2 Sheets—Sheet 1.

W. C. SPELLMAN & F. A. GOELTZ.

ADVERTISING CLOCK.

No. 184,218. Patented Nov. 7, 1876.

Fig. 1.

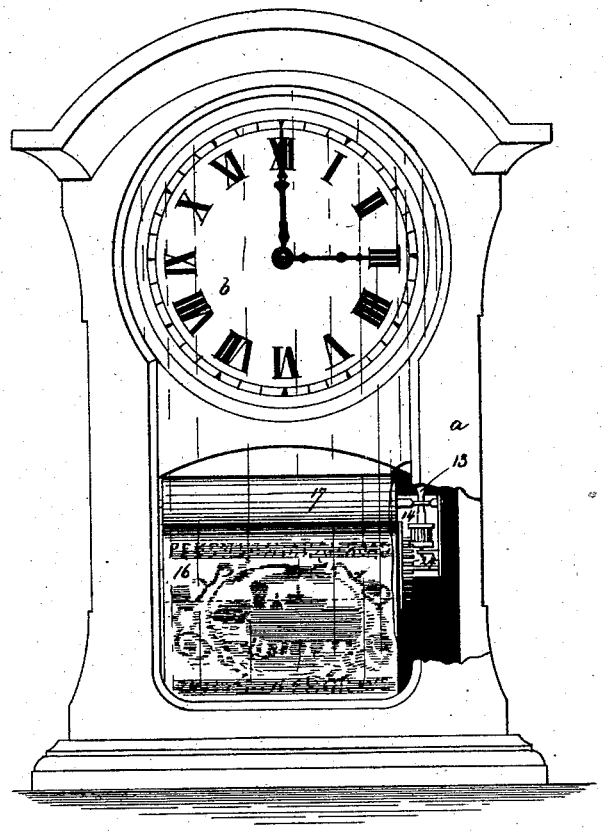
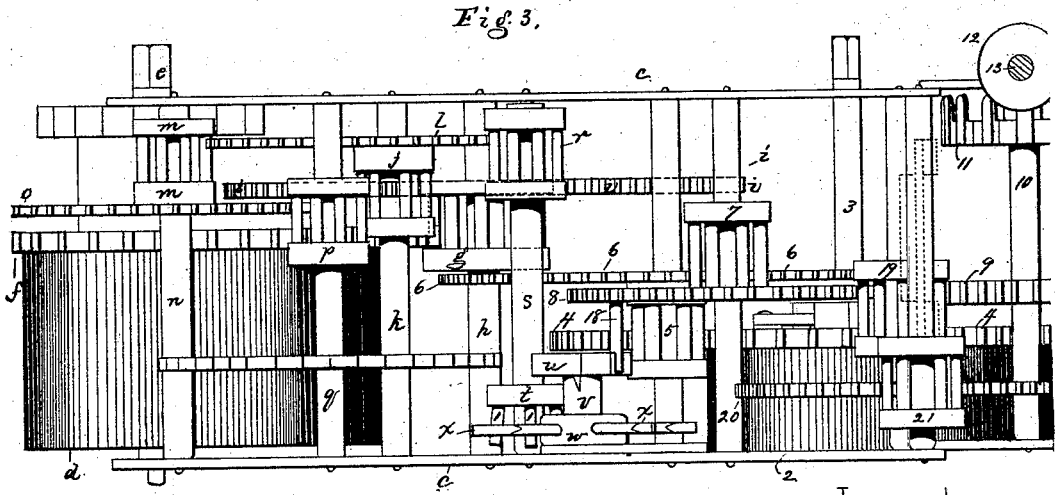


Fig. 3.



Witnesses.

E. H. Latimer,

W. J. Pratt.

Inventors

Wm. C. Spellman & Francis A. Goeltz

per Crosby & Gregory Att'ys.

2 Sheets—Sheet 2.

W. C. SPELLMAN & F. A. GOELTZ.

ADVERTISING CLOCK.

