No. 753,330. PATENTED MAR. 1, 1904.

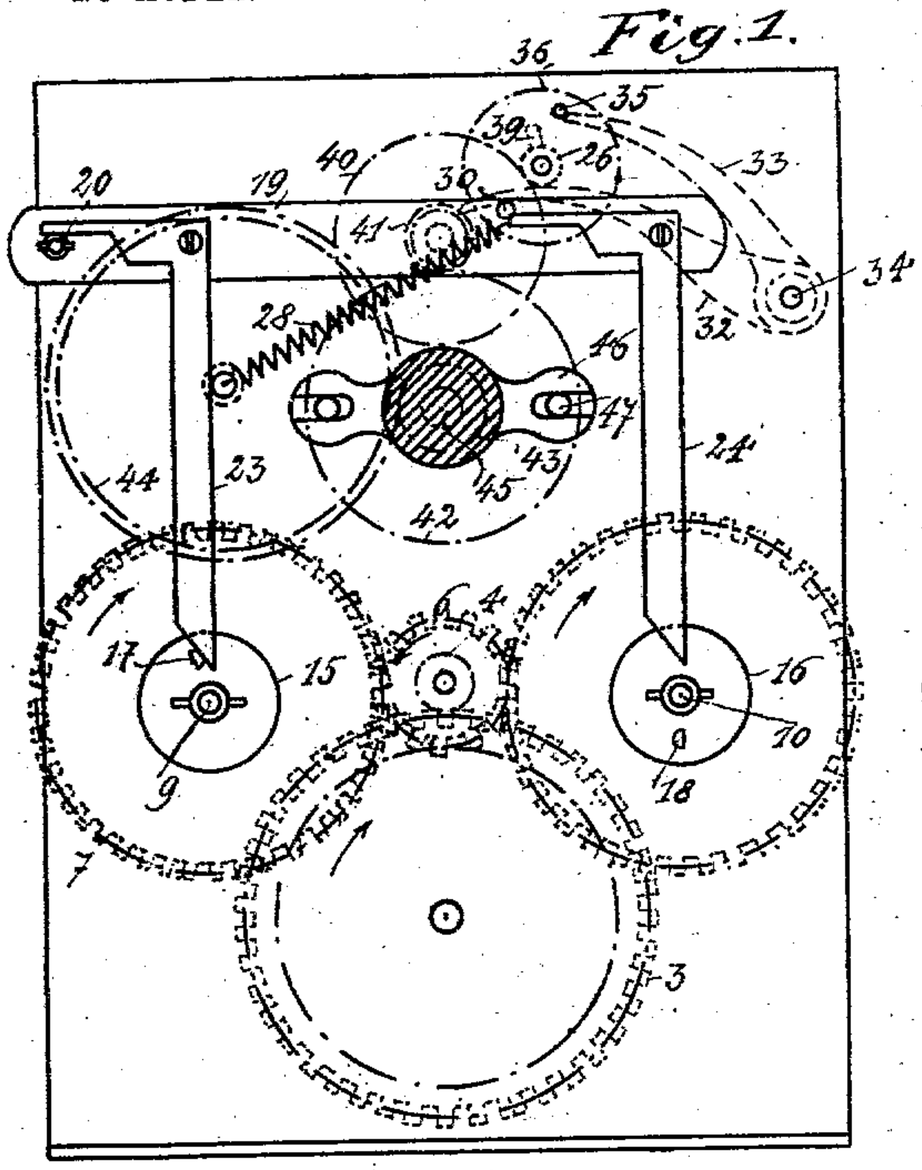
F. W. & E. THIELENHAUS & C. VOLLMANN.

TIME GAS LIGHTING MECHANISM.

APPLICATION FILED AUG. 20, 1902.

NO MODEL.

Fig. 1.



