No. 860,285. PATENTED JULY 16, 1907.

H. DREYER.

ILLUMINATED SIGN.

APPLICATION FILED JAN. 22, 1907.

2 SHEETS—SHEET 1.

Fig. 1

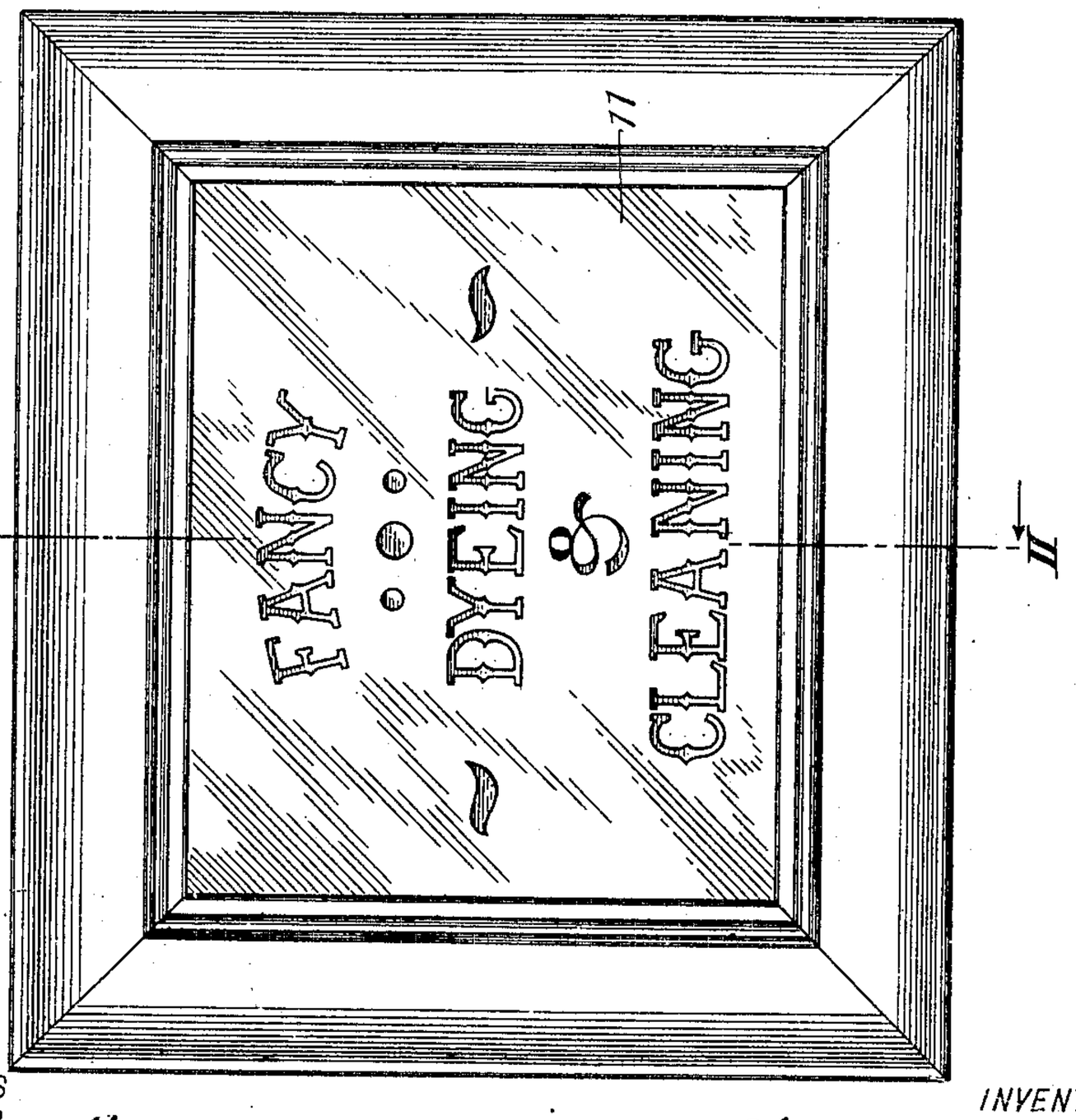
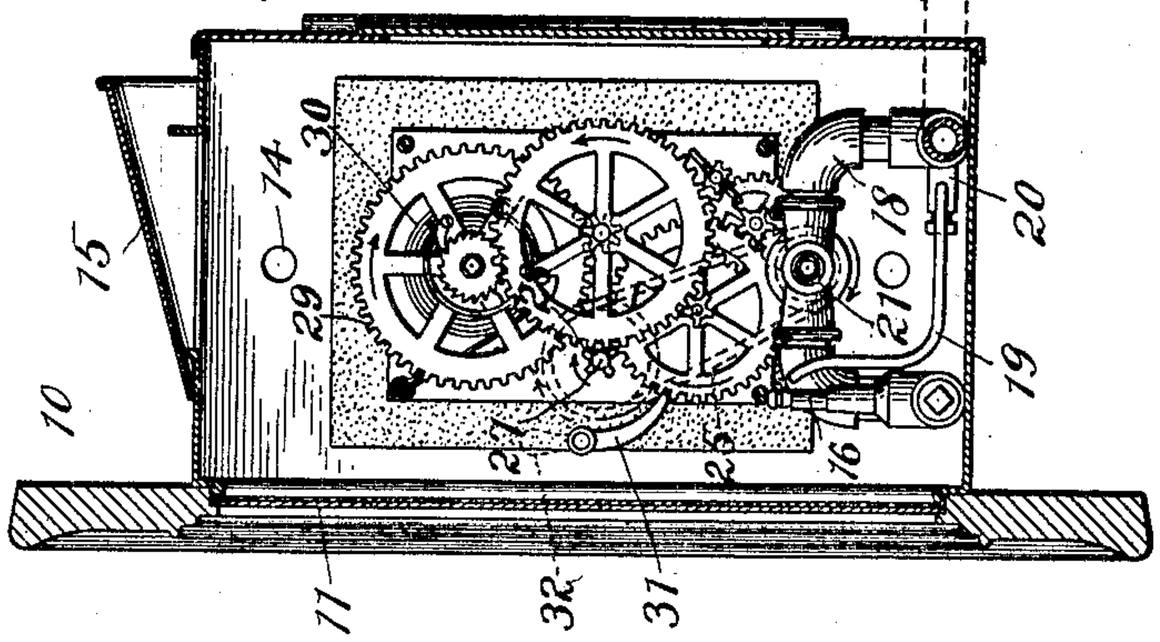


