

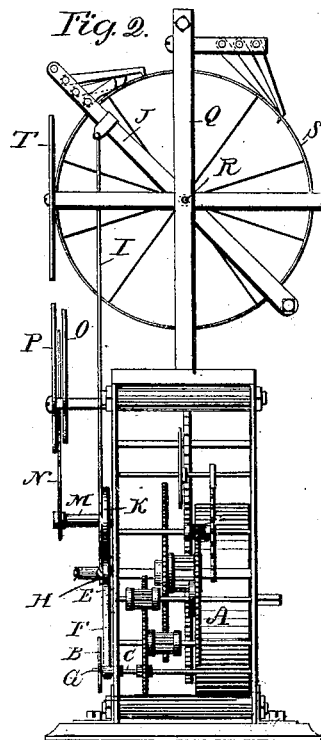
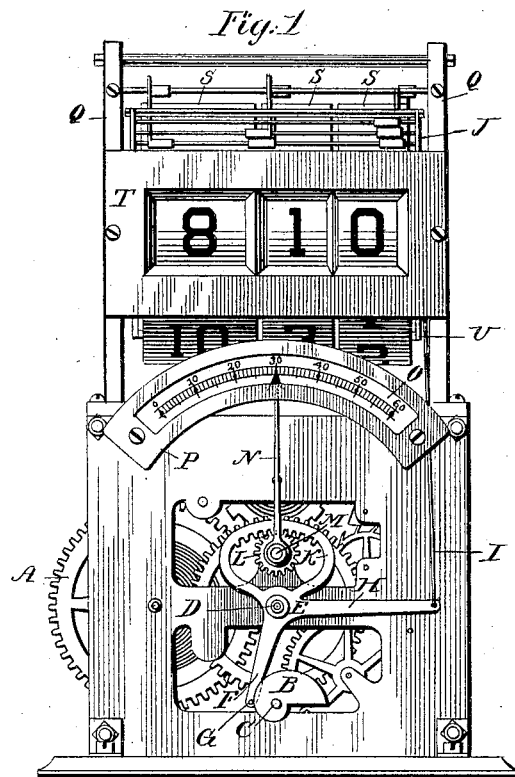
No. 649,588.

Patented May 15, 1900.

S. P. THRASHER.
TIME INDICATING DEVICE.

(Application filed Mar. 8, 1897.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL P. THRASHER, OF NEW HAVEN, CONNECTICUT.

TIME-INDICATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 649,588, dated May 15, 1900.

Application filed March 8, 1897. Serial No. 626,401. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL P. THRASHER, a citizen of the United States, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Time-Indicating Devices, of which the following is a specification.

My invention relates to time-indicating devices, and is especially adapted to indicate time by figures carried upon rotating spools or drums and figures and graduations upon a seconds-arc; and it consists in the construction and relative arrangement of the parts as hereinafter described, and pointed out in the claim, reference being had to the accompanying drawings, in which like letters of reference indicate like parts throughout the figures.

Figure 1 is a front view showing my device in operation with the case removed. Fig. 2 is a side view of the same.

A is preferably an ordinary marine clock-movement.

B is a cam secured to the shaft C, which usually bears the seconds-hand and is adapted to make a revolution each minute.

Journaled on a stud D, secured to the front plate in substantially-concentric relation to the center of the movement, is an oscillating frame E, provided with arm F, carrying a pin G in its lower end and adapted to ride upon the face of the cam B and to impart to the frame an oscillating or vibrating movement each minute. H is another arm of the frame, extending laterally and connected by a pitman I with the yoke J.

K is a rack or segment of an internal gear forming a part of the frame E and meshing into pinion L, likewise journaled on a stud M, secured to the front plate of the movement and adapted when device is in operation to be rotated in either direction sufficiently to move a seconds-pointer N, frictionally secured to the pinion, over the graduations of a seconds-arc O, which is suitably secured to the front plate and is provided with a perforated front plate or mat P, arranged in close proximity to the same and adapted to expose the seconds graduations and end of the seconds-pointer N. Secured to the top of the movement, preferably by means of screws passing

through its base into the pillars of the movement, is a frame Q, provided with a shaft R, upon which are journaled drums S S S, carrying figures to properly indicate the time of day, these drums being provided with suitable perforations and engaging pawls and the said pawls being adapted to operate their respective drums in effecting the proper change of time in substantially the same manner as shown by me in my application of October 9, 1896, Serial No. 609,293.

T is a perforated plate exposing the figures carried on the drums and suitably attached to the frame Q.

I will now describe the operation of my invention.

Cam B in making its revolution each minute by engagement with the arm F of the frame E causes it to oscillate sufficiently far in one direction by the time the highest point of the cam is reached to have rotated the pinion sufficiently by means of the rack to carry the seconds-pointer gradually to the sixtieth graduation-mark on the seconds-dial and to have drawn the upper end of the oscillating yoke J to the extreme limit of its backward movement, the carrying-pawls supported by the upper end of yoke J, previously referred to and more fully described in said former application, being then in proper position to engage one or more of the drums at their next forward movement and to cause the change of time indicated by the figures on the drums to the next succeeding minute. The weighted bar U of yoke J now falls, as described and explained in said former application, as the pin G of arm F passes off from the highest point of the cam B to its throat or lowest point and forthwith returns the oscillating frame E to its normal position, at the same time allowing the yoke J to move in a forward direction and properly actuate one or more of the drums, as the case may require, in effecting the change of time on the drums, as above stated, and at the same time causing the pinion L, engaging the rack K, to be rotated backward until the seconds-pointer N has returned to its starting-point or first graduation-mark, and in like manner each minute the repetition of the operation of these parts in the manner above described is continued.

It is evident that various changes in the construction and relative arrangement of the parts herein shown and described might be made and yet be within the spirit and scope of my invention, and I do not wish to be understood as in any way limiting myself to the exact construction and arrangement of the several parts hereinbefore described and set forth; but,

10 Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

15 In a time-indicating device in combination, a curved seconds-scale, a pivoted fly-back seconds-hand pointing to the same, a clock-movement to move said hand slowly over said scale in one direction and then release the

same, a rotatable time-indicating drum having time-numerals thereon, a connection between said drum and said clock-movement 20 to rotate the same, a connection between said drum and said hand to move the same quickly back in the opposite direction when said hand is released, and means to then move said hand slowly back over the scale in the original di- 25 rection.

Signed at New Haven, in the county of New Haven and State of Connecticut, this 6th day of March, A. D. 1897.

SAMUEL P. THRASHER.

Witnesses:

GEO. W. LEDYARD,
W. S. TUCKER.