(No Model.)

R. N. DYER.

PRINTING TELEGRAPH.

No. 332,649. Patented Dec. 15, 1885.

Fig. 1.

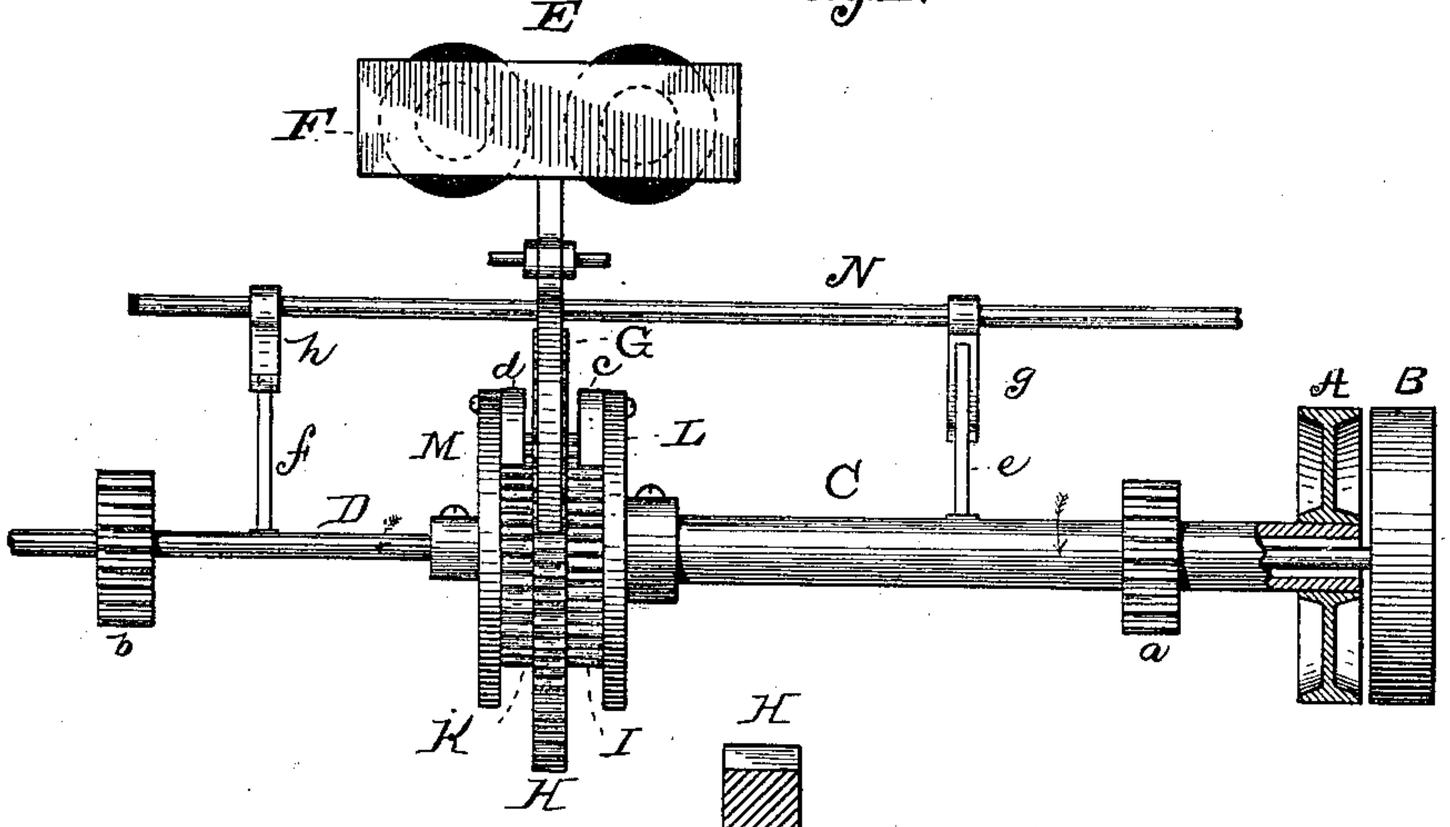


Fig. 2.

