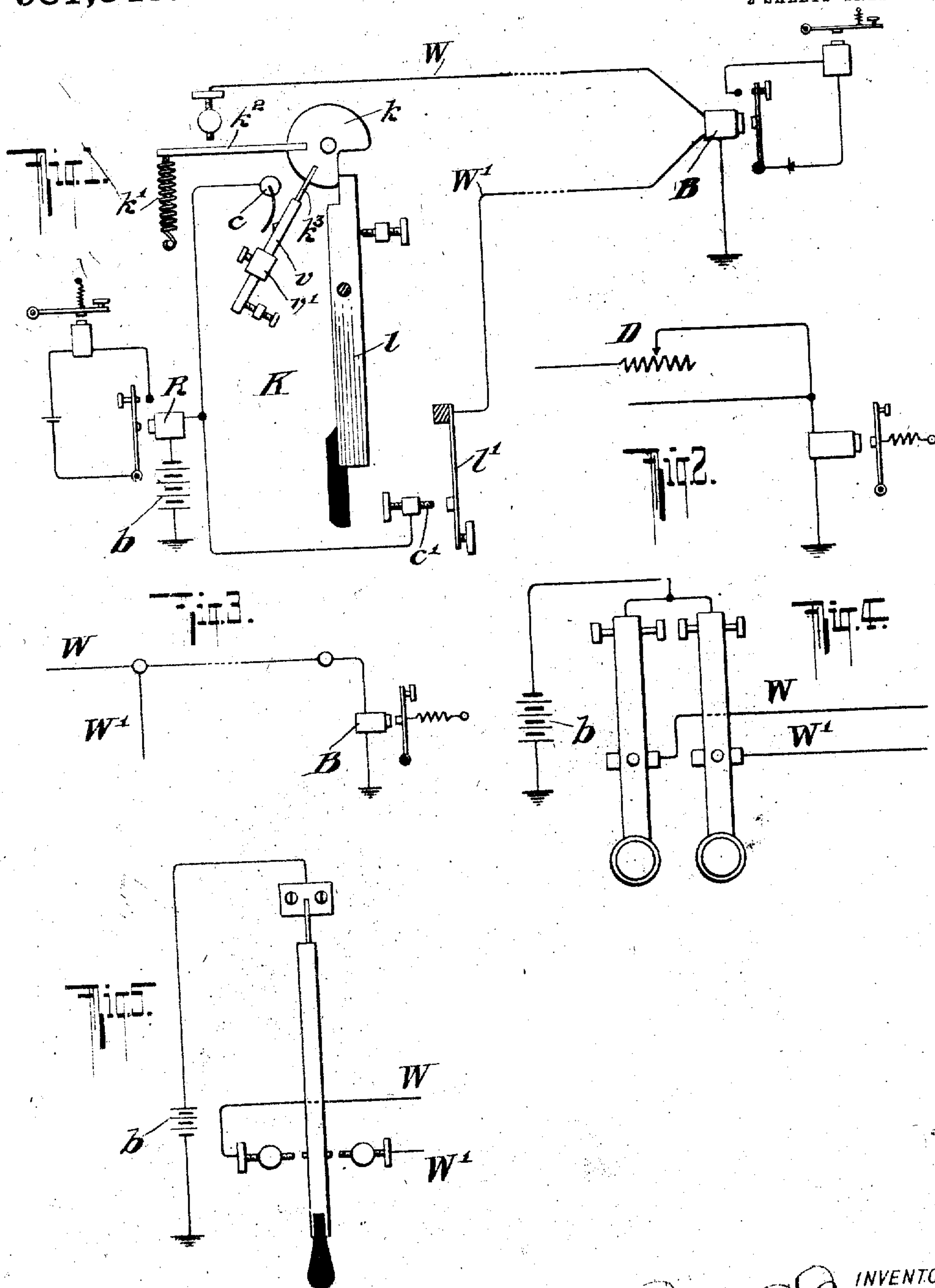


981,845.

P. B. DELANY.  
TELEGRAPHY.  
APPLICATION FILED MAR. 23, 1907.

Patented Jan. 17, 1911.