Fig. 2



WITNESSES

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2 SHEETS—SHEET 2.

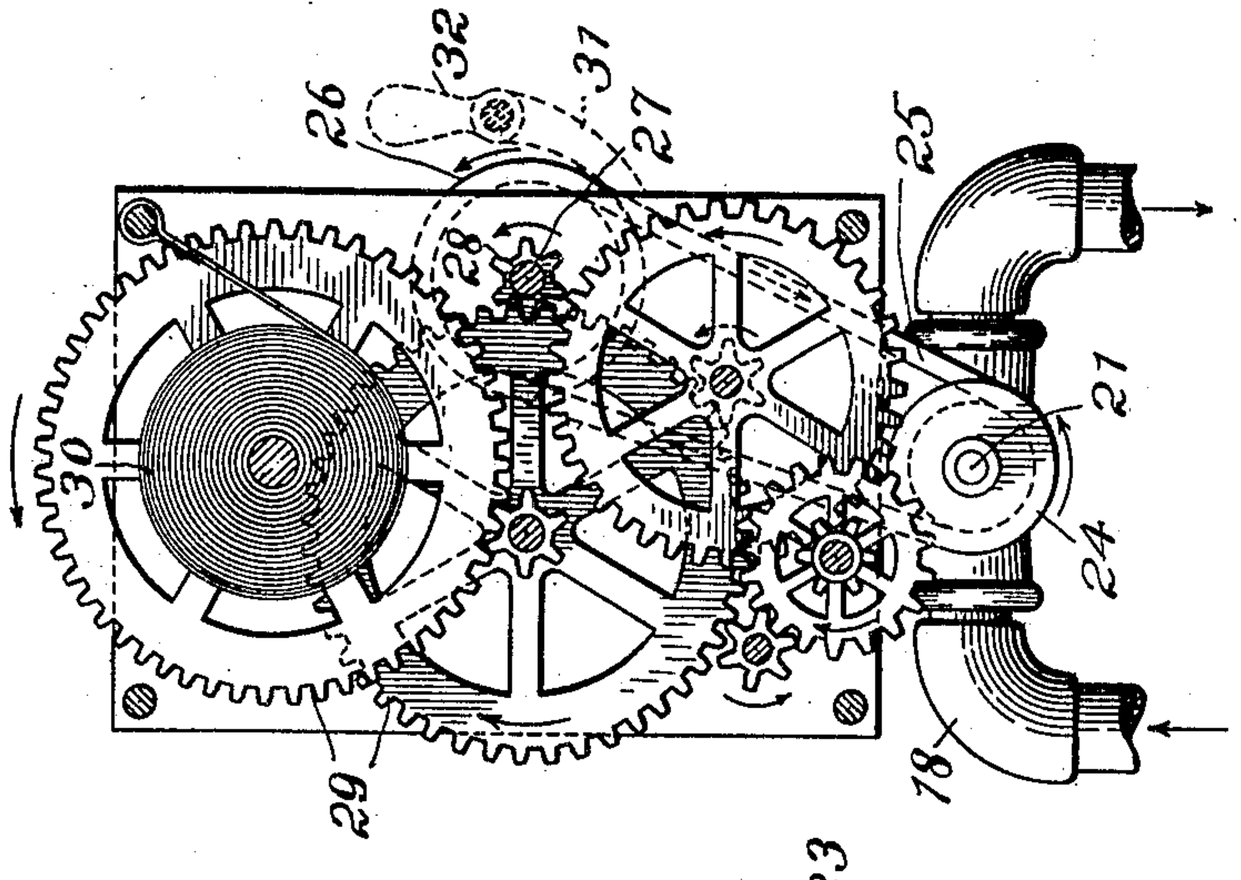


Fig. 3

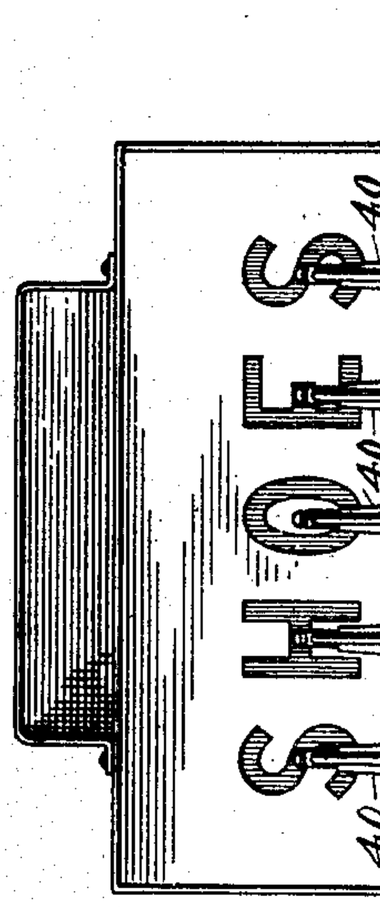


Fig. 6