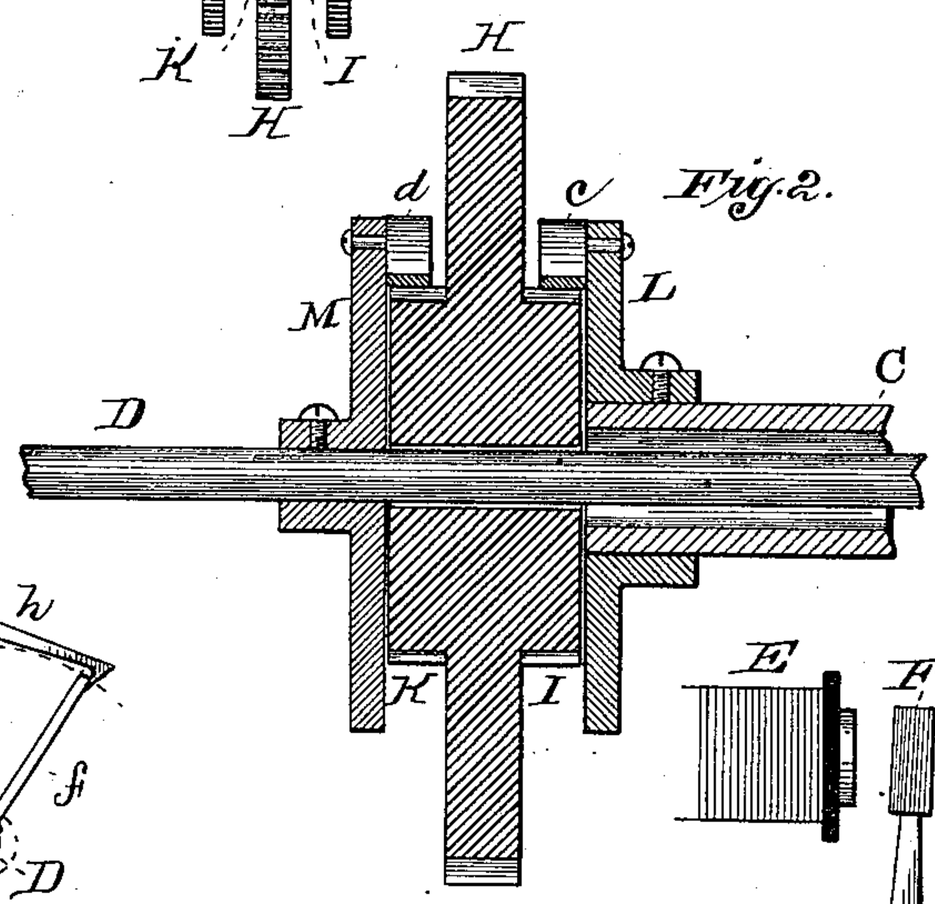


Fig. 5.

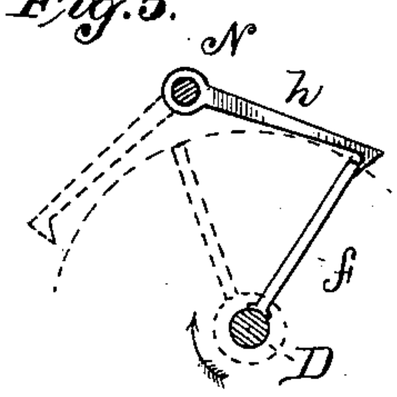


Fig. 4.