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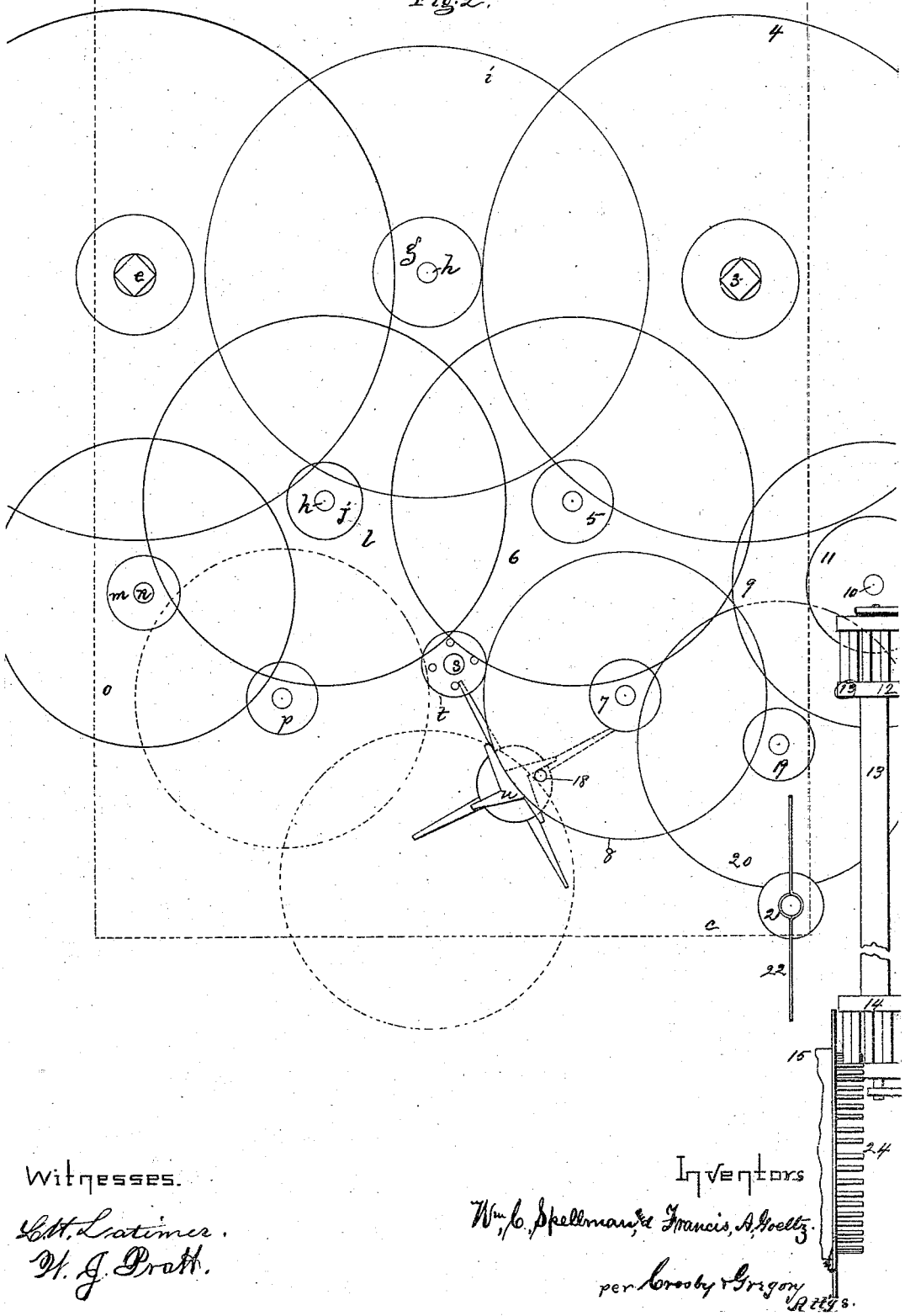
Fig. 2.



Witnesses.

H. H. Latimer.

W. J. Pratt.

Inventors

Wm. C. Spellman & Francis A. Goeltz.

per Crosby & Gregory Attys.

UNITED STATES PATENT OFFICE.

WILLIAM C. SPELLMAN AND FRANCIS A. GOELTZ, OF NEW YORK, N. Y., ASSIGNORS TO SAID SPELLMAN AND CHARLES M. ROWLEY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN ADVERTISING-CLOCKS.

Specification forming part of Letters Patent No. **184,218**, dated November 7, 1876; application filed October 10, 1876.

To all whom it may concern:

Be it known that we, WILLIAM C. SPELLMAN and FRANCIS A. GOELTZ, both of the city, county, and State of New York, have invented an Improved Advertising-Clock, of which the following is a specification:

This invention relates to an advertising-clock, in which advertisements printed upon a belt or tape are displayed at certain intervals through a transparent portion of the clock or a suitable sight-hole.

This invention consists in the combination, with mechanism adapted to measure and indicate time, of an indicating-wheel, to stop and release a belt-driving mechanism to permit the display of certain portions of the belt, and then to move it to present another advertisement, substantially as described; also, in a movable indicating-wheel and a train of gearing, provided with a crown-wheel or equivalent, and driven by a suitable spring or weight, in combination with an advertising-belt, a roller to move it, a gear thereon, and a connecting-shaft, provided with lantern-wheels or equivalents, and adapted to connect the belt-carrying roller with its driving mechanism, all constructed and arranged to operate substantially as hereinafter shown.

