

No. 631,452.

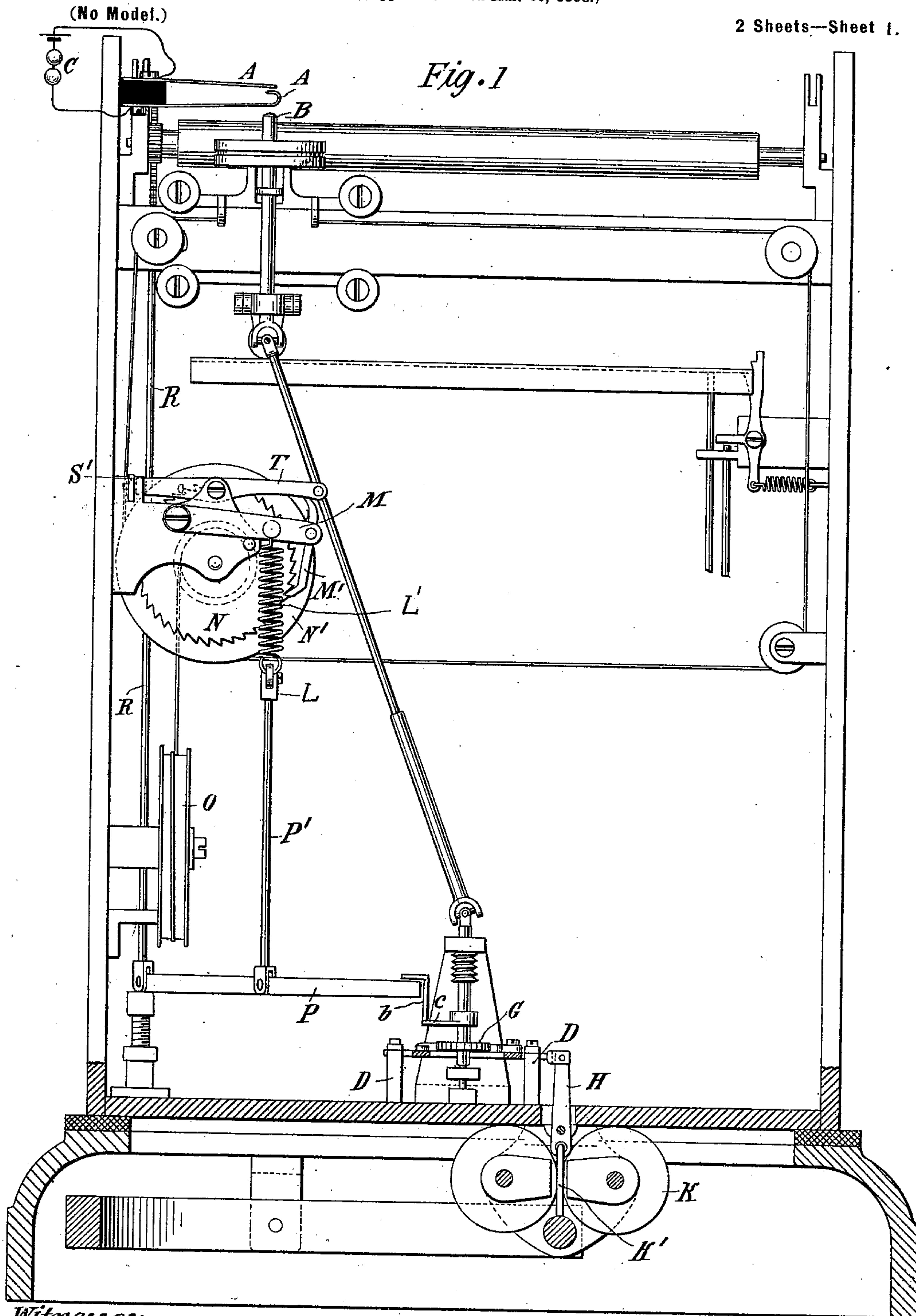
Patented Aug. 22, 1899.

J. E. WRIGHT.
COLUMN PRINTING TELEGRAPH.

(Application filed Mar. 10, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
Raphael Vetter
Henry C. Messinger.

John E. Wright, Inventor
by Kern, Curtis & Page Att'ys.

No. 631,452.

Patented Aug. 22, 1899.

