

T. JACKSON.
GAS FLASH LIGHT ADVERTISING DEVICE.
APPLICATION FILED DEC. 14, 1912.

1,077,985.

Patented Nov. 11, 1913.

3 SHEETS-SHEET 1.

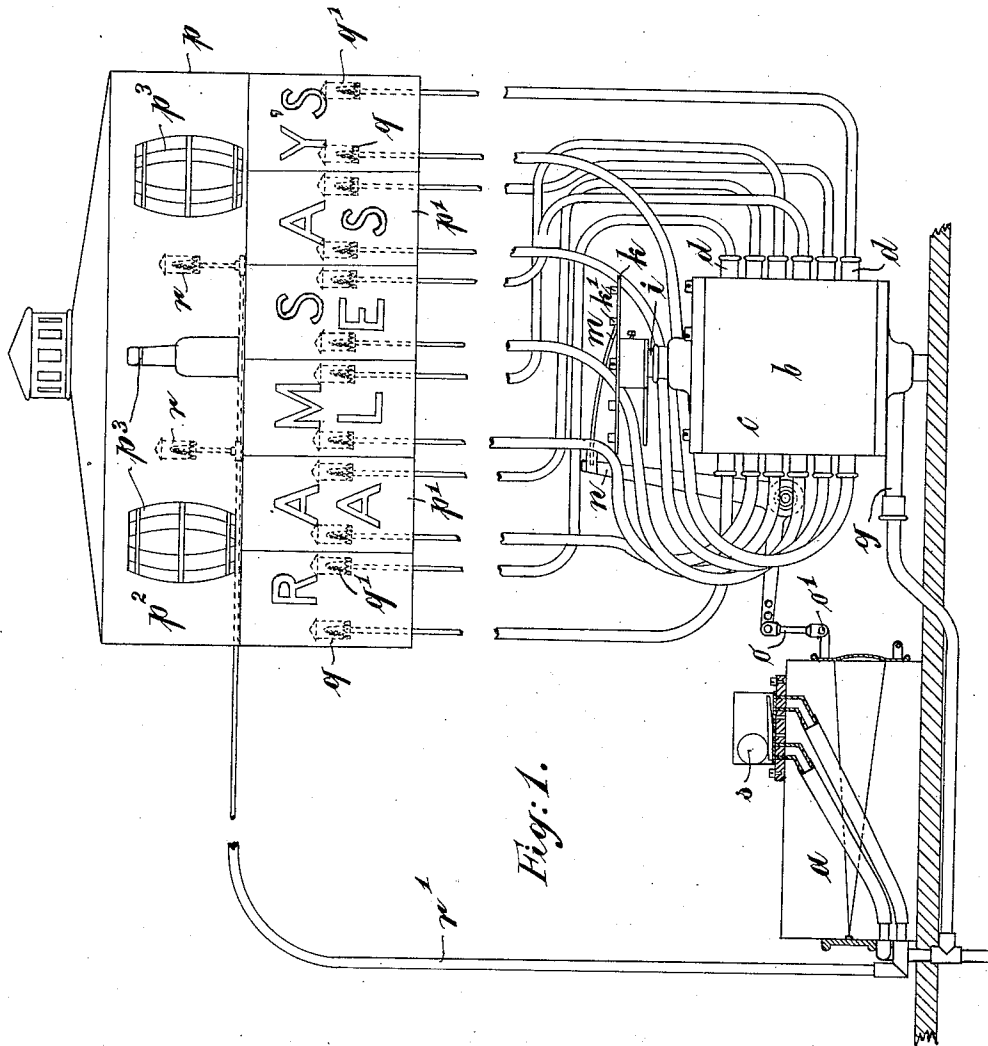


Fig. 1.

WITNESSES:

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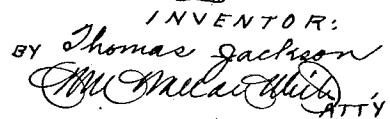
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3 SHEETS--SHEET 2.



Fig: 4.

