompanying drawings, the body of the apparatus is preferably made of a flat metal strip 10, having its edges bent upwardly and inwardly to overlap the top portion of the body, said overlapping edges having a flat top surface 11 and their adjacent edges being separated from each other. The mechanical part of the apparatus is completed by means of the flat strip 12, moving longitudinally between the body 10 and the overlapping edge portions 11, and on one end of the slide is a handle 13. Formed on the upper one of the surfaces 11 I have provided a number of transverse dividing-lines 14, dividing said surface into squares, and in each

square a symbol of some kind is placed. Beginning with the left end of the device I have provided in each square a consecutively-arranged letter of the alphabet, and following this consecutively-arranged numerals. On the top face of the slide 12 between the edges 11, I have provided marks 15, dividing the exposed surface of the strip 12 into squares of like size, and in these squares I have placed the letters of the alphabet and numerals arranged exactly the same as those on the said face 11. On the remaining one of the faces 11 I have provided a series of marks 16, dividing said space into squares of exactly the same size as the other squares, and in said squares I have placed letters, symbols, numerals, &c., arbitrarily arranged.

In practical use the operators first simply agree upon the certain position in which the slide 12 is to be placed, and they also agree as to the use of the upper set of symbols or the lower set or an arbitrary arrangement including both. Assuming that it has been previously agreed that the slide 12 shall be drawn out-until the letter "A" on the slide is in line with the letter "K" of the top series, as shown in Fig. 2 of the drawings, and assuming, further, that it is desired to secretly transmit by correspondence or by the use of the telephone or telegraph the word "John," the transmitting operator uses the letters on the slide as his guide, and assuming, further, that it is agreed to use the top series of letters the transmitting operator finds the letter "J" on the slide and, reading upwardly, finds the letter "T" immediately above the letter "J," and the letter "T" is transmitted. The second letter "O" on the slide is in line with the letter "Y" above it, and the letter "Y" is transmitted. The letter "H" on the slide is in line with the letter "R" above it, and the letter "R" is then transmitted, and the letter "N" on the slide is in line with the letter "X" on the top row. Hence said letter "X" is transmitted. The receiving operator finds readily that the letter "T" is in line with the letter "J" on the slide, the letter "Y" is in line with the letter "O" on the slide, the letter "R" is in line with the letter "H" on the slide, and the letter "X" is in line with the letter "N" on the slide, so that he may read the secretly-transmitted message upon the slide, while the sending operator may readily read the secret-code message upon the letters at the top. This makes the trans-

mission of secret codes very easy, so that it may be done readily by persons not especially skilled in the use of secret codes. If the operators previously agree to use the set of arbitrary symbols at the bottom of the device, then the word "John" would be given by the transmitting operator, as follows, assuming, further, that the slide is in position shown in Fig. 2, "D L 2." Obviously the number of combinations of which this device is susceptible is very great, because each time the slide 12 is moved an entirely different set of symbols or a new combination is formed, and the transmitted message may be further varied by a previous agreement between the operators that the first letter shall be read from the top row, and the second from the bottom row, and so on, or it may be agreed that the first letter shall be read from one space to the right of the top row, the second one space to the left of the top row, the third one space to the right of the lower row, and the fourth one space to the left of the lower row, and a number of other combinations may readily be devised.

My invention is of particular advantage in connection with the use of rural telephones, in which it frequently happens that a large number of subscribers are provided with telephones on party-lines, which party-lines are so arranged that a person at one end of the telephone may hear everything transmitted from any one of the telephones on the same party-line, and even though each person on a particular party-line should be pro-

vided with the same code apparatus such person could, by previous arrangement with the receiving operator, arrange to transmit messages by the use of the secret-code apparatus with the slide at a certain predetermined place, as before described, and in this way it would be practically impossible for a person to decipher the transmitted message unless such person knew of the previously-arranged position of the slide or of the previously-agreed method of reading the code.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

A secret-code apparatus, comprising a body portion formed of a single piece of sheet metal with its margins inclined inwardly over its top with their edges spaced apart, transverse lines on the margins, those on one margin in line with those on the other, a series of consecutively-arranged letters and numerals on one margin between the lines, a series of alphabetically-arranged symbols on the other margin between the lines, a sheet-metal slide formed with an upturned handle on one end and provided on its central portion with transverse lines spaced apart the same as those on the margins and a series of consecutively-arranged numbers and letters on the slide between the margins corresponding to the series on one of the margins, for the purposes stated.

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Witnesses:

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