

THOMAS A. EDISON.

Improvement in Printing-Telegraphs.

No. 126,535.

Patented May 7, 1872.

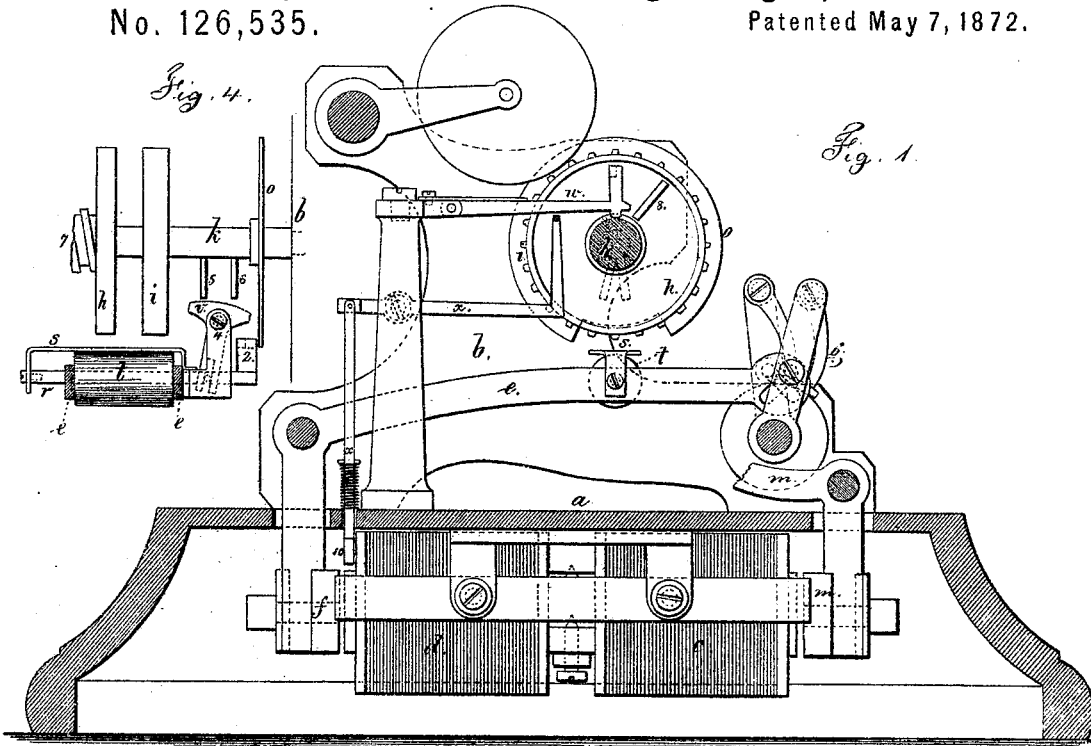


Fig. 1.

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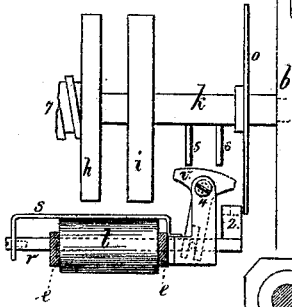


Fig. 4.

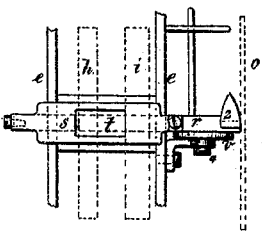


Fig. 3.

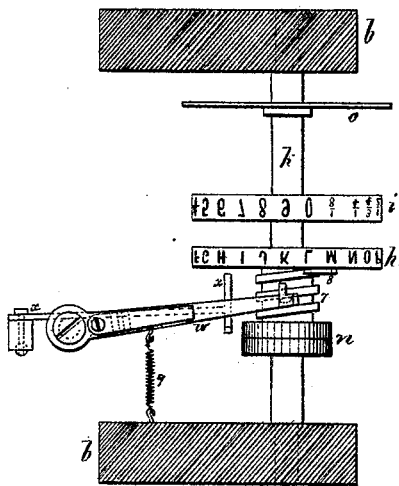


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF NEWARK, NEW JERSEY, ASSIGNOR TO GOLD AND STOCK TELEGRAPH COMPANY, OF NEW YORK CITY.

IMPROVEMENT IN PRINTING-TELEGRAPHS.

Specification forming part of Letters Patent No. 126,535, dated May 7, 1872.

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Newark, in the county of Essex and State of New Jersey, have invented and made an Improvement in Printing-Telegraphs; and the following is declared to be a correct description of the same.