Figure 1 represents, in front view, an advertising-clock embodying our invention; Fig. 2, a front view of the operative parts of the apparatus, the circles denoting the toothed wheels and pinions, the teeth, however, being omitted, as it is considered unnecessary that they be shown; Fig. 3, an under-side view of the clock and belt-driving gear, the teeth being shown.

The case *a* of the clock and the dial *b* may be of any desired or usual shape. Within the case is placed a frame, *c c*, properly held together, and adapted to sustain the shafts or axle of the toothed wheels and pinions composing the driving devices for the hour and minute hands of the clock, that measure and indicate time, and the driving devices for operating the belt-roller.

The clock mechanism is driven by a spring, *d*, attached at one end to a shaft, *e*, and at the other end to a toothed wheel, *f*, loose on shaft *e*, and engaging the lantern-wheel *g* on the shaft *h*, that moves the minute-hand of the clock. Shaft *h* carries a toothed wheel, *i*, that engages a lantern-wheel, *j*, on a shaft, *k*, provided with a toothed wheel, *l*, it engaging a lantern-wheel, *m*, on shaft *n*, having a toothed wheel, *o*, the latter wheel engaging the lantern-wheel *p* on the escapement-shaft *q*. The toothed wheel *l* also engages a lantern-wheel, *r*, on a shaft, *s*, provided with an indicating-wheel, *t*. This indicating-wheel is provided with any desired number of pins, 1, to hold a stopping device, composed of a star-wheel, *u*, on a collar, *v*, provided with a hub, *w*, and arms *x*, the latter being operated by the pins of the indicating-wheel, and adapted to indicate the period or intervals of time between each movement of the belt through its driving-gearing.

The spring 2 on shaft 3 drives the toothed wheel 4 and crown-wheel 11 through lantern-wheel 5, wheel 6, lantern 7, wheel 8, and toothed wheel 9, the latter being fast upon the shaft 10, to which is attached the crown-wheel 11. The crown-wheel 11 engages a lantern-wheel, 12, on a vertical connecting-shaft, 13, having at its lower end a second lantern-wheel, 14, that engages a crown-wheel, 24, on the end of the roller 15, that moves the belt or tape 16, upon which the advertisements to be displayed are printed. The surface of this roller 15 is provided with an india-rubber or an equivalent soft or elastic cover, and a pressure-roller, 17, above it presses the belt or tape down upon the roller 15 sufficiently to cause the roller to move the belt or tape.

The belt has printed upon it advertisements, usually of a certain length. The advertisements are displayed through the glass or open front of the clock. The belt has a movement sufficient to remove one advertisement from the sight-opening in the case and place another advertisement opposite such opening, where it remains for the desired length of time.

The indicating-wheel *t*, before described, indicates the intervals of time of motion and of rest of the belt. The distance or extent of movement of the belt depends upon the distance between the pins 18 and the size of the

toothed wheel 8, that engages and operates the toothed wheel 9 on the shaft 10, such pins 18 being alternately engaged and released by the arm of the stopping device *u*. One pin, 18, is shown in the drawing; but more than one can be used, if desired.

The wheel 8 engages a lantern-wheel, 19, having on its shaft a toothed wheel, 20, that engages a lantern-wheel, 21, on a shaft, provided with a regulating-fan, 22.

The crown-wheels 11 24 and lantern-wheels 12 14 might be bevel-pinions.

In our invention we show how a part of a time-indicating mechanism—a clock—is made to indicate the time of operation of a second train of gearing to move a belt to display an advertising-card.

We are aware that advertisements have been placed upon a belt and operated by a spring power; but we are not aware that an advertising-belt has ever been moved by a time-indicating mechanism—as a clock.

We claim—

1. A time measuring and indicating mechanism and an indicating-wheel, *t*, in combination with an advertising-belt, its roller 15, the stopping device *u v x*, and the connecting-shaft 13, driven by a train of gearing, all constructed substantially as described, to move the advertising-belt, and hold it at rest at determined intervals of time, substantially as described.

2. In combination, the indicating-wheel, the stopping device, the roller 15, the wheel 8, and pin 18, the gearing 9 11 12 14 24, and connecting-shaft 13, all substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM C. SPELLMAN.
FRANCIS A. GOELTZ.

Witnesses:
T. LEO WINKLER,
CHAS. H. STEINSIECK.