

(No Model.)

2 Sheets—Sheet 1.

F. A. JENNINGS.  
ANNUNCIATOR.

No. 571,445.

Patented Nov. 17, 1896.

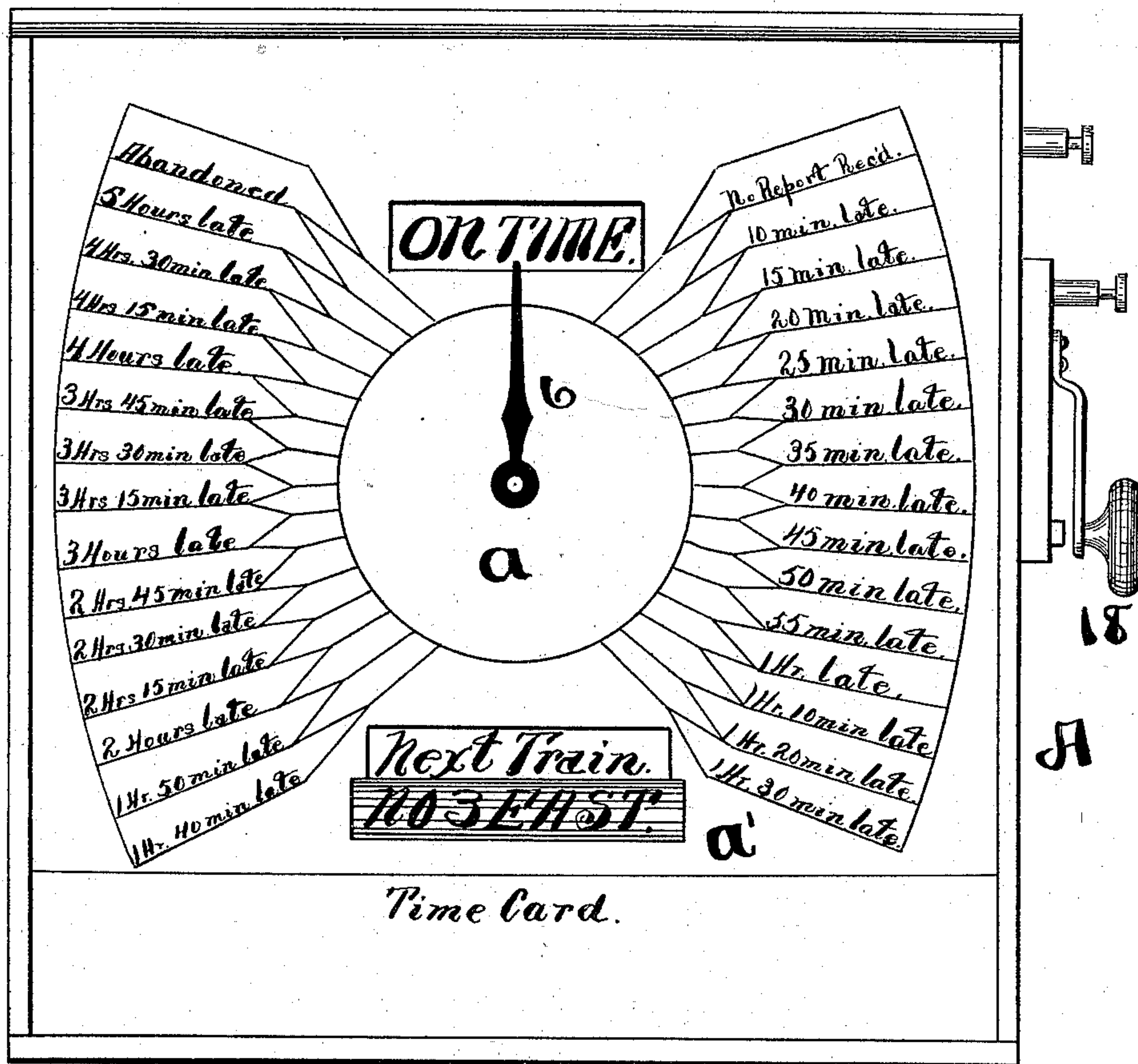


Fig. 1.