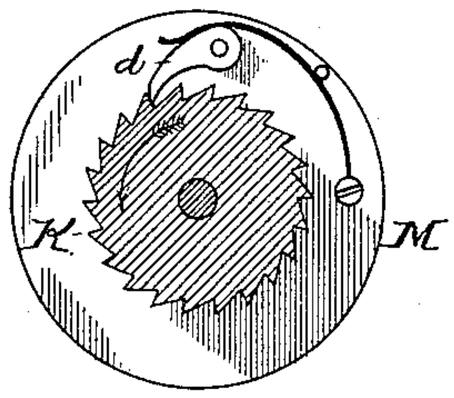
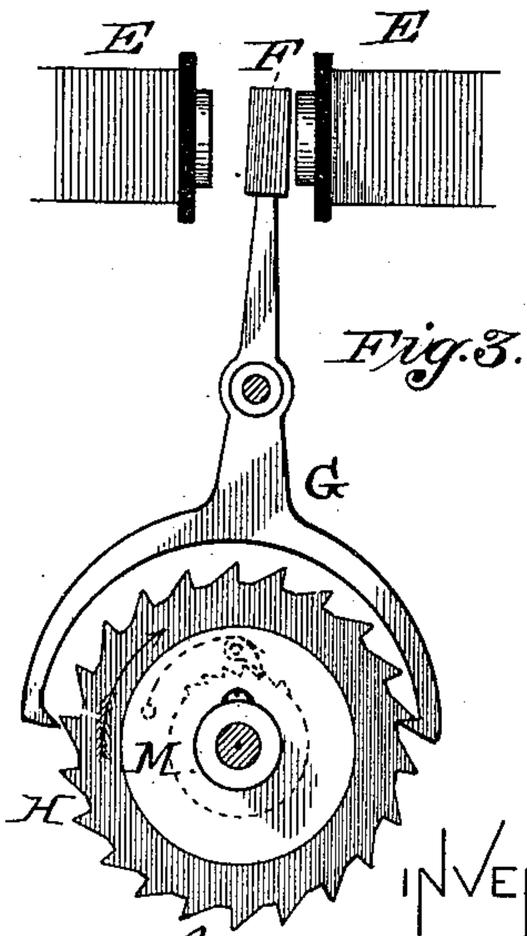


Fig. 3.



ATTEST:

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UNITED STATES PATENT OFFICE.

RICHARD N. DYER, OF NEW YORK, N. Y., ASSIGNOR TO THE COMMERCIAL TELEGRAM COMPANY, OF SAME PLACE.

PRINTING-TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 332,649, dated December 15, 1885.

Application filed September 10, 1885. Serial No. 176,658. (No model.)

To all whom it may concern:

Be it known that I, RICHARD N. DYER, of New York city, in the county and State of New York, have invented a certain new and useful Improvement in Printing-Telegraphs, of which the following is a specification.

My invention relates to that class of stock-quotation printers employing two type-wheels on independent shafts, either of which type-wheels can be moved to position and printed from while the other is at unison, such wheels being revolved in the same direction by independent motors which exert a constant tendency to turn them, and being controlled by escapements and by the unison-stops. An instrument of the class referred to is shown in Patent No. 290,557.

The object of my invention is to produce a more simple and efficient mechanism than heretofore employed for controlling the movements of the type-wheels from one magnet-armature.

By my invention I employ a single scape-wheel and pallet, the latter connected directly with the magnet-armature and vibrated thereby. The scape-wheel is not connected rigidly to either type-wheel shaft, but is coupled with them by pawls and ratchets. The scape-wheel is turned by both shafts when both type-wheels are revolving; but when one type-wheel is stopped at its blank space or unison the shaft of the other type-wheel turns the scape-wheel alone, the pawl-and-ratchet connections permitting this to be done.

In the accompanying drawings, forming a part hereof, Figure 1 is an elevation and partial section of the mechanism; Fig. 2, a section through the scape-wheel and ratchet on enlarged scale; Fig. 3, a cross-section of a type-wheel shaft, showing escapement in elevation; Fig. 4, a section through one of the ratchets with pawl in elevation, and Fig. 5 a view showing unison-stops.

A and B are the type-wheels arranged side by side and fixed on the ends of two shafts, C and D. Shaft C is a sleeve surrounding shaft D, as shown, and C is of less length than D. These shafts are revolved in the same direction by separate motors, (not shown,) as weight or spring trains terminating at the shafts in the pinions *a b*.

