

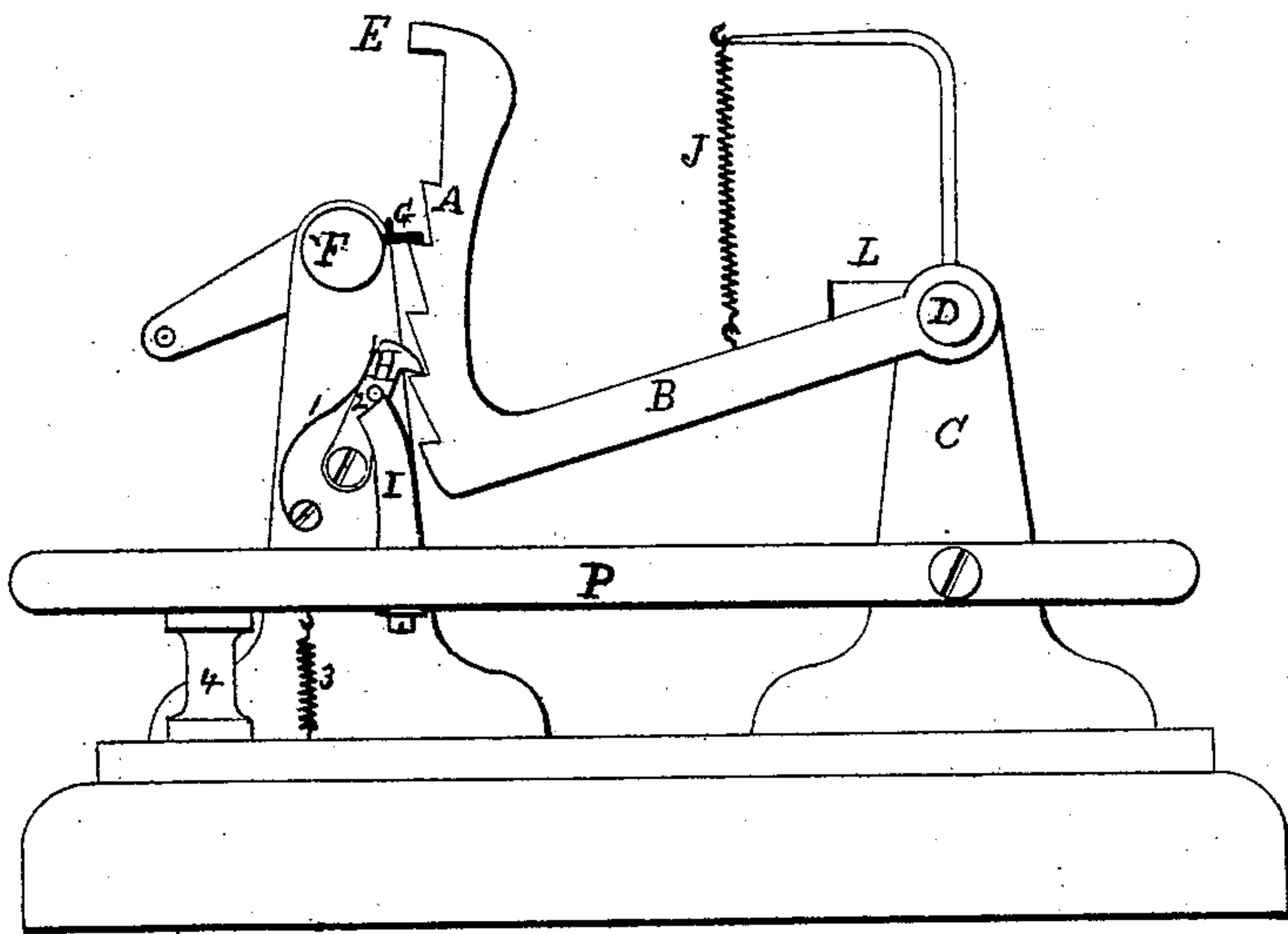
C. J. WILEY.

Unison Stops for Printing Telegraphs.

No. 144,812.

Patented Nov. 18, 1873.

Fig. 1



WITNESSES:

J. B. Stutts.  
Geo. W. Foy.

INVENTOR:

C. J. Wiley

# UNITED STATES PATENT OFFICE.

CHARLES J. WILEY, OF NEW YORK, N. Y.