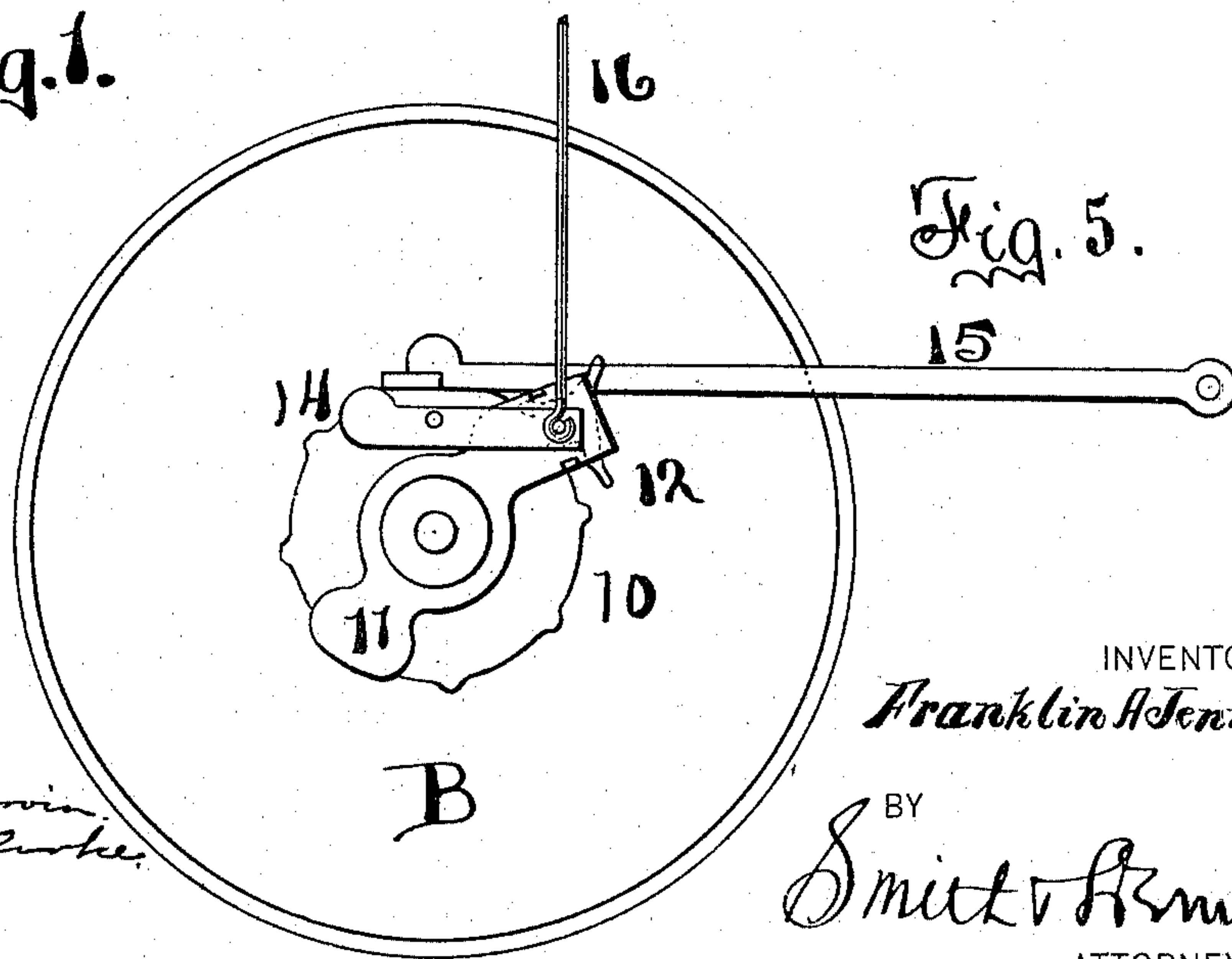


Fig. 5.

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ATTORNEYS.

