

No. 624,733.

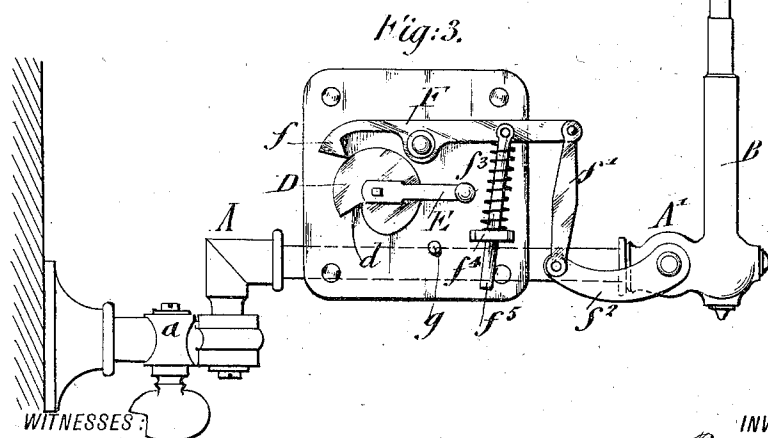
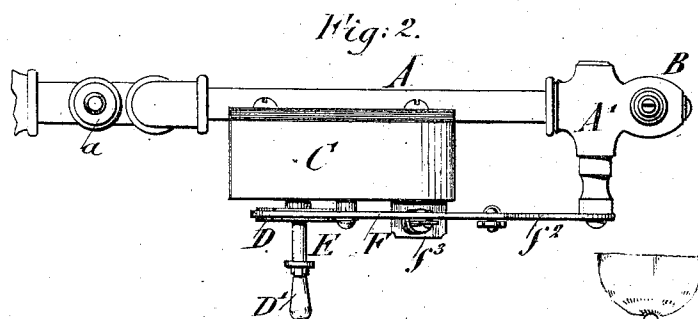
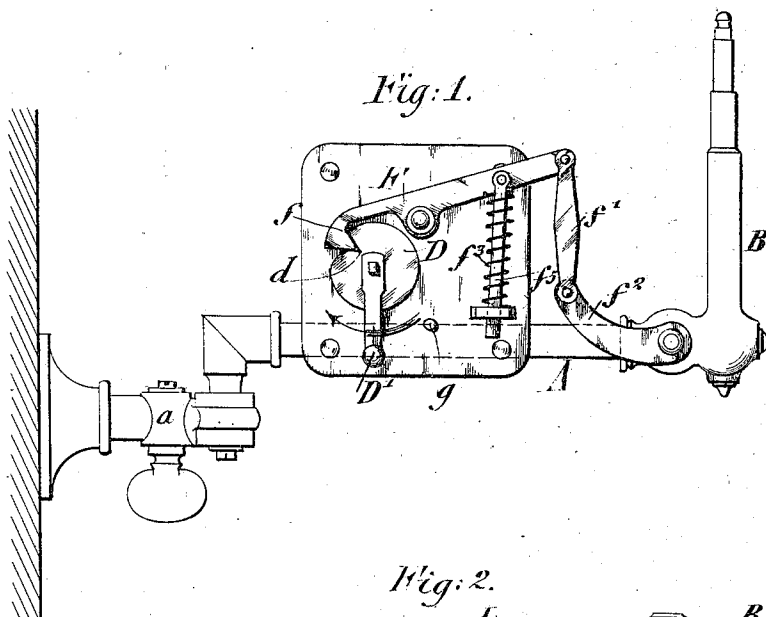
Patented May 9, 1899.

P. BARNIKEL.

TIME APPARATUS FOR EXTINGUISHING GAS.

(Application filed July 8, 1898.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

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TIME APPARATUS FOR EXTINGUISHING GAS.

SPECIFICATION forming part of Letters Patent No. 624,733, dated May 9, 1899.

Application filed July 8, 1898. Serial No. 685,407. (No model.)

To all whom it may concern:

Be it known that I, PETER BARNIKEL, a citizen of the United States, residing in New York city, borough of Manhattan, in the State of New York, have invented certain new and useful Improvements in Extinguishing Attachments for Gas-Burners, of which the following is a specification.

This invention relates to an improved attachment for gas-burners by which the flame is automatically extinguished after a given time, so as to produce not only economy in the use of gas, but also an effective protection against accidental extinguishment or against accidents resulting from the blowing out of the flame by persons unaccustomed to the use of gas. For this reason the attachment is especially adapted for the use of hotels, boarding-houses, &c., and also for the sleeping-apartments of servants, &c., in ordinary dwellings, as the attachment forms a guard device against poisoning by the escape of illuminating-gas.

The invention consists of an extinguishing attachment for gas-burners, which comprises a clock-train attached to the gas-bracket, an auxiliary cock in said bracket, a notched disk operated by the clock-train and adapted to be turned by a handle attached thereto, and a mechanism between said notched disk and the auxiliary cock, whereby after the disk has been set the clock-train produces the closing of the auxiliary cock and the extinguishment of the flame.