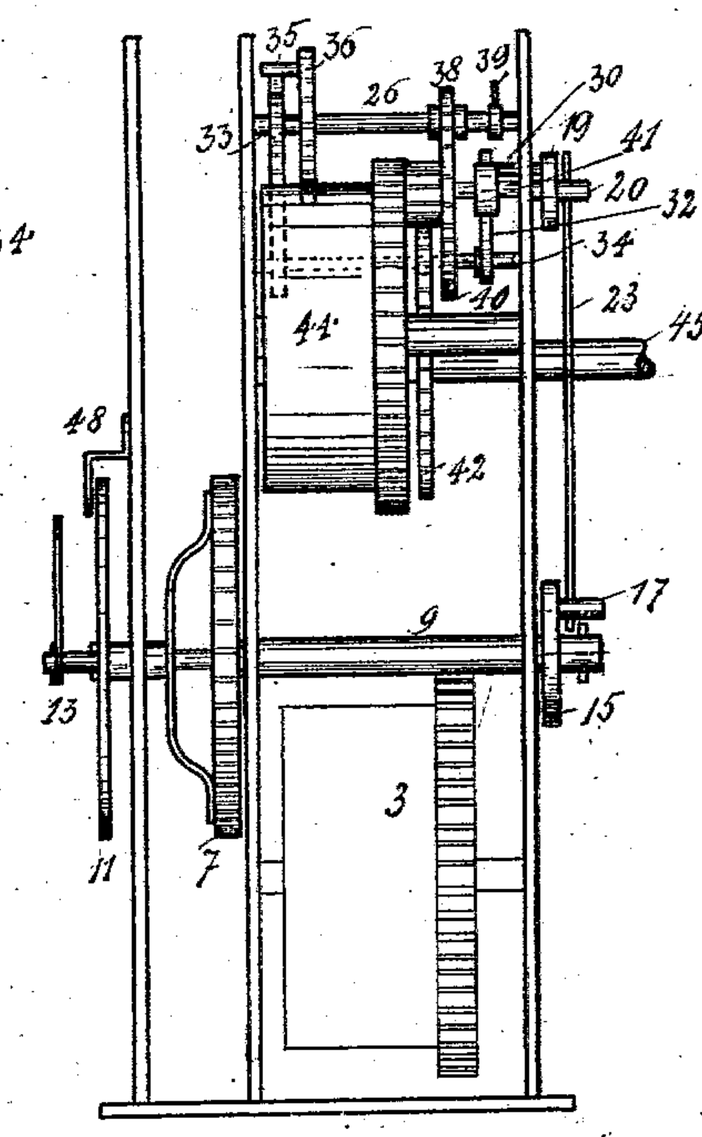
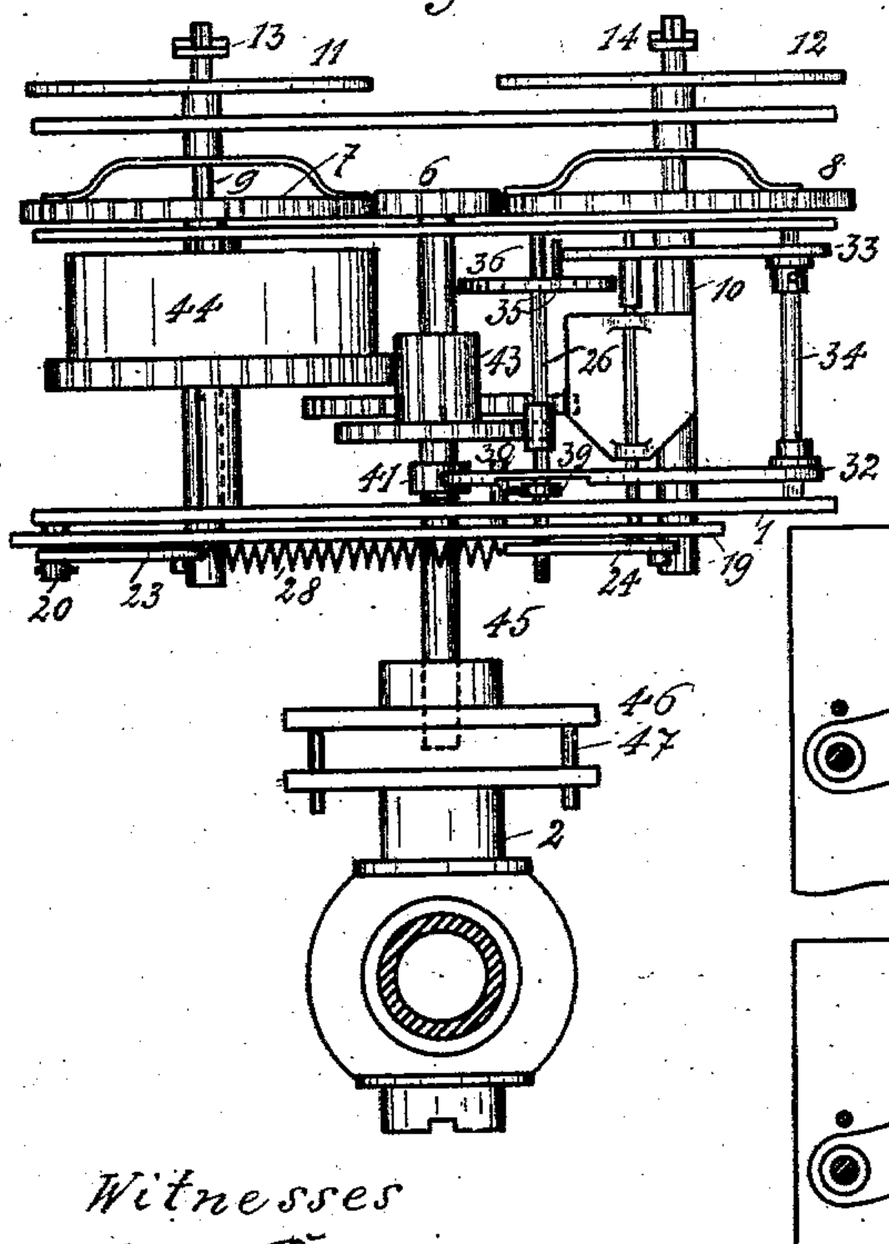
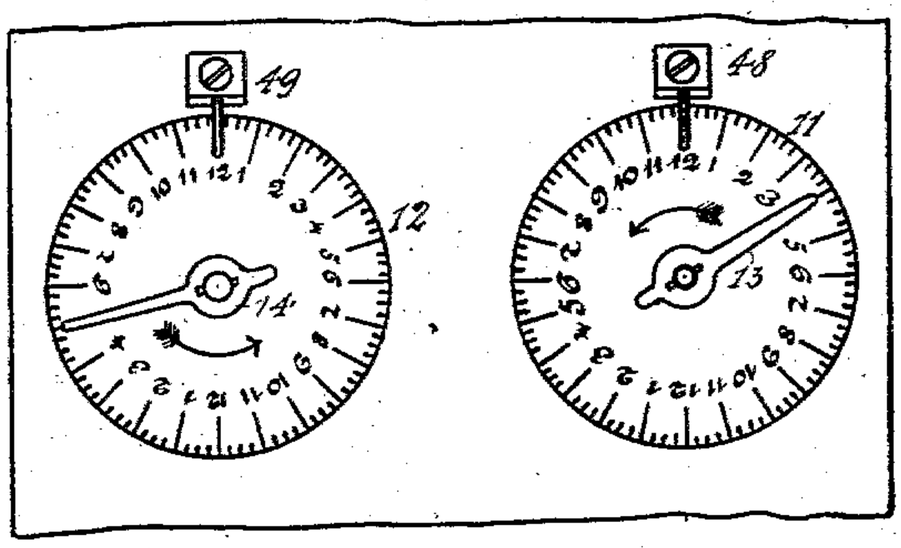