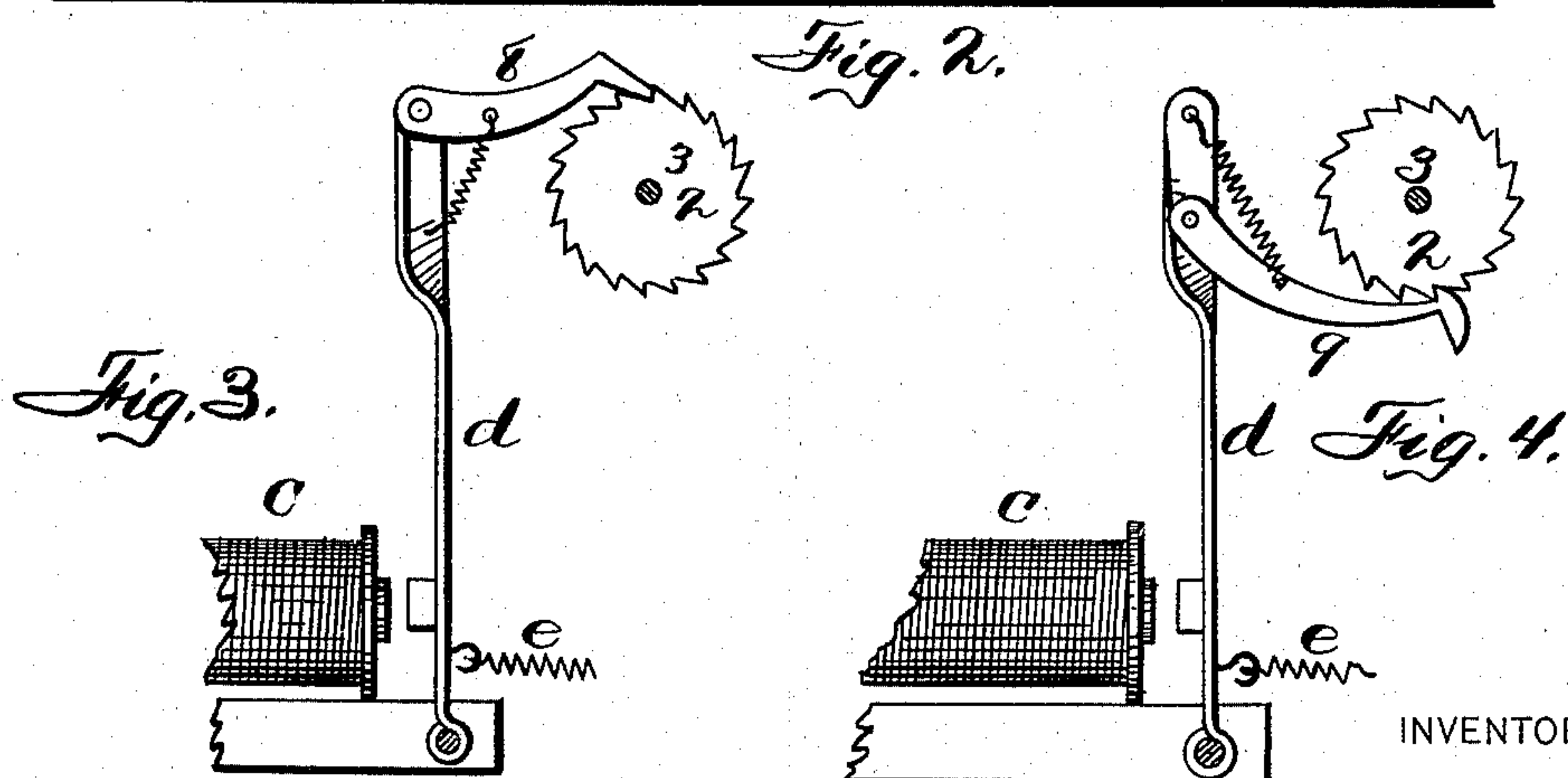
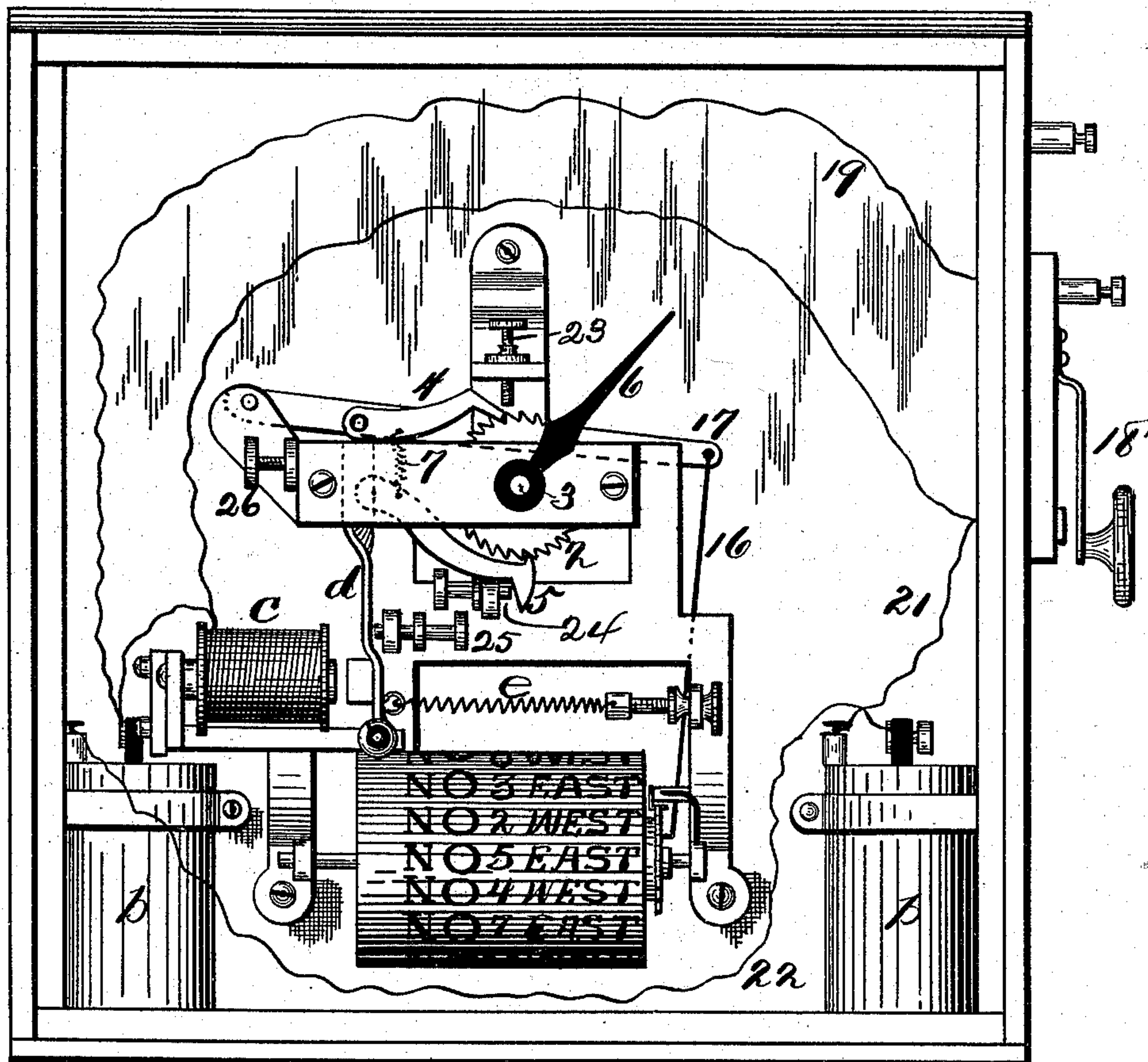
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2 Sheets—Sheet 2.