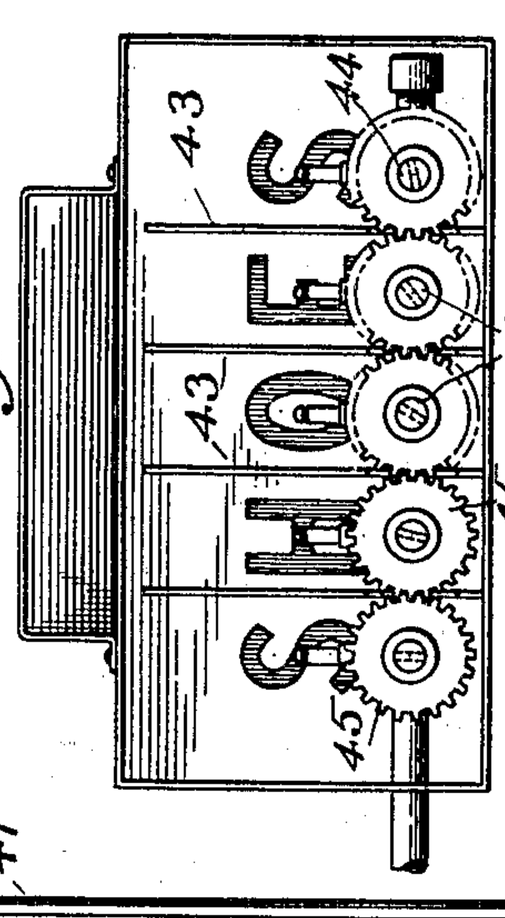


Fig. 7

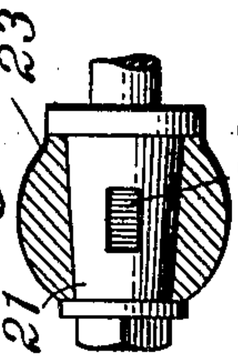


Fig. 5

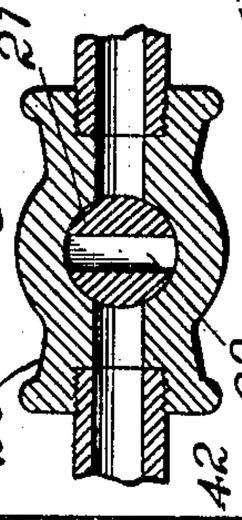


Fig. 4

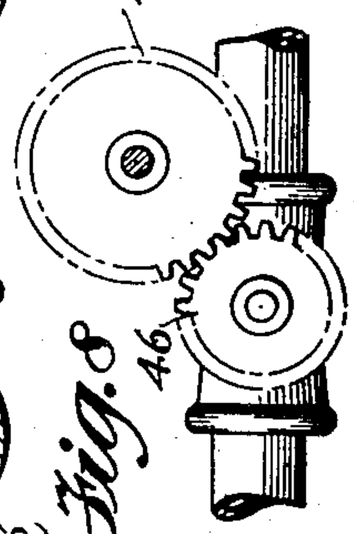
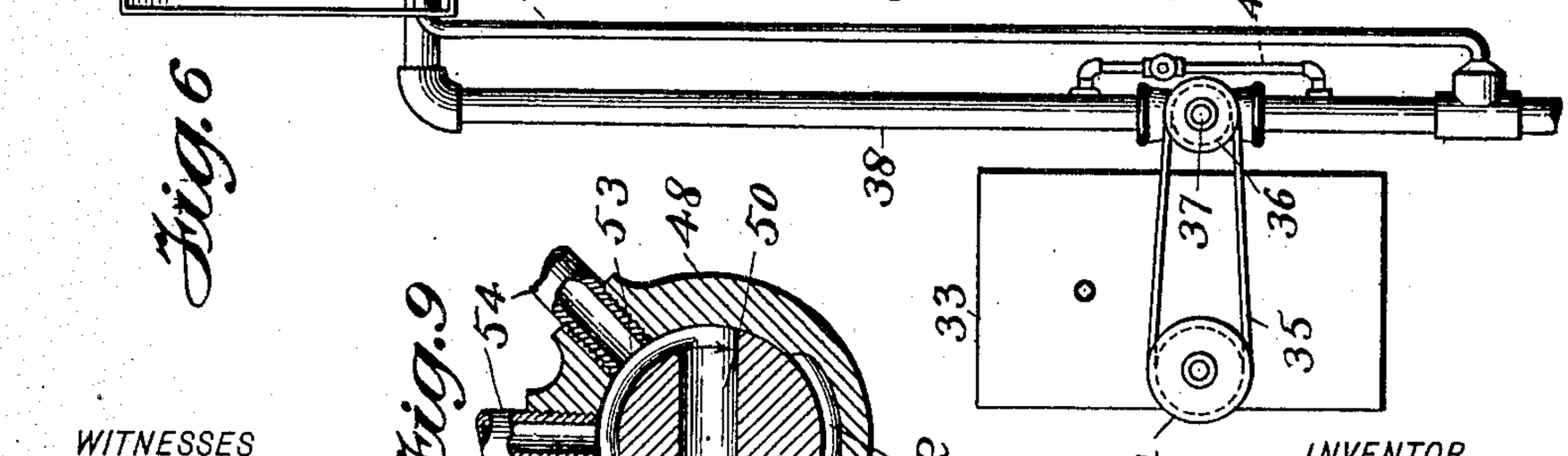