Fig. 3

Fig. 6

Fig. 2





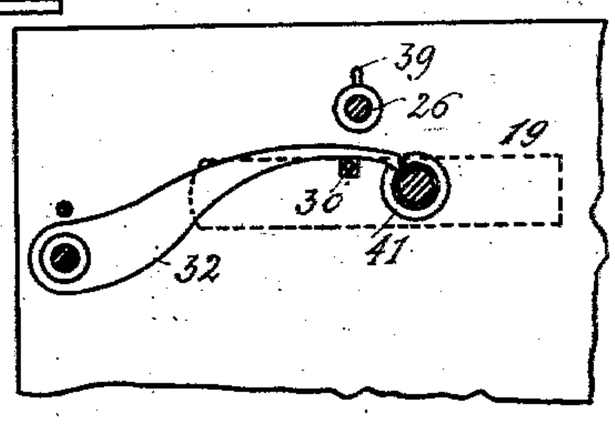


Fig. 4

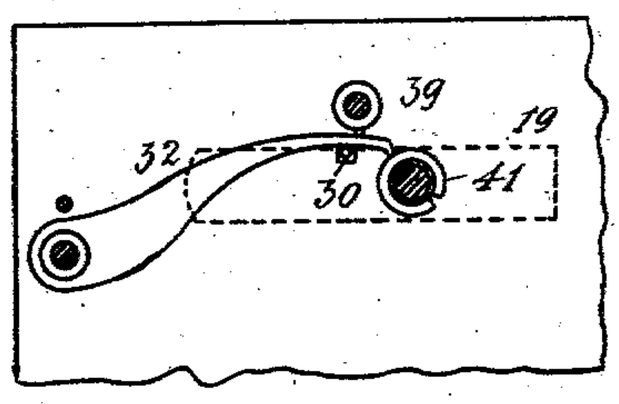


Fig. 5

Witnesses
Otto Bonner
Herman Fahn.

Inventors
F. W. Thielenhaus
E. Thielenhaus
C. Vollmann
by Adams
Atty

No. 753,330. Patented March 1, 1904.

UNITED STATES PATENT OFFICE.

FRIEDRICH WILHELM THIELENHAUS, EWALD THIELENHAUS, AND CARL VOLLMANN, OF ELBERFELD, GERMANY.

TIME GAS-LIGHTING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 753,330, dated March 1, 1904.