E is the escapement controlling electro-magnet acting upon a polarized armature, F, and serving to vibrate such armature. Armature F is carried by pallet G, which engages scape-wheel H. Scape-wheel H is mounted loosely on shaft D against or close to the end of shaft C. This scape-wheel has made in one piece with it, or rigidly attached thereto on its opposite sides, two ratchet-wheels, I K, with teeth turned in the same direction. With these ratchet-wheels engage pawls *c d*, carried by disks L M, secured rigidly to the shafts C D. The teeth of the ratchets are preferably the same in number as those of the scape-wheel, and the parts are constructed and adjusted to work together, so that the pawl of a type-wheel shaft at rest will drop into a tooth at each movement of the scape-wheel. The shafts C D are provided with radial stop-arms *e f*, which are intercepted alternately by dogs *g h* on a rock-shaft, N. When the rock-shaft N is turned one way, one dog is thrown into the path of travel of a stop-arm, and by the same movement the other dog is moved clear of the stop-arm for the other type-wheel shaft, always leaving one type-wheel shaft free to turn under control of the escapement. The type-wheels have each a blank space, at which point no impression upon the paper strip will be made. The dogs *g h* are arranged to stop the type-wheels at these points.

The mechanism described is mounted in a suitable frame with the other parts of the instrument, which may be a two-wire instrument, such as described in Patent No. 290,557, with a printing-magnet supplying power to lift the platen and rock the shaft N and a neutral magnet in the type-wheel circuit with the magnet E directing the application of the platen movement to the rock-shaft in one direction or the other; or my invention may be applied to any other suitable form of stock-quotation printer where it is desired to control two type-wheels by one magnet.

It will be seen that since the shafts revolve in the same direction and apply their power to the scape-wheel, (instead of receiving power from it,) the stopping of either shaft does not prevent the other shaft from moving. If both type-wheels are at unison, the vibration of the pallet allows but one of them to turn—

that which is free from the rock-shaft N. The pawl of the moving shaft turns the scape-wheel, while the pawl of the other shaft is at rest and rides over the teeth of its ratchet. By shifting the rock-shaft N the other shaft will be released, and a dog will be thrown down to catch and stop the shaft that has been moving when it reaches unison. Both wheels then revolve together, their pawls acting jointly to move the scape-wheel, until one reaches unison, where it is stopped by the dog on the rock-shaft, while the other continues its movement to the letter or figure it is desired to print, alone turning the scape-wheel during this last period; or each type-wheel may in turn be run to unison before the rock-shaft N is shifted, in which case only one type-wheel will revolve at a time.

What I claim is—

1. In a printing-telegraph, the combination, with two independently-revolving type-wheels, of a single pallet and scape-wheel, and connections for controlling their movements, substantially as set forth.

2. In a printing-telegraph, the combination, with two independently-revolving type-wheels, of a single pallet and scape-wheel, and connections for controlling their movements, and a single vibrating magnet-armature, to which said pallet is directly connected, substantially as set forth.

3. In a printing-telegraph, the combination, with two independently-revolving type-wheels, of a single pallet and scape-wheel, and connections for controlling their movements, a single vibrating armature, to which said pallet is connected, and means for stopping said type-wheels at the blank or unison points, substantially as set forth.

4. In a printing-telegraph, the combination, with two independent type-wheel shafts, of a scape-wheel connected with both of said shafts by pawls and ratchets, and a pallet engaging the scape-wheel, substantially as set forth.

5. In a printing-telegraph, the combination, with two independent type-wheel shafts, sleeved one upon the other, of a scape-wheel connected with both of said shafts by pawls and ratchets, and a pallet engaging the scape-wheel, substantially as set forth.

6. In a printing-telegraph, the combination, with two type-wheel shafts revolved in the same direction by power applied separately thereto, a scape-wheel connected with both of said shafts by pawls and ratchets, a pallet engaging said scape-wheel, and means for stopping said type-wheel shafts at the blank or unison points, substantially as set forth.

This specification signed and witnessed this 8th day of September, 1885.

RICHARD N. DYER.

Witnesses:
A. W. KIDDLE,
E. C. ROWLAND.