## IMPROVEMENT IN UNISON-STOPPS FOR PRINTING-TELEGRAPHS.

Specification forming part of Letters Patent No. **144,812**, dated November 18, 1873; application filed August 18, 1873.

*To all whom it may concern:*

Be it known that I, CHARLES J. WILEY, of the city, county, and State of New York, have invented a new and useful Improvement in Unison-Stops for Printing-Telegraphs, of which the following is a description, reference being had to the accompanying drawing making part of this my specification.

My improvement has reference to that class of instruments known and used for reporting stock and gold quotations; and the object of my invention is to facilitate and simplify the bringing of any number of instruments in the same circuit to harmony or unison with the transmitters, by locking the type-wheels at the zero-point; and my invention consists in locking the printing or type wheel by a novel and peculiar mechanism, consisting of a vibrating toothed arc, the teeth of which are geared to the shaft of the printing-wheel, by means of a cam upon the shaft of the printing-wheel, operating in the manner and by the means hereinafter set forth.

In the accompanying drawing my improvement is represented in side elevation; and I now proceed to describe the construction thereof, and manner of operating the same.

A is the stop, constructed in the form of an arc or outer section of a circle, resembling somewhat a section of the exterior of a toothed wheel. Attached to this, nearly at right angles, and forming part of the same, is the vibrating arm B, and having its center of motion upon the pin D, which is secured to the standard C of the frame, so as to permit the rocking motion of the stop A to the extent desired up and down. Upon the outer edge of stop A are ratchet-teeth, of the shape shown in the drawing, and extending as far as the movement of the stop requires, excepting at the top, where a space is left clear of teeth, and the stop is bent forward, so as to form a shoulder, E, and stop, for the purpose hereinafter shown. F represents the shaft of the type-wheel, (the type-wheel itself not being represented.) Upon this shaft, which projects from the frame sufficiently for the purpose, is placed the cam or flat tooth G, so as to mesh or gear into the ratchet of the stop A; and this cam, by the revolution of the type-wheel and its shaft, causes the stop A to descend the

distance of one ratchet-tooth at each revolution of the type-wheel. At the lower end of the ratchet-stop A is a pawl, H, which is made to mesh into the ratchet-teeth of A, and which is made to spring into teeth of the ratchet successively at each revolution of the type-wheel by the pressure of the spring I upon its exterior face. The pawl H and its spring are controlled by the upright cam I, the upper face of which is diagonal, so that when it is pushed upon the horizontal pin 2 upon the pawl H its effect is to throw back the pawl and disengage the ratchet-stop A when desired; and when so made to operate, the ratchet-stop A is immediately carried upward to its place by the retracting-spring J until it meets the projecting horizontal arm L, which stops it at the point required for another operation of the stop. The cam I is fastened to the horizontal vibrating bar P, which represents the printing-lever of the telegraphic instrument. The retracting-spring 3 brings the lever back to its position after it has been raised to disengage the stop A from the ratchet-teeth, and as soon as the stop is thus disengaged, the printing-lever is permitted to fall back to its rest upon the standard 4. This arrangement is such that if the printing-wheel with its shaft, and the cam G thereon, are rotated, the cam H will at each revolution carry the stop A down one tooth until the cam comes in contact with the straight vertical face of the shoulder E, when the rotation will be stopped thereby.

Now, if in the operation one or more of the printing-wheels in the circuit is not at the zero or starting point, the operator causes the rotation of the transmitter until such wheels are by rotation, but without printing, brought to the stop; and thus by the operation of my unison device, when attached to all the instruments in the circuit, any and every variation of the printing-wheels from unison may be corrected with certainty and great ease, and brought to the same point as the transmitting-instrument of the operator at zero.

It is to be understood that my unison device is always to be so set or connected with the shaft of the printing-wheel that the lock or stop will be effected at the point of zero or of starting.

After the operation above described of bring-



ing the instrument to unison has been completed, the stop is disengaged by operating the printing-lever P, which, through the instrumentality of the upright cam I, throws the pawl H out of gear with the ratchet upon A, and the stop is again ready for another operation.

Having thus described my invention, and the manner of constructing and using the same,

what I claim therein as my invention, and for which I desire Letters Patent, is—

A unison-stop, composed of the stop A, the cam G, the pawl H, cam I upon the printing-lever P, constructed, arranged, and operating substantially as set forth.

Witnesses:

CHAS. J. WILEY.

J. B. STAPLES,

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