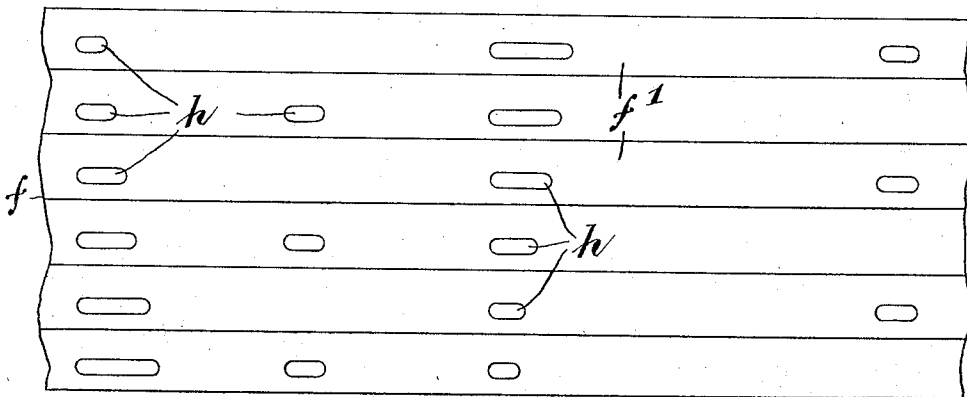
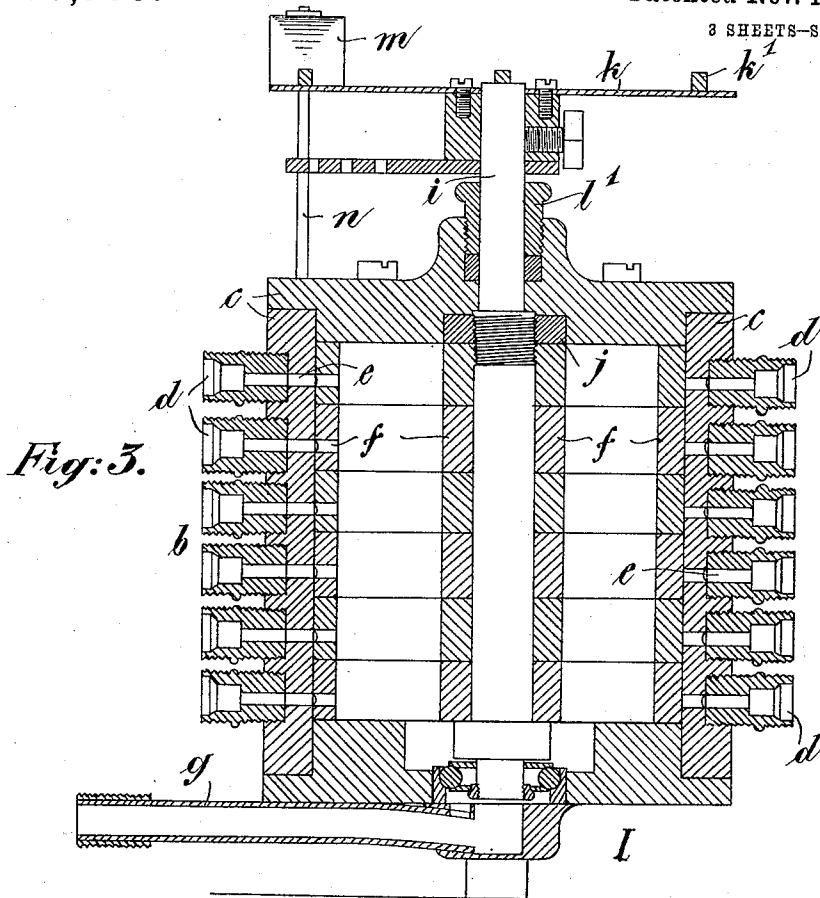


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UNITED STATES PATENT OFFICE.

THOMAS JACKSON, OF LONDON, ENGLAND, ASSIGNOR TO HIMSELF, AND ALLAN RAMSAY, OF CHESHAM, ENGLAND.

GAS-FLASH-LIGHT ADVERTISING DEVICE.

1,077,985.

Specification of Letters Patent.

Patented Nov. 11, 1913.

Application filed December 14, 1912. Serial No. 736,697.

To all whom it may concern:

Be it known that I, THOMAS JACKSON, subject of the King of Great Britain and Ireland, residing at 7 Milton Court road, New Cross, London, S. E., England, have invented new and useful Improvements in and Relating to Gas-Flash-Light Advertising Devices, of which the following is a specification.

This invention relates to improvements in gas flash light advertising devices of the type in which the control is effected by a multiple ported device operated by a motor, and has for its object the provision of improved means whereby a multiple system of lighting can be mechanically controlled with a great variety of effects easily alterable and the driving effort is effected by means of the pressure of supply of the gas itself.

The invention consists in the combination of a gas motor mechanism operated by the pressure of the illuminative gas used for flashing purposes in one set of burners such for example as described in the specification of United States Letters Patent No. 1,009,313 dated 21st November 1911 and in the specification of the application for United States Letters Patent under Serial No. 719,043 and date 7th September 1912 with a rotary drum device for supplying a number of separate pipes of another gas distributing system and means for controlling the supply of the gas to each pipe with periodic variations so that any desired combination or sequence of individual lights of the second system can be dealt with in a predetermined manner.

In order that the invention may be the better understood, I will now proceed to describe the same in relation to the accompanying drawings, reference being had to the letters and figures marked thereon.

Like letters refer to like parts in the various figures, in which:—

Figure 1 is a diagrammatic view of the devices forming the subject matter of this invention, the lantern being shown on a smaller scale to that of the control device and motor mechanism. Fig. 2 is a front elevation of the multiple control valve. Fig. 3 is a sectional side elevation of the same. Fig. 4 is an outside elevation of the rotating member of the control device. Fig. 5 is a sectional plan of one element of the con-

trol device. Fig. 6 is a developed view of the periphery of the control device.