J. E. WRIGHT.
COLUMN PRINTING TELEGRAPH.

(Application filed Mar. 10, 1898.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 2

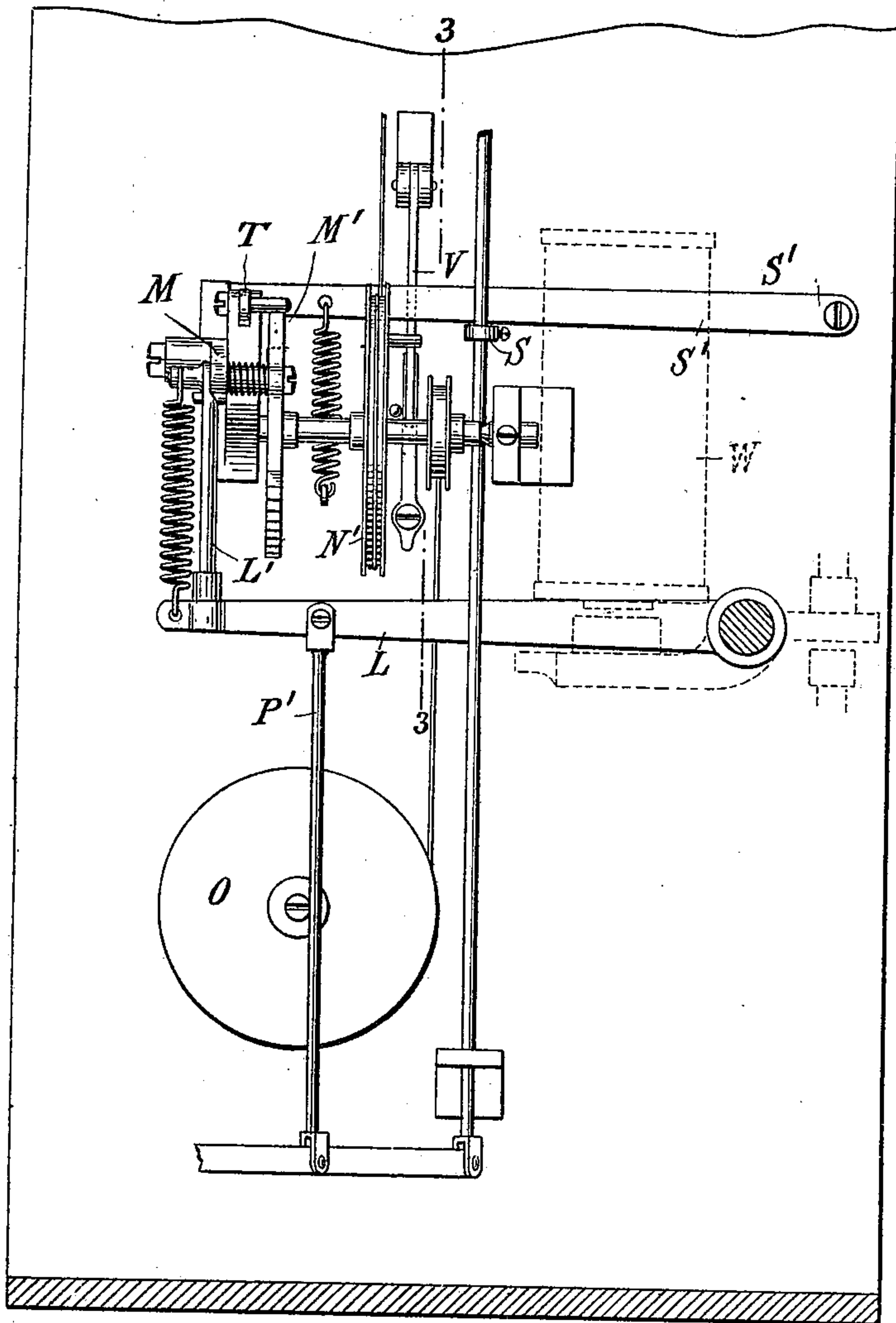


Fig. 3

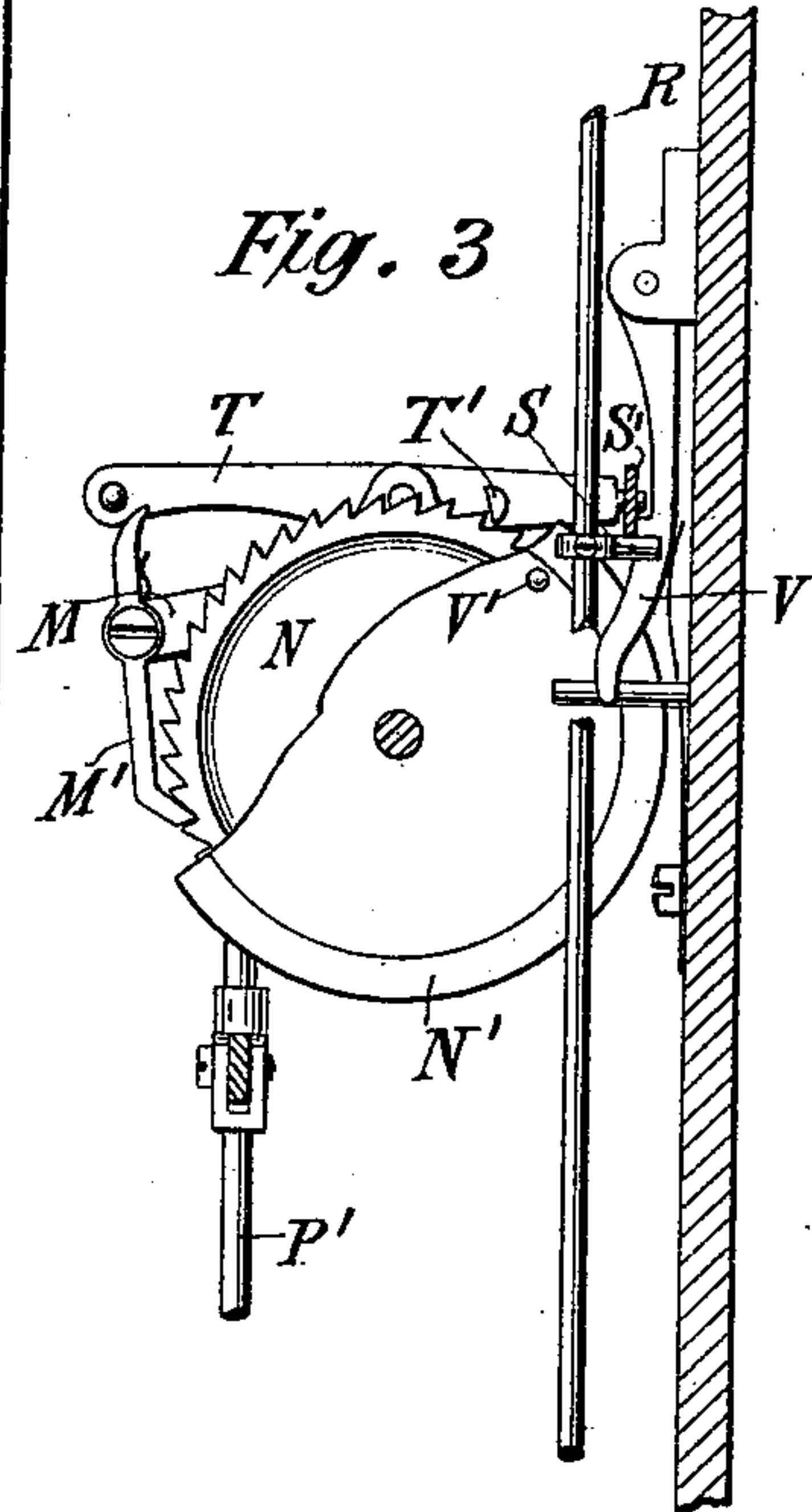
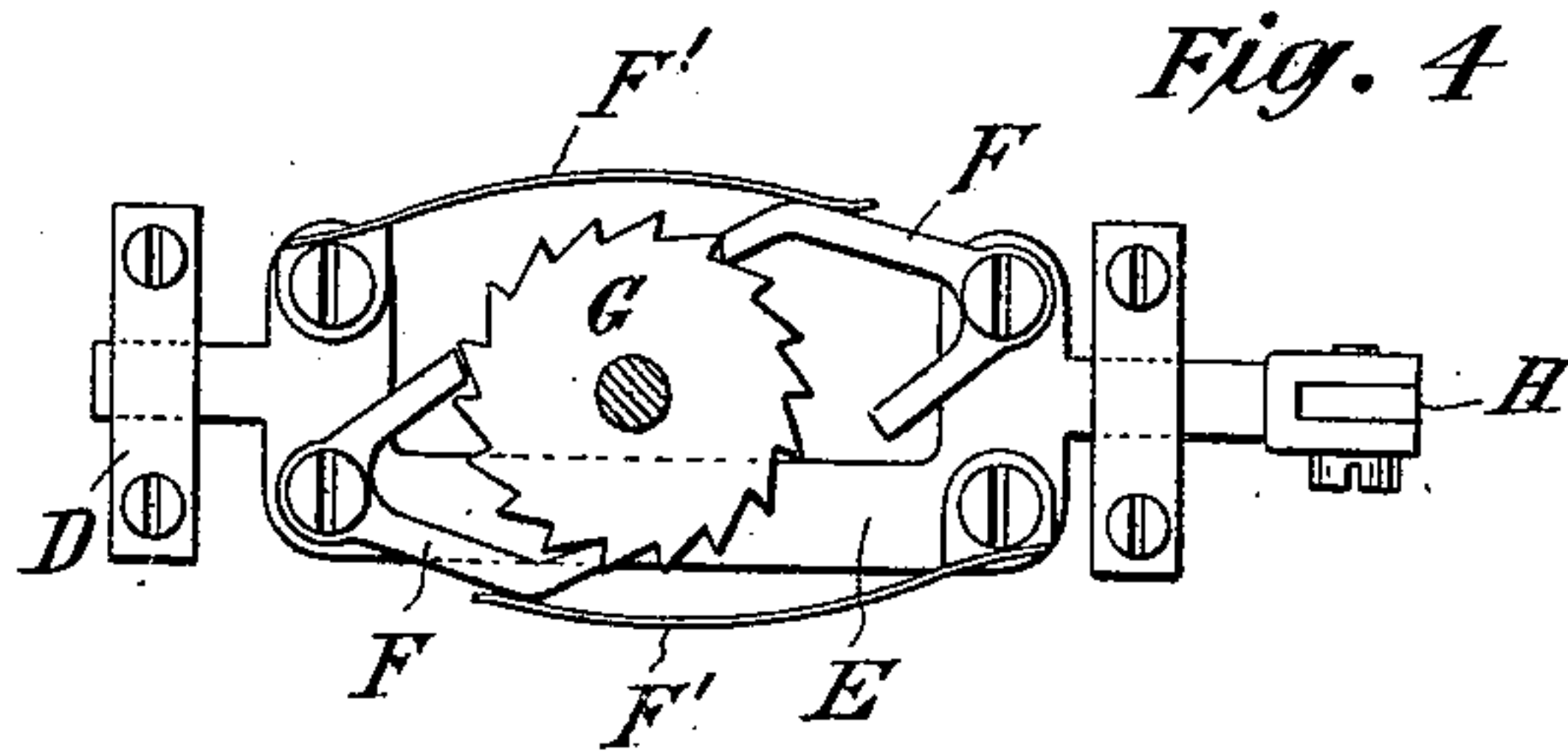