2 SHEETS—SHEET 1.



WITNESSES

L. F. Browning  
C. F. Nichols

INVENTOR  
Patrick B. Delany  
By Edmund C. Davidson  
ATTORNEY

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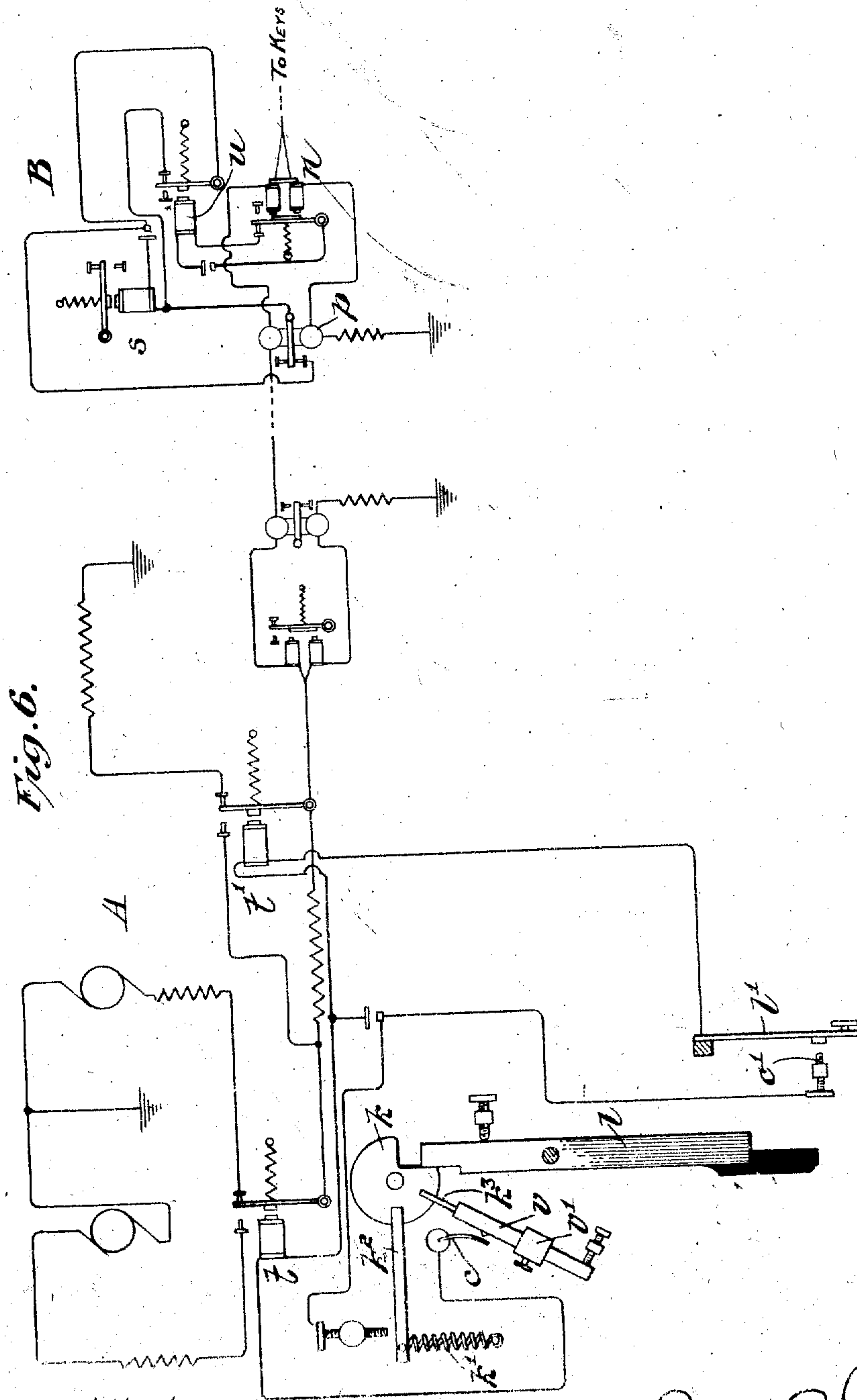


Fig. 6.

Attest:

*L. J. Browning*

by

*Patrick B. Delany* Inventor:  
*Edward C. Davidson* Atty



## UNITED STATES PATENT OFFICE.

PATRICK B. DELANY, OF SOUTH ORANGE, NEW JERSEY, ASSIGNOR TO DELANY TELEGRAPHIC TRANSMITTER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF MAINE.

TELEGRAPHY.

