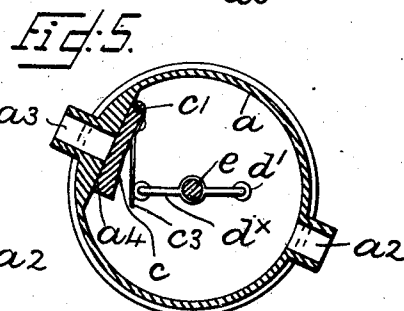
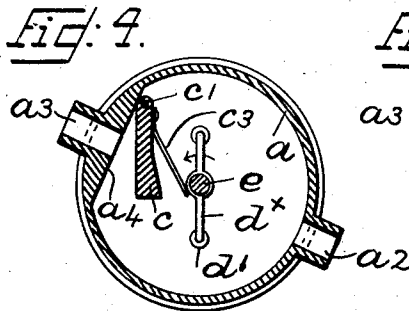
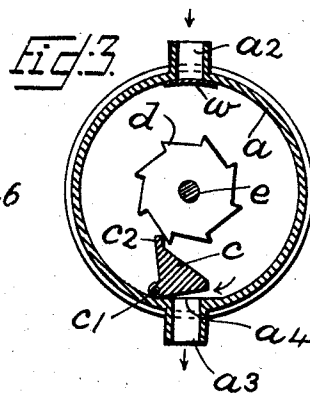
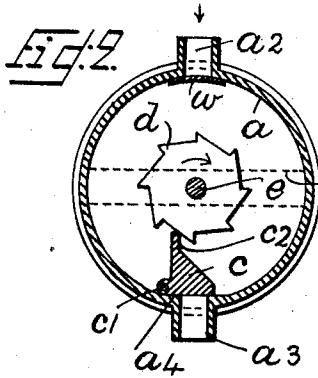
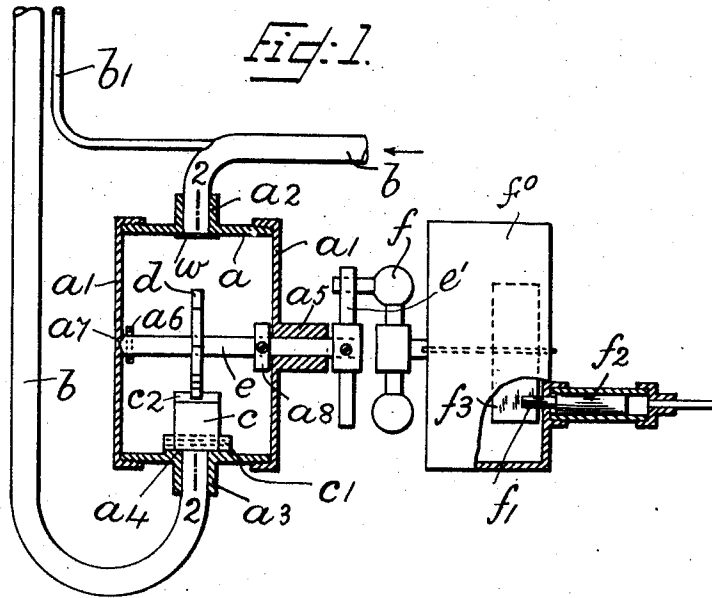


F. O. SEYD,
GAS ILLUMINATED ADVERTISING APPARATUS.
APPLICATION FILED FEB. 13, 1912.

1,063,073.

Patented May 27, 1913.