Fig. 4



Witnesses:
Raphaël Vetter
Henry C. Messinger,

John E. Wright, Inventor
by Kern. Carter & Page Att'ys.

UNITED STATES PATENT OFFICE.

JOHN E. WRIGHT, OF NEW YORK, N. Y.

COLUMN-PRINTING TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 631,452, dated August 22, 1899.

Application filed March 10, 1898. Serial No. 673,343. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. WRIGHT, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Column-Printing Telegraphs, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

In Letters Patent of the United States No. 494,185, granted to me March 28, 1893, I have shown and described a column or page printing telegraph apparatus to which my present application more specifically relates and upon which the invention forming the subject of this application constitutes improvements. The following description of these improvements is to be read in connection with the specification and drawings of said patent for a full understanding of the present invention, as the description herein is mainly confined to such improvements.

The drawings illustrate the general character of the apparatus as a whole and the specific construction of the improvements.

Figure 1 is a front view in elevation, the lower portion being in section. Fig. 2 is a side view in elevation of the mechanism for restoring the type-wheel. Fig. 3 is a part sectional view of the same devices. Fig. 4 is a top plan view of the escapement.

The improvements will be described under separate heads.

The signal-bell attachment.—This is a device which is combined with the printing-telegraph to attract attention of bystanders to any special or new despatch or news item which is about to be printed and may be any suitable audible or visual signaling device; but I prefer to use an ordinary tremble-bell C for the purpose in the circuit of a local battery under the control of the operator at the sending-station. The local circuit may be closed temporarily by the movement of suitable contacts effected by the action of some portion of the mechanisms when the type-wheel has either been turned or shifted to a predetermined position by the line-current. In order to avoid complication in the mechanism, I place the local contacts A A in such position that they will be brought together by the end of the spindle B of the type-

wheel when the latter is in position to print one of the characters in its lower row and at the beginning or first space in a line. As the characters in the lower row on the type-wheel are mainly figures and fractions, they are not apt to begin a line, so that the type-wheel is seldom raised when in such position. If the operator, therefore, desires to attract attention to anything about to be printed, it is only necessary for him to send the type-wheel home to begin a line and then to raise it to print a fraction or any character from its lower row, and thereby ring the bell in the local circuit. Should he wish to begin a line with any character on the lower row and not to ring the bell, it is merely necessary to advance the type-wheel one step by the space-key of the transmitter, when it will not close the local circuit when raised.