Fig. 8



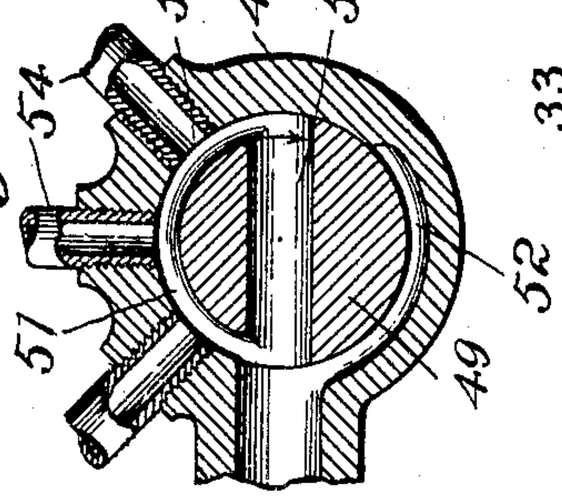


Fig. 9

WITNESSES

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UNITED STATES PATENT OFFICE.

HERMAN DREYER, OF NEW YORK, N. Y.

ILLUMINATED SIGN.

No. 860,285. Specification of Letters Patent. Patented July 16, 1907.

Application filed January 22, 1907. Serial No. 353,511.

To all whom it may concern:

Be it known that I, HERMAN DREYER, a citizen of the United States, and a resident of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Illuminated Signs, of which the following is a full, clear, and exact description.

This invention relates more particularly to illuminated gas signs for advertising purposes.

The primary object of the invention is to provide an attractive and effective sign which is adapted to be displayed either within or out of doors, and in which the gas may be made to flash so as to successively light up and darken the sign to more effectively attract attention; to provide simple and efficient means for cutting off the supply of gas to the burner or burners, and to provide simple and efficient motor connections whereby the motor may be placed at a distance from the sign proper, or made to form a part thereof.

A further object of the invention is to provide simple and efficient means whereby the sign may be intermittently lighted in part or in whole.

With these and other objects in view, the invention will be hereinafter more particularly described with reference to the accompanying drawings, which form a part of this specification, and will then be pointed out in the claims at the end of the description.

In the drawings, Figure 1 is a front elevation of one form of sign embodying my invention. Fig. 2 is a vertical section taken on the lines II—II of Fig. 1. Fig. 3 is a vertical section, partly in elevation, taken through the motor and showing on an enlarged scale the means for intermittently cutting off the supply of gas to the burner or burners. Figs. 4 and 5 are detail sectional views of the valve or means for regulating the supply of gas. Fig. 6 shows how a series of burners may be employed, and the motor placed some distance away from the sign proper. Fig. 7 illustrates how a series of burners may be successively and intermittently lighted. Fig. 8 shows how the motor mechanism may be connected direct to the valve or gas controlling means; and Fig. 9 is a detail section of another means for intermittently and successively lighting a plurality of burners.