2 SHEETS-SHEET 1.



Witnesses
F. B. Barry
E. W. Callaghan

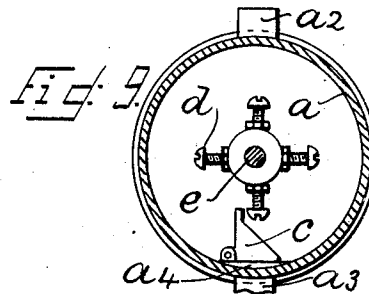
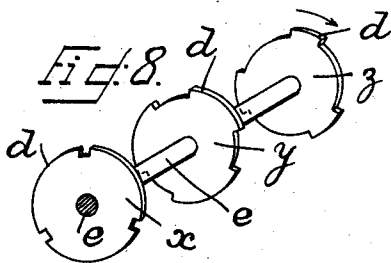
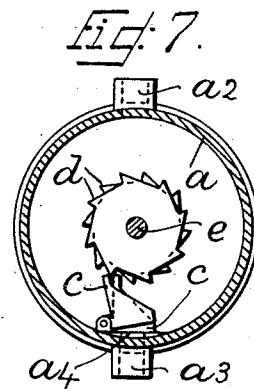
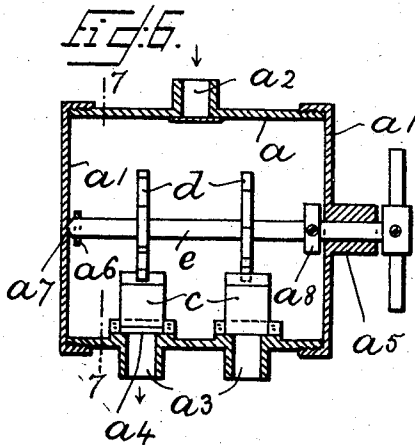
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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANK OSCAR SEYD, OF LONDON, ENGLAND.

GAS-ILLUMINATED ADVERTISING APPARATUS.

1,063,073.

Specification of Letters Patent.

Patented May 27, 1913.

Application filed February 13, 1912. Serial No. 677,304.

To all whom it may concern:

Be it known that I, FRANK OSCAR SEYD, a subject of the King of Great Britain and Ireland, and a resident of London, England, have invented certain new and useful Improvements in Gas-Illuminated Advertising Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to improvements in gas illuminated advertising apparatus.

The present invention has for its object to provide a simple and inexpensive valve mechanism which may be readily adjusted, will require a small amount of motive power to actuate it, and may utilize the gas pressure in preventing leakage.

According to the invention, a casing is constructed with inlet and outlet gas ports, and the or each outlet port is controlled by a flat faced valve flap or shutter pivotally mounted within the casing and automatically opened, or closed, by its own weight alone, and, respectively, closed, or opened, by one or more strikers mounted within the casing on a rotary shaft driven by clock-work or any other suitable motor.

The invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a sectional elevation of a modification suitable for plain flash effects, and wherein the valve is closed by gravity; Fig. 2 is a sectional elevation on 2—2, Fig. 1; Fig. 3 is a similar view to Fig. 2, but showing the valve being opened by a striker; Figs. 4 and 5 are views corresponding to Figs. 2 and 3, of a modification, wherein the valve is opened by gravity, and is closed by a striker; Fig. 6 is a similar view to Fig. 1 of a modification suitable for alternately illuminating different signs, or producing change color effects; Fig. 7 is a sectional elevation on 7—7, Fig. 6; Fig. 8 is a perspective view of a detail of a modification for obtaining letter-by-letter or the like effects; Fig. 9 is a sectional elevation of a modification.

In carrying out the invention, the valve-casing, *a*, is made, preferably cylindrical, with screw-on or other removable gas-tight ends, *a*¹, to facilitate accessibility. The casing is constructed with inlet and outlet ports, *a*², *a*³, respectively, which are connected to the gas conduit, *b*. The casing is made of a considerably larger cross sectional

area than the gas conduit to check fluctuations of gas pressure. A flat valve seating, *a*⁴, is formed within the casing at the or each gas outlet, *a*³, and a flat faced valve flap or shutter, *c*, is hinged or pivotally mounted within the casing, as at *c*¹, adjacent to the outlet port, *a*³.