In my present invention I make use of two type-wheels, revolving with their shaft, and employ an impression-pad with a sliding shield, in which is an opening. This shield can be changed at certain points in the rotation of the type-wheel, so as to allow the impression to be made from one of the type-wheels through the opening in the shield, while the other is prevented from impressing the paper by the intervening shield. I also make use of an unison mechanism that is brought into action by two or more rotations of the type-wheels, but thrown out of action by the act of moving the pressure-lever or charging its magnet. By this means, if pulsations are sent through the line sufficient to rotate the type-wheels twice or more times without an impression being taken, the type-wheels will be moved around until the stop is operative, and then the same will be stopped and the pulsations may be continued, for the purpose of bringing into unison other type-wheels, in the same electric current, that may not be correctly set; and as soon as the circuit is reversed, or the impression or other magnet charged, all the unison devices in the circuit are simultaneously liberated; and this unison mechanism is not operative each rotation of the type-wheel; hence, as an impression is usually made each rotation, or nearly so, of the type-wheel, the unison mechanism will not come into play except when the rotation is continued for effecting that unison.

In the drawing, Figure 1 is a vertical section of my instrument. Fig. 2 is a plan of the type-wheels and unison; Fig. 3 is a plan of the pad and shield; and Fig. 4 is an elevation of the device for moving said shield.

The bed *a*, frames *b b*, type-wheel magnet *c*, impression-magnet *d*, and the connections to the main line are to be of any desired character; and where the printing-magnet is made operative by reversing the polarity of the current, the devices for directing said current may

be such as shown in patents heretofore granted to me. The impression-lever *e*, armature *f*, and feeding-clamps *g*, for the paper, may also be of any desired character. The type-wheels *h i* are upon the shaft *k*, and they are moved by a step-by-step movement actuated by the armature *l* and lever *m*. *n* is the ratchet-wheels for the pawls on the lever *m*; these parts do not constitute any part of my present invention. Upon the shaft *k* is a disk, *o*, revolving with such shaft, and notched at one side; and upon the impression-lever is a slide, *r*, carrying the shield *s* above the pressure-pad *t*. Upon the end of the slide *r* is a cam, *2*, that can pass through the notch in the disk *o*; but this can only be done when the type-wheel is at a certain point; hence the shield *s* will be held by this cam and slide, with the opening in such shield under one or other of the type-wheels. A T-shaped lever, *v*, is mounted upon a pivot, *4*, upon the lever *e*, and, by a slotted end, acts upon this slide *r*; and there are two pins, *5* and *6*, projecting from the shaft *k* and contiguous to this T-lever *v*, so that, if the impression-lever is moved when one pin, *5*, is over said lever *v*, the slide and shield will be moved one way; and if the type-wheel is turned one space further, so as to bring the other pin, *6*, over this lever *v*, the movement of the slide and shield will be the other way; hence the operator can bring the shield so as to print from one wheel or the other by simply rotating the type-wheels around to the proper point, and then giving motion to the impression-lever. There is a screw-thread, *7*, upon the shaft *k*, and a tooth upon the lever *w* takes therein; there is also a block or stop, *8*, upon the type-wheel. The spring *9* draws the lever *w* away from *8* each time the tooth is lifted out of the screw *7*; hence, according to the number of turns of the screw-thread so the type-wheels will have to be rotated before the end of the lever *w* will be brought up far enough to arrest the stop *8*; and each time the lever *w* is raised, it is drawn back to the beginning of the screw-thread; hence, if there is a connection between *w* and the impression-lever, or the impression-magnet, the stop *8* and lever *w* will not come into contact when the instrument is being employed in printing; but when the pulsations are contin-

ued through the type-wheel magnet, all the type-wheels in the circuit will be stopped at the same point, as before mentioned. The lever *r* and armature 10 at the side of the core of the magnet, form a convenient means for lifting the lever *w* and its tooth out of the screw 7; and this may be made to operate by a feeble pulsation, so as not to move the impression-lever.

I claim as my invention—

1. The sliding shield actuated by the T-lever *r* and pins 5 and 6, on the shaft *k*, in combination with the two type-wheels, substantially as set forth.

2. The revolving disk *o* and the cam 2, in com-

bination with the shield *s* and type-wheels, substantially as set forth.

3. A unison stop actuated by a screw upon the type-wheel shaft, substantially as set forth.

4. The lever *x* and armature 10, at the side of the core of the magnet *d*, in combination with the unison-lever *w*, for moving the same, substantially as specified.

Signed by me this 13th day of November, A. D. 1871.

T. A. EDISON.

Witnesses:

CHAS. H. SMITH,
GEO. T. PINCKNEY.