

(No Model.)

N. H. & A. B. SHAW.

AUTOMATIC GAS LIGHTING AND EXTINGUISHING APPARATUS.

No. 520,836.

Patented June 5, 1894.

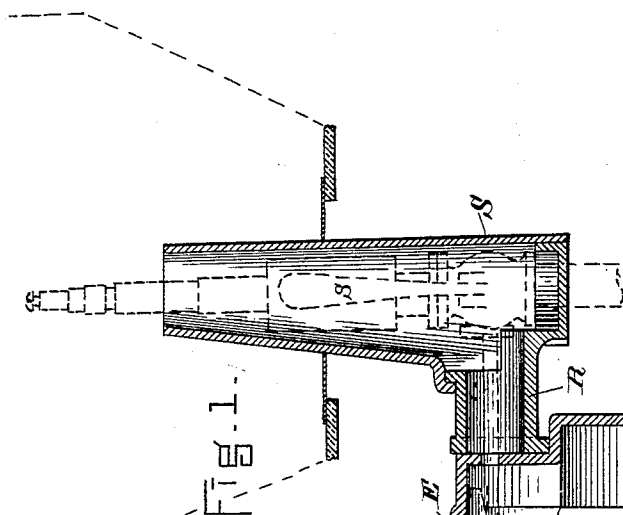
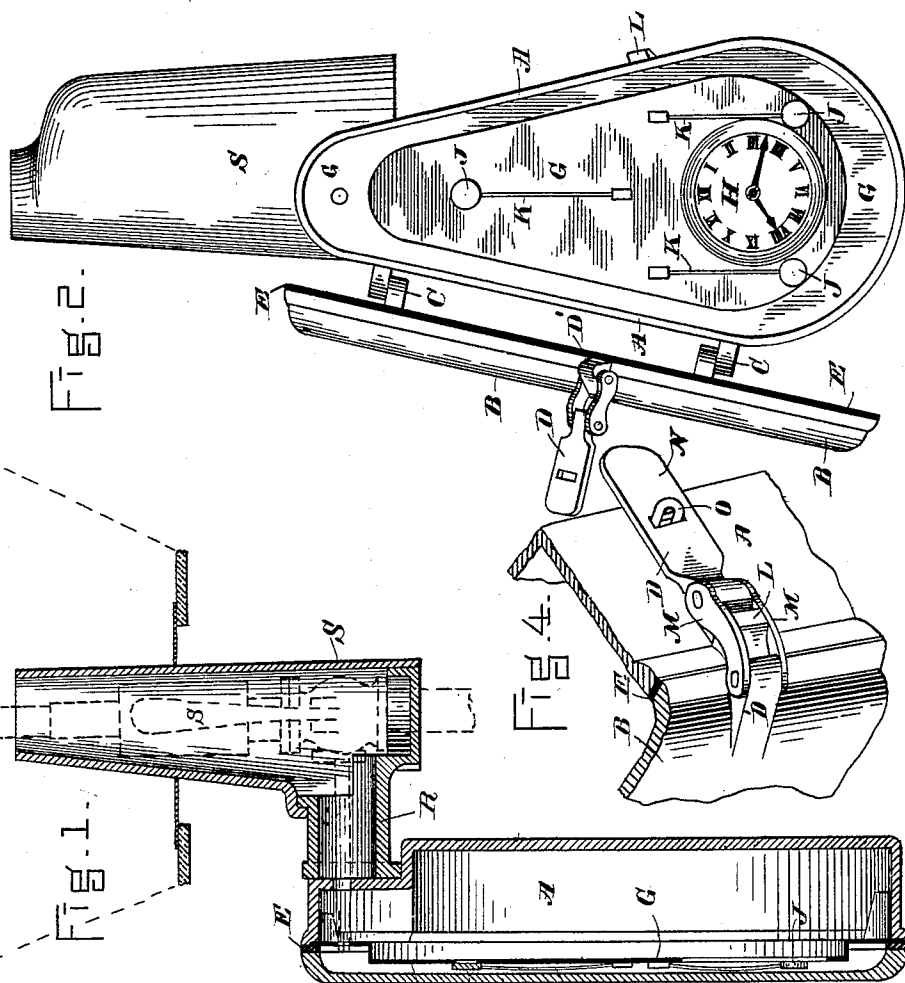
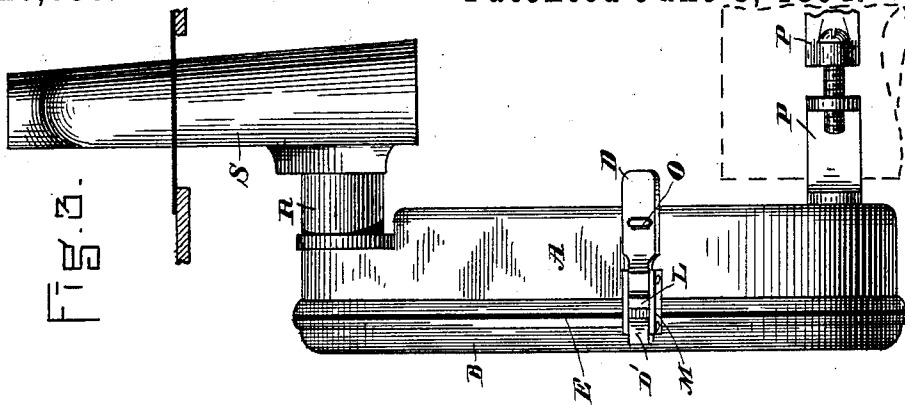
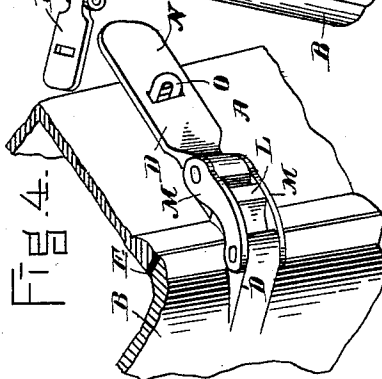


Fig. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

NATHANIEL H. SHAW, OF SOMERVILLE, AND AI B. SHAW, OF MEDFORD,
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LIGHTING COMPANY, OF PORTLAND, MAINE.

