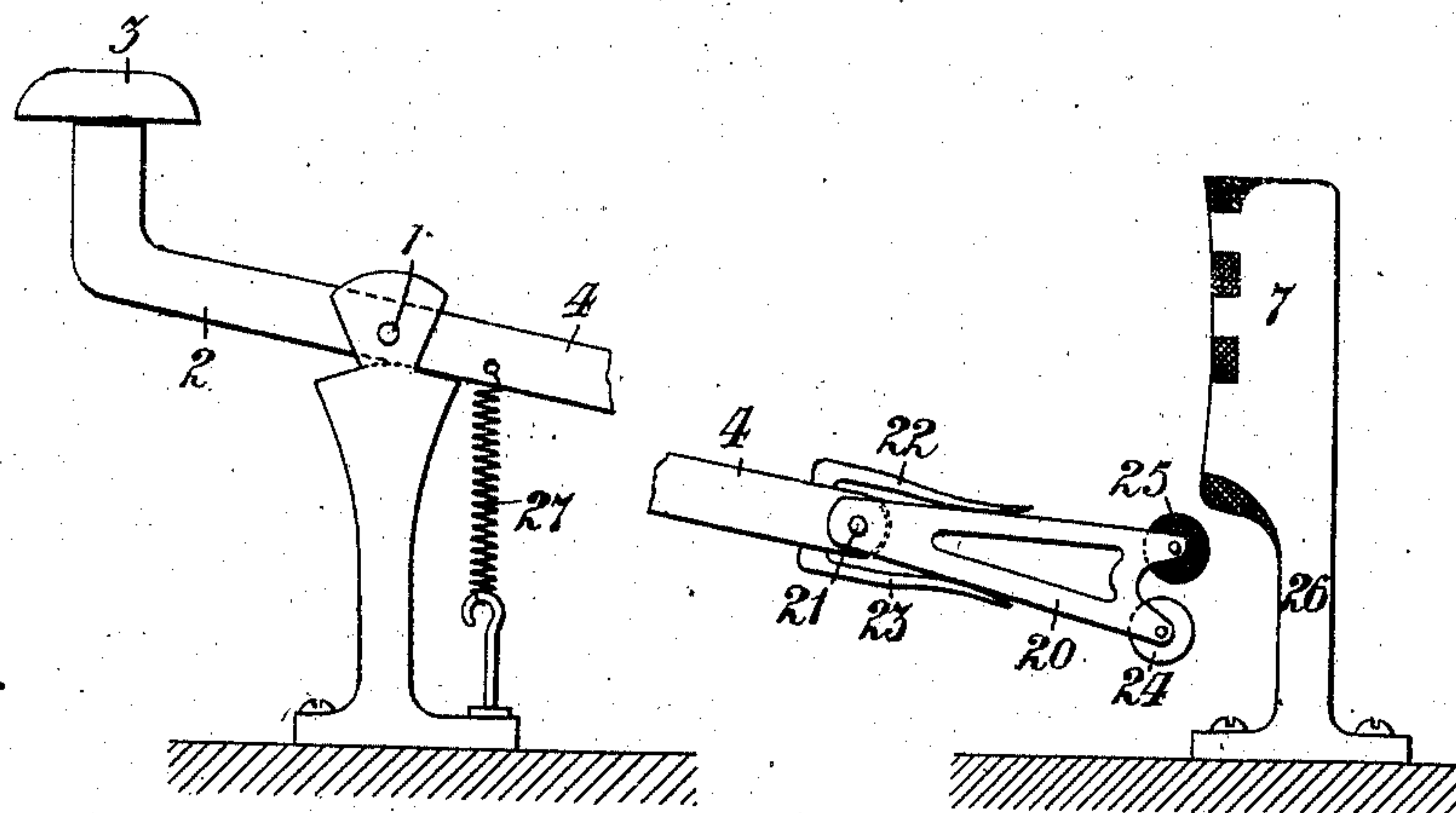


No. 846,464.

PATENTED MAR. 12, 1907.

A. GENTILI.  
TELEGRAPHIC INSTRUMENT AND THE LIKE.

APPLICATION FILED JULY 17, 1905.



Witnesses

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# UNITED STATES PATENT OFFICE.

ALBERTO GENTILI, OF VENETO, ITALY.

## TELEGRAPHIC INSTRUMENT AND THE LIKE.

No. 846,464.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed July 17, 1905. Serial No. 270,135.