The escapement.—In connection with the escapement-wheel of apparatus of this kind I have heretofore used two polarized armature-levers and a divided frame connecting the same and carrying pawls arranged to engage with the wheel on opposite sides. I have found, however, that the fact that the pawl-carrying frame did not reciprocate in exactly the same plane interfered with its proper operation. I have, however, obviated this and simplified the device by constructing it as shown in Figs. 1 and 4.

D D are two fixed guides through which the projecting end pieces of a slide-bar E pass, so as to be capable of free reciprocation, but with as little lost motion as possible. This bar E carries two bifurcated or locking pawls F, held by springs F' in constant engagement with the escapement-wheel G at opposite points on its periphery. The said locking-pawls are mounted upon transverse extensions of said slide-bar E, which serve to prevent too great a movement of the bar in either direction by abutting against the fixed guides D D.

Under the base of the instrument is placed the escapement-electromagnet K, with a polarized armature K'. To the base of the instrument is pivoted a lever H, the short arm of which is pivotally connected to the free end of the polarized armature K' and the long arm to the slide-bar E, so that impulses of current through the magnet K cause the bar

E to slide back and forth in its guides and intermittently rotate the escapement, and by reason of the connection between the lever H and armature K' a very slight movement of the latter imparts a greater movement to the bar.

Type-wheel feeding and restoring mechanism.—The apparatus has, in common with that referred to in my previous patent, a lever L, which is raised by the printing-magnet W each time that the latter is energized. The raising of this lever lifts, by means of a rigid connecting-bar L', a pivoted lever M, carrying a pawl M', that engages with a ratchet-wheel N, fixed to the shaft of a drum N'. This latter in turning winds up a spring-barrel O, with which it is connected by a cord and imparts a step-by-step forward movement to the type-wheel carriage, with which it is connected by a cord running over pulleys, as shown. When it is desired to restore the type-wheel carriage to begin a line, the escapement is turned to bring a pin b, carried by an arm c on its shaft, above the end of a lever P, which is suspended from the lever L by a connecting-rod P'. When, therefore, the printing-magnet is energized and the lever L raised, the lever P is lifted at the end thereof pivotally connected to the paper-feed rod R, while the free end of said lever is held down by the pin b, and the said rod R is thereby raised or elevated. This rod carries a stop S, which engages with a lever S', which in turn engages with the detent-lever T and causes the latter to release the drum N' by disengaging from the teeth of the ratchet N the pawl M' and a stop T' on the lever T. This permits the drum N' to turn back and bring the type-wheel carriage to its starting-point. In order to give the drum N' time to do this, the lever S', when raised by the rod R, is engaged by a spring-actuated catch V

and held up until the catch is encountered by a pin V' on the drum N'

In all other particulars than those herein described the apparatus is substantially the same as that shown and described in my previous patent, No. 494,185.

What I claim as my invention is—

1. The combination with a printing-telegraph receiver, of a local-alarm circuit, a circuit-closer therein, an escapement, and means operating a movable part of the receiver mechanism to engage the circuit-closer when the escapement is brought to a predetermined position, as set forth.

2. The combination with a type-wheel movable in the direction of its axis, and transversely to the paper, of a circuit-closer in position to be encountered by said type-wheel at a given point in its transverse path and when raised to print from its lower row of characters, and a local alarm or signaling device controlled thereby.

3. In a printing-telegraph receiver the combination with a type-wheel carriage movable transversely to the paper, the spring-actuated drum, the rotary movement of which is imparted to the type-wheel carriage, a ratchet-wheel fixed to the drum-shaft and intermittently rotated by the printing-magnet through the intermediary of a pawl, the detent-lever T and the lever S', the paper-feed rod R carrying a stop adapted to raise the detent-lever so as to release the ratchet-wheel, a catch for engaging with the lever S' when raised and a pin on the drum in position to engage with the catch when the type-wheel carriage has been brought to position to begin a line.

JOHN E. WRIGHT.

Witnesses:

FRANCIS P. SMITH,
HILLARY C. MESSIMER.