AUTOMATIC GAS LIGHTING AND EXTINGUISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 520,836, dated June 5, 1894.

Application filed March 2, 1891. Serial No. 383,457. (No model.)

To all whom it may concern:

Be it known that we, NATHANIEL H. SHAW, of Somerville, and AI B. SHAW, of Medford, in the county of Middlesex and State of Massachusetts, have jointly invented certain new and useful Improvements in Automatic Gas Lighting and Extinguishing Apparatus, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention is in the nature of an improvement upon the apparatus set forth in our Letters Patent No. 405,435, dated June 18, 1889, for "automatic gas lighting and extinguishing apparatus." In such former invention a time-mechanism was employed to automatically turn on the gas and to light it from a spark produced by a hammer-stroke upon a charge of fulminate held in one of a series of pits arranged spirally in the periphery of a cylindrical carrier, fed upwardly by revolving on a screw-shaft, the gas being automatically shut off also, at the proper time, by the time-mechanism. We employ this apparatus with our present invention and combine with it certain novel features designed to give greater efficiency to the system of lighting referred to. We inclose the time-mechanism in a rigid water-proof case, the upper end of which will enter between the supporting arms of the lantern-frame, while the lower part has clamps to secure it to the lamp-post. Within the case, a dust-shield protects the mechanism, its key-ways having spring caps to cover them. An arm extending rearwardly from the case and connecting with the gas-pipe supports the burner and cock. Through this arm the cock-operating shaft extends rearwardly, and a support for the shield or chimney is furnished.

Our invention consists in the devices and combinations of devices herein set forth, and especially referred to in the appended claims.

In the drawings, Figure 1 is a vertical section through the case and chimney; Fig. 2 a front elevation showing the door open and the dust guard in position. Fig. 3 is a side elevation with the door closed. Fig. 4 is a perspective detail of the door fastening.

A represents the body of the case designed

to receive the time mechanism for actuating the gas-cock and other lighting apparatus.

B is the door of the case, to which it is connected by hinges C and a suitable clamp fastening D, adapted to draw and hold the door and case in close contact. A packing ring E interposed between them serves to make the joint water tight.

G is the sheet metal dust-guard, seen in elevation in Fig. 2 and represented in Fig. 1 by the heavy black line. It covers closely the front of the case A within the door B, so as to entirely conceal the time mechanism, except the dial H and the hands, and serves to protect the clock-work from dust or dampness when the door is open. This guard is furnished with an inward-turned flange all around, fitting snugly within the bottom, top and side walls of the case. Its central portion is raised sufficiently to give room for the inclosed mechanism, and yet allow the door B to close. The guard has a large circular opening in its lower portion for the dial, as in Fig. 2, and has other holes through it for insertion of the key in winding the clock-work, or setting the apparatus. These holes are covered by movable caps J connected to the guard so as to be readily removed and replaced. We prefer to connect this, as shown, by a light spring K secured at one end to the guard-plate, so that said caps may be sprung to one side before inserting the key, and on removing it they will be automatically replaced and held in position.

When it is desired to utilize the time-mechanism as a public clock, the door B will be provided with a thick glass panel located directly in front of the dial H.

The drawings represent the preferred form of fastening for the door B. The case A has on its side a solid lug L, and the door has a corresponding projection D' to which a pair of links M are pivoted, the free ends of these links being similarly pivoted to one end of the locking lever N. This lever is cam-shaped at its pivoted end to engage with the face of the lug L on the case and draw the door and its packing ring E tightly against the rim of the case. The lever is represented with a slot through it to admit a staple O so that the

parts may be held fast by a padlock. The case is secured to the lamp-post by suitable clamps P, Fig. 3, or by any proper means.

The upper part of the case has a horizontal arm R, extending rearwardly to support the gas-burner inclosed in the chimney S, and also the chimney itself if desired. Said arm is represented as hollow to inclose the shaft running from the topmost gear in the train of clock-work back to the lighting apparatus and the gas-burner which are to occupy said chimney, as best shown in the drawings forming part of another application for patent filed by Ai B. Shaw simultaneously herewith.

15 We claim as our joint invention—

1. The water-proof case A with its door B, marginal packing ring F and door-fastening devices, and with means for securing said case to the lamp-post, in combination with the dust guard G within said case, adapted to cover and protect the time movement and expose the dial, for the purpose set forth.

2. A water-proof case for time-mechanism, and means of securing the same upon a lamp-

post, in combination with an arm extending rearwardly from said case to support the burner and cock at the rear end of said arm, for the purpose set forth.

3. A water-proof case for time-mechanism, and means of securing the same upon a lamp-post, in combination with a hollow arm running rearwardly from the upper end of said case to support the burner and cock and inclose the cock-operating shaft of the gas-lighting apparatus, and with a close-fitting enlarged chimney adapted to receive the gas-pipe and the sparking apparatus, for the purpose set forth.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 23d day of April, A. D. 1889.

NATHANIEL H. SHAW.
AI B. SHAW.

Witnesses:

A. H. SPENCER,
R. HENRY MARSH.