Application filed August 20, 1902. Serial No. 120,357. (No model.)

To all whom it may concern:

Be it known that we, FRIEDRICH WILHELM THIELENHAUS, EWALD THIELENHAUS, and CARL VOLLMANN, subjects of the Emperor of Germany, residing at Elberfeld, in the Province of Rhenish Prussia, Germany, have invented a new and useful Apparatus and Improvements in Self-Acting Time Gas-Lighters, of which the following is a full, clear, and exact specification, such as will enable others skilled in the art of this instrument to make and use the same.

Our invention relates to a self-acting time gas-lighter which controls the turning off or on of the gas-cock of a street or other lantern and is so constructed that the burning period of the lantern may be shortened or prolonged, the turning off or on of the gas taking place always at any desired hour and with a quick movement.

On the accompanying drawings, Figure 1 is a front elevation of the improved apparatus. Fig. 2 is a plan thereof. Fig. 3 is a side view. Figs. 4 and 5 are details of construction. Fig. 6 is a part of an opposite view of Fig. 1.

Like numerals of reference indicate like parts in the drawings.

We employ a timepiece or clockwork mechanism arranged to operate the plug of a gas-service pipe which is located in the standard-plates 1. The spring-barrel 3 of the clockwork mechanism revolves, by means of the driving-wheel 4, a toothed wheel 6, which turns the wheels 7 and 8 in the direction of the arrows in such a manner that each of said wheels only revolves once in twenty-four hours. Said wheels are secured on spindles 9 10, to which are keyed the dial-plates 11 12, that may be adjusted on spindles 9 and 10, but revolve in the same manner and having arranged in front the pointers 13 14. Said pointers are rigidly connected with spindles 9 10 and turned therewith. The spindles 9 10 carry on the opposite side the disks 15 16, which are provided with studs 17 18 of half-circular section.

To the standard 1 is linked a lever 19 by means of a bolt 20, to which are linked two angularly-shaped rods 23 24, that are connected by a spring 28 in order to allow said levers to return in their original positions after they have been operated upon. Lever 19 is provided with stud 30, projecting through the standard-plate. The stud 30 serves as support to a pawl 32, sitting on a spindle 34, to which is keyed a second pawl 33. This pawl engages a stud 35 of a wheel 36, the shaft of which carries a pinion 38 and a pin 39. Pinion 38 is in mesh with a wheel 40, having on its shaft a pinion 41, which meshes with a wheel 42. Said wheel has connection with a pinion 43, which meshes with the wheel of a spring-barrel 44. The gear 42 43 is seated upon an arbor 45, which by means of a plate 46 and studs 47 is coupled to the plug 2 of the gas-service pipe.

The revolving dial-plates 11 12, one of which is arranged for opening or turning the gas on, the other for closing or turning the gas off, may be adjusted by means of the fixed pointers 48 49. Together with said dial-plates revolve the disks 15 16, their studs 17 18 coming at different times in contact with the rods 23 24, according to their adjusted position. When engaging said rods, they raise lever 19. Stud 30 of lever 19 raises pawls 32 33, the latter releasing wheel 36, which now can turn, but is immediately stopped again, caught by the raised stud 30, which engages a pin 39 of the spindle 26. The train is now caught until the respective stud 17 or 18 has passed its respective rod 23 24, whereupon lever 19 is allowed to drop. Stud 30 is also lowered and frees the spindle 26 of wheel 36, which now can turn wholly and drive, by means of the intermediate train 38 40 41 42 43 44, the arbor 45 a quarter-turn, which is sufficient to turn the gas on or off.

To cause pawl 33 to take its normal position in order to stop wheel 36 and to prevent, therefore, pawl 32 to quickly fall down together with lever 19, on the shaft of gear 40 41 is fixed an eccentric disk 41, which engages pawl 32 and leads pawl 33 into its prepossessed position.

Having now particularly described and as-

certained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

In an apparatus of the class specified, the combination with a spring-barrel, a gear and two wheels turned by said gear, two dial-plates 11 and 12, shafts 9 and 10, pointers 13 and 14 adjustably mounted on said shafts and pointers 48 and 49, and a standard on which they are fastened, disks 15 and 16 seated on said shafts, a lever 19, studs 17 and 18, angle-levers 23 and 24, pawls 32 and 33 operated by the lever 19, the stop-wheel 36 caught and released by said pawls, a gear for turning the spring-barrel 44 and a plug 2 of a gas-pipe operated by said barrel, substantially as described and for the purpose set forth.

FRIEDRICH WILHELM THIELENHAUS.
EWALD THIELENHAUS.
CARL VOLLMANN.

Witnesses:
OTTO KÖNIG,
J. A. RITTERSHAUS.