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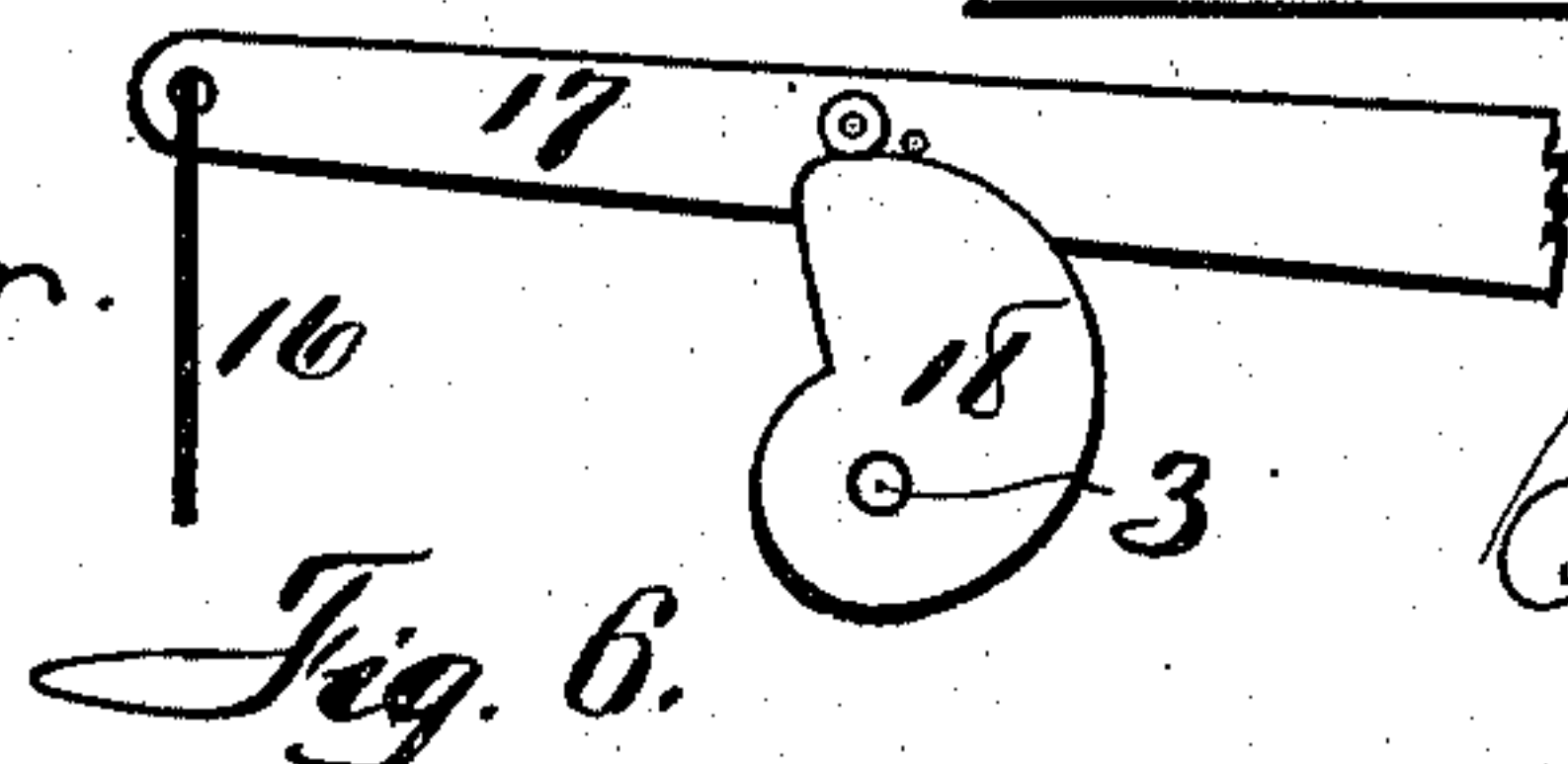