The sign, and the casing for the burners and operating means may be of any suitable form or construction.

As shown the sign 10 has a glass or transparent part 11, and back of this is arranged a card or plate with openings therethrough corresponding to the matter to be displayed or advertised, though the advertising matter if desired might be placed direct upon the glass front of the sign. To the sign 10 is secured a casing 12 having a door 13 at the rear thereof to provide access to said casing, and at suitable points therein are apertures or openings 14 for ventilation, and at the top a chimney or vent 15 for the escape of the heat and particles of combustion caused by the lighted burners. Within the casing may be arranged one or more burners 16 which may be of the usual type, either with the usual tip or adapted to hold the usual form of mantle. To the burner or lighting means 16 is connected a gas-supply pipe 17, which leads from within the casing to the source of gas supply located at any desired point. The supply pipe within the casing has a substantially U-shaped portion 18, and to the main supply pipe is connected a smaller or pilot pipe 19, the supply to which may be controlled by a valve 20, said pilot pipe having its outer end leading to a point adjacent to the burner or lighting means. The pilot pipe receives a constant supply of gas, and remains constantly ignited while the sign is in use.

To control the supply of gas, and to intermittently cut off or reduce said supply, I arrange within the U-shaped part 18 of the main supply pipe a valve, element, or controller 21. This valve or controller may be of the usual or of any preferred form. As shown it is a tapering plug 21 having the usual opening 22 which is held within a casing 23, and is adapted to intermittently form communication between the supply pipe and the lighting means or burner. This plug is rotatably held in its casing, and at one end of its stem is provided with a wheel or pulley 24. A belt 25 passes around this wheel or pulley and around a second wheel or pulley 26, which is secured to a shaft 27 of the motor, and instead of a belt and the two wheels, sprockets may be employed around which may pass a sprocket chain, so as to positively drive and rotate the gas-controlling means when the shaft of the motor is rotated. On the shaft is a pinion 28, and this pinion forms a part of a train of gears 29 of the usual or of any preferred construction, which forms a part of the motor. This motor has a spring 30, and through the spring drives the train of gearing, which may be substantially the same as that employed in clocks, the motor being so constructed as to be operated at the desired speed to permit the valve or gas controller to be operated for a number of hours without rewinding. The motor is so arranged that the spring shaft may be wound from without the casing, and pivoted to the frame of the motor is a pawl 31, to the shaft of which is connected a handle 32. This handle 32 is arranged on the outside of the sign casing, and is adapted to cause the pawl to engage the teeth of one of the wheels of the motor mechanism to stop the same, or be released from said wheel, to permit the valve or controller to be continuously operated and to intermittently cut off the supply of gas to the burner as already explained.

It will be seen that as the gas controller or element 21 constantly rotates, it will shut off or turn on the supply of gas to the burner or burners, and as the pilots are

constantly lighted, the gas as it is turned on will be ignited and cause it to give a flash light, thereby effectively and intermittently exposing the advertisement or displayed matter forming a part of the sign.

In Fig. 6, the motor frame is arranged within a separate casing 33, and on the shaft of the motor mechanism is arranged a pulley 34 which operates, through a belt or chain 35, a pulley 36 on the stem 37 of the gas controlling valve. The valve or controller is arranged in the main supply pipe 38, and the gas is adapted to be intermittently cut off in a similar manner to that shown in Figs. 2 and 3. The main supply pipe leads to within a casing 39 which may be of any suitable form, and in the supply pipe is arranged a plurality of burners 40. A pilot pipe 41 leads from the main supply pipe below the valve so as to have a constant supply of gas thereto, and is provided with branches, the openings of which are adjacent to the burner tips. As the motor is operated the controller element will rotate, and will intermittently shut off the supply of gas, and as each supply is turned on the pilot lights, which are constantly burning, will ignite the gas as it escapes from the burners and will cause a flash thereby displaying the advertisement.

