E. DETWILER & G. FAJEN.

Gas-Regulators.

No. 158,255. Patented Dec. 29, 1874.

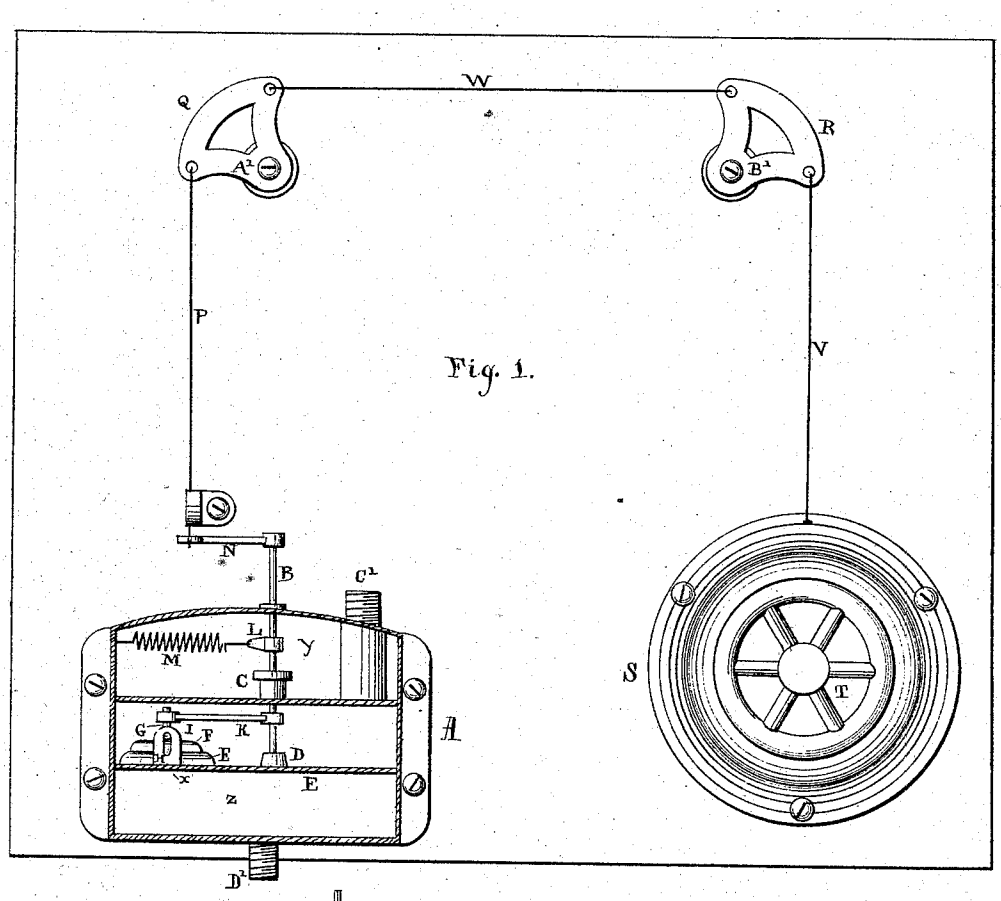

Fig. 1.

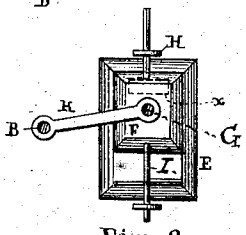

Fig. 2.

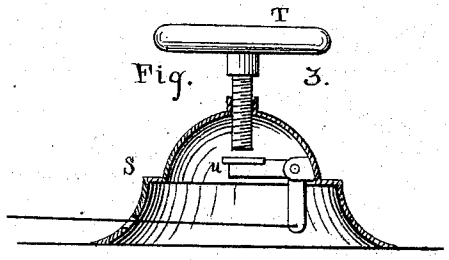

Fig. 3.

WITNESSES.

J. B. Smith

Elizabeth L. Smith

INVENTORS.

Emanuel Detwiler

Gustav Fajen

UNITED STATES PATENT OFFICE.

EMANUEL DETWILER AND GUSTAV FAJEN, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN GAS-REGULATORS.

Specification forming part of Letters Patent No. **158,255**, dated December 29, 1874; application filed October 12, 1874.

To all whom it may concern:

Be it known that we, EMANUEL DETWILER and GUSTAV FAJEN, of Milwaukee, in the county of Milwaukee, in the State of Wisconsin, have invented certain Improvements in Gas-Regulators, of which the following is a specification:

Our invention has for its object the control of the flow of gas, and is accomplished by a valve and apparatus for opening the same by a system of wires and arms, and a wheel and screw for operating the wires.

Figure 1 is a sectional view of the invention; Fig. 2, a view of the valve and valve-seat; Fig. 3, a sectional view of the handle and screw with which the apparatus is operated.

A is the case in which the valve is located; B, a shaft running down through the case, and to which an arm is attached which operates the valve. C is a stuffing-box on this rod, which prevents the gas from escaping around the rod through the partition in the case; D, the step for this shaft in the lower partition; E, the valve-seat; F, the valve; G, a pin standing on the top of the valve; H, a keeper at the end of the valve, through which a bar, I, passes, and steadies the valve in place; K, an arm out from shaft B, and through the end of which pin G passes; L, another arm from shaft B, attached to spring M, which closes the valve when the wires are slacked; N, an arm on the top of shaft B, attached to arm Q, which, when the wire P is drawn, pulls this arm round and opens the valve; Q, an arm secured to any permanent fastening by a pin, A′; R, another arm secured by pin B′; S, a raised bell-like piece secured to something permanent, into which screw T works on the top, and strikes onto; U, a movable arm attached to the side of the bell, and draws on wire V; W, a wire which connects the arms Q and R, so that as the wire V is pulled all the wires draw together; X, the opening under valve E for the gas to pass through; Y, the upper partition in the valve-case; Z, the lower partition in the valve-case; A′, bolt which holds arm Q in position; B′, bolt which holds arm R in position; C′, outlet for the gas from the valve-case; D′, inlet for the gas to the valve-case.

This invention is a useful article for shutting off the gas and regulating the flow of gas whenever a light flow is needed. The machine can be put up anywhere, and the handle T used at any point where necessary. To put on the gas, turn the screw T in, and that will press on arm U, and draw wire V, which will draw the other arm's wires till they reach wire P, and that connected with arm O, attached to arm N, will turn shaft B and open the valve as much as is wanted, in proportion to the turning of the screw T, and let gas into the center opening of the valve-case and out through the outlet C′. Whenever it is necessary to close off the flow of gas, turn the handle T in an opposite direction, and the spring M will turn the shaft B and close the valve. One or more regulators can be used whenever necessary to open or close more or less burners.

We claim as our invention —

1. An improvement in gas-regulators, consisting of rod or shaft B, stuffing-box C, valve-seat E, valve F, with pin G on the top of the valve, keeper H, with box I passing through keeper H, and spring M, combined and arranged substantially as described.

2. The valve-operating shaft or rod B, in combination with arms Q and R, bell S, screw T, arm U, and wires P, W, and V, arranged substantially as set forth.

EMANUEL DETWILER.
GUSTAV FAJEN.

Witnesses:
ELIZABETH J. SMITH,
J. B. SMITH.