The invention consists, further, of certain details of construction and combinations of parts, which will be fully described hereinafter and finally pointed out in the claim.

In the accompanying drawings, Figure 1 represents a gas-bracket with my improved extinguishing attachment applied thereto and showing it in its normal position of rest. Fig. 2 is a plan view of Fig. 1; and Fig. 3 is a side elevation of the gas-bracket, showing the attachment in position while the flame is burning and before the same is extinguished.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a gas-bracket of any approved construction, which is provided with an ordinary stop-cock α and with an auxiliary stop-cock A' near the

burner B. To the gas-bracket is attached, in any suitable manner, a small clock-train C. In the drawings the gas-bracket is provided with a ledge, that is cast integral with its middle or tubular portion, to which the clock-train is attached by screws, or the clock-train may be strapped in any suitable manner to the tube of the bracket. To the arbor of the main-spring is applied a disk D, which is provided at its circumference with a notch d . A crank E is applied to the square end of the main-spring-arbor, so that the mainspring can be wound up to a certain extent by turning the disk in the direction indicated by the arrows in Fig. 1. Vertically above the notched disk D is arranged a fulcrumed lever F, which is provided with a hook-shaped end f , that is adapted to engage the notch of the disk D, the opposite end of the lever F being connected by an intermediate pivot-link f' with a crank-arm f^2 , that is attached to the outer end of the auxiliary stop-cock A', as shown clearly in Figs. 1 and 3. A strong helical spring f^3 is interposed between the longer end of the fulcrumed lever F and a perforated stud f^4 on the casing of the clock-train, said spring being applied to a rod f^5 , that is guided in the perforated stud and pivoted to the lever F.

My improved extinguishing attachment for gas-burners is operated as follows: When the attachment is in its normal position of rest, as shown in Fig. 1, the auxiliary stop-cock A' is closed and the fulcrumed lever F rests by the projection at its end in the notch of the disk. The main cock α is also closed. When it is desired to light the burner, the main cock α is first opened. The notched disk is then turned by means of its crank-handle D' in the direction shown by the arrow in Fig. 1, so that the projection at the end of the lever F rides on the circumference of the disk and assumes the position shown in Fig. 3. By the intermediate connecting mechanism between the lever F and the crank of the auxiliary stop-cock the latter is opened, so that the burner can be lighted. As soon as the crank-handle D' is released the clock-train is operated by its mainspring, as the same has been wound up to a certain extent by turning the disk. According as the disk has been turned more or less the clock-train will run

for a greater or shorter length of time until the notch of the disk arrives again below the projection on the lever, so that the latter under tension of its spring f^3 reengages the notch of the disk and produces thereby the closing of the auxiliary stop-cock and the extinguishment of the flame. When a light is required only for a short time—say only for a few minutes sufficient to get something from the room—the gas is lighted by turning on the main cock, turning the crank of the disk for a partial rotation, and then lighting the flame. As the lever projection will arrive in a few minutes at the normal position in the notch of the disk, and thereby the stop-cock be closed automatically by the action of the clock-train and the flame extinguished, it is not necessary to shut off the gas from the cock. When a greater length of time is desired, the notched disk is turned by its crank up to a point near the notch, when the flame will burn, say, for about ten minutes, sufficient to undress and retire, as in a hotel or servant's room in a private house. When the clock-train has run out—that is to say, when the projection of the lever drops into the notch of the disk—the auxiliary stop-cock is closed and the flame extinguished. Should a longer time be desired by the person using the light, all that is necessary is to again turn the disk by the crank, when the gradual failing of the light calls attention to the fact that the clock-train is nearly run out. The light may thus be continued for another ten minutes. When it is desired to extinguish the flame before the clock-train has run out, the main cock a is closed and thereby the light directly extinguished.

The whole mechanism is preferably inclosed in a suitable casing having a glass cover opening on that side in which the crank is located. On this exterior casing is arranged a stop-pin g , against which the crank abuts, so as to

make the projection f of the lever move up close to the notch, but prevent it from dropping into it.

In some cases it may be desirable to interrupt the operation of the attachment, especially when the light is to be used for a greater length of time. In this case the crank can either be locked to the stop-pin by a suitable link or other device, or any other mechanism for arresting the return motion with the clock-train can be used. In this case the attachment cannot work until the locking device is released again, when the clock-train will run its course and close the auxiliary stop-cock in the manner described and extinguish the light. Unless so locked, however, the attachment will always accomplish its purpose—namely, the economizing of gas and the obviating of accidents resulting from blowing out the gas.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with a gas-bracket, of an auxiliary stop-cock, a clock-train supported on said bracket, a notched disk on the arbor of the mainspring, a crank-handle on said disk, a fulcrumed and spring-actuated lever provided with a projection at one end adapted to engage the notch of the disk, and intermediate connection between the lever and the auxiliary stop-cock whereby the latter is opened by winding or partly winding the mainspring or automatically closed by the running down of the clock-train, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

PETER BARNIKEL.

Witnesses:

PAUL GOEPEL,
M. H. WURTZEL.