Either in the construction shown in Fig. 6, or in any of the other figures, I may provide a small branch pipe 42 in the main supply pipe to form a by-pass around the controller as shown in dotted lines in Fig. 6. In this case the pilot light may be dispensed with, as the small pipe will supply sufficient gas to the burners, so that they will not be entirely shut off during the rotary movement of the controller, and therefore will not go entirely out.

In Fig. 7, the casing is provided with a series of partitions 43 arranged between the burners or lighting means, so as to form a compartment for each letter, and each burner has its own controller or rotary element 44. The rotary valves have their openings so arranged relatively with respect to each other, that each burner will be supplied with gas from the source of supply in succession, the openings in the valves being shown in dotted lines. The valve stems of the controlling means are each provided with a complete gear 45 which meshes with the adjacent gear, so that they will all rotate in unison, and said train of gears may be continuously rotated in substantially the same way as already described.

Fig. 8 shows how the controller or rotary regulating means may be continuously operated direct from the motor instead of by a chain as in the other views. As shown the stem of the valve has a pinion 46 which meshes with the gear 47 on one of the shafts of the spring-actuated motor.

Fig. 9, shows how a series of burners may be lighted in succession and then remain lighted for a period of time, and the lights turned down or out in succession. The casing 48 has a rotary element or valve 49 having an opening 50 therethrough, which is adapted to communicate with the source of gas supply, and on one side of the periphery of the valve is a groove 51 which communicates with the opening in said valve at its two ends. The casing has a groove or channel 52 which communicates with the source of gas supply, and in the casing are a plurality of openings 53 which communicate with the plurality of pipes 54 that lead to a series of burners. It will be seen that as the valve or controller rotates, it will successively form a communication between the gas supply and the burners, and as the controller continues to rotate it will successively shut off communication with the burner pipes, and keep the gas shut off or lowered for a period of time.

From the foregoing, it will be seen that simple and efficient means is provided whereby a sign may be made to display advertising matter, and in which one or more burners may be employed, and the lights caused to successively flash and lower for the purpose of better attracting attention.

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

1. In an illuminated sign, the combination with a gas-supply pipe, of a plurality of burners, means for lighting the burners, of a valve casing arranged in the gas-supply pipe, a tapering plug rotatably held in the casing and having a transverse opening therethrough, a peripheral channel or groove forming a communication between the ends of said opening on one side of the plug whereby the burners may be made to burn bright in succession and all remain lighted for a period of time and then lower, and a motor operatively connected with the plug for rotating the latter.

2. In an illuminated sign, the combination with a casing having means for displaying advertising and for ventilating the same, of a plurality of burners arranged within the casing, a gas-supply pipe communicating with the burners, means for lighting the gas as it escapes from the burners, a valve casing arranged in the gas-supply pipe, a rotary tapering plug held in the valve casing and arranged between the source of gas supply and the burners, said plug having a transverse opening and a peripheral channel or groove on one side thereof forming a communication between the ends of the transverse opening whereby the burners may be lighted in succession, a motor connected with the tapering plug so as to rotate the same, and means adapted to engage a part of the motor and stop the same.

3. In an illuminated sign, the combination with a casing having means for displaying advertising and for ventilating the same, of a burner arranged within the casing, a gas-supply pipe communicating with the burner, means for lighting the gas as it escapes from the burner, a valve casing arranged in the gas supply pipe, a rotary tapering plug held in the valve casing and arranged between the source of gas supply and the burner and provided with a transverse opening and a peripheral groove or channel forming a communication between the ends of said opening adapted to shut off the supply of gas as it rotates, and a motor operatively connected with the tapering plug to rotate the same.

This specification signed and witnessed this 19th day of January A. D. 1907.

HERMAN DREYER.

Witnesses:
ROBERT MICHNOFF,
MOSES J. DOLINSKY.