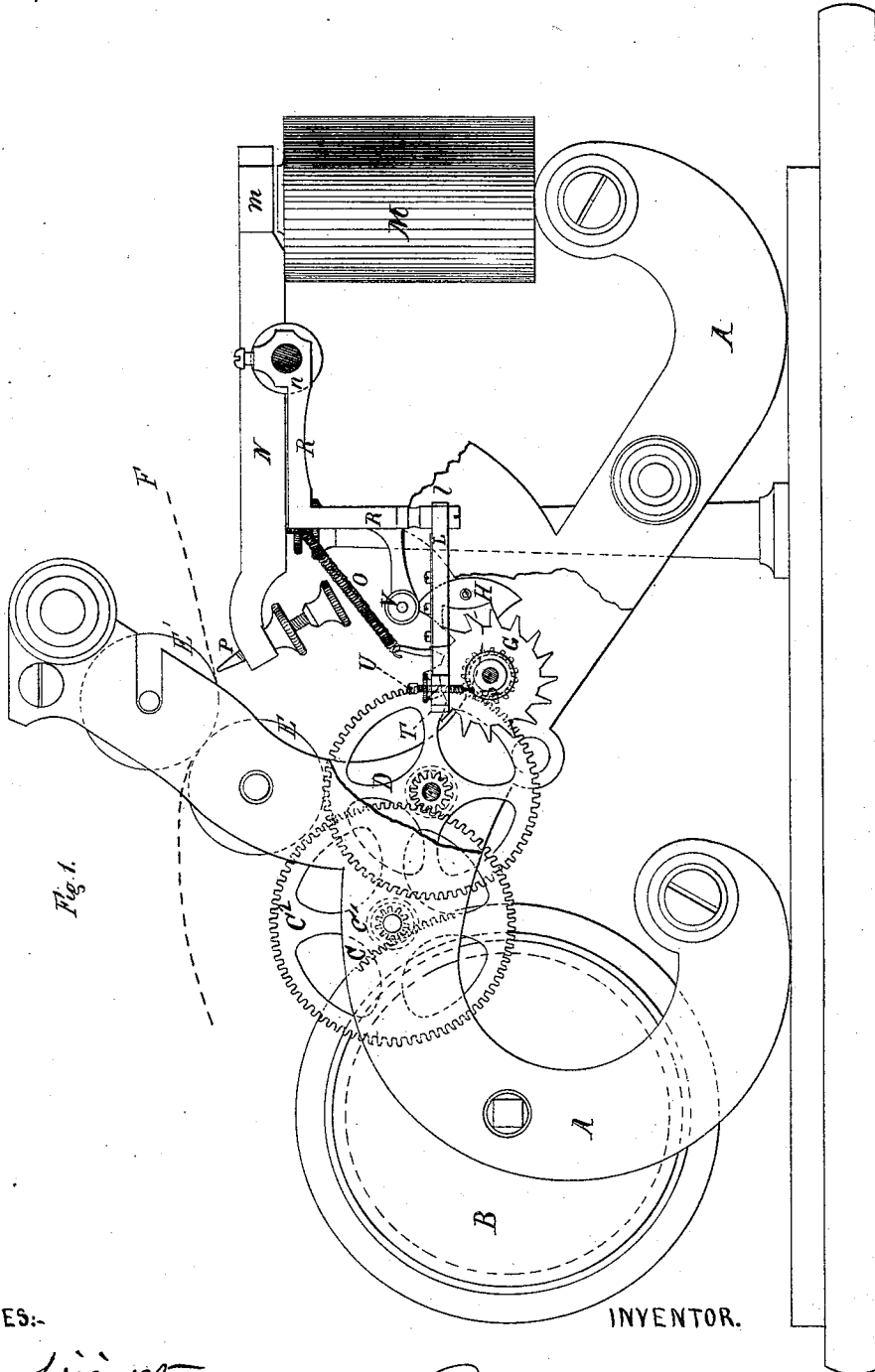


W. H. SAWYER.
Telegraph Registers.

No. 145,128.

Patented Dec. 2, 1873.