981,845.

Specification of Letters Patent.

Patented Jan. 17, 1911.

Application filed March 23, 1907. Serial No. 364,158.

To all whom it may concern:

Be it known that I, PATRICK B. DELANY, a citizen of the United States, residing in South Orange, county of Essex, State of New Jersey, have invented certain Improvements in Telegraphy, of which the following is a specification.

This invention relates particularly to secret transmission and involves the use of two wires or circuits for part or all of the way as may be deemed advisable. It is not assumed that this system would be used for ordinary commercial handling of telegraphic business, but rather for private circuits and on occasions when secrecy without the trouble and delay of conversion of messages into code and the loss of time in deciphering is desirable, and where the absolute protection gained would more than warrant the use of an extra wire. In times of disturbance and excitement, whether of labor, business or politics, and in state affairs this system would afford instantaneous communication in plain language without possibility of "leakage" or successful wire tapping between the sending and receiving instrument. This result is accomplished by sending the dots and the dashes of the Morse code over separate wires and if necessary over different routes to the point to be reached. Thus a message for Chicago might have the dots go via Albany and Buffalo while the dashes were sent via Philadelphia and Pittsburg, both to reach the receiver at Chicago in their regular order to form Morse characters or letters precisely as though they had come over a single wire in the ordinary way, or instead of sending the dots over one circuit and the dashes over another, the impulses whether dots or dashes comprising a letter may be alternated over the two circuits. The arriving signals are recorded in their proper sequence by a common receiver exactly as if they had been sent over a single circuit in the ordinary way.

In the accompanying drawings, Figures 1, 2, 3, 4, 5 and 6, show diagrammatically different applications of the invention.

Referring to Fig. 1, K is an auto dot key. 7 is the dot key-lever the end of which is adapted to strike a projection on a pivoted block  $k$  held in normal position by a spring

$k'$  applied to a rigid arm  $k^2$  projecting from the block. In the block is fixed a spring blade  $k^3$  carrying a stiff arm  $v$  which may be provided with an adjustable weight  $v'$ . When the finger piece of lever  $l$  is pushed to the right the block  $k$  is rocked until arrested by impact of  $k^2$  against its limiting stop, the action of which is to set  $v$  in vibration to make dot contacts with  $c$  which is connected through the Morse relay R to the transmitting battery  $b$ . These dots go over wire W via one route to the receiver B at the distant station. When dash lever  $l'$  is pressed against its contact  $c'$  dashes are sent over wire W' to the same receiver.

Fig. 2 represents the same organization as Fig. 1 but with a balancing arrangement D at the receiving end. Should the wire W for instance be of greatly lower resistance than wire W' compensation can be made by the adjustable resistance D. As the system is operable under widely different circuit conditions balancing of any kind will rarely be necessary but if it should, either resistance, capacity or inductance may be added to either wire in ways well known.

Fig. 3, shows the system as operated over two wires for a part of the distance and then over one wire.

Fig. 4, shows a two lever key with which the dots may be sent over one line and the dashes over the other, or the dots and dashes may be regularly alternated.

Fig. 5 shows a neutrally poised key lever which may be used for sending the signals alternately as in Fig. 4.

Obviously this system may be applied to quadruplex, duplex, multiplex or any circuits however organized, that is, in the case of a quadruplex it is only necessary to make both receiving relays operate the same sounder, as shown in Fig. 6; or the receivers of two duplex circuits may be combined to work a single sounder in the same way. At station A the dot making vibrator  $k$  and its contact operate transmitter  $t$  of the No. 1 or polar side of a quadruplex, while dash lever  $l'$  operates the transmitter  $t'$  of the No. 2 or neutral side. At the receiving station B, the polarized relay  $p$ , operated by transmitter  $t$ , records the dots at sounder S, while neutral relay  $n$  operated by trans-

mitter  $t'$  records the dashes on sounder S, through the intermediate instrument  $u$ , known as the "bug" catcher.

I claim:—

- 5 In telegraphy the method of transmitting messages which consists in sending part of a letter or character over one circuit and another part of said letter or character over

another circuit and uniting both parts in their proper relation at a common receiver, 10

In testimony whereof, I have hereunto subscribed my name.

PATRICK B. DELANY.

Witnesses:

EDWARD C. DAVIDSON,

L. F. BROWNING.