Referring particularly to the construction represented in Figs. 1 to 3, the shutter, *c*, is mounted so as to close by its own weight against the seating, *a*⁴, to obstruct the outlet, *a*³. The shutter has a finger or projection, *c*², for engagement by strikers or the like, *d*, to open the shutter. The strikers are mounted within the casing on a shaft, *e*, supported by and projecting through one of the casing-ends, *a*¹, and adapted to be rotated by a crank, *f*, on a motor, *f*^o, the crank engaging an arm, *e*¹, on the rotary shaft with facility of relative movement while in contact, so that axial movement of the valve chamber can take place, as when the sign is disturbed by the wind, without the clock-work of the motor being disturbed.

Referring particularly to the construction represented in Figs. 4 and 5, the shutter, *c*, is constructed and mounted so as to be open by its own weight and depend at an angle to the seating clear of the outlet, *a*³. A spring blade, *c*³, is mounted at the back of the shutter and adapted to be operated by strikers or the like *d*^x, mounted within the casing on the revolving motor driven shaft, *e*. The outer ends of the strikers may be provided with antifriction rollers, *d*¹.

In the closed position, the shutter, *c*, completely obstructs the outlet, *a*³, and a bypass is necessary, as indicated by the pipe, *b*¹, Fig. 1.

The hereinbefore described constructions are particularly suitable for plain flash effects.

A plurality of shutters, *c*, may be fitted in the same casing and adapted to control different outlets, *a*³; and strikers, *d*, may be mounted on the rotary shaft, *e*, and arranged to operate the respective shutters at different times, see Figs. 6 and 7. This construction is particularly suitable for alternately illuminating different signs, which may have differently colored chimneys or globes around the burners.

By employing strikers, *d*, in the form of segments on disks, *x*, *y*, *z*, on the shaft, *e*, see Fig. 8, the shutters may be caused to open

in any sequence, and to close simultaneously or in sequence. This construction is particularly suitable for letter-by-letter and the like effects. In the example illustrated, each
 5 striker on disk, *x*, will operate in advance of the corresponding one on disk, *y*; and each striker on disk, *y*, will operate in advance of the corresponding one on disk, *z*; and the strikers on the three disks will re-
 10 lease all the shutters simultaneously. The strikers may be adjustable in length by being made in the form of screws mounted in a rotary block affixed to the revolving shaft, see Fig. 9.

15 In order to prevent leakage of gas, the driving shaft, *e*, preferably passes through a long greased bearing, *a*⁵, at one end of the casing, and is guided or steadied in a fixed cross-bar, *a*⁶, adjacent to the opposite end
 20 of the casing, so that the apparatus may be adjusted while this end of the casing is removed. The end of the driving shaft may engage a preferably conical recess or bearing, *a*⁷, in this end of the casing, any wear
 25 being taken up by screwing up the latter. The driving shaft is prevented from axial movement by a collar or the like, *a*⁸, on the shaft abutting against the long bearing.

30 The starting and stopping of the motor may be effected by a piston rod, *f*¹, actuated by a piston, *f*², pneumatically controlled from a distant point of actuation, so as to
 35 be moved clear of the fan or governor, *f*³, to start the motor, or to prevent rotation of the governor to stop the motor.

w is a gauze filter.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In gas illuminated advertising apparatus, in combination, a casing having an
 40 inlet port and outlet ports, a valve at each outlet port, a rotary shaft within the casing, and on said shaft a plurality of sets of strikers in the form of segments adapted to open
 45 the valves in sequence and to close them in any desired order, substantially as described.

2. In gas illuminated advertising apparatus, in combination, a casing having an
 50 inlet port and outlet ports, a valve at each outlet port, a rotary shaft within the casing, and on said shaft a plurality of sets of strikers in the form of segments adapted to open
 55 the valves in sequence and to close them in any desired order, the segments of one set being of different length to those of another, substantially as described.

3. In gas illuminated advertising apparatus, in combination, a casing, a rotary
 60 shaft passing through one end of the casing, and a fixed cross-bar adjacent to the other end of the casing through which the rotary shaft also passes, this end of the casing being adjustable and having a recess in which
 65 the end of the shaft engages, substantially as described.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

FRANK OSCAR SEYD.

Witnesses:

ALFRED DAY,
 WALTER DAY.