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H. VAN HOEVENBERGH.

Improvement in Telegraph Printing Apparatus.

No. 122,687.

Patented Jan. 9, 1872.

Fig: 1.

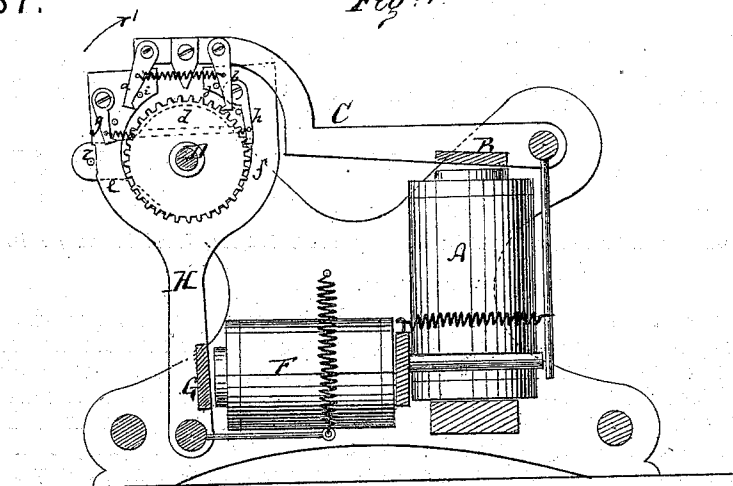


Fig: 2.

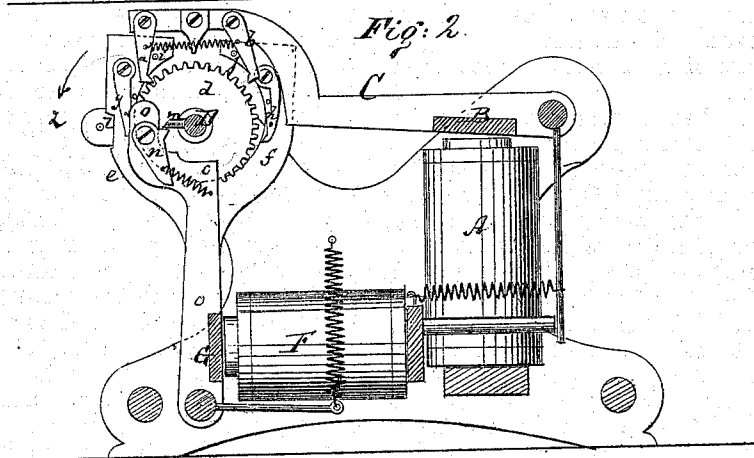
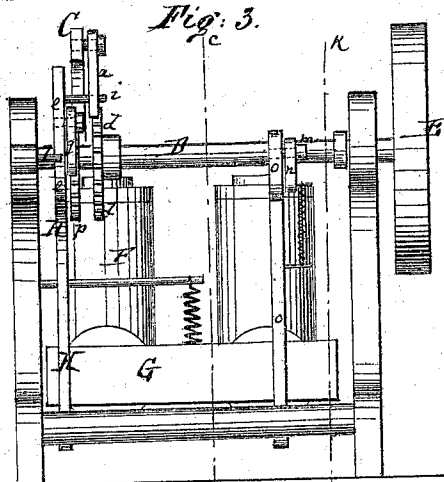


Fig: 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY VAN HOEVENBERGH, OF NEW YORK, N. Y.

IMPROVEMENT IN TELEGRAPH-PRINTING APPARATUS.

Specification forming part of Letters Patent No. 122,687, dated January 9, 1872.

Specification describing certain Improvements in Telegraph-Printing Instrument, invented by HENRY VAN HOEVENBERGH, of the city, county, and State of New York.

Figures 1 and 2 are vertical transverse sections of my improved telegraph-printing instrument, the lines *c c* and *k k* in Fig. 3 indicating, respectively, the plane of section. Fig. 3 is a front elevation of the same.

Similar letters of reference indicate corresponding parts.

This invention has for its object to produce a simple and convenient mechanism for reversing the motion of the type-wheel of a telegraph-printing instrument. It is intended for use more particularly on instruments for telegraphing stock quotations, &c., where it is desirable to have a reversible type-wheel, and thereby avoid frequent necessity of making almost complete revolutions to reach types that may be brought to action by a short back movement. My invention consists in a new revolving gear actuated by a separate current through an independent wire, and in a new double-pawl mechanism for actuating the type-wheel shaft. The invention also consists in the application to the latter of a stop whereby its motion is arrested if and as long as it is not in concert with the other instruments that are operated simultaneously by the same keys.

A in the drawing is the electro-magnet; B, the armature; C, the armature-lever; D, the type-wheel shaft; and E, the type-wheel of a telegraph-printing instrument, of ordinary construction. The armature-lever carries two pawls, *a* and *b*, of which one is in contact with a toothed wheel, *d*, on the type-wheel shaft, for imparting intermittent rotary motion to the same during the vibrations of the armature C. F is another electro-magnet, actuating an armature, G, which is at right angles to the armature C, and under or above the shaft D. The armature-lever H, of G, is forked at its free end and embraces the shaft D. On its prongs *e f* it carries spring clicks *g* and *h*, respectively, of which only one at a time can be in contact with the toothed wheel *p* of the same number of teeth as *d*, and also mounted upon the shaft D. There are, also projecting pins, *i* and *j*, on the prongs *e f*, respectively. The electro-magnet F is connected with a separate

wire, which may be provided with an independent key or connected with a friction-band on the transmitter, or otherwise conveniently arranged, so that a current may be established or interrupted through it at the will of the operator. When the magnet F is not changed the armature G is held away from it by springs or weights against a stop, *l*, and thereby carries the pin *i* against the pawl *a*, lifting the latter off the wheel *d*. The click *g* is then, also, carried away from the wheel *p*, but the pawl *b* and click *h* are in contact with the wheels *d p*, respectively, as shown in Fig. 1. When the armature B is set in motion the pawl *b* will act on the type-wheel and cause it to turn in the direction of the arrow 1, Fig. 1. When the motion of the type-wheel is to be reversed a current is caused to pass through the magnet F which will attract the armature G, and thereby carry the pawl *a* and click *g* in contact with, and the pawl *b* and click *h* off the wheels *d* and *p*, respectively, as shown in Fig. 2. The motion of the armature B will then cause the pawl *a* to act and turn the wheel in the direction of the arrow 2, Fig. 2. The shaft D is provided with a projecting pin, *m*. The same is to come against a spring catch, *n*, that is pivoted to an arm, *o*, of the armature G. In case the latter is attracted to its magnet the pin *m*, in revolving with the arrow 2, will reach the catch *n*, and be arrested thereby. An automatic current-breaker is provided on the wire of the magnet F, for the purpose of releasing the armature G for an instant, to permit the pin *m* to pass the catch *n*, provided the type-wheel is in the same position as all the others with which it is connected. If one or the other printing apparatus is ahead of the others, which often occurs, it will be arrested by its catch *n* until it is again in concert with the rest, when all the catches *n* are simultaneously moved to let the pins *m* pass.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The lever H, affixed to an armature, G, of a magnet, F, having its own wire, and provided with pins *i* and *j*, or equivalent devices for setting one of two actuating pawls *a b* out of action, substantially as herein shown and described.

2. The type-wheel armature-lever C, having pawls *a b* pivoted to the arm, and combined with a second lever, having stops to throw either pawl into gear with the toothed wheel, as described.

3. The stop *m* on the shaft D, combined with the catch *n* on the arm *o* of the armature G,

substantially as and for the purpose herein shown and described.

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Witnesses:

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