*To all whom it may concern:*

Be it known that I, ALBERTO GENTILI, a subject of the King of Italy, residing at Vittorio, Veneto, Italy, have invented certain new and useful Improvements in and Relating to Telegraphic Instruments and the Like, of which the following is a specification.

This invention relates to a Morse key, supporting a pivoted contact-lever, which by movement in one direction slides upon a contact-surface and produces one or more contacts, while by its movement in the opposite direction the contact-lever passes along the contact-surface without touching it and without making contact.

The objects of the invention are to make possible a very quick transmission of signals by a simple construction and by certainty of operation of the key.

According to the invention the contact-lever is provided with two parts, only one of which is able to close the contact, and the pivoted contact-lever is applied in such a manner to the key that the distance between the parts and the pivot of the contact-lever is shorter than the distance between the parts and the pivot of the key. The contact-surface is so disposed that by movement of the key the parts can slide upon one or more surfaces in such manner that owing to the resistance of the contact-surface the contact-lever is compelled to be displaced relatively to the key in one or the other direction, according to the direction of its movement. As the movement of the contact-lever is always in a direction opposite to the direction of movement of the key, because the contact of the one or the other of the two parts upon the contact-surface opposes to the taking with of the contact-lever by the key, the part which is behind in the direction of the movement of the key remains always distant from the contact-surface. According to the direction of the movement of the key only the part which makes contact or the part which does not make contact is in touch with the contact-surface. The part which is able to close the contact is in touch with the contact-surface only on the movement of the key in one direction, this being necessary for the proper operation of the apparatus. The parts can take the form of small wheels or rollers, one of conducting and the other of insulating material. By the end of the movement of the key in each direction the said parts, wheels, or rollers come out of touch with the contact-

surface and in this moment a spring or other device obliges the contact-lever to return to a middle position in relation to the key in preparation for the reversing of the contact-lever.

The drawing shows a side elevation of a single key. The key, which is connected with a battery or other source of current, moves on the pivot 1. The arm 2 is provided with the press-button 3, while the other arm 4 carries the contact-lever 20, which is displaceable on the pivot 21 and subject to the action of the springs 22 and 23 in such a way that normally the contact-lever 20 lies in alinement with the arm 4. The contact-lever 20 is provided with two freely-mounted wheels 24 and 25 in the same vertical plane. The wheel 25 is provided of insulating material, and the wheel 24 is of metal and through its connection with the contact-lever is also in conducting connection with the arm 4.

When the key is depressed, the wheel 25 touches against the curved contact-surface 7, which is provided on the fixed metal pillar 26, which is connected with the line. The contact-lever 20 is therefore obliged to make a slight movement downward, in pursuance of which during the upward movement of the arm 4 only the insulating-wheel 25, and not the conducting-wheel 24, is in touch with the curved contact-surface 7. On the contrary, when the arm 4, under the influence of the spring 27, moves downward only the wheel 24 slides upon the contact-surface 7, and as this surface is provided with insulating-insertions a certain number of longer or shorter closures of the circuit take place, accordingly to the length and disposition of the insertions. Each time when the wheels 25 and 24, moving upward or downward, have passed the contact-surface 7 one of the springs 22 23 brings the contact-lever 20 to its normal mid-position. The column 26 can be provided with more than one contact-surface, each with different insulating-insertions, so that by every suitable change of position of the column a different signal is to be sent by the same key.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A Morse key consisting of a pivoted key-lever a contact-lever pivoted thereto, said contact-lever being provided at its extremity with two rollers one of conducting and the other of insulating material, and a contact-piece with which one or other of the rollers



contact so that upon the movement of the key in one direction contact is made between the contact-piece and the key, while upon its movement in the reverse direction no contact is made substantially as specified.

5 2. A Morse key consisting of a pivoted key-lever, a contact-lever pivoted thereto and maintained in position by means of two oppositely-disposed springs, said contact-lever  
10 being provided at its extremity with two rollers, one of conducting and the other of insulating material, and a contact-piece with which one or other of the rollers contact, so

that upon the movement of the key in one direction contact is made between the contact- 15 piece and the key while upon its movement in the reverse direction no contact is made substantially as specified.

In testimony whereof I have hereunto signed my name to this specification in the 20 presence of two subscribing witnesses.

ALBERTO GENTILI.

Witnesses:

G. L. LULRKE,  
H. D. JAMESON.