WITNESSES:-

M. M. Livingston
A. J. De Lacy.

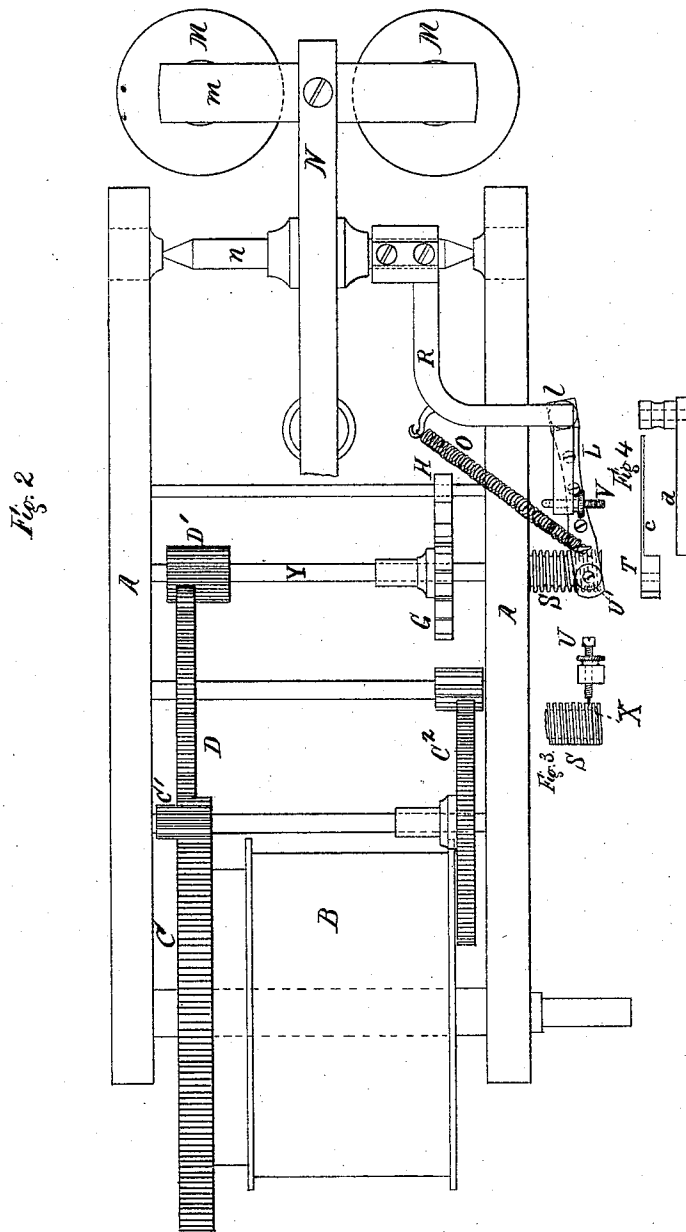
INVENTOR.

W. H. Sawyer

W. H. SAWYER.
Telegraph Registers.

No. 145,128.

Patented Dec. 2, 1873.



WITNESSES

M. M. Livingston
A. J. DeLacy

INVENTOR

W. H. Sawyer

UNITED STATES PATENT OFFICE.

WILLIAM H. SAWYER, OF NEW YORK, N. Y., ASSIGNOR TO THE AMERICAN DISTRICT TELEGRAPH COMPANY, OF SAME PLACE.

IMPROVEMENT IN TELEGRAPH-REGISTERS.

Specification forming part of Letters Patent No. **145,128**, dated December 2, 1873; application filed October 17, 1873.

To all whom it may concern:

Be it known that I, WILLIAM H. SAWYER, of the city of New York, in the county and State of New York, have invented a certain new and useful Improvement in Telegraph-Registers; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form part of this specification.

The object of my invention is to provide a device for automatically stopping the mechanism which carries forward the strips of paper in a telegraphic register or recording apparatus, and, at the same time, to so connect such device to the pen-lever that its detaining power shall be nullified by and during the movement of the said pen-lever. The invention consists in the combination, with the pen or style carrying lever, in a telegraphic recording apparatus, of a revolving shaft provided with a screw-thread, a pivoted lever attached to the pen-lever, or to its arbor, and provided with a pin, which travels along the screw-thread, a retracting-spring, and a stop-piece in the screw-thread, against which latter the pin comes in contact to arrest the movement of the mechanism when the pen-lever is at rest, but which stop-piece is disengaged by the pen-lever, and the mechanism allowed to proceed, so soon as, and as long as, the pen-lever is vibrated.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of a telegraphic register of the usual construction, showing the application of my invention thereto. Fig. 2 is a plan or top view of the same. Fig. 3 is a side view of the screw-thread and the traversing pin and the stop-piece. Fig. 4 shows a preferred method of constructing the pin-carrying lever.