I take a gas pressure supply motor appliance *a* such as is referred to above for example and I connect it with the gas control device *b* in such a way as to carry out a cycle of operations. This control device *b* consists of a cylindrical chamber *c* having a series of pipes *d* connected to its wall and communicating with or forming ports *e* leading to the inside of the chamber *c*. Within the chamber *c* is disposed a rotating control device *f* of drum formation having holes which co-act with the ports *e* so as to cover and uncover them at the desired times. The gas is admitted to the chamber *c* from a suitable supply *g* to the interior of the rotating device *f*.

In order to construct the rotating control device *f* so as to be readily alterable as to function I form it of a series of cylindrical parts *f*¹ each having one or more spaces *h* to allow gas to pass from the interior through the wall of each device *f*¹. These parts *f*¹ are adjustably mounted on a central spindle or shaft *i* and are securely fixed thereon when adjusted by a nut *j* or in any other suitable manner. The shaft *i* is carried on a ball bearing *l* at the lower part of the chamber *c* and passes through a gland *l*¹ at the upper part thereof. The upper part of the shaft *i* carries a disk *k* having a series of pins *k*¹ arranged around it with which a detent *m* engages, said detent being pivoted to a bell crank *n* rotatably mounted on a bearing *n*¹ carried by the chamber *c*. The other arm of the bell crank *n* is connected by a connecting rod *o* with the movable element *o*¹ of the motor mechanism *a* so that at each operative step of this mechanism the disk *k* is rotated by the detent *m* through the angle included by two adjacent pins *k*¹. The spaces *h* in the parts *f*¹ as illustrated in the drawing and clearly shown in Fig. 6 as developed in a plane are so disposed and of such a shape as in co-action with the ports *e* at each side of the chamber *c* will produce certain lighting effects in the lantern *p* which is only shown by way of illustration of one method of carrying the invention into effect.

The lower part of the lantern *p* is divided into six separate compartments *p*¹, each of which has a transparent portion representing a letter or letters. Each compartment

p^1 has two burners q q^1 , q being connected
 to a port e on one side of the chamber c
 and q^1 to a port e on the other side of the
 chamber c . The spaces h as shown in Fig.
 5 6 are disposed at the first, second, third
 and fifth division of the periphery, each
 division being $\frac{1}{4}$ th of the whole and the
 effects produced would be as follows:—Dur-
 ing the first increment of movement the
 10 letters would be illuminated one after the
 other from left to right by the burners q
 and the whole would then disappear sud-
 denly. The next increment of movement
 brings the alternate parts f^1 in communi-
 15 cation with the ports e on the two sides of
 the chamber c respectively so that if the
 burners q emit white light and the burners
 q^1 emit red light, the words will be shown
 with letters of white and red alternating
 20 and would then be suddenly extinguished.
 The next increment of movement will spell
 the words in white light backward and ex-
 tinguish them. The next movement will
 spell the words forward in red light and
 25 extinguish them. The next increment of
 movement will give the alternate lighting
 of white and red, but in opposite order
 to the first effect and then extinguish the
 light. The next and last increment of
 30 movement will spell the words backward in
 red and extinguish them.

The upper part of the lantern p has a
 separate compartment p^2 having translucent
 portions p^3 which may represent any suit-
 35 able design and is provided with burners r
 connected by a pipe r^1 with the motor me-
 chanism a . By means of the rolling ball valve
 arrangement s of the motor mechanism a

the flash illumination of this upper compart-
 ment p^2 is effected at each operation of the
 machine so that the exhaust gas from the
 motor mechanism a after the motive stroke
 has been made is used for illuminating pur-
 poses as described in specification of the
 application for United States Letters Patent
 under Serial No. 719043 and date 7th Sep-
 40 tember, 1912.

It is of course obvious that provision must
 be made for pilot lights to the burners in
 the ordinary way but these details have been
 45 left out of the drawings to avoid complica-
 tion.

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

A rotary valve arrangement for gas flash
 light apparatus comprising a circular cas-
 ing, a series of ports in the walls thereof
 for supplying gas to a series of burners,
 a series of circular elements of ring forma-
 55 tion adapted to form a cylindrical structure,
 a port or ports formed in each element
 adapted to co-act with one of the series of
 ports in said casing, a shaft adapted to
 rotate in said casing and means for adjust-
 60 ably carrying said elements upon said shaft
 so that periodic flashing of the burners can
 be varied at will to suit varying circum-
 stances substantially as described.

In testimony whereof I have signed my
 name to this specification in the presence
 of two subscribing witnesses.

THOMAS JACKSON.

Witnesses:

H. D. JAMESON,
 O. J. WORTH.