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# UNITED STATES PATENT OFFICE.

FRANKLIN A. JENNINGS, OF ITHACA, NEW YORK, ASSIGNOR TO THE ELECTRIC BULLENTIN COMPANY, OF SAME PLACE AND CHICAGO, ILLINOIS.

## ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 571,445, dated November 17, 1896.

Application filed May 11, 1895. Serial No. 548,909. (No model.)

*To all whom it may concern:*

Be it known that I, FRANKLIN A. JENNINGS, of Ithaca, in the county of Tompkins, in the State of New York, have invented new and useful Improvements in Annunciators, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to annunciators, and particularly to that class which are designed to be used to indicate the time-status of railway-trains.

My object is to produce an electrically-operated annunciator comprising a case, a dial thereon provided with a series of notices indicative of the time-status of a railway-train, a rotating cylinder within the case carrying a series of train-designating notices, a pawl mechanism for rotating it, a battery, an electromagnet connected thereto and provided with a swinging armature, a pawl-and-ratchet mechanism actuated by the movement of said armature to rotate a shaft and shift a pointer upon said dial, and also to actuate the pawl-and-ratchet cylinder-rotating mechanism, all operated by means of a circuit making and breaking key located upon the case or at any other convenient point through a suitable wiring system.

Some of the features of this invention are similar to those shown in Letters Patent for an annunciator granted to me May 28, 1895, No. 539,870, and an application filed by me concurrent herewith, and those features are therefore only described generally herein.

My invention consists in the several novel features of construction and operation hereinafter described, and which are specifically set forth in the claim hereunto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of the machine. Fig. 2 is a like view of the same with the dial or front of the case removed. Fig. 3 is an elevation of a push-pawl mechanism for actuating the pointer and the train-designating cylinder. Fig. 4 is a like view of a similar mechanism employing a pulling-pawl. Fig. 5 is an elevation of the cylinder-rotating ratchet-and-pawl mechanism. Fig. 6 is a de-

tail of the cam and lever operating the cylinder-rotating mechanism.

A is a suitable case, and *a* is a dial upon the front thereof provided with a series of train-status notices, substantially as shown, and having a slotway *a'*. A suitable battery *b* is placed in the case, and *c* is an electromagnet suitably mounted therein and connected to the battery, and *d* is its armature suspended from a shaft journaled in a suitable frame, and *e* is a spring by which it is normally held out of contact with the electromagnet. A ratchet-wheel 2 is secured to a shaft 3, journaled in a frame in such position that the push-pawl 4 engages with said ratchet, and the pull-pawl 5 also engages therewith, so that each time the armature swings to make or break a circuit said ratchet is rotated by the joint and simultaneous action of the pawls working in unison and neither operating as a stop or check for the other. A pointer 6 is secured upon said shaft and is carried around over said dial from one notice to another by the rotation of said ratchet. A spring 7 holds these pawls in proper position.

In Fig. 3 a push-pawl 8 is shown to rotate said ratchet, and in Fig. 4 a pulling or draw pawl 9 is shown for the same purpose, both without any stop-pawl.

B is a cylinder mounted upon and rotated by a ratchet-and-pawl mechanism similar to that shown in my aforesaid applications, and provided with a series of train-designating notices in such manner that they are successively displayed through the slotway *a'*. This mechanism comprises a ratchet 10 upon the cylinder-shaft; a counterbalance 11, pivoted on said shaft; a push-pawl 12, pivoted on said counterbalance and suitable to engage with a ratchet-tooth; a lifting-pawl 14, pivoted on said counterbalance and adapted to engage with the stop-pawl 15 and disengage it from said ratchet; a lifting-rod 16, connected to said lifting-pawl and to a lever 17, pivoted at one end and engaging with the cam 18 upon the pointer-shaft, whereby when this shaft is rotated said pawl mechanism is raised so that the push-pawl engages with another tooth, and when said lever passes the apex of said cam it drops, raising the stop-pawl and rotat-



ing the cylinder one space to change the train-designation. Upon the case or in any other suitable place an ordinary key 18' is mounted upon a suitable keyboard, having one end  
 5 connected by the wire 19 to the battery, and the contact-point 20, connected thereto by a wire 21.

Where two batteries are used they are connected by a wire 22.

10 The set-screw 23 operates to regulate the throw of the pawl 4 and to prevent it from jumping, the pawl 24 regulates the pull of the pawl 5, the set-screw 25 regulates the retraction of the armature, and the set-screw 26  
 15 regulates the swing of the top of said armature to retract pawl 4; also the set-screw 23 and 24 lock the pawls and through them the ratchet, pointer-shaft, and pointer.

Having described my invention, what I  
 20 claim, and desire to secure by Letters Patent, is—

In an annunciator a dial provided with a

series of notices, a pointer-shaft, a pointer thereon, a ratchet on said shaft, a battery, an electromagnet having a swinging armature 25 and two pawls upon said armature simultaneously engaging with said ratchet to respectively push and pull it around and shift said pointer each time a circuit is made, in combination with a cam upon the pointer-shaft, 30 a lever engaging with said cam, a cylinder provided with a series of train-designating notices and a pawl connected to said lever and engaging with a ratchet, all actuated by the rotation of the pointer-shaft to rotate said 35 cylinder to change the notice which is displayed through a slot in the dial.

In witness whereof I have hereunto set my hand on this 2d day of May, 1895.

F. A. JENNINGS.

In presence of—

C. W. SMITH,

JESSIE E. MURRAY.