T. A. EDISON.

Improvement in Printing-Telegraphs.

No. 131,336. Patented Sep. 17, 1872.

Fig. 2.

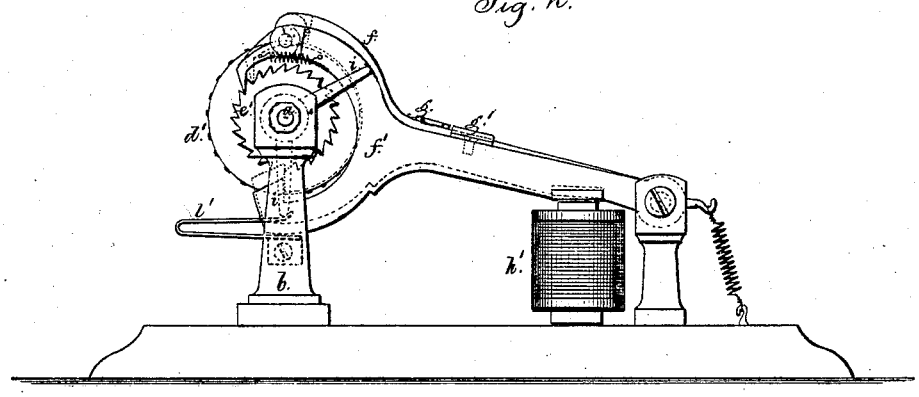
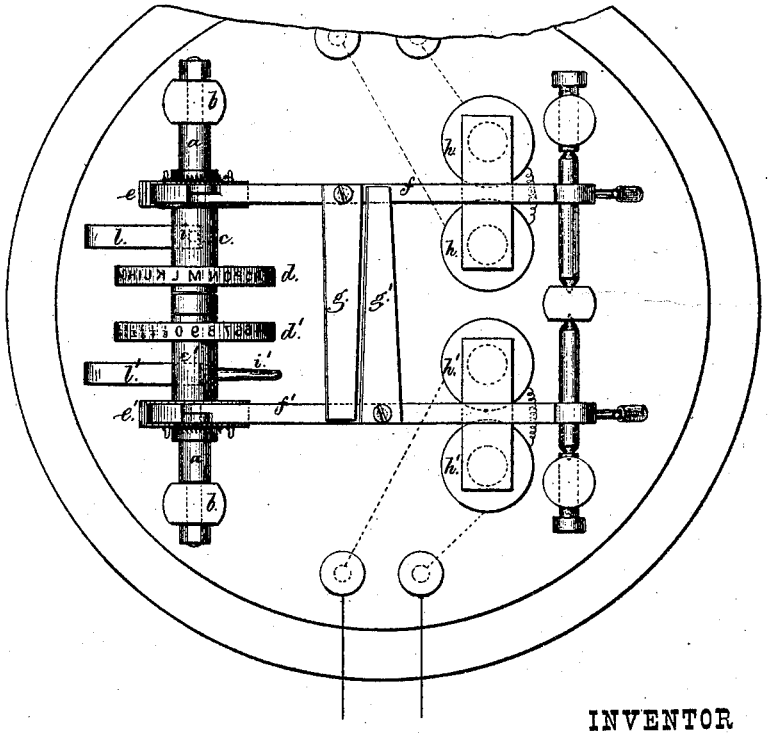


Fig. 1.



Witnesses.

Chas. A. Smith

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INVENTOR

Thomas A. Edison

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ATTY.

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN PRINTING-TELEGRAPHS.

Specification forming part of Letters Patent No. **131,336**, 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.

In this instrument there are two type-wheels—one a letter-wheel, the other a figure-wheel—both revolving upon a shaft, and each sleeve or shaft and its wheel is actuated by a separate step-by-step movement.

My invention relates to two type-wheel levers connected to each other by yielding or spring arms, so that when one type-wheel lever is vibrated by its magnet and armature to rotate its type-wheel, its spring-arm will act to vibrate the other type-wheel lever and rotate its type-wheel until said wheel is brought to the zero-point and arrested by a yielding unison stop, when the spring-arm will yield, not being of sufficient strength to move said lever against the resistance offered by the unison stop. By this arrangement of parts, if the type-wheel that has been in use is not in unison, the other type-wheel moves it forward until it reaches the zero-point, and is, in unison with the transmitter, 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 an elevation of the same.

a is a stationary shaft sustained in the standards *b b*, and upon this shaft are sleeves *c c'*, to which are secured the type-wheels *d d'* and ratchet-wheels *e e'*, respectively; or two short shafts may be employed with a central support. The type-wheel *d* is rotated in its step-by-step movement by the electro-magnet *h*, armature and lever *f*, and wheel *e*, and the type-wheel *d'* is rotated by the magnet *h'*, armature and lever *f'*, and wheel *e*, and these magnets *h h'* are in separate electric circuits, or otherwise rendered operative upon their respective armatures. *g* is a spring-arm secured to the lever *f*, and at its outer end resting upon the lever *f'*. *g'* is a second arm secured to the lever *f'*, and resting at its outer end upon the lever *f*. *i i* are the unison arms upon their respective sleeves *c c'*, and *l l'* are yielding stops for said arms to take against in their movement.

If the type-wheel *d'* is in use, and its lever *f'* vibrated by its magnet *h'*, the lever *f* will also be vibrated by the spring *g'* pressing upon the same, and it will continue to actuate said lever and rotate the type-wheel *d* until the arm *i* takes against the stop *l*, as shown in Fig. 2, and stops said wheel at zero. The spring *g'* now ceases to move the lever *f*, but yields each time the lever *f'* is drawn down by its magnet, said arm not having sufficient strength to move the lever *f* and turn the ratchet *e* one tooth to carry the arm *i* past the yielding stop *l*. The arm *g* acts in a similar manner when the lever *f* is vibrated and the type-wheel *d* is in use, and brings the type-wheel *d'* to zero.

It is to be understood that the wheel being printed from is not stopped by the arm *i* or *i'* taking against the stop *l* or *l'*, because the magnet is sufficiently powerful to overcome the resistance of the spring-stop and carry the arm *i* or *i'* past said stop.

The printing may be effected in any desired manner, such as by a printing lever and pad actuated by an electro-magnet in a circuit separate from the magnets *h* or *h'*, or in any of the known modes.

One spring attached at both ends might be employed, instead of the two springs *g g'*.

I claim as my invention—

Two type-wheels actuated by separate step-by-step movements, in combination with a spring arm or arms extending from one lever to the other, and a yielding unison stop for each type-wheel, substantially as set forth.

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

T. A. EDISON.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.