A designates the frame of the machine, and B a barrel, provided with a cord and weight for giving motion to the paper-feeding portion of the apparatus. A system of toothed wheels and pinions, C C' C'' D D', transmits rotary motion from the barrel B to the rollers E E', which serve to draw forward the strip of paper F to be marked by the pen or style P, carried by the pen-lever N, whenever the same is

vibrated by the action of the armature *m* and magnet M, in the usual manner. The scape-wheel G is mounted on the shaft Y, and is caused to rotate by the toothed wheel D engaging with the pinion D'. It is provided with a pallet, H, which serves as a regulator to prevent the mechanism running too fast.

The above-described parts, as well as their arrangement, are well known, and are to be found in registers as usually constructed.

The application of my invention to a register of the character hereinabove briefly described will now be explained.

S designates a screw-thread, which is secured to or formed upon the shaft Y, and which is provided with a stop-piece, X, whose office will be hereinafter explained. L is an arm, carrying at its outer end a pin, U, (see Fig. 3,) the point of which rests between and follows the screw-threads S. This arm L is pivoted, as shown at *l*, to an arm, R, which latter is rigidly attached to the arbor *n* of the pen-lever N. I preferably construct the whole or a portion of the arm L of a piece of spring metal. In the drawing (see Fig. 4) I have shown the said arm L as made in two parts, *c* *d*, the part *c* serving as a spring. When such construction is adopted, there is greater certainty of the point of the pin U, after the arm L has been raised, dropping into the channels between the screw-threads, instead of on the top of the thread, and no nice adjustment for controlling the extent of the oscillation of the shaft *n* or lever N need be resorted to. A retracting-spring, O, is connected at one end to the said arm L, and at the other to the arm R, or to any other appropriate part of the apparatus. V is an adjustable stop, which regulates the starting-point of the pin U in the screw S, as will be hereinafter explained.

It will now be readily understood, by reference to the drawing, that when the machine is in motion the revolution of the screw S will force the pin U and the arm L (the latter moving upon the pivot *l*) toward the outer end of the screw, away from the frame A, until the pin U comes in contact with the stop X (see Fig. 3) in the thread of the screw S. So soon as the said pin U strikes the said pin X, the en-

tire system of wheel-work will be arrested. If, now, a communication is to be received, the magnet M will attract its armature at the commencement of the first signal. The downward movement of the armature *m* will turn or oscillate the arbor *n* of the pen-lever N, and thereby raise the arms R and L, and hence lift the pin U out of the thread of the screw S, and away from the stop-piece X, when the machinery will immediately continue its operation, being actuated by power derived from the drum B and its weight. At the instant the pin U is lifted clear of the screw S, the retracting-spring O draws the pivoted arm L until it strikes against a rectangular portion of the adjustable stop V, passing through a portion of the arm R; or, if desired, a straight stop may be put through the lever L, so that its end will come in contact with the frame A; and the arm L will remain in this position so long as the lever N is vibrated in the recording of a communication; but so soon as the communication is finished and the lever N assumes its normal position, as shown in Fig. 1, the pin U will drop between the threads of the screw at a point as close to the frame A as is permitted by the adjustable stop V, when it will be carried forward by the screw-thread till it reaches the stop-piece X, as before explained.

It will be observed that the time which the apparatus is permitted to run before being arrested by the pin U coming in contact with the stop-piece X can be regulated by the ad-

justable stop V. The nearer the lever L is brought to the frame the longer will be the time the machine will run before stopping, as is obvious. It will, therefore, be understood that the first movement of the lever N, (the pen-lever,) when commencing to record a communication, will liberate my improved arresting mechanism, so that the machinery will feed the paper strip F to the pen, as is required; but so soon as the said pen-lever ceases to vibrate, the machinery will be arrested or stopped, as hereinbefore explained.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the pen-lever of a telegraphic registering or recording apparatus, of a shaft, Y, provided with a screw, S, and stop-piece X, a pivoted lever, L, carrying a pin, U, a supporting-arm, R, and a retracting-spring, O, substantially as and for the purposes herein specified.

2. The combination, with the screw S and pin U, of the pivoted lever L, the latter being made flexible for the whole or a portion of its length, substantially as and for the purposes herein specified.

3. The combination, with the arms R and L, of the adjustable stop V, substantially as and for the purposes herein specified.

W. H. SAWYER.

Witnesses:

M. M. LIVINGSTON,
A. J. DE LACY.