

T. A. EDISON.

Improvement in Printing-Telegraphs.

No. 131,335.

Patented Sep. 17, 1872.

Fig. 2.

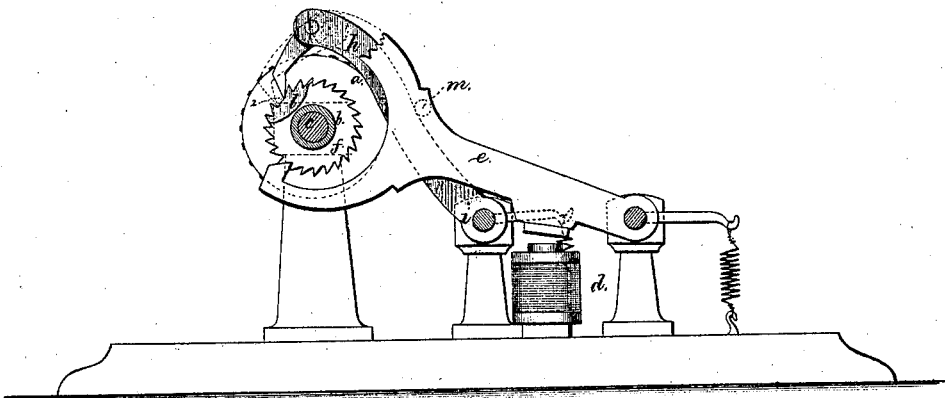
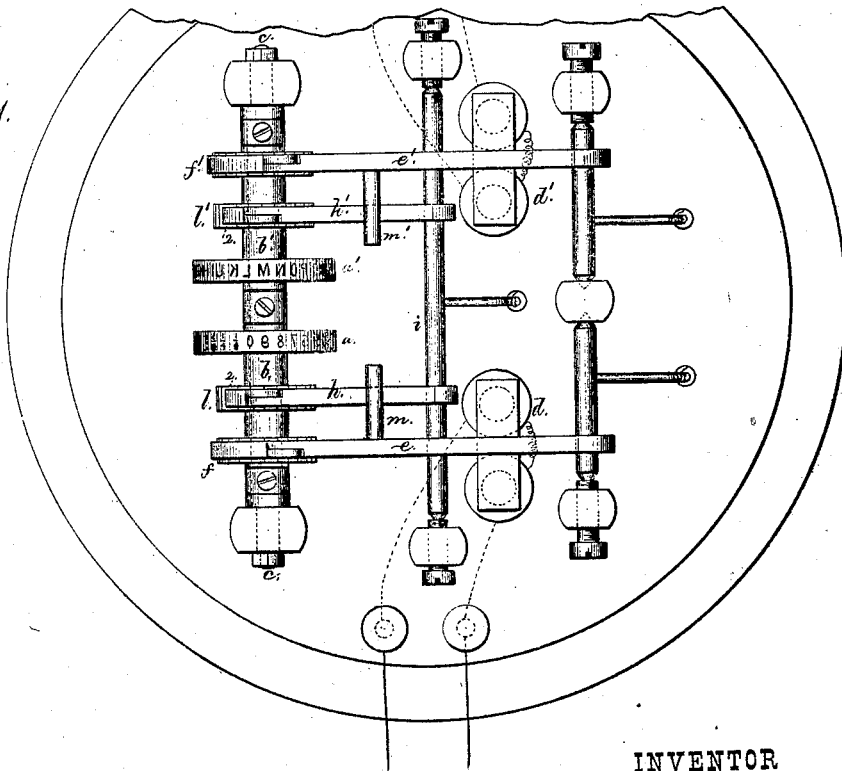


Fig. 1.



INVENTOR

Thomas A. Edison,

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Witnesses.  
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# UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF NEWARK, NEW JERSEY.

## IMPROVEMENT IN PRINTING-TELEGRAPHS.

Specification forming part of Letters Patent No. 131,335, dated September 17, 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 an Improvement in Printing-Telegraph Instruments; and the following is hereby declared to be a full and correct description of the same.

This instrument is of that class in which two type-wheels, rotated by separate step-by-step movements, are employed to print in two lines upon one strip of paper. My improvement relates to employing an auxiliary lever and ratchet-wheel in connection with each of the usual type-wheel levers, and these auxiliary levers are so arranged that when either of the type-wheel levers is vibrated by its magnet to rotate the type-wheel the other type-wheel is rotated and brought to unison by means of the auxiliary lever acting upon its ratchet-wheel, and rotating said wheel until its pawl or pallet ceases to turn said wheel, in consequence of a tooth being removed from the same. The space where the tooth is removed from the ratchet-wheel is at a place in such relation to the zero or unison point of the type-wheel that when said ratchet-wheel stops revolving the type-wheel is at zero, and is in unison with the transmitter, and so remains ready to be brought into action by that instrument.

In the drawing, Figure 1 is a plan of my improved instrument, and Fig. 2 is a sectional elevation of the same.

$a a'$  are the type-wheels secured to the sleeves  $b b'$ , which revolve upon the stationary shaft  $c$ , when actuated by their respective electro-magnets  $d d'$ , through the armatures and levers  $e e'$  and ratchet-wheels  $f f'$ . The magnets  $d d'$  are in independent electric circuits, and either type-wheel may be revolved, stopped, and printed from, according to which magnet is energized, as heretofore usual.  $h h'$  are the auxiliary levers upon the shaft or fulcrum  $i$ , and  $l l'$  are their respective ratchet-

wheels secured to the sleeves  $b b'$ ; and from each wheel  $l l'$  a tooth is removed, as at 2. These levers  $h h'$  are contiguous to the levers  $e e'$ , and pins  $m m'$  project from the same and rest upon said levers  $h h'$ . When either type-wheel is in use—say the wheel  $a'$ —its lever  $e'$  is vibrated by the magnet  $d'$ , and its pin  $m'$  will vibrate the auxiliary lever  $h'$ , and, through the shaft  $i$ , will vibrate the lever  $h'$  and rotate the ratchet-wheel  $l$  and its sleeve and type-wheel  $a$ ; and said wheel  $l$  will be rotated until the pawl or pallet of  $h$  arrives at the space 2, where the tooth is removed; and said pawl will then move up and down in said space without turning the wheel  $l$ , if the lever  $h$  continues to be vibrated. The type-wheel  $a$  is now at zero and in unison with the transmitter, ready to be brought into action by that instrument. The wheel  $a$ , when in use, acts, by its lever  $e$  and pin  $m$ , to vibrate the lever  $h'$ , to rotate the ratchet-wheel  $l'$  and bring the type-wheel  $a'$  to unison.

The printing-lever and its magnet are not shown in the drawing. They may be of any desired character, and the magnet may be in a separate electric circuit or in a circuit to the magnets  $d$  or  $d'$ . Ordinarily the change in operating the type-wheels will take place at the zero-points; hence the levers  $h h'$  will not be operative unless there has been a loss in the movement of the type-wheel that is thrown out of action.

I claim as my invention—

Two type-wheels separately revolved by a step-by-step motion, in combination with a separate lever or levers operated by the mechanism that is moving one type-wheel to set the other type-wheel, substantially as specified.

Signed by me this 15th day of June, A. D. 1872.

T. A. EDISON.

Witnesses:

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